PIERS 2024 Chengdu

PhotonIcs & Electromagnetics Research Symposium

also known as Progress In Electromagnetics Research Symposium

Program

April 21–25, 2024

Chengdu, CHINA

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THE ELECTROMAGNETICS ACADEMY

PIERS: PhotonIcs and Electromagnetics Research Symposium, also known as Progress in Electromagnetics Research Symposium, is sponsored by The Electromagnetics Academy.

The Electromagnetics Academy is devoted to academic excellence and the advancement of research and relevant applications of the electromagnetic theory and to promoting educational objectives of the electromagnetics profession. PIERS provides an international forum for reporting progress and advances in the modern development of electromagnetic theory and its new and exciting applications.

Founded by the late Professor Jin Au Kong (1942–2008) of MIT in 1989, The Electromagnetics Academy is a non-profit organization registered in USA.

PIERS Founding Chair:

Jin Au Kong, MIT, USA

PIERS Chair and President of The Electromagnetics Academy:

Professor Leung Tsang, University of Michigan, USA

JOURNAL: PROGRESS IN ELECTROMAGNETICS RESEARCH

Progress In Electromagnetics Research (PIER) publishes peer-reviewed original and comprehensive articles on all aspects of electromagnetic theory and applications. This is an open access, on-line journal PIER (E-ISSN 1559-8985). It has been first published as a monograph series on Electromagnetic Waves (ISSN 1070-4698) in 1989. It is freely available to all readers via the Internet.

PIER is a non-profit organization.

WWW.JPIER.ORG

Contact Email: work@jpier.org

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PhotonIcs & Electromagnetics Research Symposium
April 21–25, 2024
Chengdu, CHINA

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SYMPOSIUM VENUE

The 2024 PhotonIcs & Electromagnetics Research Symposium, will be held in Chengdu from 21 to 25 April 2024, at the Sichuan Jinjiang Hotel.

Address: No. 80, Section 2, Renmin South Road, Jinjiang District, Chengdu, Sichuan, China.

REGISTRATION

The PIERS technical sessions will begin at 13:00 on Sunday, April 21, 2024. You may come to register during 13:00–18:30 on Saturday, April 20, 2024, at the registration desks at the Sichuan Jinjiang Hotel. Registration is also available from 8:00 to 18:00 on April 21–25, 2024.

The on-site registration fee is USD 730 or RMB 5110, and the reduced registration fee for a student is USD 490 or RMB 3430 (a valid student ID is required). If you have pre-registered and paid, your name badge and symposium program will be ready for you to pick up at the registration counter during the symposium. Please wear your name badge throughout the meeting. Access to the coffee break, interactive areas, and technical sessions will be prohibited if a name badge is not visible.

SPECIAL EVENTS

Symposium Reception

The Symposium Reception will be organized on Sunday, April 21 from 18:40 to 21:00 at the conference hotel. The tickets are free and handed out on a first-come-first-served basis. Please make reservation in advance for the reception by April 1, 2024.

Symposium Banquet

On Wednesday evening, April 24, 2024, symposium banquet is planned for PIERS participants and their guests at the conference hotel. A limited number of banquet tickets will be available. For all participants, the price is USD 60/RMB 420 per person. Please make reservation and pay in advance for the banquet by April 1, 2024.

PIERS ONLINE

Information on PIERS 2024 Chengdu and future PIERS is posted at www.piers.org.

GUIDELINE FOR PRESENTERS

Onsite Oral Presentations

- **LOAD and TEST Presentation Files in Advance:**
  All Oral Presenters must load and test presentation files in the PIERS OFFICE no later than 12 hours before the scheduled talk. Presenters are not allowed to detach the session computer and attach their own notebook/laptop to the LCD projector in session rooms.
- **Presentation Files Format:**
  PDF, Power Point are recommended. Movies or animations in MPEG, Windows Media, and etc., should be tested in PIERS computer in PIERS OFFICE no later than half-day before the session.
- **USB Disk:**
  Presentation files in USB disk are acceptable by onsite PIERS Computer.
- **Report to Session Chair:**
  Onsite Presenters are required to report to their session chairs at least 10 minutes prior to the start of their session.
- **Talk Limit: 15 Minutes (Onsite Oral Talk):**
  All oral presentations, including questions and answers, should be less than the given minutes.
- **DO NOT Change Presentation Sequence:**
  Session Chairs, please be present in the session room at least 15 minutes before the start of the session and must strictly observe the starting time and time limit of each paper and refrain from changing paper presentation sequence.
- **NO Picture Request:**
  When such a request is made by the presenter, the session chair and session helpers will do their best to ensure that no pictures will be taken at the presentation.

Onsite Poster Presentations

- One panel will be available for each poster. The panel size may be different for each PIERS.
- The poster panels for PIERS 2024 Chengdu will be 95 cm (Width) x 200 cm (Height).
- All presenters are required to mount their papers one hour before the session and remove them at the end of their sessions. All poster presenters are suggested to be present at least during 10:00–10:30 and 15:30–16:00.
- Presenters should post time slots of their presence on the panel and be present for interactive questions at the given time.

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- Southwest Institute of Technical Physics
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- IEEE Geoscience and Remote Sensing Society (IEEE GRSS)
- IEEE Antennas and Propagation Society (IEEE AP-S)
- IEEE Photonics Society
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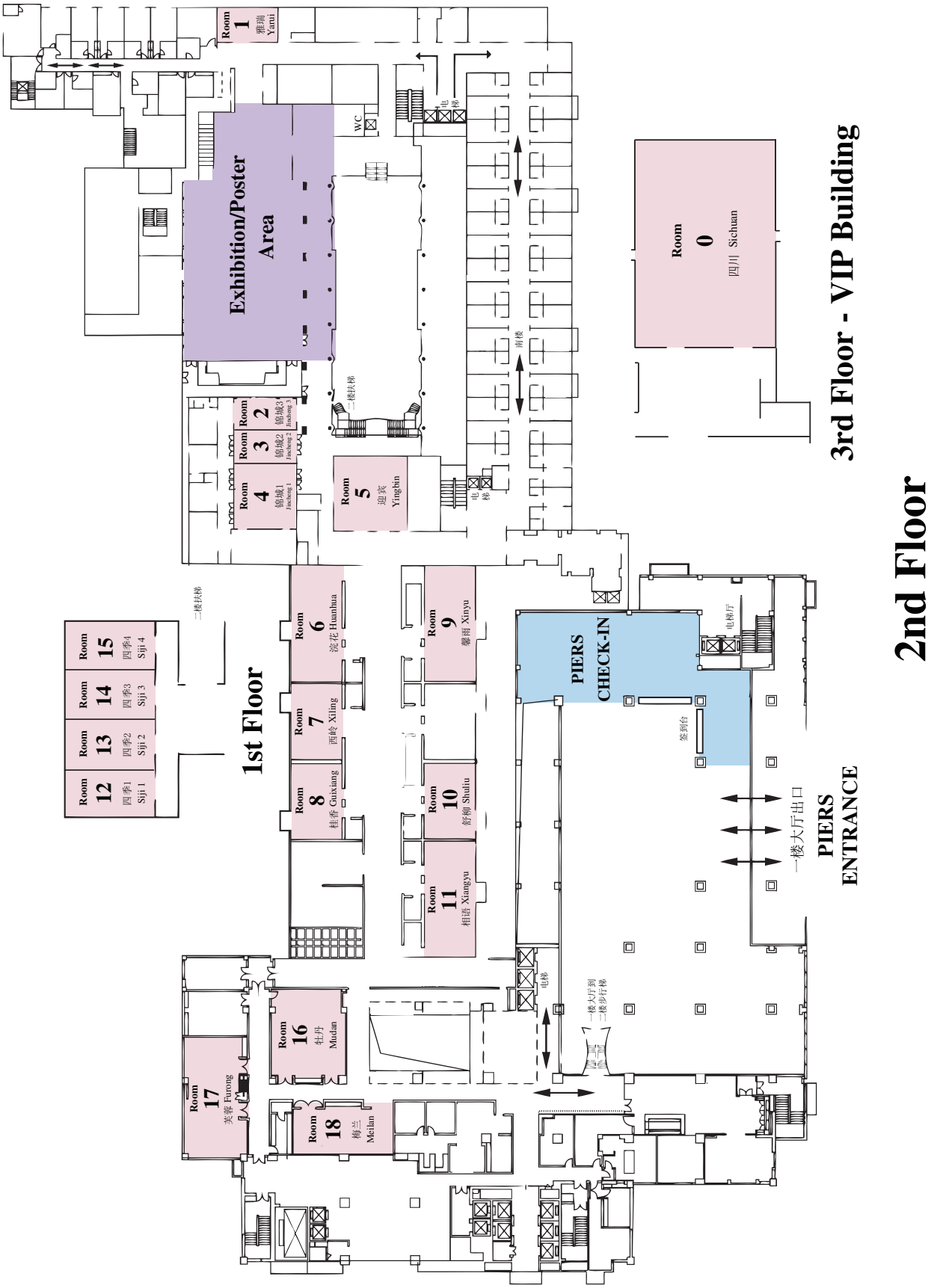

HOT TOPICS IN PHOTONICS AND ELECTROMAGNETICS

Sunday PM, April 21, 2024

Room 0 - Sichuan

Organized and Chaired by Sailing He

17:00 Opening Remark by Jun Hu, General Chair of PIERS 2024, President of UESTC
Jun Hu (University of Electronic Science and Technology of China);

17:10 Competitive Materials Science for the Realization of µm-sized LEDs Enabling All-Nitride Displays for AR/VR
Lars Samuelson (Southern University of Science and Applications, Shenzhen; Lund University);

17:20 Energy-efficient Surface Emitting Lasers, the Next Huge Photonics Market after LEDS
Dieter H. Bimberg ("Bimberg Chinese-German Center for Green Photonics" CIOMP, Chinese Academy of Sciences);

17:30 Unconventional Topological Photonic and Phononic Materials
Che Ting Chan (The Hong Kong University of Science and Technology);

17:40 Pushing Free-electron Ultrafast Spectromicroscopy toward the Zeptosecond Regime
F. Javier García de Abajo (ICFO — Institut de Ciències Fot`oniques, The Barcelon Institute of Science and Technology);

17:50 Subdiffraction Confinement of Light in Dielectric Cavities
Soren Stobbe (Technical University of Denmark);

18:00 Mie-tronics and Metaphotonics
Yuri S. Kivshar (Australian National University);

18:10 3D Photonic Topological Insulators
Baile Zhang (Nanyang Technological University);

18:20 Devices and Protocols for Quantum Advantage in Sensing
Amr S. Helmy (University of Toronto);

GENERAL INFORMATION

LANGUAGE

The official language for the Symposium is English.

CURRENCY AND CREDIT CARDS

Chinese currency is CNY with its monetary unit CNY (Yuan). The exchange rate is 1 USD for about 7.0 CNY. Credit cards and cash are acceptable for payments. International credit cards are acceptable in almost all shops, restaurants etc..

TAX AND TIP

Tipping is by no means a traditional Chinese custom. Please help keep the good custom and do not tip a waiter/waitress or a taxi driver and other persons who provides regular service. Take back any change that is rightfully yours. All advertised prices include tax. Bargaining is quite common on buying merchandise especially from Street Markets.

TAXI

Usually, a taxi is available along the roadsides, while you wave for it. However, on main streets it is only available at taxi stops or in front of a hotel.

BUSINESS OPENING HOURS

- **Bank and Post Office**
  Opening hours: usually 09:00 – 17:00, from Monday to Sunday.
- **Government Office**
  Operating hours: generally 08:00 – 17:00, from Monday to Friday.
- **Store**
  Opening hours: usually 10:00 – 21:00, but the large shopping center serves till 22:00, from Monday to Sunday.

ELECTRICITY

In China, the standard outlets provide AC of 220 V/50 Hz.

PIERS 2024 CHENGDU TECHNICAL PROGRAM

Session 0P0a
Mie-tronics and Metaphotonics 1

Sunday PM, April 21, 2024

Room 0 - Sichuan

Organized by Andrey A. Bogdanov, Yuri S. Kivshar

Chaired by Yuri S. Kivshar, Andrey A. Bogdanov

13:00 Invited — Multipole Tuning of Optical Resonances in Dielectric Structures
Andrey B. Evlyukhin (*Leibniz University Hannover*); *Vladimir R. Tuz* (*Jilin University*);

13:20 Invited — Trapping Light in Air with Dielectric Mie Voids
Kirill Koshelev (*Australian National University*); *Mario Hentschel* (*University of Stuttgart*); *Florian Sterl* (*University of Stuttgart*); *Steffen Both* (*University of Stuttgart*); *Julian Karst* (*University of Stuttgart*); *Lida Shamsafar* (*University of Stuttgart*); *Thomas Weiss* (*University of Graz*); *Yuri S. Kivshar* (*Australian National University*); *Harald W. Giessen* (*University of Stuttgart*);

13:40 General Bound States in the Continuum in Momentum Space
Dezhuan Han (*Chongqing University*);

13:55 Infinite-Q Accidental and Merging BICs with Broken Up-down Symmetry
Huayu Bai (*Aalto University*); *Andriy Shevchenko* (*Aalto University*); *Radoslaw Kolkowski* (*Aalto University*);

14:10 Invited — Quasicrystalline Structures for Electromagnetic Wave Manipulation
Mikhail V. Rybin (*National Research University for Information Technology, Mechanics and Optics*);

14:30 Metamaterial Regime in Quasicrystal Structure
Ekaterina E. Maslova (*ITMO University*); *K. V. Semushev* (*ITMO University*); *Mikhail V. Rybin* (*ITMO University*);

14:45 Invited — Polarization Properties of Photonic Crystal Slabs in Resonant Approximation
I. M. Fradin (*Skolkovo Institute of Science and Technology*); *Sergey A. Dyakov* (*Skolkovo Institute of Science and Technology*); *Nikolay A. Gippius* (*Skolkovo Institute of Science and Technology*);

15:05 **Coffee Break**

15:30 Bound States in the Continuum and Lattice Resonances in Dipole Lattices
Ilya Igorevich Karavaev (*ITMO University*); *A. A. Bogdanov* (*ITMO University*);

15:45 Invited — Generation of Harmonic Vortices and High-dimensional Entanglement Based on Metasurfaces
Shu-Ming Wang (*Nanjing University*);

16:05 Engineering the Radiative Lifetime of Excitons in Two-dimensional van der Waals Heterostructures
Polina A. Pantyukhina (*ITMO University*); *Andrey A. Bogdanov* (*Harbin Engineering University*); *Kirill L. Koshelev* (*Australian National University*);

16:20 Coupled Mode Theory for Dielectric Solids of Revolution
E. N. Bulgakov (*Institute of Computational Modeling SB RAS*); *Dmitry N. Maksimov* (*MF Reshetnev Siberian State University of Science and Technology*); *A. E. Ershov* (*Institute of Computational Modeling SB RAS*);

16:35 Invited — Evolutionary Optimization of Radiative Losses in Low-dimensional Systems of Dipole Emitters
Ilya A. Volkov (*ITMO University*); *S. A. Mitsai* (*ITMO University*); *S. K. Zhogolev* (*ITMO University*); *Danil F. Kornovan* (*ITMO University*); *Roman S. Savelev* (*ITMO University*); *Mihail I. Petrov* (*ITMO University*);

Session 0P0b
Hot Topics in Photonics and Electromagnetics

Sunday PM, April 21, 2024

Room 0 - Sichuan

Organized by Sailing He

Chaired by Sailing He

17:00 Opening Remark by Jun Hu, General Chair of PIERS 2024, President of UESTC
Jun Hu (*University of Electronic Science and Technology of China*);

17:10 Hot Topic — Competitive Materials Science for the Realization of μm-sized LEDs Enabling All-Nitride Displays for AR/VR
Lars Samuelson (*Southern University of Science and Technology, Shenzhen, China and Lund University, Lund, Sweden*);

17:20 Hot Topic Energy-efficient Surface Emitting Lasers, the Next Huge Photonics Market after LEDS

Dieter H. Bimberg (*"Bimberg Chinese-German Center for Green Photonics" CIOMP, Chinese Academy of Sciences*);

17:30 Hot Topic Unconventional Topological Photonic and Phononic Materials

Che Ting Chan (*The Hong Kong University of Science and Technology*);

17:40 Hot Topic Pushing Free-electron Ultrafast Spectromicroscopy toward the Zeptosecond Regime

F. Javier García de Abajo (*ICFO — Institut de Ciències Fotòniques, The Barcelona Institute of Science and Technology*);

17:50 Hot Topic Subdiffraction Confinement of Light in Dielectric Cavities

Soren Stobbe (*Technical University of Denmark*);

18:00 Hot Topic Mie-tronics and Metaphotonics

Yuri S. Kivshar (*Australian National University*);

18:10 Hot Topic 3D Photonic Topological Insulators

Baile Zhang (*Nanyang Technological University*);

18:20 Hot Topic Devices and Protocols for Quantum Advantage in Sensing

Amr S. Helmy (*University of Toronto*);

Session 0P1
Quantum Biology and Quantum Devices 1

Sunday PM, April 21, 2024

Room 1 - Yarui

Organized by Qing Ai, Wenqiang Yang

Chaired by Qing Ai

13:00 Invited Quantum Phase Synchronization via Electronic-vibronic Energy Dissipation Sustains Long-lived Coherence in Photosynthetic Antennas

Ruidan Zhu (*Institute of Physics, Chinese Academy of Sciences*); *Wenjun Li* (*Yantai Institute of Coast Zone Research, Chinese Academy of Sciences*); *Zhanghe Zhen* (*Institute of Physics, Chinese Academy of Sciences*); *Jiading Zou* (*Institute of Physics, Chinese Academy of Sciences*); *Guohong Liao* (*Institute of Physics, Chinese Academy of Sciences*); *Jiayu Wang* (*Institute of Physics, Chinese Academy of Sciences*); *Zhuan Wang* (*Institute of Physics, Chinese Academy of Sciences*); *Hailong Chen* (*Institute of Physics, Chinese Academy of Sciences*); *Song Qin* (*Yantai Institute of Coast Zone Research, Chinese Academy of Sciences*); *Yuxiang Weng* (*Institute of Physics, Chinese Academy of Sciences*);

13:20 Invited An Electrically Tunable Magnetic Sensor — Understanding the Physics Nature of Migratory Navigation

You-Quan Li (*Nankai University*);

13:40 Keynote Non-adiabatic Singlet Fission Dynamics Studied by Two-dimensional Electronic Spectroscopy

Buyang Yu (*Nanjing University*); *Chunfeng Zhang* (*Nanjing University*);

14:10 Invited How Animals Sense the Geomagentic Field to Navigate: From Ecology to Quantum Biology

Can Xie (*Hefei Institutes of Physical Science, Chinese Academy of Sciences*);

14:30 Invited Probing Charge Separation in the Photosynthetic Reaction Centers Using Ultrafast Multidimensional Spectroscopy

Yin Song (*Beijing Institute of Technology*);

14:50 Invited Two-dimensional Dpectroscopic Detection of Enantiomeric Excess

Hui Dong (*China Academy of Engineering Physics*);

15:10 **Coffee Break**

15:30 Invited Simulating Photosynthetic Energy Transport on a Photonic Network

Hao Tang (*Shanghai Jiao Tong University*); *Xiao-Wen Shang* (*Shanghai Jiao Tong University*); *Zi-Yu Shi* (*Shanghai Jiao Tong University*); *Tian-Shen He* (*Shanghai Jiao Tong University*); *Zhen Feng* (*Shanghai Jiao Tong University*); *Tian-Yu Wang* (*Shanghai Jiao Tong University*); *Ruoxi Shi* (*Shanghai Jiao Tong University*); *Hui-Ming Wang* (*Shanghai Jiao Tong University*); *Xi Tan* (*Shanghai Jiao Tong University*); *Xiaoyun Xu* (*Shanghai Jiao Tong University*); *Yao Wang* (*Shanghai Jiao Tong University*); *Jun Gao* (*Shanghai Jiao Tong University*); *M. S. Kim* (*Imperial College London*); *Xian-Min Jin* (*Shanghai Jiao Tong University*);

15:50 Invited Ultrafast Dynamics in the Active Site of Blue-light Photoreceptor BLUF Domains Using Transient IR and Two-dimensional IR Spectroscopy

Bei Ding (*Shanghai Jiao Tong University*);

16:10 Effects of Electronic-vibrational Resonance on the Energy Transfer of Photosynthesis Light-harvesting Complex
Xuan Leng (*Ningbo University*);

16:25 Quantum Random Walk Model for Protein Folding Time
Lihua Lu (*Zhejiang University*);

16:40 Coherent Energy Transfer in the LH1 of ***Hlr. Halochloris*** Containing 3 BChl ***b*** Rings
Long-Jiang Yu (*Institute of Botany, Chinese Academy of Sciences*); *Fei Ma* (*Institute of Botany, Chinese Academy of Sciences*);

16:55 Quantum Computation of Dissipative Dynamics with Electron-phonon Coupling
Xing Gao (*Sun Yat-sen University*);

17:10 Probing in vivo Magnetoresponses in Migratory Insects
Guijun Wan (*Nanjing Agricultural University*); *Christine Merlin* (*Texas A&M University*); *Weidong Pan* (*Institute of Electrical Engineering, Chinese Academy of Sciences*); *Gao Hu* (*Nanjing Agricultural University*); *Fajun Chen* (*Nanjing Agricultural University*);

Session 0P2
Quantum Sensing Methods and Applications

Sunday PM, April 21, 2024

Room 2 - Jincheng 3

Organized by Yong-Chun Liu, Bei Liu

Chaired by Yong-Chun Liu, Bei Liu

13:00 Spin-based Quantum Sensing and Its Applications
Invited
Xinhua Peng (*University of Science and Technology of China*);

13:20 Radio Fields Sensing Based on Rydberg Atoms
Invited
Linjie Zhang (*Shanxi University*);

13:40 Measurement of the Electric Dipole Moment (EDM) of ^{171}Yb Atoms in an Optical Dipole Trap (ODT)
Invited
Tian Xia (*University of Science and Technology of China*);

14:00 Quantum Metrology with Indefinite Causal Order
Invited
Geng Chen (*University of Science and Technology of China*);

14:20 Spin-based Quantum Sensing
Invited
Min Jiang (*University of Science and Technology of China*);

14:40 Double Electron-electron Resonance for C-centers in Diamond: Optimization, Coherent Control and Concentration Measurements
Invited
O. R. Rubinas (*P. N. Lebedev Physical Institute RAS*); *Vladimir V. Soshenko* (*P. N. Lebedev Institute, RAS*); *Ivan S. Cojocaru* (*Russian Quantum Center*); *Stepan V. Bolshedvorskii* (*P. N. Lebedev Physical Institute RAS*); *P. G. Vilyuzhanina* (*Russian Quantum Center*); *E. A. Primak* (*Russian Quantum Center*); *S. M. Drofa* (*Russian Quantum Center*); *A. M. Kozodaev* (*National Research Nuclear University "MEPhI"*); *V. G. Vins* (*LLC Velman*); *Vadim N. Sorokin* (*P. N. Lebedev Physical Institute RAS*); *A. N. Smolyaninov* (*LLC Sensor Spin Technologies*); *Aleksey V. Akimov* (*Russian Quantum Center*);

15:00 **Coffee Break**

15:30 Coupled Hybrid Atom Ensembles for Light Dark Matter and X Search (Change)
Invited
Kai Wei (*Beihang University*);

15:50 Challenging Dark Energy Theories Using Magnetically Levitated Force Sensors
Invited
Peiran Yin (*Nanjing University*);

16:10 Submillimeter-resolution 2D Atom Magnetometer Arrays and Its Application
Invited
Bei Liu (*Shandong University*); *Jin Peng* (*Shandong University*); *An-Ning Xu* (*Shandong University*);

16:30 Magnetic Field Sensing Based on Non-Hermitian Thermal Atomic Ensembles
Invited
Yong-Chun Liu (*Tsinghua University*);

Session 0P3
New Antennas and Testing Techniques for 5G/B5G Communications and Sensing Applications

Sunday PM, April 21, 2024

Room 3 - Jincheng 2

Organized by Xiaoming Chen, Luyu Zhao

Chaired by Zhixia Du, Yao Zhang

13:00 Reconstruction of the Under-sampled High-frequency Data in a Broadband Planar Near-field Test Based on the Asymptotic Field Similarity
Junhao Zheng (*Xi'an Jiaotong University*); *Binhui Liu* (*The 5th Electronic Research Institute, Ministry of Industry and Information Technology*); *Zhengpeng Wang* (*Beihang University*); *Xiaoming Chen* (*Xi'an Jiaotong University*);

13:15 Near-field Focusing Emulation of Near-field-focused Arrays Using Far-field-focused Arrays
Huaqiang Gao (*Xi'an Jiaotong University*); *Junhao Zheng* (*Xi'an Jiaotong University*); *Bingyi Qian* (*Xi'an Jiaotong University*); *Xiaoming Chen* (*Xi'an Jiaotong University*);

13:30 Design of a Dual-polarized High-gain Diagonal Horn Antenna
Chunliang Dai (*Shenyang Aircraft Design and Research Institute*); *Yongli Ma* (*Shenyang Aircraft Design and Research Institute*); *Chi Liu* (*Shenyang Aircraft Design and Research Institute*); *Linqian Jin* (*Beihang University*);

13:45 Estimation of Far-field Errors due to Probe Jitter in Planar Near-field Measurement Based on Interval Analysis Method
Jiaqian Ding (*Xi'an Jiaotong University*); *Junhao Zheng* (*Xi'an Jiaotong University*); *Tongyu Ding* (*Jimei University*); *Xiaoming Chen* (*Xi'an Jiaotong University*);

14:00 A Low-profile Broadband Reconfigurable Reflectarray with Reflective Feed
Changhao Li (*Xidian University*); *Mengkai Xi* (*Xidian University*); *Luyu Zhao* (*Anhui University*);

14:15 A Large-scale Compact Base Station Antenna Array with Improved Radiation Performance
Jiayue Jiang (*Xidian University*); *Luyu Zhao* (*Anhui University*);

14:30 A Type of In-band Full-duplex Antenna System with High Isolation for 5G NR Bands
Xiaosheng Zhang (*Xidian University*); *Zhe Xu* (*Xidian University*); *Luyu Zhao* (*Anhui University*);

14:45 Faults Detection in Phased Array: Compressed vs MUSIC Methods
Mario Del Prete (*Università degli Studi della Campania Luigi Vanvitelli*); *Maria Antonia Maisto* (*Universita degli Studi della Campania "Luigi Vanvitelli"*); *Antonio Cuccaro* (*University of Calabria*); *Raffaele Solimene* (*Universita degli Studi della Campania "Luigi Vanvitelli"*);

15:00 **Coffee Break**

15:30 A Low-frequency, Frequency Response-stable Scattering Calibration Target Based on a Dihedral Structure
Lei Zhao (*Shenyang Aircraft Corporation Beihang University*); *Junpeng Shi* (*Shenyang Aircraft Corporation Beihang University*); *Kang Zhu* (*Shenyang Aircraft Corporation Beihang University*);

15:45 A Broadband High-efficiency Amplifying Active Integrated Antenna
Haoqiang Chen (*Guangdong University of Technology*); *Changjun Lai* (*Guangdong University of Technology*); *Zhixia Du* (*Guangdong University of Technology*);

16:00 A Compact Circularly Polarized Active Integrated Antenna Based on Harmonic Impedance Control
Zhixia Du (*Guangdong University of Technology*);

16:15 A Polarization Convert Reflective Surface Based Wideband Antenna Array Decoupling Structure
Yao Zhang (*Xiamen University*); *Xiao Ling He* (*Xiamen University*); *Huanyang Chen* (*Xiamen University*); *Qing Huo Liu* (*Eastern Institute of Technology*);

16:30 A Low-cost Vehicular-mounted Multi-beam-switching Antenna System
Qing Liu Wang (*Xiamen University*); *Yao Zhang* (*Xiamen University*); *Huanyang Chen* (*Xiamen University*); *Qing Huo Liu* (*Eastern Institute of Technology*);

16:45 A Polarization Reconfigurable Beam Scanning Antenna Based on Stacked Microstrip Antenna Array
Xin Gu (*Shenyang Aircraft Corporation*); *Zhiquan Tian* (*Shenyang Aircraft Corporation*); *Chang Xu* (*Beijing Research Institute of Telemetry*); *Miaoshan Song* (*Beihang University*);

Session 0P4
Recent Advances in Optical Metasurfaces 1

Sunday PM, April 21, 2024

Room 4 - Jincheng 1

Organized by Fei Ding, Cheng Zhang

Chaired by Fei Ding, Cheng Zhang

13:00 Invited A Full-color Holographic Movie Based on Silicon Nitride Metasurface
Kentaro Iwami (*Tokyo University of Agriculture and Technology*); *M. Yamaguchi* (*Tokyo University of Agriculture and Technology*); *S. Ikezawa* (*Waseda University*);

13:20 Invited Metasurface-enhanced Nanospectroscopy and Molecular Diagnostics towards Quantum Biomedical Engineering
Inki Kim (*Sungkyunkwan University*);

13:40 Invited Gauge Field Based on 2-D Artificial Materials
Cuicui Lu (*Beijing Institute of Technology*);

14:00 Invited Algorithm-driven Design and Application of Optical Metamaterials
Wei Ma (*Zhejiang University*);

14:20 Invited Optical Imaging Based on Metasurfaces
Shu-Ming Wang (*Nanjing University*);

14:40 Keynote Dielectric Metasurfaces for Controlling THz Waves
Lei Zhou (*Fudan University*);

15:10 **Coffee Break**

15:30 Invited Versatile Plasmonic Colors with Pixelated Metasurface
Maowen Song (*Nanjing University*); *Yan-Qing Lu* (*Nanjing University*); *Ting Xu* (*Nanjing University*);

15:50 Invited LNOI-integrated Multifunctional Metasurfaces
Tao Li (*Nanjing University*); *Jitao Ji* (*Nanjing University*); *Zhizhang Wang* (*Nanjing University*); *Bin Fang* (*China Jiliang University*);

16:10 Invited New High-order Topological States and Topological Optical Switches
Shiwei Tang (*Ningbo University*);

16:30 Invited High-Q Optical Resonances in Periodic Photonic Structures
Zhanghua Han (*Shandong Normal University*);

16:50 Invited Efficient and Controllable Coupling of On-chip Photonic Systems
Shulin Sun (*Fudan University*); *Yizhen Chen* (*Fudan University*); *Zhuo Wang* (*Fudan University*); *Weikang Pan* (*Fudan University*); *Qiong He* (*Fudan University*); *Lei Zhou* (*Fudan University*);

17:10 Single-photon Sources of High-purity Polarized Vortex Beams Based on Anisotropic Metasurfaces
Xujing Liu (*University of Southern Denmark*); *Yinhui Kan* (*University of Southern Denmark*); *Sergey I. Bozhevolnyi* (*University of Southern Denmark*);

17:25 Multifunctional Deformation in Kirigami Spoof Plasmonic Interconnects
Xincheng Yao (*Zhejiang University*); *Liqiao Jing* (*Zhejiang University*); *Jie Tao* (*Zhejiang University*); *Hongsheng Chen* (*Zhejiang University*); *Zuojia Wang* (*Zhejiang University*);

Session 0P5
Advances of Numerical Methods in Computational Electromagnetics

Sunday PM, April 21, 2024

Room 5 - Yingbin

Organized by Mei Song Tong, Lei Guo

Chaired by Mei Song Tong, Lei Guo

13:00 A Computational Technique for Quantum Hydrodynamics
Christos Mystilidis (*KU Leuven*); *Guy A. E. Vandenbosch* (*KU Leuven*); *Xuezhi Zheng* (*KU Leuven*);

13:15 Aggregate Basis Functions for Subdomains of an Antenna Array
Ting Zang (*Shanghai Jiao Tong University*); *Gaobiao Xiao* (*Shanghai Jiao Tong University*);

13:30 Numerical Calculation of Anisotropic Mie Scattering Using Discrete Dipole Approximation Method
Luhao Ran (*Beijing Institute of Technology*); *Shangran Xie* (*Beijing Institute of Technology*);

13:45 On a Symmetry-based Hybrid Finite Element-mode Matching Method for 2D Scattering Problems
Yifan Li (*KU Leuven*); *Guy A. E. Vandenbosch* (*KU Leuven*); *Xuezhi Zheng* (*KU Leuven*);

14:00 Novel DGTD Method for Simulating EM Response of Bi-anisotropic Media
Qiang Ren (*Beihang University*);

14:15 On a T-matrix Modeling Scheme for Nonclassical Optical Response from Multiple Nanospheres in Planarly Stratified Layers
Xuezhi Zheng (*KU Leuven*); *Guy A. E. Vandenbosch* (*KU Leuven*);

14:30 A Time-domain Discontinuous Galerkin Method for Solving Maxwell Equations with Kerr Nonlinearity
Ruitao Sun (*King Abdullah University of Science and Technology (KAUST)*); *Ming Dong* (*King Abdullah University of Science and Technology (KAUST)*); *Liang Chen* (*King Abdullah University of Science and Technology (KAUST)*); *Hakan Bagci* (*King Abdullah University of Science and Technology (KAUST)*);

14:45 Rigorous Multi-modal Analysis of Partially Filled Waveguides for Accurate Permittivity and Permeability Retrievals
B. O. Zhu (*Nanjing University*); *Xiao Yu Li* (*Tongji University*); *Mei Song Tong* (*Tongji University*);

15:00 **Coffee Break**

15:30 RF Power Harvesting for Batteryless Wireless Sensing
Lei Guo (*Dalian University of Technology*);

15:45 A Novel Method for Near-field Coupled Path Visualization of Multi-conductor Microstrip Lines
Kenan Wang (*Beihang University*); *Hui Xu* (*Beihang University*); *Yanhua Peng* (*Beihang University*);

16:00 Study of the Terahertz Absorptance in 2D-based Nanoribbon Heterostructures
Omnia Samy (*United Arab University*); *Amine El Moutaouakil* (*United Arab University*);

16:15 A Sensorless Control Method for Built-in Permanent Magnet Synchronous Motor Based on High-frequency Pulse Sinusoidal Voltage Injection Method
Yingjie Gao (*Shanghai University of Engineering Science*); *Shu Jia Yan* (*Shanghai University of Engineering Science*); *Xinbo Liu* (*704th Research Institute, China Shipbuilding Industry Corporation*); *Shanshan Liu* (*704th Research Institute, China Shipbuilding Industry Corporation*); *Mei Song Tong* (*Tongji University*); *Qiang Chen* (*Shanghai University of Engineering Science*);

16:30 A Target Detection Algorithm for UAV Aerial Photography Based on Improved Yolov5
Cheng Chi (*Shanghai University of Engineering Science*); *Shu Jia Yan* (*Shanghai University of Engineering Science*); *Yingjie Gao* (*Shanghai University of Engineering Science*); *Mei Song Tong* (*Tongji University*);

16:45 Efficient Relation Extraction of Automobile Faults Based on Hidden Knowledge in Prompt Tuning Templates
Kai Zhang (*Shanghai University of Engineering Science*); *Shu Jia Yan* (*Shanghai University of Engineering Science*); *Qiang Chen* (*Shanghai University of Engineering Science*); *Yingjie Gao* (*Shanghai University of Engineering Science*); *Mei Song Tong* (*Tongji University*);

Session 0P6
Plasmonics and Photonics for Sustainability 1

Sunday PM, April 21, 2024

Room 6 - Huanhua

Organized by Emiliano Cortes, Matias Herran

Chaired by Emiliano Cortes, Matias Herran

13:00 Keynote — Surface-enhanced Raman Scattering with Machine Learning for Predictive Molecular and Biosensing
Xing Yi Ling (*Nanyang Technological University*);

13:30 Invited — Atomic Reconfigured Oxyhydroxides-alloy Photoanodes for Water Splitting with Stability beyond 250 Hours and Record Efficiency
Fei Xiang (*KAUST*); *Ning Li* (*King Abdullah University of Science and Technology (KAUST)*); *Arturo Burguete-Lopez* (*King Abdullah University of Science and Technology (KAUST)*); *Zhao He* (*King Abdullah University of Science and Technology (KAUST)*); *Maxim Elizarov* (*King Abdullah University of Science and Technology (KAUST)*); *Andrea Fratalocchi* (*King Abdullah University of Science and Technology (KAUST)*);

13:50 Invited — Plasmonics for Solar Fuels: From Nanoscale Insights to Scalable Devices
Alberto Naldoni (*University of Turin*);

14:10 Invited — Some Examples of Plasmonic Regulated Electrochemical Processes
Chao Zhan (*Xiamen University*); *Xia-Guang Zhang* (*Henan Normal University*); *Yan Wei* (*Fudan University*); *Jun Yi* (*Xiamen University*); *Wen-Bin Lin* (*Fudan University*); *Martin Moskovits* (*University of California*); *Zhong-Qun Tian* (*Xiamen University*);

14:30 Invited — Hot Electron-mediated Chemical Reactions with Plasmonic Nanostructures
Seunghoon Lee (*Dong-A University*);

14:50 Invited — Electric Field Enhancement in (Photo)Catalysis
Evangelina Pensa (*LMU*);

15:10 **Coffee Break**

15:30 Invited — Thin Film Plasmonic Supercrystals
Florian Schulz (*University of Hamburg*); *Felix Lehmkühler* (*The Hamburg Centre for Ultrafast Imaging (CUI)*); *Niclas S. Müller* (*Freie Universität Berlin*); *Ondřej Pavelka* (*Charles University*); *Fabian Westermeier* (*Deutsches Elektronen-Synchrotron DESY*); *Francesco Dallari* (*Deutsches Elektronen-Synchrotron DESY*); *Verena Markmann* (*Deutsches Elektronen-Synchrotron DESY*); *Yu Okamura* (*Freie Universität Berlin*); *Bruno G. M. Vieira* (*Federal University of Ceará*); *Sabrina Jürgensen* (*Freie Universität Berlin*); *Eduardo B. Barros* (*Federal University of Ceará*); *Gerhard Grübel* (*The Hamburg Centre for Ultrafast Imaging (CUI)*); *Holger Lange* (*University of Hamburg*); *Stephanie Reich* (*Freie Universität Berlin*);

15:50 Invited — Surface-enhanced Raman Spectroscopic Monitoring of Nanoparticle Catalysis Using Core-satellite Superstructures
Wei Xie (*Nankai University*);

16:10 Invited — In-situ Probing Surface Reactions Using Plasmonic Core-shell Nanostructures
Jian-Feng Li (*Xiamen University*);

16:30 Keynote — Plasmon Mediated Molecular Detection, Reaction and Manipulation
Chao Zhan (*Xiamen University*); *Jun Yi* (*Xiamen University*); *Xia-Guang Zhang* (*Henan Normal University*); *De-Yin Wu* (*Xiamen University*); *Zhong-Qun Tian* (*Xiamen University*);

17:00 Lattice Plasmons: Generation and Applications
Wenxin Wang (*Harbin Engineering University, Qingdao Innovation and Development Base*);

Session 0P7a
Metasurface: Concepts and Applications

Sunday PM, April 21, 2024

Room 7 - Xiling

Organized by Shulin Sun, Qiong He

Chaired by Shulin Sun

13:00 Invited — Plasmonic Rainbow Chip for Super-resolution Displacement Spectrometer and Surface Biosensor
Lyu Zhou (*The State University of New York at Buffalo*); *Nan Zhang* (*The State University of New York at Buffalo*); *Chang Chieh Hsu* (*The State University of New York at Buffalo*); *Matthew Singer* (*The State University of New York at Buffalo*); *Xie Zeng* (*The State University of New York at Buffalo*); *Yizheng Li* (*The State University of New York at Buffalo*); *Haomin Song* (*King Abdullah University of Science and Technology*); *Josep M. Jornet* (*University at Buffalo*); *Yun Wu* (*The State University of New York at Buffalo*); *Qiaoqiang Gan* (*King Abdullah University of Science and Technology (KAUST)*);

13:20 Invited — Compensating Losses in Polariton Propagation with Synthesized Complex Frequency Excitation
Fuxin Guan (*University of Hong Kong*);

13:40 Invited — Recent Advances in Quantum Information Metasurfaces
Long Chen (*Southeast University*); *Jianwei You* (*Southeast University*); *Ze Gu* (*Southeast University*); *Qian Ma* (*Southeast University*); *Tie Jun Cui* (*Southeast University*);

14:00 Imaging with an Ultra-thin Reciprocal Lens
Jiangguang Chen (*Fudan University*); *Wenzhe Liu* (*The Hong Kong University of Science and Technology*); *Lei Shi* (*Fudan University*); *Jian Zi* (*Fudan University*); *Che Ting Chan* (*The Hong Kong University of Science and Technology*);

14:15 Broadband Non-compound Helicity-decoupled Metasurface for Multimode Orbital Angular Momentum Multiplexing
Zuntian Chu (*Air Force Engineering University*); *Xinqi Cai* (*Air Force Engineering University*); *Tiefu Li* (*Air Force Engineering University*); *Ruichao Zhu* (*Air Force Engineering University*); *Huiting Sun* (*Air Force Engineering University*); *Jiafu Wang* (*Air Force Engineering University*);

14:30 Talbot Metasurfaces: A Self-focusing Tool with Polarization Conversion Functionalities
Abijith K. Reju (*National Institute of Technology Calicut*); *Natesan Yogesh* (*National Institute of Technology Calicut*);

14:45 Realization of Planar Focusing Configuration Based on Hyperbolic Metasurface
S. Gokul (*National Institute of Technology Calicut*); *Sneha Mary Biju* (*National Institute of Technology Calicut*); *P. Sandra* (*National Institute of Technology Calicut*); *M. Pavithra* (*University of Madras (Guindy Campus)*); *K. Ravichandran* (*University of Madras (Guindy Campus)*); *Barkathulla Asrafali* (*Shenzhen University*); *Zhengbiao Ouyang* (*Shenzhen University*); *Natesan Yogesh* (*National Institute of Technology Calicut*);

15:00 Ku-band Antenna Array Based on a Fabry-Perot Cavity
Stanislav V. Polenga (*Siberian Federal University*); *E. A. Strigova* (*Siberian Federal University*); *A. V. Stankovskiy* (*Siberian Federal University*); *R. O. Ryazantsev* (*Siberian Federal University*); *A. D. Poligina* (*Siberian Federal University*);

15:15 **Coffee Break**

Session 0P7b
Oral Presentations for Best Student Paper Awards — SC1: CEM, EMC, Scattering & EM Theory

Sunday PM, April 21, 2024

Room 7 - Xiling

Chaired by Qing Huo Liu, Amir Boag, Jun Fan

15:30 Efficient High-Order MHODLR Solver for Electrically Large Metallic Objects in Planarly Layered Media
Chuzhao Liu (*University of Electronic Science and Technology of China*); *Heng Wang* (*University of Electronic Science and Technology of China (UESTC)*); *Yongpin Chen* (*University of Electronic Science and Technology of China*); *Sheng Sun* (*University of Electronic Science and Technology of China*); *Jun Hu* (*University of Electronic Science and Technology of China*);

15:45 An Efficient T-matrix Extraction Technique for Arbitrary-shaped Scatterers and Its Application in 3D Multiple Scattering Modeling
Haifeng Zheng (*Zhejiang University*); *Xuyang Bai* (*Zhejiang University*); *Shurun Tan* (*Zhejiang University/University of Illinois at Urbana-Champaign Institute*); *Leung Tsang* (*University of Michigan*);

16:00 Real-time Computation of Brain $\boldsymbol{E}$-field for Enhanced Transcranial Magnetic Stimulation Neuronavigation and Optimization
Nahian Ibn Hasan (*Purdue University*); *Moritz Dannhauer* (*National Institutes of Health*); *Dezhi Wang* (*Purdue University*); *Zhi-De Deng* (*National Institutes of Health*); *Luis J. Gomez* (*Purdue University*);

16:15 Adaptive Mutual Coupling Compensation-based Information Transmission
Ruifeng Li (*Zhejiang University*); *Da Li* (*Zhejiang University*); *Ling Zhang* (*Zhejiang University*); *Jinyan Ma* (*Zhejiang University*); *Er Ping Li* (*Zhejiang University — UIUC Institute*);

16:30 Solving Poisson's Equation in Electromagnetics with Limited Data and Arbitrary Domain Deformation Using Physics-enhanced Neural Operator
Zheng Zong (*Zhejiang University*); *Zhun Wei* (*Zhejiang University*);

16:45 Efficient Physical Optics Solution of EM Scattering from Multi-layer Anisotropic Media Coated Target
Mengbo Hua (*Wuhan University*); *Si-Yuan He* (*Wuhan University*); *Wei Gong* (*Wuhan University*); *Ru-Meng Chen* (*Wuhan University*);

Session 0P8
High Power Millimeter-wave and Terahertz Radiation Sources

Sunday PM, April 21, 2024

Room 8 - Guixiang

Organized by Guoxiang Shu, Guo Liu

Chaired by Guoxiang Shu, Guo Liu

13:00 The Phase Re-matching Method to Synthesis Smooth-walled Horn for High-power Millimeter-wave Applications
Xiaoyi Liao (*Nanjing University of Information Science and Technology*); *Zewei Wu* (*University of Electronic Science and Technology of China*); *Minxing Wang* (*University of Electronic Science and Technology of China*); *Guowen Ding* (*University of Electronic Science and Technology of China*); *Chen Zhao* (*Nanjing University of Information Science and Technology*);

13:15 Investigation of the Effect of Dielectric Dissipation for a High Power W-band Gyro-TWT
W. J. Wang (*University of Electronic Science and Technology of China*); *Guo Liu* (*University of Electronic Science and Technology of China*);

13:30 Powerful Oversized Surface-wave Oscillators with 2D-periodical Slow-wave Structures of Cylindrical Geometry Operating in W and G Bands
Nikolai Yu. Peskov (*Institute of Applied Physics, RAS*); *Vladislav Yu. Zaslavsky* (*Institute of Applied Physics, RAS*); *Edward B. Abubakirov* (*Institute of Applied Physics Russian Academy of Sciences*); *Andrey N. Denisenko* (*Institute of Applied Physics RAS*); *Naum S. Ginzburg* (*Institute of Applied Physics, RAS*); *Andrey M. Malkin* (*Institute of Applied Physics, RAS*); *Mikhail D. Proyavin* (*Institute of Applied Physics, RAS*); *Alexander S. Sergeev* (*Institute of Applied Physics, RAS*);

13:45 Projects of Sub-GW Power Sub-THz Band Planar Cherenkov Masers with Two-dimensional Distributed Feedback
Nikolai Yu. Peskov (*Institute of Applied Physics, RAS*); *Vladislav Yu. Zaslavsky* (*Institute of Applied Physics, RAS*); *Naum S. Ginzburg* (*Institute of Applied Physics, RAS*); *Andrey M. Malkin* (*Institute of Applied Physics, RAS*); *Alexander S. Sergeev* (*Institute of Applied Physics, RAS*); *Andrey V. Arzhannikov* (*Budker Institute of Nuclear Physics RAS*); *Petr V. Kalinin* (*Budker Institute of Nuclear Physics RAS*); *Evgeny S. Sandalov* (*Budker Institute of Nuclear Physics RAS*); *Stanislav L. Sinitsky* (*Budker Institute of Nuclear Physics Russian Academy of Sciences*); *Vasily D. Stepanov* (*Budker Institute of Nuclear Physics RAS*);

14:00 Simulation of Nanosecond Microwave Pulse Amplification Based on a Gyrotron Traveling Wave Tube
Ruoyang Pan (*University of Electronic Science and Technology of China*); *Zhiyuan Zhang* (*University of Electronic Science and Technology of China*); *Guo Liu* (*University of Electronic Science and Technology of China*); *Weijie Wang* (*University of Electronic Science and Technology of China*); *Yelei Yao* (*University of Electronic Science and Technology of China*); *Jiang Wei* (*University of Electronic Science and Technology of China*); *Zewei Wu* (*University of Electronic Science and Technology of China*); *Youlei Pu* (*University of Electronic Science and Technology of China*); *Jianxun Wang* (*University of Electronic Science and Technology of China*); *Yong Luo* (*University of Electronic Science and Technology of China*);

14:15 Design and Simulation of a V Band High-power TWT with Rectangular-ring Vertex Double-bar SWS
Cong Tao (*Jiangxi University of Science and Technology*); *Wanghe Wei* (*Jiangxi University of Science and Technology*); *Wenhao Ding* (*Jiangxi University of Science and Technology*); *Jingsong Len* (*Jiangxi University of Science and Technology*); *Kun Zhu* (*Jiangxi University of Science and Technology*);

14:30 Development and Fabrication of Slow-wave Structures for Miniaturized Double-beam W-band Traveling-wave Tubes
Roman Antonovich Torgashov (*V. A. Kotel'nikov Institute of Radio Engineering and Electronics RAS*); *Alena A. Rostuntsova* (*Institute of Radio Engineering and Electronics RAS*); *D. A. Nozhkin* (*Institute of Radio Engineering and Electronics RAS*); *Andrei Victorovich Starodubov* (*Saratov State University*); *E. E. Kolesnichenko* (*Institute of Radio Engineering and Electronics RAS*); *I. S. Ozhogin* (*Institute of Radio Engineering and Electronics RAS*); *Nikita Mikhailovich Ryskin* (*V. A. Kotel'nikov Institute of Radio Engineering and Electronics RAS*);

14:45 3-D Particle-in-cell Modeling of the Plasma-assisted Sub-THz Backward-wave Oscillator
Nikita Mikhailovich Ryskin (*V. A. Kotel'nikov Institute of Radio Engineering and Electronics RAS*); *Vladimir N. Titov* (*Saratov State University*); *Roman Antonovich Torgashov* (*V. A. Kotel'nikov Institute of Radio Engineering and Electronics RAS*); *Prerna Unadkat* (*Academy of Scientific and Innovative Research (AcSIR), and CSIR-Central Electronics Engineering Research Institute*); *Vishant Dwivedi* (*Central Electronics Engineering Research Institute*); *Anand Abhishek* (*CSIR-Central Electronics Engineering Research Institute*); *Niraj Kumar* (*CSIR-Central Electronics Engineering Research Institute (CSIR-CEERI)*);

15:00 **Coffee Break**

15:30 Design of a Three-stage Depressed Collector for 220 GHz Travelling Wave Tubes
Jiawei Tang (*Shenzhen University*); *Guoxiang Shu* (*Shenzhen University*); *Xinlun Xie* (*Shenzhen University*); *Huaxing Pan* (*Shenzhen University*); *Shaochen Ma* (*Shenzhen University*); *Mingze Li* (*Shenzhen University*); *Siyuan Liu* (*Shenzhen University*); *Wenlong He* (*Shenzhen University*);

15:45 Design and Simulation of a 220 GHz Sheet Beam Electron Gun
Huaxing Pan (*Shenzhen University*); *Guoxiang Shu* (*Shenzhen University*); *Xinlun Xie* (*Shenzhen University*); *Fu Gao* (*Shenzhen University*); *Shaochen Ma* (*Shenzhen University*); *Jiawei Tang* (*Shenzhen University*); *Siyuan Liu* (*Shenzhen University*); *Mingze Li* (*Shenzhen University*); *Wenlong He* (*Shenzhen University*);

16:00 Sub-terahertz Planar Relativistic Surface-wave Oscillator with Two-dimensional Distributed Feedback Based on High-current Explosive Emission Electron Beam
Vladislav Yur'evich Zaslavsky (*Institute of Applied Physics, RAS*); *Ilya V. Zheleznov* (*Institute of Applied Physics, RAS*); *Alexander S. Sergeev* (*Institute of Applied Physics, RAS*); *Alexey V. Palitsin* (*Russian Acad Sci, Inst Appl Phys*); *Yu. V. Rodin* (*Institute of Applied Physics, RAS*); *M. B. Goykhman* (*Institute of Applied Physics, RAS*); *A. V. Gromov* (*Institute of Applied Physics, RAS*);

16:15 Generation of Sub-Nanosecond Microwave Pulse with High Compression Factor Using Reflection Structure
Zhiyuan Zhang (*University of Electronic Science and Technology of China*); *Ruoyang Pan* (*University of Electronic Science and Technology of China*); *Weijie Wang* (*University of Electronic Science and Technology of China*); *Zhiqiang Wu* (*University of Electronic Science and Technology of China*); *Guo Liu* (*University of Electronic Science and Technology of China*); *Yelei Yao* (*University of Electronic Science and Technology of China*); *Wei Jiang* (*University of Electronic Science and Technology of China*); *Zewei Wu* (*University of Electronic Science and Technology of China*); *Jianxun Wang* (*University of Electronic Science and Technology of China*); *Yong Luo* (*Laboratory of Electromagnetic Space Cognition and Intelligent Control*);

16:30 High Temperature Thermal Deformation Stability Analysis of High Power TWT Ceramic Components
Pucheng Wang (*University of Electronic Science and Technology of China*); *Wei Jiang* (*University of Electronic Science and Technology of China*); *Q. Q. Chen* (*University of Electronic Science and Technology of China*); *Yong Luo* (*University of Electronic Science and Technology of China*); *Jianxun Wang* (*University of Electronic Science and Technology of China*);

Session 0P9
Near-/Mid-/Far-Infrared Semiconductor Optoelectronic Devices: Fundamentals and Applications

Sunday PM, April 21, 2024

Room 9 - Xinyu

Organized by Yongquan Zeng, Song Han

Chaired by Yongquan Zeng, Song Han

13:00 Invited Terahertz Semiconductor Bound States in The Continuum Lasers
Jieyuan Cui (*Nanyang Technological University*); *Song Han* (*Zhejiang University*); *Bofeng Zhu* (*Nanyang Technological University*); *Yunda Chua* (*Nanyang Technological University*); *Chongwu Wang* (*Nanyang Technological University*); *Qian Wang* (*Institute of Materials Research and Engineering, A*STAR*); *Yongquan Zeng* (*Wuhan University*); *Lianhe Li* (*University of Leeds*); *Alexander Giles Davies* (*University of Leeds*); *Edmund Harold Linfield* (*University of Leeds*); *Qi Jie Wang* (*Nanyang Technological University*);

13:20 Invited Advancements in Integrated Silicon Photonics: Monolithic and Heterogeneous Approaches to On-chip Lasers
Xiangpeng Ou (*King Abdullah University of Science and Technology*); *William He* (*King Abdullah University of Science and Technology*); *Ying Shi* (*King Abdullah University of Science and Technology*); *Artem Prokoshin* (*King Abdullah University of Science and Technology*); *Yating Wan* (*King Abdullah University of Science and Technology*);

13:40 Keynote Green, Large Data Rate Communication in Data Centers: Intelligent Physics and Engineering will Contribute to a Sustainable Society
Dieter H. Bimberg (*CIOMP of CAS, Changchun and TU Berlin*);

14:10 Invited Ultralow-loss Heterogeneous Silicon Nitride Integrated Photonics
Junqiu Liu (*École Polytechnique Fédérale de Lausanne*);

14:30 Invited Highly Efficient Chip-scale Long-wavelength Infrared Optical Parametric Generation
Houkun Liang (*Sichuan University*);

14:50 Invited Optical Hot Carriers Effect-based Infrared Sensing
Qisheng Wang (*Nanchang University*);

15:10 **Coffee Break**

15:30 Invited High Performance Distributed Feedback Quantum Cascade Lasers Based on Monolithic Integration
Jun-Qi Liu (*Key Laboratory of Semiconductor Materials Science, Institute of Semiconductors, Chinese Academy of Sciences*); *Xiyu Lu* (*Key Laboratory of Semiconductor Materials Science, Institute of Semiconductors, Chinese Academy of Sciences*); *Jing Tang* (*Key Laboratory of Semiconductor Materials Science, Institute of Semiconductors, Chinese Academy of Sciences*);

15:50 Invited Mid-infrared Laser Chaos and Chaotic Lidar
Cheng Wang (*ShanghaiTech University*);

16:10 Invited Two-dimensional Nanophotonics in the Infrared/THz Regime
Xuechao Yu (*Suzhou Institute of Nano-Tech and Nano-Bionics*);

16:30 Research on Infrared-terahertz Detectors Based on Emerging Nanomaterials
Cheng Guo (*Zhejiang Lab*);

16:45 Terahertz All-silicon Reconfigurable Photonic On-chip Devices
Hang Ren (*Jilin University*); *Su Xu* (*Jilin University*);

17:00 Bias-free Magneto-optical Isolator Based on Cobalt Ferrite Films for Photonic Integrated Circuits
Gianni Portela (*Tokyo Institute of Technology*); *Yisheng Ni* (*Tokyo Institute of Technology*); *Kotaro Sato* (*Tokyo Institute of Technology*); *Yuya Shoji* (*Tokyo Institute of Technology*); *Hugo Enrique Hernandez-Figueroa* (*University of Campinas*);

17:15 Optically Pumped Stimulated Emission in HgCdTe-based Quantum Wells: Toward Continuous Wave Lasing in Very Long-wavelength Infrared Range
Vladimir V. Rumyantsev (*Institute for Physics of Microstructures RAS*); *K. A. Mazhukina* (*Institute for Physics of Microstructures of RAS*); *V. V. Utochkin* (*Institute for Physics of Microstructures RAS*); *A. A. Dubinov* (*Institute for Physics of Microstructures RAS*); *V. Ya. Aleshkin* (*Institute for Physics of Microstructures of RAS*); *M. A. Fadeev* (*Institute for Physics of Microstructures of RAS*); *D. I. Kuritsin* (*Institute for Physics of Microstructures RAS*); *K. E. Kudryavtsev* (*Institute for Physics of Microstructures of RAS*); *A. A. Razova* (*Institute for Physics of Microstructures of RAS*); *N. N. Mikhailov* (*Institute of Semiconductor Physics, Siberian Branch of Russian Academy of Sciences*); *S. A. Dvoretsky* (*Institute of Semiconductor Physics, Siberian Branch of Russian Academy of Sciences*); *V. I. Gavrilenko* (*Institute for Physics of Microstructures of RAS*); *Sergey V. Morozov* (*Institute for Physics of Microstructures of RAS*);

17:30 The Study of the Main Junction of the VDMOS Termination
Xiaopei Chen (*Southwest Jiaotong University*); *Lixiang Wang* (*Chengdu Technological University*); *Quanyuan Feng* (*Southwest Jiaotong University*); *Suping Huang* (*Southwest Jiaotong University*);

Session 0P10a
Advances in EM Scattering and Propagation from Complex Land/Marine Environment: Theories, Measurements and Applications

Sunday PM, April 21, 2024

Room 10 - Shuliu

Organized by Li-Xin Guo, Yiwen Wei

Chaired by Yiwen Wei

13:00 Modelling the UAV-based Radio Relay System in Complex Propagation Conditions Using the Parabolic Equation Method
Mikhail S. Lytaev (*St. Petersburg Federal Research Center of the Russian Academy of Sciences*);

13:15 Empirical Model for Fast Estimation of Decorrelation Induced by Ocean Waves in Interferometric Radar Altimeter
Yining Bai (*China University of Petroleum*); *Yunhua Wang* (*Ocean University of China*); *Ge Chen* (*Ocean University of China*); *Yonggang Ji* (*China University of Petroleum*); *Hanwei Sun* (*Beijing Institute of Radio Measurement*);

13:30 Electromagnetic Scattering Calculation of Corner Reflector Moving with Waves
Ying'ao Liu (*Xidian University*); *Wei Liu* (*Xidian University*); *Yanchun Zuo* (*Xidian University*);

13:45 Error Analysis of RCS Dynamic Measurement System
Jingyi Wang (*Xidian University*); *Run Huang* (*Xidian University*); *Yanchun Zuo* (*Xidian University*); *Qi Zhao* (*Xidian University*); *Xing Su* (*Xidian University*); *Wei Liu* (*Xidian University*);

14:00 Double-ridged Horn Antenna for Electromagnetic Scattering Measurement Experiment
Dayong Wu (*Xidian University*); *Wenyan Wang* (*Xidian University*); *Dilong Wu* (*Xidian University*); *Chonghao Sun* (*Xidian University*); *Yanchun Zuo* (*Xidian University*); *Li-Xin Guo* (*Xidian University*);

14:15 Electromagnetic Transmission for Dust Clouds in X-band and Ka-band
Qi Zhao (*Xidian University*); *Run Huang* (*Xidian University*); *Danyang Li* (*Xidian University*); *Bing Lv* (*Xidian University*); *Yanchun Zuo* (*Xidian University*); *Li-Xin Guo* (*Xidian University*);

14:30 Research of Objection Recognition Based on Radar Cross Section Calculations
Chonghao Sun (*Xidian University*); *Run Huang* (*Xidian University*); *Ziqi Nie* (*Xidian University*); *Jingyi Wang* (*Xidian University*); *Yanchun Zuo* (*Xidian University*); *Rui Wang* (*Xidian University*);

14:45 Based on Laser-induced Breakdown Spectroscopy and Encryption and Decryption of Printer Chinese Information
Xing Su (*Xidian University*); *Chungang Jia* (*Xidian University*); *Yanchun Zuo* (*Xidian University*); *Dayong Wu* (*Xidian University*); *Li Shen* (*Tianjin University of Technology*); *Li-Xin Guo* (*Xidian University*);

15:00 **Coffee Break**

15:30 Research on the Propagation Characteristics of Electromagnetic Waves in Non-uniform Evaporation Duct at Sea Based on Three-dimensional Parabolic Equation
Tianhang Nie (*Xidian University*); *Hanjie Ji* (*Xidian University*); *Yiwen Wei* (*Xidian University*); *Li-Xin Guo* (*Xidian University*);

15:45 Research on the Over-the-horizon Propagation Loss of Radar Waves in Non-uniform Marine Evaporation Duct Based on Standard Parabolic Equation
Hanjie Ji (*Xidian University*); *Li-Xin Guo* (*Xidian University*); *Yiwen Wei* (*Xidian University*); *Jinpeng Zhang* (*China Research Institute of Radiowave Propagation*); *Tianhang Nie* (*Xidian University*);

Session 0P10b
Wave Propagation and Scattering: Advances, Trends, and New Applications

Sunday PM, April 21, 2024

Room 10 - Shuliu

Organized by Xingqi Zhang, Xinyue Zhang

Chaired by Hao Qin

16:00 Parabolic Equation-based Channel Model for RIS-aided Train Communication Systems
Hao Qin (*University College Dublin*); *Xingqi Zhang* (*University of Alberta*);

16:15 Efficient Two-way Parabolic Equation Method with Sparse Fourier Transform for Radio Wave Propagation over Irregular Terrain
Hao Qin (*University College Dublin*); *Sicheng An* (*University of Alberta*); *Xingqi Zhang* (*University of Alberta*);

16:30 Mathematical Modeling of the Singularities of Caustic Structure of Electromagnetic Waves Formed by Traveling Ionospheric Disturbances
E. V. Mikhaleva (*Russian New University*); *Andrew S. Kryukovsky* (*Russian New University*); *Dmitry S. Lukin* (*Russian New University*); *Dmitry V. Rastyagaev* (*Russian New University*);

16:45 Research on Vortex Light Atmospheric Detection Based on Dataset Optimization Algorithm
Wenjie Jiang (*Xidian University*); *Mingjian Cheng* (*Xidian University*); *Li-Xin Guo* (*Xidian University*); *Bowen Tao* (*Xidian University*);

17:00 Scattering Characteristics of Vortex Electromagnetic Waves by Symmetrical Targets
Haodong Wang (*Xidian University*); *Tan Qu* (*Xidian University*); *Jiandong Niu* (*Beijing Institute of Radio Measurement*); *Jiaji Wu* (*Xidian University*);

17:15 Efficient Uncertainty Quantification with Subspace Pursuit for FDTD Based Microwave Circuit Models
Sicheng An (*University of Alberta*); *Hao Qin* (*University College Dublin*); *Xingqi Zhang* (*University of Alberta*);

Session 0P11
Stimulated Scattering and Its Applications

Sunday PM, April 21, 2024

Room 11 - Xiangyu

Organized by Zhenxu Bai, Quan Sheng

Chaired by Zhenxu Bai, Quan Sheng

13:00 Invited Widely Tunable High-power Terahertz Generation Based on Stimulated Polariton Scattering
Kai Zhong (*Tianjin University*); *Fangjie Li* (*Tianjin University*); *Jing Chi* (*Tianjin University*); *Jining Li* (*Tianjin University*); *Yuye Wang* (*Tianjin University*); *Degang Xu* (*Tianjin University*); *Jian-Quan Yao* (*Tianjin University*);

13:15 Thermal Convection and Its Effect on Beam Distortion in High-repetition-rate Liquid SBS-PCM
Yifu Chen (*Harbin Institute of Technology*); *B. W. Tan* (*Hebei University of Technology*); *J. Duo* (*Hebei University of Technology*); *B. Chen* (*Hebei University of Technology*); *Zhenxu Bai* (*Hebei University of Technology*); *K. Wang* (*Hebei University of Technology*); *Yulei Wang* (*Hebei University of Technology*); *Zhiwei Lu* (*Hebei University of Technology*);

13:30 Invited Thermal Suppression in High-power SBS Pulse Compression
Hongli Wang (*North University of China*);

13:45 Spatial Beam Shaping Based on SBS Beam Combination
Yue Wang (*Harbin Institute of Technology*); *Can Cui* (*Hebei University of Technology*); *Zhenxu Bai* (*Hebei University of Technology*); *Yulei Wang* (*Hebei University of Technology*); *Zhiwei Lv* (*Hebei University of Technology*);

14:00 High-power High-performance Brillouin Single-frequency Fiber Laser
Can Li (*South China University of Technology*); *Yue Tao* (*National University of Defense Technology*); *Jiang Man* (*National University of Defense Technology*); *Pu Zhou* (*National University of Defense Technology*); *Zongfu Jiang* (*National University of Defense Technology*);

14:15 Study on the Output Characteristics of External-cavity Tunable Diode Lasers
Liwen Sheng (*Ceyear Technologies Co., Ltd*); *Chonglin Ge* (*Ceyear Technologies Co., Ltd*); *Lingfeng Xiao* (*Ceyear Technologies Co., Ltd*); *Yiqi Zhang* (*Ceyear Technologies Co., Ltd*); *Jinpeng Lang* (*Ceyear Technologies Co., Ltd*); *Lin Huang* (*Ceyear Technologies Co., Ltd*); *Zhihui Zhang* (*Ceyear Technologies Co., Ltd*); *Zhiming Liu* (*Ceyear Technologies Co., Ltd*);

14:30 Invited A Continuous-wave Nd:YVO_4-KGW Intracavity Raman Laser with Over 34% Diode-to Stokes Optical Efficiency
Quan Sheng (*Tianjin University*); *Shijie Fu* (*Tianjin University*); *Wei Shi* (*Tianjin University*); *Jian-Quan Yao* (*Tianjin University*);

14:45 Invited Direct Generation of 1176 nm Vortex Beam from a Nd:YVO_4 Self-Raman Laser via Annular Pumping
Li Fan (*Yangzhou University*); *L. M. Wang* (*Yangzhou University*); *R. Sun* (*Yangzhou University*); *Z. C. Ren* (*Nanjing University*); *X. L. Wang* (*Nanjing University*); *H. T. Wang* (*Nanjing University*);

15:05 **Coffee Break**

15:30 Invited Eye-safe Intra-cavity Diamond Cascaded Raman Laser with High Peak-power
Yongsheng Hu (*Zhengzhou University*); *X. B. Mi* (*Zhengzhou University*); *H. J. Ma* (*Zhengzhou University*); *J. R. He* (*Zhengzhou University*); *Chongxin Shan* (*Zhengzhou University*);

15:45 High-power Free-running Single Frequency Diamond Raman Laser
Xuezong Yang (*Tianjin University*); *Quan Sheng* (*Tianjin University*);

16:00 Invited High-power Dual-wavelength Intracavity Diamond Raman Laser
Zhenxu Bai (*Hebei University of Technology*); *Hui Chen* (*Hebei University of Technology*); *Xiaowei Li* (*Hebei University of Technology*); *Yufan Cui* (*Hebei University of Technology*); *Yulei Wang* (*Hebei University of Technology*); *Zhiwei Lv* (*Hebei University of Technology*);

16:15 Brillouin Random Fiber Laser: A Good Platform for Fundamentals in Photonics and Beyond
Invited
Liang Zhang (*Shanghai University*);

16:30 Effective SRS Suppression in High Power Narrow Linewidth Fiber Laser
Ye Zheng (*Beijing Institute of Aerospace Control Devices*); *Shihao Sun* (*Beijing Institute of Aerospace Control Devices*);

16:45 Multi-color Wavelength Switchable Raman Laser Based on Selective Wave-mixing Mechanism
Yiqing Lu (*Wenzhou University*); *Yanmin Duan* (*Wenzhou University*); *Yong Wei* (*Hunan Institute of Science and Technology*); *Meng Yan* (*Wenzhou University*); *Yongchang Zhang* (*Wenzhou University*); *Dong Zhang* (*Wenzhou University*); *Haiyong Zhu* (*Wenzhou University*);

17:00 High Repetition Rate Large Energy and Short Pulse Zig-
Invited zag Slab Laser Amplifiers
Yu Yu (*Hebei University of Technology*); *Kai Li* (*Hebei University of Technology*); *Hengzhe Yu* (*Hebei University of Technology*); *Yuei Wang* (*Hebei University of Technology*); *Zhiwei Lu* (*Hebei University of Technology*);

17:15 Influence of Temperature-salinity Parameters on Fre-
Invited quency Shift of Brillouin LIDAR
Jiulin Shi (*Nanchang Hangkong University*); *Xiaohong Jia* (*Nanchang Hangkong University*); *Zijian Yu* (*Nanchang Hangkong University*); *Guoliang Yan* (*Nanchang Hangkong University*); *Xingxing Wu* (*Nanchang Hangkong University*); *Xingdao He* (*Nanchang Hangkong University*);

17:35 Extending the Sensing Distance of a Single-end Random-access BOTDA for Dynamic Sensing
Pengbai Xu (*Institute of Advanced Photonics Technology*); *Y. Peng* (*Institute of Advanced Photonics Technology*); *Kunhua Wen* (*Institute of Advanced Photonics Technology*); *X. Dong* (*Institute of Advanced Photonics Technology*); *Jun Yang* (*Institute of Advanced Photonics Technology*); *Yuwen Qin* (*Guangdong University of Technology*);

Session 0P12
Gyrotrons and Fast Wave Devices 1

Sunday PM, April 21, 2024

Room 12 - Siji 1

Organized by Mikhail Yu. Glyavin, Wenjie Fu

Chaired by Mikhail Yu. Glyavin, Wenjie Fu

13:00 MW-power "Inverted-Gyrotron" Cyclotron-resonance Rectenna
Grigory G. Denisov (*Institute of Applied Physics, Russian Academy of Sciences*); *Irina V. Zotova* (*Institute of Applied Physics, RAS*); *Ilya V. Zheleznov* (*Institute of Applied Physics, RAS*); *Roman Markovich Rozental* (*Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)*); *Alexander S. Sergeev* (*Institute of Applied Physics, Russian Academy of Sciences*); *Vladimir N. Manuilov* (*Institute of Applied Physics RAS*); *Mikhail Yu. Glyavin* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*);

13:15 High-power Millimeter Wave Radiation for Fundamental and Applied Plasma Studies at the A. V. Gaponov-Grekhov Institute of Applied Physics
Vadim A. Skalyga (*Federal Research Center A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Nikita V. Chekmarev* (*Federal Research Center A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Mikhail Yu. Glyavin* (*Federal Research Center A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *S. V. Golubev* (*Federal Research Center A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *I. V. Izotov* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *D. A. Mansfeld* (*Federal Research Center A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *A. V. Polyakov* (*Federal Research Center A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *E. I. Preobrazhenskiy* (*Federal Research Center A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *S. V. Razin* (*Federal Research Center A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *A. V. Sidorov* (*Federal Research Center A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Sergey V. Sintsov* (*Federal Research Center A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *A. P. Veselov* (*Federal Research Center A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *M. E. Viktorov* (*Federal Research Center A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *A. V. Vodopyanov* (*Federal Research Center A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *S. S. Vybin* (*Federal Research Center A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*);

13:30 Gyrotron Electron Optic Systems: Types and Capabilities
Vladimir N. Manuilov (*Institute of Applied Physics RAS*);

13:45 First Experiments on Frequency Locked Operation of the 170 GHz/1 MW Gyrotron
Andrey P. Fokin (*Institute of Applied Physics of the RAS*); *Andrey N. Kuftin* (*Institute of Applied Physics of the RAS*); *Vladimir I. Belousov* (*Institute of Applied Physics RAS*); *A. V. Chirkov* (*Institute of Applied Physics of the Russian Academy of Sciences*); *Mikhail I. Shmelev* (*Institute of Applied Physics of the RAS*); *German Yu. Golubiatnikov* (*Institute of Applied Physics of the RAS*); *Boris Z. Movshevich* (*Institute of Applied Physics of the RAS*); *Evgeniy M. Tai* (*Institute of Applied Physics of the RAS*); *Mikhail Yu. Glyavin* (*Institute of Applied Physics RAS*); *Grigory G. Denisov* (*Institute of Applied Physics, Russian Academy of Sciences*);

14:00 Invited Prospects of Creation of Pulsed 1 THz High-Harmonic Gyrotrons of the Kilowatt Power Level for Plasma Applications
Ilya V. Bandurkin (*Institute of Applied Physics RAS*); *Yuriy Kalynov* (*Institute of Applied Physics, RAS*); *Ivan V. Osharin* (*Institute of Applied Physics, RAS*); *Andrei V. Savilov* (*Institute of Applied Physics, RAS*); *Ekaterina M. Novak* (*Institute of Applied Physics RAS*);

14:20 Design and Experiment on One-octave Bandwidth Gyro-BWO with a Microwave Circuit in the Form of Zigzag Quasi-optical Transmission Line
Sergey V. Samsonov (*Institute of Applied Physics, Russian Academy of Sciences*); *Grigory G. Denisov* (*Institute of Applied Physics, Russian Academy of Sciences*); *Alexandr Bogdashov* (*Institute of Applied Physics, Russian Academy of Sciences*); *Igor G. Gachev* (*Institute of Applied Physics, Russian Academy of Sciences*); *Maxim V. Kamenskiy* (*Institute of Applied Physics, Russian Academy of Sciences*); *Andrei V. Savilov* (*Institute of Applied Physics, RAS*); *Ekaterina M. Novak* (*Institute of Applied Physics RAS*);

14:35 Double-beam Gyrotron with Simultaneous Excitation at the 1st and at the 2nd Cyclotron Harmonics
Ilya V. Zheleznov (*Institute of Applied Physics, RAS*); *Vladislav Yur'evich Zaslavsky* (*Institute of Applied Physics, Russian Academy of Sciences*); *K. A. Leshcheva* (*Institute of Applied Physics, RAS*); *Mikhail D. Proyavin* (*Institute of Applied Physics, Russian Academy of Sciences*); *Alexander S. Sergeev* (*Institute of Applied Physics, Russian Academy of Sciences*); *Irina V. Zotova* (*Institute of Applied Physics, RAS*); *Mikhail Yu. Glyavin* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*);

14:50 Generation of Dissipative Soliton Combs Based on Electron-wave Interaction
Naum S. Ginzburg (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *G. G. Denisov* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *S. E. Filchenkov* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *E. R. Kocharovskaya* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Sergey V. Samsonov* (*Institute of Applied Physics, Russian Academy of Sciences*); *Alexander S. Sergeev* (*Institute of Applied Physics, Russian Academy of Sciences*); *Michael N. Vilkov* (*A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *L. A. Yurovskiy* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Irina V. Zotova* (*Institute of Applied Physics, RAS*);

15:05 **Coffee Break**

15:30 Invited Gyrotron Backward-wave Oscillator Based on Double Confocal Waveguide
Wenjie Fu (*University of Electronic Science and Technology of China*); *Wenbo Tang* (*University of Electronic Science and Technology of China*); *Dun Lu* (*University of Electronic Science and Technology of China*); *Yang Yan* (*University of Electronic Science and Technology of China*);

15:50 Super-power W-band Free Electron Maser with Combined Two-mirror Resonator Consisting of 3D and 1D Bragg Reflectors
Ekaterina D. Egorova (*Institute of Applied Physics, Russian Academy of Science*); *Nikolai Yu. Peskov* (*Institute of Applied Physics, RAS*); *Alexander S. Sergeev* (*Institute of Applied Physics, Russian Academy of Sciences*); *Naum S. Ginzburg* (*Institute of Applied Physics, Russian Academy of Sciences*); *Andrey V. Arzhannikov* (*Budker Institute of Nuclear Physics RAS*); *Stanislav L. Sinitsky* (*Budker Institute of Nuclear Physics Russian Academy of Sciences*);

16:05 A Novel Type of Quasi-optical Microwave Pulse Compressor Based on Interference Controlled by Laser Driven Semiconductor Phase Shifter
Alexey V. Palitsin (*A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Grigory G. Denisov* (*Institute of Applied Physics, Russian Academy of Sciences*); *Dmitry I. Sobolev* (*A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Mikhail Yu. Glyavin* (*A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*);

16:20 Invited Development of Powerful Gyrotrons with Improved Parameters in IAP RAS/GYCOM
Grigory G. Denisov (*Institute of Applied Physics, Russian Academy of Sciences*); *A. G. Litvak* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Mikhail Yu. Glyavin* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Anton S. Sedov* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *E. A. Soluyanova* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Evgeniy M. Tai* (*Institute of Applied Physics of the RAS*);

16:40 Compact High-power Sub-THz and THz FELs Based on Planar Micro-undulators and Relativistic Electron Beams
Naum S. Ginzburg (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Ilya V. Bandurkin* (*Institute of Applied Physics RAS*); *A. E. Fedotov* (*Institute of Applied Physics RAS*); *Vladislav Yur'evich Zaslavsky* (*Institute of Applied Physics, Russian Academy of Sciences*); *Nikolai Yu. Peskov* (*Institute of Applied Physics, RAS*); *Michael N. Vilkov* (*A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Andrey Mihailovich Malkin* (*Institute of Applied Physics, Russian Academy of Sciences*); *Alexander S. Sergeev* (*Institute of Applied Physics, Russian Academy of Sciences*); *P. V. Loginov* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *N. I. Buharov* (*Institute of Applied Physics, RAS*);

Session 0P13
Signal Processing Techniques in 4D Automotive Radar Imaging and Information Processing

Sunday PM, April 21, 2024

Room 13 - Siji 2

Organized by Zhe Zhang, Bingchen Zhang

Chaired by Zhe Zhang, Jie Zhao

13:00 Invited Direction-of-Arrival Estimation for Constant Modulus Signals via Convex Optimization
Xunmeng Wu (*Xi'an Jiaotong University*); *Zai Yang* (*Xi'an Jiaotong University*); *Zongben Xu* (*Xi'an Jiaotong University*);

13:20 Invited Multiple Layer Waveguide (MLW) and Integration Platform for THz Systems
Zhongxia Simon He (*Beijing Institute of Technology/Chalmers University of Technology*);

13:40 Invited Automotive Millimeter Wave Radar Systems, Imaging, and Applications
Yan Huang (*Southeast University*); *Yuming Liu* (*Southeast University*); *Kun Deng* (*Southeast University*); *Jianwei Ma* (*Southeast University*); *Hui Zhang* (*Southeast University*); *Wei Hong* (*Southeast University*);

14:00 Invited A Target-oriented Bayesian-driven Super-resolution Imaging Method for mmW Automotive Radar
Yanqin Xu (*University of Electronic Science and Technology of China*); *Shun-Jun Wei* (*University of Electronic Science and Technology of China*);

14:20 Invited Non-line-of Sight Target Detection and Multipath Ghost Suppression for Automotive Millimeter Wave Radar
Shisheng Guo (*University of Electronic Science and Technology of China*);

14:40 Invited Sparse Signal Processing for Channel Sensing in Millimeter-wave Massive MIMO
Yue Wang (*Georgia State University*);

15:00 **Coffee Break**

15:30 Invited Research on Geometric Information and Self-attention Mechanism-based Multipath Suppression and Recognition Techniques for Autonomous Driving Radar
Fuyou Gong (*Suzhou Key Laboratory of Microwave Imaging, Processing, and Application Technology*); *Hang Li* (*Suzhou Key Laboratory of Microwave Imaging, Processing, and Application Technology*); *Zhe Zhang* (*Suzhou Aerospace Information Research Institute*);

15:50 A Tightened Semidefinite Relaxation for MVDR Robust Adaptive Beamforming with Nonconvex Steering Constraints
Yao Zhao (*Guangdong University of Technology*); *Qingsong Liu* (*Guangdong University of Technology*); *Bingo Wing-Kuen Ling* (*Guangdong University of Technology*); *Zhe Zhang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*);

16:05 Sparse SAR Imaging for 4D Automotive Radar
Yan Zhang (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Bingchen Zhang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Yirong Wu* (*Aerospace Information Research Institute, Chinese Academy of Sciences*);

16:20 An Efficiency Gridless Imaging Algorithm for 4D MMV Radar Based on the Alternate Descent Conditional Gradient
Mingxiao Shao (*Key Laboratory of Technology in Geospatial Information Processing and Application System, Chinese Academy of Sciences*); *Yizhe Fan* (*Key Laboratory of Technology in Geo-spatial Information Processing and Application System, Chinese Academy of Sciences*); *Zhe Zhang* (*Suzhou Aerospace Information Research Institute*); *Bingchen Zhang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*);

Session 0P14
Synthetic Aperture Radar System, Method and Applications 1

Sunday PM, April 21, 2024

Room 14 - Siji 3

Organized by Bingnan Wang

Chaired by Bingnan Wang, Fan Zhang

13:00 Multi-view SAR Image Classification through Decision Fusion of Adaptive Dictionary Learning and CNN
Liyuqi Wang (*Yunnan Key Laboratory of Statistical Modeling and Data Analysis*); *Mengjiao Tang* (*Yunnan University*); *Yao Rong* (*Yunnan University*); *Meixin Ni* (*Yunnan Key Laboratory of Statistical Modeling and Data Analysis*); *Fan Li* (*Civil Aviation Flight University of China*);

13:15 A Novel Two-paths-modified-LSTM-based ISAR Multi-band Fusion Method Using All-azimuths Simulation Training Data
Wen Jiang (*Institute of Remote Sensing Satellite, Chinese Academy of Space Technology*); *Hui Kuang* (*Institute of Remote Sensing Satellite, Chinese Academy of Space Technology*); *Xianghao Kong* (*Institute of Remote Sensing Satellite, Chinese Academy of Space Technology*); *Yu Wang* (*Institute of Remote Sensing Satellite, Chinese Academy of Space Technology*); *Yi Li* (*Institute of Remote Sensing Satellite, Chinese Academy of Space Technology*); *Qingfei Zhang* (*Institute of Remote Sensing Satellite, Chinese Academy of Space Technology*); *Yongfei Mao* (*Institute of Remote Sensing Satellite, Chinese Academy of Space Technology*);

13:30 Algorithm for the Multi-target Joint Detection and Ambiguity Resolving Based on Dynamic Programming
Yitong Mao (*Aerospace information Research Institute, Chinese Academy of Sciences*); *Chong Song* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Bingnan Wang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Chenhao Zhao* (*Aerospace information Research Institute, Chinese Academy of Sciences*);

13:45 Harmonic Synthetic Aperture Radar Imaging with Motion Compensation
Invited
Chenhao Zhao (*Aerospace information Research Institute, Chinese Academy of Sciences*); *Qinghai Dong* (*Aerospace information Research Institute, Chinese Academy of Sciences*); *Chong Song* (*Aerospace information Research Institute, Chinese Academy of Sciences*); *Zekun Jiao* (*Aerospace information Research Institute, Chinese Academy of Sciences*); *Yitong Mao* (*Aerospace information Research Institute, Chinese Academy of Sciences*); *Bingnan Wang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Maosheng Xiang* (*Institute of Electronics, Chinese Academy of Sciences*);

14:05 Application of Polarization in Tomographic 3D Reconstruction
Shuhang Dong (*University of Chinese Academy of Sciences*); *Zekun Jiao* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Liangjiang Zhou* (*Institute of Electronics, Chinese of Sciences*);

14:20 Modeling of Flying Target Detection by Geostationary Satellite-airship Bistatic System
Invited
Peng Liu (*Fudan University*); *Yulin He* (*Fudan University*); *Bingnan Wang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Ya-Qiu Jin* (*Fudan University*);

14:40 Advances in Multi-temporal SAR Image Change Detection Technology
Invited
Haipeng Wang (*Fudan University*); *Weisong Li* (*Fudan University*);

15:00 **Coffee Break**

15:30 Inversion Interval Estimation for SAR Tomography
Qiancheng Yan (*Aerospace information Research Institute, Chinese Academy of Sciences*); *Zekun Jiao* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Xiaolan Qiu* (*Aerospace information Research Institute, Chinese Academy of Sciences*); *Chibiao Ding* (*Aerospace information Research Institute, Chinese Academy of Sciences*);

15:45 A Novel Passive Jamming Method for SAR Based on Rotating Corner Reflector
Ying Wang (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Guikun Liu* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Yibin Chen* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Jingwen Mou* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Liang Li* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Feng Ming* (*Aerospace Information Research Institute, Chinese Academy of Sciences*);

16:00 A Novel Scheme for Slow Moving Target Imaging Using Airborne Multichannel Circular Stripmap SAR
Chong Song (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Bingnan Wang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Xiaofeng Yang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Maosheng Xiang* (*Institute of Electronics, Chinese Academy of Sciences*);

16:15 D^2T-Net: Double Dynamic Transformer Network for SAR-guided Optical Image Cloud and Shadow Removal
Jiangong Xu (*Wuhan University*); *Jun Pan* (*Wuhan University*);

16:30 A High-precision Integrated Navigation Method Based on Interferometric SAR Fringe Feature Matching
Lanyu Li (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Yachao Wang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Bingnan Wang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Maosheng Xiang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*);

16:45 Dynamic Imaging Simulation of Targets in Terahertz Band Based on BRDF
Xu Fan (*Xi'an Technological University*); *Gong Lei* (*Xi'an Technological University*); *L. G. Wang* (*Xi'an Technological University*); *Y. Yu* (*Xi'an Technological University*); *W. J. Wang* (*Xi'an Technological University*); *Z. Q. Yang* (*Xi'an Technological University*);

Session 0P15a
Progress in Electromagnetic Compatibility (EMC), Signal Integrity (SI), and Power Integrity (PI)

Sunday PM, April 21, 2024

Room 15 - Siji 4

Organized by Yan Li, Ling Zhang

Chaired by Da Li, Ling Zhang

13:00 Universal Design Procedure for Electromagnetic Shielding Performance Measurement of Multi-core, Quasi-coaxial, or Non-coaxial Shielded Cables
Haichun Wang (*Southeast University*); *Yinghui Zhou* (*PLA University of Science & Technology*); *Zheng Sun* (*PLA University of Science and Technology*); *Peng Hu* (*Southeast University*);

13:15 Space Close Multiple Source Signal Reconstruction Algorithm Based on Dual-layer Variable Weight Blind Source Separation
Jialei Liu (*National University of Defense Technology*); *Jiazhi Ma* (*National University of Defense Technology*); *Longfei Shi* (*National University of Defense Technology*); *Junxian Chen* (*National University of Defense Technology*); *Zhikang Lin* (*National University of Defense Technology*);

13:30 Modeling and Signal Integrity Analysis of Two Layers Memristor Cross Arrays for Neuromorphic Chip
Yan Li (*China Jiliang University*); *Dianjun Deng* (*China Jiliang University*);

13:45 Susceptibility of Relay Module to Conducted EMI
Jiayue Xing (*Beihang University*); *Peng Huang* (*Beihang Universary*); *Bing Li* (*Beihang University*);

14:00 Multi-functional Frequency Selective Structure for Intelligent Communication Systems
Da Li (*Zhejiang University*); *Yudi Fan* (*Zhejiang University*); *Ling Zhang* (*Zhejiang University*); *Yan Li* (*China Jiliang University*); *Er-Ping Li* (*Zhejiang University*);

14:15 EMC Near-field Scanning System with Fast Scanning Method
Yuan Zhao (*Chengdu University of Information Technology*); *Renpan Lu* (*Chengdu University of Information Technology*); *Zhiqiang Song* (*Chengdu University of Information Technology*); *Xiangyong Mou* (*Chengdu University of Information Technology*); *Yaowen Hu* (*Chengdu University of Information Technology*); *Guo-Hong Du* (*University of Science and Technology of China*);

14:30 Design of Multilayer Wideband Microwave Absorbers Using Improved Gold Rush Optimizer
Yiming Zong (*Yancheng Institute of Technology*); *Wei-Bin Kong* (*Yancheng Institute of Technology*); *Haonan Zhang* (*Yancheng Institute of Technology*); *Feng Zhou* (*Yancheng Institute of Technology*); *Lei Wang* (*Yancheng Institute of Technology*); *Botong Liu* (*Yancheng Institute of Technology*);

14:45 Design of Patterned Transcendental Metamaterial Cover Structures for Crosstalk Reduction in FBAR Parallel Feed Lines
Tongchuan Chu (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Yuyu Zhu* (*Southwest University of Science and Technology*);

15:00 **Coffee Break**

Session 0P15b
Electromagnetic Modeling and Statistical Analysis of Dynamic Targets and Environments

Sunday PM, April 21, 2024

Room 15 - Siji 4

Organized by Qi-Feng Liu, Tao Jiang

Chaired by Tao Jiang

15:30 An Efficient Coupling Prediction Method for Transmission Line under an External EMP with Uncertainties
Wan Hu Wang (*Chongqing University*); *Qi-Feng Liu* (*Chongqing University*); *Xiao-Ting Huang* (*Chongqing University*); *Weijun Wu* (*China Ship Research and Design Center*);

15:45 Research on Data Quality Management and Control Methods of Electromagnetic Engineering Knowledge Graph
Jialin Shi (*Naval Research Institute*); *Jiangnan Xing* (*Harbin Engineering University*); *Tao Jiang* (*Harbin Engineering University*);

16:00 Calibration of a Cascaded Geometry-based Stochastic Channel Model Using Ray-tracing Techniques for RIS-assisted V2V Communications at MmWave Frequencies
Asad Saleem (*Zhejiang University*); *Shurun Tan* (*Zhejiang University/University of Illinois at Urbana-Champaign Institute*);

16:15 Three-dimensional Fitting Method for Scattering Characteristics of Objects
Chenyang Li (*Harbin Engineering University*); *Tao Jiang* (*Harbin Engineering University*);

16:30 Research on Parameters Predictive Methods for Sea Clutter Model
Juncheng Yi (*Harbin Engineering University*); *Jialin Shi* (*Naval Research Institute*); *Tao Jiang* (*Harbin Engineering University*);

16:45 Graph Database-driven Research on the Design of Electromagnetic Compatibility Data Models
Ye Chen (*Marine Design & Research Institute*); *Jialin Shi* (*Naval Research Institute*); *Tao Jiang* (*Harbin Engineering University*);

Session 0P16
Nanophotonics and Topological Photonics 1

Sunday PM, April 21, 2024

Room 16 - Mudan

Organized by Lin Chen, Cuicui Lu, Zhiwei Guo

Chaired by Cuicui Lu, Zhiwei Guo

13:00 Invited Observe Topological Characteristics in Synthetic Frequency Lattices
Luqi Yuan (*Shanghai Jiao Tong University*);

13:20 Invited Chirality-enabled Directional Coupling of Optical Near Field
Shubo Wang (*City University of Hong Kong*); *Yuqiong Cheng* (*City University of Hong Kong*); *Chengzhi Zhang* (*City University of Hong Kong*);

13:40 Invited Topological Valley Hall Edge Solitons
Yiqi Zhang (*Xi'an Jiaotong University*);

14:00 Invited Light Field Manipulation with Two-dimensional Light Waves
Lin Li (*East China Normal University*); *H. Zhong* (*East China Normal University*); *Y. Cheng* (*East China Normal University*);

14:20 Invited Multimode Synthetic Topological Photonic Crystal Laser
Yongquan Zeng (*Wuhan University*); *Shouqi Zhang* (*Wuhan University*); *Cuicui Lu* (*Beijing Institute of Technology*);

14:40 Invited Dual-band Topological Large-area Waveguide Transport in Photonic Heterostructures
Hai-Xiao Wang (*Ningbo University*); *Peng-Yu Guo* (*Guangxi Normal University*);

15:00 **Coffee Break**

15:30 Invited Overcoming Losses in Superlenses with Synthetic Waves of Complex Frequency
Fuxin Guan (*University of Hong Kong*); *Xiangdong Guo* (*University of Hong Kong*); *Kebo Zeng* (*University of Hong Kong*); *Qing Dai* (*National Center for Nanoscience and Technology*); *John B. Pendry* (*Imperial College London*); *Xiang Zhang* (*University of Hong Kong*); *Shuang Zhang* (*University of Hong Kong*);

15:50 Invited Going beyond the Loss for Plasmonics: Noble Metals or Alkali Metals?
Yang Wang (*Beijing Institute of Technology*);

16:10 Microwave Characterization of the Toroidal Dipole Coupling
Tong Wu (*Jilin University*); *Anton S. Kupriianov* (*Jilin University*); *Andrey B. Evlyukhin* (*Leibniz University Hannover*); *Vladimir R. Tuz* (*Jilin University*);

16:25 Invited Nanophotonics towards Optical Manipulation Technologies for Quantum Sensors
Chai Zhen (*Beihang University*);

16:45 Hybrid Surface Waves in Twisted Anisotropic Heterometasurfaces
Xinyan Zhang (*Zhejiang University*); *Chenxu Bian* (*Zhejiang University*); *Zheng Gong* (*Zhejiang University*); *Tony Low* (*University of Minnesota*); *Hongsheng Chen* (*Zhejiang University*); *Xiao Lin* (*Zhejiang University*);

17:00 Topological Vacuum Induce Photon-exciton Strong Coupling
Yali Jia (*Peking University*); *Zihan Mo* (*Peking University*); *Qi Liu* (*Peking University*); *Zhaohua Tian* (*Peking University*); *Yu Tian* (*Peking University*); *Qihuang Gong* (*Peking University*); *Ying Gu* (*Peking University*);

Session 0P17
Light Emission from Particle-matter Interactions

Sunday PM, April 21, 2024

Room 17 - Furong

Organized by Xiao Lin, Zhaoyun Duan

Chaired by Xiao Lin, Zhaoyun Duan

13:00 Keynote Quantum Light Emission by Interaction of Free Electrons with Confined Optical Modes
F. Javier García de Abajo (*ICFO — Institut de Ciències Fotòniques, The Barcelona Institute of Science and Technology*);

13:30 Interfacial Cherenkov Radiation from Ultralow-energy Electrons
Zheng Gong (*Zhejiang University*); *Jialin Chen* (*Zhejiang University*); *Ruoxi Chen* (*Zhejiang University*); *Xingjian Zhu* (*Zhejiang University*); *Chan Wang* (*Zhejiang University*); *Xinyan Zhang* (*Zhejiang University*); *Hao Hu* (*Nanjing University of Aeronautics and Astronautics*); *Yi Yang* (*University of Hong Kong*); *Baile Zhang* (*Nanyang Technological University*); *Hongsheng Chen* (*Zhejiang University*); *Ido Kaminer* (*Technion-Israel Institute of Technology*); *Xiao Lin* (*Zhejiang University*);

13:45 Cherenkov Radiation in Twisted $\boldsymbol{\alpha}$-MoO_3 Slab
Invited
Hao Hu (*Nanjing University of Aeronautics and Astronautics*);

14:05 Kerker-transition Radiation from Magnetic Materials
Jialin Chen (*Zhejiang University*); *Chan Wang* (*Zhejiang University*); *Xuhuinan Chen* (*Zhejiang University*); *Hongsheng Chen* (*Zhejiang University*); *Xiao Lin* (*Zhejiang University*);

14:20 Some Discussions on the Free-electron Radiation from
Invited an Interface
Baile Zhang (*Nanyang Technological University*);

14:40 Terahertz Cherenkov Radiation in Hyperbolic Metama-
Invited terials
Fang Liu (*Tsinghua University*);

15:00 **Coffee Break**

15:30 Free-Electron-Exciting Surface Plasmonic Radiation to
Invited Generate Vortex Beam, Frequency Comb, and Enhanced Radiaiton Intensity
Chao-Hai Du (*Peking University*); *Zi-Wen Zhang* (*Peking University*); *Pu-Kun Liu* (*Peking University*);

15:50 Free-electron Brewster-transition Radiation
Ruoxi Chen (*Zhejiang University*); *Jialin Chen* (*Zhejiang University*); *Zheng Gong* (*Zhejiang University*); *Xinyan Zhang* (*Zhejiang University*); *Xingjian Zhu* (*Zhejiang University*); *Yi Yang* (*University of Hong Kong*); *Ido Kaminer* (*Technion-Israel Institute of Technology*); *Hongsheng Chen* (*Zhejiang University*); *Baile Zhang* (*Nanyang Technological University*); *Xiao Lin* (*Zhejiang University*);

16:05 Single-Particle-Single-Photon Coupling Using a Cir-
Invited cuital Metamaterial Cavity
Qinghui Yan (*Technion — Israel Institute of Technology*); *Ron Ruimy* (*Technion — Israel Institute of Technology*); *Arthur Niedermayr* (*Technion — Israel Institute of Technology*); *Ido Kaminer* (*Technion — Israel Institute of Technology*);

16:25 Directional Transition Radiation from Slow Electrons via Anisotropic Metamaterials
Zun Wang (*Zhejiang University*); *Zheng Gong* (*Zhejiang University*); *Hongsheng Chen* (*Zhejiang University*); *Xiao Lin* (*Zhejiang University*);

16:40 Crossover from Non-thermal to Thermal Photoluminescence from Metals Excited by Ultrashort Light Pulses
Yonatan Sivan (*Ben-Gurion University of the Negev*); *Ieng-Wai Un* (*Ben-Gurion University of the Negev*); *Imon Kalyan* (*Ben-Gurion University of the Negev*); *Kaiqiang Lin* (*Universität Regensburg*); *John M. Lupton* (*Regensburg University*); *Sebastian Bange* (*Regensburg University*);

16:55 An Upper Limit to Quantum Free-electron-light Inter-
Invited action
Zetao Xie (*The University of Hong Kong*); *Zeling Chen* (*The University of Hong Kong*); *Hao Li* (*Yale University*); *Qinghui Yan* (*Technion — Israel Institute of Technology*); *Hongsheng Chen* (*Zhejiang University*); *Xiao Lin* (*Zhejiang University*); *Ido Kaminer* (*Technion — Israel Institute of Technology*); *Owen D. Miller* (*Yale University*); *Yi Yang* (*University of Hong Kong*);

Session 0P18
New Topics on Metasurfaces: Structured Light Shaping and Artificial Intelligence

Sunday PM, April 21, 2024

Room 18 - Meilan

Organized by Haoran Ren, Xinyuan Fang

Chaired by Xinyuan Fang

13:00 Finding Invariances in Structured Light
Invited
Andrew Forbes (*University of the Witwatersrand*);

13:20 Arbitrarily Polarized Exceptional Points
Invited
Qinghua Song (*Tsinghua University*);

13:40 Manipulating Nonclassical Light with On-chip Emitter-
Invited coupled Quantum Metasurfaces
Fei Ding (*University of Southern Denmark*);

14:00 Polaritonic Metasurfaces from Mid-infrared to Visible
Invited Frequencies
Andrea Mancini (*Italian Institute of Technology*); *Lin Nan* (*Ludwig-Maxilimians-Universitaet Muenchen*); *Giacomo Venturi* (*Fondazione Istituto Italiano di Tecnologia*); *Nicola Melchioni* (*Fondazione Istituto Italiano di Tecnologia*); *Stefano Chiodini* (*Fondazione Istituto Italiano di Tecnologia*); *Haoran Ren* (*Monash University*); *Stefan A. Maier* (*Ludwig-Maximilians-University Munich*); *Antonio Ambrosio* (*Fondazione Istituto Italiano di Tecnologia*);

14:20 Electromechanically and Electrochemically Reconfig-
Invited urable Metasurfaces
Jiafang Li (*Beijing Institute of Technology*);

14:40 Arbitrarily Structured Quantum Emission with a Multifunctional Metalens (Invited)
Chi Li (*Monash University*); *Jaehyuck Jang* (*Pohang University of Science and Technology (POSTECH)*); *Trevon Badloe* (*Pohang University of Science and Technology (POSTECH)*); *Tieshan Yang* (*University of Technology Sydney*); *Joohoon Kim* (*POSTECH*); *Jaekyung Kim* (*POSTECH*); *Minh Nguyen* (*University of Technology Sydney*); *Stefan A. Maier* (*Monash University*); *Junsuk Rho* (*Pohang University of Science and Technology (POSTECH)*); *Haoran Ren* (*Monash University*); *Igor Aharonovich* (*University of Technology Sydney*);

15:00 **Coffee Break**

15:30 Nanoprinted Graphene Metamaterials and Devices (Invited)
Baohua Jia (*Swinburne University of Technology*);

15:50 Manipulating High-quality Optical Nanoantennas with Structured Light (Invited)
Kirill Koshelev (*Australian National University*);

16:10 Metasurface-enabled Wavefront Engineering for Advanced Imaging Technologies: 3D Sensing and Biomedical Imaging (Invited)
Inki Kim (*Sungkyunkwan University*);

16:30 Inverse Design of Single-cell Metasurfaces for Multicolor and 3d Holography (Invited)
Sunae So (*Korea University Sejong*);

16:50 Generation of Vortex Beams with Metaphotonic Structures (Invited)
Yuri S. Kivshar (*Australian National University*);

17:10 Nanoscale 3D Printed Metaoptics for Precise Light-field Manipulation (Invited)
Hao Wang (*Singapore University of Technology and Design*); *Cheng-Feng Pan* (*Singapore University of Technology and Design*); *Hongtao Wang* (*Singapore University of Technology and Design*); *Xiaoyan Zhou* (*Singapore University of Technology and Design*); *Joel K. W. Yang* (*Singapore University of Technology and Design*);

17:30 Metasurfaces for Versatile Polarization Manipulations and Related Applications (Invited)
Zi-Lan Deng (*Jinan University*);

17:50 Artificial Neural Networks Enabled by Nanophotonics (Invited)
Qiming Zhang (*University of Shanghai for Science and Technology*);

Session 1A1a
Quantum Biology and Quantum Devices 2

Monday AM, April 22, 2024

Room 1 - Yarui

Organized by Qing Ai, Wenqiang Yang

Chaired by Qing Ai

8:00 Tensor Network Methods for Quantum Dynamics in Molecular Aggregates (Invited)
Jiajun Ren (*Beijing Normal University*);

8:20 Ultrafast Energy Dissipation of Nonphotochemical Quenching in Higher Plants and Green Algae (Invited)
Lijin Tian (*Institute of Botany, Chinese Academy of Sciences*);

8:40 Quantum Simulation of the Dynamics of Open Quantum Systems
Na-Na Zhang (*Chongqing University of Posts and Telecommunications*);

8:55 Characterization Quantum Time Ordered Correlation and Quantum Sensing
Ping Wang (*Beijing Normal University*);

9:10 Photon Blockade in Non-Hermitian Optomechanical Systems with Nonreciprocal Couplings
J. Y. Sun (*Northeast Normal University*); *H. Z. Shen* (*Northeast Normal University*);

9:25 Necessity for Quantum Coherence of Nondegeneracy in Energy Flow
Ma Teng (*Southern University of Science and Technology*); *Ming-Jing Zhao* (*Beijing Information Science and Technology University*); *Shao-Ming Fei* (*Capital Normal University*); *Man-Hong Yung* (*Southern University of Science and Technology*);

9:40 Enhanced Mechanical Squeezing in an Optomechanical System via Backward Stimulated Brillouin Scattering
Shan-Shan Chen (*Chongqing University of Posts and Telecommunications*);

9:55 Quantum Simulation of Two-dimensional Spectroscopy
Qing Ai (*Beijing Normal University*);

10:10 **Coffee Break**

Session 1A1b
Quantum Measurement and Metrology

Monday AM, April 22, 2024

Room 1 - Yarui

Organized by Dawei Lu, Nanyang Xu

Chaired by Dawei Lu, Ying Dong

10:30 Practical Control-enhanced Quantum Metrology
Xiaodong Yang (*Southern University of Science and Technology*);

10:45 Quantum Sensing Based on Spin Defects in Silicon Carbide
Qiang Li (*ZJU-Hangzhou Global Scientific and Technological Innovation Center*);

11:00 Direct Characterization of Quantum Systems Using Weak Values
Liang Xu (*Nanjing University*); *Ying Dong* (*Zhejiang Lab*); *Changliang Ren* (*Hunan Normal University*); *Lijian Zhang* (*Nanjing University*);

11:15 Fourier Space Encoded Quantum Microscopy Based on Solid-state Spins
Pengfei Wang (*University of Science and Technology of China*);

11:30 High Precison Free-space Time-frequency Transferfor Global Networks of Optical Clocks
Qi Shen (*University of Science and Technology of China*); *Jian-Yu Guan* (*University of Science and Technology of China*); *Ji-Gang Ren* (*University of Science and Technology of China*); *Ting Zeng* (*University of Science and Technology of China*); *Lei Hou* (*University of Science and Technology of China*); *Min Li* (*University of Science and Technology of China*); *Yuan Cao* (*University of Science and Technology of China*); *Sheng-Kai Liao* (*University of Science and Technology of China*); *Juan Yin* (*University of Science and Technology of China*); *Cheng-Zhi Peng* (*University of Science and Technology of China*); *Hai-Feng Jiang* (*University of Science and Technology of China*); *Qiang Zhang* (*University of Science and Technology of China*); *Jian-Wei Pan* (*University of Science and Technology of China*);

11:45 Quantum Sensing Based on High Quality Nitrogen Vacancy Center in Diamond
Sen Yang (*HKUST*);

Session 1A2a
Quantum Walks and Their Practical Applications

Monday AM, April 22, 2024

Room 2 - Jincheng 3

Organized by Yun Shang, Jingbo Wang

Chaired by Yun Shang

8:00 Invited On Quantum Speedups for Nonconvex Optimization via Quantum Tunneling Walks
Yizhou Liu (*Tsinghua University*); *Weijie J. Su* (*University of Pennsylvania*); *Tongyang Li* (*Peking University*);

8:20 Invited Experimental Quantum Walk in Fractal Photonic Lattices
Xiaoyun Xu (*Shanghai Jiao Tong University*); *Xiao-Wei Wang* (*Shanghai Jiao Tong University*); *Dan-Yang Chen* (*Shanghai Jiao Tong University*); *Cristiane Morais Smith* (*Utrecht University*); *Xian-Min Jin* (*Shanghai Jiao Tong University*);

8:40 Invited Silicon Quantum Photonics for Quantum Walk Simulation and Applications
Xiaogang Qiang (*National Innovation Institute of Defense Technology, AMS*);

9:00 Invited Quantum and Classical Algorithms for Heat Equation
Changpeng Shao (*Academy of Mathematics and Systems Science, Chinese Academy of Sciences*); *Ashley Montanaro* (*University of Bristol*); *Noah Linden* (*University of Bristol*);

9:20 Invited Minimal Clifford Shadow Estimation by Mutually Unbiased Bases
You Zhou (*Fudan University*); *Qingyue Zhang* (*Fudan University*); *Qing Liu* (*Fudan University*);

9:40 Recovering the Original Simplicity: Succinct and Deterministic Quantum Algorithm for the Welded Tree Problem
Guanzhong Li (*Sun Yat-sen University*); *Lvzhou Li* (*Sun Yat-sen University*); *Jingquan Luo* (*Sun Yat-sen University*);

9:55 Invited Quantum Sampling and Search Algorithms Based on Markov Chains
Yun Shang (*Academy of Mathematics and Systems Science, Chinese Academy of Sciences*);

10:15 **Coffee Break**

Session 1A2b
Quantum Sensing

Monday AM, April 22, 2024

Room 2 - Jincheng 3

Organized by Lijian Zhang, Liang Xu

Chaired by Lijian Zhang, Liang Xu

10:30 Invited Heisenberg-limited Spin Squeezing Based on Interaction Control
Yong-Chun Liu (*Tsinghua University*);

10:50 Identification of Cell Samples Based on Polarization-entangled Photon Pairs
Luosha Zhang (*Institute of Microelectronics Chinese Academy of Sciences*); *Vira R. Besaga* (*Friedrich Schiller University Jena*); *Philipp Rühl* (*Friedrich Schiller University Jena*); *Frank Setzpfandt* (*Friedrich-Schiller-Universitat Jena*);

11:05 Invited Remote Preparation of Non-Gaussian State and Optical Cat State Based on Gaussian Entanglement
Dongmei Han (*Shanxi University*); *Na Wang* (*Shanxi University*); *Meihong Wang* (*Shanxi University*); *Xiaolong Su* (*Shanxi University*);

11:25 Quantum Squeezing Manipulation Based on Phase-sensitive Amplifier
Yanbo Lou (*East China Normal University*); *Shengshuai Liu* (*East China Normal University*); *Jietai Jing* (*East China Normal University*);

11:40 Invited Quantum Sensing with Optically Levitated Nanoparticles
Ying Dong (*Research Center for Quantum Sensing, Zhejiang Lab*);

12:00 Optimizing DC Magnetic Field Sensitivity of Spin Defects in Hexagonal Boron Nitride by Mitigating Power Broadening
Invited
Feifei Zhou (*Nanyang Technological University*); *Zhengzhi Jiang* (*National University of Singapore*); *Haidong Liang* (*National University of Singapore*); *Shihao Ru* (*National University of Singapore*); *Andrew A. Bettiol* (*National University of Singapore*); *Wei-Bo Gao* (*Nanyang Technological University*);

Session 1A3a
Antenna and Antenna Array Design for Radiative Wireless Power Transfer (WPT) and Energy Harvesting

Monday AM, April 22, 2024

Room 3 - Jincheng 2

Organized by Daniele Inserra

Chaired by Daniele Inserra

8:00 A Novel Wearable Slant Polarized Dual PIFA Antenna System
Zhensheng Chen (*KU Leuven*); *Xuezhi Zheng* (*KU Leuven*); *Chaoyun Song* (*Shenzhen University*);

8:15 Ultra-thin Energy Harvesting Metasurface with Polarization-insensitive and Wide-angle-of-incident Performance
Guo-Hong Du (*University of Science and Technology of China*); *Yunhao Li* (*Chengdu University of Information Technology*); *Yipeng Zhang* (*Chengdu University of Information Technology*); *Xiangyong Mou* (*Chengdu University of Information Technology*); *Ximing Li* (*Chengdu University of Information Technology*);

8:30 Optimal Designs on Multi-target Wireless Power Transfer
Xiao Cai (*Nanjing University of Information Science and Technology*); *Geyi Wen* (*Nanjing University of Information Science and Technology*);

8:45 Tightly Coupled Dipole Antenna Array for Reconfigurable Frequency Wireless Power Transfer
Daniele Inserra (*University of Electronic Science and Technology of China*); *Guangjun Wen* (*University of Electronic Science and Technology of China*);

9:00 An Efficient Power Transfer Technique of SIMO Antennas Network
Elyas Palantei (*Universitas Hasanuddin (UNHAS)*); *Zulfahmi Rizal* (*Universitas Hasanuddin (UNHAS)*); *Intan Sari Areni* (*Universitas Hasanuddin*); *Muthia Dwiwulandari* (*Universitas Hasanuddin (UNHAS)*); *Regita Pramestia N.M.N* (*Universitas Hasanuddin (UNHAS)*); *Josaphat Tetuko Sri Sumantyo* (*Chiba University*);

9:15 Optimizing Duty Cycle for Maximum Efficiency in Resonant Wireless Power Transfer: A Smith Chart Approach
Heng-Ming Hsu (*National Chung-Hsing Unviersity*); *Dian-Ying Wu* (*National Chung-Hsing Unviersity*); *Bo Yang* (*Kyoto University*);

9:30 A Miniaturized Magnetoelectric Wireless Power Transfer System with an Integrated DC Magnetic Bias
Hao Ren (*Shanghai Tech University*);

10:00 **Coffee Break**

Session 1A3b
Advanced Design for Wideband and High-Gain Millimeter/Terahertz Lens Antennas

Monday AM, April 22, 2024

Room 3 - Jincheng 2

Organized by Qingyi Guo, Xin Dai

Chaired by Qingyi Guo

10:30 A Transmitarray Antenna Using Dual-layer Polarization Rotation Elements
Invited
Lu Guo (*Nanjing University of Science and Technology*); *Meizi Wu* (*Nanjing University of Science and Technology*);

10:50 A Ku-band Fixed-height Dielectric Reflectarray
Rigui Liu (*Shenzhen University*); *Yu-Xiang Sun* (*Shenzhen University*);

11:05 A Wideband Millimeter-wave Filtering Lens Antenna with a Low Profile
Ruize Gao (*Shenzhen University*); *Hao Ding* (*Shenzhen University*); *Xiangyu Huang* (*Shenzhen University*); *Wenjie Liao* (*Shenzhen University*); *Qingyi Guo* (*Shenzhen University*);

11:20 A Dual Circularly Polarized Transmitarray Based on Dual Channel Linear-to-circular Polarization Conversion Phase Shifting Unit Cell
Jun Hu (*Hefei University of Technology*); *Chenglong Wang* (*Hefei University of Technology*); *Qingyi Guo* (*Shenzhen University*); *Peng Mei* (*Aalborg University*);

11:35 Wideband Millimeter-wave Antenna Arrays and Transmitarrays Based on the Magnetoelectric Dipole Concept
Invited
Xin Dai (*Guangzhou University*);

Session 1A4
Reconfigurable Metasurfaces and Applications

Monday AM, April 22, 2024

Room 4 - Jincheng 1

Organized by Jin Hui Shi, Huifeng Ma

Chaired by Jin Hui Shi

8:00 Plasmonic Quarter-wave Plates: From Passive to Active
Invited
Fei Ding (*University of Southern Denmark*);

8:20 Reconfigurable Nanophotonic Applications Based on Chalcogenide Phase Change Materials
Invited
Qian Wang (*Institute of Materials Research and Engineering, A*STAR*);

8:40 Dynamic Plasmonics Based on Conducting Polymers
Invited
Shangzhi Chen (*Linkoping University*); *Magnus P. Jonsson* (*Linkoping University*);

9:00 Metamaterial Time Crystals
Keynote
Nikolay I. Zheludev (*University of Southampton*);

9:30 Tunable Evolution of Optical Singularities and Quasi-BIC Resonances in Optical Nanostructures
Invited
Chunying Guan (*Harbin Engineering University*); *Keda Wang* (*Harbin Engineering University*); *Jianlong Liu* (*Harbin Engineering University*); *Jin Hui Shi* (*Harbin Engineering University*);

10:00 **Coffee Break**

10:30 Surface Wave Control Devices Based on Valley Topological Photonic Crystals
Invited
Chunmei Ouyang (*Tianjin University*); *Jiajun Ma* (*Tianjin University*);

10:50 Coherent Wavefront Modulation with Dielectric Terahertz Metasurface
Invited
Ruisheng Yang (*Northwestern Polytechnical University*); *Kangyao Sun* (*Northwestern Polytechnical University*); *Fuli Zhang* (*Northwestern Polytechnical University*); *Yuancheng Fan* (*Northwestern Polytechnical University*);

11:10 Controlling Thermal Emission with Metamaterials and Metafilms
Invited
Song Gu (*National University of Defense Technology*); *Cong Quan* (*National University of Defense Technology*); *Qi Meng* (*National University of Defense Technology*); *Zhe Wang* (*National University of Defense Technology*); *Ping Liu* (*National University of Defense Technology*); *Wei Xu* (*National University of Defense Technology*); *Chu-Cai Guo* (*National University of Defense Technology*); *Zhihong Zhu* (*National University of Defense Technology*); *Jianfa Zhang* (*National University of Defense Technology*);

11:30 Generating Optical Vortex Beams via Bound States in the Continuum in Moiré Metasurfaces
Zhengqi Zhuang (*Harbin Engineering University*); *Huawei Tang* (*Harbin Engineering University*); *Juntian Peng* (*Harbin Engineering University*); *Zheng Zhu* (*Harbin Engineering University*); *Yuxiang Li* (*Harbin Engineering University*); *Chunying Guan* (*Harbin Engineering University*); *Jin Hui Shi* (*Harbin Engineering University*);

11:45 Multifunctional Reflection-Transmission Polarization Conversion Metasurface
Heng Yang (*Soochow University*); *Wenhai Zhang* (*Soochow University*); *Yuan He* (*Beijing University of Posts and Telecommunications*); *Mei Song Tong* (*Tongji University*); *Yunjing Zhang* (*Soochow University*);

Session 1A5a
Microwave Photonics for Communication, Sensing and Measurements

Monday AM, April 22, 2024

Room 5 - Yingbin

Organized by Fangzheng Zhang, Xiong Deng

Chaired by Steevy Joyce Cordette

8:00 Quadrature Parity-Time Symmetric Opto-Electronic Oscillator
Steevy Joyce Cordette (*Technology Innovation Institute*); *Juan Coronel* (*Technology Innovation Institute*); *Chaouki Kasmi* (*Technology Innovation Institute*);

8:15 Silicon Prism as a Radiating Element of a Terahertz Photonic Integrated Phased Array Antenna
Sergey V. Seliverstov (*Moscow State Pedagogical University*); *A. K. Kozhukhovsky* (*Moscow State Pedagogical University*); *Sergey S. Svyatodukh* (*National Research University Higher School of Economics*); *G. N. Goltsman* (*National Research University Higher School of Economics*);

8:30 Photonic Generation of Multi-carrier LFM Signals Based on an Optical Frequency Comb
Jiayuan Kong (*Nanjing University of Aeronautics and Astronautics*); *Jinhu Li* (*Nanjing University of Aeronautics and Astronautics*); *Yuewen Zhou* (*Nanjing University of Aeronautics and Astronautics*); *Fangzheng Zhang* (*Nanjing University of Aeronautics and Astronautics*);

8:45 Microwave-Photonics-aided Doppler Channel Modeling
Zhang Miao (*Southwest Jiaotong University*); *Xiong Deng* (*Southwest Jiaotong University*); *Wei Pan* (*Southwest Jiaotong University*); *Ziqiang Gao* (*Southwest Jiaotong University*); *Xihua Zou* (*Southwest Jiaotong University*); *Lianshan Yan* (*Southwest Jiaotong University*);

9:30 Broadband Radar De-chirping Receiver Based on a Microwave Photonic I/Q Mixer
Yuewen Zhou (*Nanjing University of Aeronautics and Astronautics*); *Jiayuan Kong* (*Nanjing University of Aeronautics and Astronautics*); *Fangzheng Zhang* (*Nanjing University of Aeronautics and Astronautics*);

9:45 Co-simulation of Microwave Photonics and Wireless Communication
Ziqiang Gao (*Southwest Jiaotong University*); *Jiuyuan Deng* (*Southwest Jiaotong University*); *Xiong Deng* (*Southwest Jiaotong University*); *Xihua Zou* (*Southwest Jiaotong University*); *H. Y. Meng* (*Southwest Jiaotong University*); *Hao Bai* (*Southwest Jiaotong University*); *Y. X. Long* (*Southwest Jiaotong University*); *Miao Zhang* (*Southwest Jiaotong University*); *Jia Ye* (*Southwest Jiaotong University*); *Lianshan Yan* (*Southwest Jiaotong University*);

10:00 **Coffee Break**

10:30 Photonics THz-band Frequency-division Constant-envelope Integrated Sensing and Communication with Accurate Target Position Estimation
Ningyuan Zhong (*Southwest Jiaotong University*); *Xiong Deng* (*Southwest Jiaotong University*); *Xihua Zou* (*Southwest Jiaotong University*); *Fengwei Liu* (*Southwest Jiaotong University*); *Miao Zhang* (*Southwest Jiaotong University*); *Yuxin Liu* (*Southwest Jiaotong University*); *Wei Pan* (*Southwest Jiaotong University*); *Lianshan Yan* (*Southwest Jiaotong University*);

Session 1A5b
Plasmon-enhanced Raman Spectroscopy and Its Chemistry 1

Monday AM, April 22, 2024

Room 5 - Yingbin

Organized by Jun Yi, En-Ming You

Chaired by Jun Yi, En-Ming You

10:50 Invited SERS as a Probe of Surface Chemistry Enabled by Surface-accessible Plasmonic Nanomaterials
Yikai Xu (*East China University of Science and Technology*); *Chunchun Li* (*University of Shanghai for Science and Technology*); *Steven E. J. Bell* (*Queen's University Belfast*);

11:10 Invited In-situ Study of Nanocatalytic Reactions Using Surface-enhanced Raman Spectroscopy
Hua Zhang (*Xiamen University*);

11:30 Unveiling the Angstrom Scale Interfacial Electronic Structure through Metal/Electrolyte Interfaces by Plasmonic Molecular Rulers
Jun Yi (*Xiamen University*); *Zhong-Qun Tian* (*Xiamen University*);

Session 1A6
Non-Hermitian Physics: Theory and Applications 1

Monday AM, April 22, 2024

Room 6 - Huanhua

Organized by Wei Wang, Guancong Ma, Kun Ding

Chaired by Guancong Ma, Kun Ding

8:00 Keynote Transport Versus Localization in Non-Hermitian Systems
Zhong Wang (*Tsinghua University*);

8:30 Non-Bloch Band Theory for Spatiotemporal Photonic Crystals
Haozhi Ding (*Fudan University*); *Kun Ding* (*Fudan University*);

8:45 Invited Topological Multiple Phase Transition in Non-Hermitian Quasicrystals
Peng Xue (*Beijing Computational Science Research Center*);

9:05 Geometric Origin of Non-Bloch PT Symmetry Breaking
Yu-Min Hu (*Tsinghua University*); *Hong-Yi Wang* (*Tsinghua University*); *Zhong Wang* (*Tsinghua University*); *Fei Song* (*Kavli Institute for Theoretical Sciences, Chinese Academy of Sciences*);

9:20 Invited Theory of Real-time Dynamics on Non-Hermitian Lattices
Tianhua Yang (*Princeton University*); *Chen Fang* (*Institute of Physics, Chinese Academy of Sciences*);

9:40 Eigenvalue Knots in Three-state Non-Hermitian System
Zhen Li (*Hong Kong Baptist University*);

10:00 **Coffee Break**

10:30 Invited Skin and Exceptional Bound States in Non-Hermitian Lattices
Ching Hua Lee (*Stanford University*);

10:50 Invited Topological Momentum Gap in PT-symmetric Photonic Crystals
Ming-Wei Li (*Sun Yat-Sen University*); *Jian-Wei Liu* (*Sun Yat-Sen University*); *Wenjie Chen* (*Sun Yat-Sen University*); *Jian-Wen Dong* (*Sun Yat-Sen University*);

11:10 Invited Two-dimensional Asymptotic Generalized Brillouin Zone Conjecture
Zhesen Yang (*Xiamen University*);

11:30 Invited Swallowtail Catastrophe in Non-Hermitian Systems
Jing Hu (*The Hong Kong University of Science and Technology*); *Ruo-Yang Zhang* (*The Hong Kong University of Science and Technology*); *Yixiao Wang* (*The Hong Kong University of Science and Technology*); *Xiaoping Ouyang* (*Xiangtan University*); *Yifei Zhu* (*Southern University of Science and Technology*); *Hongwei Jia* (*Hong Kong University of Science and Technology*); *Che Ting Chan* (*The Hong Kong University of Science and Technology*);

Session 1A7
Nonlinear Optical Effect in Complex Nanostructures 1

Monday AM, April 22, 2024

Room 7 - Xiling

Organized by Guixin Li, Olivier J. F. Martin, Changxu Liu

Chaired by Olivier J. F. Martin, Tun Cao

8:00 Hybrid Plasmonic Metasurfaces for Broadband SERS Detection
Invited
Peng Mao (*Nanjing University*); *Changxu Liu* (*University of Exeter*); *Richard E. Palmer* (*Swansea University*); *Guanghou Wang* (*Nanjing University*); *Stefan A. Maier* (*Ludwig-Maximilians-University Munich*); *Shuang Zhang* (*University of Hong Kong*); *Min Han* (*Nanjing University*);

8:20 Spin-orbit Interaction of Light Enabled by Negative Coupling in High-quality-factor Optical Metasurfaces
Invited
Wenlong Gao (*Eastern Institute for Advanced Study, Eastern Institute of Technology*);

8:40 Tunable Parity-time Symmetry Vortex Laser from Phase Change Material Based Microcavity
Invited
Tun Cao (*Dalian University of Technology*);

9:00 Materials at the Nanoscale: Coherent Second Harmonic Generation to Incoherent SHG Scattering
Invited
Pierre-Francois Brevet (*Universite Claude Bernard Lyon 1*);

9:20 Nonlinear Nanoplasmonics with Atomically Thin Materials
Invited
Joel D. Cox (*University of Southern Denmark*);

9:40 Chiral Response of Plasmonic Metasurface
Invited
Jinwei Shi (*Beijing Normal University*);

10:00 **Coffee Break**

10:30 Inducing Strong Second Harmonic Generation from Centrosymmetric Bilayer Graphene and MoS_2
Invited
Xuetao Gan (*Northwestern Polytechnical University*); *Mingwen Zhang* (*Northwestern Polytechnical University*);

10:50 Modelling of Second-order Nonlinear Metasurfaces in the Time- and Frequency-domain
Invited
Karim Achouri (*Swiss Federal Institute of Technology Lausanne (EPFL)*);

11:10 Unusual Resonance Effects in the Nonlinear Optical Signals of 2D Metals
Invited
Kenneth L. Knappenberger, Jr. (*The Pennsylvania State University*);

11:30 A Plasmonic Nonlinear Diode
Invited
S. Boroviks (*Swiss Federal Institute of Technology Lausanne (EPFL)*); *Andrei Kiselev* (*Swiss Federal Institute of Technology Lausanne (EPFL)*); *Karim Achouri* (*Swiss Federal Institute of Technology Lausanne (EPFL)*); *Olivier J. F. Martin* (*Swiss Federal Institute of Technology Lausanne (EPFL)*);

Session 1A8
Thermal Photonics: Fundamental Physics and Application 1

Monday AM, April 22, 2024

Room 8 - Guixiang

Organized by Wei Li, Longnan Li

Chaired by Wei Li, Longnan Li

8:00 Biomimetic Regulation Mechanism of Spectral Radiative Characteristics of Radiative Cooling and Its Research Progress
Invited
Fuqiang Wang (*Harbin Institute of Technology, Weihai*);

8:20 Directional Thermal Radiation and Its Applications
Invited
Sun-Kyung Kim (*Kyung Hee University*);

8:40 Quantum of Far-field Radiation between Subwavelength Membranes
Jose Ordonez-Miranda (*The University of Tokyo*); *R. Anufriev* (*The University of Tokyo*); *Masahiro Nomura* (*The University of Tokyo*); *Sebastian Volz* (*The University of Tokyo*);

8:55 Electricity-free Heating and Cooling Strategies for Water and Energy Sustainability
Invited
Qiaoqiang Gan (*King Abdullah University of Science and Technology (KAUST)*);

9:15 Metagel with Optofluidic Design for Passive Cooling
Invited
Hong Li (*School of Mechanical and Aerospace Engineering*);

9:35 Radiative Thermal Management Materials and Devices with High Performance
Invited
Rujun Ma (*Nankai University*);

10:00 **Coffee Break**

10:30 Ground-facing Radiative Cooling for High-power LED Lights
Saichao Dang (*King Abdullah University of Science and Technology*); *Yanpei Tian* (*King Abdullah University of Science and Technology (KAUST)*); *Hasan H. Almahfoudh* (*King Abdullah University of Science and Technology*); *Haomin Song* (*King Abdullah University of Science and Technology*); *Osman M. Bakr* (*King Abdullah University of Science and Technology*); *Boon S. Ooi* (*King Abdullah University of Science and Technology*); *Qiaoqiang Gan* (*King Abdullah University of Science and Technology (KAUST)*);

10:45 Nonreciprocal Thermal Radiation Based on Magneto-optical Lattice Resonances and Coupled Brewster Modes
Invited
Kezhang Shi (*Zhejiang University*); *Sailing He* (*Royal Institute of Technology & Zhejiang University*);

11:05 Broadband Wide-angle Antireflective Coatings for Long-wave Infrared Camera
Jae-Seon Yu (*Kyung Hee University*); *Serang Jung* (*Kyung Hee University*); *Jae-Hyun Kim* (*Kyung Hee University*); *Geon-Tae Park* (*Kyung Hee University*); *Eungkyu Lee* (*Kyung Hee University*); *Sun-Kyung Kim* (*Kyung Hee University*);

11:20 Efficient Hybrid Passive Cooling Based on Atmospheric-moisture-induced Polyacrylate Hydrogels
Roisul Hasan Galib (*University at Buffalo*); *Yanpei Tian* (*King Abdullah University of Science and Technology (KAUST)*); *Yue Lei* (*Chongqing University*); *Saichao Dang* (*King Abdullah University of Science and Technology*); *Xiaole Li* (*KAUST*); *Arief Yudhanto* (*KAUST*); *Gilles Lubineau* (*KAUST*); *Qiaoqiang Gan* (*King Abdullah University of Science and Technology (KAUST)*);

11:35 Invited Super-Planckian Heat Transfer over a Long Distance in the Many-body System
Yong Zhang (*Harbin Institute of Technology*);

Session 1A9
Nonclassical Plasmonics and Nonlinear Optics 1

Monday AM, April 22, 2024

Room 9 - Xinyu

Organized by Fan Yang, Dangyuan Lei

Chaired by Fan Yang

8:00 Keynote Recent Advances in Resonant Metaphotonics and Plasmonics
Yuri S. Kivshar (*Australian National University*);

8:30 Invited Enhanced Optical Interactions in Resonant Nonlinear Topological Photonic Nanostructures
Nicolae-Coriolan Panoiu (*University College London*); *Jitong Wang* (*University College London*);

8:50 Invited Tunable Nonlinear Semiconductor Plasmonics
Cristian Ciraci (*Istituto Italiano di Tecnologia (IIT)*); *F. De Luca* (*City University of New York*); *Huatian Hu* (*Istituto Italiano di Tecnologia (IIT)*); *M. Ortolani* (*Sapienza University of Rome*);

9:10 Invited Nonlocal, Nonlinear, and Quantum Effects in Coupled Plasmon-exciton Systems
Antton Babaze (*Materials Physics Center CSIC-UPV/EHU*); *R. Esteban* (*Materials Physics Center CSIC-UPV/EHU*); *J. Aizpurua* (*University of the Basque Country UPV/EHU*); *A. G. Borisov* (*Institut des Sciences Moléculaires d'Orsay*);

9:30 Invited Mie Scattering of Disk-shaped Plasmonic Nanoparticle Metacrystals
Shao-Ding Liu (*Taiyuan University of Technology*);

9:50 Invited Nonlinear Light-matter Interaction Probed with Fast Electrons
Valerio Di Giulio (*ICFO — Institut de Ciencies Fotoniques, The Barcelona Institute of Science and Technology*);

10:10 **Coffee Break**

10:30 Invited Plasmon-exciton Coupling Probed by Ultrafast Two-dimensional Electronic Spectroscopy
Jin-Hui Zhong (*Southern University of Science and Technology*); *Christoph Lienau* (*Carl von Ossietzky Universitat Oldenburg*);

10:50 Invited Single Cycle Optical Nonlinearity of Transparent Conducting Oxides — Are Temporal Photonic Crystals Feasible?
Ieng-Wai Un (*South China Normal University*); *Subhajit Sarkar* (*Jagiellonian University*); *Yonatan Sivan* (*Ben-Gurion University of the Negev*);

11:10 Invited Quantum Optical Properties in Micro/Nano Photonic Structures
Ying Gu (*Peking University*);

11:30 Invited Interferometric Frequency-resolved Autocorrelation of Nonlinear Emission Excited by a Few-cycle Laser Pulses
Jue-Min Yi (*Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Science*); *Christoph Lienau* (*Carl von Ossietzky Universitat Oldenburg*); *Ke Xu* (*Suzhou Institute of Nano-Tech and Nano-Bionics (SINANO), CAS*);

Session 1A10a
Optical Interconnect Technologies for Datacom and Computercom

Monday AM, April 22, 2024

Room 10 - Shuliu

Organized by Binhao Wang, Stanley Cheung

Chaired by Binhao Wang

8:00 Invited Nonvolatile Reconfigurable Phase-change-materials Integrated Silicon Photonics
Kai Xu (*Zhejiang University*); *Maoliang Wei* (*Zhejiang University*); *Bo Tang* (*Institute of Microelectronics of the Chinese Academy of Sciences*); *Junying Li* (*University of Chinese Academy of Sciences*); *Yiting Yun* (*Zhejiang University*); *Kunhao Lei* (*Zhejiang University*); *Yingchun Wu* (*Westlake University*); *Lan Li* (*Westlake University*); *Hongtao Lin* (*Zhejiang University*);

8:20 Invited Co-design of Si-Photonic Segmented Mach-Zehnder Modulators and Distributed CMOS Drivers for Co-packaged Optics
Siyuan Ma (*Institute of Semiconductors, Chinese Academy of Sciences*); *Yingjie Ma* (*Institution of Semiconductors, Chinese Academy of Sciences*); *Qianli Ma* (*Institution of Semiconductors, Chinese Academy of Sciences*); *Guike Li* (*Institute of Semiconductors, Chinese Academy of Sciences*); *Nanjian Wu* (*Institute of Semiconductors, Chinese Academy of Sciences*); *Xi Xiao* (*National Opto-electronics Innovation Center (NOEIC)*); *Nan Qi* (*Institute of Semiconductors, Chinese Academy of Sciences*);

8:40 Invited TIA Design for Telecom, Datacom and PON
Dan Li (*Xi'an Jiaotong University*);

9:00 A High-Power Lateral p-i-n Silicon-Germanium Photodiode
Chao Cheng (*Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences*); *Jintao Xue* (*Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences*); *Zhiyuan Yu* (*Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences*); *Jinyi Wu* (*Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences*); *Shenlei Bao* (*Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences*); *Binhao Wang* (*Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences*);

9:15 Highly Efficient and Broad-Bandwidth Grating Coupler Between Optical Fiber and Sillicon-on-Insulator Waveguide
Zhanhao Li (*Tongji University*); *Wenxin Hao* (*Tongji University*); *Junhe Zhou* (*Tongji University*);

9:30 Invited 2.5D and 3D Advanced Packaging for Co-packaged Optics (CPO)
Haiyun Xue (*Institute of Microelectronics of the Chinese Academy of Sciences*);

10:00 **Coffee Break**

Session 1A10b
Biotechnology Related to Electromagnetics

Monday AM, April 22, 2024

Room 10 - Shuliu

Organized by Luis J. Gomez, Ho Cheung (Anderson) Shum

Chaired by Luis J. Gomez

10:30 Invited Nature-inspired Fluidics for Biomedical Applications
Ho Cheung (Anderson) Shum (*The University of Hong Kong*);

10:50 Bidomain Boundary Integral Equation for Analyzing a Neuron Cell's Response to Non-invasive Brain Stimulation
Luis J. Gomez (*Purdue University*); *David M. Czerwonky* (*Purdue University*);

11:05 Magnetic Resonance Imaging without RF Shielding via Active Sensing and Deep Learning Elimination of Electromagnetic Interference
Ed Xuekui Wu (*The University of Hong Kong*); *Yujiao Zhao* (*The University of Hong Kong*);

11:20 Peripheral Magnetic Stimulation Coil Optimization: Applying to Vagus Nerve Stimulation
Qingyang Yu (*South China University of Technology*); *Fan Chen* (*National University of Singapore*); *Yongxin Guo* (*National University of Singapore*);

11:35 Group-Level Optimized $\boldsymbol{E}$-field Dosimetry Estimation in Transcranial Magnetic Stimulation (TMS)
Nahian Ibn Hasan (*Purdue University*); *Luis J. Gomez* (*Purdue University*);

Session 1A11
Biophotonics Part 1

Monday AM, April 22, 2024

Room 11 - Xiangyu

Organized by Fan Wang, Qiu Qiang Zhan

Chaired by Fan Wang

8:20 Invited Low Refractive Index Nanoparticles Trapping and Tracking
Xuchen Shan (*Beihang University*); *Dajing Wang* (*Beihang University*); *Jinlong Shi* (*Beihang University*); *Jialin Chen* (*Beihang University*); *Ziqi Li* (*Beihang University*); *Jiachen Zheng* (*Beihang University*); *Fan Wang* (*Beihang University*);

8:40 Invited Sensing Biomolecules with Solid Spin Quantum Sensors
Qi Zhang (*University of Science and Technology of China*);

9:00 Invited Lanthanide-based Single Particle Upconversion Imaging
Qian Liu (*Fudan University*); *Yunxiang Zhang* (*Fudan University*); *Jialing Hu* (*Fudan University*); *Daoming Guan* (*Fudan University*); *Yanxin Zhang* (*Fudan University*); *Rongrong Wen* (*Fudan University*); *Fei Zhao* (*Fudan University*); *Bingjie Zhao* (*Fudan University*); *Tianli Zhai* (*Fudan University*);

9:20 Keynote NIR-II Fluorescent Probes for in vivo Multiplexed Biodetection
Fan Zhang (*Fudan University*);

9:50 Invited Dye-coupled Lanthanide Nanocrystals for Advanced Optical Biosensing and Photodynamic Therapy
Renren Deng (*Zhejiang University*);

10:10 **Coffee Break**

10:30 Keynote Sensing the Invisible with Quantum Ghost Imaging
Andrew Forbes (*University of the Witwatersrand*);

11:00 Invited Biodistribution of Rare-earth Nanocrystals Revealed by NIR-II Imaging
Ping Du (*Peking University*); *Xiaohan Yang* (*Peking University*); *Lingdong Sun* (*Peking University*); *Chunhua Yan* (*Peking University*);

11:20 Learned NIR&VISCAM: Multi-spectral Fusion for Large Depth-of-field Computational Imaging
Tingdong Kou (*Sichuan University*); *Tianyue He* (*Sichuan University*); *Junfei Shen* (*Sichuan University*);

11:35 Invited Optical Tweezing of Upconverting Nanocrystals for Single Particle Studies
Daniel Jaque García (*Universidad Autónoma de Madrid*);

Session 1A12a
Novel Electromagnetic Selective Structures and Applications

Monday AM, April 22, 2024

Room 12 - Siji 1

Organized by Zhongxiang Shen, Bo Li

Chaired by Zengdi Bao

8:00 A Frequency-energy Composite Selective Surface for High-power Microwave Protection
Jinqi Dong (*Southwest University of Science and Technology*); *Yanqing Cheng* (*Southwest University of Science and Technology*); *Shuyun Lin* (*Southwest University of Science and Technology*); *Yao Zhou* (*Southwest University of Science and Technology*); *Qi Chen* (*Southwest University of Science and Technology*);

8:15 Wide-angle Scanning Phased Array Antennas with Absorber Reciprocity
Cheng Jin (*Beijing Institute of Technology*); *Xuning Li* (*Beijing Institute of Technology*); *Hong-Wei Gao* (*Beijing Institute of Technology*); *Baihong Chi* (*Advanced Materials & Energy Research Center, China Academy of Aerospace Science and Innovation*);

8:30 Novel Conformal Wide-angle Polarization-insensitive Harvester with Wide Bandwidth for IoT Sensors
Xuemin Zhang (*Beijing Institute of Technology*); *Zengdi Bao* (*Beijing Institute of Technology*); *Yinbo Zhao* (*Beijing Institute of Technology*); *Yang Li* (*Beijing Institute of Technology*);

8:45 Dual Circularly Polarized Reflectarray with Independent Manipulation of Radiating Beams
Yanxin Xu (*Nanjing University of Posts and Telecommunications*); *Wanping Zhang* (*Nanjing University of Posts and Telecommunications*); *Yumei Chang* (*Nanjing University of Posts and Telecommunications*); *Bo Li* (*Nanjing University of Posts and Telecommunications*);

9:00 Design of Dual-passband Frequency Selective Surfaces Based on Metal Honeycomb Structures
Na Li (*Nanjing University of Posts and Telecommunications*); *Ye Han* (*Nanjing University of Posts and Telecommunications*); *Bo Li* (*Nanjing University of Posts and Telecommunications*);

9:15 Absorptive Polarization-selective Surfaces
Zhenting Chen (*Nanyang Technological University*); *Zhongxiang Shen* (*Yangtze Delta Region Academy of Beijing Institute of Technology*);

10:00 **Coffee Break**

Session 1A12b
Oral Presentations for Best Student Paper Awards — SC4: Antennas and Microwave Technologies

Monday AM, April 22, 2024

Room 12 - Siji 1

Chaired by Zhongxiang Shen, Kwai Man Luk, Sheng Sun

10:30 D-band Heterogeneous Integrated Antenna
Sen Lu (*Southeast University*); *Yizhu Shen* (*Southeast University*); *Fang Hou* (*Southeast University*); *Zhen Lin* (*Southeast University*); *Sanming Hu* (*Southeast University*);

10:45 A 3-D Frequency Selective Structure with Rapid Roll-off Based on Vertical Metallic Pillars
Pei Zhang (*Zhejiang University*); *Da Li* (*Zhejiang University*); *Er-Ping Li* (*Zhejiang University*);

11:00 Multi-resonant Non-intrusive Microwave Sensor for Liquid Identification with High Accuracy
Jing Lei Yong (*Soochow University*); *Xingli He* (*Soochow University*); *Lingfeng Li* (*Soochow University*); *Peng Li* (*Soochow University*); *Yunjing Zhang* (*Soochow University*);

11:15 Application of Technological Gyrotrons for Plasma-chemical Decomposition of Carbon Dioxide
Nikita V. Chekmarev (*Federal Research Center A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *D. A. Mansfeld* (*Federal Research Center A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Sergey V. Sintsov* (*Federal Research Center A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *E. I. Preobrazhenskiy* (*Federal Research Center A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *A. V. Vodopyanov* (*Federal Research Center A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Andrey Pavlovich Fokin* (*Federal Research Center A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)*); *Andrey A. Ananichev* (*Institute of Applied Physics of the RAS*);

11:30 Flexible and Self-compensating Reflectarray Antenna Enabled by the Sensor-antenna Integration
Fan Li (*University of Electronic Science and Technology of China*); *Taisong Pan* (*University of Electronic Science and Technology of China*);

11:45 A Low-cost Large Element Spacing Beam Scanning Antenna Array Based on Multilayer Dielectric Lens
Liuyuanzhi Han (*University of Electronic Science and Technology of China*); *Xiao Ding* (*University of Electronic Science and Technology of China*);

Session 1A13
Computational Imaging: Novel System Design and Reconstruction Algorithms 1

Monday AM, April 22, 2024

Room 13 - Siji 2

Organized by Kedar Khare, Krishna Agarwal

Chaired by Kedar Khare, Yuyue Zhang

8:00 Invited Non-line-of-sight Imaging Based on Structure Sparsity Regularization
Rui Chen (*Sun Yat-Sen University*);

8:20 Invited Single-pixel Computational Imaging through Complex Media
Wen Chen (*The Hong Kong Polytechnic University*);

8:40 Invited Computational Imaging with Randomness
Ryoichi Horisaki (*The University of Tokyo*);

9:00 Invited Deep Learning Solutions to Two-dimensional Electromagnetic Inverse Scattering Problems Based on Point Cloud
Junqing Lou (*Northwestern Polytechnical University*); *Jie Ma* (*Peking University*); *Ruijie Xiao* (*Northwestern Polytechnical University*); *Zicheng Liu* (*Northwestern Polytechnical University*);

9:20 Material Characterization via Microwave Spectroscopy: Singular Spectrum Analysis
Roberto Dima (*Universita degli Studi della Campania "Luigi Vanvitelli"*); *Maria Antonia Maisto* (*Universita degli Studi della Campania "Luigi Vanvitelli"*); *Raffaele Solimene* (*Universita degli Studi della Campania "Luigi Vanvitelli"*);

9:35 Invited Deep Learning Based Image Reconstruction for Optical Mammography
Zhen Yu (*National University of Singapore*); *Gordon Ko* (*National University of Singapore*); *Yang Li* (*National University of Singapore*); *Jiulong Liu* (*National University of Singapore*); *Hui Ji* (*Academy of Mathematics and System Sciences, Chinese Academy of Sciences*); *Anqi Qiu* (*National University of Singapore*); *Nanguang Chen* (*National University of Singapore*);

10:00 **Coffee Break**

10:30 Invited Deep Learning Phase Recovery: Data-driven or Physics-driven?
Kaiqiang Wang (*The University of Hong Kong*); *Edmund Y. Lam* (*The University of Hong Kong*);

10:50 Invited A New Short-range MIMO Array Imaging Method
Tiantian Yin (*National University of Singapore*); *Xudong Chen* (*National University of Singapore*);

11:10 Phase Retrieval with Vortex Illumination
Muskan Kularia (*Indian Institute of Technology Delhi*); *Manidipa Banerjee* (*Indian Institute of Technology Delhi*); *Kedar Khare* (*Indian Institute of Technology Delhi*);

11:25 Invited On the Use of Deep Learning for Ghost/Single-pixel Imaging: From Data-driven to Physics Driven
Fei Wang (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Guohai Situ* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*);

11:45 Invited Data Improvement of Inverse Scattering System Based on Machine Learning Approach
Naike Du (*Beijing Institute of Technology*); *Xinhui Zhang* (*Beijing Institute of Technology*); *Jing Wang* (*Beijing Institute of Technology*); *Zi He* (*Beijing Institute of Technology*); *Xiuzhu Ye* (*Beijing Institute of Technology*);

Session 1A14
Synthetic Aperture Radar System, Method and Applications 2

Monday AM, April 22, 2024

Room 14 - Siji 3

Organized by Bingnan Wang

Chaired by Bingnan Wang, Haipeng Wang

8:00 Invited Massively Parallel SAR Raw Data Simulation Using Multi-GPUs
Fan Zhang (*Beijing University of Chemical Technology*);

8:20 Invited A 3D Coherent Laser Imaging Radar Denoising Method Based on the Combination of Intensity and Elevation
Guowang Jin (*Information Engineering University*); *Qihao Huang* (*Information Engineering University*); *Xin Xiong* (*Information Engineering University*);

8:40 Invited Ship Detection Based on Polarimetric SAR Gradient and Complex Wishart Classifier
Junjun Yin (*University of Science and Technology Beijing*); *Jian Yang* (*Tsinghua University*);

9:00 Enhanced Simulation Optimization of SAR BP Algorithm for Moving Targets
Lu Li (*Yan'an University*); *Xincheng Ren* (*Yan'an University*); *Yuqing Wang* (*Yan'an University*); *Ye Zhao* (*Yan'an University*); *Peng-Ju Yang* (*Yan'an University*);

9:15 Five-component Scattering Power Decomposition for Hybrid Compact Polarimetric SAR Data
Linlin Zhang (*Southwest Jiaotong University*); *Chuan Zhang* (*Southwest Jiaotong University*); *Gui Gao* (*National University of Defense Technology*); *Xi Zhang* (*First Institute of Oceanography, Ministry of Natural Resources*); *Jia Liu* (*DFH Satellite Company Ltd.*);

9:30 Dynamic Small Targets Detection Using Multi-temporal SAR Images
Yaosen Lv (*Fudan University*); *Fengming Hu* (*Fudan University*); *Feng Xu* (*Fudan University*);

9:45 An In-orbit Calibration Method for Spaceborne SAR 2-D Antenna Pattern Measurement Based on Fly-around Calibration Satellite
Tian Qiu (*Beihang University*); *Pengbo Wang* (*Beihang University*); *Tao He* (*Beihang University*); *Yanan Guo* (*Beihang University*); *Chuanxin Zhou* (*Beihang University*);

10:00 **Coffee Break**

10:30 Automatic Detection for the Boundary of Earthquake Triggered Landslides with Sentinel-1 SAR Imagery
Lifu Chen (*Changsha University of Science and Technology*); *Zengqi Li* (*Changsha University of Science and Technology*); *Chuang Song* (*Chang'an University*); *Jin Xing* (*TD Insurance*); *Zhenhong Li* (*Chang'an University*);

10:45 An Improved Approach to Channel Mismatches Estimation for Bistatic Multichannel SAR
Chuanxin Zhou (*Beihang University*); *Pengbo Wang* (*Beihang University*); *Tao He* (*Beihang university*); *Tian Qiu* (*Beihang University*);

11:00 Turkey-Syria Mw 7.8 Earthquake Deformation Monitoring Using Lutan-1 SAR Data
Xiang Zhang (*Natl Adm Surveying Mapping & Geoinformat*); *Xinming Tang* (*Land Satellite Remote Sensing Application Center, Ministry of Natural Resources*); *Tao Li* (*Land Satellite Remote Sensing Application Center, Ministry of Natural Resources*); *Hui Zhao* (*National Geomatics Center of China*); *Xuefei Zhang* (*Land Satellite Remote Sensing Application Center, Ministry of Natural Resources*); *Jing Lu* (*Land Satellite Remote Sensing Application Center, Ministry of Natural Resources*); *Sen Lv* (*Land Satellite Remote Sensing Application Center, Ministry of Natural Resources*);

11:15 Structure-coupled Variational Bayesian Method for Building Layout Reconstruction
Zixiang Yin (*Beijing Institute of Technology*); *Xiaolu Zeng* (*Beijing Institute of Technology*); *Jiancheng Liao* (*Beijing Institute of Technology*); *Junbo Gong* (*Beijing Institute of Technology Chongqing Innovation Center*);

11:30 Electromagnetic Simulation of Norway Spruce and Scots Pine for Root Volume Estimation via SAR Tomography
Gian Carlos Oré Huacles (*University of Campinas*); *Henrik J. Persson* (*Swedish University of Agricultural Sciences*); *Alina Shevchenko* (*GFZ German Research Center for Geosciences*); *Mahdi Motagh* (*GFZ German Research Center for Geosciences*); *Linda Lück* (*GFZ German Research Center for Geosciences*); *Rubem Valbuena* (*Swedish University of Agricultural Sciences*); *Martin Herold* (*GFZ German Research Center for Geosciences*); *Hugo Enrique Hernandez-Figueroa* (*University of Campinas*);

11:45 A Novel Multi-subaperture Motion Compensation Algorithm Based on Extended Quadratic Error Model for UAV SAR Imaging
Weidi Xu (*The 54th Research Institute of CETC*); *Pengjie You* (*The 54th Research Institute of CETC*); *Xiaoliang Yang* (*The 54th Research Institute of CETC*); *Lin Wang* (*The 54th Research Institute of CETC*); *Shuo Feng* (*The 54th Research Institute of CETC*);

Session 1A15a
Deep Learning Techniques in Computational Electromagnetics

Monday AM, April 22, 2024
Room 15 - Siji 4
Organized by Qun Ren, Nicolae-Coriolan Panoiu
Chaired by Qun Ren, Nicolae-Coriolan Panoiu

8:00 Invited Nanophotonic Inverse Design Enabled by Deep Learning
Sunae So (*Korea University*);

8:20 Invited Model Agnostic Data Enhancement Algorithm in 2D Chiral Metamaterials: From Prediction to Inverse Design
Jie You (*National Innovation Institute of Defense Technology*); *Zeyu Zhao* (*National University of Defense Technology*); *Xin Zheng* (*National Innovation Institute of Defense Technology*);

8:40 Invited Data-physics Driven Machine-learning Modeling of Microwave Devices
Jianwei You (*Southeast University*); *Jun Ming Hou* (*Southeast University*); *Xuan Zheng* (*Southeast University*); *Tian Jian Peng* (*Southeast University*); *Xiong Wei Wu* (*Southeast University*); *Long Chen* (*Southeast University*); *Jianan Zhang* (*Southeast University*); *Tie Jun Cui* (*Southeast University*);

9:00 Estimating Capacity of 1D MIMO Antenna System with Physics-driven Machine-learning Approach
Yutong Jiang (*Zhejiang University*); *Wei E. I. Sha* (*Zhejiang University*);

9:15 In-series Deep Learning Techniques for Magnetic Resonance Imaging (MRI) Computation Electromagnetics
Yongjing Dang (*Tianjin University*); *Yu Zheng* (*Tianjin University*); *Qun Ren* (*Tianjin University*); *Xia Xiao* (*Tianjin University*); *Yuqing He* (*Tianjin University*); *Yanwei Pang* (*Tianjin University*);

9:30 Genetically Designed Superbandwidth Superscatterers — One among a Trillion
Pavel B. Ginzburg (*Tel Aviv University*); *Dmytro Vovchuk* (*Tel Aviv University*); *Anna Mikhailovskaya* (*Tel Aviv University*); *Konstantin Grotov* (*Tel Aviv University*); *Denis Kolchanov* (*Tel Aviv University*); *Dmitry Dobrykh* (*Tel Aviv University*);

9:45 Polarization Conversion Metasurfaces and Its Application
Fengxia Li (*Xidian University*); *Jing-Ya Deng* (*Xidian University*); *Haiyan Chen* (*University of Electronic Science and Technology of China*);

10:00 Development of Neural Network Approach for Reconstructing the Atmospheric Humidity Profile from Ground-based Microwave Radiometer-spectrometer Data
Dobroslav Pavlovich Egorov (*Kotel'nikov Institute of Radio Engineering and Electronics of RAS*); *Y. V. Verina* (*Bauman Moscow State Technical University*); *Oleg V. Kravchenko* (*Federal Research Center "Computer Science and Control" of RAS*);

10:15 **Coffee Break**

Session 1A15b
Emerging Computational Methodologies for Computer-aided Electromagnetic Design and Optimization

Monday AM, April 22, 2024

Room 15 - Siji 4

Organized by Hong-Wei Gao, Zhen Peng

Chaired by Hong-Wei Gao

10:30 A Fast Computing Technology of Three-dimensional Multilevel Fast Multipole Algorithm Based on Deep Learning
Zelin Xia (*Communication University of China*); *Jinbo Liu* (*Communication University of China*); *Zengrui Li* (*Communication University of China*); *Jiming Song* (*Iowa State University*);

10:45 High-Fidelity Electromagnetic Analysis of Conformal Metamaterials on Freeform Surfaces
Hong-Wei Gao (*Beijing Institute of Technology*); *Xi-Min Xin* (*Beijing Institute of Technology*); *Zhen Peng* (*University of Illinois at Urbana-Champaign*);

11:00 Fast Analysis of Electromagnetic Properties of Integrated Models Consist of Antenna Array and Radome
Weijian Ran (*University of Electronic Science and Technology of China*); *Ming Jiang* (*University of Electronic Science and Technology of China*); *Jun Hu* (*University of Electronic Science and Technology of China*);

11:15 Optimizing High-frequency SBR Method on x86 CPU Using SIMD
Yunchuan Wang (*Beijing Institute of Technology*); *Xiao-Min Pan* (*Beijing Institute of Technology*);

11:30 On the Formulation of Stochastic Green's Function Method for Targets with Hierarchical Levels of Interaction
Sangrui Luo (*The University of Illinois at Urbana-Champaign*); *Shen Lin* (*The University of Illinois at Urbana-Champaign*); *Zhen Peng* (*University of Illinois at Urbana-Champaign*);

11:45 Beam Steering Algorithm for Deformed Conformal Array Antennas Based on the Physics-inspired Deep Learning
Zi-Yang Liang (*Beijing Institute of Technology*); *Hong-Wei Gao* (*Beijing Institute of Technology*); *Cheng Jin* (*Beijing Institute of Technology*);

Session 1A16a
Topological Photonics: Fundamentals and Applications 1

Monday AM, April 22, 2024

Room 16 - Mudan

Organized by Yihao Yang, Ranjan Singh

Chaired by Yihao Yang

8:00 Nonlinear Topological Laser on the 2-dimensional Non-Hermitian Lattices with Higher-order Corner States
Jing-Ping Xu (*Tongji University*); *Meisong Wei* (*Tongji University*);

8:15 Terahertz Single Pixel Imaging and Sensing with Dielectric BIC Metasurfaces
Longqing Cong (*Southern University of Science and Technology*);

8:30 Invited Kekulé-distorted Topological Cavities for Beam-engineered Micro-nano Lasers
Song Han (*Zhejiang University*);

8:50 Invited Realization of Topological Phases in Gyromagnetic Photonic Crystal Platform
Pei-Heng Zhou (*University of Electronic Science and Technology of China*); *Gui-Geng Liu* (*Nanyang Technological University*); *Shuwei Li* (*University of Electronic Science and Technology of China*); *Qindong Xie* (*University of Electronic Science and Technology of China*); *Long-Jiang Deng* (*University of Electronic Science and Technology of China*); *Baile Zhang* (*Nanyang Technological University*);

Session 1A16b
Wave Engineering in Complex Media

Monday AM, April 22, 2024

Room 16 - Mudan

Organized by Nicholas Xuanlai Fang

Chaired by Nicholas Xuanlai Fang

9:10 Research Advance in Metamaterial-inspired Klystrons at UESTC
Zhaoyun Duan (*University of Electronic Science and Technology of China*); *Xuanming Zhang* (*University of Electronic Science and Technology of China*); *Shaozhe Wang* (*Guoli Vacuum (GLVAC) Industrial Technology Research Institute of High Power Devices Co. LTD*); *Jianjun Zou* (*Guoli Vacuum (GLVAC) Industrial Technology Research Institute of High Power Devices Co. LTD*); *Yongming Li* (*Guoli Vacuum (GLVAC) Industrial Technology Research Institute of High Power Devices Co. LTD*); *Chuanchao Wang* (*University of Electronic Science and Technology of China*); *Ning Li* (*University of Electronic Science and Technology of China*); *Deyong Li* (*University of Electronic Science and Technology of China*);

9:25 All-dielectric High Efficiency Bi-layer Diffraction Metagratings
Xinchen Wan (*National University of Singapore*); *Guangya Zhou* (*National University of Singapore*);

9:40 Non-Hermitian Invisible Devices from Transformation Optics
Huanyang Chen (*Xiamen University*); *Wen Xiao* (*Xiamen University*);

9:55 Localized and Propagative States in One-dimensional Non-Hermitian Disordered Rings
Xulong Wang (*Hong Kong Baptist University*); *Wei Wang* (*Hong Kong Baptist University*); *Guancong Ma* (*Hong Kong Baptist University*);

10:05 **Coffee Break**

10:30 Invited Regulated Symmetric Breaking Enables Full-space Artificial Phototaxis
Guodong Hou (*Shanghai Jiao Tong University*); *Nicholas Xuanlai Fang* (*The University of Hong Kong*); *Xiaoshi Qian* (*Shanghai Jiaotong University*);

10:50 Transparent Matte Surfaces: Concept and Applications
Hong Chen Chu (*Nanjing University*); *Xiang Xiong* (*Nanjing University*); *Nicholas Xuanlai Fang* (*The University of Hong Kong*); *Ru-Wen Peng* (*Nanjing University*); *Mu Wang* (*Nanjing University*); *Yun Lai* (*Nanjing University*);

11:05 Towards Optical Tellegen Metamaterials without External Bias Fields
Viktar S. Asadchy (*Aalto University*); *S. Safaei Jazi* (*Aalto University*); *Ihar A. Faniayeu* (*University of Gothenburg*); *D. C. Tzarouchis* (*University of Pennsylvania*); *M. M. Asgari* (*Aalto University*); *R. Cichelero* (*University of Gothenburg*); *A. Dmitriev* (*University of Gothenburg*); *Shanhui Fan* (*Stanford University*);

11:20 Design of a Highly Transmissive Cascaded Metasurface with Wavefront Controllability
Xiaojing Li (*Tongji University*); *Tong Hao* (*Tongji University*);

11:35 Keynote Photonics at Sub-wave Length Scale
Xiang Zhang (*University of Hong Kong*);

Session 1A17
Acoustic/Phononic Metamaterials, Metasurfaces, and Metadevices 1

Monday AM, April 22, 2024

Room 17 - Furong

Organized by Chen Shen, Lujun Huang

Chaired by Chen Shen, Lujun Huang

8:00 Invited Phase Gradient Metasurfaces: From Physics to Applications
Yangyang Fu (*Nanjing University of Aeronautics and Astronautics*);

8:20 Invited Lightweight Metamaterial-based Vibration and Noise Reduction Components for Various Equipment
Fuyin Ma (*Xi'an Jiaotong University*); *Xingzhong Wang* (*Xi'an Jiaotong University*); *Chongrui Liu* (*Xi'an Jiaotong University*); *Jiu Hui Wu* (*Xi'an Jiaotong University*);

8:40 Invited Sound Emission Enhancement from Bound State in the Continuum
Sibo Huang (*City University of Hong Kong*); *Yong Li* (*Tongji University*); *Jie Zhu* (*Tongji University*); *Din Ping Tsai* (*The Hong Kong Polytechnic University*);

9:00 Invited Controlling the Light Diffraction through a Single Subwavelength Metallic Slit via Phase Gradient
Songsong Li (*Soochow University*); *Yadong Xu* (*Soochow University*);

9:20 Invited Broadband Manipulation of Acoustic Vortex Beams Using 3-bit Coding Metasurfaces
Sheng-Dong Zhao (*Qingdao University*);

9:40 Invited Deep-learning-aided Metasurface Design for Megapixel Acoustic Hologram
Xuan-Bo Miao (*Tianjin University*); *Hao-Wen Dong* (*Beijing Institute of Technology*); *Sheng-Dong Zhao* (*Qingdao University*); *Shi-Wang Fan* (*Shijiazhuang Tiedao University*); *Guoliang Huang* (*University of Missouri*); *Chen Shen* (*Rowan University*); *Yue-Sheng Wang* (*Tianjin University*);

10:00 **Coffee Break**

10:30 Numerical Investigation of Acoustic Cavitation Characteristics of an Air-vapor Bubble under Multi-frequency Ultrasound
Invited
Zhenxiang Ji (*Beijing Institute of Technology*); *Xiaoyun Huang* (*Beijing Institute of Technology*); *Jie Jin* (*Beijing Institute of Technology*); *Kechi Zhang* (*Beijing Institute of Technology*); *Xinze Liu* (*Beijing Institute of Technology*); *Dingjie Suo* (*Beijing Institute of Technology*);

10:50 New Horizons beyond Optical Metadevices
Keynote
Nicholas Xuanlai Fang (*The University of Hong Kong*);

11:20 Engineering Boundary Impedance for Quality Factor Control by Customizable Acoustic Metamaterials
Sichao Qu (*The University of Hong Kong*); *Min Yang* (*Acoustic Metamaterials Group Ltd.*); *Nicholas X. Fang* (*The University of Hong Kong*);

11:35 Dual-band All-optical Logic Gate Based on Coherent Control Principles
Xinyu Shi (*Guilin University of Electronic Technology*); *Ming Chen* (*Guilin University of Electronic Technology*); *Wanli Zhao* (*Guilin University of Electronic Technology*); *Wenhao Han* (*Guilin University of Electronic Technology*);

11:50 Geometric Phase in Twisted Topological Complementary Pair
Invited
Kun Zhang (*Wuhan University*); *Qicheng Zhang* (*Wuhan University*); *Yangyang Fu* (*Nanjing University of Aeronautics and Astronautics*);

Session 1A18
Optical Metasurface for Light Manipulation and Novel Response

Monday AM, April 22, 2024

Room 18 - Meilan

Organized by Ting Xu, Maowen Song

Chaired by Maowen Song

8:00 Monolithic Metalens for Single-shot Sorting of Total Angular Momentum State
Invited
Yinghui Guo (*Institute of Optics and Electronics, Chinese Academy of Sciences*);

8:20 Asymmetric Electromagnetic Manipulation Based on Multi-layered Metasurface
Yijia Huang (*Sichuan Normal University*);

8:35 Dynamic MEMS-based Metasurfaces
Invited
Fei Ding (*University of Southern Denmark*);

8:55 Nanostructured Optical Materials for Biosensing and Hydrogen-detecting
Invited
Yang Shen (*Sun Yat-sen University*); *Chongjun Jin* (*Sun Yat-sen University*);

9:15 Polysilicon Terahertz Thermal Detector Based on CMOS Technology
Ke Wang (*Nanjing University*); *Yiming Liao* (*Nanjing University*); *Wenbin Zhou* (*Nanjing University*); *Feng Yan* (*Nanjing University*); *Xiaoli Ji* (*Nanjing University*);

9:30 Linear and Nonlinear Optical Properties of Dielectric Wavy Grating Enhanced by Bound States in the Continuum
Ma Luo (*Guangdong Polytechnic Normal University*);

9:45 Application of Metasurface Chip to Laser Frequency Stabilization in Atomic Rubidium
Chen Qing (*Beihang University*); *Dengke Zhang* (*Beihang University*);

10:00 **Coffee Break**

10:30 Multifunctional Displays Based on Optical Metasurfaces
Invited
Cheng Zhang (*Huazhong University of Science and Technology*);

10:50 OAM Dependent Speckles for OAM Mode Sorting and Demultiplexing
Rui Ma (*University of Electronic Science & Technology of China*); *Ke Hai Luo* (*Shenzhen University*); *Jing Song He* (*Shenzhen University*); *Jun Liu* (*Shenzhen University*);

11:05 Optical-addressed Dynamic Meta-hologram
Invited
Hui Gao (*Huazhong University of Science and Technology*);

11:25 Imaging Metalenses with Angular Magnification
Invited
Gang Chen (*Chongqing University*);

11:45 Multi-dimensional Light Modulation Based on Liquid Crystal
Invited
Dongliang Tang (*Hunan University*);

Session 1A19
Poster Session 1

Monday AM, April 22, 2024

8:00 AM - 12:00 AM

Room Exhibition Area

1 Multiscale Multiphysics Simulation Model of Laser-induced Ultrasonic Energy Conversion
Yongnan Li (*The University of Hong Kong*); *Nicholas X. Fang* (*The University of Hong Kong*);

2 The Experimental Investigation of Continuous Frequency Tuning in Sub-THz Gyrotrons with Short Cavities
Andrey P. Fokin (*Institute of Applied Physics of the RAS*); *Alexey E. Fedotov* (*Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)*); *Andrey A. Ananichev* (*Institute of Applied Physics of the RAS*); *Andrey S. Zuev* (*Federal Research Center "Institute of Applied Physics RAS"*); *Vladimir N. Manuilov* (*Institute of Applied Physics RAS*); *Roman M. Rozental* (*Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)*); *Irina V. Zotova* (*Institute of Applied Physics RAS*); *Mikhail Yu. Glyavin* (*Institute of Applied Physics RAS*);

3 The Electrical Property Impact Applied by Ablation on Functional Areas
Hu Fan (*Air Equipment Department*); *Chao Wang* (*Aerospace Research Institute of Materials & Processing Technology*); *Yi Wang* (*Aerospace Research Institute of Materials & Processing Technology*); *Rong-Qing Sun* (*Aerospace Research Institute of Materials & Processing Technology*); *Han Qiao Shi* (*Aerospace Research Institute of Materials & Processing Technology*); *Peng Zhang* (*Aerospace Research Institute of Materials & Processing Technology*); *Jian-Chang Wang* (*Aerospace Research Institute of Materials & Processing Technology*); *Bao-Gang Sun* (*Aerospace Research Institute of Materials & Processing Technology*);

4 A Low-profile Wideband Dual-polarized Antenna with Coupled Feed Structure for 5G Base Station Application
Cong Chen (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Jia Wan* (*Southwest University of Science and Technology*); *Yuyu Zhu* (*Southwest University of Science and Technology*);

5 Mutual Coupling Error Correction Algorithm of MIMO Radar Based on Deep Learning
Hongbo Fei (*Harbin Institute of Technology at Weihai*); *Linwei Wang* (*Harbin Institute of Technology at Weihai*); *Aijun Liu* (*Harbin Institute of Technology at Weihai*); *Chang Jun Yu* (*Harbin Institute of Technology at Weihai*);

6 Dynamically Tunable Refractive Index Sensor of MIM-graphene Hybrid Cavity Structure Based on Fano Resonance
Ting Zhang (*Sichuan University*); *Xiaoqing Yang* (*Sichuan University*); *Gao Feng* (*Sichuan University*); *Huajiang Peng* (*Sichuan University*);

7 A Three-dimensional Electromagnetic Scattering Simulation Tool
H. Liu (*University of Electronic Science and Technology of China*); *Li Xu* (*University of Electronic Science and Technology of China*); *B. Q. Liu* (*University of Electronic Science and Tech of China*);

8 Design of a High CMTI Level Shifting Circuit for GaN Gate Driver ICs
Zujing Zhang (*Southwest Jiaotong University*); *Quanyuan Feng* (*Southwest Jiaotong University*); *Jiaxiong Deng* (*Southwest Jiaotong University*);

9 An Antenna Gain Test Method Based on Extrapolation Method
Zihao Fu (*Beijing Institute of Radio Metrology & Measurement*); *Yongjun Wang* (*Beijing Institute of Electronic System Engineering*); *Wei Quan* (*Beijing Shiny Tech. Co., Ltd.*); *Yanfang Li* (*Jiangxi Science & Technology Normal University*); *Jianchong Jia* (*Beijing Institute of Electronic System Engineering*);

10 Nanoparticle Deep-subwavelength Dynamics Empowered by Optical Meron-antimeron Topology
Chengfeng Lu (*Tongji University*); *Yuzhi Shi* (*Tongji University (TJU)*); *Xinbin Cheng* (*Tongji University*);

11 Precipitation Retrieval of FY-3D MWHTS and MWRI Data Based on Light Gradient Boosting Model
Yanfang Lv (*Beijing Information Science and Technology University*); *Lanjie Zhang* (*Beijing Information Science and Technology University*); *Yifan Zhang* (*Beijing Information Science and Technology University*); *Biao Zhang* (*Beijing Information Science and Technology University*);

12 High Isolation Base Station Antenna Array Based on Fully Connected Neural Network Optimization
Xiaochi Lu (*University of Electronic Science and Technology of China*); *Haotian Li* (*University of Electronic Science and Technology of China*); *Dexin Zhao* (*National Innovation of Defense Technology, Academy of Military Sciences PLA China*);

13 Study on the Detection Performance of Polarization Light Based on Metasurfaces with Different Configurations
Chao Ye (*China Jiliang University*); *Han Gao* (*China Jiliang University*);

14 Design of P Band Filter Antenna with High Out-of-Band Suppression
Jiangling Dou (*Kunming University of Science and Technology*); *Yinsu Yuan* (*Kunming University of Science and Technology*); *Jian Song* (*Kunming University of Science and Technology*); *Qingwang Wang* (*Kunming University of Science and Technology*); *Tao Shen* (*Kunming University of Science and Technology*);

15 A Novel Compact Omnidirectional Tubby Patch Antenna with Capacitive Loading for Stable Radiation in Aero Vehicle Wireless Communications
Jingyan Mo (*Nokia Shanghai Bell Inc.*);

16 Enhancing Wi-Fi Based Ranging Accuracy through a Two-stage Algorithmic Approach
Jingyan Mo (*NOKIA Shanghai Bell Inc.*);

17 Analysis of Non-periodic and Non-planar Conformal Phased Array Antennas for Millimeter Wave Applications
Shih-Chung Tuan (*Asia Eastern University of Science and Technology*);

18 An Evaluation of Representative Samples Replay and Knowledge Distillation Regularization for SAR ATR Continual Learning
Hao Sun (*National University of Defense Technology*); *Yanjie Xu* (*National University of Defense Technology*); *Kai Fu* (*National University of Defense Technology*); *Lin Lei* (*National University of Defense Technology*); *Kefeng Ji* (*National University of Defense Technology*); *Gangyao Kuang* (*National University of Defense Technology*);

19 Modeling of Electrodynamic Components of a Complex for Microwave Pyrolysis
Alexander Vikharev (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *T. O. Krapivnitckaia* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *A. B. Alyeva* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *S. A. Ananicheva* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Mikhail Yu. Glyavin* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Nikolai Yu. Peskov* (*Institute of Applied Physics, RAS*);

20 Sectioned Gyro-BWO and Gyro-TWT with Zigzag Quasi-optical Systems: 2D Theory and Results
Ekaterina Mikhailovna Novak (*Insitute of Applied Physics RAS*); *Sergey V. Samsonov* (*Institute of Applied Physics, Russian Academy of Sciences*); *Andrei V. Savilov* (*Institute of Applied Physics, RAS*);

21 Investigation of the Effect of Cavity Roughness on the Output Characteristics of Terahertz Gyrotrons
Darya Aleksandrovna Kotova (*IAP RAS*); *Anton S. Sedov* (*IAP RAS*); *Andrey S. Zuev* (*Federal Research Center "Institute of Applied Physics RAS"*);

22 Simulations and Measurements of Selective Properties of Rectangular Grooves in Open Cavities
Andrey A. Ananichev (*Institute of Applied Physics of the RAS*); *Ilya V. Bandurkin* (*Institute of Applied Physics RAS*); *Alexey E. Fedotov* (*Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)*); *Andrey Pavlovich Fokin* (*Federal Research Center A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)*); *Dmitry I. Sobolev* (*Institute of Applied Physics, Russian Academy of Sciences*); *Mikhail D. Proyavin* (*Institute of Applied Physics, Russian Academy of Sciences*);

23 Polarimetric SAR Image Super-resolution Based on Coded Polarimetric Contexture Matrix and a Dual-branch Network
Lin-Yu Dai (*National University of Defense Technology*); *Ming-Dian Li* (*National University of Defense Technology*); *Si-Wei Chen* (*National University of Defense Technology*);

24 Arduino-based Implementation and Design of Modern Temperature Measurements Sensor Environments
Daniils Aleksandrovs-Moisejs (*Riga Technical University*); *Elans Grabs* (*Riga Technical University*); *Tianhua Chen* (*Riga Technical University*); *Romualds Beļinskis* (*Riga Technical University*); *Nikolajs Bogdanovs* (*Riga Technical University*); *Toms Kārkliņš* (*Riga Technical University*); *Jānis Klūga* (*Riga Technical University*); *Mihails Stetjuha* (*Riga Technical University*); *Aleksandrs Ipatovs* (*Riga Technical University*);

25 Design of a Compact UWB BPF with an Embedded Folded-stub Loaded Square Loop Resonator
Lingling Yang (*Wuhan Vocational College of Software and Engineering*); *Yongzhi Cheng* (*Wuhan University of Science and Technology*); *Haihong Liu* (*Wuhan University of Science and Technology*);

26 The Phenomenon of Rabi Spectrum Broadening Caused by the Colored Noise
Ni An (*National Key Laboratory of Scattering and Radiation*); *J. M. Gou* (*National Key Laboratory of Scattering and Radiation*); *Xunwang Dang* (*National Key Laboratory of Scattering and Radiation*);

27 A Ring-shaped Miniaturized Reflectarray Unit Based on Mandelbrot Fractal Geometry
Hou Yi Ding (*Tongji University*); *Yuan Chu Xu* (*Tongji University*); *Yi Ruo Wang* (*Tongji University*); *Mei Song Tong* (*Tongji University*);

28 A Novel Multi-parameter Intelligent Compensation Method for Accurate Detection of Dissolved Oxygen Concentration
Xu Cong Zhang (*Tongji University*); *Guo Chun Wan* (*Tongji University*); *Mei Song Tong* (*Tongji University*);

29 A Low-power Collaborative Control Method for Vehicle-grade Ambient Lighting System
Wen Bo Fu (*Shanghai Institute of Technology*); *Lan Chen* (*Shanghai Institute of Technology*); *Jiahui Wang* (*Shanghai Institute of Technology*); *Mei Song Tong* (*Tongji University*);

30 Research of Beam Forming Method for Radar-based Non-invasive Pulse Wave Monitoring
Siqi Huang (*Chongqing University*); *Xi Qiu* (*Chongqing University*); *Jincheng Sun* (*Chongqing University*);

31 Characteristics of Coaxial Grid Discharge Plasma and Its Effect on Microwave Transmission
Hailu Wang (*Institute of Defense Engineering*); *Xingbao Lyu* (*Harbin Institute of Technology*); *Z. Y. Li* (*Harbin Institute of Technology*); *Chengxun Yuan* (*Harbin Institute of Technology*);

32 Design of LED Lighting System with Automatic Dimming, Mixing and Situational Control
Yu-En Wu (*National Kaohsiung University of Science and Technology*); *Xu-Hui Jiang* (*National Kaohsiung University of Science and Technology*);

33 Design of UWB Bow-tie Antenna for High Power Electromagnetic Environment Monitoring
Junli Lu (*Southwest Jiaotong University*); *Xiang-Qiang Li* (*Southwest Jiaotong University*); *Jianqiong Zhang* (*Southwest Jiaotong University*); *Qingfeng Wang* (*Southwest Jiaotong University*);

34 An Exploration of Charge-neutral Atmospheric Propagation Path Error Correction Method for Interferometric Radar Altimeter
Fanwei Su (*Ocean University of China*); *Yunhua Wang* (*Ocean University of China*); *Yining Bai* (*China University of Petroleum*); *Daozhong Sun* (*Xidian University*); *Yanmin Zhang* (*Ocean University of China*);

35 An Improved Numerical Algorithm for the Coupling Simulation of Shielded Cable
Zhihong Ye (*Chongqing University of Posts and Telecommunications*); *Zihan Meng* (*Chongqing University of Posts and Telecommunications*); *Teng Hu* (*Chongqing University of Posts and Telecommunications*);

36 Microwave Coincidence Imaging in Frequency Domain Based on Phase Modulation
Hang Lin (*National University of Defense Technology*); *Hongyan Liu* (*National University of Defense Technology*); *Kang Liu* (*National University of Defense Technology*); *Ke Xu* (*National University of Defense Technology*); *Yongqiang Cheng* (*National University of Defense Technology*); *Caipin Li* (*Xi'an Institute of Space Radio Technology*);

37 Terahertz Broadband Cross-polarized Metasurface Based on Square Split-ring Resonators
Huayan Sun (*Yunnan University*); *Zhe Chen* (*Yunnan University*); *Yongping Xu* (*Yunnan University*);

38 Heisenberg-limited Spin Squeezing: Transforming Non-squeezing Interaction into Squeezing Interaction
Long-Gang Huang (*Tsinghua University*); *Feng Chen* (*Tsinghua University*); *Xinwei Li* (*Tsinghua University*); *Yaohua Li* (*Tsinghua University*); *Rong Lü* (*Tsinghua University*); *Yong-Chun Liu* (*Tsinghua University*);

39 A Wide Beamwidth Slot Type SIW 28G Antenna
Xia Zhou (*Nokia Shanghai Bell Co., Ltd.*); *Xiuqi Lai* (*Shanghai Yangpu High School of PRC*);

40 A Low Sidelobe Level Along Direction of Propagation 4-order OAM Beam Generated by Hexagonal Reflective Metasurface
Desheng Yang (*Harbin Institute of Technology*); *Cong Liu* (*Harbin Institute of Technology*); *Yueyi Yuan* (*Harbin Institute of Technology*); *Qun Wu* (*Harbin Institute of Technology*); *Kuang Zhang* (*Harbin Institute of Technology*);

41 EMC Evaluation of High-power Electronic System Based on Improved AHP-TOPSIS
Qiangming Cai (*Southwest University of Science and Technology*); *Quan Deng* (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Haoran Li* (*Southwest University of Science and Technology*); *Zhen-Yong Du* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yixiang Li* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yuyu Zhu* (*Southwest University of Science and Technology*); *Jun Fan* (*Southwest University of Science and Technology*);

42 A Wavefront Modulation Method with Converged Energy for Radar Forward-looking Imaging
Feng Kuang (*National University of Defense Technology*); *Kang Liu* (*National University of Defense Technology*); *Hongyan Liu* (*National University of Defense Technology*); *Jianqiu Wang* (*National University of Defense Technology*); *Yang Yang* (*National University of Defense Technology*);

43 FEMSiP Thermal Prediction Network Model with In-stage BPF Gain Measurement Giving Identifiable Spatial Resolution
Xilei Liu (*South China University of Technology*); *X. Wang* (*Guangzhou RunXin Information Technology Co. Ltd.*); *K. Yang* (*Guangzhou RunXin Information Technology Co. Ltd.*); *Changjian Zhou* (*South China University of Technology*);

44 Upconversion Luminescent Nanomaterials for Precise Detection and Analysis
Jialin Liu (*South China Normal University*); *Qianyi Guo* (*South China Normal University*); *Jiewei Chen* (*The Hong Kong Polytechnic University*); *Lihua Li* (*South China Normal University*);

45 Metasurface Hologram and the Superposition of Ring Vortex Beams for Polarization Measurement
Liang Xu (*Kunming University of Science and Technology*); *Jin Han* (*Kunming University of Science and Technology*); *Yongjin Li* (*Kunming University of Science and Technology*); *Zhiguo Song* (*Kunming University of Science and Technology*); *Jianbei Qiu* (*Kunming University of Science and Technology*);

46 Typhoon Wind Speed Retrieval from HY-2C Microwave Radiometer Based on LightGBM
Xuchen Dai (*Beijing Information Science and Technology University*); *Biao Zhang* (*Beijing Information Science and Technology University*); *Yifan Zhang* (*Beijing Information Science and Technology University*); *Lanjie Zhang* (*Beijing Information Science and Technology University*);

47 Spin-orbit Conversion of Vector Light Field Just after Spherical Lens
Victor V. Kotlyar (*Image Processing Systems Institute — Branch of the Federal Scientific Research Centre "Crystallography and Photonics" of RAS*); *A. A. Kovalev* (*Image Processing Systems Institute of the Russian Academy of Sciences*); *Sergey S. Stafeev* (*Image Processing Systems Institute — Branch of the Federal Scientific Research Centre "Crystallography and Photonics" of RAS*); *A. G. Nalimov* (*Samara National Research University*); *Elena Sergeevna Kozlova* (*Image Processing Systems Institute of the Russian Academy of Sciences*);

48 Design and Modeling of Monopulse Antenna System
K. S. Kharlamp'ev (*National Research University "Moscow Power Engineering Institute"*); *I. A. Gromov* (*JSC "Kompozit"*); *Mikhail Sergeyevich Mikhailov* (*National Research University "Moscow Power Engineering Institute"*);

49 Quantum Enhanced Optical Phase Metrology Beyond the Standard Quantum Limit
Yilun Xue (*Xi'an Institute of Applied Optics*); *Mengwei Cao* (*Xi'an Institute of Applied Optics*); *Bing Yu* (*Xi'an Institute of Applied Optics*); *Wangbin Xue* (*Xi'an Institute of Applied Optics*); *Junwei Chu* (*Xi'an Institute of Applied Optics*); *Jihong Fan* (*Xi'an Institute of Applied Optics*);

50 A Compact Circularly Polarized Ring Patch Antenna for RFID Reader Application
Junlong Li (*Shanwei Institute of Technology*); *Guogang Huang* (*Shanwei Institute of Technology*); *Mingzhi Zheng* (*Shanwei Institute of Technology*); *Zixuan Liu* (*South China Normal University*); *Hui Liu* (*Guangdong Polytechnical Normal University*);

51 High-resolution Metalens Imaging Polarimetry
Zhaorui Huang (*Huazhong University of Science and Technology*); *Yaqin Zheng* (*Sun Yat-sen University*); *Junhao Li* (*Huazhong University of Science and Technology*); *Yongzhi Cheng* (*Wuhan University of Science and Technology*); *Jian Wang* (*Huazhong University of Science and Technology*); *Zhang-Kai Zhou* (*Sun Yat-Sen University*); *Lin Chen* (*Huazhong University of Science and Technology*);

52 Advances on Computational Spectrometer
Qian Xue (*Huazhong University of Science and Technology*); *Yang Yang* (*Huazhong University of Science and Technology*); *Wenkai Ma* (*Huazhong University of Science and Technology*); *Hanqiu Zhang* (*Huazhong University of Science and Technology*); *Jiang Tang* (*Huazhong University of Science and Technology*); *Jianbing Zhang* (*Huazhong University of Science and Technology*);

53 The Theory of Cathode Plasma Expansion in a Spatially Non-uniform Geometric Configuration of a Vacuum Diode
Vasily Yu. Kozhevnikov (*Harbin Institute of Technology*); *Vladislav S. Igumnov* (*Harbin Institute of Technology*); *Chengxun Yuan* (*Harbin Institute of Technology*);

54 Coplanar Antenna Decoupling Using Soft Surface with Staggered Rectangular Holes
Jianpu Qiao (*Science and Technology on Electromagnetic Compatibility Laboratory*); *Jia Zhang* (*China Ship Development and Design Centre*); *Weijun Wu* (*Science and Technology on Electromagnetic Compatibility Laboratory*); *Xianliang Zeng* (*Science and Technology on Electromagnetic Compatibility Laboratory*);

55 Millimeter-wave Low-profile Spoof Surface Plasmon Polaritons Endfire Antenna Using Traveling-wave Feeding Mechanism
Yiming Zhang (*Zhejiang University*); *Yuanqing Yao* (*Zhejiang University*); *Jun Hu* (*Zhejiang University*); *Sailing He* (*Royal Institute of Technology & Zhejiang University*);

56 Application Technology of Correlation Imaging Based on a Novel Type of Structured Light Speckle
Mochou Yang (*Sichuan University*); *Peng Wang* (*Sichuan University*); *Yi Wu* (*Sichuan University*); *Guoying Feng* (*Sichuan University*); *Hai-Zhi Song* (*Southwest Institute of Technical Physics & UESTC*);

57 Electromagnetic-acoustic Beam Compressor by Double-physical-fields Null Medium
Ran Sun (*Taiyuan University of Technology*); *Fei Sun* (*Taiyuan University of Technology*); *Yichao Liu* (*Taiyuan University of Technology*); *Zeyu Zhang* (*Taiyuan University of Technology*); *Chao Yang* (*Taiyuan University of Technology*);

58 Development of a Closed-loop Antenna Tracking System for Synchronous Satellites
Cheng-Hua Wu (*National Formosa University*); *You-Min Zhu* (*National Formosa University*); *Ting-Yi Chen* (*National Formosa University*); *Chau-Chung Song* (*National Formosa University*);

59 A Conformal Antenna with GPS/WLAN-band Operations for UAVs Communication
Astik Mahapatra (*National Formosa University*); *Wen-Chung Liu* (*National Formosa University*); *Yu-Kai Chen* (*National Formosa University*);

60 Code Design of Metasurface Based on BPSO for Holographic Imaging System
Shu-Dian Wang (*Nanjing University of Posts and Telecommunications*); *Fang-Fang Wang* (*Nanjing University of Posts and Telecommunications*);

61 Low Voltage Sheet Beam W-band Klystron Design
Bingchuan Xie (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Rui Zhang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Yong Wang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*);

62 Equivalent Circuit Analysis of the Multi-Sheet-Beam Folded Waveguide Slow-wave Structure
Yanan Ma (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Fengying Lu* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Rui Zhang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Yong Wang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*);

63 Development of Building Indoor Air Quality Monitoring Based on IoT Sensor Network
Ruslans Sudniks (*Riga Technical University*); *Arturs Ziemelis* (*Riga Technical University*); *Sandis Spolitis* (*Riga Technical University*); *Agris Nikitenko* (*Riga Technical University*); *Andis Supe* (*Riga Technical University*);

64 Development and Assessment of a Lensed Fiber for Applications in Integrated Photonics
Arvids Sedulis (*Riga Technical University*); *Deniss Zurikovs* (*Riga Technical University*); *Kristaps Rubuls* (*Riga Technical University*); *Ints Murans* (*Riga Technical University*); *Dmitrijs Prigunovs* (*Riga Technical University*); *Toms Salgals* (*Riga Technical University*); *Dilan Enrique Ortiz Blanco* (*Riga Technical University*); *Mareks Parfjonovs* (*Riga Technical University*); *Lilita Gegere* (*Riga Technical University*); *Armands Ostrovskis* (*Riga Technical University*); *Oskars Ozoliņš* (*Riga Technical University, Latvian Academy of Sciences*); *Vjaceslavs Bobrovs* (*Riga Technical University*); *Sandis Spolitis* (*Riga Technical University*);

65 Size Prediction of a Single Trapped Upconversion Nanoparticle in Aqueous Solutions
Dajing Wang (*Beihang University*); *Jiachen Zheng* (*Beihang University*); *Jinlong Shi* (*Beihang University*); *Xuchen Shan* (*Beihang University*); *Fan Wang* (*Beihang University*);

66 An Integrated Full-polarized Light-emitting Device for Information Encryption
Jiawei Lv (*Seoul National University*); *Ki Tae Nam* (*Seoul National University*);

67 The Test Parameter Optimization and Response Analysis of the Line Antenna in the HEMP Bounded-wave Simulator
Chuanbao Du (*Northwest Institute of Nuclear Technology*); *Zhuo Wang* (*Xidian University*); *Wei Wang* (*Northwest Institute of Nuclear Technology*); *Zhitong Cui* (*Northwest Institute of Nuclear Technology*); *You-Huo Huang* (*Xidian University*); *Linshen Xie* (*Northwest Institute of Nuclear Technology*); *Xin Nie* (*Northwest Institute of Nuclear Technology*);

68 System-level Electromagnetic Effect Analysis of Control System by Pulsed Current Injection (PCI) Test
Congguang Mao (*Northwest Institute of Nuclear Technology*); *Feng Qin* (*Northwest Institute of Nuclear Technology*); *Chuanbao Du* (*Northwest Institute of Nuclear Technology*);

Session 1P1a
Quantum Information Processing and Devices

Monday PM, April 22, 2024

Room 1 - Yarui

Organized by Hai-Zhi Song, Guangwei Deng

Chaired by Hai-Zhi Song, Daquan Yang

13:00 Invited Electromechanical Interfaces Based on Low Dimensional Nanostructures
Zhuo-Zhi Zhang (*University of Science and Technology of China*);

13:20 Invited Quantum Information Processing with Magnomechanical Systems
Jie Li (*Zhejiang University*);

13:40 Invited Multiquanta Bundle Emission
Qian Bin (*Huazhong University of Science and Technology*);

14:00 Invited Coherent Transport of Non-equilibrium Quasiparticles in a Mesoscopic-size Superconductor
Konstantin Yu. Arutyunov (*National Research University "Higher School of Economics"*);

14:20 Invited Electric and Magnetic Response of the Superconducting Condensate in Superconducting-magnetic Hybrids
Nataliya G. Pugach (*HSE University*); *D. V. Seleznyov* (*HSE University*); *Ya. V. Turkin* (*HSE University*);

14:40 Invited Mid-infrared Single-photon Upconversion Spectroscopy Based on Temporal-spectral Quantum Correlation
Yujie Cai (*East China Normal University*); *Yu Chen* (*East China Normal University*); *Xiaoning Xin* (*East China Normal University*); *Kun Huang* (*East China Normal University*); *E Wu* (*East China Normal University*);

15:00 Invited Fractal Superconducting Nanowire Single-photon Detectors
Xiaolong Hu (*Tianjin University*);

15:30 **Coffee Break**

16:00 Invited Ultrastrong Light-matter Interaction in Circuit-QED Systems
Shuaipeng Wang (*Beijing Academy of Quantum Information Sciences*); *Tiefu Li* (*Tsinghua University*); *J. Q. You* (*Zhejiang University*);

16:20 Invited Picotesla Magnetometry of Microwave Fields with Diamond Sensors
Zhecheng Wang (*University of Science and Technology of China*); *Fei Kong* (*University of Science and Technology of China*); *Pengju Zhao* (*University of Science and Technology of China*); *Zhehua Huang* (*University of Science and Technology of China*); *Pei Yu* (*University of Science and Technology of China*); *Ya Wang* (*University of Science and Technology of China*); *Fazhan Shi* (*University of Science and Technology of China*); *Jiangfeng Du* (*University of Science and Technology of China*);

Session 1P1b
Foundation and Implementation of Optical Quantum Information

Monday PM, April 22, 2024

Room 1 - Yarui

Organized by Jietai Jing, Shengshuai Liu

Chaired by Jietai Jing, Shengshuai Liu

16:40 Invited Quantum Steering and Its Applications in Quantum Information
Yu Xiang (*Peking University*);

16:55 Invited Experimental Verification of the Fluctuation Theorem for a Quantum Channel
Hui Liu (*Nanjing University*); *Jie Xie* (*Nanjing University*); *Hyukjoon Kwon* (*Korea Institute for Advanced Study*); *Yixin Zhao* (*Nanjing University*); *M. S. Kim* (*Imperial College London*); *Lijian Zhang* (*Nanjing University*);

17:10 Invited Integrated Multimode Photonic Quantum Memory at Telecom Band
Qiang Zhou (*Tianfu Jiangxi Laboratory & University of Electronic Science and Technology of China*);

17:25 Invited 20-s Coherence Time with a Single Cesium Atom in an Optical Dipole Trap
Gang Li (*Shanxi University*);

17:40 Invited High-speed Secure Quantum Communication over Long-haul Fiber
Feihu Xu (*University of Science and Technology of China*);

17:55 Invited Steady State Spin Squeezing of an Atomic Ensemble
Junlei Duan (*Fudan University*); *Zhiwei Hu* (*Fudan University*); *Xingda Lu* (*Fudan University*); *Liantuan Xiao* (*Shanxi University*); *Suotang Jia* (*Shanxi University*); *Klaus Mølmer* (*University of Copenhagen*); *Yanhong Xiao* (*Fudan University*);

18:10 Invited Experimental Demonstration of Inequivalent Mutually Unbiased Bases
Wen-Zhe Yan (*University of Science and Technology of China*); *Yunting Li* (*Fudan University*); *Zhibo Hou* (*University of Science and Technology of China, CAS*); *Huangjun Zhu* (*University of Cologne*); *Guo-Yong Xiang* (*University of Science and Technology of China, CAS*); *Chuan-Feng Li* (*University of Science and Technology of China, CAS*); *Guang-Can Guo* (*University of Science and Technology of China*);

18:25 Controllable Transitions among Phase-matching Conditions in a Single Nonlinear Crystal
Zi-Qi Zeng (*Wuhan Institute of Technology*); *Shi-Xin You* (*Wuhan Institute of Technology*); *Zi-Xiang Yang* (*Wuhan Institute of Technology*); *Chen-Zhi Yuan* (*Wuhan Institute of Technology*); *Chenglong You* (*Louisiana State University*); *Rui-Bo Jin* (*Wuhan Institute of Technology*);

Session 1P2
Terahertz Meta-Devices 1 & 2

Monday PM, April 22, 2024

Room 2 - Jincheng 3

Organized by Su Xu, Xueqian Zhang, Quan Xu

Chaired by Su Xu, Xueqian Zhang

13:00 Invited Programmable Terahertz Metasurface for Active Beamforming
Jingbo Wu (*Nanjing University*); *Benwen Chen* (*Nanjing University*); *Hangbing Guo* (*Nanjing University*); *Caihong Zhang* (*Nanjing University*); *Kebin Fan* (*Nanjing University*); *Biaobing Jin* (*Nanjing University*); *Jian Chen* (*Nanjing University*); *Peiheng Wu* (*Nanjing University*);

13:15 Invited Spin-momentum Locking and Applications in Programmable Metamaterial
Jin Hui Shi (*Harbin Engineering University*); *Zhaoqi Jiang* (*Harbin Engineering University*); *Zheng Zhu* (*Harbin Engineering University*); *Yuxiang Li* (*Harbin Engineering University*); *Chunying Guan* (*Harbin Engineering University*);

13:30 Invited Spatial Modulation of Terahertz Beams for Imaging and Scanning
Jierong Cheng (*Nankai University*); *Shengjiang Chang* (*Nankai University*);

13:50 Invited Terahertz All-dielectric High-Q Metasurfaces Driven by Dynamic Bound States in the Continuum
Song Han (*Zhejiang University*);

14:05 Study on the Dependence of Terahertz Photoelectric Tunable-step Detector Performance on Antenna Geometry
Ran Chen (*University of Cambridge*); *Harvey E. Beere* (*University of Cambridge*); *David A. Ritchie* (*University of Cambridge*); *Wladislaw Michailow* (*University of Cambridge*);

14:15 Design of High Speed and High Power Uni-travelling-carrier Photodiode with Novel Doping Structure
Xuan Li (*Zhejiang Lab*); *Xianbin Yu* (*Zhejiang University*);

14:30 Detecting Spoof Surface-plasmon-polariton Circuity in Subwavelength Resolution with a Metalens
Zhaohua Xu (*Jilin University*); *Nan-Shu Wu* (*Jilin University*); *Zhi-Jun Qin* (*Jilin University*); *Su Xu* (*Jilin University*);

14:45 Terahertz Plasmonic Vortex Interferometers Inspired Topological Phase Transition in Optical Meronium
Yuanhao Lang (*Tianjin University*); *Quan Xu* (*Tianjin University*); *Changxu Liu* (*University of Exeter*); *Jiaguang Han* (*Tianjin University*);

15:00 Encircling Degenerate Exceptional Points in Non-Hermitian Photonic Waveguides
Zhong Lei Shan (*Jilin University*); *Xu-Lin Zhang* (*Jilin University*);

15:15 Terahertz Functional Devices Based on Multilayer Flexible Metasurface
Zhibo Yao (*Tianjin University*); *Xinyao Yuan* (*Tianjin University*); *Yuanhao Lang* (*Tianjin University*); *Xueqian Zhang* (*Tianjin University*); *Quan Xu* (*Tianjin University*); *Jiaguang Han* (*Tianjin University*);

15:30 **Coffee Break**

16:00 Invited Flexible Terahertz Metasurface Absorbers Empowered by Bound States in the Continuum
Longqing Cong (*Southern University of Science and Technology*);

16:15 Invited E-type Resonator Metasurface Based on BIC for Controllable Multi-band Filtering
Yuxin Lang (*Tianjin University*); *Qun Ren* (*Tianjin University*); *Xia Xiao* (*Tianjin University*); *Yuqing He* (*Tianjin University*); *Yanwei Pang* (*Tianjin University*);

16:30 Invited Freely Tailoring THz Lights in Both Far-field and Near-field with Metasurfaces
Shulin Sun (*Fudan University*); *Zhuo Wang* (*Fudan University*); *Yao Yao* (*Fudan University*); *Shiqing Li* (*Fudan University*); *Qiong He* (*Fudan University*); *Lei Zhou* (*Fudan University*);

16:45 Invited Analogue of Collectively Induced Transparency in Metamaterials
Wei Huang (*Guilin University of Electronic Technology*); *Shiting Cao* (*Guilin University of Electronic and Technology*); *Xiaowei Qu* (*Guilin University of Electronic Technology*); *Shan Yin* (*Guilin University of Electronic Technology*); *Wentao Zhang* (*Guilin University of Electronic Technology*);

17:00 Real-space Experimental Characteristics of the Ultralong-lifetime Trap of the Radiative Terahertz Light via Giant Transverse Shift
Minggui Wei (*Nanyang Technological University*); *Yang Long* (*Nanyang Technological University*); *Feng Wu* (*Guangdong Polytechnic Normal University*); *Guigeng Liu* (*Nanyang Technological University*); *Baile Zhang* (*Nanyang Technological University*);

17:15 On-chip Non-volatile Reconfigurable THz Varifocal Metalens
Shoujun Zhang (*TianJin University*); *Xieyu Chen* (*Tianjin University*); *Kuan Liu* (*Dalian University of Technology*); *Yuanhao Lang* (*Tianjin University*); *Quan Xu* (*Tianjin University*); *Ranjan Singh* (*Nanyang Technological University*); *Tun Cao* (*Dalian University of Technology*); *Zhen Tian* (*Tianjin University*);

17:30 High-efficiency and Broadband Terahertz Vortex Beam Plates
Li Niu (*Tianjin University*); *Xieyu Chen* (*Tianjin University*); *Yuanhao Lang* (*Tianjin University*); *Quan Xu* (*Tianjin University*); *Xueqian Zhang* (*Tianjin University*); *Jiajun Ma* (*Tianjin University*); *Chunmei Ouyang* (*Tianjin University*); *Zhen Tian* (*Tianjin University*); *Jiaguang Han* (*Tianjin University*);

17:45 Tailoring Spatiotemporal Dynamics of Plasmonic Vortices Based on Terahertz Metasurface
Xinyao Yuan (*Tianjin University*); *Yuanhao Lang* (*Tianjin University*); *Xiaohan Jiang* (*Tianjin University*); *Xueqian Zhang* (*Tianjin University*); *Quan Xu* (*Tianjin University*); *Jiaguang Han* (*Tianjin University*);

18:00 Flexible Power Splitting and Inter-chip Near-field Communications Based on Silicon Topological Photonics
Wen-Ya Wang (*Jilin University*); *Hong Chen* (*Jilin University*); *Hang Ren* (*Jilin University*); *Su Xu* (*Jilin University*);

Session 1P3
New Physics and Applications of Zero-index and Other Extraordinary Metamaterials

Monday PM, April 22, 2024

Room 3 - Jincheng 2

Organized by Yun Lai, Jie Luo

Chaired by Yun Lai, Jie Luo

13:00 Invited Quantum and Thermal Emission from Time-modulated Epsilon-near-zero Media
Iñigo Liberal (*Universidad Pública de Navarra, Campus Arrosadía*);

13:20 Invited Optical Properties of Dielectric Cavities Embedded in the ENZ Materials
Ying Gu (*Peking University*);

13:40 Invited Low-loss Zero-index Metawaveguides and Devices
Yang Li (*Tsinghua University*);

14:00 Invited Low-loss Epsilon-near-zero Metamaterials
Wendi Yan (*Tsinghua University*); *Ziheng Zhou* (*Fuzhou University*); *Yue Li* (*Tsinghua University*);

14:20 Invited Extreme Nonlinear Optics in Epsilon-near-zero Materials
Yuanmu Yang (*Tsinghua University*);

14:40 Invited Photonic Device Design Integrating the Photonic Crystal and Material Loss
Sheng Zhang (*Soochow University*); *Zhi Hong Hang* (*Soochow University*);

15:00 Invited Optimizing Sound Communication with Tunable Metasurfaces
Guancong Ma (*Hong Kong Baptist University*);

15:20 Invited Parallel Universes and Zero-index Wormholes for Photons
Tongtong Song (*Nanjing University*); *Hong Chen Chu* (*Nanjing University*); *Jie Luo* (*Soochow University*); *Ru-Wen Peng* (*Nanjing University*); *Mu Wang* (*Nanjing University*); *Yun Lai* (*Nanjing University*);

15:40 **Coffee Break**

16:00 Realization of Type-II Double Zero-index Photonic Crystals
Invited
Zebin Zhu (*Nanjing University of Science and Technology*); *Liyong Jiang* (*Nanjing University of Science and Technology*);

16:20 Simultaneously Controlling Double-physical Fields by Null Medium
Invited
Fei Sun (*Taiyuan University of Technology*); *Yichao Liu* (*Taiyuan University of Technology*); *Hanchuan Chen* (*Taiyuan University of Technology*);

16:40 Optical Parity-time Induced Perfect Resonance Transmission in Zero Index Metamaterials
Invited
Cong Wang (*Soochow University*); *Yadong Xu* (*Soochow University*);

17:00 Three-dimensional Double-zero-index Medium
Invited
Changqing Xu (*Nanjing Normal University*); *Hong Chen Chu* (*Nanjing University*); *Zeguo Chen* (*Nanjing University*); *Guancong Ma* (*Hong Kong Baptist University*); *Ying Wu* (*King Abdullah University of Science and Technology (KAUST)*); *Yun Lai* (*Nanjing University*);

17:20 Observation of Large Scattering in Refractive-index-near-zero Environments
Xingshuo Cui (*Zhejiang University*); *Chan Wang* (*Zhejiang University*); *Tong Cai* (*Air Force Engineering University*); *Hongsheng Chen* (*Zhejiang University*); *Xiao Lin* (*Zhejiang University*);

17:35 Controlling the Directional Excitation of Surface Plasmon Polaritons Using Tunable Non-Hermitian Metasurfaces
Guohao Zhang (*Nanjing University of Aeronautics and Astronautics*); *Changdong Chen* (*Nanjing University of Aeronautics and Astronautics*); *Yangyang Fu* (*Nanjing University of Aeronautics and Astronautics*);

17:50 Quenching of Second-harmonic Generation by Epsilon-near-zero Media
Chenglin Wang (*Suzhou City University*); *Ran Shi* (*Suzhou City University*); *Lei Gao* (*Soochow University*); *Alexander Sergeevich Shalin* (*Moscow Institute of Physics and Technology*); *Jie Luo* (*Soochow University*);

18:05 Controlling Coherent Perfect Absorption via Long-range Connectivity of Defects in Three-dimensional Zero-index materials
Dongyang Yan (*Soochow University*); *Ran Mei* (*Soochow University*); *Mingyan Li* (*Soochow University*); *Zhikai Ma* (*Peking University*); *Zhi Hong Hang* (*Soochow University*); *Jie Luo* (*Soochow University*);

Session 1P4a
Special Session on Quantum Frontiers

Monday PM, April 22, 2024

Room 4 - Jincheng 1

Organized by Jinxian Guo, Guzhi Bao

Chaired by Jinxian Guo, Guzhi Bao

13:00 Quantum Simulation with Superradiance Lattices
Invited
Han Cai (*Zhejiang University*);

13:15 Atom-light Quantum Interface with Cold Atoms
Invited
Xingchang Wang (*Southern University of Science and Technology*); *Jianmin Wang* (*Southern University of Science and Technology*); *Georgios A. Siviloglou* (*Southern University of Science and Technology*); *Jiefei Chen* (*Southern University of Science and Technology*);

13:30 Quantum-enhanced Effects in Atomic Magnetometer
Invited
Jia Kong (*Hangzhou Dianzi University*);

13:45 Multi-physical Field Detection Based on NV Center in Diamond
Invited
Bing Chen (*Hefei University of Technology*);

14:00 Optimal Resource Allocation in Lossy Quantum Interferometer
Wenfeng Huang (*East China Normal University*); *Liqing Chen* (*East China Normal University*);

14:15 Entangled Light Enabled Quantum Magnetic Gradiometer
Shuhe Wu (*Shanghai Jiao Tong University*); *Guzhi Bao* (*Shanghai Jiao Tong University*); *Liqing Chen* (*East China Normal University*); *Weiping Zhang* (*Shanghai Jiao Tong University*);

14:30 Protection of Atomic Coherence in the Geomagnetic Environment
Peiyu Yang (*Shanghai Jiao Tong University*); *Guzhi Bao* (*Shanghai Jiao Tong University*); *Liqing Chen* (*East China Normal University*); *Weiping Zhang* (*Shanghai Jiao Tong University*);

14:45 Proposal for Practical Rydberg Quantum Gates Using a Native Two-photon Excitation
Rui Li (*Shanghai Jiao Tong University*); *Jing Qian* (*East China Normal University*); *Weiping Zhang* (*Shanghai Jiao Tong University*);

15:00 Stochastic Resonance of Spinor Condensates in Optical Cavity
Zhengchun Li (*Shanghai Jiao Tong University*);

15:15 Polarization Modulation Based on Light-atom Interaction
Ruiqi Wang (*Shanghai Jiao Tong University*); *Peiyu Yang* (*Shanghai Jiao Tong University*); *Ding Huang* (*Shanghai Jiao Tong University*); *Guzhi Bao* (*Shanghai Jiao Tong University*); *Weiping Zhang* (*Shanghai Jiao Tong University*);

15:30 Quantum-enhanced Electrometer Based on Microwave-dressed Rydberg Atoms
Dong Zhang (*Shanghai Jiao Tong University*); *Shuhe Wu* (*Shanghai Jiao Tong University*); *Guzhi Bao* (*Shanghai Jiao Tong University*); *Weiping Zhang* (*Shanghai Jiao Tong University*);

15:45 **Coffee Break**

Session 1P4b
Quantum Chip

Monday PM, April 22, 2024

Room 4 - Jincheng 1

Organized by Xian-Min Jin

Chaired by Xian-Min Jin

16:00 Invited CHIPX: Chip Hub for Integrated Photonics Xplore
Xian-Min Jin (*Shanghai Jiao Tong University*);

16:20 Invited Non-line-of-sight Imaging at Infrared Wavelengths Using a Superconducting Nanowire Single-photon Detector
Xiaolong Hu (*Tianjin University*);

16:40 Invited Half-wavelength Pitch Wavelength Array with Low-crosstalk
Ting Li (*ShanghaiTech University*); *Peiji Zhou* (*ShanghaiTech University*); *Hong Zhang* (*ShanghaiTech University*); *Lipeng Xia* (*ShanghaiTech University*); *Yi Zou* (*ShanghaiTech University*);

17:00 Invited Microwave Quantum Photonics Based on Superconducting Circuits
Hongyi Zhang (*Tsinghua University*);

17:20 Invited Quantum Computing Software and Algorithms for Now
Man-Hong Yung (*Huawei Technologies Co., Ltd*);

17:40 Invited Research on Planar Lightwave Circuit (PLC) Integrated Chip for Quantum Key Distribution (QKD)
Junming An (*Institute of Semiconductors, Chinese Academy of Sciences*); *Chunxue Zhang* (*Institute of Semiconductors, Chinese Academy of Sciences*); *Hanming Yang* (*Institute of Semiconductors, Chinese Academy of Sciences*); *Dan Wu* (*Institute of Semiconductors, Chinese Academy of Sciences*); *Jiashun Zhang* (*Institute of Semiconductors, Chinese Academy of Sciences*); *Liangliang Wang* (*Institute of Semiconductors, Chinese Academy of Sciences*); *Yue Wang* (*Institute of Semiconductors, Chinese Academy of Sciences*);

18:00 Invited Highly-nonlinear Plexcitons in 2D Semiconductor-based Nanocavities
Tian Jiang (*National University of Defense Technology*);

18:20 Invited Quantum Light Sources Based on III-V Quantum Dots
Feng Liu (*Zhejiang University*);

18:40 Invited Enhanced Single Emitter-cavity Coupling by Waveguide-assisted Energy Quantum Transfer
Yuan Liu (*Tsinghua University*); *Hongwei Zhou* (*Tsinghua University*); *Linhan Lin* (*Tsinghua University*); *Hong-Bo Sun* (*Tsinghua University*);

Session 1P5a
Plasmon-enhanced Raman Spectroscopy and Its Chemistry 2

Monday PM, April 22, 2024

Room 5 - Yingbin

Organized by Jun Yi, En-Ming You

Chaired by Jun Yi, En-Ming You

13:00 Invited New Approaches on Plasmon-enhanced Raman Spectroscopy Vertically Probing Electrochemical Interface and Interphase with High Spatial Resolution
Yu Gu (*Xiamen University*); *Jun Yi* (*Xiamen University*); *En-Ming You* (*Jimei University*); *Yi-Fan Huang* (*Shanghai Tech University*); *Yue-Jiao Zhang* (*Xiamen University*); *Jian-Feng Li* (*Xiamen University*); *Bing-Wei Mao* (*Xiamen University*); *Zhong-Qun Tian* (*Xiamen University*);

13:20 Invited Probing Vibronic Coupling in a Single Molecule
Yang Zhang (*University of Science and Technology of China*);

13:40 Invited Molecular-level Insights on Reactive Arrangement in On-surface Photocatalytic Coupling Reactions Using Tip-enhanced Raman Spectroscopy
Zhenfeng Cai (*Sichuan University*);

14:00 Invited Local Heating and Raman Thermometry of a Single Molecule during the Chemical Reaction
Yao Zhang (*University of Science and Technology of China*);

14:20 Invited Pushing the Thinness Limit of Silver Films via an Ion-beam Thinning-back Process
Dongxu Ma (*Hunan University*); *Yiqin Chen* (*Hunan University*);

14:40 Invited Picocavity Adatoms Resolve Single Molecule Electrophotocatalysis
Shu Hu (*University of Cambridge*); *Jeremy J. Baumberg* (*University of Cambridge*);

15:00 Invited Unveiling C-C Coupling on Cu Surface during CO_2 Electro-reduction by *in-situ* PERS
Chao Zhan (*Xiamen University*); *Federico Dattila* (*The Barcelona Institute of Science and Technology (BIST)*); *Fabian Scholten* (*Fritz-Haber Institute of the Max-Planck Society*); *Clara Rettenmaier* (*Fritz-Haber Institute of the Max-Planck Society*); *Arno Bergmann* (*Fritz-Haber Institute of the Max-Planck Society*); *Núria López* (*Xiamen University*); *Beatriz Roldan Cuenya* (*Xiamen University*);

15:40 **Coffee Break**

Session 1P5b
Miniaturization of Optical Spectrometers

Monday PM, April 22, 2024

Room 5 - Yingbin

Organized by Zongyin Yang, Shaowei Wang

Chaired by Shaowei Wang, Ruonan Ji

16:00 High-performance Integrated Miniature Spectrometer Enabled by Dielectric Cavity-based Structures
Ruonan Ji (*Shanghai Institute of Technical Physics, Chinese Academy of Sciences*); *Qingquan Liu* (*Shanghai Institute of Technical Physics, Chinese Academy of Sciences*); *Shaowei Wang* (*Shanghai Institute of Technical Physics, Chinese Academy of Sciences*);

16:15 On-chip Spectrometer with Cascaded Micro-ring Resonator and Mach-Zehnder Interferometers
Tongxin Yang (*Beijing University of Posts and Telecommunications*); *Shiqi Zhang* (*Beijing University of Posts and Telecommunication*); *Lei Zhang* (*Beijing University of Posts and Telecommunications*);

16:30 Invited Miniaturized Computational Spectrometer Based on On-chip Resonators
Xuhan Guo (*Shanghai Jiao Tong Unviersity*);

16:50 Mantis Shrimp-inspired Perovskite Spectral Polarimetric Camera
Yujin Liu (*Jinan University*); *Zhong Ji* (*Jinan University*); *Zongyin Yang* (*Zhejiang University*); *Wenjie Mai* (*Jinan University*);

17:05 High-performance Quantum Dot Spectrometers with an Excellent Denoising Algorithm
Jianbing Zhang (*Huazhong University of Science and Technology*);

17:20 Deep Learning-based Miniaturized All-dielectric Ultra-compact Film Spectrometer and Spectral Imaging Application
Junren Wen (*Hangzhou Institute for Advanced Study*); *Chenying Yang* (*University of Chinese Academy of Sciences*); *Wei-Dong Shen* (*Zhejiang University*);

17:35 Rapid in-situ Deviation Calibration of Computational Micro-spectrometer with Few-shot Meta-learning
Meichen Yang (*University of Chinese Academy of Sciences*); *Xiuteng Chen* (*University of Chinese Academy of Sciences*); *He Zhu* (*University of Chinese Academy of Sciences*); *Hongxing Qi* (*University of Chinese Academy of Sciences*);

17:50 Broadband Miniaturized Spectrometer Based on "Rainbow" Perovskites
Nan Zhang (*Beijing Institute of Technology*); *X. Zheng* (*Beijing Institute of Technology*);

18:05 On-chip Spectrometer with a Spectral-tunable Filter Array
Menghan Tian (*Beihang University*); *Baolei Liu* (*Beihang University*); *Xiaolan Zhong* (*Beihang University*); *Fan Wang* (*Beihang University*);

Session 1P6
Advances in Nanophotonics and Metasurfaces 1

Monday PM, April 22, 2024

Room 6 - Huanhua

Organized by Lingling Huang, Cheng Zhang

Chaired by Cheng Zhang, Lingling Huang

13:00 Diatomic- and Bilayer-metasurfaces for Multifunctional Polarization Manipulations
Song Gao (*University of Jinan*); *Wenjing Yue* (*University of Jinan*); *Yang Li* (*Shandong University*);

13:15 Genetic Algorithm Assisted Meta-atom Design for High-performance Metasurfaces
Zhenjie Yu (*Huazhong University of Science and Technology*); *Moxin Li* (*Huazhong University of Science and Technology*); *Zhenyu Xing* (*Huazhong University of Science and Technology*); *Zeyang Liu* (*Huazhong University of Science and Technology*); *Cheng Zhang* (*Huazhong University of Science and Technology*);

13:35 Near-field Coupling of Janus Dipoles Beyond Polarization Locking
Chan Wang (*Zhejiang University*); *Yuhan Zhong* (*Zhejiang University*); *Xuhuinan Chen* (*Zhejiang University*); *Huaping Wang* (*Zhejiang University*); *Tony Low* (*University of Minnesota*); *Hongsheng Chen* (*Zhejiang University*); *Baile Zhang* (*Nanyang Technological University*); *Xiao Lin* (*Zhejiang University*);

13:50 Invited Single-shot Full-parameter Optical Imaging with Metasurface
Yanjun Bao (*Jinan University*);

14:10 Visible Transparent Wideband Microwave Metaabsorber with Designable Digital Infrared Camouflage
Yina Cui (*Air Force Engineering University*);

14:25 Creating Grafted Vortex Beams with Optical Metasurfaces
Hammad Ahmed (*Heriot-Watt University*); *Xianzhong Chen* (*Heriot-Watt University*);

14:40 Invited Plasmonic-based "Rainbow" Chip for Dual-functional Intelligent Spectrometer
Dylan Tua (*The State University of New York at Buffalo*); *Ruiying Liu* (*The State University of New York at Buffalo*); *Wenhong Yang* (*King Abdullah University of Science and Technology*); *Lyu Zhou* (*The State University of New York at Buffalo*); *Haomin Song* (*King Abdullah University of Science and Technology*); *Leslie Ying* (*The State University of New York at Buffalo*); *Qiaoqiang Gan* (*King Abdullah University of Science and Technology (KAUST)*);

15:00 Invited Higher Dimensional Related Topology in Metamaterials
Shaojie Ma (*Fudan University*);

15:20 Toroidal Dipole Induced Near-field Directionality
Junho Jung (*City University of Hong Kong*); *Yuqiong Cheng* (*City University of Hong Kong*); *Shubo Wang* (*City University of Hong Kong*);

15:35 **Coffee Break**

16:00 Manipulating Spectral Line Shape by Photonic Spin-orbit Interaction
Yuqiong Cheng (*City University of Hong Kong*); *Wanyue Xiao* (*City University of Hong Kong*); *Shubo Wang* (*City University of Hong Kong*);

16:15 Invited Multidimensional Light Field Modulation and Imaging on Metasurfaces
Wei Li (*Changchun Institute of Optics, Fine Mechanics and Physics, CAS*);

16:35 Structuring Quantum Light with on-chip Emitter-coupled Metasurfaces
Yinhui Kan (*University of Southern Denmark*); *Xujing Liu* (*University of Southern Denmark*); *Sergey I. Bozhevolnyi* (*University of Southern Denmark*);

16:50 Invited Atomically Thin Metasurfaces Enabled by Two-dimensional Semiconductors
Xingwang Zhang (*Suzhou Institute of Nano-tech and Nano-bionics, Chinese Academy of Sciences*); *Yuefeng Wang* (*Suzhou Institute of Nano-tech and Nano-bionics, Chinese Academy of Sciences*); *Jiaxin Zhou* (*Suzhou Institute of Nano-Tech and Nano-Bionics (SINANO), Chinese Academy of Sciences (CAS)*); *Di Huang* (*Suzhou Institute of Nano-Tech and Nano-Bionics (SINANO), Chinese Academy of Sciences (CAS)*);

17:10 Invited Metasurface-based Vectorial Field Generation and Control
Dandan Wen (*Northwestern Polytechnical University*);

17:30 Thermal Resonant Response of a Double Subwavelength Gratings in the PT-symmetry Mode
Egor V. Shalymov (*ITMO University*); *Alexander A. Zinchik* (*ITMO University*); *Ekaterina A. Efremova* (*ITMO University*); *Igor R. Krylov* (*St.-Petersburg State University*); *Vladislav I. Shoev* (*ITMO University*); *Uliana V. Prokhorova* (*St.-Petersburg State University*); *Vladimir Yu. Venediktov* (*Saint Petersburg State Electrotechnical University "LETI"*);

17:45 Invited Detection of Multidimensional Light Field on Metasurfaces
Chunqi Jin (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*);

18:05 Invited Metasurface Based Multiple Optical Manipulations Enabling High-integrated and High-camouflaged Information Encryption
Qi Dai (*National University of Defense Technology*); *Congling Liang* (*Wuhan University*); *Zile Li* (*Wuhan University*); *Guoxing Zheng* (*Wuhan University*);

Session 1P7a
Nonlinear Optical Effect in Complex Nanostructures 2

Monday PM, April 22, 2024

Room 7 - Xiling

Organized by Guixin Li, Olivier J. F. Martin, Changxu Liu

Chaired by Olivier J. F. Martin, Guixin Li

13:00 Polarization Control with Resonant Nonlinear Metasurfaces
Kirill Koshelev (*Australian National University*); *Yuri S. Kivshar* (*Australian National University*);

13:15 Invited Quantum Photon Pairs from Nonlinear Metasurfaces for Quantum Imaging Applications
Jinyong Ma (*The Australian National University*); *Jinliang Ren* (*The Australian National University*); *Jihua Zhang* (*Songshan Lake Materials Laboratory*); *Jiajun Meng* (*University of Melbourne*); *Caitlin McManus-Barrett* (*The Australian National University*); *Kenneth B. Crozier* (*The University of Melbourne*); *Andrey A. Sukhorukov* (*Australian National University*);

13:35 Transformation Optics Approach to Nonlinear Plasmonic Metasurfaces
Yunfei Zhang (*Sichuan University*); *Chen Wei* (*Sichuan University*); *Fuhua Gao* (*Sichuan University*); *Fan Yang* (*Sichuan University*);

Session 1P7b
Integrated Microwave Photonics

Monday PM, April 22, 2024

Room 7 - Xiling

Organized by Xiuyou Han, Jiejun Zhang

Chaired by Jiejun Zhang, Xiuyou Han

13:50 Keynote Integrated Microwave Photonics and Artificial Intelligence
Jianping Yao (*University of Ottawa*);

14:20 Photonic Integrated Circuits for Microwave Signal Generation and Detection
Xihua Zou (*Southwest Jiaotong University*);

14:35 High-frequency Characterization of Wafer-level Optoelectronic Integrated Transceiver Chips Based on Photonic Sampling and Mapping
Shangjian Zhang (*University of Electronic Science and Technology of China (UESTC)*); *Xinghai Zhou* (*University of Electronic Science and Technology of China (UESTC)*); *Yong Liu* (*University of Electronic Science and Technology of China (UESTC)*);

14:50 Microwave Photonic Filters and Applications
Yaocheng Shi (*Zhejiang University*);

15:05 Silicon Photonics for Microwave Signal Generation
Weifeng Zhang (*Beijing Institute of Technology*);

15:20 Integrated Microcomb for Microwave Photonics
Jijun He (*Swiss Federal Institute of Technology Lausanne (EPFL)*);

15:35 **Coffee Break**

16:00 Large-scale Programmable Photonic Chip and Its Applications
Naid Cui (*Chongqing United Microelectronics Center (CUMEC)*); *Yuxin Liang* (*Chongqing United Microelectronics Center (CUMEC)*);

16:15 Microwave Photonic Radar Based on Thin Film Lithium Niobate
Sha Zhu (*Beijing University of Technology*);

16:30 Microcomb-based Transversal Microwave Photonic Applications
Xingyuan Xu (*Beijing University of Posts and Telecommunications*);

16:45 Silicon Integrated Microwave Photonic Beamformer
Liangjun Lu (*Shanghai Jiao Tong University*); *Yuanbin Liu* (*Shanghai Jiao Tong University*); *Ziheng Ni* (*Shanghai Jiao Tong University*); *Yixuan Wang* (*Shanghai Jiao Tong University*); *Jianping Chen* (*Shanghai Jiao Tong University*); *Linjie Zhou* (*Shanghai Jiao Tong University*);

17:00 Research Progress on Integrated Microwave Photonics Devices and System on Silicon
Hui Yu (*Zhejiang Lab*);

17:15 Research of PLC Passive Waveguide Technology in Optical Networks
Xiaojie Yin (*Institute of Semiconductors, Chinese Academyof Sciences*);

17:30 Integrated Photonic Processing Core for Dual-band Microwave Radar Imaging
Weichao Ma (*National Key Lab of Microwave Imaging Technology, Aerospace Information Research Institute, Chinese Academy of Sciences*); *Ruixuan Wang* (*National Key Lab of Microwave Imaging Technology, Aerospace Information Research Institute, Chinese Academy of Sciences*); *Jianwei Liu* (*National Key Lab of Microwave Imaging Technology, Aerospace Information Research Institute, Chinese Academy of Sciences*); *Wangzhe Li* (*Institute of Electronics Chinese Academy of Sciences*);

17:45 Bias-independent Frequency Response Measurement of Electro-optic Modulation Chips Utilizing Fixed Low-frequency Photodetection and Three-port Microwave De-embedding
Junfeng Zhu (*University of Electronic Science and Technology of China*); *Xinhai Zou* (*University of Electronic Science and Technology of China (UESTC)*); *Ying Xu* (*University of Electronic Science and Technology of China*); *Chao Jing* (*University of Electronic Science and Technology of China*); *Yali Zhang* (*University of Electronic Science and Technology of China (UESTC)*); *Zhiyao Zhang* (*University of Electronic Science and Technology of China*); *Shangjian Zhang* (*University of Electronic Science and Technology of China (UESTC)*); *Yong Liu* (*University of Electronic Science and Technology of China (UESTC)*);

18:00 Hybrid Integrated External Cavity Diode Laser with Flexible Feedback at 1-μm Band
Chen Chen (*Dalian University of Technology*); *Fang Wei* (*ZhangJiang Laboratory*); *Xiuyou Han* (*Dalian University of Technology*); *Qingshuai Su* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Haoyang Pi* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Yanguang Sun* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Huimin Wu* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Anton Stroganov* (*LIGENTEC SA*); *Qing Ye* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Haiwen Cai* (*ZhangJiang Laboratory*);

18:15 Silicon Photonic Integrated Broadband Continuously Tunable Optical Delay Line
Meng Chao (*Dalian University of Technology*); *Xinxin Su* (*Dalian University of Technology*); *Xindi Yang* (*Dalian University of Technology*); *Han Liang* (*Dalian University of Technology*); *Zhenlin Wu* (*Dalian University of Technology*); *Xiuyou Han* (*Dalian University of Technology*); *Mingshan Zhao* (*Dalian University of Technology*);

Session 1P8
Thermal Photonics: Fundamental Physics and Application 2

Monday PM, April 22, 2024

Room 8 - Guixiang

Organized by Wei Li, Longnan Li

Chaired by Wei Li, Longnan Li

13:00 Keynote Re-balancing the Power of Light & Heat through Hierarchical Designs
Jia Zhu (*Nanjing University*);

13:30 Colored Sub-atmospheric Passive Coolers
Eun-Joo Lee (*Kyung Hee University*); *Sun-Kyung Kim* (*Kyung Hee University*);

13:45 Energy Harvesting for Thermal Radiation in a Wide Wavelength Range Using Optical Rectenna with a Hollow Resonator
Zhen Liu (*Tohoku University*); *Makoto Shimizu* (*Tohoku University*); *Daisuke Matsuura* (*Tohoku University*); *Hiroo Yugami* (*Tohoku University*);

14:00 Broadband Precisely Directed Thermal Emission
Yue Ma (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*); *Tianji Liu* (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*); *Wei Li* (*Changchun Institute of Optics, Fine Mechanics and Physics, CAS*);

14:15 Research and Application of Near Field Heat Transfer Based on Multilayer Systems
Peng Tian (*Soochow University*); *Baoyin Sun* (*Nanjing University of Aeronautics and Astronautics*); *Yadong Xu* (*Soochow University*);

14:30 Ultra-broadband Directional Thermal Emission
Qiuyu Wang (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*); *Tianji Liu* (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*); *Longnan Li* (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*); *Chen Huang* (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*); *Jiawei Wang* (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*); *Meng Xiao* (*Wuhan University*); *Yang Li* (*Tsinghua University*); *Wei Li* (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*);

14:45 Invited Dynamic Control of Solar and Infrared Radiation for Thermal Management Applications
Donogliang Zhao (*Southeast University*);

15:05 Invited Infrared Properties of Ultrathin 2D $Ti_3C_2T_x$ MXene Films
Meng Li (*The Hong Kong University of Science and Technology*); *Yang Li* (*Zhejiang University*); *Baoling Huang* (*The Hongkong University of Science and Technology*);

15:30 **Coffee Break**

16:00 Invited Nanophotonic Engineering of Thermal Radiation for High-temperature Applications
Kehang Cui (*Shanghai Jiao Tong University*); *Zhequn Huang* (*Shanghai Jiao Tong University*); *Heng Zhang* (*Shanghai Jiao Tong University*); *Qixiang Wang* (*Shanghai Jiao Tong University*); *Huaxu Qiao* (*Shanghai Jiao Tong University*);

16:20 Invited Nanophotonic Structures for Perfect Absorbers and Radiative Cooling
Dasol Lee (*Yonsei University*);

16:40 Invited Application-specific Passive Radiative Cooling Technologies
Young Min Song (*Gwangju Institute of Science and Technology*);

17:00 Transparent Directional Infrared Emitter Based on Broadband Berreman-mode for Energy-saving Windows
Do Hyeon Kim (*Gwangju Institute of Science and Technology*); *Minyeol Bae* (*Gwangju Institute of Science and Technology*); *Young Min Song* (*Gwangju Institute of Science and Technology*);

17:15 Improving the Heat Transfer of Radiative Heat Sink-integrated Electrocaloric Cooling
Dong Hyun Seo (*Gwangju Institute of Science and Technology*); *Hyung Rae Kim* (*Gwangju Institute of Science and Technology*); *Gil Ju Lee* (*Gwangju Institute of Science and Technology*); *Young Min Song* (*Gwangju Institute of Science and Technology*);

17:30 Generation and Evolution of Topological Phase Singularity Pairs at Large Incident Angles in Planar Structures
Jiawei Wang (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*); *Mengqi Liu* (*Shanghai Jiao Tong University*); *Cheng-Wei Qiu* (*National University of Singapore*); *Wei Li* (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*);

17:45 Invited Deep Learning Design of Wave-selective Thermal Photonics
Run Hu (*Huazhong University of Science and Technology*);

18:05 Controlling the Characteristics of Thermal Emission with Low-dimensional Materials
Michael Enders (*The Barcelona Institute of Science and Technology*); *Mitradeep Sarkar* (*The Barcelona Institute of Science and Technology*); *Michela Picardi* (*The Barcelona Institute of Science and Technology*); *Georgia Theano Papadakis* (*The Institute of Photonic Sciences*);

18:20 Design and Fabrication of Low-emissivity Surface for Energy and Storage Applications
Yue Zhang (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*); *Longnan Li* (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*); *Wei Li* (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*);

18:35 Thermal Emitter for Daytime Radiative Cooling
Fei Xie (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*); *Wei Li* (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*);

Session 1P9a
Nonclassical Plasmonics and Nonlinear Optics 2

Monday PM, April 22, 2024

Room 9 - Xinyu

Organized by Fan Yang, Dangyuan Lei

Chaired by Fan Yang

13:00 Invited Giant Free-electron Kerr Nonlinearities in Nonclassical Plasmonic Heavily Doped Semiconductor Hybrid Systems
Huatian Hu (*Istituto Italiano di Tecnologia (IIT)*); *Cristian Ciraci* (*Istituto Italiano di Tecnologia (IIT)*);

13:20 Invited Metasurfaces for Tomography and Distribution of Quantum States
Ru-Wen Peng (*Nanjing University*); *Mu Wang* (*Nanjing University*);

13:40 The Near Wake Characteristics of Different Hypersonic Vehicles at Various Angles of Attack
J. C. Tong (*Xidian University*); *Hai-Ying Li* (*Xidian University*); *Bing Xu* (*China Research Institute of Radiowave Propagation*);

Session 1P9b
Advances in Nanophotonics/Plasmonics/Metasurfaces and Their Applications

Monday PM, April 22, 2024

Room 9 - Xinyu

Organized by Jicheng Wang, Yefeng Yu

Chaired by Yefeng Yu

14:00 Utilizing a Unconservative Coupling Scheme to Guide Light in a Passive Micro-ring Resonator
Keya Zhou (*Harbin Institute of Technology*); *Jun Wang* (*Harbin Institute of Technology*); *Qi Liu* (*Harbin Institute of Technology*); *Xiaowei Li* (*Harbin Institute of Technology*); *Wei Wang* (*Harbin Institute of Technology*); *Qiaohua Wu* (*Harbin Institute of Technology*);

14:15 Spin-orbit Interaction Enabled Non-resonance Optical Chirality
Yidong Hou (*Sichuan University*); *Dangyuan Lei* (*City University of Hongkong*);

14:30 Tailoring Light Propagation of High Quality Factor Resonances in Dielectric Metasurfaces
Tian Sang (*Jiangnan University*); *Zekun Ge* (*Jiangnan University*); *Xianghu Zhang* (*Jiangnan University*); *Yueke Wang* (*Jiangnan University*);

14:45 Non-uniform Pseudomagnetic Fields in Photonic Crystals
Bin Yang (*China University of Mining and Technology*); *Yuting Yang* (*China University of Mining and Technology*);

15:00 3D Printing of Nanocellulose and Silica Based Composites for Photonic Properties and Mechanical Reinforcement
Amrutha Augustine (*Trinity College Dublin*); *Jing Qian* (*Trinity College Dublin*); *A. Louise Bradley* (*Trinity College Dublin*); *David L. Officer* (*University of Wollongong*); *Sanjeev Gambhir* (*University of Wollongong*); *Gordon G. Wallace* (*University of Wollongong*); *Colm Delaney* (*Trinity College Dublin*); *Larisa Florea* (*Trinity College Dublin*);

15:15 Tuning Plasmonic Coupling of Touching to Near-touching Nanodimers via Nanometric Gaps
Yina Wu (*The Barcelona Institute of Science and Technology*); *Andrea Konečná* (*Brno University of Technology*); *Shin Hum Cho* (*Keimyung University*); *Delia J. Milliron* (*The University of Texas at Austin*); *Jordan A. Hachtel* (*Oak Ridge National Laboratory*); *F. Javier García de Abajo* (*ICFO — Institut de Ciències Fotòniques, The Barcelona Institute of Science and Technology*);

16:00 Generating Novel Perfect Vortex Beams Based on All-dielectric Geometric Metasurfaces
Bolun Zhang (*Jiangnan University*); *Jicheng Wang* (*Jiangnan University*);

16:15 Ka-band Lens Antenna Based on Metasurface
Shibin Jiang (*University of Electronic Science and Technology of China*); *Shaowei He* (*University of Electronic Science and Technology of China*); *Lijun Jiang* (*Zhejiang Dali Technology Co. Ltd*); *Kun Zheng* (*University of Electronic Science and Technology of China*); *Weiming Zhu* (*University of Electronic Science and Technology of China*);

16:30 Plasmon Enhanced Optical Manipulation of Janus Nanoparticles in Metallic Nanoaperture
Alemayehu Nana Koya (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*); *Longnan Li* (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*); *Wei Li* (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*);

16:45 Reducing the Form Factor of Weak Measurement for Observation of Spin-orbit Interaction
Minkyung Kim (*Gwangju Institute of Science and Technology (GIST)*);

17:00 Laser Synthesis of Linear Carbon Structures for Nanophotonics
Anton V. Osipov (*Vladimir State University*); *Vlad D. Samyshkin* (*Vladimir State University*); *A. S. Abramov* (*Stoletov Vladimir State University*); *D. S. Bodunov* (*Stoletov Vladimir State University*); *Alexey V. Povolotskiy* (*Saint-Petersburg State University*); *Evgeny S. Sedov* (*Westlake University*); *Alexey O. Kucherik* (*Stoletov Vladimir State University*);

17:15 Scattering and Absorption of Electromagnetic Waves by Hemispherical Silver Nanoparticles on Silicon Nanopillar Arrays
Wen Sun (*Northwest A&F University*); *Xiangyao Luo* (*Northwest A&F University*); *Hongchang An* (*Northwest A&F University*);

17:30 Formation, Stabilization and Orientation of Linear Carbon Chains Using Arc Discharge and Laser Radiation
Anton V. Osipov (*Vladimir State University*); *Vlad Samyshkin* (*Vladimir State University*); *Alexey O. Kucherik* (*Stoletov Vladimir State University*); *Andrey Abramov* (*Vladimir State University*);

17:45 Mode Purity Analysis for the Vortex Beam Emitter
Fan-Hong Li (*Institution of Remote Sensing Satellite, Chinese Academy of Space Technology*); *Kai-Xin Wang* (*Institution of Remote Sensing Satellite, Chinese Academy of Space Technology*); *He-Yi Li* (*Institution of Remote Sensing Satellite, Chinese Academy of Space Technology*); *Tao He* (*Institution of Remote Sensing Satellite, Chinese Academy of Space Technology*); *Jin Huang* (*Institution of Remote Sensing Satellite, Chinese Academy of Space Technology*); *Zi-Wen Zhang* (*Peking University*); *Juan-Feng Zhu* (*Singapore University of Technology and Design*);

Session 1P10a
Simulation of Radar Echo and Scattering Center Extraction Technology

Monday PM, April 22, 2024

Room 10 - Shuliu

Organized by Anqi Wang, Shuirong Chai

Chaired by Anqi Wang

13:00 Study on Composite Scattering from Frozen Soil Surface and Complex Moving Targets on It
Wei Chen (*Yan'an University*); *Xincheng Ren* (*Yan'an University*); *Yuqing Wang* (*Yan'an University*); *Ye Zhao* (*Yan'an University*); *Peng-Ju Yang* (*Yan'an University*);

13:15 Study on Radar Scattering Characteristics of Breaking Wave
Pengbo Du (*Ocean University of China*); *Yunhua Wang* (*Ocean University of China*); *Yanmin Zhang* (*Ocean University of China*); *Jianbo Cui* (*Ocean University of China*); *Yushi Zhang* (*Ocean University of China*); *Xin Li* (*Ocean University of China*);

13:30 Simulation of X-band Radar Sea Clutter Based on Different Wave Spectrum Models
Meichen Liu (*Xidian University*); *Feng Luo* (*Xidian University*); *Enchao Peng* (*Xidian University*); *Daozhong Sun* (*Xidian University*);

13:45 Research on the Differences between Ocean Wave Parameters Retrieved Based on ITTC Spectra and PM Spectra
Meichen Liu (*Xidian University*); *Daozhong Sun* (*Xidian University*); *Feng Luo* (*Xidian University*); *Enchao Peng* (*Xidian University*);

14:00 Fast RCS Simulation of Target on the Sea Surface Based on the SBR and Advanced Two-scale Method
Siyuan Wang (*Nanjing University of Science and Technology*); *Zi He* (*Nanjing University of Science and Technology*); *Da-Zhi Ding* (*Nanjing University of Science and Technology*); *Lin Liu* (*Beijing Institute of Remote Sensing Equipment*); *Ying Zhou* (*Beijing Institute of Remote Sensing Equipment*);

14:15 Study on the Multidimensional Characteristics of Microwave Scattering from Nearshore Sea Waves
Jianbo Cui (*Ocean University of China*); *Yunhua Wang* (*Ocean University of China*); *Yanmin Zhang* (*Ocean University of China*); *Pengbo Du* (*Ocean University of China*);

14:30 An Accurate Technique for Extended Target Radar Echo Simulation Based on the Scattering Center Model
Shui-Rong Chai (*Xidian University*); *Fangyin Zhu* (*Xidian University*); *Zhenxiang He* (*Xidian University*); *Yufeng Zou* (*Xidian University*); *Li-Xin Guo* (*Xidian University*);

14:45 Simulation of Extended Target Radar Echo in Frequency-domain Based on SBR Method
Shui-Rong Chai (*Xidian University*); *Pu-Kun Dai* (*Xidian University*); *Li-Xin Guo* (*Xidian University*);

15:00 Scattering Center Parametric Modeling of Two-dimensional Rough Surface
Xiaohong Liang (*Anhui University*); *Anqi Wang* (*Anhui University*); *Lixia Yang* (*Anhui University*); *Zhi-Xiang Huang* (*Anhui University*);

15:15 Application of TAdam in Method of Moments for Rough Surface Scattering
Meng Yuan (*Anhui University*); *Anqi Wang* (*Anhui University*); *Lixia Yang* (*Anhui University*); *Zhi-Xiang Huang* (*Anhui University*);

15:30 **Coffee Break**

Session 1P10b
Electromagnetic Modeling, and Inversion and Applications

Monday PM, April 22, 2024

Room 10 - Shuliu

Organized by Jianhua Li, Ganquan Xie

Chaired by Ganquan Xie, Gang Zhang

16:00 Based on Absolute Airspace Reference System Analysis of Doppler Effect of Light (Electromagnetic Wave)
Shandong Zhao (*Hunan Supercomputing Science Society*); *Yijia Zhao* (*China Machinery International Engineering Design & Research Institute Co., Ltd*);

16:15 Effects of Base Frequency, Duty Cycle, and Waveform Repetition on TEM Responses: Insights from Models of a Deep-buried Conductor
Yao Wang (*China University of Geosciences*); *Jianhui Li* (*China University of Geosciences*);

16:30 Cloud Spatial Characteristics Evaluation Based on the Results of Downwelling K-band Radiation Spectra Measurements
Dobroslav Pavlovich Egorov (*Kotel'nikov Institute of Radio Engineering and Electronics of RAS*); *Boris Georgievich Kutuza* (*Kotel'nikov Institute of Radio Engineering and Electronics of RAS*);

16:45 On the Problem of Reciprocity of Radar Images of Forests at $\boldsymbol{HV}$ and $\boldsymbol{VH}$ Polarizations
A. A. Kalinkevich (*Kotelnikov Institute of Radioengineering and Electronics of RAS*); *Dobroslav Pavlovich Egorov* (*Kotel'nikov Institute of Radio Engineering and Electronics of RAS*); *A. A. Chernienko* (*Kotelnikov Institute of Radioengineering and Electronics of RAS*);

17:00 Research on the Application of Comprehensive Physical Exploration in the Detection of Heavy Metal Contaminated Sites — Take the Case of Jijie Town in Yunnan Province as an Example
Sen Dai (*Southwest University of Science and Technology*); *Zhe Wang* (*Southwest University of Science and Technology*); *Qiuping Zeng* (*Southwest University of Science and Technology*); *Gang Zhang* (*Southwest University of Science and Technology*);

17:15 Geomagnetic Data Processing
Sheng He (*Southwest University of Science and Technology*); *Gang Zhang* (*Southwest University of Science and Technology*);

17:30 Segmentation of the Longmenshan Fracture Zone Based on Deep Electrical Structural Characteristics
Yongjie Tang (*Southwest University of Science and Technology*); *Gang Zhang* (*Southwest University of Science and Technology*);

17:45 Discussion on a Non-traditional Antigravity Theory and the Realization Path Is Envisaged
Shandong Zhao (*Hunan Supercomputing Science Society*); *Yijia Zhao* (*China Machinery International Engineering Design & Research Institute Co., Ltd*);

18:00 Anti Atomic Bomb Nuclear Weapon
Ganquan Xie (*GL Geophysical Laboratory, Lawrence Berkeley Laboratory*); *Jianhua Li* (*GL Geophysical Laboratory*);

18:15 Immigrate to Mars
Ganquan Xie (*GL Geophysical Laboratory, Lawrence Berkeley Laboratory*); *Jianhua Li* (*GL Geophysical Laboratory*);

18:30 Super Science
Ganquan Xie (*GL Geophysical Laboratory, Lawrence Berkeley Laboratory*); *Jianhua Li* (*GL Geophysical Laboratory*);

Session 1P11a
Biophotonics Part 2

Monday PM, April 22, 2024

Room 11 - Xiangyu

Organized by Chao Tian, Shuhua Yue

Chaired by Chao Tian, Shuhua Yue

13:00 Progresses in Multimodal Photoacoustic Imaging
Invited
Changhui Li (*Peking University*);

13:20 Image-guided Near Infrared Spectral Tomography for
Invited Breast Cancer Diagnosis
Jinchao Feng (*Beijing University of Technology*); *Shumin Lin* (*Beijing University of Technology*); *Chengpu Wei* (*Beijing University of Technology*); *Zhe Li* (*Beijing University of Technology*); *Kebin Jia* (*Beijing University of Technology*);

13:40 Spheroids and Organoids as 3D in Vitro Cellular Models
Invited for Biomedical Research
Hongxu Lu (*Shanghai Institute of Ceramics, Chinese Academy of Sciences*);

14:00 Comparison of Newly Developed 3D Reconstruction Techniques for Imaging through Turbid Medium from a Single Blurred 2D Image — For Noninvasive Transillumination Imaging of Animal Bodies Using NIR Light
Koichi Shimizu (*Xidian University*);

14:15 High-speed meso-SCAPE Microscope with Multi-
Invited millimeter FOV and Cellular Resolution
Zixian Cao (*University of Scienceand Technology of China*); *Jiapeng Zhu* (*University of Scienceand Technology of China*); *Yankan Huang* (*University of Scienceand Technology of China*); *Bingxin Shen* (*University of Scienceand Technology of China*); *Wenxuan Liang* (*University of Science and Technology of China — USTC*);

14:35 Stimulated Raman Scattering Microscopy Enabled ***in***
Invited ***situ*** Subcellular Lipid Metabolomics Promotes Cancer Phenotyping
Shuhua Yue (*Beihang University*);

14:55 Quantitative Assessment of the Contribution of Light Absorption and Scattering to the PPG Signal by Monte Carlo Simulation
Denis Grigorievich Lapitan (*Moscow Regional Research and Clinical Institute ("MONIKI")*); *Andrey Petrovich Tarasov* (*Moscow Regional Research and Clinical Institute ("MONIKI")*); *Dmitry Alekseevich Rogatkin* (*Moscow Regional Research and Clinical Institute ("MONIKI")*);

15:30 **Coffee Break**

Session 1P11b
Biophotonics Part 3

Monday PM, April 22, 2024

Room 11 - Xiangyu

Organized by Peng Fei, Jun Fan

Chaired by Jun Fan

16:00 Ultra-wide Bandwidth High Resolution All-optical Intravascular Ultrasound Using Miniaturized Photoacoustic Transducer (Invited)
Pu Wang (*Beihang University*);

16:20 Physics-driven Deep Learning Photoacoustic Tomography
Chao Tian (*University of Science and Technology of China*);

16:35 On the Imaging Depth Limit of Photoacoustic Tomography in the Visible and First Near-infrared Windows
Songde Liu (*University of Science and Technology of China*);

16:50 Excitation Fluorescence Spectral Microscopy for Highly Multiplexed and Quantitative Cellular Imaging (Invited)
Kun Chen (*University of Electronic Science and Technology of China*); *Jinhong Yan* (*University of Electronic Science and Technology of China*); *Yi He* (*University of Electronic Science and Technology of China*);

17:10 Fluorescence Lifetime Imaging Microscopy for Early Diagnosis and Severity Prediction of Preeclampsia with Nile Blue Probe
Yinru Zhu (*Shenzhen University*); *Wei Yan* (*Shenzhen University*);

17:25 Laser-induced Bubble Dynamics in Finite Liquid Partially Confined by Elastic Thin Walls and Free Surface
Lei Fu (*Xi'an Jiaotong University*); *Xiao-Xuan Liang* (*University of Lubeck*); *Zhenxi Zhang* (*Xi'an Jiaotong University*); *Alfred Vogel* (*University of Lubeck*); *Cuiping Yao* (*Xi'an Jiaotong University*);

17:40 Super-resolution Fluorescence and Quantitative Phase Microscopy Visualize Live Cells in 3D
Peng Gao (*Xidian University*);

Session 1P12a
Gyrotrons and Fast Wave Devices 2

Monday PM, April 22, 2024

Room 12 - Siji 1

Organized by Mikhail Yu. Glyavin, Wenjie Fu

Chaired by Mikhail Yu. Glyavin, Wenjie Fu

13:00 Problems and Solutions for Increasing of the Operating Frequency of Gyrotrons
Vladimir E. Zapevalov (*Institute of Applied Physics RAS*);

13:15 Design of a Multi-barrel Terahertz Gyrotron for DNP/NMR Spectroscopy
Vladimir E. Zapevalov (*Institute of Applied Physics RAS*); *Andrey S. Zuev* (*Federal Research Center "Institute of Applied Physics RAS"*); *Oleg P. Plankin* (*Institute of Applied Physics of the RAS*); *Evgeny S. Semenov* (*Institute of Applied Physics of the Russian Academy of Sciences*);

13:30 Compact and Efficient Output Converter for Gyrotron Mode with High Longitudinal Wave Number
Grigory G. Denisov (*Institute of Applied Physics, Russian Academy of Sciences*); *Dmitry I. Sobolev* (*Institute of Applied Physics, Russian Academy of Sciences*); *Mikhail D. Proyavin* (*Institute of Applied Physics, Russian Academy of Sciences*); *A. P. Gashturi* (*Institute of Applied Physics, Russian Academy of Sciences*); *M. V. Morozkin* (*Institute of Applied Physics, Russian Academy of Sciences*); *V. E. Kotomina* (*Institute of Applied Physics, Russian Academy of Sciences*); *M. V. Kamensky* (*Institute of Applied Physics, Russian Academy of Sciences*); *A. A. Orlovsky* (*Institute of Applied Physics, Russian Academy of Sciences*);

13:45 Modeling of Selective Photonic-structure Cavities for Sub-terahertz High-cyclotron-harmonic Gyrotrons
Ekaterina Mikhailovna Novak (*Insitute of Applied Physics RAS*); *Andrei V. Savilov* (*Institute of Applied Physics, RAS*);

14:00 Possibilities of Creating a Relativistic Terahertz Gyrotron with a Multi-megawatt Power Level
Yuri Yurievich Danilov (*Institute of Applied Physics of the Russian Academy of Sciences*); *Alexander Nikolaevich Leontyev* (*Institute of Applied Physics of the Russian Academy of Sciences*); *Andrey Mihailovich Malkin* (*Institute of Applied Physics, Russian Academy of Sciences*); *Evgeny Sergeevich Semenov* (*Institute of Applied Physics of the Russian Academy of Sciences*); *Oleg Petrovich Plankin* (*Institute of Applied Physics of the RAS*); *Roman Markovich Rozental* (*Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)*);

14:15 Synthesized Quasi-optical Converter for 175–250 GHz Gyrotron with Two Output Windows
Anton P. Gashturi (*Institute of Applied Physics, Russian Academy of Sciences*); *Grigory G. Denisov* (*Institute of Applied Physics, Russian Academy of Sciences*); *Andrey Pavlovich Fokin* (*Federal Research Center A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)*); *Mikhail Yu. Glyavin* (*A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Dmitry I. Sobolev* (*Institute of Applied Physics, Russian Academy of Sciences*); *Andrey S. Zuev* (*Federal Research Center "Institute of Applied Physics RAS"*);

14:30 Setup and Preliminary Experiment of the 400 MHz DNP/NMR System Based on a 263 GHz Frequency-tunable Gyrotron
Diwei Liu (*University of Electronic Science and Technology of China*); *Y. X. Chai* (*University of Electronic Science and Technology of China*); *C. Y. Zhang* (*University of Electronic Science and Technology of China*); *A. Q. Wang* (*University of Electronic Science and Technology of China*); *C. H. Zhu* (*University of Electronic Science and Technology of China*); *W. Wang* (*University of Electronic Science and Technology of China*); *T. Song* (*University of Electronic Science and Technology of China*); *K. C. Zhang* (*University of Electronic Science and Technology of China*); *Z. H. Wu* (*University of Electronic Science and Technology of China*); *M. Hu* (*University of Electronic Science and Technology of China*); *Y. Y. Wei* (*University of Electronic Science and Technology of China*); *Y. B. Gong* (*University of Electronic Science and Technology of China*);

14:45 Design of Series Active Linear Filter for High-voltage Pulse Power Supply of Gyrotron Cathode
Chunhui Yang (*Huazhong University of Science and Technology*); *Xiaotao Han* (*Huazhong University of Science and Technology*); *Tao Jiang* (*Huazhong University of Science and Technology*); *Junxian Fan* (*Huazhong University of Science and Technology*); *Shaozhe Zhang* (*Huazhong University of Science and Technology*);

15:00 Design of Quasi-optical Mode Converter for 800-GHz $TE_{8,5}$ Mode Gyrotron
Liangqian Xie (*Wuhan National High Magnetic Field Center*); *Houxiu Xiao* (*Huazhong University of Science and Technology*); *Xianfei Chen* (*Huazhong University of Science and Technology*); *Yu Huang* (*Huazhong University of Science and Technology*);

15:15 Invited Project of Powerful Long-pulse THz-band FEL with Talbot-type Cavity: Design and Optimization
Dominika D. Krygina (*Institute of Applied Physics, Russian Academy of Sciences*); *Yulia S. Oparina* (*Institute of Applied Physics, RAS*); *Andrei V. Savilov* (*Institute of Applied Physics, RAS*); *Nikolai Yu. Peskov* (*Institute of Applied Physics, RAS*);

15:35 **Coffee Break**

16:00 Theoretical Investigation on the Second-harmonic Gyrotron for 600 MHz DNP/NMR System
Y. X. Chai (*University of Electronic Science and Technology of China*); *Diwei Liu* (*University of Electronic Science and Technology of China*); *C. Y. Zhang* (*University of Electronic Science and Technology of China*); *A. Q. Wang* (*University of Electronic Science and Technology of China*); *C. H. Zhu* (*University of Electronic Science and Technology of China*); *W. Wang* (*University of Electronic Science and Technology of China*); *T. Song* (*University of Electronic Science and Technology of China*); *K. C. Zhang* (*University of Electronic Science and Technology of China*); *Z. H. Wu* (*University of Electronic Science and Technology of China*); *M. Hu* (*University of Electronic Science and Technology of China*); *Y. Y. Wei* (*University of Electronic Science and Technology of China*); *Y. B. Gong* (*University of Electronic Science and Technology of China*);

Session 1P12b
Microwave and Millimeter Wave Devices and Systems

Monday PM, April 22, 2024

Room 12 - Siji 1

Organized by Tianliang Zhang, Liguo Zhou

Chaired by Liguo Zhou

16:15 A Doherty Amplifier with a Tunable Transformer for Load Modulation
Shah Yash Hemant (*Korea Aerospace University*); *Ahmad Bilal* (*Korea Aerospace University*); *Abdul Hadee* (*Korea Aerospace University*); *Sohom Bhattacharjee* (*Korea Aerospace University*); *Cho Choon Sik* (*Korea Aerospace University*);

16:30 Design of a Low-cost Gaussian White Noise Source for ADC Dither Experiments
Guo-Hong Du (*University of Science and Technology of China*); *Shihai Liao* (*Chengdu University of Information Technology*); *Xiangwei Jin* (*Chengdu University of Information Technology*);

16:45 A Dual-mode Microstrip Antenna for Sensing Applications
Xing-Yun Zhang (*National Key Laboratory of Scattering and Radiation*); *Fang Liu* (*National Key Laboratory of Scattering and Radiation*); *Jingxuan Yang* (*National Key Laboratory of Scattering and Radiation*); *Qunting Ren* (*National Key Laboratory of Scattering and Radiation*); *Yang Bai* (*National Key Laboratory of Scattering and Radiation*);

17:00 A High-precision Multi-target Vital Signs Detection Method Based on FMCW Radar
Miaomiao Zhao (*Anhui University*); *Zhongxiang Zhang* (*Hefei Normal University*); *Wenxia Bao* (*Anhui University*);

17:15 A W-band Hybrid Vector-modulated and Reflective-type Phase Shifter in 130-nm SiGe BiCMOS
Xianhu Luo (*Institute of Electronic Engineering, China Academy of Engineering Physics*); *Xu Cheng* (*Institute of Electronic Engineering, China Academy of Engineering Physics*); *Yun-Bo Rao* (*Institute of Electronic Engineering, China Academy of Engineering Physics*); *Jiang-An Han* (*Institute of Electronic Engineering, China Academy of Engineering Physics*); *Bin-Bin Cheng* (*Institute of Electronic Engineering, China Academy of Engineering Physics*); *Xianjin Deng* (*Institute of Electronic Engineering, China Academy of Engineering Physics*);

17:30 A W-band High-gain Low-noise Amplifier in 0.13 µm SiGe BiCMOS for Millimeter-wave Radar Application
Xianhu Luo (*Institute of Electronic Engineering, China Academy of Engineering Physics*); *Xu Cheng* (*Institute of Electronic Engineering, China Academy of Engineering Physics*); *Yun-Bo Rao* (*Institute of Electronic Engineering, China Academy of Engineering Physics*); *Jiang-An Han* (*Institute of Electronic Engineering, China Academy of Engineering Physics*); *Bin-Bin Cheng* (*Institute of Electronic Engineering, China Academy of Engineering Physics*); *Xianjin Deng* (*Institute of Electronic Engineering, China Academy of Engineering Physics*);

17:45 Dual-band Bandpass Filter for 5G Communication
Invited
Jiang Jiang (*Northwestern Polytechnical University*); *Yu Han* (*Northwestern Polytechnical University*); *Chengdong Huang* (*Northwestern Polytechnical University*); *Daiyao Zhang* (*Northwestern Polytechnical University*); *Weikang Zhou* (*Northwestern Polytechnical University*); *Liguo Zhou* (*Northwestern Polytechnical University*);

Session 1P13a
Computational Imaging: Novel System Design and Reconstruction Algorithms 2

Monday PM, April 22, 2024

Room 13 - Siji 2

Organized by Kedar Khare, Krishna Agarwal

Chaired by Kedar Khare, Yuyue Zhang

13:00 Speckle Correlation Analysis in Multi-scattering Regime
Invited
Qihang Zhang (*Tsinghua University*); *Liangcai Cao* (*Tsinghua University*);

13:20 3-D Microwave Imaging with Optimized Sparse Array
Zhengyue Dong (*Hangzhou Dianzi University*); *Kuiwen Xu* (*Hangzhou Dianzi University*);

13:35 Enhancement of Generalization Ability for Deep
Invited Learning-based Electromagnetic Inverse Scattering Models
Rencheng Song (*Hefei University of Technology*); *Qian Huang* (*Hefei University of Technology*);

13:55 Adaptation of Inverse Scattering Algorithms for 3D Refractive Index Reconstruction with Coherent Label-free Microscope Data
Yingying Qin (*UiT The Arctic University of Norway*); *Ankit Butola* (*UiT The Arctic University of Norway*); *Krishna Agarwal* (*UiT The Arctic University of Norway*);

14:10 Recent Advancements in Microwave Imaging for Monitoring Thermal Ablation
Mengchu Wang (*Tsinghua University*); *Rosa Scapaticci* (*National Research Council of Italy Institute for Electromagnetic Sensing of the Environment (CNR-IREA)*); *Marta Cavagnaro* (*University of Rome "La Sapienza"*); *Maokun Li* (*Tsinghua University*); *Fan Yang* (*Tsinghua University*); *Shenheng Xu* (*Tsinghua University*); *Lorenzo Crocco* (*Institute for Electromagnetic Sensing of the Environment (IREA-CNR)*);

14:25 Number of Degrees of Freedom, Resolution and Kol-
Invited mogorov Entropy in Electromagnetic Linear Inverse Scattering Problems
Maria Antonia Maisto (*Universita degli Studi della Campania "Luigi Vanvitelli"*); *Raffaele Solimene* (*Universita degli Studi della Campania "Luigi Vanvitelli"*);

14:45 Study on Generation of Free-viewpoint Images by Using Drone
Takashi Kuroiwa (*Nihon University*); *Yifan Wu* (*Nihon University*); *Syota Yazawa* (*Nihon University*); *Kiyozumi Niizuma* (*Nihon University*);

Session 1P13b
Electromagnetic Quantitative Imaging via Machine Learning

Monday PM, April 22, 2024

Room 13 - Siji 2

Organized by Xudong Chen, Tiantian Yin

Chaired by Xudong Chen, Tiantian Yin

15:00 Machine Learning-based Imaging through Scattering
Invited Media
Wen Chen (*The Hong Kong Polytechnic University*);

15:20 Effects of Physics-guided Loss Functions Ondeep Learn-
Invited ing Performance in Inverse Scattering
Zicheng Liu (*Northwestern Polytechnical University*); *Dilip K. Prasad* (*UiT — The Arctic University of Norway*); *Krishna Agarwal* (*UiT — The Arctic University of Norway*);

15:40 **Coffee Break**

16:00 A Kalman Filtering Framework of Dynamic Microwave Tomographic Imaging
Yahui Ding (*University of Electronic Science and Technology of China*); *Yifan Chen* (*University of Electronic Science and Technology of China*);

16:15 Microwave Vision and the Intelligent Perception of Radar Imagery (Invited)
Feng Xu (*Fudan University*); *Ya-Qiu Jin* (*Fudan University*);

16:35 A Comparative Study on Deep Learning Accelerated Computational Electromagnetic Solvers (Invited)
Xiao-Min Pan (*Beijing Institute of Technology*); *Xinyue Lou* (*Beijing Institute of Technology*); *Jiyuan Wang* (*Beijing Institute of Technology*); *Junbo Zhang* (*Beijing Institute of Technology*);

16:55 Physics-informed Neural Network-based Inverse Scattering Method and Its Application in Antenna (Invited)
Yi-Di Hu (*University of Electronic Science and Technology of China*); *Hui Zhou* (*University of Electronic Science and Technology of China*); *Xiao-Hua Wang* (*University of Electronic Science and Technology of China*);

17:15 A Learning Method based on Far-field Approximation for Radar Imaging (Invited)
Xudong Chen (*National University of Singapore*); *Tiantian Yin* (*National University of Singapore*);

17:35 Analysis of Defocusing Effect due to Array Deformation for Millimeter Wave Near-field Multistatic Imaging
Xianzhong Tian (*National University of Singapore*); *Yongxin Guo* (*National University of Singapore*);

Session 1P14
Remote Sensing of Atmosphere, Ocean and Land Using GNSS and Other Sensors

Monday PM, April 22, 2024

Room 14 - Siji 3

Organized by Shuanggen Jin, Yan Jia

Chaired by Shuanggen Jin, Yan Jia

13:00 High-frequency Water Level Estimation in the Yangtze River from GNSS-Interferometric Reflectometry
Zilong Chen (*Nanjing University of Information Science and Technology*); *Shuanggen Jin* (*Henan Polytechnic University*);

13:15 Reconstruction of Spatially Seamless Soil Moisture Data from SMAP Product Using Deep Learning
Haoyu Fan (*Nanjing University of Posts and Telecommunications*); *Zeshuo Li* (*Nanjing University of Posts and Telecommunications*); *Yan Jin* (*Nanjing University of Posts and Telecommunications*); *Yan Jia* (*Nanjing University of Posts and Telecommunications*); *S. G. Jin* (*Nanjing University of Information Science and Technology*);

13:30 Soil Moisture Assessment and Drought Monitoring in Arid Environments from GNSS-Reflectometry: A Comparative Analysis between Africa and China
Charafa El Rhadiouini (*Nanjing University of Information Science and Technology*); *Shuanggen Jin* (*Henan Polytechnic University*);

13:45 Exploitation of HydroGNSS Coherent Channel: Cases Based on CyGNSS Raw IF Data
Jilun Peng (*Institute for Space Sciences (ICE-CSIC)*); *Estel Cardellach* (*Institute of Space Studies (ICE, CSIC)*); *Weiqiang Li* (*Institute of Space Sciences (ICE, CSIC)*); *Serni Ribo* (*Institute of Space Sciences (ICE, CSIC)*); *Antonio Rius* (*Institute of Space Studies (ICE, CSIC)*);

14:00 Urban Land Use Efficiency and Spatial Dynamics: A Case Study of Nanjing's Sustainable Development
Zeshuo Li (*Nanjing University of Posts and Telecommunications*); *Yi Zhang* (*Nanjing University of Posts and Telecommunications*); *Haoyu Fan* (*Nanjing University of Posts and Telecommunications*); *Yan Jia* (*Nanjing University of Posts and Telecommunications*); *Yan Jin* (*Nanjing University of Posts and Telecommunications*);

14:15 A Multiple Eigenvalues-based Approach for Spaceborne GNSS-R Sea Surface Wind Speed Inversion
K. C. Zhang (*Xidian University*); *Ding Nie* (*Xidian University*); *J. N. Yan* (*Xidian University*); *Min Zhang* (*Xidian University*);

14:30 Reconstructing NDVI for Lakes: Early Insights Leveraging CYGNSS and ERA-5 Data
Yinqing Zhen (*Nanjing University of Information Science and Technology*); *Qingyun Yan* (*Nanjing University of Information Science and Technology*);

14:45 Inversion of Bohai Sea Ice Thickness Based on HY-1D Data
Wenlong Bi (*Qingdao University*); *Ran Yan* (*Qingdao University*); *Ning Wang* (*North China Sea Marine Forecasting Center of State Oceanic Administration*); *Yifan Li* (*Qingdao University*); *Xinyu Li* (*Qingdao University*); *Jin Wang* (*Qingdao University*); *Meijie Liu* (*Qingdao University*);

15:30 **Coffee Break**

16:00 Estimation of the AMSR2 Data Potential to Retrieve the Arctic Sea Ice Thickness
Elizaveta V. Zabolotskikh (*Russian State Hydrometeorological University (RSHU)*); *S. M. Azarov* (*Russian State Hydrometeorological University (RSHU)*); *A. Stokoz* (*Russian State Hydrometeorological University (RSHU)*); *K. I. Yarusov* (*Russian State Hydrometeorological University (RSHU)*);

16:15 A Simulation Method of HFSWR Tsunami Echo Based on COMCOT
Yixuan Liu (*Harbin Institute of Technology at Weihai*); *Zhe Lyu* (*Harbin Institute of Technology at Weihai*); *Linwei Wang* (*Harbin Institute of Technology at Weihai*); *Chang Jun Yu* (*Harbin Institute of Technology at Weihai*);

16:30 Tropical Belt Variations and Drivers from Multiple GNSS Radio Occultation Measurements
Shuanggen Jin (*Henan Polytechnic University*); *Mohamed Darrag* (*Nanjing University of Information Science and Technology*); *Aalaa Samy* (*National Research Institute of Astronomy and Geophysics-NRIAG*);

16:45 Prediction of Ionospheric F2 Layer Height with Biparametric Deep Learning Network Based on HFSWR Data
Xuekun Chen (*Harbin Institute of Technology at Weihai*); *Hongjuan Yang* (*Harbin Institute of Technology at Weihai*); *Chang Jun Yu* (*Harbin Institute of Technology at Weihai*);

17:00 Study of the Multi-parameter Influence of Wind Waves and Swell Waves Based on GNSS Bistatic Scattering Model
J. N. Yan (*Xidian University*); *Ding Nie* (*Xidian University*); *K. C. Zhang* (*Xidian University*); *Min Zhang* (*Xidian University*);

17:15 Total Cloud Liquid Water Content Retrieval over the Arctic Sea Ice from the AMSR2 Data
Elizaveta V. Zabolotskikh (*Russian State Hydrometeorological University (RSHU)*); *E. V. Lvova* (*Russian State Hydrometeorological University*); *K. I. Yarusov* (*Russian State Hydrometeorological University (RSHU)*); *S. M. Azarov* (*Russian State Hydrometeorological University (RSHU)*);

17:30 Arctic Sea Ice Classification with the AMSR2 Data
Elizaveta V. Zabolotskikh (*Russian State Hydrometeorological University (RSHU)*); *Margarita Andreevna Zhivotovskaya* (*Russian State Hydrometeorological University (RSHU)*); *S. M. Azarov* (*Russian State Hydrometeorological University (RSHU)*); *K. I. Yarusov* (*Russian State Hydrometeorological University (RSHU)*);

17:45 First Results from the Indian Lightning Detection Network
Anirban Guha (*Tripura University*); *J. Saha* (*Tripura University*); *P. Nicholson* (*VLF Services*); *E. Williams* (*Massachusetts Institute of Technology*); *M. Atkinson* (*HeartMath Institute*); *A. Adhikari* (*Via Vitae Solutions*);

Session 1P15a
Numerical Methods in Analysis and Design of Metasurfaces

Monday PM, April 22, 2024

Room 15 - Siji 4

Organized by Jun Wei Wu

Chaired by Jun Wei Wu, Hanru Shao

13:00 Analyzing Large Periodic Arrays Using Fast Model Order Reduction Method
Hanru Shao (*Ningbo University*);

13:15 An FDTD Algorithm for Frequency Selective Surfaces Analysis with Excitation of High-power Electromagnetic Wave
Dexin Ma (*Beijing Jiaotong University*); *Xiaotian Pan* (*The Beijing Institute of Radio Measurement*); *Xiao Jia* (*Beijing Jiaotong University*); *Mingjiang Wang* (*Beijing Jiaotong University*);

13:30 Frequency Band Shifting of Absorber Based on Fragmented Multi-objective Optimization Algorithm
Liujia E (*Lanzhou University*); *Yuxuan Zeng* (*Lanzhou University*); *Shujie Liu* (*Lanzhou University*); *Zhonglei Mei* (*Lanzhou University*); *Tiaoming Niu* (*Lanzhou University*);

13:45 An Efficient Approach for Conformal Metasurface Cloak Design of High-order Bezier Surface
Lingyu Chen (*Nanjing University of Science and Technology*); *Zihao Ning* (*Nanjing University of Science and Technology*); *Mengmeng Li* (*Nanjing University of Science and Technology*); *Da-Zhi Ding* (*Nanjing University of Science and Technology*);

14:00 A Fast Simulation Method for Dynamically Tunable Metasurfaces
Shihao Deng (*University of Electronic Science and Technology of China*); *Ming Jiang* (*University of Electronic Science and Technology of China*); *Jun Wei Wu* (*Southeast University*); *Weijian Ran* (*University of Electronic Science and Technology of China*); *Xiaolin Mi* (*Fudan University*); *Lin Lei* (*University of Electronic Science and Technology of China*); *Jun Hu* (*University of Electronic Science and Technology of China*);

14:15 High-efficiency Optimization and Phase Smoothness Consideration of Large-scale Metasurface Array Antenna
Jun Wei Wu (*Southeast University*);

Session 1P15b
Advanced Electromagnetic Methods and Channel Propagation Modeling in Indoor, Urban, and Terrestrial Environments

Monday PM, April 22, 2024

Room 15 - Siji 4

Organized by Zhong-Yu Liu, Ke Guan

Chaired by Zhong-Yu Liu, Ke Guan

14:30 Measurement and Analysis of 5G Millimeter-wave Propagation Channels in Dense-vegetation Scenarios
Shuo Hu (*Xidian University*); *Zhong-Yu Liu* (*Xidian University*); *Li-Xin Guo* (*Xidian University*); *Zhengfeng Zhang* (*Xi'an Aeronautical Institute*);

14:45 Measurement and Analysis of 5G V2V Channel in Urban Scenarios
Haochuan Zang (*Xidian University*); *Li-Xin Guo* (*Xidian University*); *Zhong-Yu Liu* (*Xidian University*); *Shuo Hu* (*Xidian University*); *Zhi-Gang Zhong* (*China Information Technology Designing & Consulting Institute CO. LTD*); *Zuo-Yong Nan* (*China Information Technology Designing & Consulting Institute CO. LTD*);

15:00 A Fast Computation SBR Algorithm for General Scenario Electromagnetic Propagation
Jiang Guo (*Xidian University*); *Li-Xin Guo* (*Xidian University*); *Zhong-Yu Liu* (*Xidian University*); *Zhi-Gang Zhong* (*China Information Technology Designing & Consulting Institute CO. LTD*); *Zuo-Yong Nan* (*China Information Technology Designing & Consulting Institute CO. LTD*);

15:15 A Reverse Ray Tracing Algorithm for Site-specific Modeling of O2I Radio Wave Propagation
Zhong-Yu Liu (*Xidian University*); *Qi Yao* (*Xidian University*); *Li-Xin Guo* (*Xidian University*); *Zhi-Gang Zhong* (*China Information Technology Designing & Consulting Institute CO. LTD*); *Zuo-Yong Nan* (*China Information Technology Designing & Consulting Institute CO. LTD*);

15:30 **Coffee Break**

16:00 Design and Analysis of Outdoor Multipath Measurement System
Jiang Gao (*Xidian University*); *Zhong-Yu Liu* (*Xidian University*); *Li-Xin Guo* (*Xidian University*); *Shuo Hu* (*Xidian University*); *Zhi-Gang Zhong* (*China Information Technology Designing & Consulting Institute CO. LTD*); *Zuo-Yong Nan* (*China Information Technology Designing & Consulting Institute CO. LTD*);

16:15 The Influence of the Limit Number on the Ray Tracking Models
Zhicong Li (*Xidian University*); *Zhong-Yu Liu* (*Xidian University*); *Li-Xin Guo* (*Xidian University*); *Qi Yao* (*Xidian University*); *Zhi-Gang Zhong* (*China Information Technology Designing & Consulting Institute CO. LTD*); *Zuo-Yong Nan* (*China Information Technology Designing & Consulting Institute CO. LTD*);

16:30 Localization of Microcell Models by Integrating Measured and Simulated Data
Mengjie Sun (*Xidian University*); *Li-Xin Guo* (*Xidian University*); *Zhong-Yu Liu* (*Xidian University*); *Zhi-Gang Zhong* (*China Information Technology Designing & Consulting Institute CO. LTD*); *Zuo-Yong Nan* (*China Information Technology Designing & Consulting Institute CO. LTD*);

16:45 Influence of Antenna Disturbing System on Deterministic Propagation Simulation in Typical Scenarios
Xiaoye Wang (*Xidian University*); *Li-Xin Guo* (*Xidian University*); *Zhong-Yu Liu* (*Xidian University*); *Zhi-Gang Zhong* (*China Information Technology Designing & Consulting Institute CO. LTD*); *Zuo-Yong Nan* (*China Information Technology Designing & Consulting Institute CO. LTD*);

17:00 An Improved Ray Tracing Algorithm for High-efficiency Prediction of Ultra-large-scale Complex Electromagnetic Environments
Yi Gou (*Beijing University of Posts and Telecommunications*); *Dan Shi* (*Beijing University of Posts & Telecommunications*); *Cong Guo* (*Beijing University of Posts and Telecommunications*); *Dan Xiao* (*Beijing Xiaomi Mobile Software Co., Ltd.*); *Xingguo Jiang* (*Beijing Xiaomi Mobile Software Co., Ltd.*);

17:15 Buoy Loss Model for Satellite-to-sea Communication Cooperating 6D Motion
Chongyu Lv (*Nanjing University of Aeronautics and Astronautics*); *Sheng Fang* (*Nanjing University of Aeronautics and Astronautics*); *Boyu Hua* (*Nanjing University of Aeronautics and Astronautics*); *Taotao Zhang* (*China Luoyang Electronic Equipment Test Center*); *Manxi Wang* (*Complex Electromagnetic Environment Effects on Electronics and Information System (CEMEE)*); *Longjun Wang* (*Nanjing University of Aeronautics and Astronautics*); *Qiuming Zhu* (*Nanjing University of Aeronautics and Astronautics*);

17:30 Shadow Fading Model for UAV-to-Ground Channel under Built-up Scenarios
Yurao Ge (*Nanjing University of Aeronautics and Astronautics*); *Haoran Ni* (*Nanjing University of Aeronautics and Astronautics*); *Xiaomin Chen* (*Nanjing University of Aeronautics and Astronautics*); *Cesar Briso-Rodriguez* (*Universidad Politecnica de Madrid*); *Hanpeng Li* (*Nanjing University of Aeronautics and Astronautics*); *Farman Ali* (*Nanjing University of Aeronautics and Astronautics*); *Qiuming Zhu* (*Nanjing University of Aeronautics and Astronautics*);

17:45 Hyper Ray Tracer — Key Enabler for Smart Wireless Environments
Ke Guan (*Beijing Jiaotong University*);

Session 1P16
Nanophotonics and Topological Photonics 2

Monday PM, April 22, 2024

Room 16 - Mudan

Organized by Lin Chen, Cuicui Lu, Zhiwei Guo

Chaired by Cuicui Lu, Zhiwei Guo

13:00 Invited Loss Induced Non-Hermitian Topological Effect
Yong-Chun Liu (*Tsinghua University*);

13:20 Invited Evanescent-wave-induced Interesting Phenomena in Zero-index Metamaterials
Jie Luo (*Soochow University*);

13:40 Topological Flat Bands in 2D Optical Plasmonic Valley Photonic Crystals
Jie Chang (*Southeast University*); *Zhixia Xu* (*Dalian Maritime University*); *Hongxin Zhao* (*Southeast University*); *Shunli Li* (*Southeast University*); *Xiaoxing Yin* (*Southeast University*);

13:55 Controllable Photonic Weyl Nodal Line Semimetals Based on Hyper-crystals
Invited
Shengyu Hu (*Tongji University*); *Zhiwei Guo* (*Tongji University*); *Hong Chen* (*Tongji University*);

14:15 Transverse Scattering and Transverse Spin Splitting Based on Magnetoelectric Coupling
Invited
Wenjia Li (*Harbin Engineering University*); *Kaihao Zheng* (*Harbin Engineering University*); *Jin Hui Shi* (*Harbin Engineering University*); *Jianlong Liu* (*Harbin Engineering University*);

14:35 Chip-scale Mid-infrared Sensing Systems Based on Integrated Silicon Photonics
Invited
Yiming Ma (*Shanghai University*);

14:55 Dirac Fermion Metamaterials, Metasurfaces and Metagratings in Graphene
Invited
Junjie Du (*East China Normal University*); *Ruihuang Zhao* (*East China Normal University*);

15:15 Robust Photonic Zero Modes in Non-Hermitian Systems without a Global Symmetry
Invited
Li Ge (*City University of New York*);

15:35 **Coffee Break**

16:00 Nanoscale Optical Memory Based on Dual-beam Writing and Dual-beam Reading
Invited
Jing Wen (*University of Shanghai for Science and Technology*);

16:15 Realization of Chiral Zero Modes in Two-dimensional Systems
Invited
Hongwei Jia (*Hong Kong University of Science and Technology*); *Mudi Wang* (*The Hong Kong University of Science and Technology*); *Che Ting Chan* (*Hong Kong University of Science and Technology*);

16:35 Unconventional Bound States in the Continuum in Double Net Metamaterials
Invited
Matthias Saba (*University of Fribourg*); *Wenhui Wang* (*Ningbo University*);

16:55 Asymmetric Vectorial Metasurface with Pairs of Exceptional Points
Zijin Yang (*Tsinghua University*); *Qinghua Song* (*Tsinghua University*);

17:10 Observation of Topological Edge States Protected by Latent Symmetry
Invited
Wenlong Gao (*Eastern Institute for Advanced Study, Eastern Institute of Technology*);

17:30 Optical Field Modulation and Light Information Transmission Based on Dielectric Metasurfaces
Invited
Wenwei Liu (*Nankai University*);

17:50 Observation of Unidirectional Bulk Modes and Robust Edge Modes in Triangular Photonic Crystals
Zi-Xuan Gao (*Sun Yat-Sen University*); *Jing-Zun Liao* (*Sun Yat-Sen University*); *Fu-Long Shi* (*Sun Yat-Sen University*); *Ke Shen* (*Sun Yat-Sen University*); *Fei Ma* (*Sun Yat-Sen University*); *Min Chen* (*Shantou University*); *Xiao-Dong Chen* (*Sun Yat-Sen University*); *Jian-Wen Dong* (*Sun Yat-Sen University*);

18:05 THz and Multi THz Lasers Based on Heterostructure with HgCdTe/CdHgTe with Quasirelativistic Dispersion Laws
Sergey V. Morozov (*Institute for Physics of Microstructures of RAS*); *K. A. Mazhukina* (*Institute for Physics of Microstructures of RAS*); *A. A. Yantser* (*Institute for Physics of Microstructures of RAS*); *A. A. Razova* (*Institute for Physics of Microstructures of RAS*); *V. V. Utochkin* (*Institute for Physics of Microstructures RAS*); *M. A. Fadeev* (*Institute for Physics of Microstructures of RAS*); *V. V. Rumyantsev* (*Institute for Physics of Microstructures RAS*); *A. A. Dubinov* (*Institute for Physics of Microstructures RAS*); *D. V. Shengurov* (*Institute for Physics of Microstructures of RAS*); *N. N. Mikhailov* (*A.V. Rzhanov Institute of Semiconductor Physics SO RAS*);

Session 1P17a
Acoustic/Phononic Metamaterials, Metasurfaces, and Metadevices 2

Monday PM, April 22, 2024

Room 17 - Furong

Organized by Chen Shen, Lujun Huang

Chaired by Chen Shen, Lujun Huang

13:00 Spatiotemporal Vortex Generation via Exploiting Topological Darkness in Photonic Crystal Slabs
Wenzhe Liu (*The Hong Kong University of Science and Technology*); *Jiajun Wang* (*Fudan University*); *Yang Tang* (*Fudan University*); *Xinhao Wang* (*Fudan University*); *Xingqi Zhao* (*Fudan University*); *Lei Shi* (*Fudan University*); *Jian Zi* (*Fudan University*); *Che Ting Chan* (*The Hong Kong University of Science and Technology*);

13:15 Generation of Spatiotemporal Vortex Pulses by Resonant Diffractive Grating
Zhiyuan Che (*Fudan University*);

13:30 Ultra-broadband Transcranial Ultrasound by Acoustic Phase-only Hologram with a Tungsten Metalens
Erqian Dong (*The University of Hong Kong*); *Tianye Zhang* (*University of Michigan, Ann Arbor*); *Jinhu Zhang* (*Xiamen University*); *Xiaochun Su* (*Xiamen University*); *Sichao Qu* (*The University of Hong Kong*); *Xin Ye* (*Xiamen University*); *Zhanyuan Gao* (*Xiamen University*); *Chengtian Gao* (*The First Affiliated Hospital of Xiamen University*); *Jiangang Hui* (*Xiamen University*); *Zhanxiang Wang* (*The First Affiliated Hospital of Xiamen UniversityT*); *Nicholas X. Fang* (*The University of Hong Kong*); *Yu Zhang* (*Xiamen University*);

Session 1P17b
Recent Advances and Applications in Photonic/Acoustic Metasurfaces

Monday PM, April 22, 2024

Room 17 - Furong

Organized by Yangyang Fu, Yifan Zhu

Chaired by Yangyang Fu, Yifan Zhu

13:45 Invited — Acoustic Metasurfaces: Design for Reconfigurable Control and Advanced Functionality
Chen Shen (*Rowan University*);

14:05 Invited — Bound States in the Continuum: From Photonics to Acoustics
Lujun Huang (*East China Normal University*);

14:25 Invited — Brewster Metasurfaces for Ultra-broadband Reflectionless Manipulation of Electromagnetic Waves
Jie Luo (*Soochow University*); *Yun Lai* (*Nanjing University*);

14:45 Energy Harvesting with Circuit-based Hyper-scatterer in Zero-index Metasurfaces
Yuqian Wang (*Tongji University*); *Zhiwei Guo* (*Tongji University*); *Hong Chen* (*Tongji University*);

15:00 Spatiotemporal Acoustic Vortex Beams
Hao Ge (*Nanjing University*); *Shuai Liu* (*Nanjing University*); *Xiaoping Liu* (*ShanghaiTech University*); *Ming-Hui Lu* (*Nanjing University*); *Yan-Feng Chen* (*Nanjing University*);

15:15 Maximum Helical Dichroism Enabled by an Exceptional Point in Non-Hermitian Gradient Metasurfaces
Xiao Li (*Nanjing University of Aeronautics and Astronautics*); *Youwen Liu* (*Nanjing University of Aeronautics and Astronautics*); *Yangyang Fu* (*Nanjing University of Aeronautics and Astronautics*);

15:30 **Coffee Break**

16:00 Reconfigurable Acoustic Meta-device Empowered by Geometric-phase Meta-atoms
Bingyi Liu (*Hefei University of Technology*);

16:35 Invited — Broadband Ventilated Sound Insulation by Ultrasparse Acoustic Meta-surfaces
Yifan Zhu (*Southeast University*); *Siyuan Gao* (*Southeast University*); *Zihao Su* (*Southeast University*); *Haohan Zeng* (*Southeast University*); *Hui Zhang* (*Southeast University*);

16:55 Dynamically Tunable Multidimensional Image and Beam Splitter Based on Chiral Metasurfaces
Yangyang Zhou (*China Electronic Produce Reliability and Environmental Testing Research Institute*);

17:10 Controlling Single Subwavelength-slit Diffraction of Sound Wave via Phase Gradient Concept
Baoyin Sun (*Nanjing University of Aeronautics and Astronautics*); *Jiaqi Quan* (*Soochow University*); *Yutian Xie* (*University of Science and Technology of China*); *Yadong Xu* (*Soochow University*);

17:25 Acoustic Metamaterials Based on Reciprocity and Parity Transformation
Jinjie Shi (*Nanjing University*); *Hongchen Chu* (*Nanjing University*); *Chenkai Liu* (*Nanjing University*); *Johan Christensen* (*IMDEA Materials Institute*); *Xiaozhou Liu* (*Nanjing University*); *Yun Lai* (*Nanjing University*);

17:40 Lightweight Broadband Sound Absorption Metamaterials and Their Engineering Applications
Chongrui Liu (*Xi'an Jiaotong University*); *Jiu Hui Wu* (*Xi'an Jiaotong University*); *Fuyin Ma* (*Xi'an Jiaotong University*);

17:55 Manipulating Extremely Asymmetric Wave Propagation via a Symmetry-broken Diffraction Route in Momentum Space
Jiaqi Quan (*Soochow University*); *Yadong Xu* (*Soochow University*);

18:10 Reflective Encrypted Acoustic Holographic Metasurface
Haohan Zeng (*Southeast University*); *Zhenyu He* (*Southeast University*); *Yusen Wu* (*Southeast University*); *Siyuan Gao* (*Southeast University*); *Yifan Zhu* (*Southeast University*); *Hui Zhang* (*Southeast University*);

Session 1P18
Nascent Light-matter Interactions

Monday PM, April 22, 2024

Room 18 - Meilan

Organized by Mikhail Y. Shalaginov, Lian Shen

Chaired by Mikhail Y. Shalaginov, Lian Shen

13:00 Invited — Intelligent Meta-device for Imaging and Depth Perception
X. Liu (*City University of Hong Kong*); *M. K. Chen* (*City University of Hong Kong*); *Din Ping Tsai* (*The Hong Kong Polytechnic University*);

13:20 Keynote — Nanoplasmonic Strong Coupling for Ambiert Temperature Quantum Nanophotonics
Ortwin Hess (*Trinity College Dublin*);

13:50 Rapid Recognition of Solid and Liquid Microparticles through Lateral Mie Scattering
Pushihan Wang (*Beijing Institute of Technology*); *Haoyang Cheng* (*Beijing Institute of Technology*); *Shangran Xie* (*Beijing Institute of Technology*);

14:05 Invited — Photonic Crystal Cavities for GeV&SnV Diamond
Aleksey V. Akimov (*Russian Quantum Center*);

14:25 Invited — Raman Soliton Self-frequency Shift in Chalcogenide Glass Waveguide
Qingyang Du (*Zhejiang Lab*); *Fengbo Han* (*Zhejiang Lab*); *Zhao Li* (*Xiamen University*); *Zhengqian Luo* (*Xiamen University*);

14:45 Ultrafast Light-matter Interactions with Hot-carrier Plasmonics (Invited)
Wenshan Cai (*Georgia Institute of Technology*);

15:05 Individual Manipulation of the Ion Qubits Using Global Addressing with Counter-propagating Optical Frequency Combs
E. Anikin (*Russian Quantum Center*); *L. A. Akopyan* (*Russian Quantum Center*); *M. Popov* (*Russian Quantum Center*); *Y. Suleimen* (*Russian Quantum Center*); *O. Lakhmanskaya* (*Russian Quantum Center*); *Kirill Lakhmanskiy* (*Russian Quantum Center*);

15:30 **Coffee Break**

16:00 Enhanced Nanophotonic Dispersion Engineering via Artificial Intelligence (Invited)
Sensong An (*University of North Texas*); *Hung-I Lin* (*Massachusetts Institute of Technology*); *Fan Yang* (*Massachusetts Institute of Technology*); *Mikhail Y. Shalaginov* (*Massachusetts Institute of Technology*); *Akira Ueno* (*Massachusetts Institute of Technology*); *Clara Rivero-Baleine* (*Lockheed Martin Corporation*); *Tian Gu* (*Massachusetts Institute of Technology*); *Juejun Hu* (*Massachusetts Institute of Technology*);

16:20 Material-enabled Surface Polariton Control at the Subwavelength Limit (Invited)
Yingjie Wu (*Zhejiang University*);

16:40 Expanding the Frontiers of Flexible Integrated Photonics: Design, Fabrication and Sensing Applications (Invited)
Lan Li (*Westlake University*); *Yingchun Wu* (*Westlake University*); *Renjie Tang* (*Westlake University*); *Jialing Jian* (*Westlake University*); *Kangjian Bao* (*Westlake University*); *Zongxi Li* (*Westlake University*); *Chunlei Sun* (*Westlake University*); *Hongtao Lin* (*Zhejiang University*);

17:00 Switchable Multimode Strong Coupling via Singemolecule Redox in Plasmonic Nanocavities
Yanji Yang (*Trinity College Dublin*); *Rohit Chikkaraddy* (*University of Cambridge*); *Qianqi Lin* (*University of Cambridge*); *Daniel D. A. Clarke* (*Trinity College Dublin*); *Daniel Wigger* (*Trinity College Dublin*); *Jeremy J. Baumberg* (*University of Cambridge*); *Ortwin Hess* (*Imperial College London*);

17:15 Electrically Switchable Plasmonic Polymer Metasurfaces for Video-rate Beam Switching and Multi-focal Metaobjectives with CMOS Voltages (Invited)
Harald W. Giessen (*University of Stuttgart*); *Julian Karst* (*University of Stuttgart*); *Mario Hentschel* (*University of Stuttgart*); *Yohan Lee* (*University of Stuttgart*);

17:35 Wide-angle Meta-optics and Its Applications in 3-D Sensing (Invited)
Mikhail Y. Shalaginov (*Massachusetts Institute of Technology*);

17:55 Ultrafast Negative Diffusion in Gold Films
A. Block (*Catalan Institute of Nanoscience and Nanotechnology (ICN2)*); *Renwen Yu* (*Stanford University*); *Ieng-Wai Un* (*Ben-Gurion University of the Negev*); *S. Varghese* (*Catalan Institute of Nanoscience and Nanotechnology (ICN2)*); *M. Liebel* (*The Barcelona Institute of Science and Technology*); *N. F. van Hulst* (*The Barcelona Institute of Science and Technology*); *Shanhui Fan* (*Stanford University*); *K. J. Tielrooij* (*Catalan Institute of Nanoscience and Nanotechnology (ICN2)*); *Yonatan Sivan* (*Ben-Gurion University of the Negev*);

Session 1P19
Poster Session 2

Monday PM, April 22, 2024
14:00 PM - 18:00 PM
Room Exhibition Area

1 Simulation of a Sub-THz Quasi-optical Gyrotron within a Multi-mode Self-consistent Model with Fixed Axial Field Structure
Andrey P. Fokin (*Institute of Applied Physics of the RAS*); *Andrey A. Ananichev* (*Institute of Applied Physics of the RAS*); *Andrey S. Zuev* (*Federal Research Center "Institute of Applied Physics RAS"*); *Mikhail Yu. Glyavin* (*Institute of Applied Physics RAS*);

2 Method to Monitoring Indoor Maximum Electromagnetic Power Density Based on Gaussian Process Regression
Xiao Yu (*Northwestern Polytechnical University*); *Shilong Wang* (*Northwestern Polytechnical University*); *Zhan Wang* (*Zhejiang Energy Digital Technology Co., Ltd.*); *Zicheng Liu* (*Northwestern Polytechnical University*);

3 A Compact Broadband Filtering Circularly Polarized Antenna with Band-pass Structure in Sequential-phase Feed Network
Jia Wan (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Cong Chen* (*Southwest University of Science and Technology*); *Yuyu Zhu* (*Southwest University of Science and Technology*);

4 A DOA Estimation Method of Distributed Multi-shipborne High-frequency Surface Wave Radar under Ship Swing State
Wenzhuo Hao (*Harbin Institute of Technology at Weihai*); *Xiuhong Wang* (*Harbin Institute of Technology at Weihai*); *Guixian Zhang* (*Harbin Institute of Technology at Weihai*);

5 Dual-Polarized Reflectarray-based Metasurface Aperture for Computational Polarimetric Imaging at Microwave Frequencies
Aobo Li (*Queen's University Belfast*); *Mengran Zhao* (*Queen's University Belfast*); *Muhammad Ali Babar Abbasi* (*Queen's University Belfast*); *Okan Yurduseven* (*Queen's University Belfast*);

6 Impact of Polarization Direction on SBS Threshold in PM Fiber Amplifiers
Yu Wen (*Laser Fusion Research Center of CAEP*); *Qiuhui Chu* (*Laser Fusion Research Center of CAEP*); *Haoyu Zhang* (*Laser Fusion Research Center of CAEP*); *Jianjun Wang* (*Laser Fusion Research Center of CAEP*);

7 From Brain to Devices: Carbon Nano Tube Integrated Circuits Nano Chip for Electronic Devices and Computers
Diyar Bajalan (*TU Wien*);

8 A Design of High-power Microwave Antenna Array Based on the TEM-TE $_{10}$ Mode Transition Method
Zichong Chen (*Hunan Vanguard Group Co.Ltd*); *Xiaojun Mao* (*Hunan Vanguard Group Co.Ltd*); *Yun Jiang* (*Hunan Vanguard Group Co.Ltd*); *Rui Yin* (*Hunan Vanguard Group Co.Ltd*); *Shangyi Jiang* (*Hunan Vanguard Group Co.Ltd*); *Peng Bai* (*Hunan Vanguard Group Co.Ltd*); *Yang Liu* (*Hunan Vanguard Group Co.Ltd*);

9 Flatland Cherenkov Radiation on the Capacitive/Inductive Equivalent Impedance Surface
Shuo Bao (*Southeast University*); *Shunli Li* (*Southeast University*); *Xue Zhou* (*Dalian Maritime University*); *Zhixia Xu* (*Dalian Maritime University*);

10 Bridging and Unified Understanding of Huynen Decomposition and H/A/alpha Decomposition for PolSAR Data Based on SU Group Theory
Liting Liang (*National Space Science Center, Chinese Academy of Sciences*); *Yunhua Zhang* (*National Space Science Center, Chinese Academy of Sciences*); *Dong Li* (*National Space Science Center, Chinese Academy of Sciences*);

11 A High Isolation Dual-polarized Antenna with Low Profile Using Partially Reflective Surface
Xin Xiong (*Southwest University of Science and Technology*); *Zuxue Xia* (*Southwest University of Science and Technology*); *Wenhai Xia* (*Zhejiang Lierda Internet of Things Technology Co. Ltd.*); *Xin Cao* (*Southwest University of Science and Technology*); *Jiayuan Hu* (*Southwest University of Science and Technology*); *Rui Cheng* (*Southwest University of Science and Technology*);

12 Annular Flows in Ring Polariton Condensates
Evgeny S. Sedov (*Westlake University*); *V. A. Lukoshkin* (*St. Petersburg State University*); *V. K. Kalevich* (*St. Petersburg State University*); *P. G. Savvidis* (*Westlake University*); *Alexey V. Kavokin* (*Westlake University*);

13 Analysis of Permeability Characteristic of Planar Antenna with Spiral Resonator (SR) Shape
Yamato Tan (*University of Pakuan*); *Evyta Wismiana* (*University of Pakuan*); *Mochamad Yunus* (*University of Pakuan*); *Agus Dwi Prasetyo* (*Institut Teknologi Bandung*); *Junas Haidi* (*Institut Teknologi Bandung*); *Achmad Munir* (*Bandung Institute of Technology*);

14 Detection and Demodulation Design for Radar and Communication Integrated LFM-MSK Signal on FPGA
Jietao Li (*Sun Yat-sen University of Shenzhen Campus*); *Rui Guo* (*Sun Yat-sen University of Shenzhen Campus*); *Enming Lin* (*Sun Yat-sen University of Shenzhen Campus*); *Xingguo Li* (*Sun Yat-sen University of Shenzhen Campus*);

15 Optical Analysis of Skin Diffuse Reflectance Using the PSO Algorithm
José Mario Cantú Rodríguez (*Universidad Autónoma de Nuevo León*); *Norma Patricia Puente-Ramirez* (*Universidad Autonoma de Nuevo Leon*); *Luis Martín Torres-Trevino* (*Universidad Autónoma de Nuevo León*); *Mario Angel Rico-Mendez* (*Universidad Autonoma de Nuevo Leon*);

16 Data Mining Methods and Intelligent Analysis Application for Foundation Treatment in Power Grid Engineering
Weiya Guan (*Economic and Technological Research Institute State Grid Jiangsu Electric Power Co., Ltd*); *Hong Chen* (*Economic and Technological Research Institute State Grid Jiangsu Electric Power Co., Ltd*); *Jianfeng Zhang* (*Economic and Technological Research Institute State Grid Jiangsu Electric Power Co., Ltd*);

17 Preliminary Design of a Two-plate Corner Reflector Antenna for Drone with High Power Electric Field Source
Shih-Chung Tuan (*Asia Eastern University of Science and Technology*); *Shen Shou Max Chung* (*National Penghu University of Technology*);

18 Optothermal Needle-free Injection of Vaterite Nanocapsules
Denis Kislov (*Moscow Institute of Physics and Technology*); *D. Ofer* (*Tel Aviv University*); *Andrey Machnev* (*Tel Aviv University*); *Hani Barhom* (*Tel Aviv University*); *Vjaceslavs Bobrovs* (*Riga Technical University*); *A. Shalin* (*Moscow Institute of Physics and Technology*); *Pavel B. Ginzburg* (*ITMO University*);

19 Accurate and Efficient Depth Completion Based on Attention
Ruoyun Ding (*Tongji University*); *Yuxing Zhao* (*Tongji University*); *Lan Lin* (*Tongji University*);

20 Laboratory Setup for Thermal Processing of Organic Materials with the Microwave Radiation
Alexander Vikharev (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *T. O. Krapivnitckaia* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *S. A. Ananicheva* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Andrey N. Denisenko* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *A. B. Alyeva* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Mikhail Yu. Glyavin* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Nikolai Yu. Peskov* (*Institute of Applied Physics, RAS*);

21 Spatio-temporal Theory of a Frequency-tunable Gyrotron Based on a Three-mirror Cavity
Ekaterina Mikhailovna Novak (*Insitute of Applied Physics RAS*); *Andrei V. Savilov* (*Institute of Applied Physics, RAS*);

22 A Low Noise Hybrid Microwave Photonic Module for Passive Phased array
Nan Zhao (*Nanjing Marine Radar Institute*); *Yuan Huang* (*National Key Laboratory of Electromagnetic Effect and Security on Marine Equipment and Nanjing Marine Radar Institute*); *Yifan Zhou* (*Nanjing Marine Radar Institute*); *Mingming Sun* (*Nanjing Marine Radar Institute*); *Xinmin Zhang* (*Nanjing Marine Radar Institute*);

23 Bound States in the Continuum: Stability Against Structural Disorder
K. V. Semushev (*ITMO University*); *N. A. Vlasov* (*ITMO University*); *Alexander I. Solomonov* (*ITMO University*); *A. A. Bogdanov* (*ITMO University*); *Mikhail V. Rybin* (*ITMO University*); *Zarina F. Sadrieva* (*ITMO University*); *Ekaterina E. Maslova* (*ITMO University*);

24 Frequency Tunable 6-mirror Gyrotron for Direct Positronium Measurements
Vladislav Yur'evich Zaslavsky (*Institute of Applied Physics, RAS*); *Dmitry Sobolev* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)*); *Irina V. Zotova* (*Institute of Applied Physics RAS*); *Mikhail Yu. Glyavin* (*Institute of Applied Physics RAS*);

25 A Noninterrupted Phase Synchronization Scheme of Multistatic SAR Based on Short-term Shift-orthogonal Signal
Tao Zhou (*Nanjing University of Aeronautics and Astronautics*); *Guodong Jin* (*Nanjing University of Aeronautics and Astronautics*); *Dai-Yin Zhu* (*Nanjing University of Aeronautics and Astronautics*);

26 Development of Laser Communication Algorithm for Moving Objects
Deomits Andrejevs (*Riga Technical University*); *Elans Grabs* (*Riga Technical University*); *Dmitrijs Čulkovs* (*Riga Technical University*); *Viktors Jeralovičs* (*Riga Technical University*); *Loreta Juškaite* (*Riga Technical University*); *Tianhua Chen* (*Riga Technical University*); *Dmitrijs Rjazanovs* (*Riga Technical University*); *Aleksandrs Ipatovs* (*Riga Technical University*);

27 A Novel Wearable Multi-sensor System for BioSignal Collection and Analysis
Zhi Chong Wan (*Tongji University*); *Guo Chun Wan* (*Tongji University*); *Mei Song Tong* (*Tongji University*);

28 An Insulator Image Segmentation Method Based on Simple Non-iterative Clustering with Edge Information
Junyou Chen (*Shanghai Investigation, Design & Research Institute Co., Ltd, China Three Gorges Corporation*); *Shu Jia Yan* (*Shanghai University of Engineering Science*); *Yingjie Gao* (*Shanghai University of Engineering Science*); *Mei Song Tong* (*Tongji University*);

29 Analysis of Signal Response and Detection Performance of Azimuth Transient Electromagnetic Logging While Drilling
Xiaozhuang Wang (*China University of Petroleum (Beijing)*); *Jie Gao* (*China University of Petroleum (Beijing)*); *Wei Su* (*China University of Petroleum (Beijing)*); *Shizhen Ke* (*China University of Petroleum (Beijing)*); *Jun Zhu* (*China National Logging Corporation*);

30 A Novel Narrow-band Bandpass Frequency Selective Surface
Zhen Wang (*Tongji University*); *Xiao Yu Li* (*Tongji University*); *Yi Ruo Wang* (*Tongji University*); *Mei Song Tong* (*Tongji University*);

31 A Dynamic Frame Slot ALOHA Algorithm Based on Deep Learning for Collision Prevention of RFID Systems
Han Zhang (*Tongji University*); *Guo Chun Wan* (*Tongji University*); *Mei Song Tong* (*Tongji University*);

32 A Low-power Design of Common-mode Feedback Circuit for Fully-differential Operational Amplifiers
Shi Qian Wang (*Tongji University*); *Yunyun Hu* (*Tongji University*); *Mei Song Tong* (*Tongji University*);

33 Using T-shaped Metal Structure for Far-end Crosstalk Mitigation in PCIe5 High-speed Connectors
Haoxin Luo (*Southwest University of Science and Technology*); *Haoran Li* (*Southwest University of Science and Technology*); *Yuyu Zhu* (*Southwest University of Science and Technology*); *Lanqing Yang* (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Jun Fan* (*Southwest University of Science and Technology*);

34 Nonlocal Effects in Asymmetric Plasmonic Waveguides
Henglei Du (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Wenkang Wang* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Chaojin Zhang* (*Jiangsu Normal University*); *Chengpu Liu* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*);

35 A Novel E-electric Field Sensor Used for Large Dynamic Range of the Transient Electric Field Measurement
Li Zou (*Southwest Jiaotong University*); *Xiang-Qiang Li* (*Southwest Jiaotong University*); *Jianqiong Zhang* (*Southwest Jiaotong University*); *Qingfeng Wang* (*Southwest Jiaotong University*);

36 Research and Design of High-power and High Aperture Efficiency Open Waveguide Array Antenna
Yihong Wei (*Southwest Jiaotong University*); *Xiang-Qiang Li* (*Southwest Jiaotong University*); *Yiyu Su* (*Southwest Jiaotong University*); *Jianqiong Zhang* (*Southwest Jiaotong University*); *Qingfeng Wang* (*Southwest Jiaotong University*);

37 Microwave Scattering Properties from Oil Film Contaminated Sea Surface with Kirchhoff Approximation
Hualei Fan (*Xi'an University of Posts and Telecommunications*); *Chao Yang* (*Xi'an University of Posts and Telecommunications*); *Yusheng Jin* (*Xi'an University of Posts and Telecommunications*); *Weiqi Du* (*Xi'an University of Posts and Telecommunications*);

38 A Dual Polarization Frequency Selective Metasurface Based on Interlaced Spiral Inductors with Low Insertion Loss
Tongtong Shi (*National University of Defense Technology*); *Yixuan Xu* (*National University of Defense Technology*); *Yuchen Yan* (*National University of Defense Technology*); *Xueyi Hu* (*National University of Defense Technology*); *Weiwei Wu* (*National University of Defense Technology*);

39 Skylight Polarization Orientation Method for Occlusion Scene
Yucong Zhou (*China Jiliang University*); *Han Gao* (*China Jiliang University*);

40 A Broadband 60G LTCC Bow-tie Antenna
Xia Zhou (*Nokia Shanghai Bell Co., Ltd.*); *Xiuqi Lai* (*Shanghai Yangpu High School of PRC*);

41 Design a Patch Dipole Antenna Array for the Application of Short Baseline Interferometer
Jincheng Tang (*Southwest University of Science and Technology*); *Peng Gao* (*Southwest University of Science and Technology*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Qi Liu* (*Southwest University of Science and Technology*); *Chao Zhang* (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Jun Fan* (*Southwest University of Science and Technology*); *Peng Gao* (*Southwest University of Science and Technology*);

42 Towards the Microwave Implementation for Luminal Metamaterials
Wei Cao (*University of Electronic Science and Technology of China*); *Y. Liao* (*University of Electronic Science and Technology of China*); *Longji Duan* (*University of Electronic Science and Technology of China*); *Jiang Xiong* (*University of Electronic Science and Technology of China*);

43 Using Load Transient Waveform to Analyze Fault Propagation Mechanism in DC-DC Switching Power Supply
Junliang Wan (*Southwest University of Science and Technology*); *Pengfei Yu* (*Laboratory of Science and Technology on Reliability Physics and Application of Electronic Component*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Haoran Li* (*Southwest University of Science and Technology*); *Yuyu Zhu* (*Southwest University of Science and Technology*); *Jun Fan* (*Southwest University of Science and Technology*);

44 Experimental Study on the Sensing of Odor Molecular Compounds by Metal-organic Framework Materials
Yuzhi Qin (*South China Normal University*); *Qianyi Guo* (*South China Normal University*); *Lihua Li* (*South China Normal University*); *Jiewei Chen* (*The Hong Kong Polytechnic University*);

45 An Embedded Triband Shared-Aperture Antenna with Omnidirectional Radiation Pattern
Yuan Zhang (*University of Electronic Science and Technology of China*); *Dongjun Wang* (*AVIC Chengdu Aircraft Industrial (Group) CO., LTD.*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Yan-Wen Zhao* (*National Institute of Defense Technology Innovation, Academy of Military Sciences PLA China*); *Jun Hu* (*University of Electronic Science and Technology of China*);

46 The Influence of a Strong Electromagnetic Wave and Phonon Confinement on the Acouto-magneto-electric Effect in Low-dimensional Doped Semiconductor Superlattices
Nguyen Quyet Thang (*Vietnam National University*); *Nguyen Quang Bau* (*Hanoi National University*); *Nguyen Dinh Nam* (*Vietnam National University*); *Nguyen Van Nghia* (*Thuy Loi University*); *Nguyen Thu Huong* (*Vietnam National University*);

47 Interesting Optical Force Effects in Hyperbolic Metamaterial System
Junxiang Lu (*Institute of Theoretical Physics, Shanxi University*); *Lei Zhang* (*Shanxi University*); *Jun Chen* (*Shanxi University*);

48 Investigation of the Features of Radio Wave Propagation over the Sea Surface
Andrey Alexeevich Pimenov (*National Research University "Moscow Power Engineering Institute"*); *A. S. Filimonov* (*National Research University "Moscow Power Engineering Institute"*); *Anton Alekseevich Novikov* (*National Research University "Moscow Power Engineering Institute"*); *Kirill Sergeyevich Sychev* (*National Research University "Moscow Power Engineering Institute"*); *Alexandr Alexandrovich Gladchenko* (*National Research University "Moscow Power Engineering Institute"*); *Mikhail Sergeyevich Mikhailov* (*National Research University "Moscow Power Engineering Institute"*);

49 Comparison of Multi-resonant Patch Antenna Topologies
E. D. Malev (*National Research University "Moscow Power Engineering Institute"*); *Mikhail Sergeyevich Mikhailov* (*National Research University "Moscow Power Engineering Institute"*); *Alexey Mikhailovich Mikhailov* (*National Research University "Moscow Power Engineering Institute"*); *A. A. Komarov* (*National Research University "Moscow Power Engineering Institute"*);

50 A Design of Decoupling Scheme for Antenna Array Operating in X Band
Jing Ruan (*Harbin Engineering University*); *Tao Jiang* (*Harbin Engineering University*);

51 Simplified Transfer Matrix Method for Capturing Propagation through Isotropy
Jiuyang Fan (*Anhui University*); *Yuxian Zhang* (*Anhui University*); *Xiaoli Feng* (*Anhui University*); *Naixing Feng* (*Anhui University*); *Yilin Kang* (*Anhui University*); *Lixia Yang* (*Anhui University*); *Zhi-Xiang Huang* (*Anhui University*);

52 A Divergence-free Finite Element Method for Approximating the Two-dimensional Maxwell Eigenvalues from Upper
Jiayu Han (*Guizhou Normal University*); *Xiaolin Fan* (*Guizhou Normal University*); *Yu Zhang* (*Guizhou University of Finance and Economics*);

53 Analysis of Fields of a New Horizontally Polarized EMP Simulator
Xiang-Qin Zhu (*Northwest Institute of Nuclear Technology*); *Wei Wu* (*National Key Laboratory of Intense Pulsed Radiation Simulation and Effect*); *Zaigao Chen* (*Northwest Institute of Nuclear Technology*); *Hongfu Xia* (*National Key Laboratory of Intense Pulsed Radiation Simulation and Effect*);

54 Coupled Valley Spin and Pseudo-magnetic Field in Photonic Crystals
Shiyu Liu (*China University of Mining and Technology*); *Mingxuan Li* (*China University of Mining and Technology*); *Bin Yang* (*China University of Mining and Technology*); *Yuting Yang* (*China University of Mining and Technology*);

55 Experimental Study on Terahertz Radiation Flux Generation Due to Nonlinear Processes in Beam-plasma Interaction System
Andrey V. Arzhannikov (*Budker Institute of Nuclear Physics RAS*); *Stanislav L. Sinitsky* (*Budker Institute of Nuclear Physics Russian Academy of Sciences*); *D. A. Samtsov* (*Budker Institute of Nuclear Physics RAS*); *Petr V. Kalinin* (*Budker Institute of Nuclear Physics RAS*); *S. S. Popov* (*Budker Institute of Nuclear Physics SB RAS*); *M. G. Atlukhanov* (*Budker Institute of Nuclear Physics SB RAS*); *Evgeny S. Sandalov* (*Budker Institute of Nuclear Physics of Siberian Branch Russian Academy of Sciences (BINP SB RAS)*); *Vasily D. Stepanov* (*Budker Institute of Nuclear Physics RAS*); *K. N. Kuklin* (*Budker Institute of Nuclear Physics SB RAS*); *M. A. Makarov* (*Budker Institute of Nuclear Physics RAS*);

56 Influence of Accelerating Voltage Fluctuations on the Width of the Frequency Locking Area of a 2 Megawatt-level Gyrotron
Andrey Pavlovich Fokin (*Federal Research Center A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)*); *Alexander Nikolaevich Leontyev* (*Institute of Applied Physics of the Russian Academy of Sciences*); *Roman Markovich Rozental* (*Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)*);

57 Application of Beamforming Method with Maximum SNR in Phased Array Receiver
Kai Wang (*Xinjiang Astronomical Observatory, CAS*);

58 Millimeter-wave Ultra-narrowband Band-pass Filter Based on SIW and Archimedean Spiral Slots
Yiming Zhang (*Zhejiang University*); *Weiting Sun* (*Southern University of Science and Technology*);

59 Application of PINNs in PNJ Research
Qinyu Deng (*Xidian University*); *Huan Tang* (*Xidian University*); *Renxian Li* (*Xidian University*); *Wei Li* (*Xidian University*); *Mingyu Zhang* (*Xidian University*); *Zhuoyuan Shi* (*Xidian University*); *Yuan Zhang* (*Xidian University*);

60 Disaster Monitoring Analysis Using Multi-source Remote Sensing Data
Zihua Tong (*Nanjing Guochu Science and Technology Research Institute Co., Ltd.*); *Chenghui Zheng* (*Jiangsu Hydraulic Research Institute*); *Yuwei Liu* (*Jiangsu Hydraulic Research Institute*); *Yan Li* (*Flood and Drought Disaster Prevention and Dispatch Command Center of Jiangsu Province*); *Junjie Wang* (*Nanjing University of Posts and Telecommunications*); *Zhen Wu* (*Nanjing University of Posts and Telecommunications*); *Yan Jia* (*Nanjing University of Posts and Telecommunications*);

61 Research on X-band Microstrip Broadband Antenna Based on Metasurface
Haixuan Li (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Rui Zhang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Zhicheng Wang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*);

62 Using Complementary Split-ring Resonators for Supercompact Filters on the Substrate Integrated Waveguide
Hui Zhang (*High-Tech Institute of Xi'an*); *Yanling Li* (*High-Tech Institute of Xi'an*); *Jianwei Zhan* (*High-Tech Institute of Xi'an*); *Qian Miao* (*High-Tech Institute of Xi'an*); *Fei Cao* (*High-Tech Institute of Xi'an*);

63 Design of a Long Range Single Photon 3D Imaging System with an Off-axis Telescope
Libing Hou (*Xi'an Institute of Applied Optics*); *Wei Liu* (*Xi'an Institute of Applied Optics*); *Guocong Wang* (*Xi'an Institute of Applied Optics*); *Zhanming Li* (*Xi'an Institute of Applied Optics*); *Tan Wang* (*Xi'an Institute of Applied Optics*); *Wenbo Duan* (*Xi'an Institute of Applied Optics*); *Longyang Kong* (*Xi'an Institute of Applied Optics*); *Pingping Yun* (*Xi'an Institute of Applied Optics*); *Weiguo Zhang* (*Xi'an Institute of Applied Optics*);

64 The Research of InGaAs/InP Negative Feedback Avalanche Diode
Oingmin Chen (*Southwest Institute of Technical Physics*); *Heping Xie* (*Southwest Institute of Technical Physics*); *Wenzhi Qin* (*Southwest Institute of Technical Physics*); *Fei Yuan* (*Southwest Institute of Technical Physics*); *Hongjun Tian* (*Southwest Institute of Technical Physics*); *Yuan Liu* (*Southwest Institute of Technical Physics*); *Qian Dai* (*Southwest Institute of Technical Physics*); *Hai-Zhi Song* (*Southwest Institute of Technical Physics & UESTC*);

65 Observation of Localized Acoustic Skyrmions
Ping Hu (*Anhui University of Science and Technology*); *Hong-Wei Wu* (*Hong Kong University of Science and Technology*); *Wen-Jun Sun* (*Anhui University of Science and Technology*); *Nong Zhou* (*Anhui University of Science and Technology*); *Xue Chen* (*Anhui University of Science and Technology*); *Yong-Qiang Yang* (*Anhui University of Science and Technology*); *Zong-Qiang Sheng* (*Anhui University of Science and Technology*);

66 High Rep-rate, Burst Mode Fiber Front-end for Electron Storage Ring Laser Driven Synchronization
Chenyang Gao (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Gengji Zhou* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Yuxin Leng* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*);

67 Probing Contaminant Loss in a Billion-Q Fused Silica Microcavity
Bing Duan (*Beijing University of Posts and Telecommunications*); *Tingyang Pan* (*Beijing University of Posts and Telecommunications*); *Chang Li* (*Beijing University of Posts and Telecommunications*); *Daquan Yang* (*Beijing University of Posts and Telecommunications*);

68 Strong Electromagnetic Pulse Interference Loading Method on Electrical Equipment under Operation State
Feng Qin (*Northwest Institute of Nuclear Technology*); *Zhitong Cui* (*Northwest Institute of Nuclear Technology*); *Wei Chen* (*Northwest Institute of Nuclear Technology*); *Xin Nie* (*Northwest Institute of Nuclear Technology*); *Wei Wu* (*Northwest Institute of Nuclear Technology*); *Yixiong Wang* (*Northwest Institute of Nuclear Technology*);

Session 2A1a
Quantum Information Physics, Materials and Devices 1

Tuesday AM, April 23, 2024

Room 1 - Yarui

Organized by Yaping Wu, Deyi Fu

Chaired by Yaping Wu, Deyi Fu

8:10 Invited Hybridizing Nano-photonics and Spin-bearing Molecular Network for High-temperature Quantum Computing with Promising Scale-up Potential
Wei Wu (*University College London*);

8:30 Epitaxial Thin Films and Devices of Novel 2D Magnetic Materials
Yongkang Xu (*Nanjing University*); *Pengfei Yan* (*Nanjing University*); *Jing Wang* (*Nanjing University*); *Taikun Wang* (*Nanjing University*); *Yu Liu* (*Nanjing University*); *Liang He* (*Nanjing University*);

8:45 Theoretical and Experimental Research on Novel 2D Ferroelectric Materials
Xin Luo (*Sun Yat-sen University*);

9:00 Large-area Fabrication, Properties and Device Applications of Topological Semimetal Thin Films
Xuefeng Wang (*Nanjing University*);

9:15 Tunable Topological Properties of Sm-doped (Bi, Sb)$_2$Te$_2$S Crystal
Junjie Wu (*University of Science and Technology of China*); *Bin Xiang* (*University of Science and Technology of China*);

9:30 Spin-orbit Physics in Functional Oxides and Its Application in Spintronics
Weinan Lin (*Xiamen University*);

9:45 Enhanced Trion Valley Polarizaton in Janus MoSeS by Constructing a Type-II Hexagonal (2H)/Rhombohedral (3R) Stacking van der Waals Heterostructure
Mengyu Liu (*Xiamen University*); *Wei Wu* (*Xiamen University*); *Zilong Chen* (*Xiamen University*); *Xu Li* (*Xiamen University*); *Yaping Wu* (*Xiamen University*); *Zhiming Wu* (*Xiamen University*); *Junyong Kang* (*Xiamen University*);

10:00 **Coffee Break**

Session 2A1b
High-dimensional Quantum Information

Tuesday AM, April 23, 2024

Room 1 - Yarui

Organized by Biheng Liu, Xiao-Min Hu

Chaired by Xiao-Min Hu, Biheng Liu

10:30 Invited — High-dimensional Entanglement with New Entanglement Measures
Ming-Xing Luo (*Southwest Jiaotong University*);

10:50 Invited — Two-photon Interference and High-dimensional Photon-photon Gate
Zhi Cheng Ren (*Nanjing University*); *Xi-Lin Wang* (*Nanjing University*);

11:10 Invited — Improving Qubit Communication with High-dimensional Entanglement
Yu Guo (*University of Science and Technology of China*);

11:30 Invited — Certifying Unknown Genuine Multipartite Entanglement by Neural Networks
Zhenyu Chen (*Tsinghua University*); *Xiaodie Lin* (*Tsinghua University*); *Zhaohui Wei* (*Tsinghua University*);

11:50 Invited — Integrated Multidimensional Quantum Photonics
Jianwei Wang (*Peking University*);

12:10 Resolved Raman Sideband Cooling of a Single Optically Trapped Cesium Atom
Zhuangzhuang Tian (*Shanxi University*); *Haobo Chang* (*Shanxi University*); *Xin Lv* (*Shanxi University*); *Gang Li* (*Shanxi University*); *Tiancai Zhang* (*Shanxi University*);

Session 2A2
Metasurface Inspired Antennas and Microwave Components

Tuesday AM, April 23, 2024

Room 2 - Jincheng 3

Organized by Yizhu Shen, Chunhua Xue

Chaired by Yizhu Shen, Chunhua Xue

8:00 Invited — A D-band Multi-feed Metasurface-inspired Antenna for Chip Integration
Teng Li (*Southeast University*); *Shuyuan Chu* (*Southeast University*); *Akanksha Bhutani* (*Karlsruhe Institute of Technology*); *Thomas Zwick* (*Karlsruhe Institute of Technology*);

8:20 Invited — Study on the Angular Stability of Huygens' Metasurface
Xue-Song Yang (*University of Electronic Science and Technology of China*); *Zi-Hao Fu* (*University of Electronic Science and Technology of China*);

8:40 Invited — Compact Antennas Based on Spoof Surface Plasmon Polaritons
Dou Tian (*Chang'an University*); *Ruiyao Zhao* (*Chang'an University*);

9:00 Machine-learning Aided Design (MLAD) of Metasurfaces and Antennas
Xi Chong You (*ShanghaiTech University*); *Fenghan Lin* (*ShanghaiTech University*);

9:15 Millimeter-wave Folded Reflectarray and Its Integration with Active Chip
Yizhu Shen (*Southeast University*); *Jiawei Yang* (*Southeast University*); *Shizhe Xu* (*Southeast University*); *Sanming Hu* (*Southeast University*);

9:30 A Broadband and Wide-angle Frequency Selective Surface with Polarization Conversion Capability
Tong Zhang (*Southeast University*); *Juliang Lv* (*Southeast University*); *Teng Li* (*Southeast University*);

9:45 A Double-layer Huygens' Metalens Antenna with Linear-to-circular Polarization Function
Haibo Wang (*Guangxi University of Science and Technology*); *Chunhua Xue* (*Guangxi University of Science and Technology*);

10:00 **Coffee Break**

10:30 A Microstrip Energy Selective Antenna Based on PIN Diodes
Shuyun Lin (*Southwest University of Science and Technology*); *Yanqing Cheng* (*Southwest University of Science and Technology*); *Jinqi Dong* (*Southwest University of Science and Technology*); *Yao Zhou* (*Southwest University of Science and Technology*); *Qi Chen* (*Southwest University of Science and Technology*);

10:45 Metasurface-based Resonator with Rotational Magnatic Field for Wireless Power Transfer
Xinyu Huang (*Harbin Engineering University*); *Longyang Wang* (*Wuhan University of Technology*); *Xinrui Liu* (*Qingdao Innovation and Development Center of Harbin Engineering University*); *Mingzhao Song* (*Qingdao Innovation and Development Center of Harbin Engineering University*);

11:00 A Double-layer Reflective Bifacial Metasurface and Its Bi-functional Reflectarray Antenna Application
Qiang Gao (*Guangxi University of Science and Technology*); *Chunhua Xue* (*Guangxi University of Science and Technology*);

11:15 Waveguide Feeding in 3-D Heterogeneous Integration of Holographic Antenna
Wencheng Wan (*Southeast University*); *Yizhu Shen* (*Southeast University*); *Song Xue* (*Southeast University*); *Sanming Hu* (*Southeast University*);

11:30 An Ultra-low-profile Folded Transmitarray Antenna Based on Chain Huygens' Metasurface
Yanfeng He (*Guangxi University of Science and Technology*); *Chunhua Xue* (*Guangxi University of Science and Technology*);

11:45 A Novel Frequency Tuning and Calibration Scheme in an E-band PLL
Yuxuan Wang (*Southeast University*); *Guoqing Dong* (*Southeast University*); *Yizhu Shen* (*Southeast University*); *Sanming Hu* (*Southeast University*);

12:00 Bandwidth Enhancement of Huygens' Metalens Antenna Based on AI Collaboration
Haiyang Wang (*Guangxi University of Science and Technology*); *Chunhua Xue* (*Guangxi University of Science and Technology*);

Session 2A3a
Advanced Antenna Design Technologies for Pattern Diversity and Reconfigurability

Tuesday AM, April 23, 2024

Room 3 - Jincheng 2

Organized by Sen Yan, Yuandan Dong

Chaired by Sen Yan

8:00 A Compact High-gain Rotman Lens Multibeam Antenna with Low Crossover Level and Sidelobe
Yuanxi Cao (*Xi'an Jiaotong University*); *Sen Yan* (*Xi'an Jiaotong University*); *Jiahao Zhang* (*Naval University of Engineering*);

8:15 Beamwidth and Bandwidth Enhancement of a Dual-circularly Polarized Microstrip Patch Antenna
Rui Du (*Xidian University*); *Neng-Wu Liu* (*Xidian University*);

8:30 A Compact and Broadband Meta-surface Antenna with Multi-mode Resonances
Kai Zhang (*Xi'an University of Technology*);

8:45 A Butler Matrix Based Multi-beam Antenna Array Fed by GSG Probe in W-band
Dongxu Wang (*Xi'an Jiaotong University*); *Yuanxi Cao* (*Xi'an Jiaotong University*); *Cheng Guo* (*Xi'an Jiaotong University*); *Kai-Da Xu* (*Xi'an Jiaotong University*); *Sen Yan* (*Xi'an Jiaotong University*);

9:00 Slot-fed Pattern-diversity Dielectric Resonator Antenna with HEM_{113} Mode and TM_{011} Mode
Shuhao Hu (*Sun Yat-sen University*); *Nan Yang* (*Sun Yat-sen University*); *Kai Lu* (*Sun Yat-sen University*); *Peng Fei Hu* (*Sun Yat-Sen University*);

9:15 A Wideband Circularly Polarized Slot Antenna for UWB Application
Junlong Li (*Shanwei Institute of Technology*); *Caili Yu* (*Shanwei Institute of Technology*); *Guogang Huang* (*Shanwei Institute of Technology*); *Zixuan Liu* (*South China Normal University*); *Hui Liu* (*Guangdong Polytechnical Normal University*);

9:30 Reconfigurable Mixed-mode Small Antennas for Intelligent Wireless Communication
Yuandan Dong (*University of Electronic Science and Technology of China*); *Zhan Wang* (*University of Electric Science and Technology of China (UESTC)*);

10:00 **Coffee Break**

Session 2A3b
Compact Antennas and Their Arrays for Modern Wireless Communications

Tuesday AM, April 23, 2024

Room 3 - Jincheng 2

Organized by Ming-Chun Tang, Ke Chen

Chaired by Ke Chen

10:30 Design of a Dual-polarized High Isolation Multilayer Patch Antenna and Array
Guo-Hong Du (*University of Science and Technology of China*); *Yipeng Zhang* (*Chengdu University of Information Technology*); *Mingli Chen* (*Chengdu University of Information Technology*); *Xiangyong Mou* (*Chengdu University of Information Technology*); *Zhao Yang* (*Chengdu University of Information Technology*); *Xiaofeng Sun* (*Chengdu University of Information Technology*);

10:45 Design of a Dual-band Dual-polarized Antenna with Polygon AMC Reflector for 5G Base Station
Jiahao Huang (*Guangdong Polytechnical Normal University*); *Xiahua Dong* (*Guangdong Polytechnical Normal University*); *Yanwen Zhang* (*Guangdong Polytechnical Normal University*); *Junyu Zhou* (*Guangdong Polytechnical Normal University*); *Hui Liu* (*Guangdong Polytechnical Normal University*);

11:00 A Small Metal Insensitive UHF RFID Tag for Temperature Measurement Based on LTCC Technology
Zixuan Liu (*South China Normal University*); *Junyu Zhou* (*Guangdong Polytechnical Normal University*); *Jiapeng Wu* (*Guangdong Polytechnical Normal University*); *Yunfeng Diao* (*Guangdong Polytechnical Normal University*); *Binghang Dai* (*Guangdong Polytechnical Normal University*); *Weipeng Tan* (*Guangdong Polytechnical Normal University*); *Junlong Li* (*Shanwei Institute of Technology*); *Jun Li* (*Guangdong Polytechnical Normal University*); *Hui Liu* (*Guangdong Polytechnical Normal University*);

11:15 Enhancing the Isolation Performance of Dual Port Linearly Polarized Reconfigurable Antenna by Using Backload Parasitic Structure
Fan Ye (*Nanjing University of Information Science & Technology*); *Guowen Ding* (*Nanjing University of Information Science & Technology*); *Xinyao Luo* (*Nanjing University of Information Science & Technology*); *Xiaoyi Liao* (*Nanjing University of Information Science and Technology*); *Shen-Yun Wang* (*Nanjing University of Aeronautics & Astronautics*);

11:30 Wireless Signal Enhancement with Dual Reconfigurable Intelligent Surface
Kui Tang (*Nanjing University*); *Ke Chen* (*Nanjing University*); *Yijun Feng* (*Nanjing University*);

11:45 Electrically Small, Near-field Resonant Parasitic Monopole Antenna with Large Gain-bandwidth Product and Expanded Rejection Band
Ruolei Chai (*Chongqing University*); *Da Yi* (*Chongqing University*); *Huapeng Zhao* (*University of Electronic Science and Technology of China*); *Ming-Chun Tang* (*Chongqing University*);

Session 2A4
Wave Phenomena in Space/Time Varying Metamaterials/Metasurfaces 1

Tuesday AM, April 23, 2024

Room 4 - Jincheng 1

Organized by Fu Liu, Huanan Li, Xuchen Wang

Chaired by Fu Liu, Huanan Li

8:00 Optical Interferences in the Time Domain
Invited
Luqi Yuan (*Shanghai Jiao Tong University*);

8:20 Robust Temporal Adiabatic Passage with Perfect Frequency Conversion between Detuned Acoustic Cavities
Zhaoxian Chen (*Nanjing University*); *Yu-Gui Peng* (*Huazhong University of Science and Technology*); *Zeguo Chen* (*Nanjing University*); *Yuan Liu* (*Nanjing University*); *Peng Chen* (*Nanjing University*); *Xuefeng Zhu* (*Nanjing University*); *Yan-Qing Lu* (*Nanjing University*);

8:35 Reconfigurable Metasurface: Inverse Design and Application
Invited
Jiaran Qi (*Harbin Institute of Technology*);

8:55 Asymmetric Vortex Generation Based on Time-switched Magnetoplasma
Sihao Zhang (*Nankai University*); *Huan He* (*Nankai University*); *Zhaoxian Chen* (*Nanjing University*); *Jiwei Qi* (*Nankai University*); *Huanan Li* (*Nankai University*); *Jingjun Xu* (*Nankai University*);

9:10 Resonant Photonic Time Crystals
Invited
Xuchen Wang (*Karlsruhe Institute of Technology*); *P. Garg* (*Karlsruhe Institute of Technology*); *M. S. Mirmoosa* (*University of Eastern Finland*); *A. G. Lamprianidis* (*Karlsruhe Institute of Technology*); *Carsten Rockstuhl* (*Karlsruhe Institute of Technology*); *Viktar S. Asadchy* (*Aalto University*);

9:30 Quantum Time Reflection and Refraction for Matter Waves
Invited
Zhaoju Yang (*Zhejiang University*);

9:50 Passive Photonic Time Crystals
Shixiong Yin (*City University of New York*); *Andrea Alù* (*The City University of New York*);

10:05 **Coffee Break**

10:30 Magnet-free Non-reciprocity in Time-modulated Circuits
Invited
Xiaohu Wu (*Southern University of Science and Technology*); *Alejandro Álvarez Melcón* (*Technical University of Cartagena*); *Juan Sebastián Gómez-Díaz* (*University of California Davis*); *Xiaoguang Liu* (*Southern University of Science and Technology*);

10:50 A Matrix Riccati Equation for Fast Modeling of Wave Propagation and Absorption in Complex Inhomogeneous Media with Spatial Dispersion and Anisotropy
Egor D. Gospodchikov (*A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)*); *Alexander G. Shalashov* (*A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)*);

11:05 Reconfigurable Super-directive Absorbers Based on Finite-sized Strip Arrays
Yongming Li (*Xi'an Jiaotong University*); *Xikui Ma* (*Xi'an Jiaotong University*); *Jiawei Wang* (*Xi'an Jiaotong University*); *Xuchen Wang* (*Karlsruhe Institute of Technology*); *Sergei A. Tretiakov* (*Aalto University*);

11:20 Gyromagnetic Double-zero-index Metamaterials Enable Ultrarobust Generation of Optical Spatiotemporal Vortices
Invited
Ruo-Yang Zhang (*The Hong Kong University of Science and Technology*); *Xiaohan Cui* (*The Hong Kong University of Science and Technology*); *Che Ting Chan* (*The Hong Kong University of Science and Technology*);

11:40 Quantum Vacuum Amplification Effects in Time-varying Media
Invited
Iñigo Liberal (*Universidad Pública de Navarra, Campus Arrosadía*);

Session 2A5
The Merge of Artificial Intelligence and Nanophotonics for Optical Computing, Sensing and Imaging

Tuesday AM, April 23, 2024

Room 5 - Yingbin

Organized by Li Gao, Zongfu Yu

Chaired by Li Gao

8:00 General End-to-end Inverse Design Framework for Multi-parameter Dielectric Meta-optics
Invited
Yue Qiang Hu (*Hunan University*);

8:20 Algorithm-driven Design and Optimization of On-chip Metamaterials
Invited
Wei Ma (*Zhejiang University*);

8:40 Active Neuro-metasurfaces for Computing, Detection, and Imaging
Invited
Chao Qian (*Zhejiang University*);

9:00 Optical Computation through Electrically Tunable Multifunctional Metalenses
Invited
Trevon Badloe (*Pohang University of Science and Technology (POSTECH)*); *Yeseul Kim* (*Pohang University of Science and Technology (POSTECH)*); *Joohoon Kim* (*Pohang University of Science and Technology (POSTECH)*); *Junhwa Seong* (*Pohang University of Science and Technology (POSTECH)*); *Inki Kim* (*Sungkyunkwan University*); *Junsuk Rho* (*Pohang University of Science and Technology (POSTECH)*);

9:20 Deep Inverse Approaches for Artificial Electromagnetic Materials
Keynote
Willie John Padilla (*Duke University*); *Y. Deng* (*Duke University*); *S. Ren* (*Duke University*); *J. M. Malof* (*Duke University*);

10:00 **Coffee Break**

10:30 Multifunctional Nanoplasmonics Facilitated by Deep Neural Networks
Invited
Wenshan Cai (*Georgia Institute of Technology*);

10:50 Neural Network Enhanced Compact Meta-polarimetry
Invited
Chen Chen (*Nanjing University*); *Xingjian Xiao* (*Nanjing University*); *Tao Li* (*Nanjing University*);

11:10 Learning to See Natural Scenes through Dense and Non-static Fog
Invited
Haishan Liu (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Yaoming Bian* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Fei Wang* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Guohai Situ* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*);

11:30 Nanophotonic Devices Based on Intelligent Optimization Algorithms
Invited
Cuicui Lu (*Beijing Institute of Technology*);

Session 2A6
High Power Fiber Laser Technology and Applications

Tuesday AM, April 23, 2024

Room 6 - Huanhua

Organized by Rumao Tao

Chaired by Xiaolin Wang, Rumao Tao

8:00 Novel 10 kW High Power Bidirectional Output High-power Fiber Laser in Continuous Wave and Quasi Continuous Wave
Invited
Xiaolin Wang (*National University of Defense Technology*);

8:20 High-power Ytterbium-Raman Fiber Laser
Invited
Qirong Xiao (*Tsinghua University*); *Tiancheng Qi* (*Tsinghua University*); *Dan Li* (*Tsinghua University*); *Ping Yan* (*Tsinghua University*); *Mali Gong* (*Tsinghua University*);

8:40 Research Progress and Application of Fiber Combiner
Invited
Zilun Chen (*National University of Defense Technology*); *Zhixian Li* (*National University of Defense Technology*); *Meng Wang* (*National University of Defense Technology*); *Zefeng Wang* (*National University of Defense Technology*);

9:00 Long-distance Structured Illumination Super-resolution Imaging
Invited
Weilong Wei (*Key Laboratory of Optical Engineering, Chinese Academy of Sciences*); *Zongliang Xie* (*Key Laboratory of Optical Engineering, Chinese Academy of Sciences*); *Haotong Ma* (*University of Chinese Academy of Sciences*);

9:20 Wide Temperature Operation of High Power Fiber Laser
Invited
Hanwei Zhang (*National University of Defense Technology*); *Jinming Wu* (*National University of Defense Technology*); *Xiaolin Wang* (*National University of Defense Technology*); *Kai Han* (*National University of Defense Technology*); *Jinbao Chen* (*National University of Defense Technology*);

10:00 **Coffee Break**

10:30 Single-frequency Linearly-polarized Nanosecond Fiber Laser
Invited
Rongtao Su (*National University of Defense Technology (NUDT)*); *Siyu Chen* (*National University of Defense Technology*); *Wanru Zhang* (*National University of Defense Technology*);

10:50 Characterization of Narrowband Generation Regime of a Random Fiber Raman Laser
Oleg A. Gorbunov (*Novosibirsk State University*); *Ilya D. Vatnik* (*Novosibirsk State University*); *Sergey V. Smirnov* (*Novosibirsk State University*); *Dmitry V. Churkin* (*Novosibirsk State University*);

11:05 Multicore Fiber Lasers with fs-inscribed Grating Arrays: Recent Developments and Perspectives
A. G. Kuznetsov (*Institute of Automation and Electrometry SB RAS*); *Alexandr V. Dostovalov* (*Institute of Automation and Electrometry SB RAS*); *Alexey Yu. Kokhanovskiy* (*ITMO University*); *Sergey A. Babin* (*Institute of Automation and Electrometry SB RAS*);

11:20 Deep Learning Enabled High Accuracy Coherent Beam Combination with Ultra Low Residual Phase
Hongbing Zhou (*Tsinghua University*); *Rumao Tao* (*Laser Fusion Research Center, China Academy of Engineering Physics*); *Xi Feng* (*Laser Fusion Research Center, China Academy of Engineering Physics*);

Session 2A7
Integrated Nonlinear Photonics: From Materials to Devices and Applications

Tuesday AM, April 23, 2024

Room 7 - Xiling

Organized by Dingshan Gao, Yuping Chen

Chaired by Yuping Chen, Dingshan Gao

8:00 Chiral Metasurfaces in Anisotropic Thin Film Lithium Niobate and Its Nonlinear Effect
Xianpeng Lv (*Jinan University*); *Huihui Lu* (*Jinan University*);

8:15 Invited Nonlinear Optics in III-nitride Microresonators
Changzheng Sun (*Tsinghua University*); *Zhaoqin He* (*Tsinghua University*); *Bing Xiong* (*Tsinghua University*); *Zhibiao Hao* (*Tsinghua University*); *Lai Wang* (*Tsinghua University*); *Jian Wang* (*Tsinghua University*); *Yanjun Han* (*Tsinghua University*); *Hongtao Li* (*Tsinghua University*); *Lin Gan* (*Tsinghua University*); *Yi Luo* (*Tsinghua University*);

8:35 Invited Nonlinear Optical Signal Processing Based on Parity Time Symmetry
Jing Xu (*Huazhong University of Science and Technology*); *Hanghang Li* (*Huazhong University of Science and Technology*); *Zhuang Fan* (*Huazhong University of Science and Technology*); *Nuo Chen* (*Huazhong University of Science and Technology*); *Xiaolong Fan* (*Huazhong University of Science and Technology*); *Wenchan Dong* (*Huazhong University of Science and Technology*); *Jianji Dong* (*Huazhong University of Science and Technology*); *Xinliang Zhang* (*Huazhong University of Science and Technology*);

8:55 High-efficiency Second Harmonic Generation in Periodically Poled Thin Film Lithium Niobate Waveguide
Yuzhao Dong (*Huazhong University of Science and Technology*); *Jian Cheng* (*Huazhong University of Science and Technology*); *Dingshan Gao* (*Huazhong University of Science and Technology*);

9:25 Soliton Microcomb Formation in a Normal Dispersion Lithium Niobate Microdisk by Mode Trimming
Chuntao Li (*East China Normal University*); *Renhong Gao* (*East China Normal University*); *Botao Fu* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Jintian Lin* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Ya Cheng* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*);

10:00 **Coffee Break**

10:30 Invited Cascaded Third Harmonic Generation in Periodically Poled Thin-film Lithium Niobite Waveguides
Xiao Wu (*Nankai University*); *Li Zhang* (*Nankai University*); *Zhenzhong Hao* (*Nankai University*); *Fang Bo* (*Nankai University*); *Guoquan Zhang* (*Nankai University*); *Jingjun Xu* (*Nankai University*);

10:50 Invited Soliton Microcombs with Long-term Stability in Lithium Niobate on Insulator
Zexing Zhao (*Nanjing University*); *Chenyu Wang* (*Nanjing University*); *Kunpeng Jia* (*Nanjing University*); *Xiaohui Tian* (*Nanjing University*); *Zhen-Da Xie* (*Nanjing University*); *Shi-Ning Zhu* (*Nanjing University*);

11:10 Invited Integrated Lithium Niobate Nonlinear Photonics
Juanjuan Lu (*Shanghai Tech University*);

11:30 Chip-scale Spontaneous Quasi-phase Matched Nonlinear Devices on Thin-film Lithium Niobate
Tingge Yuan (*Shanghai Jiao Tong University*); *Jiangwei Wu* (*Shanghai Jiao Tong University*); *Yuping Chen* (*Shanghai Jiao Tong University*); *Xianfeng Chen* (*Shanghai Jiao Tong University*);

Session 2A8a
Thermal Radiation: Principles, Progress, and Potentials 1

Tuesday AM, April 23, 2024

Room 8 - Guixiang

Organized by Bai Song, Kezhang Shi

Chaired by Bai Song, Kezhang Shi

8:00 Invited Multidimensional Regulation of Thermal Radiation and Its Applications on Radiative Cooling
Fei Xie (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*); *Qiuyu Wang* (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*); *Jiawei Wang* (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*); *Yue Zhang* (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*); *Yi Liu* (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*); *Hao Pan* (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*); *Naiqin Yi* (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*); *Longnan Li* (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*); *Wei Li* (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences*);

8:20 Invited Designing Thermal Metamaterials for Multi-band Nonreciprocal Thermal Radiation
Run Hu (*Huazhong University of Science and Technology*);

8:40 Achieving Broadband Directional Thermal Radiation
Invited
Cunhai Wang (*University of Science and Technology Beijing*);

9:00 Evolution of High-temperature Spectrally Selective Solar Absorber Coatings
Invited
Yang Li (*Zhejiang University*);

9:20 Efficient Energy Harvesting from the Hot Sun and Cold Universe
Invited
Bin Zhao (*University of Science and Technology of China*); *Chongwen Zou* (*University of Science and Technology of China*); *Gang Pei* (*University of Science and Technology of China*);

9:40 Investigation of Spectral Modulation to Improve Photovoltaic Performance
Invited
Yue Yang (*Harbin Institute of Technology*);

10:00 **Coffee Break**

Session 2A8b
Thermal Photonics: Fundamental Physics and Application 3

Tuesday AM, April 23, 2024

Room 8 - Guixiang

Organized by Wei Li, Longnan Li

Chaired by Wei Li, Longnan Li

10:30 Fluorescence-mediated Smart Radiative Cooling for Green Buildings and Skin Electronics
X. Ma (*City University of Hongkong*); *Dangyuan Lei* (*City University of Hongkong*);

10:45 Metamaterials Solutions for Sustainabilities
Keynote
Xiaobo Yin (*The University of Hong Kong*);

11:15 Zero-power Smart Thermal Management by Temperature-adaptive Radiative Coatings
Kaichen Dong (*Tsinghua Shenzhen International Graduate School, Tsinghua University*); *Jiachen Li* (*University of California, Berkeley*); *Kechao Tang* (*Peking University*); *Tiancheng Zhang* (*University of California*);

Session 2A9a
Hybrid Optoelectronics

Tuesday AM, April 23, 2024

Room 9 - Xinyu

Organized by Meicheng Li, Yuyi Feng

Chaired by Yuyi Feng

8:00 Ionic Transport and Stability Study for Halide Semiconductor Optoelectronic Devices
Invited
Qing Zhao (*Peking University*);

8:20 High-efficiency All Fluorescence White OLEDs with High Color Rendering Index
Invited
Yuan Liu (*Beijing Information Science & Technology University*);

8:40 Understanding the Li^+ Ions Migration Behaviors within the Perovskite Solar Cells during Preparation and under Operation
Invited
Changzeng Ding (*Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences*); *Chang-Qi Ma* (*Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences*);

9:00 Surface Properties and Photovoltaic Applications of Perovskite Quantum Dots
Invited
Donglin Jia (*North China Electric Power University*); *Meicheng Li* (*North China Electric Power University*);

9:20 Exciton Dynamics in Lattice Epitaxial $CsPbBr_3$/CdS Heterostructure
Invited
Hengwei Qiu (*North China Electric Power University*); *Meicheng Li* (*North China Electric Power University*);

9:40 Artificial Photonic Hetero-synapses Based on ZnO/IGZO Heterojunction for Neuromorphic Computing
Invited
Wenxiao Wang (*University of Jinan*); *Yang Li* (*Shandong University*); *Jiewei Chen* (*The Hong Kong Polytechnic University*);

10:00 **Coffee Break**

10:30 Enhancing Optical Activity via Chiral Perovskite Metamaterials
Invited
Yuyi Feng (*North China Electric Power University*); *Xin Bi* (*North China Electric Power University*); *Yifan Zeng* (*North China Electric Power University*); *Jianyu Li* (*North China Electric Power University*); *Xinyu Gu* (*North China Electric Power University*); *Tongtong Jiang* (*North China Electric Power University*); *Meicheng Li* (*North China Electric Power University*);

10:45 Strategies towards High Light Yield Low-dimensional Metal Halide Scintillators
Invited
Jiawen Xiao (*Beijing University of Technology*); *Quan Zhou* (*Beijing University of Technology*); *Chao Wang* (*Beijing University of Technology*);

11:00 PEDOT:PSS-based Electrochromic Reflective Displays Based on Direct Photolithography
Invited
Guojian Yang (*Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences*); *Chaoyu Xiang* (*Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences*); *Ting Zhang* (*Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences*);

Session 2A9b
Advanced Light Source Using Integrated Photonics Technologies

Tuesday AM, April 23, 2024

Room 9 - Xinyu

Organized by Lin Chang, Xiyuan Lu

Chaired by Yuyi Feng

11:15 A Highly Sensitive Fiber-optic Microphone Radar Driven by Soliton Microcomb and FPGA
Shangce Wang (*University of Electronic Science and Technology of China*); *Zeping Wang* (*University of Electronic Science and Technology of China*); *Jing Tan* (*University of Electronic Science and Technology of China*); *Xinyue He* (*University of Electronic Science and Technology of China*); *Bing Chang* (*University of Electronic Science and Technology of China*); *Teng Tan* (*University of Electronic Science and Technology of China*); *Baicheng Yao* (*University of Electronic Science and Technology of China*);

11:30 Spatio-temporal Structure of Vortex Soliton
Yanwu Liu (*Peking University*); *Chenghao Lao* (*Peking University*); *Min Wang* (*Institute of Physics, Chinese Academy of Sciences*); *Yinke Cheng* (*Peking University*); *Yuanlei Wang* (*Peking University*); *Shiyao Fu* (*Beijing Institute of Technology*); *Chunqing Gao* (*Beijing Institute of Technology*); *Jianwei Wang* (*Peking University*); *Bei-Bei Li* (*Institute of Physics, Chinese Academy of Sciences*); *Qihuang Gong* (*Peking University*); *Yun-Feng Xiao* (*Peking University*); *Wenjing Liu* (*Peking University*); *Qi-Fan Yang* (*Peking University*);

11:45 Towards Micro-Hz Fundamental Linewidth Fiber Brillouin Laser
Shihan Liu (*University of Electronic Science and Technology of China*); *Yanping Yang* (*University of Electronic Science and Technology of China*); *Wenjing Zhang* (*University of Electronic Science and Technology of China*); *Zhengyuxiao Yang* (*University of Electronic Science and Technology of China*); *Jiahao Hu* (*University of Electronic Science and Technology of China*); *Tong Lin* (*University of Electronic Science and Technology of China*); *Haocheng Ke* (*University of Electronic Science and Technology of China*); *Yanlan Xiao* (*University of Electronic Science and Technology of China*); *Yong Geng* (*University of Electronic Science and Technology of China*); *Heng Zhou* (*University of Electronic Science and Technology of China*);

Session 2A10a
Oral Presentations for Best Student Paper Awards — SC3: Optics and Photonics

Tuesday AM, April 23, 2024

Room 10 - Shuliu

Chaired by Xian-Min Jin, Pier Paolo Pompa, Sailing He

8:00 Epsilon-near-zero Enhancement of Linear and Nonlinear Thermo-optic Effects
Jiaye Wu (*Swiss Federal Institute of Technology Lausanne (EPFL)*); *Marco Clementi* (*École Polytechnique Fédérale de Lausanne (EPFL)*); *Chenxingyu Huang* (*Peking University*); *Feng Ye* (*Peking University Shenzhen Graduate School*); *Hongyan Fu* (*Tsinghua University*); *Lei Lu* (*Peking University*); *Shengdong Zhang* (*Peking University*); *Qian Li* (*Peking University Shenzhen Graduate School*); *Camille-Sophie Bres* (*Ecole Polytechnique Federale Lausanne*);

8:15 Cooling of Thermal Motion of Levitated Optically Coupled Nanoparticles
Tereza Zemánková (*Institute of Scientific Instruments of the Czech Academy of Sciences*); *Vojtěch Liška* (*Institute of Scientific Instruments of the Czech Academy of Sciences*); *Alexandr Jonáš* (*Institute of Scientific Instruments of the Czech Academy of Sciences*); *Vojtěch Svak* (*Institute of Scientific Instruments of the Czech Academy of Sciences*); *P. Jakl* (*Institute of Scientific Instruments of the Czech Academy of Sciences*); *Stephen H. Simpson* (*Institute of Scientific Instruments of the Czech Academy of Sciences*); *Pavel Zemánek* (*Institute of Scientific Instruments of the Czech Academy of Sciences*); *Oto Brzobohaty* (*Institute of Scientific Instruments of the Czech Academy of Sciences*);

8:30 Topological Integrated Antenna for 6G Terahertz Wireless Communication
Ridong Jia (*Nanyang Technological University*); *Sonu Kumar* (*Nanyang Technological University*); *Thomas Cai Wei Tan* (*Nanyang Technological University*); *Abhishek Kumar* (*Nanyang Technological University*); *Yi Ji Tan* (*Nanyang Technological University*); *Manoj Gupta* (*Nanyang Technological University*); *Pascal Szriftgiser* (*Universite Lille 1*); *Alphones Arokiaswami* (*Nanyang Technological University*); *Guillaume Ducournau* (*Institute of Electronics, Microelectronics and Nanotechnology (IEMN), CNRS/University of Lille*); *Ranjan Singh* (*Nanyang Technological University*);

8:45 Three-dimensional Spatial Multiplexed Holography for Accurate Reception Range and Position Control in Visible Light Communication
Chaoxu Chen (*Fudan University*); *Yuan Wei* (*Fudan University*); *Haoyu Zhang* (*Fudan University*); *Ziwei Li* (*Fudan University*); *Chao Shen* (*Fudan University*); *Junwen Zhang* (*Fudan University*); *Nan Chi* (*Fudan University*); *Jianyang Shi* (*Fudan University*);

9:00 Inverse-design of an Ultra-compact and Broadband Mode Size Converter
Yunjie Wang (*University of Sydney*); *Yeming Chen* (*University of Sydney*); *Kai Pan* (*University of Sydney*); *Shijie Song* (*University of Sydney*); *Liwei Li* (*University of Sydney*); *Xiaoke Yi* (*University of Sydney*);

9:15 Subwavelength Grating Microring Resonator Sensor Based on Microwave Photonic Interrogation Technique
Yiming Yan (*University of Sydney*); *Xiaoyi Tian* (*University of Sydney*); *Jianfu Wang* (*University of Sydney*); *Chujun Wu* (*University of Sydney*); *Liwei Li* (*University of Sydney*); *Debin Meng* (*University of Sydney*); *Xiaoke Yi* (*University of Sydney*);

Session 2A10b
Oral Presentations for Best Student Paper Awards — SC2: Metamaterials, Plasmonics and Complex Media

Tuesday AM, April 23, 2024

Room 10 - Shuliu

Chaired by Guixin Li, Yihao Yang, Yadong Xu

10:00 **Coffee Break**

10:30 Superluminal Pulse Propagation in Temporal Photonic Moiré Superlattice
Linyang Zou (*Nanyang Technological University*); *Hao Hu* (*Nanyang Technological University*); *Haotian Wu* (*Nanyang Technological University*); *Yang Long* (*Nanyang Technological University*); *Qi Jie Wang* (*Nanyang Technological University*); *Yidong Chong* (*Nanyang Technological University*); *Baile Zhang* (*Nanyang Technological University*); *Yu Luo* (*Nanyang Technological University*);

10:45 Pushing the Limits of Metasurface Cloak Using Global Inverse Design
Nanxuan Wu (*Zhejiang University*); *Chao Qian* (*Zhejiang University*); *Hongsheng Chen* (*Zhejiang University*);

11:00 Self-adaptive Reconfigurable Multifunctional Metasurface
Chengjing Gao (*Zhejiang University*); *Tingjun Lai* (*Zhejiang University*); *Zhengjie Huang* (*Zhejiang University*); *Dexin Ye* (*Zhejiang University*);

11:15 Flexible Multilayer Film with Selective Infrared Emission for Passive Daytime Radiative Cooling
Maoren Wang (*University of Electronic Science and Technology of China*); *Sulin Ma* (*University of Electronic Science and Technology of China*); *Qindong Xie* (*University of Electronic Science and Technology of China*); *Pei-Heng Zhou* (*University of Electronic Science and Technology of China*);

11:30 On-chip Emitter-coupled Meta-optics for Versatile Quantum Light Sources
Sören Im Sande (*University of Southern Denmark*); *Yinhui Kan* (*University of Southern Denmark*); *Danylo Komisar* (*University of Southern Denmark*); *Cuo Wu* (*University of Southern Denmark*); *Shailesh Kumar* (*University of Southern Denmark*); *Sergey I. Bozhevolnyi* (*University of Southern Denmark*); *Fei Ding* (*University of Southern Denmark*);

11:45 Dual-band Polarization- and Incident-angle Independent Air-like Metamaterials
Yaqing Huang (*Zhejiang University*); *Zhengjie Huang* (*Zhejiang University*); *Dexin Ye* (*Zhejiang University*);

Session 2A11a
Fiber Sensing Technology and Fiber-based Devices

Tuesday AM, April 23, 2024

Room 11 - Xiangyu

Organized by Xuewen Shu, Shengnan Wu

Chaired by Shengnan Wu, Xuewen Shu

8:00 Invited Experimental Study of Replica Symmetry Breaking in Raman Random Fiber Laser
Zinan Wang (*University of Electronic Science & Technology of China*);

8:20 Light Coupling to Fibers from Second-order Fiber Bragg Gratings
Nai-Hsiang Sun (*I-Shou University*); *Yu-Tao Chou* (*I-Shou University*); *Ya-Zhou Li* (*I-Shou University*); *Shuo-Erh Liang* (*I-Shou University*); *Jung-Sheng Chiang* (*I-Shou University*);

8:35 Analysis and Experimental of Anti-resonant Hollow-core Fiber Sensor
Jung-Sheng Chiang (*I-Shou University*); *Kai-Wei Liu* (*I-Shou University*); *Zi-You Zhou* (*I-Shou University*); *Chih-Hao Wang* (*I-Shou University*); *Nai-Hsiang Sun* (*I-Shou University*);

8:50 Highly Dense FBG Temperature Sensor at Multi-core Fiber Calibrated with Artificial Neural Network
Alexey Kokhanovskiy (*ITMO University*); *Alexandr V. Dostovalov* (*Institute of Automation and Electrometry SB RAS*); *Denis Sakhno* (*ITMO University*); *Evgeniy Golikov* (*Institute of Automation and Electrometry of the SB RAS*); *Zhibzema Munkueva* (*Institute of Automation and Electrometry of the SB RAS*); *Sergey A. Babin* (*Institute of Automation and Electrometry SB RAS*);

9:05 Fiber Optic Shape Sensing Robustness Against Cores Failure
Francesco Falcetelli (*University of Bologna*); *Leonardo Rossi* (*IMM, National Research Council*); *Filippo Bastianini* (*SOCOTEC Photonics*); *Gabriele Bolognini* (*IMM, National Research Council*); *Raffaella Di Sante* (*University of Bologna*);

9:20 Highly Efficient Design Scheme for Specialty Optical Fibers
S. Rao (*Ben-Gurion University of the Negev*); *Yonatan Sivan* (*Ben-Gurion University of the Negev*);

9:35 An Eccentric Core PCF Embedded with Gold Nanowires Based SPR Sensor for Humidity-temperature Dual-parameter Sensing
Jiayuan Liu (*Lanzhou University of Technology*); *Yongtao Xia* (*Lanzhou University of Technology*); *Shanglin Hou* (*Lanzhou University of Technology*); *Gang Wu* (*Lanzhou University of Technology*); *Zuyong Yan* (*Lanzhou University of Technology*);

9:50 Optical Curvature Sensor with Large Measurement Range Based on a Tapered Seven-core Fiber Michelson Interferometer
Siyu Zhang (*Guangdong University of Technology*); *Fan Zhang* (*Guangdong University of Technology*); *Chuangwei Wu* (*Guangdong University of Technology*); *Ou Xu* (*Guangdong University of Technology*); *Jiangli Dong* (*Guangdong University of Technology*);

10:05 **Coffee Break**

Session 2A11b
Discharge Plasma in Contact with a Liquid 1

Tuesday AM, April 23, 2024

Room 11 - Xiangyu

Organized by Qiang Chen, Wenjun Ning

Chaired by Qiang Chen, Wenjun Ning

10:30 Characterization of a Novel Atmospheric Pressure Plasma Jet for Biomedical Applications
Saikang Shen (*Sichuan University*); *Cristina Canal* (*Universitat Politècnica de Catalunya (UPC)*); *Wenjun Ning* (*Sichuan University*);

10:45 Plasma-enabled Synthesis of Metal Catalysts in Solution
Yu Tian (*Dalian University*); *Xiaonan Du* (*Dalian University*); *Hong Li* (*Dalian University*); *Yue Hua* (*Dalian University*); *Lanbo Di* (*Dalian University*);

11:15 Rapid Synthesis of Noble Metal Colloids by Plasma-liquid Interactions
Qing Yang (*Dalian University*); *Yuanwen Pang* (*Dalian University*); *Lanbo Di* (*Dalian University*); *Hong Li* (*Dalian University*);

11:30 Erosion of Metal Electrodes in Liquid-phase Discharge Plasma with Phenol Solution Medium
Xiao Han (*Nanjing Tech University*); *Haixia Wu* (*Nanjing Tech University*); *Wei Ye* (*Nanjing Tech University*); *Ruoyu Liu* (*Nanjing Municipal Design and Research Institute Co., Ltd*);

11:45 Preparation of MnO_2 Nanoparticles by Anode Glow Discharge Electrolysis and Its Electrochemical Properties
Manye Liu (*Northwest Normal University*); *Bo Wang* (*Northwest Normal University*); *Jie Yu* (*Northwest Normal University*); *Quanfang Lu* (*Northwest Normal University*);

12:00 Synthesis of Cu_2O-ZnO Nanocomposites via Cathode Glow Discharge Electrolysis: Mechanism, Photoelectrochemical and Photocatalytic Performance
Yuheng Qian (*Northwest Normal University*); *Bo Wang* (*Northwest Normal University*); *Jie Yu* (*Northwest Normal University*); *Quanfang Lu* (*Northwest Normal University*);

Session 2A12
AI/Machine Learning Based Modeling and Design Optimization Techniques in Microwaves

Tuesday AM, April 23, 2024

Room 12 - Siji 1

Organized by Feng Feng, Weicong Na

Chaired by Feng Feng, Ningning Yan

8:00 Principal Feature Extraction Based Low-complexity Convolutional Neural Network for Concurrent Multiband Digital Predistortion of RF Power Amplifiers
Boyan Li (*Beijing University of Posts and Telecommunications*); *Xin Hu* (*Beijing University of Posts and Telecommunications*); *Quanhao Yao* (*Beijing University of Posts and Telecommunications*); *Zongyu Chang* (*Beijing University of Posts and Telecommunications*); *Yu Rong Yao* (*Beijing University of Posts and Telecommunications*); *Weidong Wang* (*Beijing University of Posts and Telecommunications*);

8:15 UWB Antenna Modeling Based on Ensemble Learning Methods
Yubo Tian (*Guangzhou Maritime University*); *Zhiwei Zhu* (*Jiangsu University of Science and Technology*); *Fei Meng* (*Guangzhou Maritime University*);

8:30 Augmented Neural Networks Behavioral Model of Wideband RF Power Amplifiers for 5G New Radio
Quanhao Yao (*Beijing University of Posts and Telecommunications*); *Xin Hu* (*Beijing University of Posts and Telecommunications*); *Boyan Li* (*Beijing University of Posts and Telecommunications*); *Zongyu Chang* (*Beijing University of Posts and Telecommunications*); *Bo Peng* (*Beijing Institute of Radio Metrology and Measurement*); *Weidong Wang* (*Beijing University of Posts and Telecommunications*);

8:45 Modified Newton Optimization Algorithm for Fast-convergent Parameter Update in Microwave Filter Tuning
Xinyu Zhou (*Shenzhen TenFong Technology Co., Ltd*); *Hongwei Zhou* (*Shenzhen TenFong Technology Co., Ltd*); *Qingfeng Zhang* (*Southern University of Science and Technology*);

9:00 A Multi-scale Deep Neural Network Technique for Surrogate Modeling of Microwave Components
Zheng Li (*Shanghai Jiao Tong University*); *Xiaochun Li* (*Shanghai Jiaotong University*); *Ze-Ming Wu* (*Shanghai Jiaotong University*);

9:15 Efficient Model Structure Selection Method for Automated Neural-based Model Generation of Microwave Components
Weicong Na (*Beijing University of Technology*); *Shanchao Ke* (*Beijing University of Technology*); *Ke Liu* (*Beijing University of Technology*); *Taiqi Bai* (*Beijing University of Technology*); *Wanrong Zhang* (*Beijing University of Technology*); *Ningning Yan* (*Tianjin University*);

9:30 A Low-cost Method for Identifying Pre-distortion Coefficients of RF Power Amplifiers Based on AE-GILC
Zongyu Chang (*Beijing University of Posts and Telecommunications*); *Xin Hu* (*Beijing University of Posts and Telecommunications*); *Boyan Li* (*Beijing University of Posts and Telecommunications*); *Quanhao Yao* (*Beijing University of Posts and Telecommunications*); *Yurong Yao* (*Beijing University of Posts and Telecommunications*); *Weidong Wang* (*Beijing University of Posts and Telecommunications*);

10:00 **Coffee Break**

10:30 Autoencoder Parameter Extraction Technique for Parametric Modeling of Third-order Waveguide Filter
Jinyi Liu (*Tianjin University*); *Feng Feng* (*Tianjin University*); *Weicong Na* (*Beijing University of Technology*); *Wei Liu* (*Tianjin University*); *Kaixue Ma* (*Tianjin University*); *Qi-Jun Zhang* (*Carleton University*); *Ningning Yan* (*Tianjin University*);

10:45 A Genetic Algorithm and Model Order Reduction Method Based EM Topology Optimization for a Fourpole Waveguide Filter
Jiali Zhang (*Tianjin University*); *Feng Feng* (*Tianjin University*); *Jing Jin* (*Central China Normal University*); *Wei Liu* (*Tianjin University*); *Kaixue Ma* (*Tianjin University*); *Qi-Jun Zhang* (*Carleton University*);

11:00 Two-stage Cognition-driven Multiphysics Optimization for Microwave Filters Design
Jiaping Fu (*Central China Normal University*); *Jing Jin* (*Central China Normal University*); *Ke Cao* (*Central China Normal University*); *Tengyu Li* (*Central China Normal University*); *Xintong Shi* (*Central China Normal University*); *Hai Lin* (*Central China Normal University*);

11:15 Brief Research of Traditional and AI-based Models for IMD2 Cancellation
A. A. Degtyarev (*Moscow Institute of Physics and Technology*); *Nikita Bakholdin* (*Moscow Institute of Physics and Technology*); *A. Y. Maslovskiy* (*Moscow Institute of Physics and Technology*); *S. A. Bakhurin* (*Moscow Institute of Physics and Technology*);

11:30 Multiphysics Inverse Design of Frequency Selective Surface by Multi-fidelity Neural Networks
Yang Lu (*Zhejiang University*); *Zhun Wei* (*Zhejiang University*);

11:45 Research on High Aperture Efficiency and Broadband Metalens Antenna Based on Machine Learning-based Optimization Method
Ruoyang Yang (*University of Electronic Science and Technology of China*); *Jianing Zhao* (*University of Electronic Science and Technology of China*); *Hao Li* (*University of Electronic Science and Technology of China*); *Tian-Ming Li* (*University of Electronic Science and Technology of China*); *Cheng Fu* (*University of Electronic Science and Technology of China*); *Biao Hu* (*University of Electronic Science and Technology of China (UESTC)*); *Hai-Yang Wang* (*University of Electronic Science and Technology of China*); *Yi-Hong Zhou* (*University of Electronic Science and Technology of China*);

Session 2A13a
Electromagnetic Medical Sensing and Imaging for Healthcare: Recent Progress, Clinical Applications and Future Prospects

Tuesday AM, April 23, 2024

Room 13 - Siji 2

Organized by Zheng Gong, Yifan Chen

Chaired by Zheng Gong

8:00 A Generalized Quantitative Microwave Medical Sensing and Imaging System for the Detection of Alzheimer's Disease
Caiyi Liao (*University of Electronic Science and Technology of China*); *Zheng Gong* (*University of Electronic Science and Technology of China*); *Yifan Chen* (*University of Electronic Science and Technology of China*);

8:15 Research on the Super Resolution of Electromagnetic Inverse Scattering
Yahui Ding (*University of Electronic Science and Technology of China*); *Yongpin Chen* (*University of Electronic Science and Technology of China*); *Jun Hu* (*University of Electronic Science and Technology of China*);

8:30 Effect of Emission Waveform on Ultrasonic Signal of THz Photoacoustic Imaging System
Bingyang Liang (*University of Electronic Science and Technology of China (UESTC)*); *Lianghao Guo* (*University of Electronic Science and Technology of China*); *Yubin Gong* (*University of Electronic Science and Technology of China*); *Huarong Gong* (*University of Electronic Science and Technology of China (UESTC)*); *Shaomeng Wang* (*University of Electronic Science and Technology of China*); *Yuanguo Zhou* (*Xi'an University of Science and Technology*);

8:45 A-prior-knowledge-informed Microwave Medical Imaging for Breast Cancer Diagnosis
Lide Hu (*University of Electronic Science and Technology of China*); *Yahui Ding* (*University of Electronic Science and Technology of China*); *Zheng Gong* (*University of Electronic Science and Technology of China*); *Yifan Chen* (*University of Electronic Science and Technology of China*);

9:00 Uncertainty Quantification in Magnetotelluric Data Inversion Based on Deep Generative Models
Hongyu Zhou (*Tsinghua University*); *Rui Guo* (*Tsinghua University*); *Maokun Li* (*Tsinghua University*); *Fan Yang* (*Tsinghua University*); *Shenheng Xu* (*Tsinghua University*); *Aria Abubakar* (*Schlumberger Houston Formation Evaluation*);

9:15 Microwave Continuous Blood Glucose Monitoring Using Microgels-based Sensor
Zheng Gong (*University of Electronic Science and Technology of China*); *Boyu Ren* (*University of Electronic Science and Technology of China*); *Yifan Chen* (*University of Electronic Science and Technology of China*);

9:30 An Ultra-wideband Tapered Slot Antenna for Medical Microwave Imaging Applications
Ali Raza (*University of Electronic Science and Technology of China*); *Yifan Chen* (*University of Electronic Science and Technology of China*); *Zheng Gong* (*University of Electronic Science and Technology of China*); *Yahui Ding* (*University of Electronic Science and Technology of China*); *Rajesh Kumar* (*University of Electronic Science and Technology of China*);

9:45 Next-Gen Medical Collaboration Integrating Blockchain for Image Sharing
Rajesh Kumar (*University of Electronic Science and Technology of China*); *Yifan Chen* (*University of Electronic Science and Technology of China*); *Zheng Gong* (*University of Electronic Science and Technology of China*); *Zaid Al-Huda* (*Southwest Jiaotong University*); *Ali Raza* (*University of Electronic Science and Technology of China*);

10:00 Recent Progress on Focused Microwave Hyperthermia Guided by Microwave-induced Thermoacoustic Tomography
Xiong Wang (*ShanghaiTech University*);

10:15 **Coffee Break**

Session 2A13b
Oral Presentations for Best Student Paper Awards — SC5: Remote Sensing, Inverse Problems, Imaging, Radar and Sensing

Tuesday AM, April 23, 2024

Room 13 - Siji 2

Chaired by Saibun Tjuatja, Kun-Shan Chen, Feng Xu

10:30 High-resolution Magnetotelluric Data Inversion Constrained with Seismic Texture
Hongyu Zhou (*Tsinghua University*); *Rui Guo* (*Tsinghua University*); *Zuzhi Hu* (*Bureau of Geophysical Prospecting (BGP) Inc., China National Petroleum Cooperation (CNPC)*); *Maokun Li* (*Tsinghua University*); *Fan Yang* (*Tsinghua University*); *Shenheng Xu* (*Tsinghua University*); *Yanling Shi* (*Bureau of Geophysical Prospecting (BGP) Inc., China National Petroleum Cooperation (CNPC)*);

10:45 Uncertainty Nonlinearly Guided Learning Framework for Full-wave Inverse Scattering
Siyuan He (*Zhejiang University*); *Zhun Wei* (*Zhejiang University*);

11:00 A Motion Compensation Method for Synthetic Aperture Ladar Based on Triangular Linear Frequency Modulation Continuous Wave Interferometry
Ruihua Shi (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Gen Sun* (*Shanghai Aerospace Electronic Technology Institute*); *Chong Song* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Bingnan Wang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Maosheng Xiang* (*Institute of Electronics, Chinese Academy of Sciences*);

11:15 Neural Structures with Fourier and Dyadic Propagator Operators for Full-wave Inverse Scattering
Yusong Wang (*Zhejiang University*); *Zhun Wei* (*Zhejiang University*);

11:30 Magnetic Field Monitoring on HVdc Transmission Lines Using a UHF-RFID Tag
Shijie Fu (*University of Manitoba*); *Greg E. Bridges* (*University of Manitoba*); *Behzad Kordi* (*University of Manitoba*);

11:45 A Novel Accuracy Enhancement Approach for Single-photon 3D Imaging
Yuyang Zhao (*Institute of Microelectronics of the Chinese Academy of Sciences*); *Tianpeng Xie* (*Institute of Microelectronics of the Chinese Academy of Sciences*); *Pengfei Zhou* (*Institute of Microelectronics of the Chinese Academy of Sciences*); *Chenghao Jiang* (*Institute of Microelectronics of the Chinese Academy of Sciences*); *Jingguo Zhu* (*Institute of Microelectronics, Chinese Academy of Sciences*);

Session 2A14
Advanced Optimization and Intelligent Processing Methodologies for Radar Systems

Tuesday AM, April 23, 2024

Room 14 - Siji 3

Organized by Lan Lan, Guolong Cui

Chaired by Lan Lan, Guolong Cui

8:00 Joint Transmit-receive Optimization for Target Location with Subarray-FDA-MIMO Radar
Fa Wei (*Xidian University*); *Sheng-Qi Zhu* (*Xidian University*); *Lan Lan* (*Xidian University*); *Ximin Li* (*Xidian University*); *Guisheng Liao* (*Xidian University*);

8:15 Bi-layer Non-interpolation Fast Back-projection Algorithm for Along-track Focusing of Ice-sounding Data
Chen Lv (*Tongji University*); *Tong Hao* (*Tongji University*);

8:30 Research on Human Posture Recognition Technology Based on Millimeter-wave Radar
Yuan Zhao (*Chengdu University of Information Technology*); *Zhiqiang Song* (*Chengdu University of Information Technology*); *Renpan Lu* (*Chengdu University of Information Technology*); *Xiangyong Mou* (*Chengdu University of Information Technology*); *Shihai Liao* (*Chengdu University of Information Technology*);

8:45 Adaptive Radar Detection for Range-spread Targets in Compound-Gaussian Environments with Missing Data
Chenchen Hao (*Yunnan University*); *Yao Rong* (*Yunnan University*); *Mengjiao Tang* (*Yunnan University*); *Xin Wang* (*Yunnan University*); *Fan Li* (*Civil Aviation Flight University of China*);

9:00 Subspace Detection of Range-distributed Targets in Compound Gaussian Clutter with Random Textures and Persymmetric Scatter Matrix
Xin Wang (*Yunnan University*); *Mengjiao Tang* (*Yunnan University*); *Yao Rong* (*Yunnan University*); *Chenchen Hao* (*Yunnan University*); *Sanfeng Hu* (*Yunnan University*);

9:15 Robust Adaptive Bayesian Beamforming Based on Unitary Approximate Message Passing and Covariance Matrix Reconstruction
Xiaoning Liu (*Xidian University*); *Guisheng Liao* (*Xidian University*); *Jian Gao* (*The 29th Research Institute of China Electronics Technology Group Corporation*); *Sen Cao* (*The 29th Research Institute of China Electronics Technology Group Corporation*); *Xuying Zhang* (*The 29th Research Institute of China Electronics Technology Group Corporation*); *Dawei Gao* (*Xidian University*);

9:30 Waveform Design for MIMO Multifunction Radio Frequency Systems
Bo Tang (*National University of Defense Technology*);

10:30 Joint Optimization of Transmit Parameters and Receive Filter in an FDA-MIMO Radar
Lan Lan (*Xidian University*); *Massimo Rosamilia* (*Universita degli Studi di Napoli "Federico II", DIETI*); *Augusto Aubry* (*Universita degli Studi di Napoli "Federico II", DIETI*); *Antonio De Maio* (*University of Naples "Federico II"*); *Guisheng Liao* (*Xidian University*);

10:45 MIMO Radar Waveform Design for More Precise Amplitude Estimation
Ping Huang (*National University of Defense Technology*); *Wenjun Wu* (*National University of Defense Technology*); *Bo Tang* (*National University of Defense Technology*);

11:00 The Estimation Method of Multi-target Parameters for OTFS Radar Sensing
Quan Ran Chang (*Henan University*); *Jixuan Wang* (*Henan University*); *Tuanwei Tian* (*Henan University*); *Hao Deng* (*Henan University*); *Xiaolin Du* (*Yantai University*);

11:15 Multi-dimensional Signal Synthesis and Processing for Cognitive Radar Mainlobe Jamming Suppression
Guolong Cui (*University of Electronic Science and Technology of China*);

11:30 CWD-DSCNet: A Radar Waveform Recognition Approach Based on Deep Subspace Clustering
Yan An (*National Key Laboratory of Radar Signal Processing Xidian University Xian, China*); *Sheng-Qi Zhu* (*Xidian University*); *Lan Lan* (*Xidian University*); *Ximin Li* (*Xidian University*); *Guisheng Liao* (*Xidian University*);

Session 2A15
Advanced Techniques in Electromagnetic Numerical Analysis and Applications

Tuesday AM, April 23, 2024

Room 15 - Siji 4

Organized by Pengfei Gu, Jihong Gu

Chaired by Pengfei Gu

8:00 Analysis of Electromagnetic Pulse in Civil Air Defense Engineering Based on TDSBR Algorithm
Yu Tao (*Nanjing University of Aeronautics and Astronautics*); *Yinghui Zhou* (*PLA University of Science & Technology*); *Zheng Sun* (*Army Engineering University*); *Tiancheng Zhang* (*Nanjing University of Science and Technology*); *Huaguang Bao* (*Nanjing University of Science and Technology*); *Da-Zhi Ding* (*Nanjing University of Science and Technology*);

8:15 Backscattering Analysis of Particle Clouds in Collision Scenario Based on VRT
Chun Xin Li (*Nanjing University of Science and Technology, Nanjing, China*); *Zi He* (*Nanjing University of Science and Technology*); *Da-Zhi Ding* (*Nanjing University of Science and Technology*); *Fan Ding* (*The China Ship Development and Design Center*); *Xinrui Jiang* (*Beijing Institute of Remote Sensing Equipment*); *Yupeng Wang* (*Beijing Institute of Remote Sensing Equipment*);

8:30 Research on the Evaluation of Stealth Target
Yao Wang (*Nanjing University of Science and Technology*); *Zi He* (*Nanjing University of Science and Technology*); *Da-Zhi Ding* (*Nanjing University of Science and Technology*); *Fan Ding* (*The China Ship Development and Design Center*);

8:45 SAR Simulation of Lunar Surface Based on Rocks Abundance from NAC
Bang Zhi He (*Nanjing University of Science and Technology*); *Wenjing Zheng* (*Nanjing University of Science and Technology*); *Zi He* (*Nanjing University of Science and Technology*); *Da-Zhi Ding* (*Nanjing University of Science and Technology*);

9:00 An Effective Optimization Algorithm for Synthesizing Wideband Thinned Array Antenna
Shuyi Chen (*Nanjing University of Science and Technology*); *Hao Wen* (*Nanjing University of Science and Technology*); *Pengfei Gu* (*Nanjing University of Science and Technology*); *Zi He* (*Nanjing University of Science and Technology*); *Da-Zhi Ding* (*Nanjing University of Science and Technology*);

9:15 Research on Forward Extraction of Scattering Parameters of Lossy Dielectric Multi-targets
Xi Cheng (*Nanjing University of Science and Technology*); *Chuan Zhang* (*Nanjing University of Science and Technology*); *Mengmeng Li* (*Nanjing University of Science and Technology*); *Da-Zhi Ding* (*Nanjing University of Science and Technology*);

9:30 A Kernel-independent Fast Direct Solution of Surface Integral Equations for Conducting Objects
Yuhan Zuo (*Nanjing University of Science and Technology*); *Mengmeng Li* (*Nanjing University of Science and Technology*);

9:45 A Parameter Extraction Method for Cone-shaped Space Targets Based on Scattering Center Model
Shaoran Wang (*Nanjing University of Science and Technology*); *Mengmeng Li* (*Nanjing University of Science and Technology*);

10:00 **Coffee Break**

10:30 Investigation on Low-frequency Breakdown of Electric Field Integral Equation Using 16-byte Floating-point Number
Xiang Chen (*Nanjing University of Science and Technology*); *Mingxuan Zhang* (*Nanjing University of Science and Technology*); *Zhenhong Fan* (*Nanjing University of Science and Technology*); *Da-Zhi Ding* (*Nanjing University of Science and Technology*);

10:45 Comparisons of Different Interior Penalty Terms on Discontinuous Galerkin-based Mixed Potential Integral Equation
Zhou Zhou (*Nanjing University of Science and Technology*); *Mingxuan Zhang* (*Nanjing University of Science and Technology*); *Zhenhong Fan* (*Nanjing University of Science and Technology*); *Da-Zhi Ding* (*Nanjing University of Science and Technology*);

11:00 The FDFD Method with the $\boldsymbol{S}$-parameter Extraction for the Optical Waveguide
Chengnian Huang (*Zhejiang University*); *Wei E. I. Sha* (*Zhejiang University*);

11:15 A Fast Ray-tracing-based Method for Non-uniform Structured Mesh Generation
Zhitao Rao (*Anhui University*); *Ming Fang* (*Anhui University*);

11:30 Efficient Numerical Method Aimed on the Payload Testing Considering the Radio Model Influence
Yong Fan (*Institute of Spacecraft System Engineering, China Academy of Space Technology*); *Hua Jiang* (*Institute of Spacecraft System Engineering, China Academy of Space Technology*); *Shida Gao* (*Institute of Spacecraft System Engineering, China Academy of Space Technology*); *Sining Dong* (*Institute of Spacecraft System Engineering, China Academy of Space Technology*); *Yineng Wang* (*Institute of Spacecraft System Engineering, China Academy of Space Technology*);

11:45 A Wideband $\boldsymbol{E_x}$-$\boldsymbol{E_y}$-$\boldsymbol{E_z}$ Hybrid Electric Probe for Near-field Measurement
Mingrui Chen (*Shanghai Jiao Tong University*); *Daxiang Cui* (*Shanghai Jiao Tong University*);

Session 2A16
Topological Condensed Matter and Artificial System 1

Tuesday AM, April 23, 2024

Room 16 - Mudan

Organized by Xiang Yuan, Cheng Zhang

Chaired by Xiang Yuan, Cheng Zhang

8:00 Invited Coexisting Linear Band Crossings in Both Spinless and Spinful Settings in 2D Materials
Feng Tang (*Nanjing University*);

8:20 Invited Towards Non-Abelian Statistics of Majorana Zero Modes in Topological Planar Josephson Junctions
Tong Zhou (*Eastern Institute of Technology*);

8:40 Invited Symmetry-conserving Maximally Projected Wannier Functions and Its Applications in Topological Materials Quantum Responses
Yan Sun (*Institute of Metal Research, Chinese Academy of Sciences*); *Klaus Koepernik* (*IFW Dresden*); *O. Janson* (*IFW Dresden*); *Jeroen van den Brink* (*IFW Dresden*);

9:00 Invited Nonlinear Hall Effect
Hai-Zhou Lu (*Southern University of Science and Technology*);

9:20 Invited Non-Hermitian Topology beyond One Dimension: An Amoeba Formulation
Zhong Wang (*Tsinghua University*);

9:40 Invited Theory for the 2D non-Hermitian Skin Effect
Zhesen Yang (*Xiamen University*);

10:00 **Coffee Break**

10:30 Invited Evidence for Single-band Mott Insulator State in Nb_3Cl_8 and Excitonic Insulator State in $Ta_2Pd_3Te_5$
Tian Qian (*Institute of Physics, Chinese Academy of Sciences*);

10:50 Invited Keldysh Space Control of Charge Dynamics in a Strongly Driven Mott Insulator
Xinwei Li (*National University of Singapore*);

11:10 Invited Discrete Scale Invariance and Log-B Periodic Quantum Oscillations in Ultra-quantum Dirac Materials
Haiwen Liu (*Beijing Normal University*);

11:30 Invited Spin Excitations in Kagome Systems
Yang Xu (*East China Normal University*);

Session 2A17
Phononic Crystals, Acoustic/Elastic Metamaterials and Metasurfaces 1

Tuesday AM, April 23, 2024

Room 17 - Furong

Organized by Fuyin Ma, Rui Zhu, Xue Jiang

Chaired by Fuyin Ma, Xue Jiang

8:00 Invited Acoustic Metamaterials for Underwater and Biomedical Applications
Chadi Ellouzi (*Rowan University*); *Chen Shen* (*Rowan University*);

8:20 Invited Acoustic Metagratings: Design Principle and Applications
Jun Mei (*South China University of Technology*);

8:40 Invited Orbitals Induced Duality Symmetry and Topological Transitions
Feng Gao (*Huazhong University of Science and Technology*); *Yu-Gui Peng* (*Huazhong University of Science and Technology*); *Xue-Feng Zhu* (*Huazhong University of Science and Technology*);

9:00 Invited Elastic Meta-fence for Broadband Vibration Isolation and Absorption
Yongquan Liu (*Xi'an Jiaotong University*); *Yunhao Zhang* (*Xi'an Jiaotong University*); *Yiting Cheng* (*Xi'an Jiaotong University*);

9:20 Invited Digitally Resonant Elastic Metamaterials for Vibration Control
Kaijun Yi (*Beijing Institute of Technology*);

9:40 Invited Suppression of Panel Flutter Based on Acoustic Black Hole
Zhuogeng Zhang (*Nanjing University of Aeronautics and Astronautics*); *Hongli Ji* (*Nanjing University of Aeronautics and Astronautics*); *Jinhao Qiu* (*Nanjing University of Aeronautics and Astronautics*);

10:00 **Coffee Break**

10:30 Invited Converged Wireless Infrastructure with Acoustic Holographic Array
Chuanxin Zhang (*Fudan University*); *Xue Jiang* (*Fudan University*);

10:50 Invited Spatial Coding Metastructures for Computational Sensing of Sound and Vibration
Tianxi Jiang (*University of Science and Technology of China*);

11:10 Invited Acoustic/Elastic Metamaterials for Vibration and Noise Attenuation in Railway Vehicles
Yingli Li (*Central South University*);

11:30 Invited Multifunctional Metamaterials with Superior Low-frequency Sound Absorption, Broadband Energy Harvesting and High Load-bearing Capacity
Penglin Gao (*Shanghai Jiao Tong University*);

11:50 Invited Reconfigurable Dielectric Elastomer Actuated Petals for Tunable Acoustic Absorber
M. Shrestha (*Nanyang Technological University*); *G. K. Lau* (*National Yang Ming Chiao Tung University*); *Y. W. Chin* (*National University of Singapore*); *Edwin Hang Tong Teo* (*Nanyang Technological University*); *Boo Cheong Khoo* (*National University of Singapore*); *Z. Lu* (*Sun Yat-Sen University*);

Session 2A18
Optical and Acoustic Manipulation: Fundamental and Application 1

Tuesday AM, April 23, 2024

Room 18 - Meilan

Organized by Jack Ng, Feiyan Cai

Chaired by Xiao Li, Jun Chen

8:00 Nonreciprocal Optical Binding Force between Identical Particles
Xiaoyong Duan (*Jiaxing University*); *Graham D. Bruce* (*University of St Andrews*); *F. Li* (*Jiaxing University*); *Kishan Dholakia* (*University of St Andrews*);

8:15 Invited Controlling Optical Forces for Versatile Nanomanipulation
Fan Nan (*Jinan University*);

8:35 Invited Morphology-independent General-purpose Optical Surface Tractor Beam
Neng Wang (*Shenzhen University*); *Jack Ng* (*Southern University of Science and Technology*); *Guo Ping Wang* (*Shenzhen University*);

8:55 Stochastic Dynamics of Optically Bound Structures
Alexandr Jonáš (*Institute of Scientific Instruments of the Czech Academy of Sciences*); *Vojtěch Svak* (*Institute of Scientific Instruments of the Czech Academy of Sciences*); *Jana Flajšmanová* (*Institute of Scientific Instruments of the Czech Academy of Sciences*); *Lukáš Chvátal* (*Institute of Scientific Instruments of the Czech Academy of Sciences*); *Martin Šiler* (*Institute of Scientific Instruments of the Czech Academy of Sciences*); *Stephen H. Simpson* (*Institute of Scientific Instruments of the Czech Academy of Sciences*); *Pavel Zemánek* (*Institute of Scientific Instruments of the Czech Academy of Sciences*); *Oto Brzobohaty* (*Institute of Scientific Instruments of the Czech Academy of Sciences*);

9:10 Computation of Internal Optical Forces Using the Helmholtz Tensor
Li-Yong Cui (*Changsha University of Science & Technology*);

9:25 Invited Optical and Acoustic Microfluidic Biosensors for Point-of-Care Diagnostics
Chen Yang (*Wuhan University*); *Yihan Ma* (*Wuhan University*); *Tao Jiang* (*Wuhan University (WHU)*); *Yi Yang* (*Wuhan University (WHU)*);

9:45 Invited Selective Trapping and Assembly at Cell-sized Level with Single-beam Acoustical Tweezers
Zhixiong Gong (*Shanghai Jiao Tong University*);

10:05 **Coffee Break**

10:30 Invited A Broadband Meta-grating Based on Dispersion Engineerable Metasurface
Guanxing Zang (*University of Electronic Science and Technology of China*); *Shaowei He* (*University of Electronic Science and Technology of China*); *Lijun Jiang* (*Zhejiang Dali Technology Co. Ltd*); *Kun Zheng* (*University of Electronic Science and Technology of China*); *Weiming Zhu* (*University of Electronic Science and Technology of China*);

10:50 Invited Pseudo-dipole Modes and Metegrating Retroreflection
Ruihuang Zhao (*East China Normal University*); *Junjie Du* (*East China Normal University*);

11:10 Invited High-order Structured Light in Paraxial Optical System for Diverse Optical Manipulations
Peng Shi (*Shenzhen University*);

11:30 Invited Casimir Force at the Deep Nanoscale in Three Dimensions: A Conformal Map Method and the Role of Surface Electrons
Hewan Zhang (*Fudan University*); *Kun Ding* (*Fudan University*);

11:50 Flexible Electromagnetic Manipulation by Topological Photonic States
Tiantao Qu (*Shanxi University*); *Neng Wang* (*Shenzhen University*); *Mudi Wang* (*The Hong Kong University of Science and Technology*); *Lei Zhang* (*Shanxi University*); *Jun Chen* (*Shanxi University*);

Session 2A19
Poster Session 3

Tuesday AM, April 23, 2024
8:00 AM - 12:00 AM
Room Exhibition Area

1 A Reconfigurable Antenna Driven by Ion Wind Generator
Xuesong Guo (*Zhejiang University*); *Chengjing Gao* (*Zhejiang University*); *Hongbin Ma* (*Zhejiang University*); *Yang Pan* (*Zhejiang University*); *Zhuoyu Zhang* (*Zhejiang University*); *Jiangtao Huangfu* (*Zhejiang University*);

2 A New Method of Electromagnetic Diagonalization of Anisotropic Permittivity
Jin Li (*Shaanxi Xueqian Normal University*); *Ying-Le Li* (*Shaanxi Xueqian Normal University*);

3 A 2D Lidar-Inertial-Visual Fusion SLAM for Robust and Real-time Indoor Localization
Chao Li (*Tongji University*); *Wenjie Na* (*Tongji University*); *Chenpeng Yao* (*Tongji University*); *Chengju Liu* (*Tongji University*); *Qijun Chen* (*Tongji University*);

4 Prediction of Ocean Velocity during Typhoon Using a GA-BP Neural Network Model
Jinze Gao (*Harbin Institute of Technology at Weihai*); *Xuekun Chen* (*Harbin Institute of Technology at Weihai*); *Aijun Liu* (*Harbin Institute of Technology at Weihai*); *Chang Jun Yu* (*Harbin Institute of Technology at Weihai*);

5 Assessment and Optimization of Disordered Distribution Reflecting Metasurfaces for Computational Imaging
Aobo Li (*Queen's University Belfast*); *Mengran Zhao* (*Queen's University Belfast*); *Muhammad Ali Babar Abbasi* (*Queen's University Belfast*); *Okan Yurduseven* (*Queen's University Belfast*);

6 Sub-micron T-gate AlGaNGaN HEMTs Using Diluted ZEP520A
Hsin-Jung Lee (*National Taiwan University*); *Cheng-Che Lee* (*National Taiwan University*); *Shao-Yu Lo* (*National Taiwan University*); *Chieh-Hsiung Kuan* (*National Taiwan University*);

7 Evaluation of Indoor Human Electromagnetic Radiation Dose
Shilong Wang (*Northwestern Polytechnical University*); *Zicheng Liu* (*Northwestern Polytechnical University*);

8 SIW Transition Structure of Double-layer Substrates and Its Application in 3 dB Coupler
Xiong Zou (*Air Force Early Warning Academy*); *Ya Fan* (*Air Force Early Warning Academy*); *Di Zhang* (*Air Force Early Warning Academy*); *Qiang Chen* (*Air Force Early Warning Academy*); *Huan Qian* (*Air Force Early Warning Academy*);

9 Black Body Radiation Problem with an Infinite Speed of Light Perspective and Some Consequences
Namik Yener (*Istanbul Commerce University*);

10 Design of Piezoelectric Ceramic Power Amplifier Based on Milti-phase-shifted Half-bridge Topology
Delin Tan (*Southwest University of Science and Technology*); *Haoran Li* (*Southwest University of Science and Technology*); *Li Wu* (*Southwest University of Science and Technology*); *Yuyu Zhu* (*Southwest University of Science and Technology*); *Xuebing Leng* (*Southwest University of Science and Technology*); *Rongyan Liu* (*Southwest University of Science and Technology*); *Congjin Wang* (*Southwest University of Science and Technology*);

11 A Novel Tri-band Balanced Bandpass Filter Based on SIW with Double-sided Complementary Split Ring Resonators (DS-CSRRs)
Rui Cheng (*Southwest University of Science and Technology*); *Zuxue Xia* (*Southwest University of Science and Technology*); *Wenhai Xia* (*Zhejiang Lierda Internet of Things Technology Co. Ltd.*); *Xin Cao* (*Southwest University of Science and Technology*); *Xin Xiong* (*Southwest University of Science and Technology*); *Jiayuan Hu* (*Southwest University of Science and Technology*);

12 All-pass Filter Assisted Microring Resonator with Ultra-high Rejection Ratio
Ming Chen (*Huazhong University of Science and Technology*); *Yifan Liu* (*Huazhong University of Science and Technology*); *Kaixiang Cao* (*Huazhong University of Science and Technology*); *Yuan Yu* (*Huazhong University of Science and Technology*); *Fangzheng Zhang* (*Nanjing University of Aeronautics and Astronautics*); *Yu Yu* (*Huazhong University of Science and Technology*); *Xinliang Zhang* (*Huazhong University of Science and Technology*);

13 A Novel Method to Identify the SAR Operating Mode Based on Sidelobe Reconnaissance and Machine Learning
Runfa Ma (*Nanjing University of Aeronautics and Astronautics*); *Guodong Jin* (*Nanjing University of Aeronautics and Astronautics*); *Yu Wang* (*Nanjing University of Aeronautics and Astronautics*); *Dai-Yin Zhu* (*Nanjing University of Aeronautics and Astronautics*);

14 A Resonating Cavity Antenna with an Integrated Structure Utilizing Artificial Material
Yoshihiro Toda (*Ryukoku University*); *Yangjun Zhang* (*Ryukoku University*);

15 Design and Implementation of X-band Multi-channel Broadband Transceiver System Based on RFSoC
Enming Lin (*Sun Yat-sen University of Shenzhen Campus*); *Rui Guo* (*Sun Yat-sen University of Shenzhen Campus*); *Haohui Yi* (*Sun Yat-sen University of Shenzhen Campus*); *Jietao Li* (*Sun Yat-sen University of Shenzhen Campus*);

16 Simulations of GaAs Photoconductive Switch by Using Improved Carrier Velocity Formula under Ultra-high Electric Field
Hai-Juan Cui (*University of Electronic Science and Technology of China*); *Yaotian Luo* (*Sichuan Province Engineering Research Center for Broadband Microwave Circuit High Density Integration*); *Jianping Xiao* (*Sichuan Province Engineering Research Center for Broadband Microwave Circuit High Density Integration*); *Jiu-Xun Sun* (*University of Electronic Science and Technology of China*);

17 Magnetic System for Gyrotron: Present Status and Nearest Future
Mikhail Yu. Glyavin (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Mikhail D. Proyavin* (*Institute of Applied Physics, RAS*);

18 Orientation Selection Analysis of a Special Electromagnetic Shield in HEMP Residual Electric Field Test
Zhizhen Zhu (*Northwest Institution of Nuclear Technology*); *Jing Yang* (*Northwest Institute of Nuclear Technology*); *Xin Nie* (*Northwest Institute of Nuclear Technology*); *Yuewu Shi* (*Northwest Institute of Nuclear Technology*); *Yifu Zhou* (*Northwest Institute of Nuclear Science*);

19 A Lightweight U-Net for Medical Image Segmentation
Yuxing Zhao (*Tongji University*); *Lan Lin* (*Tongji University*);

20 Measurement of Dielectric Characteristics of Bulk Cellulose-containing Materials at a Frequency of 2.45 GHz
Alexander Vikharev (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *A. V. Gromov* (*Institute of Applied Physics, RAS*); *T. O. Krapivnitckaia* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *A. B. Alyeva* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *S. A. Ananicheva* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *A. A. Orlovskiy* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Mikhail Yu. Glyavin* (*A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Nikolai Yu. Peskov* (*Institute of Applied Physics, RAS*); *I. V. Izotov* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*);

21 Optimization of Radiation Output in Surface-wave Oscillators Based on 2D-periodical Slow-wave Structures of Planar Geometry
Ekaterina D. Egorova (*Institute of Applied Physics, Russian Academy of Science*); *Naum S. Ginzburg* (*Institute of Applied Physics, Russian Academy of Sciences*); *Andrey M. Malkin* (*Institute of Applied Physics, Russian Academy of Sciences*); *Nikolai Yu. Peskov* (*Institute of Applied Physics, RAS*); *Alexander S. Sergeev* (*Institute of Applied Physics, Russian Academy of Sciences*);

22 Optically Active Silicate Glass Microspheres with Silver Molecular Clusters for Label-free Whispering Gallery Mode Sensors
Egor Mikharev (*St. Petersburg Electrotechnical University "LETI"*); *Andrey Lunev* (*St. Petersburg Electrotechnical University "LETI"*); *Alexander I. Sidorov* (*ITMO University*); *Dmitrii Redka* (*St. Petersburg Electrotechnical University "LETI"*);

23 Prediction of Marine Atmospheric Duct and its Loss Based on LSTM
Yi Yan (*Xidian University*); *Jiangting Li* (*Xidian University*); *Shu-Ji Sun* (*China Research Institute of Radiowave Propagation*); *Zhou Xiang Yu* (*Xidian University*); *Zhangyi Li* (*Xidian University*);

24 A Radio Frequency Measuring Method of Deformation
Ran Yan (*Zhejiang University*); *Yang Pan* (*Zhejiang University*); *Hongbin Ma* (*Zhejiang University*); *Sijie Chen* (*Zhejiang University*); *Jiangtao Huangfu* (*Zhejiang University*);

25 A High-precision Automated Calibration Method for LED Color Parameters
Zhi Chong Wan (*Tongji University*); *Guo Chun Wan* (*Tongji University*); *Mei Song Tong* (*Tongji University*);

26 Performance Analysis of NRZ and Duobinary Modulated WDM-PON Transmission Systems Utilizing FEC Codes
Ricards Kudojars (*Riga Technical University*); *Dmitrijs Prigunovs* (*Riga Technical University*); *Ruslans Sudniks* (*Riga Technical University*); *Aleksandr Krotov* (*Riga Technical University*); *Dmitrii Redka* (*Riga Technical University*); *Toms Salgals* (*Riga Technical University*); *Vjaceslavs Bobrovs* (*Riga Technical University*); *Svitlana Matsenko* (*Riga Technical University*);

27 Dual-band Dual-mode Chiral Metasurface for Terahertz Near-field Imaging
Aning Ma (*Lanzhou University*); *Di Geng* (*Lanzhou University*); *Guojian Li* (*Northwest Minzu University*);

28 A Miniaturized Ultra-wideband Antenna Based on Mandelbrot Fractal Geometry
Lu Yi Liu (*Tongji University*); *Hou Yi Ding* (*Tongji University*); *Amir Boag* (*Tel Aviv University*); *Mei Song Tong* (*Tongji University*);

29 A Fast Computation Method for Solving Scattering from Multilayer Dielectric Structures with Anisotropic Materials
Zeng Yang (*National Key Laboratory of Scattering and Radiation*); *Han-Chi Xu* (*National Key Laboratory of Scattering and Radiation*); *Yuan Zhang* (*National Key Laboratory of Scattering and Radiation*); *Zhi-Yong Huang* (*National Key Laboratory of Scattering and Radiation*); *Zhijie Xie* (*Science and Technology on Electromagnetic Scattering Laboratory*);

30 A Novel Design of Dualband Microstrip Patch Antenna for 5G Mobile Communication
Shuo Tao Li (*Shanghai Institute of Technology*); *Jia Hui Wang* (*Shanghai Institute of Technology*); *Lan Chen* (*Shanghai Institute of Technology*); *Mei Song Tong* (*Tongji University*);

31 Using Coaxial Ground Full-touch Structure to Reduce Far-end Crosstalk in PCIe5 High-speed Connectors
Yuhui Liu (*Southwest University of Science and Technology*); *Lanqing Yang* (*Southwest University of Science and Technology*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Haoran Li* (*Southwest University of Science and Technology*); *Haoxin Luo* (*Southwest University of Science and Technology*); *Yuyu Zhu* (*Southwest University of Science and Technology*); *Jun Fan* (*Southwest University of Science and Technology*);

32 Optimization of the Reverse Recovery Characteristics of 500 V VDMOS
Lixiang Wang (*Chengdu Technological University*); *Xiaopei Chen* (*Southwest Jiaotong University*); *Quanyuan Feng* (*Southwest Jiaotong University*);

33 Analysis of Various Approaches to Modeling a Glow Discharge in Helium at Atmospheric Pressure
Ismail Rafatov (*Middle East Technical University*); *Gubad Islamov* (*Middle East Technical University*); *Ender Eylenceoglu* (*Middle East Technical University*);

34 Analysis of Structural and Mode Item Based on Active Antennas
Fang Liu (*National Key Laboratory of Scattering and Radiation*); *Xing-Yun Zhang* (*National Key Laboratory of Scattering and Radiation*); *Yang Bai* (*National Key Laboratory of Scattering and Radiation*);

35 Liquid Crystals Enabled Vectorial Holography
Zeyu Wang (*Nanjing University*); *Ling-Ling Ma* (*Nanjing University*); *Yan-Qing Lu* (*Nanjing University*);

36 Simulation and Analysis of Sea Surface Electromagnetic Bias for Interferometric Imaging Radar Altimeter
Bowen Xue (*CAS Key Laboratory of Microwave Remote Sensing, National Space Science Center, Chinese Academy of Sciences*); *Yunhua Zhang* (*National Space Science Center, Chinese Academy of Sciences*); *Xiao Dong* (*National Space Science Center, Chinese Academy of Sciences*);

37 Target Identification Method on Ship Formation Imaging for HFSWR
Jiaqi Wang (*Harbin Institute of Technology at Weihai*); *Aijun Liu* (*Harbin Institute of Technology at Weihai*); *Chang Jun Yu* (*Harbin Institute of Technology at Weihai*);

38 Research on Magnetic Field Similarity in the Production of Eddy Current Magnetic Field Scaling Model
Kena Wu (*Naval University of Engineering*); *Zhi-Hao Ye* (*Naval University of Engineering*); *Zhaohui Wu* (*China Ship Development and Design Center*); *Yuelin Liu* (*Naval University of Engineering*); *Shengdao Liu* (*Naval University of Engineering*); *Jun Ouyang* (*Hua Zhong University of Science and Technology*);

39 A 57.3 to 66.2 GHz Millimeter-wave Wireless Link with CMOS Power Amplifier and Wideband Phase-locked Loop
Yuan Liang (*Nanyang Technological University*); *Yuxin Zhang* (*Guangzhou University*); *Ke Yang* (*Guangzhou University*); *Zhikai Li* (*Guangzhou University*); *Guangyu Zhong* (*Guangzhou University*); *Liangming Lian* (*Guangzhou University*);

40 Electric-field-coupled Inductive-capacitive Resonators for Terahertz Electromagnetically Induced Transparency Metamaterials
Haotian Ling (*Qilu Aerospace Information Research Institute (AIR), Chinese Academy of Sciences (CAS)*); *Zhaolin Li* (*Shandong University*); *Ruiqi Zhao* (*Qilu Aerospace Information Research Institute, Chinese Academy of Sciences*); *Pengfei Ma* (*Qilu Aerospace Information Research Institute, Chinese Academy of Sciences*); *Yongping Zhou* (*Qilu Aerospace Information Research Institute, Chinese Academy of Sciences*); *Yu Feng* (*Qilu Aerospace Information Research Institute, Chinese Academy of Sciences*); *Yevhen Yashchyshyn* (*Warsaw University of Technology*); *Xudong Zou* (*Qilu Aerospace Information Research Institute, Chinese Academy of Sciences*); *Yifei Zhang* (*Shandong University*);

41 Research on Electromagnetic Interference during IGBT Module Opening and Closing Process
Yang Dong Xu (*Southwest University of Science and Technology*); *Shi Lie He* (*China Electronic Product Reliability and Environmental Test Institute Key Laboratory*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Junliang Wan* (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Haoran Li* (*Southwest University of Science and Technology*); *Zhen-Yong Du* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yixiang Li* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yuyu Zhu* (*Southwest University of Science and Technology*); *Bo Pu* (*DeTooLIC Technology Co., Ltd.*); *Jun Fan* (*Southwest University of Science and Technology*);

42 Threshold Evaluation of Smooth Surface Dielectric Composite Large-area Explosive Emission Cathode
Tingxu Chen (*University of Electronic Science and technology of China*); *Tian-Ming Li* (*University of Electronic Science and Technology of China*); *Liu Yang* (*University of Electronic Science and Technology of China*); *Hao Li* (*University of Electronic Science and Technology of China*); *Hai-Yang Wang* (*University of Electronic Science and Technology of China*); *Yi-Hong Zhou* (*University of Electronic Science and Technology of China*); *Keqiang Wang* (*Yangtze Delta Region Institute (Huzhou), University of Electronic Science and Technology of China (UESTC)*); *Biao Hu* (*University of Electronic Science and Technology of China (UESTC)*);

43 Enhanced Dual-band Antenna for Intelligent Vehicular Communications
Sayed Ahmad (*University of Hertfordshire, College Lane*); *Eugene A. Ogbodo* (*University of Hertfordshire, College Lane*); *Azunka N. Ukala* (*University of Hertfordshire, College Lane*);

44 Power Partition with Pure Skin Effect
Wenwen Liu (*The University of Hong Kong*); *Shuang Zhang* (*The University of Hong Kong*);

45 Measurement of Radiophysical Properties and Electromagnetic Parameters of Material Samples in the Millimeter Microwave Range
A. A. Politiko (*JSC "Kompozit"*); *V. A. Dyakonov* (*JSC "Kompozit"*); *V. S. Anshin* (*JSC "Kompozit"*); *I. A. Gromov* (*JSC "Kompozit"*); *S. A. Prosypkin* (*LLC "Equipment and Electronics"*); *Mikhail Sergeyevich Mikhailov* (*National Research University "Moscow Power Engineering Institute"*);

46 Comparison of Circular Polarized Patch Antenna Topologies
E. D. Malev (*National Research University "Moscow Power Engineering Institute"*); *Mikhail Sergeyevich Mikhailov* (*National Research University "Moscow Power Engineering Institute"*); *Alexey Mikhailovich Mikhailov* (*National Research University "Moscow Power Engineering Institute"*); *A. A. Komarov* (*National Research University "Moscow Power Engineering Institute"*);

47 FFD Supported FNN for Inverse Design of Patch Antenna
Chengkai He (*Harbin Engineering University*); *Tao Jiang* (*Harbin Engineering University*);

48 Modeling Processes of Radio Wave Propagation in Urban Areas
Anton Alekseevich Novikov (*National Research University "Moscow Power Engineering Institute"*); *Kirill Sergeyevich Sychev* (*National Research University "Moscow Power Engineering Institute"*); *Andrey Alexeevich Pimenov* (*National Research University "Moscow Power Engineering Institute"*); *A. S. Filimonov* (*National Research University "Moscow Power Engineering Institute"*); *Mikhail Sergeyevich Mikhailov* (*National Research University "Moscow Power Engineering Institute"*);

49 Analysis of Responses and Influencing Factors of Whole-space Transient Electromagnetic Logging
Xiaozhuang Wang (*China University of Petroleum (Beijing)*); *Jie Gao* (*China University of Petroleum (Beijing)*); *Shizhen Ke* (*China University of Petroleum (Beijing)*); *Yanxin Zhou* (*China University of Petroleum (Beijing)*); *Huanxing Li* (*China University of Petroleum (Beijing)*);

50 Prediction of Over-the-horizon Radio Waves Propagation Loss in Marine Evaporation Ducts Based on the LSTM-transformer Structure
Hanjie Ji (*Xidian University*); *Li-Xin Guo* (*Xidian University*); *Yiwen Wei* (*Xidian University*); *Tianhang Nie* (*Xidian University*);

51 Full-space Hologram at W-band by Independent Phase Encoding of Metasurface
Z. J. Wang (*Hefei University of Technology*); *B. Y. Wen* (*Hefei University of Technology*); *Zhiping Yin* (*Hefei University of Technology*);

52 Faraday Rotation Spectroscopy NOx Sensor Based on NdFeB Ring Magnet Array
Yuan Cao (*Anhui Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Kun Liu* (*Anhui Institute of Optics & Fine Mechanics, Chinese Academy of Sciences*); *Xiaoming Gao* (*Anhui Institutes of Physical Science, Chinese Academy of Sciences*);

53 Narrowband HMSIW-SSPP Hybrid Bandpass Filter Operating at Millimeter-wave Band
Yiming Zhang (*Zhejiang University*); *Yuanqing Yao* (*Zhejiang University*); *Jun Hu* (*Zhejiang University*); *Sailing He* (*Royal Institute of Technology & Zhejiang University*);

54 Simulation Design of Hairpin Microstrip Bandpass Filter at L-band
Qingyao Wang (*National Key Laboratory of Electromagnetic Effect and Security on Marine Equipment China Ship Development and Design Centre*); *Bo Luo* (*Changjiang Polytechnic*); *Xinyang Shi* (*Wuhan Maritime Communication Research Institute*); *Chong-Hua Fang* (*National Key Laboratory of Electromagnetic Effect and Security on Marine Equipment China Ship Development and Design Centre*);

55 A Deep Learning Scheme Based on Variational Back Propagation Method for Solving Electromagnetic Inverse Scattering Problems
Changlin Du (*University of Electronic Science and Technology of China*); *Jin Pan* (*University of Electronic Science and Technology of China*); *Jun Hu* (*University of Electronic Science and Technology of China*); *Deqiang Yang* (*University of Electronic Science and Technology of China*); *Yongpin Chen* (*University of Electronic Science and Technology of China*);

56 Resolution of Ground-based Microwave Radar Systems for Monitoring Space Debris
Fedor Nikolaevich Kovalev (*Institute of Applied Physics of the RAS*); *A. N. Kovalev* (*Nizhni Novgorod State Technical University n.a. R.E. Alekseev*); *Ilya V. Lesnov* (*Institute of Applied Physics of the RAS*); *M. V. Efimova* (*Institute of Applied Physics of the RAS*); *Vyacheslav F. Vdovin* (*Institute of Applied Physics of the RAS*);

57 Reference-frame-independent Quantum Key Distribution with Four States
Ziran Xie (*Sun Yat-sen University*); *Zhiyu Tian* (*Sun Yat-sen University*); *Shihai Sun* (*Sun Yat-sen University*);

58 Magnetic Field Stabilization System Based on Self-oscillating Magnetometer
Shurui Yang (*Hangzhou Dianzi University*); *Jiqing Fu* (*National Institute of Metrology*); *Jia Kong* (*Hangzhou Dianzi University*);

59 A Compact Relativistic Magnetron with Extract Ring
Yuying Wang (*University of Electronic Science and Technology of China*); *Tianming Li* (*University of Electronic Science and Technology of China*); *Renjie Cheng* (*University of Electronic Science and Technology of China*); *Jiaoyin Wang* (*University of Electronic Science and Technology of China*); *Haiyang Wang* (*University of Electronic Science and Technology of China*); *Hao Li* (*University of Electronic Science and Technology of China*); *Yihong Zhou* (*University of Electronic Science and Technology of China*); *Biao Hu* (*University of Electronic Science and Technology of China*);

60 Design of the MIMO Antenna for Mobile Communication Terminal
Yuxin Li (*Lanzhou Jiaotong University*); *Wenyin Zhou* (*Lanzhou Jiaotong University*); *Jinjing Xu* (*Lanzhou Jiaotong University*);

61 D-band Directly Coupled Bandpass Filter Based on Micro-coaxial Structure
Xinyao Liu (*Chongqing University*); *Daotong Li* (*Chongqing University*); *Lanlan Yang* (*Chongqing University*); *Dongyi Sui* (*Chongqing University*); *Naoki Shinohara* (*Kyoto University*);

62 A 170–260 GHz Broadband Sub-harmonic Mixer Using Monolithic Integration Technology
Dongfeng Ji (*Nanjing Electronic Devices Institute*); *Kunpeng Dai* (*Nanjing Electronic Devices Institute*); *Yunhan Qin* (*China National Accreditation Service for Conformity Assessment*); *Weibo Wang* (*Science and Technology on Monolithic Integrated Circuits and Modules Laboratory*); *Xuming Yu* (*Science and Technology on Monolithic Integrated Circuits and Modules Laboratory*); *Hongqi Tao* (*Science and Technology on Monolithic Integrated Circuits and Modules Laboratory*);

63 Scattering Clutter Suppression by Means of Spatial and Frequency Filtering in Underwater Lidar Systems
Su Hui Yang (*Beijing Institute of Technology*);

64 Design of a 3.75 GHz Improved Bandpass Filter Based on GaAs IPD Technology
Weikang Zhou (*Northwestern Polytechnical University*); *Liguo Zhou* (*Northwestern Polytechnical University*); *Xianhu Luo* (*Northwestern Polytechnical University*); *Yu Han* (*Northwestern Polytechnical University*); *Chengdong Huang* (*Northwestern Polytechnical University*); *Jiang Jiang* (*Northwestern Polytechnical University*);

65 A 60 GHz Series-fed Microstrip Patch Antenna Array for Millimeter Wave Automotive Radar Application
Yu Han (*Northwestern Polytechnical University*); *Daiyao Zhang* (*Northwestern Polytechnical University*); *Chengdong Huang* (*Northwestern Polytechnical University*); *Jiang Jiang* (*Northwestern Polytechnical University*); *Liguo Zhou* (*Northwestern Polytechnical University*);

66 VTVBrain: A Two-stage Brain Encoding Model for Decoding Key Neural Responses in Multimodal Contexts
Ya Qi Wang (*Tongji University*); *Renzhou Gui* (*Tongji University*); *Wen Bo Zhu* (*Tongji University*); *Yu Miao Yin* (*Tongji University*); *Mei Song Tong* (*Tongji University*);

67 A Dual-function Quasi-static Magnetic Device with Cloaking and Concentrating Functions Simultaneously
Hanchuan Chen (*Taiyuan University of Technology*); *Yichao Liu* (*Taiyuan University of Technology*); *Fei Sun* (*Taiyuan University of Technology*);

68 Study on Solid State Relay Effect under Electromagnetic Pulse
Xutong Wang (*Northwest Institute of Nuclear Technology*); *Wenbing Wang* (*Northwest Institute of Nuclear Technology*);

Session 2P1a
Quantum Information Physics, Materials and Devices 2

Tuesday PM, April 23, 2024

Room 1 - Yarui

Organized by Yaping Wu, Deyi Fu

Chaired by Yaping Wu, Deyi Fu

13:00 Invited Narrow-gap 2D Semiconductors for Infrared and Terahertz Optoelectronics
Kai Zhang (*Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences*);

13:20 Invited MOCVD Growth of Two-dimensional Semiconductors at Wafer Scale
Yufeng Hao (*Nanjing Unviersity*);

13:40 Non-reciprocal Electric Control of Magnetism in van der Waals Heterostructure Multiferroics
Bo Peng (*University of Electronic Science and Technology of China*);

13:55 Magnetic Manipulation of Excitonic Emission in 2D Antiferromagnet $NiPS_3$
Xingzhi Wang (*Xiamen University*); *Qishuo Tan* (*Boston University*); *Tie Li* (*Xiamen University*); *Xi Ling* (*Boston University*);

14:10 Artificial Kagome Lattices of Shockley Surface States Patterned by Halogen Hydrogen-bonded Organic Frameworks
Ruoting Yin (*University of Science and Technology of China*); *Xiang Zhu* (*University of Science and Technology of China*); *Chuanxu Ma* (*University of Science and Technology of China*); *Tianyi Hu* (*University of Science and Technology of China*); *Lingyun Wan* (*University of Science and Technology of China*); *Yingying Wu* (*University of Science and Technology of China*); *Yifan Liang* (*University of Science and Technology of China*); *Zhengya Wang* (*University of Science and Technology of China*); *Zhen-Lin Qiu* (*Xiamen University*); *Yuan-Zhi Tan* (*Xiamen University*); *Shijing Tan* (*University of Science and Technology of China*); *Qiang Fu* (*University of Science and Technology of China*); *Wei Hu* (*University of Science and Technology of China*); *Bin Li* (*University of Science and Technology of China*); *Z. F. Wang* (*University of Science and Technology of China*); *Jinlong Yang* (*University of Science and Technology of China*); *Bing Wang* (*University of Science and Technology of China*);

14:25 Light Emission from Monolayer Semiconductor Microcavities
Jingzhi Shang (*Northwestern Polytechnical University*);

14:40 Room-temperature Spin Injection in van der Waals Layered GeSe
Xu Li (*Xiamen University*); *Shiming Wu* (*Xiamen University*); *Yaping Wu* (*Xiamen University*); *Zhiming Wu* (*Xiamen University*); *Junyong Kang* (*Xiamen University*);

14:55 Catalytic Growth of Ultralong Graphene Nanoribbons on Insulating Substrates
Bosai Lyu (*Shanghai Jiao Tong University*); *Jiajun Chen* (*Shanghai Jiao Tong University*); *Shuo Lou* (*Shanghai Jiao Tong University*); *Can Li* (*Shanghai Jiao Tong University*); *Lu Qiu* (*Institute for Basic Science*); *Wengen Ouyang* (*Wuhan University*); *Jingxu Xie* (*Shanghai Jiao Tong University*); *Izaac Mitchell* (*Institute for Basic Science*); *Tongyao Wu* (*Shanghai Jiao Tong University*); *Aolin Deng* (*Shanghai Jiao Tong University*); *Cheng Hu* (*Shanghai Jiao Tong University*); *Xianliang Zhou* (*Shanghai Jiao Tong University*); *Peiyue Shen* (*Shanghai Jiao Tong University*); *Saiqun Ma* (*Shanghai Jiao Tong University*); *Zhenghan Wu* (*Shanghai Jiao Tong University*); *Kenji Watanabe* (*National Institute for Materials Science*); *Takashi Taniguchi* (*National Institute for Materials Science*); *Xiaoqun Wang* (*Shanghai Jiao Tong University*); *Qi Liang* (*Shanghai Jiao Tong University*); *Jin-Feng Jia* (*Shanghai Jiao Tong University*); *Michael Urbakh* (*Tel Aviv University*); *Oded Hod* (*Tel Aviv University*); *Feng Ding* (*Institute for Basic Science*); *Shiyong Wang* (*Shanghai Jiao Tong University*); *Zhiwen Shi* (*Shanghai Jiao Tong University*);

15:10 Helicity Dependent Photocurrent and Surface Polarity Detection on Two-dimensional Bi_2O_2Se Nanosheets
Jinling Yu (*Fuzhou University*); *Wenyi Wu* (*Fuzhou University*); *Yonghai Chen* (*Institute of Semiconductors, Chinese Academy of Sciences*); *Shuying Cheng* (*Fuzhou University*); *Ke He* (*Tsinghua University*);

15:30 **Coffee Break**

Session 2P1b
Atomic Quantum Optics

Tuesday PM, April 23, 2024

Room 1 - Yarui

Organized by Shanchao Zhang, Yukai Wu

Chaired by Yukai Wu, Shanchao Zhang

16:00 Invited Experimental Realization of a Multi-purpose Photonic Quantum Memory
Sheng Zhang (*Tsinghua University*); *Jixuan Shi* (*Tsinghua University*); *Yukai Wu* (*Tsinghua University*); *Luming Duan* (*Tsinghua University*); *Yunfei Pu* (*Tsinghua University*);

16:20 Invited High-efficiency Quantum Memory Based on Cold Atoms and Exploration of Its Functions
Yunfei Wang (*South China Normal University*);

16:40 Invited Multipath Light Storage with Orbital Angular Momentum in Cold Atoms
Hong Gao (*Xi'an Jiaotong University*); *Mingtao Cao* (*National Time Service Center, Chinese Academy of Sciences*); *Ying Yang* (*Xi'an Jiaotong University*); *Chengyuan Wang* (*Xi'an Jiaotong University*);

17:00 Invited Observation of Spatiotemporal Single-photon Airy Wavepackets
Jianmin Wang (*Southern University of Science and Technology*); *Ying Zuo* (*Southern University of Science and Technology*); *Xingchang Wang* (*Southern University of Science and Technology*); *Georgios A. Siviloglou* (*Southern University of Science and Technology*); *J. F. Chen* (*Southern University of Science and Technology*);

17:20 Invited Effects of Higher-order Casimir-Polder Interactions on Rydberg Atom Spectroscopy
B. Dutta (*Universite Sorbonne Paris Nord*); *J. C. De Aquino Carvalho* (*Université Sorbonne Paris Nord*); *G. Garcia-Arellano* (*Université Sorbonne Paris Nord*); *P. Pedri* (*Université Sorbonne Paris Nord*); *A. Laliotis* (*Université Sorbonne Paris Nord*); *C. Boldt* (*University of Rostock*); *J. Kaushal* (*University of Rostock*); *Stefan Scheel* (*University of Rostock*);

17:40 Long-lived Memory for Orbital Angular Momentum Quantum States
Ying-Hao Ye (*University of Science and Technology of China*); *Lei Zeng* (*University of Science and Technology of China*); *Wei Zhang* (*University of Science and Technology of China*);

17:55 Invited Dynamical Behaviors of Light in Instantaneously Reconfigurable Electromagnetically Induced Photonic Lattices
Zhaoyang Zhang (*Xi'an Jiaotong University*);

Session 2P2
Deep Learning-enabled Metasurface Design and Autonomous Meta-devices

Tuesday PM, April 23, 2024

Room 2 - Jincheng 3

Organized by Chao Qian, Junsuk Rho

Chaired by Chao Qian

13:00 Invited Autonomous Aeroamphibious Invisibility Cloak with Stochastic-evolution Learning
Chao Qian (*Zhejiang University*); *Yuetian Jia* (*Zhejiang University*); *Zhedong Wang* (*Zhejiang University*); *Jieting Chen* (*Zhejiang University*); *Pujing Lin* (*Zhejiang University*); *Xiaoyue Zhu* (*Zhejiang University*); *Er Ping Li* (*Zhejiang University — UIUC Institute*); *Hongsheng Chen* (*Zhejiang University*);

13:20 Invited Inverse-designed Nanophotonic Structures for Smart Sensing
Sunae So (*Korea University*);

13:40 Invited Structural Colour Metasurfaces Enhanced with Machine Learning for Real-time Refractive Index Sensing
Trevon Badloe (*Pohang University of Science and Technology (POSTECH)*); *Younghwan Yang* (*Pohang University of Science and Technology (POSTECH)*); *Seokho Lee* (*Pohang University of Science and Technology (POSTECH)*); *Junsuk Rho* (*Pohang University of Science and Technology (POSTECH)*);

14:00 Machine Learning Facilitates Rapid Design of Metamaterials
Ruichao Zhu (*Air Force Engineering University*); *Jiafu Wang* (*Air Force Engineering University*); *Yuxiang Jia* (*Air Force Engineering University*); *Yuxi Li* (*Air Force Engineering University*); *Shaojie Wang* (*Air Force Engineering University*); *Zuntian Chu* (*Air Force Engineering University*); *Yina Cui* (*Air Force Engineering University*); *Huiting Sun* (*Air Force Engineering University*); *Shaobo Qu* (*Air Force Engineering University*);

14:15 Resonance for Analog Recurrent Neural Network
Invited
Yurui Qu (*University of Wisconsin*); *Ming Zhou* (*University of Wisconsin*); *Erfan Khoram* (*University of Wisconsin*); *Nanfang Yu* (*Columbia University*); *Zongfu Yu* (*University of Wisconsin-Madison*);

14:35 Deep Learning Enabled Intelligent Spatiotemporal Metasurfaces for Wireless Communications
Xiaoyue Zhu (*Zhejiang University*); *Chao Qian* (*Zhejiang University*); *Hongsheng Chen* (*Zhejiang University*);

14:50 At the Crossroad between Deep Learning and Nanotech-
Invited nology for Photonics
M. Chung (*Swiss Federal Institute of Technology Lausanne (EPFL)*); *Christian Santschi* (*Swiss Federal Institute of Technology Lausanne*); *Olivier J. F. Martin* (*Swiss Federal Institute of Technology Lausanne (EPFL)*);

15:30 **Coffee Break**

16:00 Scattering Engineering with Deep Learning
Invited
Yongxin Jing (*Nanjing University*); *Wei Wang* (*Hong Kong University of Science and Technology (Guangzhou)*); *Yun Lai* (*Nanjing University*);

16:20 Invisible Devices with Natural Materials Designed by Evolutionary Optimization
Bei Wu (*Zhejiang University*); *Shuwen Xue* (*Xiamen University*); *Zhibin Zhang* (*Xiamen University*); *Huanyang Chen* (*Xiamen University*);

16:35 Topology-optimized Plasmonic Nanoantenna for Efficient Single-photon Extraction
Min Chen (*Zhejiang University*); *Lian Shen* (*Zhejiang University*); *Yifei Hua* (*Zhejiang University*); *Zijian Qin* (*Zhejiang University*); *Hongsheng Chen* (*Zhejiang University*); *Huaping Wang* (*Zhejiang University*);

16:50 Radar Deception with Intelligent Time-modulated Metasurface
Wei Zhou (*Zhejiang University*); *Huan Lu* (*Zhejiang University*); *Bin Zheng* (*Zhejiang University*);

17:05 Multispectral Orbital Angular Momentum Holography Based on Metasurface
Weijia Meng (*University of Shanghai for Science and Technology*); *Xinyuan Fang* (*University of Shanghai for Science and Technology*);

17:20 Intelligent Design and Sensing Application of Metasur-
Invited face Devices
Li Gao (*Nanjing University of Posts and Telecommunications*);

Session 2P3
Antenna Designs, Measurements, and Trends for 5G/B5G and Satellite Communications

Tuesday PM, April 23, 2024
Room 3 - Jincheng 2
Organized by Huan-Chu Huang
Chaired by Huan-Chu Huang

13:00 The Myth of QZ Specification in Antenna Test Ranges
Invited
Dau-Chyrh Chang (*Bojay Electronics Co., Ltd*); *Oscar Yan* (*Bojay Electronics Co., Ltd*); *Zhaohu Chen* (*Bojay Electronics Co., Ltd*); *Zhangjin Qin* (*Bojay Electronics Co., Ltd*); *Xu Yin* (*Bojay Electronics Co., Ltd*);

13:20 Toroidal CATR for Applications in 5G and LEO Satel-
Invited lites
Dau-Chyrh Chang (*Bojay Electronics Co., Ltd*); *Oscar Yan* (*Bojay Electronics Co., Ltd*); *Zhaohu Chen* (*Bojay Electronics Co., Ltd*); *Zhangjin Qin* (*Bojay Electronics Co., Ltd*); *Xu Yin* (*Bojay Electronics Co., Ltd*);

13:40 A Large-scale 1-bit Active Reflectarray
Invited
Jinfeng Wei (*University of Electronic Science and Technology of China*); *Yongling Ban* (*University of Electronic Science and Technology of China*);

14:00 Passive Reconfigurable Intelligent Surface (RIS) for En-
Invited hanced Wireless Communications
Cheng-Nan Hu (*Asia Eastern University of Science and Technology*); *Qincheng Li* (*AEUST*); *Po-Yu Ho* (*AEUST*); *Fu-Shun Hsu* (*AEUST*); *K.-C. Chou* (*AEUST*); *W.-J. Cheng* (*Auden Techno. Corp*); *Chao-Hsing Chang* (*AEUST*); *P.-S. Wan* (*AEUST*);

14:20 The Evolution in Phased Array Design and Measure-
Invited ment
Hongbing Sun (*Nanjing Research Institute of Electronics Technology*); *Qiang Zhang* (*Nanjing Research Institute of Electronics Technology*); *Shuliang Li* (*Nanjing Research Institute of Electronics Technology*); *Hao Zhou* (*Nanjing Research Institute of Electronics Technology*); *Xiao Hu* (*Science and Technology on Antenna and Microwave Laboratory*);

14:40 Impact Evaluation of External Charging Cables on mm-
Invited Wave OTA Performance
Wei He (*China Academy of Information and Communications Technology*); *Lei Chen* (*China Academy of Information and Communications Technology*); *Siyang Sun* (*China Academy of Information and Communications Technology*);

15:00 Co-designed Millimeter-wave and Microwave Antennas for 5G and B5G Handsets
Huan-Chu Huang (*Visionox Technology, Inc.*); *Jie Wu* (*Visionox Technology, Inc.*); *Shuang Cui* (*Visionox Technology, Inc.*);

15:30 **Coffee Break**

16:00 Invited A Frequency Sensor of Reconfigurable Intelligent Metasurface for 5G Communication
Yixin Cui (*China University of Geosciences*); *Linyan Guo* (*China University of Geosciences, Beijing*);

16:20 The High Gain Ka-band LTCC Antenna Design for Electronically Steered Array
Su-Wei Chang (*TMY Technology Inc.*); *Chun-Cheng Chan* (*TMY Technology Inc.*); *Brian Laughlin* (*Celanese Corporation*); *Jiun-Wei Wu* (*TMY Technology Inc.*); *Chih-Hsien Wu* (*TMY Technology Inc.*);

16:35 Status and Enhancement of 5G-A Millimeter Wave Wireless Devices RF Testing
Yuanyuan Liu (*China Academy of Information and Communications Technology*); *Xiangqian Sun* (*China Academy of Information and Communications Technology*); *Rui Zhang* (*China Academy of Information and Communications Technology*); *Siyang Sun* (*China Academy of Information and Communications Technology*); *Yu Zhou* (*China Academy of Information and Communications Technology*);

16:50 The Multi-beam Technology in LEO Satellite Communications
Hongbing Sun (*Nanjing Research Institute of Electronics Technology*); *Qiang Zhang* (*Nanjing Research Institute of Electronics Technology*); *Lei Sun* (*Nanjing Research Institute of Electronics Technology*); *Daqun Yu* (*Nanjing Research Institute of Electronics Technology*); *Jianxin Li* (*Nanjing Research Institute of Electronics Technology*); *Hua Wang* (*Nanjing Research Institute of Electronics Technology*);

17:05 A Novel Dual-band and Broadband Antenna
Yihan Zhu (*Anhui University*); *Zhongxiang Zhang* (*Hefei Normal University*); *Xingang Ren* (*Anhui University*);

17:20 A Dual-band Dual-polarized Antenna for 5G Base Station
Weiliang Zeng (*Guangdong Polytechnical Normal University*); *Junyu Zhou* (*Guangdong Polytechnical Normal University*); *Zixuan Liu* (*South China Normal University*); *Junlong Li* (*Shanwei Institute of Technology*); *Hui Liu* (*Guangdong Polytechnical Normal University*);

17:35 Millimeter-wave Antenna-on-display (AoD) Design on the Encapsulation Layer of an OLED Display for 5G and B5G Smartphones
Huan-Chu Huang (*Visionox Technology Inc.*); *Jie Wu* (*Visionox Technology, Inc.*); *Shuang Cui* (*Visionox Technology, Inc.*); *Yiming Jia* (*Visionox Technology Inc.*);

Session 2P4a
Wave Phenomena in Space/Time Varying Metamaterials/Metasurfaces 2

Tuesday PM, April 23, 2024

Room 4 - Jincheng 1

Organized by Fu Liu, Huanan Li, Xuchen Wang
Chaired by Fu Liu, Xuchen Wang

13:00 Invited Photonic Discrete Time Crystals and Quasicrystals
Bumki Min (*Korea Advanced Institute of Science and Technology (KAIST)*);

13:20 Invited On-demand Dynamic Polarization Transformer with Space-time-varying Metasurface
Qi Hu (*Nanjing University*); *Ke Chen* (*Nanjing University*); *Junming Zhao* (*Nanjing University*); *Yijun Feng* (*Nanjing University*);

13:40 Invited Pseudo-random Noise Sequence-based Time-modulated Metasurfaces for Wireless Applications
Xiaoyi Wang (*Tongji University*);

14:00 Temporal Effective Medium for Frequency-dispersive Acoustic Metamaterials
Xinghong Zhu (*Hong Kong University of Science and Technology*); *Hong-Wei Wu* (*Anhui University of Science and Technology*); *Ziling Liu* (*Anhui University of Science and Technology*); *Jensen Li* (*Hong Kong University of Science and Technology*);

14:15 Double Phase Transition in a 1D Waveguide Array with Time-modulated Non-Hermitian Floquet Defect
Zhenzhi Liu (*Xi'an Jiaotong University*); *Ke Li* (*Xi'an Jiaotong University*); *Fu Liu* (*Xi'an Jiaotong University*);

14:30 Unidirectional Amplification with Acoustic Non-Hermitian Space-time Varying Metamaterial
Xinhua Wen (*The Hong Kong University of Science and Technology*); *Xinghong Zhu* (*Hong Kong University of Science and Technology*); *Alvin Fan* (*Hong Kong University of Science and Technology*); *Wing Yim Tam* (*Hong Kong University of Science and Technology*); *Jie Zhu* (*Hong Kong Polytechnic University*); *Hong Wei Wu* (*Hong Kong University of Science and Technology*); *Fabrice Lemoult* (*ESPCI ParisTech*); *Mathias Fink* (*Universite Denis Diderot Paris 7*); *Jensen Li* (*Hong Kong University of Science and Technology*);

14:45 Analysis and Design of Vector Holographic Metasurfaces
Alexandros Pitilakis (*Aristotle University of Thessaloniki*); *Odysseas Tsilipakos* (*National Hellenic Research Foundation*); *Anna C. Tasolamprou* (*National and Kapodistrian University of Athens*); *Angeliki Tsioliaridou* (*Foundation for Research and Technology Hellas, Institute of Computer Science*); *Nikolaos V. Kantartzis* (*Aristotle University of Thessaloniki*); *Sotiris Ioannidis* (*Foundation for Research and Technology Hellas, Institute of Computer Science*); *Christos Liaskos* (*Foundation for Research and Technology Hellas, Institute of Computer Science*); *Maria Kafesaki* (*Research and Technology Hellas (FORTH)*);

15:00 Temporal Discontinuity Meets Bianisotropic Materials
Mohammad Sajjad Mirmoosa (*University of Eastern Finland*); *M. H. Mostafa* (*Aalto University*); *A. Norrman* (*University of Eastern Finland*); *Sergei A. Tretyakov* (*Aalto University*);

15:30 **Coffee Break**

Session 2P4b
Time-modulated Metamaterials and Time-variant Systems

Tuesday PM, April 23, 2024

Room 4 - Jincheng 1

Organized by Jiang Xiong, Hao Hu

Chaired by Jiang Xiong, Hao Hu

16:00 Spontaneous Emission in Photonic Temporal Crystals
Invited
Bumki Min (*Korea Advanced Institute of Science and Technology (KAIST)*);

16:20 Inverse Design of Topological Photonic Time Crystal via
Invited Deep Learning
Yang Long (*Nanyang Technological University*); *Baile Zhang* (*Nanyang Technological University*);

16:40 Disorder-immune Time Edge States
Yukun Yang (*Nanjing University of Aeronautics and Astronautics*); *Hao Hu* (*Nanjing University of Aeronautics and Astronautics*); *Zhuo Li* (*Nanjing University of Aeronautics and Astronautics*);

16:55 Temporal Smith-Purcell Radiation from a Photonic Time Crystal
Juan-Feng Zhu (*Singapore University of Technology and Design*); *Zi-Wen Zhang* (*Peking University*); *Yu-Lu Lei* (*Peking University*); *Chao-Hai Du* (*Peking University*); *Lin Wu* (*Singapore University of Technology and Design (SUTD)*);

17:10 Antireflection in the Spatiotemporal Systems
Youxiu Yu (*Soochow University*);

17:25 Realization of 1D Photonic Time Crystals Based on Dynamic Microwave Circuits
Xudong Zhang (*University of Electronic Science and Technology of China*); *Longji Duan* (*University of Electronic Science and Technology of China*); *Haonan Hou* (*University of Electronic Science and Technology of China*); *Jiang Xiong* (*University of Electronic Science and Technology of China*);

17:40 A New Space-time-coding Metasurface for Joint Multiharmonic Synthesis
Zhangjie Luo (*Southeast University*); *Zhiming Zhang* (*Southeast University*); *Tie Jun Cui* (*Southeast University*);

Session 2P5a
Optics for AR, VR, and MR

Tuesday PM, April 23, 2024

Room 5 - Yingbin

Organized by Youmin Wang

Chaired by Youmin Wang

13:00 3D Holography Based on D2NN with Random Phase Image Target
Haoqian Pu (*Tongji University*); *Ruotong Wang* (*Tongji University*); *Kai Chen* (*Tongji University*); *Junhe Zhou* (*Tongji University*);

13:15 Polarization Based Optical Microscopy for Better Resolution
Nagendra Prasad Yadav (*Hubei Polytechnic University*); *Guozhen Hu* (*Huanggong Normal University*); *Xiaofeng Cai* (*Hubei Polytechnic University*); *Zhengpeng Yao* (*Hubei Polytechnic University*); *Peng Yang* (*Hubei Polytechnic University*);

13:30 Study and Research of Milky Shine on the Surface of Zisha Pot by Microscopy Imaging
Nagendra Prasad Yadav (*Hubei Polytechnic University*); *Guozhen Hu* (*Hubei Polytechnic University*); *Zhengpeng Yao* (*Hubei Polytechnic University*);

13:45 Towards Color Metasurface Hologram with High Integration and Fidelity
Yimin Ding (*Pennsylvania State University*); *Lidan Zhang* (*Pennsylvania State University*); *Xi Chen* (*Pennsylvania State University*); *Yao Duan* (*Pennsylvania State University*); *Xuexue Guo* (*Pennsylvania State University*); *Md Tarek Rahman* (*Pennsylvania State University*); *Xingjie Ni* (*Pennsylvania State University*);

14:00 Event Based Camera and Applications in Eye Tracking
Carmen Wang (*Meta Reality Labs*); *Chris Aholt* (*Meta Reality Labs*); *Timo Stoffregen* (*Meta Reality Labs*);

14:15 Introduction of the Digitally-controlled Electrochromic Materials (DC-EC) and the Usecases in the AR Field
York Chen (*Suzhou Bear Sunny Technologies Inc.*);

14:30 MEMS for Eye Tracking
Francesco LaRocca (*Meta, Facebook*); *Joonyoung Yu* (*Meta, Facebook*); *Ehsan Vadiee* (*Meta, Facebook*); *Youmin Wang* (*Meta, Facebook*);

14:45 AR Display Challenges and Outlook
Guohua Wei (*Meta, Facebook*); *Youmin Wang* (*Meta, Facebook*);

15:30 **Coffee Break**

Session 2P5b
Emerging Biomedical Applications of Optical Imaging and Spectroscopy

Tuesday PM, April 23, 2024

Room 5 - Yingbin

Organized by Xusan Yang, Shuo Chen

Chaired by Xusan Yang, Shuo Chen

16:00 Point-of-care Multiplexed Colorimetric Test on a Lensless CMOS Image Sensor for Chronic Kidney Disease Biomarkers
Xinyue Hu (*McGill University*); *Laura Camila Penuela Cardenas* (*McGill University*); *Young Chae Han* (*McGill University*); *Nassib Hassouna* (*McGill University*); *Ngoc Lan Anh Huynh* (*McGill University*); *Weiyi Wan* (*McGill University*); *Túlio De Lima Pedrosa* (*McGill University*); *Sebastian Wachsmann-Hogiu* (*McGill University*);

16:15 Multi-branch Attention Raman Network and Surface-enhanced Raman Spectroscopy for Neurological Disorders Classification
Changchun Xiong (*Ningbo University*); *Qingshan Zhong* (*Ningbo University*); *Yudong Yao* (*Ningbo University*); *Wei Qian* (*Ningbo University*); *Xi Mei* (*Ningbo University*); *Shanshan Zhu* (*Ningbo University*);

16:30 Multifocal Fluorescence Video-rate Imaging of Centimetre-wide Arbitrarily Shaped Brain Surfaces at Micrometric Resolution
Xiaofei Han (*Tsinghua University*); *Hao Xie* (*Tsinghua University*);

16:45 Identifying Osteoporosis in Humans with Hip Fractures Using Raman Spectroscopy
Keren Chen (*Northeastern University*); *Chunguang Yao* (*Northeastern University*); *Mengya Sun* (*Northeastern University*); *Qiang Li* (*The Fifth People's Hospital of Foshan*); *Zhaoxin Luo* (*The Fifth People's Hospital of Foshan*); *Yifeng Lan* (*The Fifth People's Hospital of Foshan*); *Yangxin Chen* (*The Fifth People's Hospital of Foshan*); *Shuo Chen* (*Northeastern University*);

17:00 Simultaneous Multimodal Optical Coherence and Three-photon Microscopy of the Mouse Brain in vivo Using a Single OPA Laser
Xusan Yang (*Institute of Physics, Chinese Academy of Science*);

17:15 Fast and Non-invasive Fundus Angiography Based on Programmable Hyperspectral Imaging
Yuetian Ren (*Northeastern University*); *Shuo Chen* (*Northeastern University*);

17:30 Single Molecule Localization Microscopy: From Single Cell Structural Imaging to High Throughput Functional Imaging
Yiming Li (*Southern University of Science and Technology*);

17:45 Focusing through Scattering Media and Its Application in High-resolution Microscopic Imaging and Optical Manipulation
Tong Peng (*Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences*); *Runze Li* (*Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences*); *Dan Dan* (*Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences*); *Meiling Zhou* (*Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences*); *Chen Bai* (*Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences*); *Junwei Min* (*Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences*); *Baoli Yao* (*Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences*);

18:00 On the Nitinol Hypotube Surface Performance by 1030 nm Femtosecond Laser Cutting under Different Protective Gas Atmospheres
Zhiwei Yang (*Yangtze River Delta Physics Research Center*); *Yunfeng Song* (*Yangtze River Delta Physics Research Center*); *Tiangang Xu* (*Yangtze River Delta Physics Research Center*); *Ziyuan Li* (*Yangtze River Delta Physics Research Center*); *Lan Chen* (*Jiangsu University*); *Chengrong Cao* (*Medical and Applied Physics Platform, Institute of Physics, CAS*); *Xusan Yang* (*Institute of Physics, Chinese Academy of Science*);

Session 2P6a
Optical Skyrmions 1

Tuesday PM, April 23, 2024

Room 6 - Huanhua

Organized by Yijie Shen, Peng Shi

Chaired by Yijie Shen, Peng Shi

13:00 Topological Plasmonics: Ultrafast Vector Movies of Plas-
Keynote monic Skyrmions on the Nanoscale
Harald W. Giessen (*University of Stuttgart*); *Tim Davis* (*University of Stuttgart*); *Frank Meyer zu Heringdorf* (*University of Duisburg-Essen*); *Bettina Frank* (*University of Stuttgart*); *David Janoschka* (*University of Duisburg-Essen*); *Pascal Dreher* (*University of Duisburg-Essen*);

13:30 Invited The Hidden Spin-momentum Locking and Topological Defects in Unpolarized Light Fields
Peng Shi (*Shenzhen University*); *Xiao-Cong Yuan* (*Shenzhen University*);

13:50 Multidimensional Optical Singularities in Photonic Microstructures: A Symmetry Point of View
Jie Yang (*Airforce Engineering University*); *Xuezhi Zheng* (*KU Leuven*); *Jiafu Wang* (*Air Force Engineering University*); *Tie Jun Cui* (*Southeast University*);

14:05 Near-field Characterization and Manipulation of Topological Spin Structures of Light
Fanfei Meng (*Great Bay University*); *Luping Du* (*Shenzhen University*); *Xiao-Cong Yuan* (*Shenzhen University*);

14:20 Invited Plasmonic Skyrmions with Bound States in the Continuum
Zhen Liao (*Nanjing University of Posts and Telecommunications*); *Guoqing Luo* (*Hangzhou Dianzi University*); *Leilei Liu* (*Nanjing University of Posts and Telecommunications*);

14:40 Invited Photonic Spin-orbit Coupling in Planar and Concave Optical Microcavities
Feng Li (*Xi'an Jiaotong University*);

15:00 Invited Periodic Dynamics of Optical Skyrmion Lattices Driven by Symmetry
Zhenwei Xie (*Shenzhen University*);

15:20 Plasmonic Twistronics: Discovery of Plasmonic Skyrmion Bags
Julian Schwab (*University of Stuttgart*); *Alexander Neuhaus* (*University of Duisburg-Essen*); *Pascal Dreher* (*University of Duisburg-Essen*); *Shai Tsesses* (*Technion-Israel Institute of Technology*); *Anant Mantha* (*University of Stuttgart*); *Florian Mangold* (*University of Stuttgart*); *Bettina Frank* (*University of Stuttgart*); *Guy Bartal* (*Technion-Israel Institute of Technology*); *Frank-J. Meyer Zu Heringdorf* (*University of Duisburg-Essen*); *Timothy J. Davis* (*The University of Melbourne*); *Harald W. Giessen* (*University of Stuttgart*);

15:35 **Coffee Break**

Session 2P6b
Optical Skyrmions 2

Tuesday PM, April 23, 2024

Room 6 - Huanhua

Organized by Luping Du, Xiao-Cong Yuan

Chaired by Yijie Shen, Peng Shi

16:00 Invited Pico-Metric Displacement Sensing by Photonic Spin Skyrmions
Aiping Yang (*Dongguan University of Technology*); *Luping Du* (*Shenzhen University*); *Xiao-Cong Yuan* (*Shenzhen University*);

16:20 Invited Sub-atomic Metrology with Topologically Structured Light
Nikolay I. Zheludev (*University of Southampton & Nanyang Technological University*);

16:40 Invited Quantum Skyrmions: Linking Entanglement to Topology
Pedro Ornelas (*University of the Witwatersrand*); *Isaac Nape* (*University of the Witwatersrand*); *Robert De Mello Koch* (*University of the Witwatersrand*); *Andrew Forbes* (*University of the Witwatersrand*);

17:00 Invited Observation of Skyrmionic Textures in Toroidal Electromagnetic Pulses
Ren Wang (*University of Electronic Science and Technology of China*); *Bing-Zhong Wang* (*University of Electronic Science and Technology of China*); *Nikolay I. Zheludev* (*University of Southampton & Nanyang Technological University*); *Yijie Shen* (*Nanyang Technological University*);

17:20 Invited Tailoring Highly Confined Electric-field Based Optical Skyrmions
Jian Chen (*University of Shanghai for Science and Technology*); *X. Shen* (*University of Shanghai for Science and Technology*); *Y. Zeng* (*University of Shanghai for Science and Technology*); *Qiwen Zhan* (*University of Shanghai for Science and Technology*);

17:40 Invited Conversion of Optical Skyrmion Driven by Synthetic Magnetic Fields
Junhui Jia (*Jinan University*); *Jianbin Ren* (*Jinan University*); *Shiwen Zhou* (*Jinan University*); *Shenhe Fu* (*Jinan University*);

18:00 Invited Synthesis and Characterization of Spin-orbit States: From Digital Devices to Geometric Phase and Nonlinear Toolkits
Zhi-Han Zhu (*Harbin University of Science and Technology*); *Carmelo Rosales-Guzmán* (*Harbin University of Science and Technology*); *Yijie Shen* (*Nanyang Technological University*);

18:20 Direct Generation of Skyrmions from Laser Cavity and Their Applications in Material Processing
A. Srinivasa Rao (*Chiba University*); *Rihito Tamura* (*Chiba University*); *Praveen Kumar* (*IIT (BHU)*); *William R. Kerridge-Johns* (*Chiba University*); *Takashige Omatsu* (*Chiba University*);

Session 2P7a
New Trends in Nonlinear Optics and Emerging Platforms for The Generation of Complex Light

Tuesday PM, April 23, 2024

Room 7 - Xiling

Organized by Goëry Genty, Massimo Giudici

Chaired by Goëry Genty, Massimo Giudici

13:00 Machine Learning Control of Ultrafast Pulse Propagation Dynamics
Invited
Goëry Genty (*Tampere University*); *Mathilde Hary* (*Tampere University*); *Lauri Salmela* (*Tampere University*); *Mehdi Mabed* (*Université Bourgogne Franche-Comté CNRS UMR 6174*); *Andrei Ermolaev* (*Université Bourgogne Franche-Comté CNRS UMR 6174*); *John M. Dudley* (*Université Bourgogne Franche-Comté CNRS UMR 6174*);

13:20 Polarization Domain Walls in Strong Birefringent Fiber Resonators
Ning Wang (*China University of Geosciences*); *Tianye Huang* (*China University of Geosciences*); *Jianxing Pan* (*China University of Geosciences*); *Chaoyu Xu* (*China University of Geosciences*); *Gang Xu* (*Huazhong University of Science and Technology*); *Zhichao Wu* (*China University of Geosciences*); *Xiang Li* (*China University of Geosciences*); *Jie Tu* (*Optics Valley Technology Co., Ltd.*); *Huang Yu* (*Fiberhome Fujikura Optic Technology Co., Ltd.*); *Zuowei Yin* (*China University of Geosciences*); *Yin Jie* (*China University of Geosciences*); *Bao Huang* (*Wuhan Raycus Fiber Laser Technologies Co., Ltd.*); *Jing Zhang* (*China University of Geosciences*);

13:35 Scalable and Autonomous Photonic Neural Networks
Invited
Adria Grabulosa (*Université Franche-Comté CNRS UMR 6174*); *Anas Skalli* (*Université Franche-Comté CNRS UMR 6174*); *Johnny Moughames* (*Université Franche-Comté CNRS UMR 6174*); *Xavier Porte* (*University of Strathclyde*); *James Lott* (*Technische Universität Berlin*); *Stephan Reitzenstein* (*Technische Universität Berlin*); *Daniel Brunner* (*Université Franche-Comté CNRS UMR 6174*);

13:55 Reservoir Computing-based Advance Warning of Extreme Events
Tao Wang (*Xidian University*); *H. Zhou* (*Xidian University*); *Q. Fang* (*Hangzhou Dianzi University*); *Y. Han* (*Xidian University*); *X. Guo* (*Xidian University*); *Y. Zhang* (*Xidian University*); *C. Qian* (*Zhejiang University*); *H. Chen* (*Zhejiang University*); *S. Barland* (*Université Côte d'Azur*); *S. Xiang* (*Xidian University*); *G. L. Lippi* (*Université Côte d'Azur*);

14:10 On-chip Pulse Pattern Generation and Fiber Propagation for Multidimensional Wave-packet Control
Invited
Alexis Bougaud (*Université de Limoges*); *Van-Thuy Hoang* (*Université de Limoges*); *Bruno P. Chaves* (*Université de Limoges*); *Yassin Boussafa* (*Université de Limoges*); *Lynn Sader* (*Université de Limoges*); *Sébastien Février* (*University of Limoges*); *Vincent Couderc* (*University of Limoges*); *Brent E. Little* (*QXP Technology*); *Sai T. Chu* (*City University of Hong Kong*); *David J. Moss* (*Swinburne University of Technology*); *Roberto Morandotti* (*Institut National de la Recherche Scientifique (INRS-EMT)*); *Benjamin Wetzel* (*XLIM-CNRS UMR 7252*);

14:30 Multimode Fibers for Nonlinear Control of Structured Light
Jiaqi Li (*Tampere University*); *Ines Caceres Pablo* (*Tampere University*); *Francesca Gallazzi* (*Tampere University*); *Zahra Eslami* (*Tampere University*); *Ekaterina Krutova* (*Tampere University*); *Goëry Genty* (*Tampere University*);

14:45 Excitation and Manipulation of Super Cavity Solitons in Multi-stable Passive Kerr Resonators
Invited
Pengxiang Wang (*Huazhong University of Science and Technology*); *Jianxing Pan* (*China University of Geosciences*); *Tianye Huang* (*China University of Geosciences*); *Carlos Mas-Arabi* (*Universitat Politècnica de València*); *Gang Xu* (*Huazhong University of Science and Technology*);

15:05 Emerging Trends in Multimode Fiber Optics
Invited
Bertrand Kibler (*Laboratoire Interdisciplinaire Carnot de Bourgogne*); *Karolina Stefanska* (*Laboratoire Interdisciplinaire Carnot de Bourgogne*); *Esteban Serrano* (*Laboratoire Interdisciplinaire Carnot de Bourgogne*); *Damien Bailleul* (*Laboratoire Interdisciplinaire Carnot de Bourgogne*); *Frédéric Smektala* (*Laboratoire Interdisciplinaire Carnot de Bourgogne*); *Karol Tarnowski* (*Wroclaw University of Science and Technology*); *Pierre Béjot* (*Laboratoire Interdisciplinaire Carnot de Bourgogne*);

15:35 **Coffee Break**

16:00 Spatio-temporally Reconfigurable Light in Degenerate Laser Cavities
Invited
A. Bartolo (*Université Côte d'Azur*); *N. Vigne* (*University of Montpellier*); *M. Marconi* (*Université Côte d'Azur*); *Grégoire Beaudoin* (*CNRS, Université Paris Saclay*); *Konstantinos Pantzas* (*CNRS, Université Paris-Saclay*); *L. Gratiet* (*CNRS, Université Paris Saclay*); *Isabelle Sagnes* (*CNRS, Université Paris Saclay*); *A. Garnache* (*University of Montpellier*); *Massimo Giudici* (*Universite Cote d'Azur*);

Session 2P7b
Photonics & Nanophotonics

Tuesday PM, April 23, 2024

Room 7 - Xiling

Chaired by Xianzhong Chen, Aleksandr Sergeevich Shalin

16:20 Longitudinally Variable 3D Optical Polarization Structures Based on Metalens
Yan Li (*Heriot-Watt University*); *Muhammad Afnan Ansari* (*Heriot-Watt University*); *Hammad Ahmed* (*Heriot-Watt University*); *Ruoxing Wang* (*North China Electric Power University*); *Guanchao Wang* (*Heriot-Watt University*); *Xianzhong Chen* (*Heriot-Watt University*);

16:35 Silicon Waveguide Cross-sectional Dimension Estimation Based on Effective Refractive Index Extraction
Enge Zhang (*Beijing University of Posts and Telecommunications*); *Xiaoran Zhu* (*Beijing University of Posts and Telecommunications*); *Lei Zhang* (*Beijing University of Posts and Telecommunications*);

16:50 Novel Mechanism for Superscattering in All-dielectric Nanoparticles
Adrià Canós Valero (*University of Graz*); *Hadi K. Shamkhi* (*ITMO University*); *Anton S. Kuprianov* (*Jilin University*); *Thomas Weiss* (*University of Graz*); *Vjaceslavs Bobrovs* (*Riga Technical University*); *Yuri S. Kivshar* (*Australian National University*); *Alexander Sergeevich Shalin* (*Moscow Institute of Physics and Technology*);

17:05 Irradiation Effects of Gallium Ions on MoS_2 Field Effect Transistors
Yu Zhang (*University of Electronic Science and Technology of China*); *Yazhou Wei* (*University of Electronic Science and Technology of China*); *Feiliang Chen* (*University of Electronic Science and Technology of China*); *Mo Li* (*University of Electronic Science and Technology of China*); *Jian Zhang* (*University of Electronic Science and Technology of China*);

17:20 Neuromorphic Networks with Exciton Polariton Lattices
Evgeny S. Sedov (*Westlake University*); *Alexey V. Kavokin* (*Westlake University*);

17:35 MEMS-based Generalized Computational Mid-infrared Spectrometer
Heng Chen (*Shanghai University*); *Jing Zhou* (*Shanghai University*); *Hui Zhang* (*The Hong Kong Polytechnic University*); *Nan Wang* (*Shanghai University*); *Yiming Ma* (*Shanghai University*);

17:50 Autoencoder-denoised MEMS-based Computational Spectrometer
Jing Zhou (*Shanghai University*); *Hui Zhang* (*The Hong Kong Polytechnic University*); *Heng Chen* (*Shanghai University*); *Nan Wang* (*Shanghai University*); *Yiming Ma* (*Shanghai University*);

18:05 Terahertz Nearly Perfect-absorption Using Graphene-hBN Configuration
Muhammad Imran (*Shenzhen University*); *Muhyiddeen Yahya Musa* (*Audu Bako College of Agriculture Dambatta*);

Session 2P8
Thermal Radiation: Principles, Progress, and Potentials 2

Tuesday PM, April 23, 2024

Room 8 - Guixiang

Organized by Bai Song, Kezhang Shi

Chaired by Bai Song, Kezhang Shi

13:00 Keynote Near-field Radiative Heat Transfer — A Personal Account and Its Recent Development
Jianbin Xu (*The Chinese University of Hong Kong*); *Yungui Ma* (*Zhejiang University*);

13:30 Invited Photon Transport by Nonequilibrium Green's Functions
Jian-Sheng Wang (*National University of Singapore*);

13:50 Invited Manipulation of Radiative Heat Transfer with Hyperbolic Materials
Ceji Fu (*Peking University*);

14:10 Invited Photonic p-n Junction: Physics and Potential Applications
Junming Zhao (*Harbin Institute of Technology*); *Deyu Xu* (*Harbin Institute of Technology*);

14:30 Invited Modulating Near-field Thermal Radiation through Temporal Drivings: A Quantum Many-body Theory
Gaomin Tang (*Graduate School of China Academy of Engineering Physics*);

14:50 Invited Thermal Radiation Based on Quantum Phases
Cheng-Long Zhou (*Harbin Institute of Technology*); *Xin-Yu Jia* (*Harbin Institute of Technology*); *Yong Zhang* (*Harbin Institute of Technology*); *Hongliang Yi* (*Harbin Institute of Technology*);

15:10 Invited Heat-assisted Detection and Ranging
Fanglin Bao (*Purdue University*); *Xueji Wang* (*Purdue University*); *Shree Hari Sureshbabu* (*Purdue University*); *Gautam Sreekumar* (*Michigan State University*); *Liping Yang* (*Purdue University*); *Vaneet Aggarwal* (*Purdue University*); *Vishnu N. Boddeti* (*Michigan State University*); *Zubin Jacob* (*Purdue University*);

15:30 **Coffee Break**

16:00 Invited Dynamic and Steady-state Thermal Nonreciprocity in Two-port and Three-port Systems
Ying Li (*Zhejiang University*);

16:20 Invited Tailoring Thermal Radiation Based on Topological Photonic Structures
Boxiang Wang (*Shanghai Jiao Tong University*);

16:40 Invited Experimental Demonstration of Enhanced Near-field Radiative Heat Transfer between Dielectric-organic Multilayers
Lu Lu (*Hubei University of Technology*); *Qiang Cheng* (*Huazhong University of Science and Technology*);

17:00 Invited Near-field Radiative Heat Transfer between Hyperbolic Materials
Xiaohu Wu (*Shandong Institute of Advanced Technology*);

17:20 Invited In-plane Phonon Polariton Thermal Conduction: A Combined Ellipsometric Measurements and Multiscale Simulations
Jia-Yue Yang (*Shandong University*);

17:40 Extraordinary Tunability of Thermal Emissivity with Semiconductor Quantum Dots
Yu Gu (*Nanjing University of Science and Technology*);

17:55 Isotope Effect on the Casimir Force
Lanyi Xie (*Peking University*); *Fuwei Yang* (*Peking University*); *Bai Song* (*Peking University*);

18:10 Tunable Near-field Radiative Heat Transfer between Anisotropic Magneto-optical Metasurfaces
Bo Zhang (*Huazhong University of Science and Technology*); *Zixue Luo* (*Huazhong University of Science and Technology*); *Qiang Cheng* (*Huazhong University of Science and Technology*);

Session 2P9
Non-Hermitian and Topological Phenomena with Electromagnetic Waves

Tuesday PM, April 23, 2024

Room 9 - Xinyu

Organized by Luqi Yuan, Haoran Xue

Chaired by Luqi Yuan, Baile Zhang

13:00 Invited 3D Magnetic Topological Photonic Crystals
Baile Zhang (*Nanyang Technological University*);

13:20 Invited Non-Hermitian Modulated Topological Modes in Optical Waveguides
Wange Song (*Nanjing University*); *Shengjie Wu* (*Nanjing University*); *Tao Li* (*Nanjing University*);

13:40 Invited Continuum of Bound States in a Non-Hermitian Model
Yidong Chong (*Nanyang Technological University*); *Qiang Wang* (*Nanyang Technological University*); *Changyan Zhu* (*Nanyang Technological University*); *Xu Zheng* (*Nanyang Technological University*); *Haoran Xue* (*The Chinese University of Hong Kong*); *Baile Zhang* (*Nanyang Technological University*);

14:00 Invited Scattering Extremizations in Momentum Space
Wei Liu (*National University of Defense Technology*);

14:20 Invited Nonlinear Higher-order Topological States and Higher-order Topological Solitons
Yiqi Zhang (*Xi'an Jiaotong University*); *Yaroslav V. Kartashov* (*Institute of Spectroscopy, Russian Academy of Sciences*);

14:40 Invited Observation of Time-reversal Photonic Topological Anderson Insulators
Xiao-Dong Chen (*Sun Yat-Sen University*);

15:00 Invited Observation of the Photonic Floquet Skin-topological Effect
Zhaoju Yang (*Zhejiang University*);

15:20 Invited Non-Hermitian Skin Effects in Higher-dimensional Systems
Mengying Hu (*Fudan University*); *Kun Ding* (*Fudan University*);

15:40 **Coffee Break**

16:00 Invited Anti-parity-time Symmetry in Integrated Topological Photonics
Fei Gao (*Zhejiang University*);

16:20 Invited Non-Hermitian Control on Floquet Topological States
Weiwei Zhu (*Ocean University of China*);

16:40 Invited Observation of Momentum-gap Topology of Light
Yihao Yang (*Zhejiang University*);

17:00 Invited Nonlinearity Enabled Higher-order Exceptional Point
Meng Xiao (*Wuhan University*);

17:20 Invited Dynamical Detection of Topological Spectral Density
Feng Mei (*Shanxi University*);

17:40 Controllable Flatbands via Non-Hermiticity
Shirong Lin (*City University of Hong Kong*); *Yao Liang* (*City University of Hong Kong*); *Jingcheng Zhang* (*City University of Hong Kong*); *Mu Ku Chen* (*City University of Hong Kong*); *Din Ping Tsai* (*The Hong Kong Polytechnic University*);

17:55 Experimental Observation of Non-Hermitian Antichiral Currents
Yanyan He (*Shanghai Jiao Tong University*); *Rui Ye* (*Shanghai Jiao Tong University*); *Guangzhen Li* (*Shanghai Jiao Tong University*); *Luqi Yuan* (*Shanghai Jiao Tong University*); *Xianfeng Chen* (*Shanghai Jiao Tong University*);

Session 2P10
Interaction of Electromagnetic Waves with Ionized and Complex Media

Tuesday PM, April 23, 2024

Room 10 - Shuliu

Organized by Anatoly A. Kudryavtsev, Chengxun Yuan

Chaired by Anatoly A. Kudryavtsev, Chengxun Yuan

13:00 Numerical Modeling of Energy Dissipation of the Superthermal Electrons in Ionosphere Plasma
Nurken E. Aktaev (*Harbin Institute of Technology*); *Anatoly A. Kudryavtsev* (*Harbin Institute of Technology*); *Chengxun Yuan* (*Harbin Institute of Technology*);

13:15 Effect of EEDF Nonlocality on the Electromagnetic Wave Propagation Characteristics in Dusty Plasma
Kurban M. Rabadanov (*Dagestan State University*); *Anatoly A. Kudryavtsev* (*Harbin Institute of Technology*); *Chengxun Yuan* (*Harbin Institute of Technology*);

13:30 Microwave Diagnostics of Cold Atmospheric Plasma Jets
Chengxun Yuan (*Harbin Institute of Technology*); *Aleksandr M. Astafiev* (*Saint Petersburg Electrotechnical University "LETI"*); *Anatoly A. Kudryavtsev* (*Harbin Institute of Technology*); *Aleksandr S. Chirtsov* (*Saint Petersburg Electrotechnical University "LETI"*);

13:45 Microwave Diagnostics of the Long-lived Atmospheric Afterglow
Aleksandr M. Astafiev (*Saint Petersburg Electrotechnical University "LETI"*); *Chengxun Yuan* (*Harbin Institute of Technology*); *Anatoly A. Kudryavtsev* (*Harbin Institute of Technology*); *Aleksandr S. Chirtsov* (*Saint Petersburg Electrotechnical University "LETI"*);

14:00 Modulation of Microwave Reflection by Grid Electrode DC Glow Discharge
Zhiyong Li (*Harbin Institute of Technology*); *Xingbao Lyu* (*Harbin Institute of Technology*); *Chengxun Yuan* (*Harbin Institute of Technology*); *Zhongxiang Zhou* (*Harbin Institute of Technology*); *Chunfeng Hou* (*Harbin Institute of Technology*); *Anatoly A. Kudryavtsev* (*Harbin Institute of Technology*);

14:15 Effect of Material, Shape and Transmittance of the DC Glow Discharge Grid Anode on Microwave Transport in the Post-anode Plasma
Xingbao Lyu (*Harbin Institute of Technology*); *Chengxun Yuan* (*Harbin Institute of Technology*); *Svetlana V. Avtaeva* (*Harbin Institute of Technology*); *Anatoly A. Kudryavtsev* (*Harbin Institute of Technology*); *Zhongxiang Zhou* (*Harbin Institute of Technology*);

14:30 Effect of Different Discharge Modes of Hollow Cathode Discharge on Electromagnetic Wave Propagation
Qiuyue Zheng (*Harbin Institute of Technology*); *Chengxun Yuan* (*Harbin Institute of Technology*); *Chen Zhou* (*Harbin Institute of Technology*); *Xingbao Lv* (*Harbin Institute of Technology*); *Zhian Hao* (*Harbin Institute of Technology*); *Zhongxiang Zhou* (*Harbin Institute of Technology*); *Anatoly A. Kudryavtsev* (*Harbin Institute of Technology*);

14:45 The Numerical Simulation of a Microwave to Plasma Interaction in the S-band Microwave Pulse Compressor
Vladislav S. Igumnov (*Harbin Institute of Technology*); *Vasily Yu. Kozhevnikov* (*Harbin Institute of Technology*); *Zijian Liu* (*Harbin Institute of Technology*); *Chengxun Yuan* (*Harbin Institute of Technology*);

15:00 Microhollow Cathode Plasma Studies and Effect of Array Structure on Electromagnetic Wave Propagation
Yiru Zhou (*Harbin Institute of Technology*); *Zhian Hao* (*Harbin Institute of Technology*); *Chengxun Yuan* (*Harbin Institute of Technology*); *Chen Zhou* (*Harbin Institute of Technology*); *Zhongxiang Zhou* (*Harbin Institute of Technology*); *Anatoly A. Kudryavtsev* (*Harbin Institute of Technology*);

15:15 A Wave-absorbing Material Composed of Plasma and Electromagnetic Resonant Metasurface
Zhian Hao (*Harbin Institute of Technology*); *Jianfei Li* (*Harbin Institute of Technology*); *Jingfeng Yao* (*Harbin Institute of Technology*); *Xingbao Lyu* (*Harbin Institute of Technology*); *Chengxun Yuan* (*Harbin Institute of Technology*); *Chen Zhou* (*Harbin Institute of Technology*); *Zhongxiang Zhou* (*Harbin Institute of Technology*); *Anatoly A. Kudryavtsev* (*Harbin Institute of Technology*);

15:30 **Coffee Break**

16:00 The Multiband Antenna Tuned by Plasma
Chen Chen (*Harbin Institute of Technology*); *Zijia Chu* (*Harbin Institute of Technology*); *Jianfei Li* (*Harbin Institute of Technology*); *Jingfeng Yao* (*Harbin Institute of Technology*); *Chengxun Yuan* (*Harbin Institute of Technology*); *Vladislav Sergeevich Igumnov* (*Harbin Institute of Technology & National Research Tomsk Polytechnic University*);

16:15 Tunable Bound State in the Continuum in Asymmetrically One-dimensional Photonic Crystal Guided by Surface Plasmon Polariton
Ziyi Liu (*Harbin Institute of Technology*); *Jingfeng Yao* (*Harbin Institute of Technology*); *Chengxun Yuan* (*Harbin Institute of Technology*);

16:30 Numerical Simulation of Assisted Electrode Discharges for Electromagnetic Wave Interactions
Junjie Li (*Harbin Institute of Technology*); *Chen Zhou* (*Harbin Institute of Technology*); *Xingbao Lv* (*Harbin Institute of Technology*); *Chengxun Yuan* (*Harbin Institute of Technology*); *Zhongxiang Zhou* (*Harbin Institute of Technology*); *Anatoly A. Kudryavtsev* (*Harbin Institute of Technology*);

16:45 Research on the Characteristics of Focusing Effect of Electromagnetic Wave in Inhomogeneous Plasma
Jingfeng Yao (*Harbin Institute of Technology*); *Hanlu Fei* (*Harbin Institute of Technology*); *Jianfei Li* (*Harbin Institute of Technology*); *Xin Ye* (*Harbin Institute of Technology*); *Chengxun Yuan* (*Harbin Institute of Technology*); *Zhongxiang Zhou* (*Harbin Institute of Technology*);

17:00 Thomson Scattering of Essentially Non-Gaussian Microwave Beams in Inhomogeneous Magnetized Plasma
Egor D. Gospodchikov (*A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)*); *Timur A. Khusainov* (*A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)*); *Alexander G. Shalashov* (*A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)*);

17:15 Spontaneous Generation and Multiplication of Self-organized Current Structures in an Atmospheric Pressure Glow Discharge in Helium
Ismail Rafatov (*Middle East Technical University*); *Gubad Islamov* (*Middle East Technical University*); *Ender Eylenceoglu* (*Middle East Technical University*);

17:30 Experimental Investigations of Topological States in Plasma Photonic Crystals
Jianfei Li (*Harbin Institute of Technology*); *Jingfeng Yao* (*Harbin Institute of Technology*); *Chengxun Yuan* (*Harbin Institute of Technology*);

17:45 Study on Discharge Characteristics of a Grid Glow Discharge Electromagnetic Wave Absorb Device
Yiqun Ma (*Harbin Institute of Technology*); *Xingbao Lyu* (*Harbin Institute of Technology*); *C. Yuan* (*Harbin Institute of Technology*); *Z. Zhou* (*Harbin Institute of Technology*);

18:00 Measurement of Microwave Propagation in Dusty Plasma with Periodic Structure
Guijiang Liu (*Harbin Institute of Technology*); *Xingbao Lyu* (*Harbin Institute of Technology*); *Chengxun Yuan* (*Harbin Institute of Technology*); *Zhongxiang Zhou* (*Harbin Institute of Technology*); *Jingfeng Yao* (*Harbin Institute of Technology*); *Anatoly A. Kudryavtsev* (*Harbin Institute of Technology*);

Session 2P11
Discharge Plasma in Contact with a Liquid 2

Tuesday PM, April 23, 2024

Room 11 - Xiangyu

Organized by Qiang Chen, Wenjun Ning

Chaired by Qiang Chen, Xiaolong Huang

13:00 Influence of Metal Ions Providing Methods on the Synthesis of Gold Nanoparticles from a Plasma-liquid System
Binhong Wu (*Xiamen University*); *Qiang Chen* (*Xiamen University*);

13:15 Plasma Bubbles in Oil and Their Applications in Sterilization
Chenjie Wang (*Dalian Minzu University*); *Xiaokang Tan* (*Dalian Minzu University*); *Yang Ming* (*Dalian Minzu University*); *Xiang-Jun Liu* (*Dalian Minzu University*); *Hong-Yu Fan* (*Dalian Minzu University*); *Jin-Hai Niu* (*Dalian Minzu University*);

13:30 Plasma-enhanced Electrolysis for Water Activation and Biomedical Applications
Jishen Zhang (*Xi'an Jiaotong University*); *Jiao Lin* (*Xi'an Jiaotong University*); *Renwu Zhou* (*Xi'an Jiaotong University*); *Li Guo* (*Xi'an Jiaotong University*); *Dingxin Liu* (*Xi'an Jiaotong University*); *Mingzhe Rong* (*Xi'an Jiaotong University*);

13:45 How to Make Plasma Technology Achieve the Bulk Treatment of Liquid: A Novel Strategy for Liquid Phase Discharge Initiation
Quanli Wang (*Dalian Maritime University*); *Yanbin Xin* (*Dalian Maritime University*); *Bing Sun* (*Dalian Maritime University*);

14:00 Carbon Fixation with Liquid-phase Plasma
Junchen Lu (*Xiamen University*); *Xianhui Zhang* (*Xiamen University*); *Qiang Chen* (*Xiamen University*);

14:15 Degradation of PFOA by Atmospheric Pressure Three-dimensional Rotating Gliding Arc Plasma
Di Tian (*Beijing Institute of Graphic Communication*); *Jiushan Cheng* (*Beijing Institute of Graphic Communication*); *Mengge Jia* (*Beijing Institute of Graphic Communication*); *Ruoxi Li* (*Beijing Institute of Graphic Communication*); *Zhongwei Liu* (*Beijing Institute of Graphic Communication*); *Qiang Chen* (*Beijing Institute of Graphic Communication*);

14:30 Study on the Cracking of the Heavy Oil Model Compound, n-hexadecane, by Heterogeneous Liquid Pulsed Discharge
Yutong Yang (*Dalian Maritime University*); *Bing Sun* (*Dalian Maritime University*); *Xiaomei Zhu* (*Dalian Maritime University*); *Yanbin Xin* (*Dalian Maritime University*);

14:45 Effect of Gas Flow Rate on Silver Nanoparticles Synthesized by Plasma Electrochemistry
Haochen Shen (*Nanjing University of Science and Technology*); *Jisong Qian* (*Nanjing University of Science and Technology*); *Tangjie Cheng* (*Nanjing University of Science and Technology*); *Yanqiang Cao* (*Nanjing University of Science and Technology*); *Liyong Jiang* (*Nanjing University of Science and Technology*); *Ying Wang* (*Nanjing University of Science and Technology*);

15:00 Ultralong-lasting Plasma Activated Water at Room Temperature: Production and Mechanism
Xiang-Yu Ma (*Chongqing University*); *Cong-Fu Ran* (*Chongqing University*); *Xiong-Feng Zhou* (*Chongqing University*); *Kun Liu* (*Chongqing University*);

15:15 Mechanistic Study on the Interaction between Non-thermal Plasma and Aromatic Compounds in Fuel Oil
Yadi Liu (*Shandong University*); *Xiaojiao Wu* (*Shandong University*); *Hao Sun* (*Institute of Electrical Engineering, Chinese Academy of Sciences*); *Xiaolong Wang* (*Shandong University*); *Tao Shao* (*Institute of Electrical Engineering, Chinese Academy of Sciences*);

15:30 **Coffee Break**

16:00 Investigation of Plasma Bio-Oil Hydrodeoxygenation Mechanism through Molecular Dynamics Simulation
Xiaojiao Wu (*Shandong University*); *Yadi Liu* (*Shandong University*); *Xiaolong Wang* (*Shandong University*);

16:15 Fast Synthesis and Photoluminescent Property Regulation of Carbon Quantum Dots by Gas-liquid Discharges
Yuan Li (*Xi'an Jiaotong University*); *Yaxuan Shi* (*Xi'an Jiaotong University*); *Jing Gao* (*Xi'an Jiaotong University*); *Guan-Jun Zhang* (*Xi'an Jiaotong University*);

16:30 Solution Plasma Processing Multiple Defects of Electrocatalysts
Zongyuan Wang (*Shihezi University*); *Feng Yu* (*Shihezi University*); *Bin Dai* (*Shihezi University*);

16:45 Multiple Defects Activating Lattice Oxygen in Fe, N Co-Doped α-Co(OH)$_2$ for Electrocatalytic Oxygen Evolution Reaction
Qian Yang (*Shihezi University*); *Yaao Li* (*Shihezi University*); *Zongyuan Wang* (*Shihezi University*); *Feng Yu* (*Shihezi University*);

17:00 Cancer-targeting Carbon Quantum Dots Synthesized by Plasma Electrochemical Method for Red Light Activated Photodynamic Therapy
Ruoyu Wang (*Shanghai Jiao Tong University*); *Qing Zhang* (*Shanghai Jiao Tong University*); *Xiaoxia Zhong* (*Shanghai Jiao Tong University*);

17:15 Plasma-enabled Synthesis of Pd/GO Rich in Oxygen-containing Groups and Defects for Highly Efficient 4-nitrophenol Reduction
Xiaonan Du (*Dalian University*); *Hong Li* (*Dalian University*); *Yue Hua* (*Dalian University*); *Lanbo Di* (*Dalian University*); *Xiuling Zhang* (*Dalian University*);

17:30 Research on H_2O_2 Conversion by Water Spray on Circular Electrolysis
Sishu Huang (*Hohai University*); *Chunyang Zhang* (*Hohai University*); *Fei Ding* (*Hohai University*); *Xiang He* (*Hohai University*); *Yongfeng Jiang* (*Hohai University*); *Bingyan Chen* (*Hohai University*);

17:45 Preparation of Pure Acrylic Emulsion by Glow Discharge Electrolysis Plasma and Its Application for the Conservation of Flaking Murals
Qingying Ma (*Northwest Normal University*); *Xiaoyun Fang* (*Northwest Normal University*); *Jie Yu* (*Northwest Normal University*); *Quanfang Lu* (*Northwest Normal University*);

18:00 Study on the Formation Mechanism of OH and H_2O_2 in Liquid Phase Induced by Atmospheric Pressure Plasma Jet with the Introduction of Oxygen
W. Xi (*Hefei Institutes of Physical Science, Chinese Academy of Sciences*); *Y. Hu* (*Hefei Institutes of Physical Science, Chinese Academy of Sciences*); *Y. Lan* (*Hefei Institutes of Physical Science, Chinese Academy of Sciences*); *Cheng Cheng* (*Hefei Institutes of Physical Science, Chinese Academy of Sciences*);

18:15 Gas-liquid Plasma Mutagenesis Breeding and High-yield Apramycin Mutant Strain Screening
Jie Shen (*Institute of Plasma Physics, Chinese Academy of Sciences*); *Qiang Ding* (*Yichang Sanxia Pharmaceutical Co., Ltd.*); *Dongao Li* (*Institute of Plasma Physics, Chinese Academy of Sciences*);

Session 2P12
High Power Microwave, Millimeter-Wave and Terahertz Wave Generation, Transmission and Radiation

Tuesday PM, April 23, 2024

Room 12 - Siji 1

Organized by Jianing Zhao, Liangjie Bi

Chaired by Jianing Zhao, Liangjie Bi

13:00 Invited Research on the V-band Relativistic Diffraction Radiation Oscillator
Biao Hu (*Yangtze Delta Region Institute (Huzhou), University of Electronic Science and Technology of China (UESTC)*); *Tian-Ming Li* (*University of Electronic Science and Technology of China*); *Huihui Wang* (*University of Electronic Science and Technology of China*); *Feng Lan* (*University of Electronic Science and Technology of China*); *Hao Li* (*University of Electronic Science and Technology of China*); *Hai-Yang Wang* (*University of Electronic Science and Technology of China*); *Yi-Hong Zhou* (*University of Electronic Science and Technology of China*); *Jianing Zhao* (*University of Electronic Science and Technology of China*); *Keqiang Wang* (*Yangtze Delta Region Institute (Huzhou), University of Electronic Science and Technology of China (UESTC)*); *Chaoxiong He* (*Yangtze Delta Research Institute (Huzhou) of the University of Electronic Science and Technology of China*);

13:20 Generation of Ultrashort Pulse Sequences Based on the Superradiacne of a Coaxial Relativistic Backward Wave Oscillator Operating at Low Magnetic Field
Renzhen Xiao (*Northwest Institute of Nuclear Technology*); *Renjie Cheng* (*University of Electronic Science and Technology of China*);

13:35 Research on Phase locking Characteristics of Overmoded Extended Interaction Oscillators for High-power THz Radiation
Liangjie Bi (*University of Electronic Science and Technology of China*); *Xinyu Jiang* (*University of Electronic Science and Technology of China*); *Yong Yin* (*University of Electronic Science and Technology of China*); *Hai-Long Li* (*University of Electronic Science and Technology of China*); *Bin Wang* (*University of Science and Technology of China*); *Lin Meng* (*University of Electronic Science and Technology of China*);

13:50 Research on High-power Microwave Radiation System for Multi-port Relativistic Magnetron
Liwei Wu (*University of Electronic Science and Technology of China*); *Hao Li* (*University of Electronic Science and Technology of China*); *Jianing Zhao* (*University of Electronic Science and Technology of China*); *Tian-Ming Li* (*University of Electronic Science and Technology of China*); *Biao Hu* (*University of Electronic Science and Technology of China*); *Hai-Yang Wang* (*University of Electronic Science and Technology of China*); *Yi-Hong Zhou* (*University of Electronic Science and Technology of China*);

14:05 A Compact Relativistic Magnetron with Diffraction Output of TE11 Mode
Chaoxiong He (*Yangtze Delta Research Institute (Huzhou) of the University of Electronic Science and Technology of China*); *Tian-Ming Li* (*University of Electronic Science and Technology of China*); *Renjie Cheng* (*University of Electronic Science and Technology of China*); *Hao Li* (*University of Electronic Science and Technology of China*); *Hai-Yang Wang* (*University of Electronic Science and Technology of China*); *Guangjun Wen* (*Yangtze Delta Region Institute (Huzhou), University of Electronic Science and Technology of China (UESTC)*); *Biao Hu* (*Yangtze Delta Region Institute (Huzhou), University of Electronic Science and Technology of China (UESTC)*); *Yi-Hong Zhou* (*University of Electronic Science and Technology of China*);

14:20 Parallel Phase-locked Relativistic Magnetrons with All Cavity Axial Extraction
Renjie Cheng (*University of Electronic Science and Technology of China*); *Tian-Ming Li* (*University of Electronic Science and Technology of China*); *Renzhen Xiao* (*Northwest Institute of Nuclear Technology*); *Jiaoyin Wang* (*University of Electronic Science and Technology of China*); *Hai-Yang Wang* (*University of Electronic Science and Technology of China*); *Hao Li* (*University of Electronic Science and Technology of China*); *Yi-Hong Zhou* (*University of Electronic Science and Technology of China*); *Biao Hu* (*University of Electronic Science and Technology of China*);

14:35 A Compact Ku-band 24-cavity Relativistic Magnetron with TEM Mode Output
Bin Ding (*National University of Defense Technology*); *Di-Fu Shi* (*National University of Defense Technology*); *Junpu Ling* (*National University of Defense Technology*); *Kunpeng Chen* (*National University of Defense Technology*);

14:50 Research on the Oversized and Compact TE_{01} Mode Bend with Hexagonal Waveguide for High-power Microwave Applications
Keqiang Wang (*University of Electronic Science and Technology of China (UESTC)*); *Chaoxiong He* (*University of Electronic Science and Technology of China*); *Hao Li* (*University of Electronic Science and Technology of China*); *Jianing Zhao* (*University of Electronic Science and Technology of China*); *Tian-Ming Li* (*University of Electronic Science and Technology of China*); *Guangjun Wen* (*University of Electronic Science and Technology of China (UESTC)*); *Hai-Yang Wang* (*University of Electronic Science and Technology of China*); *Biao Hu* (*University of Electronic Science and Technology of China (UESTC)*);

15:05 A Novel Segmented Design Method for Serpentine Shaped Mode Converter
Xinhong Cui (*The Key Laboratory of Advanced Science and Technology on High Power Microwave*); *Xiaoxin Zhu* (*The Key Laboratory of Advanced Science and Technology on High Power Microwave*); *Sen Wang* (*The Key Laboratory of Advanced Science and Technology on High Power Microwave*);

15:20 Design of a Variable Polarizer for High Power Microwave Applications
Yunfei Sun (*National University of Defense Technology*); *Zhenqiang Cao* (*National University of Defense Technology*); *Qiang Zhang* (*National University of Defense Technology*); *Juntao He* (*National University of Defense Technology*);

15:35 **Coffee Break**

16:00 Experimental Analysis of the Promotive Effect of Temperature on the Field Electron Characteristics of Metallic Materials
Nongchao Tan (*National University of Defense Technology*); *Ping Wu* (*Northwest Institute of Nuclear Technology*); *Jun Sun* (*Northwest Institute of Nuclear Technology*); *Wenhua Huang* (*Northwest Institute of Nuclear Technology*);

16:15 The Design of a Sheet Beam Electron Optical System for a Ku Band Continuous Wave Traveling Wave Tube
Pengcheng Yin (*University of Electronic Science and Technology of China*); *Jinchi Cai* (*University of Electronic Science and Technology of China*); *Jin Xu* (*University of Electronic Science and Technology of China*); *Lingna Yue* (*University of Electronic Science and Technology of China*); *Hairong Yin* (*University of Electronic Science and Technology of China*); *Yong Xu* (*University of Electronic Science and Technology of China*); *Guoqing Zhao* (*University of Electronic Science and Technology of China*); *Wenxiang Wang* (*University of Electronic Science and Technology of China*); *Yanyu Wei* (*University of Electronic and Technology of China*);

16:30 K-band Variable Polarization Antenna Based on Waveguide Continuous Transverse Stubs for High-power Microwave Application
Zhenqiang Cao (*National University of Defense Technology*); *Yunfei Sun* (*National University of Defense Technology*); *Qiang Zhang* (*National University of Defense Technology*); *Xuan Liu* (*National University of Defense Technology*); *Guang Yang* (*National University of Defense Technology*); *Juntao He* (*National University of Defense Technology*);

16:45 Research on Radiation Characteristics of Array Antennas in the Time-domain Based on NSGA-II Constrained Multi-objective Algorithm
Xinyu Jiang (*University of Electronic Science and Technology of China*); *Youjie Yan* (*Northwest Institute of Nuclear Technology*); *Kaiyue Zhang* (*Northwest Institute of Nuclear Technology*); *Liangjie Bi* (*University of Electronic Science and Technology of China*); *Lin Meng* (*University of Electronic Science and Technology of China*);

17:00 Experimental Investigation on Time-domain Breakdown Characteristics of Microwave Gas Discharge Tubes
Liangping Chen (*University of Electronic Science and Technology of China*); *Yong Yin* (*University of Electronic Science and Technology of China*); *Shun Deng* (*Chengdu Guoguang Electric Co., Ltd.*); *Hai-Long Li* (*University of Electronic Science and Technology of China*); *Bin Wang* (*University of Science and Technology of China*); *Liangjie Bi* (*University of Electronic Science and Technology of China*); *Lin Meng* (*University of Electronic Science and Technology of China*); *Zhengfeng Xiong* (*Northwest Institute of Nuclear Technology (NINT)*);

17:15 A High Power Stealthy Radome Based on Frequency Selective Surface for Radar Cross Section Reduction
Xuan Liu (*National University of Defense Technology*); *Qiang Zhang* (*National University of Defense Technology*); *Yunfei Sun* (*National University of Defense Technology*); *G. Yang* (*National University of Defense Technology*); *Zhenqiang Cao* (*National University of Defense Technology*); *Chengwei Yuan* (*National University of Defense Technology*);

17:30 An All-metal Cross-slot Multilayer Circular Polarizer Conversion Unit for High-power Microwave Applications
Zhaokun Ma (*National University of Defense Technology*); *Yunfei Sun* (*National University of Defense Technology*); *Juntao He* (*National University of Defense Technology*);

17:45 Simulation of a High-power V-band Transit-time Oscillator under a Low Magnetic Field
Zu Long Chen (*National University of Defense Technology*); *Lei Wang* (*National University of Defense Technology*); *Junpu Ling* (*National University of Defense Technology*); *Lili Song* (*National University of Defense Technology*); *Juntao He* (*National University of Defense Technology*);

18:00 A High Efficiency C-band Relativistic Magnetron with All-cavity Extraction
Kunpeng Chen (*National University of Defense Technology*); *Zeyang Liu* (*National University of Defense Technology*); *Haodong Xu* (*National University of Defense Technology*); *Bin Ding* (*National University of Defense Technology*); *Yu-Wei Fan* (*National University of Defense Technology*);

18:15 Design of S-band High-power Low Sidelobe Horn Antenna Based on Finite Size
Aming Zhao (*University of Electronic Science and Technology of China*); *Hai-Long Li* (*University of Electronic Science and Technology of China*); *Liangjie Bi* (*University of Electronic Science and Technology of China*);

18:30 Suppression of Mode Competition in High-efficiency Phase-locking between High-power Magnetrons
Qiong Zheng (*University of Electronic Science and Technology of China*); *Liangjie Bi* (*University of Electronic Science and Technology of China*); *Hai-Long Li* (*University of Electronic Science and Technology of China*); *Dagui Shen* (*University of Electronic Science and Technology of China*);

Session 2P13a
Scientific Computing and Machine Learning in Subsurface Geophysical Prospecting

Tuesday PM, April 23, 2024

Room 13 - Siji 2

Organized by Decheng Hong, Lei Wang

Chaired by Decheng Hong

13:00 Rapid Simulation of Induction Logging Responses in Biaxial Anisotropic Formations
Ping Qiao (*China University of Petroleum (East China)*); *Zhiqiang Li* (*The 22nd Research Institute of China Electronics Technology Group Corporation*); *Hui Fang* (*The 22nd Research Institute of China Electronics Technology Group Corporation*); *Liwei Li* (*FairOak Technology Inc*); *Jianwen Zhou* (*FairOak Technology Inc*); *Lei Wang* (*China University of Petroleum (East China)*);

13:15 Numerical Investigation of Detecting a Cased Borehole Using Dipole Acoustic LWD from a Nearby Well in Very Slow Formations
Jiayi Zhong (*Chengdu University of Technology*); *Zhen Li* (*Chengdu University of Technology*);

13:30 Fast Computation of Array Induction Logging Responses in Cylindrically Layered Formations
Fuhua Cao (*China University of Petroleum (East China)*); *Zhiqiang Li* (*The 22nd Research Institute of China Electronics Technology Group Corporation*); *Lei Wang* (*China University of Petroleum (East China)*); *Ping Qiao* (*China University of Petroleum (East China)*); *Yueyang Han* (*China University of Petroleum (East China)*); *Kailin Yang* (*China University of Petroleum (East China)*);

13:45 Inversion of Azimuthal Electromagnetic Logging-while-drilling Based on Levenberg-Marquardt Algorithm Assisted by Deep Learning
Zhengming Kang (*Xi'an Shiyou University*); *Haojie Qin* (*Xi'an Shiyou University*);

14:00 Numerical Simulation and Tool Structure Analysis of the Open-loop-half-circle Antenna-based Electromagnetic Logging Methods
Xiaoqiao Liao (*Southwest Petroleum University*); *Zhenguan Wu* (*Southwest Petroleum University*);

14:15 Fast FDTD Modeling of Transient Electromagnetic Logging through Casing
Qingtao Sun (*Eastern Institute of Technology*); *Yunyun Hu* (*Tongji University*);

14:30 An Enhanced BIM Inversion Method for 3-D Targets Imaging
Yunyun Hu (*Tongji University*); *Qingtao Sun* (*Eastern Institute of Technology*); *Mei Song Tong* (*Tongji University*);

14:45 A Forward Modeling for Ultradeep Azimuthal Resistivity Logging in Planar-stratified Formation
Guoyu Li (*Well-tech R&D Institute, China Oilfield Services Limited*); *Xizhou Yue* (*Well-tech R&D Institute, China Oilfield Services Limited*); *Tianlin Liu* (*Well-tech R&D Institute, China Oilfield Services Limited*); *Pengyun Zhang* (*Well-tech R&D Institute, China Oilfield Services Limited*); *Kai Zhao* (*Jilin University*); *Decheng Hong* (*Jilin University*);

15:00 Modified General Reflection/Transmission Coefficients for Electromagnetic Field in Cylindrically Multilayered Medium
Xianghong He (*Guangdong University of Science and Teachnology*); *Xizhou Yue* (*Well-tech R&D Institute, China Oilfield Services Limited*); *Guoyu Li* (*Well-tech R&D Institute, China Oilfield Services Limited*); *Tianlin Liu* (*Well-tech R&D Institute, China Oilfield Services Limited*); *Kai Zhao* (*Jilin University*); *Decheng Hong* (*Jilin University*);

15:30 **Coffee Break**

Session 2P13b
Subsurface Detection and Imaging

Tuesday PM, April 23, 2024

Room 13 - Siji 2

Organized by Hai Liu, Tian Lan

Chaired by Hai Liu, Tian Lan

16:00 Investigation of Glacier Structure on Yulong Snow Mountain Using Low-frequency Ground-penetrating Radar
Tan Qin (*Wuhan University*); *Xu Sun* (*Wuhan University*); *Yudi Pan* (*Wuhan University*);

16:15 Enhanced GPR Inversion Method in Complex Underground Environment
Shiwen Sheng (*Beijing Institute of Technology*); *Xiaopeng Yang* (*Beijing Institute of Technology*); *Tian Lan* (*Beijing Institute of Technology*);

16:30 A Novel DOA Estimation Algorithm Combined Pulse Compression and MUSIC for Underground Target Detection
Chaowen Ju (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Zhuo Zhang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Yixuan Liu* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Xinger Cheng* (*Jilin University*); *Yuchen Luan* (*Aerospace Information Research Institute, Chinese Academy of Sciences*);

16:45 PIRESGAN: Radio Echo Sounding Signal Synthesis with Physic-informed Generative Adversarial Networks
Qian Ma (*Tongji University*); *Tong Hao* (*Tongji University*);

17:00 Advancing Subsurface Imaging: A Novel Deep Learning Approach for Diffraction Separation in GPR Analysis
Xiangyu Wang (*Guangzhou University*); *Hai Liu* (*Guangzhou University*); *Junhong Chen* (*Guangzhou University*);

17:15 Potential of a Dual-polarization Ground Penetrating Radar for Underground Cylinder Diameter Estimation
Bin Zhang (*Guangzhou University*); *Guiquan Yuan* (*Guangzhou University*); *Hai Liu* (*Guangzhou University*); *Feng Ding* (*Guangdong Provincial Academy of Building Research Group Co.,Ltd.*); *Yao Wang* (*Guangzhou University*); *Xu Meng* (*Guangzhou University*);

17:30 Unsupervised Deep Learning Method with MS-SSIM Loss for Clutter Suppression in Ground Penetrating Radar Image
Feifei Hou (*Central South University*); *Mengqi Fang* (*Central South University*); *Hai Liu* (*Guangzhou University*);

17:45 Modelling J-coupling in NMR Spectra at Low and Ultra-low Magnetic Fields
Rifat Gimatdin (*Gebze Technical University*); *Pavel Kupriyanov* (*Gebze Technical University*); *Georgy Mozzhukhin* (*Gebze Technical University*); *Vladimir Chizhik* (*Saint-Petersburg State University*); *Bulat Rameev* (*Gebze Technical University*);

18:00 NQR Detection of Ammonium Nitrate in Partially Shielded Volumes
Georgy Mozzhukhin (*Gebze Technical University*); *Pavel Kupriyanov* (*Gebze Technical University*); *Eren Doğan* (*Gebze Technical University*); *A. Marasli* (*Gebze Technical University*); *B. Çolak* (*Gebze Technical University*); *C. Okay* (*Marmara University*); *Maksut Maksutoğlu* (*Gebze Technical University*); *Sinan Kazan* (*Gebze Technical University*); *Bulat Rameev* (*Gebze Technical University*);

Session 2P14
Remote Sensing of Water and Energy Cycles

Tuesday PM, April 23, 2024

Room 14 - Siji 3

Organized by Hui Lu, Jiancheng Shi

Chaired by Hui Lu, Jiancheng Shi

13:00 Invited Satellite Observations on Energy and Water Cycle over Tibet Plateau
Jiancheng Shi (*National Space Science Center, Chinese Academy of Sciences*);

13:20 A Multi-source Satellite Soil Moisture Fusion Method Considering the Influence of Geographic and Climatic Factors
Yanqing Yang (*Institute of Mountain Hazards and Environment, Chinese Academy of Sciences*); *Wei Zhao* (*Institute of Mountain Hazards and Environment, Chinese Academy of Sciences*); *Tao Ding* (*Institute of Mountain Hazards and Environment, Chinese Academy of Sciences*);

13:35 An Adaptive Physics-embedded Artificial Neural Network Model for Layered Soil Microwave Remote Sensing
Xuyang Bai (*Zhejiang University*); *Kaiqi Chen* (*Zhejiang University*); *Yiwen Fang* (*Zhejiang University/University of Illinois at Urbana-Champaign Institute*); *Shurun Tan* (*Zhejiang University/University of Illinois at Urbana-Champaign Institute*);

13:50 A Hierarchical Reconstruction Framework for the Gap Area of ESA CCI Soil Moisture Product Using Deep Learning Model
Tao Ding (*Institute of Mountain Hazards and Environment, Chinese Academy of Sciences*); *Wei Zhao* (*Institute of Mountain Hazards and Environment, Chinese Academy of Sciences*); *Yanqing Yang* (*Institute of Mountain Hazards and Environment, Chinese Academy of Sciences*); *Tianhao Zhou* (*Institute of Mountain Hazards and Environment, Chinese Academy of Sciences*);

14:05 Optical Measurement of Eastern Rwanda's Wetlands to Assess the Water Quality: Case of Lake Cyohoha North
Gerard Rushingabigwi (*University of Rwanda College of Science and Technology (UR CST)*);

14:20 Representativeness Error Estimation in SSS Products Based on Quadruple Collocation Analysis
Yifan Li (*Qingdao University*); *Xinyu Li* (*Qingdao University*); *Wenlong Bi* (*Qingdao University*); *Ran Yan* (*Qingdao University*); *Meijie Liu* (*Qingdao University*); *Jin Wang* (*Qingdao University*);

14:35 Development of a High-resolution Soil Moisture Product by Merging Multi-source Remote Sensing Data
Hui Lu (*Tsinghua University*);

14:50 A New Cloud and Atmospheric Radiation (CARA Ver1.0) Product
Husi Letu (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Takashi Y. Nakajima* (*Tokai University*); *Run Ma* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Chong Shi* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Dabin Ji* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Huazhe Shang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Liangfu Chen* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Jiancheng Shi* (*National Space Science Center, Chinese Academy of Sciences*);

15:05 A Precipitation Estimation Method by Considering Clouds Microphysical Parameters Based on Observations from Geostationary Satellite
Dabin Ji (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Husi Letu* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Huazhe Shang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Jiancheng Shi* (*National Space Science Center, Chinese Academy of Sciences*);

15:30 **Coffee Break**

16:00 L-band Microwave Propagation in Forested Environment Using Fast Hybrid Method of Full-wave Simulations of Foldy-Lax Multiple Scattering Equations
Jongwoo Jeong (*University of Michigan*); *Leung Tsang* (*University of Michigan*); *Andreas Colliander* (*California Institute of Technology*); *Xiaolan Xu* (*California Institute of Technology*); *Simon H. Yueh* (*California Institute of Technology*);

16:15 Modelling of Microwave Emission from Seasonal Frozen Ground Using Dense Media Radiative Transfer Theory (DMRT)
Lingmei Jiang (*Beijing Normal University*); *Jian Wang* (*Beijing Normal University*);

16:30 Exploring Spaceborne C-band SAR Data Sensitivity on Snow Depth Variability under Artic Tundra Environment
Yuanhao Cao (*University of Waterloo*); *Richard Kelly* (*University of Waterloo*); *Shurun Tan* (*Zhejiang University/University of Illinois at Urbana-Champaign Institute*); *Benoit Montpetit* (*Environment and Climate Change Canada, Climate Research Division*); *Branden Walker* (*Wilfrid Laurier University*); *Philip Marsh* (*Wilfrid Laurier University*); *Wang Wei* (*University of Waterloo*); *Joshua King* (*Environment and Climate Change Canada*);

16:45 Snow Water Equivalent Retrieval from Coupled Radiative Transfer and Hydrology Modelsby Assimilating Active and Passive Microwave Observations
Yiwen Fang (*Zhejiang University/University of Illinois at Urbana-Champaign Institute*); *Yuanhao Cao* (*University of Waterloo*); *Shurun Tan* (*Zhejiang University/University of Illinois at Urbana-Champaign Institute*); *Do Hyuk Kang* (*NOAA Weather Program Office*);

17:00 C-band Polarimetric Backscattering of Snow: A Ground-based Experiment and Model Simulations
Chuan Xiong (*Southwest Jiaotong University*); *Xudong Li* (*Southwest Jiaotong University*); *Wanyi Li* (*Southwest Jiaotong University*); *Haijiao Sun* (*Southwest Jiaotong University*); *Liang Yuan* (*Southwest Jiaotong University*);

Session 2P15a
Integral Equation Methods in Electromagnetics

Tuesday PM, April 23, 2024

Room 15 - Siji 4

Organized by Ran Zhao, Guangshang Cheng

Chaired by Ran Zhao, Guangshang Cheng

13:00 Fast Solution of Array Structures and Platform Using Parametric Model Order Reduction Method
Hanru Shao (*Ningbo University*);

13:15 A Higher-order BEM Discretization Scheme for the EEG Forward Problem
Rui Chen (*Nanjing University of Science and Technology*); *Mengmeng Li* (*Nanjing University of Science and Technology*); *Da-Zhi Ding* (*Nanjing University of Science and Technology*);

13:30 Electromagnetic Modal Analysis for Side-fed Metasurface Antennas (Metantennas)
Ren-Zun Lian (*Xidian University*); *Wen-Bin Fan* (*Xidian University*);

13:45 Characteristic Mode Analysis (CMA) for the Scatterer Excited by a Definite Driver
Ren-Zun Lian (*Xidian University*);

14:00 The Application of VSIE Method with the Continuity Condition for Composite Magnetic Medium-PEC Objects
Jinbo Liu (*Communication University of China*); *Zengrui Li* (*Communication University of China*);

14:15 A Directional Multilevel Green's Function Interpolation Method for Electric Field Integral Equation
Shidong Jiang (*Zhejiang University*); *Hao Gang Wang* (*Zhejiang University*);

14:30 Characteristic Mode Analysis of Plasmonic Composite Nanostructures
Meruyert Khamitova (*King Abdullah University of Science and Technology (KAUST)*); *Ran Zhao* (*University of Electronic Science and Technology of China*); *Doolos Aibek Uulu* (*University of Central Asia (UCA)*); *Hakan Bagci* (*King Abdullah University of Science and Technology (KAUST)*);

14:45 Incorporation of Generalized Sheet Conditions with Normal Field Components into Surface Integral Equation Solvers
Sebastian Celis Sierra (*King Abdullah University of Science and Technology (KAUST)*); *Ran Zhao* (*University of Electronic Science and Technology of China*); *Hakan Bagci* (*King Abdullah University of Science and Technology (KAUST)*);

15:00 An Efficient Numerical Method for Analyzing Quasi-periodic Arrays Using the Theory of Characteristic Modes
Wei Zhou (*Anhui University*); *Guangshang Cheng* (*Auhui University*); *Lixia Yang* (*Anhui University*); *Zhixiang Huang* (*Anhui University*);

15:15 Efficient Simulation Method for Composite Electromagnetic Scattering Characteristics of Urban Buildings and Background Environments
Yu Chen (*Nanjing University of Science and Technology*); *Jihong Gu* (*Nanjing University of Science and Technology*); *Jie Yang* (*Nanjing University of Science and Technology*); *Zhou Cong* (*Nanjing University of Science and Technology*); *Dazhi Ding* (*Nanjing University of Science and Technology*);

15:30 **Coffee Break**

Session 2P15b
Intelligent Computing for Multiscale and Multiphysics Problem

Tuesday PM, April 23, 2024

Room 15 - Siji 4

Organized by Jianwei You, Lianlin Li

Chaired by Jianwei You

16:00 The Brain-controlled Programmable Metasurface Holography
Qiang Xiao (*Southeast University*); *Qian Ma* (*Southeast University*); *Tie Jun Cui* (*Southeast University*);

16:15 Fast Yield Estimation of Metasurface-based Microwave Absorber Using the Neuro-TF Approach
Xiumei Lin (*Southeast University*); *Long Chen* (*Southeast University*); *Jianan Zhang* (*Southeast University*); *Jianwei You* (*Southeast University*);

16:30 Multiperson Vital Signs Sensing Empowered by Space-time-coding Metasurfaces
Xinyu Li (*Southeast University*); *Jingyuan Zhang* (*Southeast University*); *Ze Gu* (*Southeast University*); *Qian Ma* (*Southeast University*); *Jianwei You* (*Southeast University*); *Tie Jun Cui* (*Southeast University*);

16:45 Deep Neural Network Based Predictive Learning Benchmark for Time Domain Electromagnetic Simulation: 1D and 2D Cases
Junming Hou (*Southeast University*); *Xuan Li* (*Southeast University*); *Xiaoyu Chen* (*Southeast University*); *Xiumei Lin* (*Southeast University*); *Xiong Wei Wu* (*Southeast University*); *Jianan Zhang* (*Southeast University*); *Jianwei You* (*Southeast University*);

17:00 Improved Variational Mode Decomposition for Contactless Heartbeat Monitoring
Jingyuan Zhang (*Southeast University*); *Xinyu Li* (*Southeast University*); *Jianwei You* (*Southeast University*);

17:15 Research on Artificial Intelligence-based Three-dimensional Building Reconstruction Technology for Ultra-fast Large-scale Remote Sensing SAR Image Simulation
Guanshen Qi (*Southeast University*); *Weiwei Sun* (*Southeast University*); *Haoyu Jiang* (*Southeast University*); *Haixu Yan* (*Southeast University*); *Tianhao Xia* (*Southeast University*); *Che Liu* (*Southeast University*); *Tie Jun Cui* (*Southeast University*);

17:30 Large-scale Natural Language Model Driven Multi-metasurface Collaboration System
Jiawen Xu (*Peking University*);

17:45 Data-driven Modeling of Plasma Electron Temperature Equation in SAMI2 by Fourier Neural Operator
Yuhong Liu (*Fudan University*); *Jiayu Ma* (*Fudan University*); *Haiyang Fu* (*Fudan University*);

18:00 Magnetoelectric Basic Logic Element for Neuromorphic Computing
Vasilii A. Misilin (*Yaroslav-the-Wise Novgorod State University*); *Viktor A. Kiselev* (*Yaroslav-the-Wise Novgorod State University*); *Aleksandr A. Mikhailov* (*Yaroslav-the-Wise Novgorod State University*); *Roman V. Petrov* (*Novgorod State University*); *Aleksandr O. Nikitin* (*Yaroslav-the-Wise Novgorod State University*);

18:15 Analysis of Electromagnetic Characteristics of a Hypersonic Vehicle Considering Multiphysical Effects
Xiong Wei Wu (*Southeast University*); *Jun Ming Hou* (*Southeast University*); *Jianwei You* (*Southeast University*);

Session 2P16
Topological Condensed Matter and Artificial System 2

Tuesday PM, April 23, 2024

Room 16 - Mudan

Organized by Xiang Yuan, Cheng Zhang

Chaired by Xiang Yuan, Cheng Zhang

13:00 Invited Tunable Broken-symmetry States in Rhombohedral Multilayer Graphene
Guorui Chen (*Shanghai Jiao Tong University*);

13:20 Invited Layer-dependent Electromechanical Response and Intertwined Strain Solitons in Twisted Graphene Moiré Superlattices
Zaiyao Fei (*Nanjing University*);

13:40 Invited New Opportunities of Engineering Excitonic Phases in 2D Materials
Liguo Ma (*Cornell University*);

14:00 Invited Doping on Demand in Low-dimensional Quantum Materials
Wu Shi (*Fudan University*);

14:20 Invited Hydrodynamic Plasmons and Energy Waves in Graphene
Wenyu Zhao (*Huazhong University of Science and Technology*);

14:40 Invited Tuning of Natural Hyperbolic Plasmons in Van der Waals Thin Films
Chong Wang (*Beijing Institute of Technology*);

15:00 Invited Scanning Microwave Impedance Microscopy Study of Magnetic Topological Insulator $MnBi_2Te_4$
Xiaodong Zhou (*Fudan University*);

15:20 Invited Infrared Study of the Multiband Low-energy Excitations of the Topological Antiferromagnet $MnBi_2Te_4$
Bing Xu (*Institute of Physics CAS*);

15:40 **Coffee Break**

16:00 Invited Chiral Excitations in Magnetic Weyl Semimetal $Co_3Sn_2S_2$
Run Yang (*Southeast University*); *T.-T. Zhang* (*Southeast University*); *M. Steigleder* (*Universität Stuttgart*); *X.-G. Qiu* (*Institute of Physics, Chinese Academy of Sciences*); *M. Dressel* (*Universität Stuttgart*);

16:20 Invited Giant g-factors and Fully Spin-polarized States in Metamorphic Short-period InAsSb/InSb
Yuxuan Jiang (*Anhui University*);

16:40 Invited Unconventional Flux Quantization of Topological Superconductors
Yufan Li (*The Chinese University of Hong Kong*);

17:00 Invited Spectroscopic Edvience of Spin-state Excitation in $FeSb_2$
Huayao Li (*Southeast University*); *Guohua Wang* (*Shanghai Jiao Tong University*); *Dong Qian* (*Shanghai Jiao Tong University*); *Lin Miao* (*Southeast University*);

17:20 Non-topological Origins of Fractional ac Josephson Signatures
Invited
Po Zhang (*Beijing Academy of Quantum Information Sciences*);

17:40 A Pathway towards Massive Topological Edge Channels
Invited
Fengfeng Zhu (*Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences*); *Chenqiang Hua* (*Zhejiang University*); *Xiao Wang* (*Heinz Maier-Leibnitz Zentrum (MLZ)*); *Lin Miao* (*Southeast University*); *Yixi Su* (*Heinz Maier-Leibnitz Zentrum (MLZ)*); *Makoto Hashimoto* (*Stanford Institute for Materials and Energy Sciences*); *Donghui Lu* (*Stanford University*); *Zhi-Xun Shen* (*Stanford University*); *Jin-Feng Jia* (*Shanghai Jiao Tong University*); *Yunhao Lu* (*Zhejiang University*); *Dandan Guan* (*Shanghai Jiao Tong University*); *Dong Qian* (*Shanghai Jiao Tong University*);

Session 2P17
Mie-tronics and Metaphotonics 2

Tuesday PM, April 23, 2024

Room 17 - Furong

Organized by Andrey A. Bogdanov, Yuri S. Kivshar

Chaired by Andrey A. Bogdanov, Yuri S. Kivshar

13:00 Giant Optical Anisotropy in van der Waals Materials: Perspectives and Challenges
Invited
Valentyn S. Volkov (*Emerging Technologies Research Center, XPANCEO*); *G. A. Ermolaev* (*Emerging Technologies Research Center, XPANCEO*); *D. V. Grudinin* (*Emerging Technologies Research Center, XPANCEO*); *K. V. Voronin* (*Donostia International Physics Center (DIPC)*); *A. A. Vyshnevyy* (*Emerging Technologies Research Center, XPANCEO*); *A. B. Mazitov* (*Institute of Materials, École Polytechnique Fédérale de Lausanne*); *G. I. Tselikov* (*Emerging Technologies Research Center, XPANCEO*); *I. A. Kruglov* (*Emerging Technologies Research Center, XPANCEO*); *D. A. Ghazaryan* (*Yerevan State University*); *L. Martin-Moreno* (*CSIC-Universidad de Zaragoza*); *A. V. Arsenin* (*Emerging Technologies Research Center, XPANCEO*); *K. S. Novoselov* (*National University of Singapore*);

13:20 Transition Metal Dichalcogenides for High-index Nanophotonics, Nonlinear Optics and Strong Light-matter Coupling
Invited
Timur O. Shegai (*Chalmers University of Technology*);

13:40 Mie Resonances under Microscope
Invited
Xiangping Li (*Jinan University*);

14:00 Mie Optics behind Vaterite-based Drug Delivery
Invited
Pavel B. Ginzburg (*Tel Aviv University*); *Hani Barhom* (*Tel Aviv University*); *Andrey Machnev* (*Tel Aviv University*); *Andrey Ushkov* (*Tel Aviv University*); *Hod Gilad* (*Tel Aviv University*); *Denis Kolchanov* (*Tel Aviv University*);

14:20 Engineering Topological States in Arrays of Two-mode Nanostructured Dielectric Waveguides
A. O. Mikhin (*ITMO University*); *V. Rutckaia* (*The City University of New York*); *Roman S. Savelev* (*ITMO University*); *I. S. Sinev* (*ITMO University*); *Andrea Alù* (*The City University of New York*); *Maxim A. Gorlach* (*ITMO University*);

14:35 Graphene Perfect Absorber Based on Silicon Huygens' Metasurface
Invited
Junichi Takahara (*Osaka University*);

14:55 A Broadband Polarization Degeneracy of the Waveguide Modes in Silicon Metasurface
Zarina F. Kondratenko (*ITMO University*); *M. Asadulina* (*ITMO University*);

15:10 Improved Ultrasensitive Sensors Based on Bound States in the Continuum
Invited
Aleksandra A. Kutuzova (*ITMO University*); *Mikhail V. Rybin* (*National Research University for Information Technology, Mechanics and Optics*);

15:30 **Coffee Break**

16:00 Nanostructured Periodic Arrays for Sensing Applications
Invited
Andrei V. Lavrinenko (*Technical University of Denmark*);

16:20 Uncertainty of Bloch Waves Traveling in Periodic Structures
K. V. Semushev (*ITMO University*); *Ekaterina E. Maslova* (*ITMO University*); *Mikhail V. Rybin* (*National Research University for Information Technology, Mechanics and Optics*);

16:35 Optical Field Modulation and Imaging Based on Metasurfaces
Invited
Juntao Li (*Sun Yat-Sen University*); *Haowen Liang* (*Sun Yat-Sen University*); *Xue-Hua Wang* (*Sun Yat-Sen University*);

16:55 High-efficiency Broadband Achromatic Metalens for Terahertz Regime
Cheng Chi (*Beijing Institute of Technology*);

17:10 High-resolution Hyperspectral Video Understanding at 1.2 Tb/s and Ultrasensitive Detection via Universal Light Encoders
Invited
A. B. Lopez (*King Abdullah University of Science and Technology (KAUST)*); *Qizhou Wang* (*King Abdullah University of Science and Technology (KAUST)*); *Maksim Makarenko* (*King Abdullah University of Science and Technology (KAUST)*); *Andrea Fratalocchi* (*King Abdullah University of Science and Technology (KAUST)*);

17:30 Invited Geometric Phase Controlled Nonlinear Photonic Metasurfaces
Guixin Li (*Southern University of Science and Technology*);

17:50 Polarization Control Based on PT-symmetric Metasurfaces
Yicheng Li (*Harbin Engineering University*); *Shicheng Wan* (*Harbin Engineering University*); *Andrey A. Bagdonav* (*Harbin Engineering University*); *Jinhui Shi* (*Harbin Engineering University*);

18:05 Electromagnetic Asymmetry and Optical Magnetism for Nonlinear Plasmonics
Yaorong Wang (*City University of Hongkong*); *Dangyuan Lei* (*City University of Hongkong*);

18:20 Enhanced Interaction of Structured Light with Resonant Dielectric Metastructures
Yiyuan Wang (*Harbin Engineering University*); *Jin Hui Shi* (*Harbin Engineering University*); *Stefan A. Maier* (*Monash University*); *Haoran Ren* (*Monash University*); *Yuri S. Kivshar* (*Australian National University*); *Kirill Koshelev* (*Australian National University*);

Session 2P18a
Optical and Acoustic Manipulation: Fundamental and Application 2

Tuesday PM, April 23, 2024

Room 18 - Meilan

Organized by Xiao Li, Jun Chen

Chaired by Xiao Li, Jun Chen

13:00 Invited Multipole Optomechanics
Xiaohao Xu (*Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences*); *Shaohui Yan* (*Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences*); *Baoli Yao* (*Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences*);

13:20 Invited Algorithms of Optical Gradient and Scattering Forces on Arbitrary Sized Micro-particles and Their Applications
Huajin Chen (*Guangxi University of Science and Technology*); *Hongxia Zheng* (*Guangxi University of Science and Technology*); *Xiaoshu Zhao* (*Fudan University*); *Wanli Lu* (*China University of Mining and Technology*); *Jack Ng* (*Southern University of Science and Technology*); *Zhifang Lin* (*Fudan University*);

13:40 Steering Micromotors via Reprogrammable Optoelectronic Paths
Xi Chen (*Chengdu University of Technology*); *Shuailong Zhang* (*Beijing Institute of Technology*); *Wei Wang* (*Harbin Institute of Technology (Shenzhen)*);

13:55 Non-Hermitian Non-Equipartition Theory of Trapped Particles
Xiao Li (*The Hong Kong University of Science and Technology*); *Yongyin Cao* (*Harbin Institute of Technology*); *Jack Ng* (*Southern University of Science and Technology*); *Che Ting Chan* (*The Hong Kong University of Science and Technology*);

Session 2P18b
Meta-optics for Multidimensional Light Field Control

Tuesday PM, April 23, 2024

Room 18 - Meilan

Organized by Xiangping Li, Zi-Lan Deng

Chaired by Zi-Lan Deng, Xiangping Li

14:10 Invited Monocular Polarimetric Metalens for Ultracompact Snapshot Stereo-imaging
Shu-Ming Wang (*Nanjing University*);

14:30 Invited Interaction between Plasmonic Nanostructures and Monolayer Transition Metal Dichalcogenides
Hong Wei (*Institute of Physics, Chinese Academy of Sciences*);

14:50 Invited Multidimensional Metasurface Holography and Wavefront Engineering
Lingling Huang (*Beijing Institute of Technology*);

15:10 Invited Breaking the Limitation of Polarization Multiplexing in Optical Metasurfaces via Engineered Noise
Ru-Wen Peng (*Nanjing University*); *Yongmin Liu* (*Northeastern University*); *Mu Wang* (*Nanjing University*);

15:30 **Coffee Break**

16:00 Invited High Q-factor in All-dielectric Metasurface
Chaobiao Zhou (*Guizhou Minzu University*);

16:20 Highly Efficient Metasurfaces for Bi-channel Multiplexing
Changhong Dai (*Fudan University*); *Tong Liu* (*The Hong Kong University of Science and Technology*); *Dongyi Wang* (*Hongkong Baptist University*); *Lei Zhou* (*Fudan University*);

16:35 Metalens for Accelerated Optoelectronic Edge Detection under Ambient Illumination
Shuai Wang (*Harbin Engineering University*);

Session 2P18c
Multiplexing Metasurfaces for Integrated EM Wave Manipulations

Tuesday PM, April 23, 2024

Room 18 - Meilan

Organized by He-Xiu Xu, Yongjun Huang

Chaired by He-Xiu Xu, Yongjun Huang

16:50 Invited — Super-reflector Enabled by Non-interleaved Spin-momentum-multiplexed Metasurface
He-Xiu Xu (*Air Force Engineering University*);

17:10 Invited — Multi-field Coupling Analysis and Experimental Demonstrations of Nonlinear Optomechanical Metasurfaces
Yongjun Huang (*University of Electronic Science and Technology of China*);

17:30 — Thermally Tunable and Nonlinear Liquid-type Metamaterial Based on Fluid-metal ELC Structure
Yuqiong Zhang (*University of Electronic Science and Technology of China*); *Dexu Chen* (*University of Electronic Science and Technology of China*); *Liang Ma* (*University of Electronic Science and Technology of China*); *Yong Liang* (*Institute of Electronic and Information Engineering of UESTC in Guangdong*); *He-Xiu Xu* (*Air Force Engineering University*); *Guangjun Wen* (*University of Electronic Science and Technology of China*); *Yongjun Huang* (*University of Electronic Science and Technology of China*);

17:45 — Radar-infrared Bi-stealth Vortex Beam Generator Using Hybrid Metasurface
Yanzhao Wang (*Air Force Engineering University*); *Meiling Zeng* (*Air Force Engineering University*); *Huiling Luo* (*Air Force Engineering University*); *He-Xiu Xu* (*Air Force Engineering University*);

18:00 — Artificial Intelligence Design for Omnidirectional Three-dimensional Meta-hologram
Zhongwei Jin (*China Jiliang University*);

18:15 — Novel EBG Absorber in the Application of Ka Band Cavity Microwave Modules
Yue Zhang (*Harbin Institute of Technology*); *Yunfei Liu* (*Harbin Institute of Technology*); *Kuang Zhang* (*Harbin Institute of Technology*);

18:30 — Wide-angle Meta-reflector Using a Non-periodic Metasurface
Huiling Luo (*Air Force Engineering University*); *Yanzhao Wang* (*Air Force Engineering University*); *Huanhuan Gao* (*Xi'an University of Science and Technology*); *Yanzhang Shao* (*Air Force Engineering University*); *He-Xiu Xu* (*Air Force Engineering University*);

Session 2P19
Poster Session 4

Tuesday PM, April 23, 2024

14:00 PM - 18:00 PM

Room Exhibition Area

1 — Design of Angle-stable and High-transmittance Frequency Selective Rasorber Based on Bilateral Connected Interdigital Resonator
Yixuan Xu (*National University of Defense Technology*); *Tongtong Shi* (*National University of Defense Technology*); *Xueyi Hu* (*National University of Defense Technology*); *Yuchen Yan* (*National University of Defense Technology*); *Weiwei Wu* (*National University of Defense Technology*);

2 — Design of CA-CP-RLSA
Feng Zhao (*China Aerospace Science and Technology Corporation*);

3 — Goal Decision-making in Active SLAM Using 2D Lidar Based on DRL Driven by Intrinsic Rewards
Wenjie Na (*Tongji University*); *Zhihao Liu* (*Tongji University*); *Mengqi He* (*Tongji University*); *Chao Li* (*Tongji University*); *Chengju Liu* (*Tongji University*); *Qijun Chen* (*Tongji University*);

4 — Wideband RCS Reduction of Fabry-Perot Antenna Based on Diffuse Scattering Method
Guoqiang Feng (*Air Force Engineering University*); *Peng Xie* (*Air Force Engineering University*);

5 — Inversion of Ocean Winds from C-band Dual-polarized SAR Images
Yi Cheng (*Guilin University of Technology*); *Ying Yang* (*Nanjing University of Science and Technology*);

6 — $\mathbf{8 \times 8}$ MIMO Antenna for 5G Mobile Applications
Wei-Chen Cheng (*National Taipei University of Technology*); *Guan-Pu Pan* (*National Taipei University of Technology*); *Y. H. Chang* (*National Taipei University of Technology*); *Guan-Yu Chen* (*National Taipei University of Technology*); *Jwo-Shiun Sun* (*National Taipei University of Technology*);

7 — Low-frequency Broadband Transparency and High-frequency Broadband RCS Reduction in Rasorber Design
Wei Ding (*Nanjing University*); *Zhen-Xu Yao* (*Nanjing University*); *Yuan-Cheng Shi* (*Nanjing University*); *Ruixin Wu* (*Nanjing University*);

8 — Vertical-cavity Surface-emitting Laser Linewidth Narrowing Enabled by Coupled-cavity
Zhiting Tang (*University of Electronic Science and Technology of China*); *Chuanlin Li* (*University of Electronic Science and Technology of China*); *Aobo Ren* (*University of Electronic Science and Technology of China*); *Jiang Wu* (*University of Electronic Science and Technology of China*);

9 Compact Quasi-reasonant Flyback Synchronous Rectifier Converter and Control Method
Xiaoyan Wei (*Southwest Jiaotong University*); *Quanyuan Feng* (*Southwest Jiaotong University*); *Tao Li* (*Southwest Jiaotong University*);

10 Reconfigurable Split-Ring Resonators with the Enhanced Resonance in Coplanar Waveguide
Hee-Jo Lee (*Daegu University*);

11 Infinite Speed of Light and Compton Scattering
Namik Yener (*Istanbul Commerce University*);

12 Research on 5 kW Power Synthesis Medium-long Wave Radio Station Amplifier
Congjin Wang (*Southwest University of Science and Technology*); *Haoran Li* (*Southwest University of Science and Technology*); *Yuyu Zhu* (*Southwest University of Science and Technology*); *Li Wu* (*Southwest University of Science and Technology*); *Piaoyi Huang* (*Southwest University of Science and Technology*); *Yonghao Lu* (*Southwest University of Science and Technology*); *Xing Long Liu* (*Southwest University of Science and Technology*);

13 Capacitor-based Branch-line Couplers for Simple Configuration of Flexible Phase-difference Butler Matrices
Zulfi (*Institut Teknologi Bandung*); *Sulistyaningsih* (*Institut Teknologi Bandung*); *Joko Suryana* (*Institut Teknologi Bandung*); *Achmad Munir* (*Bandung Institute of Technology*);

14 Remote Sensing of Soil Moisture Using UWB Impulses from a UAV Platform
Konstantin Victorovich Muzalevskiy (*Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences*); *Sergey Viktorovich Fomin* (*Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences*); *A. Yu. Karavayskiy* (*Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences*); *Yu. Leskova* (*Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences*); *V. Romanov* (*KSC Siberian Branch Russian Academy of Science, Krasnoyarsk Research Institute of Agriculture Federal, Research Center Krasnoyarsk*); *A. Lipshin* (*KSC Siberian Branch Russian Academy of Science, Krasnoyarsk Research Institute of Agriculture Federal, Research Center Krasnoyarsk*);

15 A Multi-polarized Reflectarray Antenna Employing Planar Magnetoelectric Dipole Elements
Sen Li (*Space Engineerring University*); *Hong Ma* (*Space Engineerring University*); *Yang Cai* (*Space Engineering University*); *Lijun Bu* (*Space Engineering University*); *Siyu Qi* (*Space Engineerring University*); *Yufan Cao* (*Space Engineering University*); *Tao Wu* (*Space Engineerring University*);

16 Development of Wavelength Demultiplexers Based on a Binary Search Inverse Design Algorithm
Heng Zhong (*Anhui University*); *Ming Fang* (*Anhui University*);

17 Defining Internet Access Service QoS Measurement Server Placement Criteria in National Internet Network
Alina Stafecka (*Riga Technical University*); *Andrejs Lizunovs* (*Riga Technical University*); *Aleksandrs Olinš* (*Riga Technical University*); *Mihails Rjumšins* (*Riga Technical University*); *Sandis Spolitis* (*Riga Technical University*); *Vjaceslavs Bobrovs* (*Riga Technical University*);

18 Surface-wave Oscillators with Advanced Bragg Reflectors as a Way to Increase Frequency Stability and Tuning
Nikolai Yu. Peskov (*Institute of Applied Physics, RAS*); *Vladislav Yu. Zaslavsky* (*Institute of Applied Physics, RAS*); *K. A. Leshcheva* (*Institute of Applied Physics, RAS*); *Ekaterina D. Egorova* (*Institute of Applied Physics, RAS*);

19 A 3D Mach-Zehnder Time-Domain EO Sensor for the EMP Measurement
Yuewu Shi (*Northwest Institute of Nuclear Technology*); *Wei Chen* (*Northwest Institute of Nuclear Technology*); *Xin Nie* (*Northwest Institute of Nuclear Technology*); *Wei Wu* (*Northwest Institute of Nuclear Technology*); *Wei Wang* (*Northwest Institute of Nuclear Technology*); *Jianguo Miao* (*Northwest Institute of Nuclear Technology*);

20 Implementation of Medical Image Segmentation Algorithm Based on Deep Network
Chao Tang (*Tongji University*); *Yuxing Zhao* (*Tongji University*); *Lan Lin* (*Tongji University*);

21 Research on Scattering Characteristics of Swarm Targets
Jing-Yue Sun (*Beijing Institute of Technology*); *Kun-Yi Guo* (*Beijing Institute of Technology*); *Xin-Qing Sheng* (*Beijing Institute of Technology*); *Wei Cong* (*Chengde Vocational College of Applied Technology*);

22 Simulation and Analysis of Solid-state Switch-based High Voltage Pulse Power Supply Using Marx Generator
Aashish Ranjan (*CSIR-Central Electronics Engineering Research Institute*); *Anand Abhishek* (*CSIR-Central Electronics Engineering Research Institute*); *Niraj Kumar* (*CSIR-Central Electronics Engineering Research Institute (CSIR-CEERI)*); *Nikita Mikhailovich Ryskin* (*V. A. Kotel'nikov Institute of Radio Engineering and Electronics RAS*); *Vladimir N. Titov* (*Saratov State University*); *Roman Antonovich Torgashov* (*V. A. Kotel'nikov Institute of Radio Engineering and Electronics RAS*);

23 Use of Sectional Slow-wave Systems with One-dimensional and Two-dimensional Periodic Corrugations to Generate Radiation with an Azimuthal Symmetric Structure in Long-pulse Surface Wave Oscillators
Vladislav Yur'evich Zaslavsky (*Institute of Applied Physics, Russian Academy of Sciences*); *Ilya V. Zheleznov* (*Institute of Applied Physics, RAS*); *Alexander S. Sergeev* (*Institute of Applied Physics, Russian Academy of Sciences*); *E. V. Ilyakov* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *I. S. Kulagin* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Naum S. Ginzburg* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*);

24 Tunable High-power Soliton Generation up to 3.5 μm in a Large Core Diameter Fluorotellurite Fiber
Linjing Yang (*Beijing University of Technology*); *Chuanfei Yao* (*Beijing University of Technology*); *Xuan Wang* (*Beijing University of Technology*); *Zipeng Xu* (*Beijing University of Technology*); *Pingxue Li* (*Beijing University of Technology*);

25 Analysis of the Influence of Forwarding Waveform with Time-domain Mismatch on Time Difference Direction Finding
Qi Zhao (*National University of Defense Technology*); *Zhonghao Lu* (*National University of Defense Technology*); *Shun-Ping Xiao* (*National University of Defense Technology*);

26 Design and Evaluation of Rare-Earth-Doped Fiber Amplifier for WDM-PON Transmission Systems
Dmitrijs Prigunovs (*Riga Technical University*); *Ricards Kudojars* (*Riga Technical University*); *Patriks Morevs* (*Riga Technical University*); *Mareks Parfjonovs* (*Riga Technical University*); *Andis Supe* (*Riga Technical University*); *Svitlana Matsenko* (*Riga Technical University*); *Aleksandr Krotov* (*Riga Technical University*); *Dmitrii Redka* (*St. Petersburg Electrotechnical University "LETI"*); *Vjaceslavs Bobrovs* (*Riga Technical University*); *Toms Salgals* (*Riga Technical University*);

27 A Spherical Conformal Reflectarray Sensor Array for Long-distance Monitoring of Water Quality
Xiao Yu Li (*Tongji University*); *Xiao Jie Lu* (*Tongji University*); *Zhen Wang* (*Tongji University*); *Mei Song Tong* (*Tongji University*);

28 A Flexible Chipless RFID Tag with Polymer Coatings Used for Harsh Environments
Lu Yi Liu (*Tongji University*); *Ajay K. Poddar* (*Synergy Microwave Corporation*); *Ulrich L. Rohde* (*Synergy Microwave Corporation*); *Mei Song Tong* (*Tongji University*);

29 A Low-cost Displacement Sensor Based on Chipless RFID Tag with Microstrip Notch Circuit
Jia Hui Wang (*Shanghai Institute of Technology*); *Lan Chen* (*Shanghai Institute of Technology*); *Mei Song Tong* (*Tongji University*);

30 Two-dimensional Microwave Through-wall Imaging Algorithm Based on Total Variational Compressive Sensing
Chi Zhou (*Shanghai Normal University*); *Chunxia Yang* (*Shanghai Normal University*); *Mei Song Tong* (*Tongji University*);

31 Dual-channel Chip-to-Chip Communication Employing Field Enhancement Spoof Surface Plasmon Polaritons Transmission Line
Wen Jin (*Guangzhou University*); *Zhikai Li* (*Guangzhou University*); *Yiqian Shan* (*Guangzhou University*); *Yuan Liang* (*Nanyang Technological University*); *Ke Yang* (*Guangzhou University*); *Liangming Lian* (*Guangzhou University*);

32 Angle of Arrival Estimation Method Based on SNR Threshold Detection and Data Cache
Shengguo Zhou (*National Key Laboratory of Electromagnetic Effect and Security on Marine Equipment and Nanjing Marine Radar Institute*); *Pengfei Leng* (*Nanjing Marine Radar Institute*); *Liu Huang* (*Nanjing Marine Radar Institute*); *Boyang Wang* (*Nanjing Marine Radar Institute*); *Weixiang Lv* (*Nanjing Marine Radar Institute*); *Xinmin Zhang* (*Nanjing Marine Radar Institute*);

33 Research of Gate-drain Capacitance of 60 V UMOSFET
Mao Luo (*Chengdu Technological University*); *Hang Ran* (*Chengdu Technological University*); *Lixiang Wang* (*Chengdu Technological University*); *Xiaopei Chen* (*Southwest Jiaotong University*);

34 Optimization of Carbon Dioxide Conversion in the DBD Plasma-chemical Reactor
Ismail Rafatov (*Middle East Technical University*);

35 Ray Tracing Simulation of Electromagnetic Wave Interaction with Multilayered Medium Targets
Chen Yan (*Xidian University*); *Yiping Han* (*Xidian University*);

36 Effect of Ionospheric Faraday Rotation on Polarimetric Scattering Similarity
Xun Wang (*National Space Science Center, Chinese Academy of Sciences*); *Yunhua Zhang* (*National Space Science Center, Chinese Academy of Sciences*); *Dong Li* (*National Space Science Center, Chinese Academy of Sciences*); *Jiefang Yang* (*National Space Science Center, Chinese Academy of Sciences*);

37 A Frequency-scanning Antenna Based on A S-shaped Single-ridge Waveguide
Min Wang (*Chongqing University of Posts and Telecommunications*); *Hao Chen* (*Chongqing University of Posts and Telecommunications*); *Nan Hu* (*A-INFO Inc.*); *Wenqing Xie* (*A-INFO Inc.*); *Xuan Li* (*Chongqing University of Posts and Telecommunications*);

38 Gain-switched Yb-doped Fiber Laser by Fast Modulation of a Pump Laser Diode
Juyong Shin (*Korea Institute of Industrial Technology*); *Sungmok Kim* (*Korea Institute of Industrial Technology*); *Eunkyoung Park* (*Hanyang University ERICA*); *Inchul Park* (*Hanyang University ERICA*); *Yejin Oh* (*Hanyang University ERICA*); *Jiwon Kim* (*Hanyang University ERICA*); *Hoon Jeong* (*Korea Institute of Industrial Technology*);

39 Manipulation of Epsilon-near-zero Properties in Magnetron-sputtered Indium Tin Oxide Films
Chenxingyu Huang (*Peking University*); *Qian Li* (*Peking University Shenzhen Graduate School*); *Hongyan Fu* (*Tsinghua University*);

40 Study on Shielding Efficiency of Metal Wire Mesh for Cable Joints
Quanfeng Jiang (*Southwest University of Science and Technology*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Jincheng Tang* (*Southwest University of Science and Technology*); *Guangjin Lin* (*Southwest University of Science and Technology*); *Haiyan Guo* (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Haoran Li* (*Southwest University of Science and Technology*); *Zhen-Yong Du* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yixiang Li* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yuyu Zhu* (*Southwest University of Science and Technology*); *Bo Pu* (*DeTooLIC Technology Co., Ltd.*); *Jun Fan* (*Southwest University of Science and Technology*);

41 A Non-destructive Metal Classification System Based on Magnetic Induction and Mutual Impedance Measurement
Ji Deng (*Southwest University of Science and Technology*); *Jincheng Tang* (*Southwest University of Science and Technology*); *Feng Guo* (*Southwest University of Science and Technology*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Haoran Li* (*Southwest University of Science and Technology*); *Zhen-Yong Du* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yixiang Li* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yuyu Zhu* (*Southwest University of Science and Technology*); *Bo Pu* (*DeTooLIC Technology Co., Ltd*); *Jun Fan* (*Southwest University of Science and Technology*);

42 A **2.53** $\sim$ **2.84** GHz Low-phase-noise Voltage-controlled Oscillator with Integrated Low Dropout Regulator in 0.18 µm CMOS Technology
Yuxin Zhang (*Guangzhou University*); *Wen Jin* (*Guangzhou University*); *Yiqian Shan* (*Guangzhou University*); *Yuan Liang* (*Nanyang Technological University*); *Guangyu Zhong* (*Guangzhou University*); *Liangming Lian* (*Guangzhou University*);

43 Narrowband SIW-SSPP Hybrid Bandpass Filter and Frequency Division Multiplexer at Ka Band
Zhaolin Li (*Shandong University*); *Yasong Wang* (*Shandong University*); *Baoqing Zhang* (*Shandong University*); *Haotian Ling* (*Qilu Aerospace Information Research Institute (AIR), Chinese Academy of Sciences (CAS)*); *Aimin Song* (*University of Manchester*); *Yifei Zhang* (*Shandong University*);

44 Analysis of Transverse Induced Magnetization Characteristics of Large Asymmetric Ships
Yuelin Liu (*Naval University of Engineering*); *Guohua Zhou* (*Naval University of Engineering*); *Shengdao Liu* (*Naval University of Engineering*); *Kena Wu* (*Naval University of Engineering*);

45 ITS-G5 Antennas: Powering Future Urban Transports
Abu Zafar Md. Imran (*University of Hertfordshire, College Lane*); *Azunka N. Ukala* (*University of Hertfordshire, College Lane*); *Eugene A. Ogbodo* (*University of Hertfordshire, College Lane*); *Martin Thomas* (*University of Hertfordshire, College Lane*);

46 Spectrophotometry and High-resolution NMR Spectroscopy to Study the Mechanisms of Interaction of Aromatic Amino Acids with Noble Metal Nanoparticles
Mark Smirnov (*Immanuel Kant Baltic Federal University*); *Galina S. Kupriyanova* (*Immanuel Kant Baltic Federal University*); *Andrey Yurievich Zyubin* (*Immanuel Kant Baltic Federal University*); *E. Demishkevich* (*IKBFU*); *A. Zozulya* (*IKBFU*); *I. Khodov* (*G. A. Krestov Institute of Solution Chemistry of the Russian Academy of Sciences*); *G. Gamov* (*Ivanovo State University of Chemistry and Technology*);

47 Diagnostics Systems for High-power Sub-THz/THz Radiation Fluxes Produced by Beam-plasma Generator and Long-pulse FELs
Evgeny S. Sandalov (*Budker Institute of Nuclear Physics RAS*); *Andrey V. Arzhannikov* (*Budker Institute of Nuclear Physics RAS*); *D. A. Samtsov* (*Budker Institute of Nuclear Physics RAS*); *S. A. Kuznetsov* (*Budker Inst Nucl Phys SB RAS*); *Petr V. Kalinin* (*Budker Institute of Nuclear Physics RAS*); *Vasily D. Stepanov* (*Budker Institute of Nuclear Physics RAS*); *Stanislav L. Sinitsky* (*Budker Institute of Nuclear Physics Russian Academy of Sciences*); *M. A. Makarov* (*Budker Institute of Nuclear Physics RAS*); *Naum S. Ginzburg* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Nikolai Yu. Peskov* (*Institute of Applied Physics, RAS*);

48 Problems of Detecting Anomalous See Waves by Navigation Radars
Valery A. Permyakov (*Moscow Power Engineering Institute (Technical University)*); *A. I. Baskakov* (*National Research University "Moscow Power Engineering Institute"*); *Mikhail Sergeyevich Mikhailov* (*National Research University "Moscow Power Engineering Institute"*); *S. V. Permiakov* (*National Research University "Moscow Power Engineering Institute"*);

49 Optimization of an Extended Antenna Field
Alexey Mikhailovich Mikhailov (*National Research University "Moscow Power Engineering Institute"*); *Mikhail Sergeyevich Mikhailov* (*National Research University "Moscow Power Engineering Institute"*); *A. A. Komarov* (*National Research University "Moscow Power Engineering Institute"*); *S. V. Orobchenko* (*National Research University "Moscow Power Engineering Institute"*);

50 Design of Plasma Generator at Normal Temperature and Pressure
Xiaoyun Zhao (*Chengdu University of Technology*); *Yihong Wang* (*Chengdu University of Technology*); *Biao Hu* (*Chengdu University of Technology*);

51 Multibeam Antenna Array Simulation
Kirill Sergeyevich Sychev (*National Research University "Moscow Power Engineering Institute"*); *Anton Alekseevich Novikov* (*National Research University "Moscow Power Engineering Institute"*); *Andrey Alexeevich Pimenov* (*National Research University "Moscow Power Engineering Institute"*); *A. S. Filimonov* (*National Research University "Moscow Power Engineering Institute"*); *Mikhail Sergeyevich Mikhailov* (*National Research University "Moscow Power Engineering Institute"*);

52 A First-principles Study of BiOCl Monolayer as Anode Potential Material for Na-ion Batteries
Yong Zhou (*Chengdu Technological University*); *Beitong Cheng* (*Southwest Institute of Technical Physics*); *Xingyong Huang* (*Yibin University*); *Ruomei Jiang* (*Southwest Institute of Technical Physics*); *Xule Wang* (*Southwest Institute of Technical Physics*); *Shuai Huang* (*Southwest Institute of Technical Physics*); *Wei Zhang* (*Southwest Institute of Technical Physics*); *Hai-Zhi Song* (*Southwest Institute of Technical Physics & UESTC*);

53 Anisotropic Material for Nanoparticles with Resonant Optical Response
Ilya U. Titov (*Moscow Center for Advanced Studies*); *Ilya A. Zavidovskiy* (*Moscow Center for Advanced Studies*); *Aleksandr S. Slavich* (*Moscow Center for Advanced Studies*); *Mikhail K. Tatmyshevskiy* (*Moscow Center for Advanced Studies*); *Georgy A. Ermolaev* (*Moscow Center for Advanced Studies*); *Alexei V. Prokhorov* (*Moscow Center for Advanced Studies*); *Aleksey V. Arsenin* (*Moscow Center for Advanced Studies*); *Valentyn S. Volkov* (*Emerging Technologies Research Center, XPANCEO, Dubai Investment Park First*); *Sergey M. Novikov* (*Moscow Center for Advanced Studies*);

54 Generation of Optical Vortex from an Optical Vortex Pumped Diamond Raman Laser
Chuang Xuan (*Xinjiang Normal University*); *Palidan Aierken* (*Xinjiang Normal University*); *Yuxia Zhou* (*Xinjiang Normal University*); *Ying Wan* (*Nanjing University of Information Science & Technology*); *Jianxiang Wen* (*Shanghai University*); *Taximaiti Yusufu* (*Xinjiang Normal University*);

55 An Estimation Method of Time Domain Radiation Pattern for UWB Array Antenna
Binwen Wang (*Northwest Institute of Nuclear Technology*); *Hui Ning* (*Northwest Institute of Nuclear Technology*); *Qilong Liu* (*Northwest Institute of Nuclear Technology*); *Youjie Yan* (*Northwest Institute of Nuclear Technology*);

56 Double-polarization Slotted Arrays for Extremely Low Side-lobe Based on Single-ridged Waveguide
Ze Yu (*The 38th Research Institute of China Electronic Technology Group Corporation*); *X. L. Zhang* (*The 38th Research Institute of China Electronic Technology Group Corporation*); *C. Chen* (*The 38th Research Institute of China Electronic Technology Group Corporation*); *W. D. Chen* (*The 38th Research Institute of China Electronic Technology Group Corporation*);

57 A Chip-scale Magnetic Field Sensor Based on Frequency Readout Cavity Optomechanical System
Zhe Li (*University of Electronic Science and Technology of China*); *Chengwei Xian* (*University of Electronic Science and Technology of China*); *Pengju Kuang* (*University of Electronic Science and Technology of China*); *Jinglong Xiong* (*University of Electronic Science and Technology of China*); *Zihan Huang* (*University of Electronic Science and Technology of China*); *Senyu Zhang* (*University of Electronic Science and Technology of China*); *Guangjun Wen* (*University of Electronic Science and Technology of China (UESTC)*); *Kai Chen* (*University of Electronic Science and Technology of China*); *Yongjun Huang* (*University of Electronic Science and Technology of China*);

58 High-Q Fabry-Pérot Cavity Based on Micro-lens Array for Refractive Index Sensing
Qi Wang (*Fudan University*); *Xuyang Zhao* (*Fudan University*); *Man Luo* (*Fudan University*); *Yuxiang Li* (*Fudan University*); *Junjie Liu* (*Fudan University*); *Xiang Wu* (*Fudan University*);

59 Marine Wireless Communication Channel Propagation Loss Model in Rough Sea Environment Based on Wind Speed and Direction Parameters
Yanlong Liu (*Hainan University*); *Wanchao Li* (*Hainan University*); *Lihui Wang* (*Hainan University*); *Zhenjia Chen* (*Hainan University*); *Xiao Zhao* (*Hainan University*);

60 Virtual Simulation Experiment Training Platform of Radio Measurement Technology Based on Electromagnetic Spectrum Monitoring Method Combined Online and Offline
Songkun Chu (*Hainan University*); *Zhenjia Chen* (*Hainan University*); *Lihui Wang* (*Hainan University*);

61 Research on a Simplified Ray Tracing Method for Indoor Radio Wave Propagation Calculation
Yuncheng Mo (*Nanjing Normal University*); *Jianfeng Gu* (*Nanjing Normal University*); *Wanchun Tang* (*University of Nanjing Science and Technology*);

62 Comparison of One-photon Absorption and Two-photon Absorption Imaging through Dynamic Scattering Media
Wei Liu (*Xi'an Institute of Applied Optics*); *Libing Hou* (*Xi'an Institute of Applied Optics*); *Yingchun Wu* (*Xi'an Institute of Applied Optics*); *Tan Wang* (*Xi'an Institute of Applied Optics*); *Bingtao Guo* (*Xi'an Institute of Applied Optics*); *Zhanming Li* (*Xi'an Institute of Applied Optics*); *Qiyao Sun* (*Xi'an Institute of Applied Optics*); *Shan Li* (*Xi'an Institute of Applied Optics*); *Weiguo Zhang* (*Xi'an Institute of Applied Optics*); *Wenbo Duan* (*Xi'an Institute of Applied Optics*);

63 Simulation Analysis of Indoor Electromagnetic Environment Based on Correlation Coefficient
Jianfeng Gu (*Nanjing Normal University*); *Yuncheng Mo* (*Nanjing Normal University*); *Wanchun Tang* (*University of Nanjing Science and Technology*);

64 Flexible Light Manipulation in Non-Hermitian Frequency Su-Schrieffer-Heeger Lattice
Yiling Song (*Wenzhou University*);

65 Mode-locking in Anti-PT Symmetric Frequency Lattices
Yiling Song (*Wenzhou University*);

66 Selection and Enhancement of the Frequency Modes with Floquet Exceptional Points and Chiral Zener Tunneling
Yiling Song (*Wenzhou University*);

67 Pre-training Deep Neural Network for Decoding Multiple Brain Regions Can Enhance Image Reconstruction
Wen Bo Zhu (*Tongji University*); *Renzhou Gui* (*Tongji University*); *Ya Qi Wang* (*Tongji University*); *Yu Miao Yin* (*Tongji University*); *Mei Song Tong* (*Tongji University*);

68 Research on Early Depression Recognition Method by Combining Data and Knowledge Dual Driven Graph Network
Yu Miao Yin (*Tongji University*); *Renzhou Gui* (*Tongji University*); *Ya Qi Wang* (*Tongji University*); *Wen Bo Zhu* (*Tongji University*); *Mei Song Tong* (*Tongji University*);

Session 3A1
Quantum Computation and Quantum Simulation

Wednesday AM, April 24, 2024

Room 1 - Yarui

Organized by Gang Li, Xiaolong Su

Chaired by Gang Li

8:00 Invited Simulators of Quantum Fluids Using Atomic Vapors
Feng Li (*Xi'an Jiaotong University*);

8:20 Invited Neutral Atomic Array near an Optical Nanofiber
Pengfei Zhang (*Shanxi University*);

8:40 Invited Quantum Programming of Topological Phases of Matter
Feng Mei (*Shanxi University*);

9:00 Invited Preparation of Optical Cat States Carrying Laguerre-Gaussian Mode
Meihong Wang (*Shanxi University*); *Chenyu Qiao* (*Shanxi University*); *Fengyi Xu* (*Shanxi University*); *Rong Ma* (*Shanxi University*); *Xiaolong Su* (*Shanxi University*);

9:20 Invited Robust Multi-qubit Quantum Network Nodes in Waveguide-integrated Superconducting Quantum Circuits
Wei Nie (*Tianjin University*);

9:40 Invited Realization of Strong Coupling between Deterministic Single-atom Arrays and a High-finesse Miniature Optical Cavity
Zhihui Wang (*Shanxi University*); *Yanxin Liu* (*Shanxi University*); *Shijun Guan* (*Shanxi University*); *Pengfei Yang* (*Shanxi University*); *Pengfei Zhang* (*Shanxi University*); *Gang Li* (*Shanxi University*); *Tiancai Zhang* (*Shanxi University*);

10:00 **Coffee Break**

10:30 Invited Towards Quantum Simulations with Ultracold Thulium Atoms at an Optical Lattice Formed by 1064 nm Laser Light
D. A. Kumpilov (*Russian Quantum Center*); *D. A. Pershin* (*Russian Quantum Center*); *V. A. Khlebnikov* (*Russian Quantum Center*); *I. A. Pyrkh* (*Russian Quantum Center*); *A. E. Rudnev* (*Russian Quantum Center*); *E. A. Fedotova* (*Russian Quantum Center*); *D. V. Gaifudinov* (*Russian Quantum Center*); *Ivan S. Cojocaru* (*Russian Quantum Center*); *K. A. Khoruzhii* (*Russian Quantum Center*); *P. A. Aksentsev* (*Russian Quantum Center*); *A. K. Zykova* (*Russian Quantum Center*); *V. V. Tsyganok* (*Russian Quantum Center*); *Aleksey V. Akimov* (*Russian Quantum Center*);

10:50 Invited Coherent Ising Computation with Error Correction
Chuan Wang (*Beijing Normal University*);

11:10 Invited Orbital Angular Momentum Multiplexed Quantum Entanglement and Its Applications
Jietai Jing (*East China Normal Unversity*);

11:30 Invited Experimental Investigation of Quantum Correlations in Qutrit System with a Single NV Center in Diamond
Xing Rong (*University of Science and Technology of China*); *Y. Fu* (*Beijing Institute of Technology*);

11:50 FEM Modelling of the Loop-gap Resonator for Applications in Quantum Transduction
N. Güneş Saribaş (*Gebze Technical University*); *Maksut Maksutoğlu* (*Gebze Technical University*); *Pavel Kupriyanov* (*Gebze Technical University*); *Fikret Yildiz* (*Gebze Technical University*); *Bulat Rameev* (*Gebze Technical University*);

12:05 Continuous Variable Quantum State Distributor
Qingwei Wang (*Hangzhou Dianzi University*); *Y. Zheng* (*Shanxi University*);

Session 3A2
Single Photon Detection: Device and Integration

Wednesday AM, April 24, 2024

Room 2 - Jincheng 3

Organized by Wei Zhang, Hao Li

Chaired by Hao Li

8:00 Invited Hybrid Integration of Superconducting Nanowire Single-photon Detectors for Large Scale Quantum Photonic Circuits
Qing-Yuan Zhao (*Nanjing University*);

8:20 Invited Recent Advances on InGaAs/InP Geiger-mode Avalanche Photodiode Arrays in SITP
Yingjie Ma (*Shanghai Institute of Technical Physics (SITP) of the Chinese Academy of Sciences*); *Xue Li* (*Shanghai Institute of Technical Physics, Chinese Academy of Science*); *Yi Gu* (*Shanghai Institute of Technical Physics, Chinese Academy of Science*); *Jingxian Bao* (*Shanghai Institute of Technical Physics, Chinese Academy of Science*); *Yueqi Zhai* (*Shanghai Institute of Technical Physics, Chinese Academy of Science*); *Xiumei Shao* (*Shanghai Institute of Technical Physics, Chinese Academy of Science*); *Tao Li* (*Shanghai Institute of Technical Physics, Chinese Academy of Science*); *Hai-Mei Gong* (*Shanghai Institute of Technical Physics, Chinese Academy of Science*); *Jiaxiong Fang* (*Shanghai Institute of Technical Physics, Chinese Academy of Science*);

8:40 Invited Several Novel Applications of Single-photon Detector in LiDAR
Zhaohui Li (*East China Normal University*); *Didi Zhai* (*East China Normal University*); *Weihua Zhang* (*East China Normal University*); *Guang Wu* (*East China Normal University*);

9:00 Invited Inp/InGaAs Negative Feedback Avalanche Diodes Working at Room Temperature
Haifeng Ye (*Yunnan University*); *Rong Bai* (*Yunnan University*); *Chen Liu* (*Yunnan University*); *Yan-Li Shi* (*Yunnan University*);

9:20 Invited High Performance Semiconductor Single-photon Detectors and Applications
Chao Yu (*University of Science and Technology of China*); *Qi Xu* (*University of Science and Technology of China*); *Dong An* (*University of Science and Technology of China*); *Xian-Song Zhao* (*University of Science and Technology of China*); *Jun Zhang* (*University of Science and Technology of China*); *Jian-Wei Pan* (*University of Science and Technology of China*);

9:40 Hybrid Integration of Near-infrared InGaAs/InP Single Photon Avalanche Diodes Array and Silicon Photonics Chip
Xiaosong Ren (*Tsinghua University*); *Dongning Liu* (*Tsinghua University*); *Mingzhong Hu* (*Tsinghua University*); *Yan-Li Shi* (*Yunnan University*); *Yidong Huang* (*Tsinghua University*); *Wei Zhang* (*Tsinghua University*);

10:00 **Coffee Break**

10:30 Invited High Fidelity Photon-number-resolving Superconducting Nanowire Single-photon Detector
Chaomeng Ding (*Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences*); *Xingyu Zhang* (*Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences*); *Lingdong Kong* (*Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences*); *Lixing You* (*Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences*); *Hao Li* (*Shanghai Institute of Microsystem and Information Technology (SIMIT), CAS*);

10:50 Invited Up-conversion Single Photon Detection and Its Integration
Xina Wang (*University of Science and Technology of China*); *Xufeng Jiao* (*University of Science and Technology of China*); *Bin Wang* (*Jinan Institute of Quantum Technology*); *Yang Liu* (*Jinan Institute of Quantum Technology*); *Xiuping Xie* (*Jinan Institute of Quantum Technology*); *Ming-Yang Zheng* (*Jinan Institute of Quantum Technology*); *Qiang Zhang* (*University of Science and Technology of China*); *Jian-Wei Pan* (*University of Science and Technology of China*);

11:10 Polarization-independent Photon-counting Reconstructive Spectrometer Based on Superconducting Nanowire Single-photon Detectors and On-chip Photonic Structures
Mingzhong Hu (*Tsinghua University*); *You Xiao* (*Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences*); *Xiaosong Ren* (*Tsinghua University*); *Hao Li* (*Shanghai Institute of Microsystem and Information Technology (SIMIT), CAS*); *Lixing You* (*Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences*); *Xue Feng* (*Tsinghua University*); *Fang Liu* (*Tsinghua University*); *Kaiyu Cui* (*Tsinghua University*); *Yidong Huang* (*Tsinghua University*); *Wei Zhang* (*Tsinghua University*);

Session 3A3a
Advanced Decoupling Networks for Large-scale Arrays

Wednesday AM, April 24, 2024

Room 3 - Jincheng 2

Organized by Qi Wu, Min Li

Chaired by Min Li

8:00 Hybrid Network Design for Enhanced Isolation and Throughput in MIMO Antenna Systems
Min Li (*Heriot-Watt University*); *Lijun Jiang* (*Missouri University of Science and Technology*);

8:15 A Simultaneous Transmit and Receive Slot Antenna with High Isolation Using Defected Ground Structures
Xudong Lu (*Shenzhen University*); *Zheng Zhang* (*Shenzhen University*); *Meng-En Li* (*Shenzhen University*); *Xiao-Chong Zhang* (*Shenzhen University*); *Yaxin Li* (*Shenzhen University*); *Di Wu* (*Shenzhen University*);

8:30 A Novel MIMO Antenna with Compact Structure for 5G Smartphone Applications
Xiao-Chong Zhang (*Shenzhen University*); *Xuan He* (*Shenzhen University*); *Yisha Cai* (*Shenzhen University*); *Yaxin Li* (*Shenzhen University*); *Xudong Lu* (*Shenzhen University*); *Di Wu* (*Shenzhen University*);

8:45 Transmission-line Implementation of Decoupling Feeding Networks
W. Q. Fan (*Beihang University*); *Qi Wu* (*Beihang University*);

9:00 Dual-band Decoupling Network
Hang Liu (*Dalian University of Technology*); *Min Li* (*Dalian University of Technology*); *Changfei Zhou* (*Dalian University of Technology*);

9:15 Array-antenna Decoupling Surface for MIMO Antennas
Hang Liu (*Dalian University of Technology*); *Min Li* (*Dalian University of Technology*); *Changfei Zhou* (*Dalian University of Technology*);

9:30 Wide-angle Scanning in Azimuth Plane
Ren Wang (*University of Electronic Science and Technology of China*); *Bing-Zhong Wang* (*University of Electronic Science and Technology of China*);

9:45 Radiation Pattern Decoupling: From Theory to Validation
Nan Yang (*Sun Yat-sen University*); *Changwu Tong* (*Sun Yat-sen University*); *Guangyao Liu* (*Sun Yat-sen University*); *Jingbiao Wu* (*Sun Yat-sen University*); *Kwok Wa Leung* (*City University of Hong Kong*);

10:00 **Coffee Break**

Session 3A3b
Advanced Mode-inspired Antennas for 5G/B5G Communications

Wednesday AM, April 24, 2024

Room 3 - Jincheng 2

Organized by Neng-Wu Liu, Qianwen Liu

Chaired by Neng-Wu Liu, Qianwen Liu

10:30 Design of Multi-mode Planar Antenna Based on the Patch Resonator and SIW Cavity
Qianwen Liu (*Nanjing University of Posts and Telecommunications*); *Huan Yan* (*Nanjing University of Posts and Telecommunications*);

10:45 Decoupling Design between Near-field Resonant Parasitic (NFRP) and Electric Dipole Based on CM/DM Decoupling Theory
Buyun Wang (*Xi'an Jiaotong University*); *Sen Yan* (*Xi'an Jiaotong University*);

11:00 Broadband Filtering Antenna Based on Microstrip Patch and Substrate Integrated Waveguide
Chengyu Li (*Nanjing University of Posts and Telecommunications*); *Qianwen Liu* (*Nanjing University of Posts and Telecommunications*); *Yiming Tang* (*Nanjing University of Posts and Telecommunications*);

11:15 Performance Improvement of The Multi-port Antenna Based on the Multi-mode Concept
Neng-Wu Liu (*Xidian University*); *Lei Zhu* (*Xidian University*); *Guang Fu* (*Xidian University*); *Ying Liu* (*Xidian University*);

11:30 Wide Bandwidth Microstrip Patch Antenna with Improved Cross-polarization
Bing-Bing Huang (*Xidian University*); *Neng-Wu Liu* (*Xidian University*);

11:45 Design and Optimization of Vortex Electromagnetic Wave Antenna
Yali Lu (*University of Electronic Science and Technology of China*); *Yating Yu* (*University of Electronic Science and Technology of China*); *Zhiwen Luo* (*University of Electronic Science and Technology of China*); *Shiying Tu* (*University of Electronic Science and Technology of China*);

Session 3A4
Advances in Nanophotonics and Metasurfaces 2

Wednesday AM, April 24, 2024

Room 4 - Jincheng 1

Organized by Lingling Huang, Cheng Zhang

Chaired by Cheng Zhang, Lingling Huang

8:00 Multifunctional Microscopy Based on an Ultrathin Metasurface
Muhammad Afnan Ansari (*Heriot-Watt University*); *Yuttana Intaravanne* (*Heriot-Watt University*); *Hammad Ahmed* (*Heriot-Watt University*); *Narina Bileckaja* (*University of Glasgow*); *Huabing Yin* (*University of Glasgow*); *Xianzhong Chen* (*Heriot-Watt University*);

8:15 Simultaneous Terahertz Generation and Manipulation
Invited Using Nonlinear Metasurfaces
Xueqian Zhang (*Tianjin University*); *Qingwei Wang* (*Tianjin University*); *Xi Feng* (*Tianjin University*); *Yongchang Lu* (*Tianjin University*); *Li Niu* (*Tianjin University*); *Haidi Qiu* (*Tianjin University*); *Quan Xu* (*Tianjin University*); *Jiaguang Han* (*Tianjin University*);

8:35 Visible Chalcogenide Metadevices
Invited
Hao Dai (*Zhejiang University*); *Yilin Shi* (*Westlake University*); *Jieren Song* (*Westlake University*); *Lan Li* (*Westlake University*); *Hongtao Lin* (*Zhejiang University*);

8:55 Dielectric Metasurface for Color Display
Invited
Lei Jin (*Hangzhou Dianzi University*);

9:15 Large-scale High-performance Broadband Perfect Absorber Designed via Bayesian Optimization
Moxin Li (*Huazhong University of Science and Technology*); *Danyan Wang* (*Huazhong University of Science and Technology*); *Zhenyu Xing* (*Huazhong University of Science and Technology*); *Hao Gao* (*Huazhong University of Science and Technology*); *Cheng Zhang* (*Huazhong University of Science and Technology*);

9:30 Wide Band Full-Stokes Polarimetry Based on Optical Metasurface
Yuhui Hu (*Huazhong University of Science and Technology*); *Hao Gao* (*Huazhong University of Science and Technology*); *Zhelin Lin* (*Huazhong University of Science and Technology*); *Cheng Zhang* (*Huazhong University of Science and Technology*);

9:45 High-$\boldsymbol{Q}$ Resonances Enable Maximum Chirality in
Invited Metastructures
Yang Chen (*University of Science and Technology of China*);

10:05 **Coffee Break**

10:30 Generating Vector Beams Carrying Orbital Angular Momentums Using Ultraviolet Anisotropic Metasurfaces
Huixian Zhou (*Huazhong University of Science and Technology*); *Hao Gao* (*Huazhong University of Science and Technology*); *Zhenyu Xing* (*Huazhong University of Science and Technology*); *Cheng Zhang* (*Huazhong University of Science and Technology*);

10:45 Inverse-designed Quantum Metasurfaces
Invited
Jihua Zhang (*Songshan Lake Materials Laboratory*); *Jinyong Ma* (*The Australian National University*); *Neuton Li* (*The Australian National University*); *Shaun Lung* (*The Australian National University*); *Andrey A. Sukhorukov* (*Australian National University*);

11:05 Study on Field Distribution of Nano-silver Sphere Array Structure
Xiaowei Ji (*Liupanshui Normal College*);

11:20 Enhancing Color Purity and Brightness Through Transitional Resonance Cavity Effect in Layered Thin Film Structures
Danyan Wang (*Huazhong University of Science and Technology*); *Chengang Ji* (*Ningbo Inlight Technology Co., Ltd.*); *Moxin Li* (*Huazhong University of Science and Technology*); *Zhenyu Xing* (*Huazhong University of Science and Technology*); *Hao Gao* (*Huazhong University of Science and Technology*); *Huixian Zhou* (*Huazhong University of Science and Technology*); *Yuhui Hu* (*Huazhong University of Science and Technology*); *Zhelin Lin* (*Huazhong University of Science and Technology*); *Cheng Zhang* (*Huazhong University of Science and Technology*);

11:35 Tailoring Hierarchical Metasurface Designs to Achieve Broadband Detections in the New-developed Ratchet Photodetector
Yiwei Wang (*Institute of Applied Physics and Computational Mathematics*); *Peng Bai* (*Institute of Applied Physics and Computational Mathematics*); *Ning Yang* (*Institute of Applied Physics and Computational Mathematics*); *Weidong Chu* (*Institute of Applied Physics and Computational Mathematics*);

11:50 Valley-addressable Monolayer Lasing through Berry
Invited Phase Photonic Cavities
Xiaoyang Duan (*Beijing Institute of Technology*);

Session 3A5
Advanced Photonic Technologies for Spectroscopic Applications 1

Wednesday AM, April 24, 2024

Room 5 - Yingbin

Organized by Wei Dong Chen, Vincenzo Spagnolo
Chaired by Kun Liu, Weilin Ye

8:00 Quartz-tuning-fork-based Laser Spectroscopy Sensing
Invited
Yufei Ma (*Harbin Institute of Technology*); *Ying He* (*Harbin Institute of Technology*);

8:20 Lithium Niobate Tuning Forks as Piezoelectric Transducers in Photoacoustic Spectroscopy
Invited
Angelo Sampaolo (*University and Politecnico of Bari*); *Aldo F. P. Cantatore* (*University and Politecnico of Bari*); *Giansergio Menduni* (*Politecnico and University of Bari*); *Andrea Zifarelli* (*Universita degli Studi di Bari and Politecnico di Bari*); *Miguel Gonzalez* (*Aramco Americas, Sensors Development Team*); *Huseyin R. Seren* (*Aramco Americas, Sensors Development Team*); *Pietro Patimisco* (*Universita degli Studi di Bari and Politecnico di Bari*); *Vincenzo Spagnolo* (*Politecnico di Bari*);

8:40 Advancements in Quartz-enhanced Photoacoustic and Photothermal Hybrid Spectroscopy Research
Invited
Hongpeng Wu (*Shanxi University*); *Ruyue Cui* (*Shanxi University*); *Vincenzo Spagnolo* (*Politecnico di Bari*); *Wei Dong Chen* (*Université du Littoral Côte d'Opale*); *Lei Dong* (*Shanxi University*);

9:00 Assessment of Methane Isotopologues Relaxation Rate in a Wet-nitrogen Matrix Using QEPAS
Marilena Giglio (*University and Politecnico of Bari*); *Mariagrazia Olivieri* (*University and Politecnico of Bari*); *Giansergio Menduni* (*Politecnico and University of Bari*); *Andrea Zifarelli* (*Universita degli Studi di Bari and Politecnico di Bari*); *Angelo Sampaolo* (*University and Politecnico of Bari*); *Pietro Patimisco* (*Universita degli Studi di Bari and Politecnico di Bari*); *Vincenzo Spagnolo* (*Politecnico di Bari*);

9:15 Multiple Gas Detection by Cavity-enhanced Raman Spectroscopy with Sub-ppm Sensitivity
Invited
Yan Tan (*University of Science and Technology of China*); *Qing-Ying Yang* (*University of Science and Technology of China*); *Yu Sun* (*Institute of Advanced Science Facilities*); *An-Wen Liu* (*University of Science and Technology of China*); *Shui-Ming Hu* (*University of Science and Technology of China*);

9:35 Advanced Photoacoustic Multicomponent SF_6 Decomposition Sensors for an Electric Power System Simple
Invited
Xukun Yin (*Xidian University*);

10:00 **Coffee Break**

10:30 Development and Application of Innovative Folded-path Optical Cells for High-sensitivity Trace Gas Sensing
Ruyue Cui (*Shanxi University*); *Hongpeng Wu* (*Shanxi University*); *Vincenzo Spagnolo* (*Politecnico di Bari*); *Weidong Chen* (*Université du Littoral Côte d'Opale*); *Lei Dong* (*Shanxi University*);

10:45 Gas Isotopologue Ratios Measurement Using a Mid-Infrared Hollow Waveguide Gas Sensor
Invited
Haojie Zhang (*Nanchang Hangkong University*); *Tao Wu* (*Nanchang Hangkong University*); *Qiang Wu* (*Northumbria University*); *Wei Dong Chen* (*Université du Littoral Côte d'Opale*); *Xingdao He* (*Nanchang Hangkong University*);

11:05 Development of VIPA Spectrometer for Broadband and High Resolution Spectroscopy Detection
Invited
Weixiong Zhao (*Anhui Institute of Optics and Fine Mechanics, Chinese Academy Sciences*); *Hao Zhou* (*Anhui Institute of Optics and Fine Mechanics, Chinese Academy Sciences*); *Bingxuan Lv* (*Anhui Institute of Optics and Fine Mechanics, Chinese Academy Sciences*); *Weihua Cui* (*Anhui Institute of Optics and Fine Mechanics, Chinese Academy Sciences*); *Bo Fang* (*Anhui Institute of Optics and Fine Mechanics, Chinese Academy Sciences*); *Nana Yang* (*Anhui Institute of Optics and Fine Mechanics, Chinese Academy Sciences*); *Weijun Zhang* (*Anhui Institute of Optics & Fine Mechanics, Chinese Academy of Sciences*); *Wei Dong Chen* (*Université du Littoral Côte d'Opale*);

11:25 Generation of Broadband Mid-infrared Supercontinuum Spectrum in Square-core Photonic Crystal Fiber for Low-power Pulses
Yongtao Xia (*Lanzhou University of Technology*); *Jiayuan Liu* (*Lanzhou University of Technology*); *Shanglin Hou* (*Lanzhou University of Technology*); *Gang Wu* (*Lanzhou University of Technology*); *Zuyong Yan* (*Lanzhou University of Technology*);

Session 3A6a
Non-Hermitian Optics and Photonics, and Exceptional Point

Wednesday AM, April 24, 2024

Room 6 - Huanhua

Organized by Pai-Yen Chen, Minye Yang

Chaired by Minye Yang

8:00 Highly Homogeneous Zero-index Metamaterial for High-directivity Antenna
Invited
Yang Li (*Tsinghua University*);

8:20 Frequency Tunable Coherent Perfect Absorption and Lasing in Radio-frequency System for Ultrahigh-sensitive Sensing
Jianhui Wu (*Zhejiang University*); *Jie Li* (*Zhejiang University*); *Chi Zhang* (*Zhejiang University*); *Weipeng Xuan* (*Hangzhou Dianzi University*); *Hao Jin* (*Zhejiang University*); *Shu Rong Dong* (*Zhejiang University*); *Jikui Luo* (*Zhejiang University*);

8:35 Higher-order Partity-time Symmetry Enabled Multimodal Wireless Sensors
Zhilu Ye (*Xi'an Jiaotong University*); *Pai-Yen Chen* (*University of Illinois at Chicago*);

8:50 Non-Hermitian Photonics Manipulations in Topological Waveguide Lattices
Wange Song (*Nanjing University*); *Shining Zhu* (*Nanjing University*); *Tao Li* (*Nanjing University*);

9:05 Loss Difference Induced Localization in a Non-Hermitian Honeycomb Photonic Lattice
Zhenzhi Liu (*Xi'an Jiaotong University*); *Yuan Feng* (*Xi'an Jiaotong University*); *Jiawei Yu* (*Xi'an Jiaotong University*); *Shun Liang* (*Xi'an Jiaotong University*); *Feng Li* (*Xi'an Jiaotong University*); *Yanpeng Zhang* (*Xi'an Jiaotong University*); *Min Xiao* (*Nanjing University*); *Zhaoyang Zhang* (*Xi'an Jiaotong University*); *Fu Liu* (*Xi'an Jiaotong University*);

9:20 Nonreciprocal Magnon-photon Coupling Based on Microwave Photonic Crystal
Chi Zhang (*Lanzhou University*); *Zhenhui Hao* (*Lanzhou University*); *Guozhi Chai* (*Lanzhou University*);

9:35 Pseudo-Hermitian Circuits and Their Novel Applications
Ke Yin (*Xi'an Jiaotong University*); *Yuangen Huang* (*Xi'an Jiaotong University*); *Zhuoyu Zhang* (*Xi'an Jiaotong University*); *Xi-Kui Ma* (*Xi'an Jiaotong University*); *Tianyu Dong* (*Xi'an Jiaotong University*);

10:00 **Coffee Break**

10:20 Tracking Exceptional Points above the Lasing Threshold
Kaiwen Ji (*Centre de Nanosciences et de Nanotechnologies, CNRS*); *Zhong Qi* (*Michigan Technological University*); *Li Ge* (*CUNY*); *Gregoire Beaudoin* (*Centre de Nanosciences et de Nanotechnologies, CNRS*); *Isabelle Sagnes* (*Centre de Nanosciences et de Nanotechnologies, CNRS*); *Fabrice Raineri* (*Centre de Nanosciences et de Nanotechnologies, CNRS*); *Ramy El-Ganainy* (*Michigan Technological University*); *Alejandro M. Yacomotti* (*Centre de Nanosciences et de Nanotechnologies, CNRS*);

10:35 Dynamically Encircling an Exceptional Nexus for Chiral Mode Switching in Gainless and Lossless Anti-PT Symmetric System
Yuxin Zhong (*Southern University of Science and Technology*); *Jingming Chen* (*Southern University of Science and Technology*); *Zhen Gao* (*Southern University of Science and Technology*);

Session 3A6b
Non-Hermitian Physics: Theory and Applications 2

Wednesday AM, April 24, 2024

Room 6 - Huanhua

Organized by Wei Wang, Guancong Ma, Kun Ding

Chaired by Guancong Ma, Kun Ding

10:50 Localized Chiral Edge States in Non-Hermitian Photonic Chern Insulators
Gui-Geng Liu (*Nanyang Technological University*); *Subhaskar Mandal* (*Nanyang Technological University*); *Pei-Heng Zhou* (*University of Electronic Science and Technology of China*); *Xiang Xi* (*Southern University of Science and Technology*); *Yihao Yang* (*Zhejiang University*); *Yidong Chong* (*Nanyang Technological University*); *Baile Zhang* (*Nanyang Technological University*);

11:05 Restoration of Non-Hermitian Bulk-boundary Correspondence by Counterbalancing Skin Effect
Yixin Xiao (*The Hong Kong University of Science and Technology*); *Zhao-Qing Zhang* (*The Hong Kong University of Science and Technology*); *Che Ting Chan* (*The Hong Kong University of Science and Technology*);

11:20 Acoustic Circular Dichroism in a Three-dimensional Chiral Metamaterial
Qing Tong (*City University of Hong Kong*); *Jensen Li* (*Hong Kong University of Science and Technology*); *Shubo Wang* (*City University of Hong Kong*);

11:35 Ultra-broadband Reflection-less Sound Absorbers with Angular Selectivity
Jinjie Shi (*Nanjing University*); *Chenkai Liu* (*Nanjing University*); *Hongchen Chu* (*Nanjing University*); *Jie Luo* (*Soochow University*); *Xiaozhou Liu* (*Nanjing University*); *Jensen Li* (*Hong Kong University of Science and Technology*); *Yun Lai* (*Nanjing University*);

Session 3A7
Integrated Photonics Beyond the Communication Waveband

Wednesday AM, April 24, 2024

Room 7 - Xiling

Organized by Yi Zou, Rongping Wang

Chaired by Yi Zou, Rongping Wang

8:00 Invited In-situ Visualization of Nanosecond Laser-materials Processes and the Functional Structures Preparation of Thin Film
Dongfeng Qi (*Shandong University of Technology*); *Letian Wang* (*University of California*); *Songyan Chen* (*Xiamen University*); *Costas P. Grigoropoulos* (*University of California, Berkeley*);

8:20 Invited Nonlinear Photonic Devices Based on GeSbSe Chalcogenide Glass
Peipeng Xu (*Ningbo University*);

8:40 Invited High Accuracy Terahertz Computed Tomography and Continuous-wave Terahertz Holographic Diffraction Tomography
Dayong Wang (*Beijing University of Technology*); *Jie Zhao* (*Beijing University of Technology*); *Lu Rong* (*Beijing University of Technology*); *Yunxin Wang* (*Beijing University of Technology*); *Shufeng Lin* (*Beijing University of Technology*);

9:00 Hybrid Integration of Chalcogenide with Silica Pedestal for Mid-infrared Nonlinear Applications
Invited
Duk-Yong Choi (*Australian National University*);

9:20 A Novel Tuned Phosphate Systems to Fabricate Glass for Their Variety of Optical Applications Thereof
Invited
El Sayed Said Yousef (*King Khalid University*); *Mohammed S. Alqahtani* (*King Khalid University*); *A. M. Alshehri* (*King Khalid University*); *Bozena Burtan-Gwizdala* (*Cracow University of Technology*); *Manuela Reben* (*AGH — University of Science and Technology*); *Ganapathy Senthil Murugan* (*University of Southampton*); *Rongping Wang* (*Ningbo University*);

9:40 Mid-infrared All-transparent Chalcogenide Glass Fiber for Laser and Optics
Invited
Xunsi Wang (*Ningbo University*); *Kai Jiao* (*Ningbo University*); *Yuze Wang* (*Ningbo University*);

10:00 **Coffee Break**

10:30 Towards Removal of Water Vapour and Carbon Dioxide Effects from Mid-infrared Spectra
Invited
Waseem Ahmed (*University of Southampton*); *Eleanor Osborne* (*University of Southampton*); *Ganapathy Senthil Murugan* (*University of Southampton*);

10:50 Ultrafast Optofluidic Imaging on a Chip for Massive Image-based Single-cell Profiling
Invited
Ting-Hui Xiao (*Zhengzhou University*);

11:10 Group IV Integrated Photonics for Shortwave Infrared Applications
Invited
Li Shen (*Huazhong University of Science and Technology*);

11:30 Broadband Double-layer L-shaped Grating Coupler
Wenxin Hao (*Tongji University*); *Junhe Zhou* (*Tongji University*);

11:45 Mid-infrared On-chip Spectrometer for Chemical Sensing
Lipeng Xia (*ShanghaiTech University*); *Yi Zou* (*ShanghaiTech University*);

12:00 On-chip Er-doped Ta_2O_5 and Ga_2O_3 Waveguide Amplifiers
Rongping Wang (*Ningbo University*);

Session 3A8
High-Q Photonic Resonances in All-dielectric Nanostructures and Their Applications 1

Wednesday AM, April 24, 2024

Room 8 - Guixiang

Organized by Zhanghua Han, Wei Wang

Chaired by Zhanghua Han

8:00 The Hamiltonian of Optical Bound States in Photonic Crystal Slabs
Invited
Dezhuan Han (*Chongqing University*);

8:20 High-Q Resonant Nanophotonics
Invited
Lujun Huang (*East China Normal University*);

8:40 Investigation of Dirac Semimetal Supported Tunable Terahertz High Q-factor All-dielectric Metamaterials
Invited
Xiao-Yong He (*Shanghai Normal University*);

9:00 Optical Nonlinearity in All-dielectric Nanostructures of High-Q Photonic Resonances
Invited
Tingyin Ning (*Shandong Normal University*);

9:20 Scanning Probe Lithography for Optoelectronic Devices
Invited
Xiaorui Zheng (*Westlake University*);

9:40 Metasurfaces for Manipulating and Controlling Visible-light Emission and Its Diverse Applications
Invited
Shaojun Wang (*Soochow University*);

10:00 **Coffee Break**

10:30 High-Q EIT Resonance Freeform Dielectric Metasurface via Time-reversal Based Time-domain Topology Optimization
Invited
Mingfeng Xu (*Chinese Academy of Sciences*); *Mingbo Pu* (*Institute of Optics and Electronics, Chinese Academy of Sciences*); *Tianqu Chen* (*Chinese Academy of Sciences*); *Yuhan Zheng* (*Chinese Academy of Sciences*); *Shilin Yu* (*Chinese Academy of Sciences*); *Fei Zhang* (*Chinese Academy of Sciences*); *Yinghui Guo* (*Institute of Optics and Electronics, Chinese Academy of Sciences*); *Xiong Li* (*Institute of Optics and Electronics, Chinese Academy of Sciences*); *Xiaoliang Ma* (*Institute of Optics and Electronics, Chinese Academy of Sciences*); *Xiangang Luo* (*Institute of Optics and Electronics, Chinese Academy of Sciences*);

10:50 Heterogeneous Vanadium Oxide Metasurface Empowered High-Q Infrared Thermal Switching
Invited
Hai Lu (*Henan Normal University*); *Shi-Qing Dong* (*Henan Normal University*); *Hong-Chao Liu* (*Henan Normal University*); *Chao Dong* (*Henan Normal University*); *Ke-Sheng Shen* (*Henan Normal University*);

11:10 Bound States in the Continuum Manipulations with AL-3Dlithograhy and Its Application in Optoelectronic Devices
Invited
Liaoyong Wen (*Westlake University*);

11:30 Self-aligned Integration of Self-assembled Silicon Photonic Cavities with Atomic-scale Confinement in Photonic Circuits
Invited
Ali Nawaz Babar (*Technical University of Denmark*); *Thor August Schimmell Weis* (*Technical University of Denmark*); *Konstantinos Tsoukalas* (*Technical University of Denmark*); *Shima Kadkhodazadeh* (*Technical University of Denmark*); *Guillermo Arregui* (*Technical University of Denmark*); *Babak Vosoughi Lahijani* (*Technical University of Denmark*); *Soren Stobbe* (*Technical University of Denmark*);

Session 3A9
Organic, Perovskite and Low-dimensional Light Sources: Emerging Phenomena and Applications

Wednesday AM, April 24, 2024

Room 9 - Xinyu

Organized by Dawei Di

Chaired by Baodan Zhao, Chen Zou

8:00 Invited — From Excitons to Polarons: The Photophysics of Lead Halide Perovskites
Michele Saba (*Università di Cagliari*); *Riccardo Pau* (*Università di Cagliari*); *Federico Pitzalis* (*Università di Cagliari*); *Luyan Wu* (*Università di Cagliari*); *Ruirui Wu* (*Università di Cagliari*); *Selene Matta* (*Università di Cagliari*); *Stefano Lai* (*Università di Cagliari*); *Daniela Marongiu* (*Università di Cagliari*); *Angelica Simbula* (*Università di Cagliari*); *Valeria Demontis* (*Università di Cagliari*); *Francesco Quochi* (*Università di Cagliari*); *Andrea Mura* (*Università di Cagliari*); *Giovanni Bongiovanni* (*Università di Cagliari*);

8:20 Invited — Polaritonic Metasurface Based on Halide Perovskite
Hai Son Nguyen (*Ecole Centrale de Lyon*); *Nguyen Ha My Dang* (*Université Claude Bernard Lyon 1*); *Simone Zanotti* (*Università di Pavia*); *Céline Chevalier* (*Université Claude Bernard Lyon 1*); *Emmanuel Drouard* (*Univ Lyon*); *Gaëlle Trippé-Allard* (*Université Paris-Saclay*); *Emmanuelle Deleporte* (*Ecole Normale Supérieure Paris-Saclay*); *Dario Gerace* (*Univ Pavia*); *Christian Seassal* (*Université Claude Bernard Lyon 1*);

8:40 Invited — Passivation Strategies for Mitigating Defect Challenges in Halide Perovskite Light-emitting Diodes
Bo-Ram Lee (*Sungkyunkwan University*);

9:00 Invited — Interface-assisted Perovskite Modulations for High-performance Near-infrared Light-emitting Diodes
Sai Bai (*University of Electronic Science and Technology*);

9:20 Invited — Challenges beyond Efficiency in Perovskite Light-emitting Diodes
Baodan Zhao (*Zhejiang University*); *Dawei Di* (*Zhejiang University*);

9:40 Invited — Towards Efficient Electrical Doping Strategies in Metal-halide Perovskites
Keehoon Kang (*Seoul National University*);

10:00 **Coffee Break**

10:30 Invited — Molecular Engineering Enabled High-performance Perovskite Light-emitting Diodes
Kang Wang (*Institute of Chemistry Chinese Academy of Sciences*); *Letian Dou* (*Purdue University*);

10:50 Invited — Patterning Multicolor Perovskite Films Using a Dry Lift-Off Method
Chen Zou (*Zhejiang University*);

11:10 Optical Routes to Enhance the Open Circuit Voltage from Organic and Perovskite Photovoltaic Cells
Francisco Bernal-Texca (*ICFO — Institut de Ciències Fotòniques, The Barcelona Institute of Science and Technology*); *Mariia Kramarenko* (*ICFO — Institut de Ciències Fotòniques, The Barcelona Institute of Science and Technology*); *Jordi Martorell* (*ICFO-Institut de Ciencies Fotoniques*);

11:25 Bright Circularly Polarized Photoluminescence in Chiral Layered Hybrid Lead-halide Perovskites
Shangpu Liu (*Universität Heidelberg*); *Yang Li* (*Universität Heidelberg*); *Stanislav Bodnar* (*Universität Heidelberg*); *Jonathan Zerhoch* (*Universität Heidelberg*); *Andrii Shcherbakov* (*Universität Heidelberg*); *Markus W. Heindl* (*Universität Heidelberg*); *Ulrich W. Paetzold* (*Karlsruhe Institute of Technology*); *Felix Deschler* (*Universität Heidelberg*);

11:40 Multifunctional Additives for Bright, Efficient and Stable Lead-bromide Perovskite LEDs
Shiyu Xing (*Zhejiang University*); *Yucai Yuan* (*Zhejiang University*); *Gan Zhang* (*Zhejiang University*); *Shiang Zhang* (*Zhejiang University*); *Yaxiao Lian* (*Zhejiang University*); *Weidong Tang* (*Zhejiang University*); *Ke Zhou* (*Zhejiang University*); *Zhixiang Ren* (*Zhejiang University*); *Guoling Zhang* (*Zhejiang University*); *Baodan Zhao* (*Zhejiang University*); *Dawei Di* (*Zhejiang University*);

11:55 Invited — Light-emission and Lasing in Organic Semiconductor-incorporated Perovskites (OSiP)
Letian Dou (*Purdue University*);

Session 3A10a
Measurement-computation Fusion for Advanced Applications

Wednesday AM, April 24, 2024

Room 10 - Shuliu

Organized by Huapeng Zhao, Xingchang Wei

Chaired by Xingchang Wei

8:00 Inception-V4 Convolutional Neural Network for Near-field to Far-field Transform
Tianyang Zeng (*Zhejiang University*); *Jianming Zhou* (*Zhejiang University*); *Donghao Han* (*Zhejiang University*); *Xingchang Wei* (*Zhejiang University*);

8:15 Far Field Prediction Based on Non-fixed Height Near-field Scan and VGG19 Convolutional Neural Network
Jianming Zhou (*Zhejiang University*); *Tianyang Zeng* (*Zhejiang University*); *Donghao Han* (*Zhejiang University*); *Xingchang Wei* (*Zhejiang University*);

8:30 Active Machine Learning for Automatic Electromagnetic Source Localization
Ling Zhang (*Zhejiang University*); *Jinghai Guo* (*Zhejiang University*); *Er-Ping Li* (*Zhejiang University*);

8:45 Research Progress on Sub-band Fusion Technology for Ultra-wideband Radar Signals
Denghui Huang (*University of Electronic Science and Technology of China*); *Ying Zhang* (*University of Electronic Science and Technology of China*); *Huapeng Zhao* (*University of Electronic Science and Technology of China*); *Muchen He* (*University of Electronic Science and Technology of China*); *Yipeng Wang* (*University of Electronic Science and Technology of China*); *Xinxin Qin* (*University of Electronic Science and Technology of China*);

9:00 Statistical Research on Human Posture Characteristics Based on RFID
Yuan Zhao (*Chengdu University of Information Technology*); *Zhiqiang Song* (*Chengdu University of Information Technology*); *Yihao Wan* (*Sunwave Communications Co., Ltd.*); *Haojie Ren* (*Chengdu University of Information Technology*); *Pengju Chen* (*Chengdu University of Information Technology*); *Guo-Hong Du* (*University of Science and Technology of China*);

9:15 Multi-sensor Fusion Positioning System for Connected Vehicles
Mohamed Cheikh (*Continental Automotive AG*); *Herve Foligne* (*Continental Automotive Systems*); *J. F. Girard* (*Continental Automotive AG*);

9:30 An Efficient Method for Evaluating the Radiated Emission from Power Train of Electric Vehicles
H. L. Zhang (*University of Electronic Science and Technology of China*); *Bao-Lin Nie* (*University of Electronic Science and Technology of China*); *W. Zhang* (*University of Electronic Science and Technology of China*); *Jiabao Wang* (*University of Electronic Science and Technology of China*); *X. Zhang* (*University of Electronic Science and Technology of China*);

9:45 Fast Simulation of Antennas on Large Platforms by Measurement-computation Fusion Based on Modal Decomposition
Huapeng Zhao (*University of Electronic Science and Technology of China*); *Jun Hu* (*University of Electronic Science and Technology of China*); *Da Yi* (*Chongqing University*);

10:00 **Coffee Break**

Session 3A10b
RF-THz Physical, Chemical and Biological Sensors and Measurement

Wednesday AM, April 24, 2024

Room 10 - Shuliu

Organized by Yunjing Zhang, Wenhai Zhang

Chaired by Yunjing Zhang

10:30 Detection of Biological Sample by Using Terahertz Technology
Nagendra Prasad Yadav (*Hubei Polytechnic University*); *Guozhen Hu* (*Hubei Polytechnic University*); *Xiaofeng Cai* (*Hubei Polytechnic University*);

10:45 Deep Learning-based Recognizing Liquids Using a Multi-resonance Microwave Sensor
Yifan Zhou (*University of Electronic Science and Technology of China*); *Jing Lei Yong* (*Soochow University*); *Jin Yang Peng* (*Soochow University*); *Peng Li* (*Soochow University*); *Mei Song Tong* (*Tongji University*); *Yunjing Zhang* (*Soochow University*);

11:00 A Wireless Temperature Monitoring Method for Battery Pack
Yang Pan (*Zhejiang University*); *Sijie Chen* (*Zhejiang University*); *Hongbin Ma* (*Zhejiang University*); *Ran Yan* (*Zhejiang University*); *Jiangtao Huangfu* (*Zhejiang University*);

11:15 Pipeline Monitoring Based on Magnetic Inductive Coils Detection System
Hongbin Ma (*Zhejiang University*); *Xingyu Liu* (*Zhejiang University*); *Yang Pan* (*Zhejiang University*); *Yifang Sun* (*Zhejiang University*); *Jiangtao Huangfu* (*Zhejiang University*);

Session 3A11
Advanced Optical and Digital Signal Processing in Optical Communication Networks 1

Wednesday AM, April 24, 2024

Room 11 - Xiangyu

Organized by Feng Wen, Mingming Tan, Tianhua Xu

Chaired by Feng Wen

8:00 Invited High-symbol Rate Silicon Photonics Ring Resonator Modulators
Oskars Ozoliņš (*Riga Technical University, Latvian Academy of Sciences*); *Armands Ostrovskis* (*Riga Technical University*); *Aleksandrs Marinins* (*Riga Technical University*); *Toms Salgals* (*Riga Technical University*); *Michael Koenigsmann* (*Keysight Technologies Deutschland GmbH*); *Benjamin Krüger* (*Keysight Technologies Deutschland GmbH*); *Fabio Pittalà* (*Keysight Technologies Deutschland GmbH*); *Arvids Sedulis* (*Riga Technical University*); *Kristaps Rubuls* (*Riga Technical University*); *Ryan P. Scott* (*Keysight Technologies, Inc.*); *Hansjoerg Haisch* (*Keysight Technologies Deutschland GmbH*); *Richard Schatz* (*Royal Institute of Technology (KTH)*); *Rafael Puerta* (*Ericsson Research*); *Katia Gallo* (*KTH — Royal Institute of Technology*); *Lu Zhang* (*Zhejiang University*); *Sandis Spolitis* (*Riga Technical University*); *Xianbin Yu* (*Zhejiang University*); *Markus Gruen* (*Keysight Technologies Deutschland GmbH*); *Hadrien Louchet* (*Keysight Technologies Deutschland GmbH*); *Kazuo Yamaguchi* (*Keysight Technologies*); *Vjaceslavs Bobrovs* (*Riga Technical University*); *Xiaodan Pang* (*KTH Royal Institute of Technology, Riga Technical University*);

8:20 Invited Directly Modulated Quantum Cascade Laser for Mid-wave and Long-wave Infrared Free-space Optical Communications
Xiaodan Pang (*KTH Royal Institute of Technology*); *Richard Schatz* (*Royal Institute of Technology (KTH)*); *Mahdieh Joharifar* (*KTH Royal Institute of Technology*); *Hamza Dely* (*Université Paris Cité, CNRS*); *Laureline Durupt* (*MirSense*); *Gregory Maisons* (*MirSense*); *Djamal Gacemi* (*Université Paris Cité, CNRS*); *Rafael Puerta* (*Ericsson Research*); *Thomas Bonazzi* (*Université Paris Cité, CNRS*); *Lu Zhang* (*Zhejiang University*); *Sandis Spolitis* (*Riga Technical University*); *Yanting Sun* (*KTH Royal Institute of Technology*); *Vjaceslavs Bobrovs* (*Riga Technical University*); *Xianbin Yu* (*Zhejiang University*); *Angela Vasanelli* (*Université Paris Cité, CNRS*); *Carlo Sirtori* (*Université Paris Cité, CNRS*); *Oskars Ozolins* (*Riga Technical University*);

8:40 Invited A Novel Guard-interval Shortening Method for CS-NFDM Transmission Approaching Its Spectral Efficiency Limit
Jianqing He (*Guangdong University of Technology*); *Jianping Li* (*Guangdong University of Technology*); *Yuwen Qin* (*Guangdong University of Technology*);

9:00 Invited Eye-safe Random Fiber Lasers and Manipulation of Their Optical Fields
Jun Liu (*Shenzhen University*); *Xinying Li* (*Shenzhen University*); *Rui Ma* (*Shenzhen University*);

9:20 Invited Characterization of Coupled-core Four-core Fibers for Long-haul Transmission
Lin Ma (*Shanghai Jiao Tong University*); *Junjie Xiong* (*Shanghai Jiao Tong University*);

9:40 Invited Simplified Coherent Optical Transmissions Utilizing Noise Shaping and Non-Integer-Oversampling Clock Data Recovery
Lin Sun (*Soochow University*); *Haotian Mu* (*Soochow University*);

10:00 **Coffee Break**

10:30 Analytical Solution of the Gaussian Noise Model Applied to Hybrid Heterogeneous Links
Tengyuan Liu (*Tongji University*); *Yuheng Wang* (*Tongji University*); *Jiuzhou Guo* (*Tongji University*); *Junhe Zhou* (*Tongji University*);

10:45 Mode-division Multiplexing Signals through Both Wired and Wireless Optical Channels
Shiyu Zong (*University of Electronic Science and Technology of China*); *Feng Wen* (*University of Electronic Science and Technology of China*); *Tianfeng Zhao* (*University of Electronic Science and Technology of China*); *Kun Qiu* (*University of Electronic Science and Technology of China*);

11:00 Mode Exchange of High-speed DP-QPSK Signals Using Spatial Light Modulator
Wei Yan (*University of Electronic Science and Technology of China*); *Bao-Jian Wu* (*University of Electronic Science and Technology of China*); *Yu Tang* (*University of Electronic Science and Technology of China*); *Yuhang Wang* (*University of Electronic Science and Technology of China*); *Kun Qiu* (*University of Electronic Science and Technology of China*);

11:15 Semiconductor Optical Amplifier based on Optical Reservoir (SOA-OR) for Mode-division Multiplexing Signal Compensation
Huiwen Luo (*University of Electronic Science and Technology of China*); *Xiyong Liu* (*University of Electronic Science and Technology of China*); *Tianfeng Zhao* (*University of Electronic Science and Technology of China*); *Kun Qiu* (*University of Electronic Science and Technology of China*); *Feng Wen* (*University of Electronic Science and Technology of China*);

11:30 A Out-of-band Noise Detection and Whitening Method for Polarization Dependent Loss Mitigation
Jiuzhou Guo (*Tongji University*); *Yuheng Wang* (*Tongji University*); *Tengyuan Liu* (*Tongji University*); *Junhe Zhou* (*Tongji University*);

Session 3A12a
Passive Microwave and Millimeter-wave Components and Their Application for RF Frontend

Wednesday AM, April 24, 2024

Room 12 - Siji 1

Organized by Xiaolong Wang, Yong Mao Huang

Chaired by Xiaolong Wang, Yong Mao Huang

8:00 A Novel Wideband Filtering Power Divider with Full Frequency Isolation Performance, Controllable Bandwidth and Reflection Level
Shuo Yang (*Jilin University*); *Xindong Zhang* (*Jilin University*); *Xiaolong Wang* (*Jilin University*); *Chun-Ping Chen* (*Kanagawa University*); *Gennadi Milinevsky* (*Jilin University*); *Geyu Lu* (*Jilin University*);

8:15 A Design Method for Ring Type Dual-band Complex Filtering Impedance Transformer
Chunxiao Li (*Jilin University*); *Hongda Xu* (*Jilin University*); *Xiaolong Wang* (*Jilin University*); *Chun-Ping Chen* (*Kanagawa University*); *Gennadi Milinevsky* (*Jilin University*); *Geyu Lu* (*Jilin University*);

8:30 Substrate Integrated Waveguide Miniaturization Filter with Interdigital Complementary Split-ring Resonator
Yong Mao Huang (*Xihua University*); *Yu Jie Huang* (*Xihua University*);

8:45 Design of a 1 in 8 out Dual-frequency Power Divider
Guanbao Long (*Guangdong Polytechnical Normal University*); *Junyu Zhou* (*Guangdong Polytechnical Normal University*); *Songjie Zhao* (*Guangdong Polytechnical Normal University*); *Peng Xu* (*Guangdong Polytechnical Normal University*); *Ye Li* (*Zhongkai University of Agriculture and Engineering*); *Hui Liu* (*Guangdong Polytechnical Normal University*);

9:00 Design of an N3-band FBAR Filter Chip for Mobile Communications
Chen Zhao (*Guangdong Polytechnical Normal University*); *Wenyu Yan* (*Guangdong Polytechnical Normal University*); *Shangran Wang* (*Guangdong Polytechnical Normal University*); *Zihao Lin* (*Guangdong Polytechnical Normal University*); *Hui Liu* (*Guangdong Polytechnical Normal University*);

9:15 Miniaturized Power Divider Based on Parallel Coupled Microstrip Lines
Wan Jiang (*Sichuan University*); *Xiaobo Chang* (*XiHua University*);

9:30 CSRR Loaded HMSIW Filtering Power Divider with Embedded Snake-shaped Slots
Chen Wang (*Xihua University*); *Yong Mao Huang* (*Xihua University*);

9:45 Investigation of Electromagnetic Susceptibility Characteristics of Optocouplers by DPI Test Method
Peng Huang (*Beihang Universary*); *Jiayue Xing* (*Beihang University*); *Bing Li* (*Beihang University*); *Donglin Su* (*Beihang University*);

10:00 **Coffee Break**

Session 3A12b
Advanced Mode-Inspired Filtering Techniques for 5G+/6G Communications

Wednesday AM, April 24, 2024

Room 12 - Siji 1

Organized by Gang Zhang, Kai Xu

Chaired by Gang Zhang, Kai Xu

10:30 3-D Printed Multiband Filter and Multiplexer on Modified Multimode Coaxial Resonators: Modeling, Synthesis, and Validation
Gang Zhang (*Nanjing Normal University*); *Chenxin Ma* (*Nanjing Normal University*); *Zhanzhi Liu* (*Nanjing Normal University*); *Hongtao Gu* (*Nanjing Normal University*);

10:45 Dual-band Helical Filter Based on Helical Coaxial Stepped Impedance Resonators
Chenxin Ma (*Nanjing Normal University*); *Zhanzhi Liu* (*Nanjing Normal University*); *Hongtao Gu* (*Nanjing Normal University*); *Gang Zhang* (*Nanjing Normal University*); *Wanchun Tang* (*University of Nanjing Science and Technology*);

11:00 A Decoupling Antenna with Integrated Filtering Characteristics
Kai Xu (*Nantong University and City University of Hong Kong*); *Binghe Wang* (*Nantong University*); *Shiwei Wang* (*Nantong University*); *Wei Zhang* (*Nantong University*); *Jin Shi* (*Nantong University*);

11:15 A Balanced Filtering Phase Shifter with Wide Operating Bandwidth
Jinwei Shi (*Nantong University*); *Jin Shi* (*Nantong University*); *Mengjie Yue* (*Nantong University*); *Kai Xu* (*Nantong University and City University of Hong Kong*); *Wei Zhang* (*Nantong University*);

11:30 Bandstop Cavity Filter Based Decoupling Method for $\mathbf{1 \times 2}$ MIMO Slot Antennas
Mingqi Li (*Sun Yat-sen University*); *Nan Yang* (*Sun Yat-sen University*); *Kai Lu* (*Sun Yat-sen University*); *Peng Fei Hu* (*Sun Yat-Sen University*); *Yunliang Long* (*Sun Yat-Sen University*);

Session 3A13a
New Mechanism and Data Processing of Ground Penetrating Radar

Wednesday AM, April 24, 2024

Room 13 - Siji 2

Organized by Tong Hao, Hongxia Ye

Chaired by Tong Hao, Hongxia Ye

8:00 Time-varying Baseline Characteristics Analysis for Active and Passive Glacier Deep Exploration with Multi-satellites Formation Flying
H. M. Dai (*National Space Science Center, Chinese Academy of Sciences*); *R. Li* (*National Space Science Center, Chinese Academy of Sciences*); *Li Deng* (*National space science center, Chinese Academy of Sciences*);

8:15 GPR Clutter Removal Based on Stationary Graph Process
Wenhao Luo (*Tongji University*); *Tong Hao* (*Tongji University*);

8:30 Denoising Method for SHARAD Radar Signal Based on Diffusion Probabilistic Model
Rui Shi (*Fudan University*); *Hongxia Ye* (*Fudan University*);

8:45 Shallow Neural Network-based Wavelet Synchrosqueezing for Near-surface Void Detection by GPR
Changyu Zhou (*Tongji University College of Surveying & Geo-Informatics*);

9:00 The Sharpness Method Based on Window Interception Improves the Stability of Mars TEC Estimation
Yunlong Dong (*Fudan University*); *Hongxia Ye* (*Fudan University*);

9:15 Design of a Directional Borehole Radar System
Shangyang Zhang (*Guangzhou University*); *Hai Liu* (*Guangzhou University*); *Yao Wang* (*Guangzhou University*); *Xu Meng* (*Guangzhou University*);

9:30 An Intelligent Reconfigurable Anti-reflection Matching Layer for Ground Penetrating Radar
Linyan Guo (*China University of Geosciences, Beijing*); *Bo Li* (*China University of Geosciences, Beijing*);

9:45 Integration of Metasurface-based Impedance Matching Layer with Ground Penetrating Radar
Tong Hao (*Tongji University*); *Wuan Zheng* (*Tongji University*); *Xiaojing Li* (*Tongji University*);

10:00 **Coffee Break**

Session 3A13b
Progress in Inversion Method and Machine Learning Enhanced Inversion Method and Their Applications

Wednesday AM, April 24, 2024

Room 13 - Siji 2

Organized by Yunyun Hu, Rencheng Song

Chaired by Yunyun Hu, Rencheng Song

10:30 Physics-informed Deep Neural Networks for Fourier Ptychographic Microscopy Imaging
Quan Chen (*Sun Yat-Sen University*); *Rui Chen* (*Sun Yat-Sen University*);

10:45 A Sparsity-promoting Regularization Scheme for Electromagnetic Imaging
Lingqi Gao (*King Abdullah University of Science and Technology*); *Hakan Bagci* (*King Abdullah University of Science and Technology (KAUST)*);

11:00 Integrating Discrete-valued Search and Continuous Gradient Information through Probabilistic Approaches
Shanglin Yang (*Xidian University*); *Hao Jia* (*Lanzhou University*);

11:15 New Thin Sheet Approximation of Hydraulic Fractures for Electromagnetic Surveys
Qingtao Sun (*Eastern Institute of Technology*); *Yunyun Hu* (*Tongji University*);

11:30 Broadband Complete Polarization Control via Inverse-designed Photonic Crystal Slabs
Ruhuan Deng (*Fudan University*); *Tongyu Li* (*Fudan University*); *Wenzhe Liu* (*Fudan University*); *Chao Peng* (*Peking University*); *Lei Shi* (*Fudan University*);

11:45 Meta-learning-accelerated Untrained Neural Network for Electromagnetic Inverse Scattering Problems
Qian Huang (*Hefei University of Technology*); *Rencheng Song* (*Hefei University of Technology*);

Session 3A14
Advanced Signal and Data Processing Methodologies for Multistatic Radar System

Wednesday AM, April 24, 2024

Room 14 - Siji 3

Organized by Xiaolong Li, Shisheng Guo

Chaired by Xiaolong Li, Shisheng Guo

8:00 Invited Target Detection and Parameters Estimation in GNSS-based FSR
Xiaofeng Ai (*National University of Defense Technology*); *Yuqing Zheng* (*National University of Defense Technology*);

8:20 Invited Multichannel Adaptive Signal Detection: Basic Theory and Some Examples
Weijian Liu (*National University of Defense Technology*);

8:40 Invited Collaborative Signal Processing in Radar Sensor Networks: Past, Present and Future
Jing Liang (*University of Electronic Science and Technology of China*);

9:00 Invited Multi-dimensional Transmit Resource Management Scheme for Phased Array Radar Networks in Target Tracking Application
Chenguang Shi (*Nanjing University of Aeronautics and Astronautics*);

9:20 Invited Spaceborne Distributed Aperture Radar Maneuvering Target Detection Approach with Space-time 2D Hybrid Integration Technique
Dong Li (*Chongqing University*);

9:40 Joint Power and Time Allocation Algorithm in Multi-radar System for Cooperative Target Detection
Xinrui Zhang (*Nanjing University of Aeronautics and Astronautics*); *Chenguang Shi* (*Nanjing University of Aeronautics and Astronautics*); *Jianjiang Zhou* (*Nanjing University of Aeronautics and Astronautics*);

9:55 Intelligent Decision-making Algorithm for Anti-UAV Swarm Based on Convolutional Neural Networks
Xuezhang Sun (*Nanjing University of Aeronautics and Astronautics*); *Chenguang Shi* (*Nanjing University of Aeronautics and Astronautics*); *Jianjiang Zhou* (*Nanjing University of Aeronautics and Astronautics*);

10:05 **Coffee Break**

10:30 Advanced Spatial Signal Processing Based on Novel Spintronic Computing in Memory Accelerators Realizing Complex Weight Multiplications
Haotian Wang (*Beijing Institute of Radio Measurement*); *Liang Chang* (*University of Electronic Science and Technology of China*);

10:45 Wall Parameter Estimation Method Based on Consistent Target States for Distributed Through-wall Imaging Radar
Yao Yu (*University of Electronic Science and Technology of China*); *Shisheng Guo* (*University of Electronic Science and Technology of China*); *Jiahui Chen* (*University of Electronic Science and Technology of China*);

11:00 Enhanced Through-the-wall Radar Imaging Based on ADMM-Net
Qiyue Hu (*Shenyang Aerospace University*); *Lele Qu* (*Shenyang Aerospace University*); *Yan Yang* (*Shenyang Aerospace University*);

11:15 Through-the-wall Human Target Tracking Based on Low Center-frequency Ultra-wideband SFCW Radar
Yang Zheng (*Fourth Military Medical University*); *Jingwen Duan* (*Fourth Military Medical University*); *Qiang An* (*Fourth Military Medical University*);

11:30 An Efficient Algorithm for Low-PAPR Comb Jamming Signal Synthesis
Yongjun Chen (*National University of Defense Technology*); *Da Li* (*National University of Defense Technology*); *Wenjun Wu* (*National University of Defense Technology*); *Bo Tang* (*National University of Defense Technology*);

11:45 Experimental Results of Drone Detection Based on Passive Bistatic Radar Using Radar Illuminator
Jiameng Pan (*National University of Defense Technology*); *Jian Chen* (*National University of Defense Technology*); *Qinglong Bao* (*National University of Defense Technology*); *Xianghong Deng* (*National University of Defense Technology*);

Session 3A15a
Computational Electromagnetics, Hybrid Methods and EMC 1

Wednesday AM, April 24, 2024

Room 15 - Siji 4

Chaired by Huaguang Bao, Mikhail S. Lytaev

8:00 Theory of Electromagnetic Wave Scattering and Dispersion in Exponential Materials
Sichao Qu (*The University of Hong Kong*); *Erqian Dong* (*The University of Hong Kong*); *Nicholas X. Fang* (*The University of Hong Kong*);

8:15 Efficient Electromagnetic Scattering Simulation for Inhomogeneous Objects with Triply Periodic Minimal Surface Structure
Zi-Zhu Qin (*Beijing Institute of Technology*); *Wei-Jia He* (*Beijing Institute of Technology*); *Bi-Yi Wu* (*Beijing Institute of Technology*); *Ming-Lin Yang* (*Beijing Institute of Technology*); *Xin-Qing Sheng* (*Beijing Institute of Technology*);

8:30 Stochastic Parabolic Equation for the Radio Wave Propagation Modeling in Uncertain Tropospheric Ducts
Mikhail S. Lytaev (*St. Petersburg Federal Research Center of the Russian Academy of Sciences*);

8:45 Enhanced Bi-LSTM for Modeling Nonlinear Amplification Dynamics of Ultra-short Optical Pulses
Karina P. Saraeva (*Novosibirsk State University*); *Anastasia E. Bednyakova* (*Novosibirsk State University*);

9:00 A VIE-PEEC Method with Prism and Tetrahedron Mesh for Circuit Parameters Extraction from Complex Packaging Structures
Wei Yang (*Southwest University of Science and Technology*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Feng Guo* (*Southwest University of Science and Technology*); *Yu Tang* (*Southwest University of Science and Technology*); *Tao Zhou* (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Haoran Li* (*Southwest University of Science and Technology*); *Zhen-Yong Du* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yixiang Li* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yuyu Zhu* (*Southwest University of Science and Technology*); *Bo Pu* (*DeTooLIC Technology Co., Ltd*); *Jun Fan* (*Southwest University of Science and Technology*);

9:15 Modeling of Planar Transformers Based on PEEC Method
Mingjun Li (*Southwest University of Science and Technology*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Tao Zhou* (*Southwest University of Science and Technology*); *Yu Tang* (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Haoran Li* (*Southwest University of Science and Technology*); *Zhen-Yong Du* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yixiang Li* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yuyu Zhu* (*Southwest University of Science and Technology*); *Bo Pu* (*DeTooLIC Technology Co., Ltd.*); *Jun Fan* (*Southwest University of Science and Technology*);

9:30 Analysis of High Power Microwave Coupling Effect of PCB Traces
Huimin Yang (*Nanjing University of Science and Technology*); *Yan Peng* (*Nanjing University of Science and Technology*); *Tiancheng Zhang* (*Nanjing University of Science and Technology*); *Huaguang Bao* (*Nanjing University of Science and Technology*); *Yanyan Zhang* (*National Key Laboratory of Electromagnetic Space Security*); *Dazhi Ding* (*Nanjing University of Science and Technology*);

9:45 Simulation of High Power Characteristics of PIN Diode Based on Electrothermal Physical Model
Yinchun Liu (*Nanjing University of Science and Technology*); *Chunyu Li* (*Nanjing University of Science and Technology*); *Tiancheng Zhang* (*Nanjing University of Science and Technology*); *Huaguang Bao* (*Nanjing University of Science and Technology*); *Da-Zhi Ding* (*Nanjing University of Science and Technology*);

10:00 **Coffee Break**

Session 3A15b
Efficient Algorithms in Computational Electromagnetics and Their Applications

Wednesday AM, April 24, 2024

Room 15 - Siji 4

Organized by Yang Liu, Bo O. Zhu

Chaired by Bo O. Zhu

10:30 Beam Tracing with Physical Optics for Angular Glint Calculation in Near Field
Yifan Wu (*Zhejiang University*); *Yuxuan Li* (*Zhejiang University*); *Yuhao Shen* (*Zhejiang University*); *Lizhen Yang* (*Zhejiang University*); *Nan Wu* (*China Ship Development and Design Center*); *Hai Lin* (*Zhejiang University*);

10:45 Fast Physical Optics Integrated Based on Vulkan Ray Tracing
Xirun Yin (*Zhejiang University*); *Ruoming Zhang* (*Zhejiang University*); *Ce Ding* (*Zhejiang University*); *Yanpeng Jia* (*Zhejiang University*); *Hai Lin* (*Zhejiang University*);

11:00 An Electrostatic Integral Equation Method Compatible with Non-conformal Meshes
Zhongyuan Pang (*Nanjing University*); *Bo O. Zhu* (*Nanjing University*);

11:15 Finite Element Solution of Electrostatic Field Based on Three-dimensional Unstructured Mesh: A Study Case of PIC Method
Tianbo Shang (*Institute of Applied Physics and Computational Mathematics Graduate School of China*); *Wei Yang* (*Institute of Applied Physics and Computational Mathematics*); *Mengmeng Song* (*Institute of Applied Physics and Computational Mathematics Graduate School of China*);

11:30 An Efficient FEBI-MLFMA with the Approximate Tucker Decomposition
Yang Liu (*Institute of Applied Physics and Computational Mathematics*); *Haijing Zhou* (*Institute of Applied Physics and Computational Mathematics*);

Session 3A16
Topological Photonics: Fundamentals and Applications 2

Wednesday AM, April 24, 2024

Room 16 - Mudan

Organized by Yihao Yang

Chaired by Yihao Yang

8:00 The Full-tensor Material Parameter of Yttrium Iron Garnet Retrieval from 0.1 THz to 2 THz
Qindong Xie (*University of Electronic Science and Technology of China*); *Zechuan Bin* (*University of Electronic Science and Technology of China*); *Yuxuan Wang* (*University of Electronic Science and Technology of China*); *Yujie Tang* (*University of Electronic Science and Technology of China*); *Dong Gao* (*University of Electronic Science and Technology of China*); *Weihang Yang* (*University of Electronic Science and Technology of China*); *Lei Bi* (*University of Electronic Science and Technology of China*); *Xiuli Yue* (*University of Electronic Science and Technology of China*); *Fu Tang* (*University of Electronic Science and Technology of China*); *Tianyu Zhang* (*University of Electronic Science and Technology of China*); *Qinghui Yang* (*University of Electronic Science and Technology of China*); *Min Hu* (*University of Electronic Science and Technology of China*); *Pei-Heng Zhou* (*University of Electronic Science and Technology of China*);

8:15 Observation of Tunable Topological Phases of Polaritons in a Cavity Waveguide
Invited
Yan Meng (*Southern University of Science and Technology*); *Zhen Gao* (*Southern University of Science and Technology*);

8:35 Twisted Photonic Weyl Meta-crystals and Aperiodic Fermi Arc Scattering
Invited
Hanyu Wang (*National University of Defense Technology*); *Wei Xu* (*National University of Defense Technology*); *Zhihong Zhu* (*National University of Defense Technology*); *Biao Yang* (*National University of Defence Technology*);

8:55 Coherent-resonance Enhancement of Sensing at the Exceptional Points
Jingming Chen (*Southern University of Science and Technology*); *Zhen Gao* (*Southern University of Science and Technology*);

9:10 Observation of Scale-free Localized States Induced by Non-Hermitian Defects
Invited
Xinrong Xie (*Zhejiang University*); *Gan Liang* (*Sun Yat-Sen University (Zhuhai Campus)*); *Fei Ma* (*Zhejiang University*); *Yulin Du* (*Zhejiang University*); *Yiwei Peng* (*Zhejiang University*); *Er Ping Li* (*Zhejiang University — UIUC Institute*); *Hongsheng Chen* (*Zhejiang University*); *Linhu Li* (*Sun Yat-Sen University (Zhuhai Campus)*); *Fei Gao* (*Zhejiang University*); *Haoran Xue* (*The Chinese University of Hong Kong*);

9:30 Realization of a Topological One-way Photonic Crystal Fiber
Invited
Xiang Xi (*Southern University of Science and Technology*); *Zhen Gao* (*Southern University of Science and Technology*);

9:50 Higher-order Topology and Fully Flat Bands in Multimode Photonic Lattices
Maxim Mazanov (*ITMO University*); *Anton S. Kuprianov* (*Jilin University*); *Zuxian He* (*Jilin University*); *Roman S. Savelev* (*ITMO University*); *Maxim A. Gorlach* (*ITMO University*);

10:05 **Coffee Break**

10:30 Antichiral Surface States in Time-reversal-invariant Photonic Semimetals
Jian-Wei Liu (*Sun Yat-Sen University*); *Wenjie Chen* (*Sun Yat-Sen University*); *Jian-Wen Dong* (*Sun Yat-Sen University*);

10:45 Robust Ultrahigh $\boldsymbol{Q}$ Factors of Brillouin Zone Folding Induced Bound States in the Continuum
Wenhao Wang (*Nanyang Technological University*); *Yogesh Kumar Srivastava* (*Nanyang Technological University*); *Thomas Cai Wei Tan* (*Nanyang Technological University*); *Zhiming Wang* (*University of Electronic Science and Technology of China*); *Ranjan Singh* (*Nanyang Technological University*);

11:00 Counter-propagating Waves in Topological Slow Light and its Active Control on a Chip
Yi Ji Tan (*Nanyang Technological University*); *Abhishek Kumar* (*Nanyang Technological University*); *Nikhil Navaratna* (*Nanyang Technological University*); *Manoj Gupta* (*Nanyang Technological University*); *Prakash Pitchappa* (*Institute of Microelectronics, Agency for Science, Technology and Research*); *Ranjan Singh* (*Nanyang Technological University*);

11:15 Optical-force-controlled Phase Transition of a Photonic SSH Cavity Chain
Feng Tian (*The University of Tokyo*); *Satoshi Iwamoto* (*The University of Tokyo*);

11:30 Topologically Protected Strong-interaction of Photonics with Free Electron
Jing Li (*Peking University*); *Yunquan Liu* (*Peking University*);

11:45 Robust Propagation through Topological Edge States in Terahertz and Microwave Photonic Crystals
Invited
Geetanjali Jena (*Indian Institute of Technology Delhi*); *Koijam Monika Devi* (*University of Lille*); *Ravi K. Varshney* (*Indian Institute of Technology Delhi*); *Dibakar Roy Chowdhury* (*Mahindra University*);

Session 3A17a
Phononic Crystals, Acoustic/Elastic Metamaterials and Metasurfaces 2

Wednesday AM, April 24, 2024

Room 17 - Furong

Organized by Fuyin Ma, Rui Zhu, Xue Jiang

Chaired by Fuyin Ma, Xue Jiang

8:00 Acoustic Topological Metamaterial Based on Meta-atoms and Meta-molecules
Invited
Changlin Ding (*Northwestern Polytechnical University*); *Yibao Dong* (*Northwestern Polytechnical University*); *Yang Sun* (*Northwestern Polytechnical University*); *Xiao-Peng Zhao* (*Northwestern Polytechnical University*);

8:20 Vibroacoustic Metasurface for Sound Transmission Enhancement through the Water-air Interface
Invited
Hong-Tao Zhou (*Tianjin University*); *Shao-Cong Zhang* (*Tianjin University*); *Tong Zhu* (*Tianjin University*); *Yu-Ze Tian* (*Tianjin University*); *Yan-Feng Wang* (*Tianjin University*); *Yue-Sheng Wang* (*Tianjin University*);

8:40 Elastic Metagrating for Extraordinary Guided-wave Manipulations
Invited
Bing Li (*Northwestern Polytechnical University*); *Yabin Hu* (*Northwestern Polytechnical University*); *Jiali Cheng* (*Northwestern Polytechnical University*); *Meizhen Li* (*Northwestern Polytechnical University*);

9:00 Synthesizing Topological Acoustic Rainbow Trapping at
Invited Deep-subwavelength Corners
Zhiwang Zhang (*Nanjing University*); *Ying Cheng* (*Nanjing University*); *Xiao-Jun Liu* (*Nanjing University*); *Johan Christensen* (*IMDEA Materials Institute*);

9:20 Topological Rainbow Trapping and Piezoelectric Energy
Invited Harvesting of Airborne Sound Based on Acoustic Metamaterials
Xiao-Lei Tang (*Tianjin University*); *Tianxue Ma* (*Beijing Jiaotong University*); *Yue-Sheng Wang* (*Tianjin University*);

9:40 Inverse-designed Flexural Wave Metamaterial Beams
Invited with Thermally Induced Tunability
Xuebin Zhang (*Chongqing University*); *Jun Zhang* (*Chongqing University*); *Caibin Xu* (*Chongqing University*); *Junjie Rong* (*Northwestern Polytechnical University*); *Ning Hu* (*Hebei University of Technology*); *Mingxi Deng* (*Chongqing University*); *Chuanzeng Zhang* (*University of Siegen*);

10:00 **Coffee Break**

Session 3A17b
Physics and Applications in Photonic/Acoustic Micro-/Nano-Structures 1

Wednesday AM, April 24, 2024

Room 17 - Furong

Organized by Ying Chen, Feng Wu, Hongwei Wang

Chaired by Ying Chen, Hongwei Wang

10:30 High-$\boldsymbol{Q}$ Monolayer Near-perfect Absorber through Quasi-bound States in the Continuum
Haosen Zhang (*Shenzhen University*); *Kedi Wu* (*Shenzhen University*);

10:45 Topological Chirality-dependent Edge Modes in One-dimensional Photonic Crystals
Wei Qian (*Tongji University*); *Haitao Jiang* (*Tongji University*); *Hong Chen* (*Tongji University*);

11:00 Narrow-angle Privacy Protection Based on Anomalous Propagation Characteristics at Epsilon-near-zero Threshold Frequency of $YaBa_2Cu_3O_7$ Ceramic Material
Bao-Fei Wan (*Nanjing University of Posts and Telecommunications*); *Hai Feng Zhang* (*Nanjing University of Posts and Telecommunications*);

11:15 Quasi-bound States in the Continuum in Subwavelength
Invited Gratings
Feng Wu (*Guangdong Polytechnic Normal University*); *Shuyuan Xiao* (*Nanchang University*);

11:35 Facile Triggering of Bound States in the Continuum in Plasmonic-photonic Configurations
Shaoxin Shen (*Huaqiao University*); *Wenxuan Liu* (*Huaqiao University*); *Guangxu Su* (*Zhejiang University of Technology*); *Zhilin Yang* (*Xiamen University*);

11:50 Topological Effects in the Non-Euclidean Acoustic Metamaterials
Ying Chen (*Huaqiao University*); *Yuhang Yin* (*Xiamen University*); *Zhi-Kang Lin* (*Soochow University*); *Ze-Huan Zheng* (*Xiamen University*); *Yang Liu* (*Soochow University*); *Jian-Hua Jiang* (*Soochow University*); *Huanyang Chen* (*Xiamen University*);

Session 3A18a
Structured Light: From Classical to Quantum 1

Wednesday AM, April 24, 2024

Room 18 - Meilan

Organized by Zhi-Han Zhu, Carmelo Rosales-Guzmán

Chaired by Carmelo Rosales-Guzmán

8:00 Structured Light and Its Application
Invited
Qiang Wang (*Nankai University*); *Chenghou Tu* (*Nankai University*); *Yongnan Li* (*Nankai University*); *Hui-Tian Wang* (*Nanjing University*);

8:20 Near and Mid-infrared Optical Vortex Parametric Oscil-
Invited lator Based on MgO:PPLN and KTA Crystals
Taximaiti Yusufu (*Xinjiang Normal University*);

8:40 Manipulation and Measurement Based on Vectorial
Invited Light-matter Interaction
Jinwen Wang (*Xi'an Jiaotong University*); *Hong Gao* (*Xi'an Jiaotong University*); *Sonja Franke-Arnold* (*University of Glasgow*);

9:00 Generation and Modulation of Spatially Structured
Invited Light Beams Realized via Photopatterning Liquid Crystals
Bing-Yan Wei (*Northwestern Polytechnical University*);

9:20 Programmable Liquid Crystal Superstructures for Soft-
Invited matter Photonics
Ling-Ling Ma (*Nanjing University*); *Zeyu Wang* (*Nanjing University*); *Han Zhang* (*Nanjing University*); *Yan-Qing Lu* (*Nanjing University*);

9:40 Intracavity Generation and Manipulation of Complex
Invited Nested Super-geometric Modes Structured Light
Jiashuo An (*Hebei University of Technology*); *Zhenxu Bai* (*Hebei University of Technology*); *Yulei Wang* (*Hebei University of Technology*); *Zhiwei Lu* (*Hebei University of Technology*);

10:00 **Coffee Break**

Session 3A18b
Light-matter Interaction in Disordered Structures and The Photonic Applications

Wednesday AM, April 24, 2024

Room 18 - Meilan

Organized by Jinhui Chen, Huanyang Chen

Chaired by Jinhui Chen

10:50 Invited Disordered Spin-orbit Interactions of Light in Two-dimensional Photonic Platforms
Bo Wang (*Shanghai Jiao Tong University*);

11:10 Harnessing Disorder Photonic Structures for High-dimensional Optical Information Multiplexing
Yi Xu (*Guangdong University of Technology*);

11:25 Branched Flow of Light in Disordered Liquid Crystals
Jinhui Chen (*Xiamen University*);

11:40 Anomalous Optical Whispering-gallery Mode Induced by Rotational Symmetry Breaking
Jinhui Chen (*Xiamen University*); *Wen Xiao* (*Xiamen University*); *Sheng-Ke Zhu* (*Xiamen University*); *Pei-Ji Zhang* (*Peking University*); *Qi-Tao Cao* (*Peking University*); *Chao-Fan Shen* (*Xiamen University*); *Cheng-Wei Qiu* (*National University of Singapore*); *Huanyang Chen* (*Xiamen University*); *Yun-Feng Xiao* (*Peking University*);

11:55 Waves and Rays on Curved Surface
Yixiao Ge (*Xiamen University*); *Wen Xiao* (*Xiamen University*); *Huanyang Chen* (*Xiamen University*);

Session 3A19
Poster Session 5

Wednesday AM, April 24, 2024

8:00 AM - 12:00 AM

Room Exhibition Area

1 Broadband RCS Reduction Based on 1-bit Polarization Conversion Metasurfaces
Chao Zhang (*University of Electronic Science and Technology of China*); *Shaojun Guo* (*National Institute of Defense Technology Innovation, Academy of Military Sciences PLA China*); *Jiawei Zhang* (*University of Electronic Science and Technology of China*); *Chunrong Zou* (*National Institute of Defense Technology Innovation, Academy of Military Sciences PLA China*); *Yan-Wen Zhao* (*National Institute of Defense Technology Innovation, Academy of Military Sciences PLA China*); *Tongsheng Shen* (*National Institute of Defense Technology Innovation, Academy of Military Sciences PLA China*);

2 Stereo Vision SLAM Based on Feature Extraction Network
Lei Zhang (*Tongji University*); *Wenjie Na* (*Tongji University*); *Chenpeng Yao* (*Tongji University*); *Chengju Liu* (*Tongji University*); *Qijun Chen* (*Tongji University*);

3 110–170 GHz Bandpass Filter with Steep Rejection Slope Based on Symmetrical $\boldsymbol{H}$-plane Cavities
Shu Jiang (*Nanjing Institute of Technology*); *Yi Song* (*Nanjing Institute of Technology*); *Huijun Yang* (*Nanjing Institute of Technology*); *Hengfei Xu* (*Nanjing Institute of Technology*); *Shiqi Ge* (*Nanjing Research Institute of Electronics Technology*); *Wenbo Wang* (*Southeast University*);

4 Optimization of Variable Thickness Rotationally-symmetric Dielectric Radome Based on Physics Optics
Huan Yu (*Shanghai Radio Equipment Research Institution*); *Wenchao Chen* (*Shanghai Radio Equipment Research Institution*); *Zijian Cai* (*Shanghai Radio Equipment Research Institution*); *Fuheng Zhang* (*Shanghai Radio Equipment Research Institution*); *Peng Xin* (*Shanghai Radio Equipment Research Institution*); *Hao Gu* (*Shanghai Radio Equipment Research Institution*);

5 Design of Blass-like Matrix Based Wideband Beamforming Network with Arbitrary Power Distributions
Shuo Li (*Dalian Maritime University*); *Hongmei Liu* (*Dalian Maritime University*); *Yan Zhang* (*Dalian Maritime University*); *Teng Ma* (*Dalian Maritime University*); *Yanjie Pei* (*Dalian Maritime University*);

6 Design of a Capacitive-based Isolated Signal Transmission Circuit
Tao Li (*Southwest Jiaotong University*); *Quanyuan Feng* (*Southwest Jiaotong University*); *Xiaoyan Wei* (*Southwest Jiaotong University*);

7 Enhanced Terahertz Emission from Alcohol Solutions Induced by Ultrashort Laser Pulses
Yong Zhang (*Kunming University of Science and Technology*); *Tao Shen* (*Kunming University of Science and Technology*); *Haoyang Wang* (*Kunming University of Science and Technology*); *Hong Li* (*GBA Branch of Aerospace Information Research Institute, Chinese Academy of Science*); *Tianwu Wang* (*GBA Branch of Aerospace Information Research Institute, Chinese Academy of Sciences*); *Guangchao He* (*Kunming University of Science and Technology*); *Chao Chang* (*Kunming University of Science and Technology*); *Lirong Li* (*Kunming University of Science and Technology*);

8 Surface Waves on Equivalent Impedance Metasurfaces: Recent Developments and New Goals
Zhixia Xu (*Dalian Maritime University*);

9 Wideband Terahertz Waveguide Matched Load with Magnetic Metal Surfaces
Bo Zhang (*University of Electronic Science and Technology of China*); *Yong Zhang* (*University of Electronic Science and Technology of China*);

10 Improvement of Evaluation Method of Automobile Electromagnetic Radiation on Human Health and Its Protection
Bing Chen (*China Automotive Engineering Research Institute Co., Ltd*); *Yang-Chun Gao* (*China Automotive Engineering Research Institute Co., Ltd*); *Xiao-Jiao Li* (*China Automotive Engineering Research Institute Co., Ltd*); *Ya-Wen Dong* (*Guangzhou Automobile Group Co., Ltd*); *Song Mao* (*China Automotive Engineering Research Institute Co., Ltd*); *Hong-Ling Yi* (*China Automotive Engineering Research Institute Co., Ltd*); *Man Xiong* (*Chongqing University of Technology*);

11 A Novel Digital Piezoelectric Ceramic Power Amplifier of T-Type Three-levels Topology
Jing Chen (*Southwest University of Science and Technology*); *Haoran Li* (*Southwest University of Science and Technology*); *Yuyu Zhu* (*Southwest University of Science and Technology*); *Chunxi Jiang* (*Southwest University of Science and Technology*); *Congjin Wang* (*Southwest University of Science and Technology*);

12 A Pair of Rectangular Slots for Bandwidth Improvement of Microstrip Antenna Fed by Proximity Coupling
Mohammad Ridwan Effendi (*Institut Teknologi Bandung*); *Fadjrianah* (*Institut Teknologi Bandung*); *Rheyuniarto Sahlendar Asthan* (*Institut Teknologi Sumatera*); *Sulistyaningsih* (*Institut Teknologi Bandung*); *Rama Rahardi* (*Institut Teknologi Bandung*); *Achmad Munir* (*Bandung Institute of Technology*);

13 The Attenuation of UWB Impulses Amplitude, Reflected from the Soil Surface with the Varying Degree of Roughness
Konstantin Victorovich Muzalevskiy (*Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences*); *Sergey Viktorovich Fomin* (*Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences*);

14 A Novel Design of an Aperiodic Array with Grating Lobe Suppression Based on the Einstein Tile
Yun Fei Qiang (*Nanjing University*); *Wei Wang* (*No. 38 Research Institute of China Electronic Technology Corporation*); *Ruixin Wu* (*Nanjing University*);

15 Recent Progress in Transparent Perovskite Light-emitting Diodes
Zhengyang Ju (*Zhejiang University*); *Dawei Di* (*Zhejiang University*);

16 Effect of Nitrogen on Carbon Dioxide Conversion in Nonequilibrium Plasma Supported by Microwave Radiation of a Gyrotron at Atmospheric Pressure
Nikita V. Chekmarev (*Federal Research Center A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Sergey V. Sintsov* (*Federal Research Center A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *D. A. Mansfeld* (*Federal Research Center A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *A. V. Vodopyanov* (*Federal Research Center A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*);

17 Motion Sensors Data Fusion for Accurate Measurement in AHRS Systems
Jānis Klūga (*Riga Technical University*); *Elans Grabs* (*Riga Technical University*); *Tianhua Chen* (*Riga Technical University*); *Arnis Ancans* (*Riga Technical University*); *Mihails Stetjuha* (*Riga Technical University*); *Dmitrijs Rjazanovs* (*Riga Technical University*); *Aleksandrs Ipatovs* (*Riga Technical University*);

18 The Impact of Measurement Atmosphere on the Ion Migration in Mixed-halide Perovskites
Shengnan Liu (*Zhejiang University*); *Zhixiang Ren* (*Zhejiang University*); *Puyang Li* (*Zhejiang University*); *Ke Zhou* (*Zhejiang University*); *Baodan Zhao* (*Zhejiang University*); *Dawei Di* (*Zhejiang University*);

19 A Rotating Reconfigurable Water Antenna Design
Yifang Sun (*Zhejiang University*); *Hongbin Ma* (*Zhejiang University*); *Yang Pan* (*Zhejiang University*); *Xingyu Liu* (*Zhejiang University*); *Zhuoyu Zhang* (*Zhejiang University*); *Jiangtao Huangfu* (*Zhejiang University*);

20 A Non-contact Electromagnetic Motion Measurement Method
Xingyu Liu (*Zhejiang University*); *Hongbin Ma* (*Zhejiang University*); *Yang Pan* (*Zhejiang University*); *Yifang Sun* (*Zhejiang University*); *Jiangtao Huangfu* (*Zhejiang University*);

21 Location of the Suffa Observatory: Problems of Electromagnetic Compatibility and Regulatory Framework
Ilya V. Lesnov (*Institute of Applied Physics of the RAS*); *D. B. Danilevsky* (*Radiooservatory RT-70*); *Gennady Shanin* (*Radiooservatory RT-70*); *Vyacheslav F. Vdovin* (*Institute of Applied Physics of the RAS*);

22 Gyro-multipliers Based on MW-level Gyrotrons
Grigory G. Denisov (*Institute of Applied Physics, Russian Academy of Sciences*); *Irina V. Zotova* (*Institute of Applied Physics, RAS*); *Ilya V. Zheleznov* (*Institute of Applied Physics, RAS*); *Andrey M. Malkin* (*Institute of Applied Physics, RAS*); *Alexander S. Sergeev* (*Institute of Applied Physics, RAS*); *Mikhail Yu. Glyavin* (*Institute of Applied Physics, RAS*);

23 Mode-locking Regimes in a Helical Waveguide Gyro-BWO
Michael N. Vilkov (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Naum S. Ginzburg* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Irina V. Zotova* (*Institute of Applied Physics, RAS*); *Sergey V. Samsonov* (*Institute of Applied Physics, Russian Academy of Sciences*); *Roman M. Rozental* (*Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)*); *A. A. Bogdashov* (*Institute of Applied Physics, Russian Academy of Sciences*); *Alexander S. Sergeev* (*Institute of Applied Physics, Russian Academy of Sciences*);

24 High Power Near-infrared Supercontinuum Generation in All-fiber Polarization-maintaining Erbium-doped Amplifier
Zipeng Xu (*Beijing University of Technology*); *Chuanfei Yao* (*Beijing University of Technology*); *Xuan Wang* (*Beijing University of Technology*); *Linjing Yang* (*Beijing University of Technology*); *Pingxue Li* (*Beijing University of Technology*);

25 A Method of 2D Electromagnetic Transmission Imaging through Comb Spectrum Hadamard Coding
Sijie Chen (*Zhejiang University*); *Yang Pan* (*Zhejiang University*); *Hongbin Ma* (*Zhejiang University*); *Ran Yan* (*Zhejiang University*); *Jiangtao Huangfu* (*Zhejiang University*);

26 Research on a Compact Symmetrical 90° TE_{01} Bend Based on Dielectric-coated Metallic Circular Waveguide
Meiling Ou (*University of Electronic Science and Technology of China*); *Dagang Liu* (*University of Electronic Science and Technology of China*); *Hao Li* (*University of Electronic Science and Technology of China*);

27 A Spherical Conformal Microstrip Array Antenna with Circular Polarization and Gap-coupled Feeding for Omnidirectional Coverage
Xiao Yu Li (*Tongji University*); *Zhen Wang* (*Tongji University*); *Xiao Jie Lu* (*Tongji University*); *Mei Song Tong* (*Tongji University*);

28 A Miniaturized Multiband Antenna Based on Koch-Minkowski Composite Fractal Structure
Jian Shi (*Tongji University*); *Dan Ni Lin* (*Tongji University*); *Mei Song Tong* (*Tongji University*);

29 Optofluidic Tweezers: Efficient and Versatile Micro/Nano-manipulation Tools
Yuchen Zhu (*Tongji University*); *Minmin You* (*Tongji University*); *Yuzhi Shi* (*Tongji University (TJU)*); *Haiyang Huang* (*Tongji University*); *Zeyong Wei* (*Tongji University*); *Tao He* (*Tongji University*); *Sha Xiong* (*Central South University*); *Zhanshan Wang* (*Tongji University*); *Xinbin Cheng* (*Tongji University*);

30 An Encoded Reconfigurable Chipless RFID Sensor with an U-shaped Structure
Kai Qing Wang (*Shanghai Institute of Technology*); *Lan Chen* (*Shanghai Institute of Technology*); *Mei Song Tong* (*Tongji University*);

31 Non-contact Detection of Head Motions Using Bio-radar
Xiao Yu (*Fourth Military Medical University*);

32 An Energy Efficient CMOS THz Inter-chip Interconnect with Spoof Surface Plasmon Polariton (SSPP) Waveguide and SSPP Oscillator
Zhikai Li (*Guangzhou University*); *Wen Jin* (*Guangzhou University*); *Yiqian Shan* (*Guangzhou University*); *Yuan Liang* (*Nanyang Technological University*); *Guangyu Zhong* (*Guangzhou University*); *Ke Yang* (*Guangzhou University*);

33 Utilization of LC Circuit as Impedance Matching for Spiral Resonator-based Planar Antenna
Mochamad Yunus (*University of Pakuan*); *Agustini Rodiah Mahdi* (*University of Pakuan*); *Yamato Tan* (*University of Pakuan*); *Muhammad Farhan Maulana* (*Institut Teknologi Bandung*); *Dwi Andi Nurmantris* (*Telkom University*); *Achmad Munir* (*Bandung Institute of Technology*);

34 Change in the Radiation Pattern of a Short Linear Antenna during the Interaction of Electromagnetic Waves with an Extended Plasma Region
Aleksandr M. Astafiev (*Saint Petersburg Electrotechnical University "LETI"*); *Chengxun Yuan* (*Harbin Institute of Technology*); *Anatoly A. Kudryavtsev* (*Harbin Institute of Technology*); *Aleksandr S. Chirtsov* (*Saint Petersburg Electrotechnical University "LETI"*);

35 Analytical Description of Energy Losses of Superthermal Electrons in the Discrete Loss Approximation
Nurken E. Aktaev (*Harbin Institute of Technology*); *Anatoly A. Kudryavtsev* (*Harbin Institute of Technology*); *Dana Koldasbay* (*L. N. Gumilyov Eurasian National University*); *Chengxun Yuan* (*Harbin Institute of Technology*);

36 A Finite-gap Port Model in SIE with CRWG Basis Functions for Radiation Analysis
Yu-Rui Jia (*Southwest University of Science and Technology*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Zi-Qiang Wu* (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Haoran Li* (*Southwest University of Science and Technology*); *Zhen-Yong Du* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yixiang Li* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yuyu Zhu* (*Southwest University of Science and Technology*); *Yu-Teng Zheng* (*DeTooLIC Technology Co., Ltd*); *Bo Pu* (*DeTooLIC Technology Co., Ltd*); *Jun Fan* (*Southwest University of Science and Technology*);

37 Inversion of Martian Arctic Sedimentary Layer and Basal Unit
Xin Shu (*Fudan University*); *Hongxia Ye* (*Fudan University*);

38 A Metal-only Wideband Reflectarray Element for Dual-polarized Operation
Hao Chen (*Chongqing University of Posts and Telecommunications*); *Nan Hu* (*A-INFO Inc.*); *Min Wang* (*Chongqing University of Posts and Telecommunications*); *Wenqing Xie* (*A-INFO Inc.*);

39 A Wide Beamwidth SIW 28G Antenna
Xia Zhou (*Nokia Shanghai Bell Co., Ltd.*); *Yicheng Lai* (*Suzhou University*);

40 High Efficiency Ultrathin Metasurface for Independent Phase Controls in Transmission and Reflection Spaces
Lijun Bu (*Space Engineering University*); *Hong Ma* (*Space Engineerring University*); *Yang Cai* (*Space Engineering University*); *Tao Wu* (*Space Engineerring University*); *Yufan Cao* (*Space Engineering University*); *Sen Li* (*Space Engineerring University*); *Siyu Qi* (*Space Engineerring University*);

41 Modeling the Performance of Electromagnetic Pulse Generation Circuit Based on Avalanche Transistor Switches
Zhenbo Cheng (*Northwest Institute of Nuclear Technology*); *Chuanxiang Tang* (*Tsinghua University*); *Hao Cai* (*Northwest Institute of Nuclear Technology*); *Wei Zhao* (*Northwest Institute of Nuclear Technology*); *Yuqing Chen* (*Northwest Institute of Nuclear Technology*);

42 Microstrip Ultra-wideband Omnidirectional Vertically Polarized Antenna
Chao Zou (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Haoran Li* (*Southwest University of Science and Technology*); *Zhen-Yong Du* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yixiang Li* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yuyu Zhu* (*Southwest University of Science and Technology*); *Yu-Teng Zheng* (*DeTooLIC Technology Co., Ltd.*); *Bo Pu* (*DeTooLIC Technology Co., Ltd.*); *Jun Fan* (*Southwest University of Science and Technology*);

43 High Resolution 3-D Imaging via Distributed UAVs SAR Tomography
Jiangbo Hu (*University of Electronic Science and Technology of China*); *Shun-Jun Wei* (*University of Electronic Science and Technology of China*); *Rong Shen* (*University of Electronic Science and Technology of China*); *Xiang Cai* (*University of Electronic Science and Technology of China*); *Mou Wang* (*University of Electronic Science and Technology of China*); *Jun Shi* (*University of Electronic Science and Technology of China*); *Xiaoling Zhang* (*University of Electronic Science and Technology of China*);

44 Gain Enhancement Using SSR Metasurface for 5G Application
Ferdi K. Lumbantobing (*Telkom University*); *Levy Olivia Nur* (*Telkom University*); *Bambang Setia Nugroho* (*Universitas Indonesia*);

45 A Nonconformal Volume Integral Equation Method for Electromagnetic Scattering from Multi-layer Dielectric Radome
Qifeng Cheng (*Ichuan Jiuzhou Electric Group Co., Ltd.*); *Tao Liu* (*Sichuan Jiuzhou Electric Group Co., Ltd*); *Lei Han* (*Sichuan Jiuzhou Electric Group Co., Ltd.*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*);

46 Advanced Filtering Power Dividers: Achieving Superior Isolation in RF Applications
Hassan Sarfraz (*University of Hertfordshire, College Lane*); *Azunka N. Ukala* (*University of Hertfordshire, College Lane*); *Eugene A. Ogbodo* (*University of Hertfordshire, College Lane*); *Martin Thomas* (*University of Hertfordshire, College Lane*); *Eze Stella Ifeyinwa* (*The Institute of Management and Technology*);

47 Investigation of an Ultrashort Second-Order Cylindrical Vector Beam Focusing by Phase and Amplitude Binary Zone Plates
Elena Sergeevna Kozlova (*Image Processing Systems Institute of the Russian Academy of Sciences*); *Victor V. Kotlyar* (*Image Processing Systems Institute — Branch of the Federal Scientific Research Centre "Crystallography and Photonics" of RAS*);

48 Optimization of Compressive Sensing Reconstruction Algorithms Based on Deep Learning
Zhe Wang (*Dalian University*); *Youyu Zhao* (*Liupanshui Normal University*); *Shixi Wen* (*Dalian University*); *Junjie Feng* (*Liupanshui Normal University*);

49 Research on ISAR Imaging Algorithm of a Certain Type of Shipborne Aircraft
Guanhongye Peng (*Yan'an University*); *Xincheng Ren* (*Yan'an University*); *Yuqing Wang* (*Yan'an University*); *Ye Zhao* (*Yan'an University*); *Peng-Ju Yang* (*Yan'an University*);

50 Direction of Arrival Estimation Method of Correlative Interferometer Based on GRNN Neural Network
Xinchao Zhang (*National University of Defense Technology*); *Xiaofa Zhang* (*National University of Defense Technology*); *Kaibo Cui* (*National University of Defense Technology*); *Zijing Liu* (*National University of Defense Technology*);

51 Direction-finding and Adaptive Beamforming Methods
Kirill Sergeyevich Sychev (*National Research University "Moscow Power Engineering Institute"*); *Anton Alekseevich Novikov* (*National Research University "Moscow Power Engineering Institute"*); *Andrey Alexeevich Pimenov* (*National Research University "Moscow Power Engineering Institute"*); *A. S. Filimonov* (*National Research University "Moscow Power Engineering Institute"*); *Mikhail Sergeyevich Mikhailov* (*National Research University "Moscow Power Engineering Institute"*);

52 Increasing the Multimedia Network Effectiveness
Vladislav Skorpil (*Brno University of Technology*);

53 Topological State in Photonic Crystals and Electric Circuits
Bin Liu (*China University of Mining and Technology*); *Xinyue Qian* (*China University of Mining and Technology*); *Bin Yang* (*China University of Mining and Technology*); *Yuting Yang* (*China University of Mining and Technology*);

54 Miura Origami Based Reconfigurable Gradient Retroreflector for Asymmetric Control
Zhe Qin (*Air Force Engineering University*); *Zhibiao Zhu* (*Air Force Engineering University*); *Yongfeng Li* (*Air Force Engineering University*); *Lixin Jiang* (*Airforce Engineering University*); *Wanwan Yang* (*Air Force Engineering University*); *Jiafu Wang* (*Air Force Engineering University*); *Hongya Chen* (*Air Force Engineering University*); *Shaobo Qu* (*Air Force Engineering University*);

55 Efficient Decoupling Vector Light Fields Based on Terahertz Metasurface
Zhuo Wang (*Fudan University*); *Weikang Pan* (*Fudan University*); *Yu He* (*Fudan University*); *Zhiyan Zhu* (*Fudan University*); *Xiangyu Jin* (*Ningbo University*); *Muhan Liu* (*Fudan University*); *Qiong He* (*Fudan University*); *Shulin Sun* (*Fudan University*); *Lei Zhou* (*Fudan University*);

56 Spatiotemporal Control of Ultraviolet Optical Pulses
Yingjie Zhang (*Nankai University*); *Lu Chen* (*Nankai University*); *Jingjun Xu* (*Nankai University*);

57 Wireless Performance Test and Evaluation for New Generation WiFi Router
Binhui Liu (*The 5th Electronic Research Institute, Ministry of Industry and Information Technology*); *Kai Zhao* (*China Electronic Product Reliability and Environmental Testing Institute*); *Linyi Huang* (*China Electronic Product Reliability and Environmental Testing Institute*); *Huawei Xu* (*China Electronic Product Reliability and Environmental Testing Institute*);

58 Image Based Abnormal Behavior Recognition Algorithm Based on Function Change Rate
Tiaojun Zeng (*Shihezi University*);

59 An Electrically Tunable Magnetic Sensor — Understanding the Physics Nature of Migratory Navigation
You-Quan Li (*Nankai University*);

60 Electromagnetic Scattering of Infinitely Long Cylinder of Arbitrary Cross-section Based on PINNs
Wei Li (*Xidian University*); *Huan Tang* (*Xidian University*); *Renxian Li* (*Xidian University*); *Mingyu Zhang* (*Xidian University*); *Qinyu Deng* (*Xidian University*); *Yuan Zhang* (*Xidian University*); *Zhuoyuan Shi* (*Xidian University*);

61 Joint Wideband Spectrum Sensing and Direction-of-arrival Estimation for Sub-Nyquist Sampled Sparse Linear Arrays
Xu Ren (*Xidian University*); *Guisheng Liao* (*Xidian University*); *Jian Gao* (*The 29th Research Institute of China Electronics Technology Group Corporation*); *Sen Cao* (*The 29th Research Institute of China Electronics Technology Group Corporation*); *Chunxia Cai* (*The 29th Research Institute of China Electronics Technology Group Corporation*); *Dawei Gao* (*Xidian University*);

62 Tunable Terahertz Absorber Based on Graphene/Metal-mesh Core-shell Structure
Zhouying Jiang (*Suzhou City University*);

63 The Bragg Gap in Photonic Crystals Containing Left-handed Materialsand Right-handed Materials
Hui Zhang (*High-Tech Institute of Xi'an*); *Yanling Li* (*High-Tech Institute of Xi'an*); *Jianwei Zhan* (*High-Tech Institute of Xi'an*); *Fei Cao* (*High-Tech Institute of Xi'an*);

64 Communication Signal Automatic Modulation Classification Based on Feature Fusion
Shengxiang Xu (*National University of Defense Technology*); *Yu Zhou* (*National University of Defense Technology*); *Pengjiang Hu* (*National University of Defense Technology*);

65 Topological Transitions with an Imaginary Aubry-André-Harper Potential
Bofeng Zhu (*Nanyang Technological University*); *Qi Jie Wang* (*Nanyang Technological University*); *Yidong Chong* (*Nanyang Technological University*);

66 An Optimizing Method for Parameters of Cavity Filter for Approximate Estimation of Class Curve Fitting
Junliang Wan (*Southwest University of Science and Technology*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Haoran Li* (*Southwest University of Science and Technology*); *Zhen-Yong Du* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yixiang Li* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yuyu Zhu* (*Southwest University of Science and Technology*); *Yu-Teng Zheng* (*DeTooLIC Technology Co., Ltd.*); *Bo Pu* (*DeTooLIC Technology Co., Ltd.*); *Jun Fan* (*Southwest University of Science and Technology*);

67 Analysis of the Effect of White Noise on Minimum Phase Algorithm
Peng Chen (*Xidain University*); *Wei Wang* (*Northwest Institute of Nuclear Technology*); *Xin Nie* (*Northwest Institute of Nuclear Technology*); *Hongmin Lu* (*Xidian University*);

68 Generation of Vortex Harmonics in Momentum Space Based on Bound States in the Continuum
Run Chen (*Nanjing University*); *Hao Chen* (*Nanjing University*); *Qianhui Bi* (*Nanjing University*); *Shu-Ming Wang* (*Nanjing University*); *Zhuo Chen* (*Nanjing University*); *Zhenlin Wang* (*Nanjing University*);

Session 3P1a
Quantum Light Source and Quantum Interference 1

Wednesday PM, April 24, 2024

Room 1 - Yarui

Organized by Rui-Bo Jin, Chen-Zhi Yuan

Chaired by Baihong Li, Peter J. Mosley

13:00 Invited Nonlocal Quantum Gates over 7.0 km
Xiao-Min Hu (*University of Science and Technology of China*);

13:20 Invited Quantum Entanglement Source and Its Applications in Fundamental Tests of Quantum Physics
Zhengda Li (*Southern University of Science and Technology*);

13:40 Invited Unifying the Frequency and Bandwidth of Quantum Light Sources via Four-wave Mixing in Photonic Crystal Fibre
Peter J. Mosley (*University of Bath*);

14:00 Invited Recent Progress in Quantum Interferometers
Rui-Bo Jin (*Wuhan Institute of Technology*); *Zi-Qi Zeng* (*Wuhan Institute of Technology*);

14:20 Invited Experimental Investigation of Einstein-Podolsky-Rosen Steering
Kai Sun (*University of Science and Technology of China*);

14:40 Invited Full Characterization of Biphotons with a Generalized Quantum Interferometer
Baihong Li (*Shaanxi University of Science and Technology*);

15:00 Invited Measuring Ultrafast Transient Processes by Hong-Ou-Mandel Interference
Chen-Zhi Yuan (*Wuhan Institute of Technology*); *Rui-Bo Jin* (*Wuhan Institute of Technology*);

15:20 Invited Efficient Multipartite Entanglement Distribution by Single Photon-vacuum Inteference
Masahiro Takeoka (*Keio University*);

15:40 **Coffee Break**

Session 3P1b
Quantum Light Source and Quantum Interference 2

Wednesday PM, April 24, 2024

Room 1 - Yarui

Organized by Rui-Bo Jin, Chen-Zhi Yuan

Chaired by He Lu, Omar S. Magana-Loaiza

16:00 Invited Research on Generation and Applications of Quantum Entanglement in Telecom Band
Zi-Chang Zhang (*University of Electronic Science and Technology of China*); *Yun-Ru Fan* (*University of Electronic Science and Technology of China*); *Chen-Zhi Yuan* (*Wuhan Institute of Technology*); *Guangwei Deng* (*University of Electronic Science and Technology of China*); *You Wang* (*Southwest Institute of Technical Physics*); *Hai-Zhi Song* (*Southwest Institute of Technical Physics & UESTC*); *Guang-Can Guo* (*University of Electronic Science and Technology of China*); *Qiang Zhou* (*Tianfu Jiangxi Laboratory & University of Electronic Science and Technology of China*);

16:20 Invited Tunable Super-bunching Light Source Based on Colloidal Quantum Dots and Its Applications in Correlated-photon Imaging
Yunrui Song (*Shanxi University*); *Chengbing Qin* (*Shanxi University*); *Yuanyuan Li* (*Shanxi University*); *Xiangdong Li* (*Shanxi University*); *Liantuan Xiao* (*Shanxi University*);

16:40 Invited Multiphoton Quantum Imaging Using Single-pixel Cameras
Omar S. Magana-Loaiza (*Louisiana State University*);

17:00 Invited Quantum Key Distribution with Integrated Silicon Photonics
Kejin Wei (*Guangxi University*);

17:20 Invited Efficient Generation of Broadband Photon Pairs in Shallow-etched Lithium Niobate Nanowaveguide
Xiaoxu Fang (*Shandong University*); *He Lu* (*Shandong University*);

17:40 Invited Toward TCAD for On-chip Nonlinear Quantum Photonics
Young-Ik Sohn (*Korea Advanced Institute of Science and Technology*);

18:00 Tunable Quantum Dots in Microcavities for High-performance Single-photon Sources
Jiawei Yang (*Sun Yat-Sen University*); *Yan Chen* (*National University of Defense Technology*); *Ying Yu* (*Sun Yat-sen University*); *Siyuan Yu* (*Sun Yat-sen University*);

18:15 Multi-wavelength Quantum Light Source at Telecomband
Yun-Ru Fan (*University of Electronic Science and Technology of China*); *Chen Lyu* (*University of Electronic Science and Technology of China*); *Chen-Zhi Yuan* (*University of Electronic Science and Technology of China*); *Guangwei Deng* (*University of Electronic Science and Technology of China*); *Zhi-Yuan Zhou* (*University of Science and Technology of China*); *Yong Geng* (*University of Electronic Science and Technology of China*); *Hai-Zhi Song* (*Southwest Institute of Technical Physics & UESTC*); *You Wang* (*Southwest Institute of Technical Physics*); *Yanfeng Zhang* (*Sun Yat-sen University*); *Rui-Bo Jin* (*Wuhan Institute of Technology*); *Heng Zhou* (*University of Electronic Science and Technology of China*); *Lixing You* (*Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences*); *Zhen Wang* (*Shanghai Institute of Microsystem and Information Technology*); *Guang-Can Guo* (*University of Electronic Science and Technology of China*); *Qiang Zhou* (*Tianfu Jiangxi Laboratory & University of Electronic Science and Technology of China*);

18:30 Genuine High-dimensional Quantum Entanglement Network with Integrated Photonic Chip
Yu Cui (*Nanjing University*); *Ran Yang* (*Nanjing University*); *Jia-Chen Duan* (*Nanjing University*); *Dong-Jie Guo* (*Nanjing University*); *Ling-Zhi Kong* (*Nanjing University*); *Zhen-Da Xie* (*Nanjing University*); *Yan-Xiao Gong* (*Nanjing University*); *Shi-Ning Zhu* (*Nanjing University*);

Session 3P2a
Electromagnetic Modes in Metastructures and Their Applications

Wednesday PM, April 24, 2024

Room 2 - Jincheng 3

Organized by Jiafu Wang, Jie Yang

Chaired by Jie Yang

13:00 A Wideband 2-Bit Amplifying Information Metasurface for Signal Energy Enhancement
Lijie Wu (*Southeast University*); *Qunyan Zhou* (*Southeast University*); *Ruizhe Jiang* (*Southeast University*); *Qiang Cheng* (*Southeast University*);

13:15 High Efficiency Metasurface-Lens for Deformable OAM Beam Generation and Modulation
Yueyi Yuan (*Harbin Institute of Technology*); *Wenjie Zhou* (*Harbin Institute of Technology*); *Qun Wu* (*Harbin Institute of Technology*); *Kuang Zhang* (*Harbin Institute of Technology*);

13:30 An Approach for Generating OAM Beams Using Spoof Surface Plasmon Polaritons Metasurfaces
Weixi Qiu (*Northwestern Polytechnical University*); *Zhichen Li* (*Northwestern Polytechnical University*); *Qianyi Zhang* (*Northwestern Polytechnical University*); *Fuli Zhang* (*Northwestern Polytechnical University*); *Yuancheng Fan* (*Northwestern Polytechnical University*);

13:45 Invited Principle, Design, and Applications of Hybrid Substrate Integrated Waveguide and Spoof Surface Plasmon Polariton Structure
Dong-Fang Guan (*National University of Defense Technology*); *Zhangbiao Yang* (*National University of Defense Technology*);

14:05 Vortex Beam Generation Using Ultrathin Huygens' Metasurface with 360° Phase Control
Changfan Min (*Nanjing Tech University*); *Ying Zhao* (*Nanjing Tech University*); *Yi Feng Li* (*Nanjing Tech University*);

14:20 Ultrathin RCS Reduction Metasurface Based on Integer and Fractional Vortex Waves
Qian Liu (*University of Electronic Science and Technology of China*); *Difei Liang* (*University of Electronic Science and Technology of China*); *Haiyan Chen* (*University of Electronic Science and Technology of China*); *Tiancheng Han* (*University of Electronic Science and Technology of China*); *Xin Yao* (*University of Electronic Science and Technology of China*); *Qingting He* (*University of Electronic Science and Technology of China*); *Xiaodi Wang* (*University of Electronic Science and Technology of China*); *Shuntian Wen* (*University of Electronic Science and Technology of China*); *Zhichao Xue* (*University of Electronic Science and Technology of China*);

14:35 A Low-cost, High-bandwidth, Lightweight and Flexible Absorber in the P-band Based on Metamaterials
Shixian Li (*National University of Defense Technology*); *Weiwei Wu* (*National University of Defense Technology*); *Fuxing Wang* (*National University of Defense Technology*); *Yixuan Xu* (*National University of Defense Technology*); *Tongtong Shi* (*National University of Defense Technology*);

14:50 A Polarization-insensitive Switchable Stealth-transparent Integrated Surface
Fuxing Wang (*National University of Defense Technology*); *Shixian Li* (*National University of Defense Technology*); *Yixuan Xu* (*National University of Defense Technology*); *Tongtong Shi* (*National University of Defense Technology*); *Weiwei Wu* (*National University of Defense Technology*);

15:05 A Metallic-mesh Patch Metasurface for EM Transparency Using Different Mechanisms for Different Polarization at Extreme Angles
Tiefu Li (*Air Force Engineering University*); *Chang Ding* (*Air Force Engineering University*); *Zuntian Chu* (*Air Force Engineering University*); *Ruichao Zhu* (*Air Force Engineering University*); *Jiafu Wang* (*Air Force Engineering University*); *Cun-Qian Feng* (*Air Force Engineering University*);

15:30 **Coffee Break**

16:00 An Efficient Infrared-selective Infrared Selective Emitter with Digital Pixel Distribution with Transparency to Visible Light
Yina Cui (*Air Force Engineering University*); *Huiting Sun* (*Air Force Engineering University*); *Jun Wang* (*Air Force Engineering University*); *Jiafu Wang* (*Air Force Engineering University*);

16:15 Multispectral Wideband Microwave Meta-absorber with Optically Transparency and Infrared Camouflage
Huiting Sun (*Air Force Engineering University*); *Liang-Wei Song* (*Air Force Engineering University*); *Jun Wang* (*Air Force Engineering University*); *Zuntian Chu* (*Air Force Engineering University*); *Ruichao Zhu* (*Air Force Engineering University*); *Yuxiang Jia* (*Air Force Engineering University*); *Yina Cui* (*Air Force Engineering University*); *Jiafu Wang* (*Air Force Engineering University*); *Shaobo Qu* (*Air Force Engineering University*);

Session 3P2b
Epsilon-near-zero (ENZ) Materials and ENZ Photonic Devices

Wednesday PM, April 24, 2024

Room 2 - Jincheng 3

Organized by Hongyan Fu, Qian Li

Chaired by Hongyan Fu, Qian Li

16:40 Low-velocity-favored Transition Radiation Based on Ultrathin ENZ Slab
Jialin Chen (*Zhejiang University*); *Ruoxi Chen* (*Zhejiang University*); *Fuyang Tay* (*Rice University*); *Zheng Gong* (*Zhejiang University*); *Hao Hu* (*Nanyang Technological University*); *Yi Yang* (*University of Hong Kong*); *Xinyan Zhang* (*Zhejiang University*); *Chan Wang* (*Zhejiang University*); *Ido Kaminer* (*Technion-Israel Institute of Technology*); *Hongsheng Chen* (*Zhejiang University*); *Baile Zhang* (*Nanyang Technological University*); *Xiao Lin* (*Zhejiang University*);

16:55 Evanescent-wave-induced Effective-medium Theory Breakdown and Flux Control Effects in Zero-index Metamaterials
Ran Mei (*Soochow University*); *Dongyang Yan* (*Soochow University*); *Yun Lai* (*Nanjing University*); *Jie Luo* (*Soochow University*);

17:10 Epsilon-near-zero Photonics and Fiber Laser with Intracavity Epsilon-near-zero Effect
Qian Li (*Peking University Shenzhen Graduate School*);

17:25 Epsilon-near-zero Magneto-optical Materials and Metamaterials
Lei Bi (*University of Electronic Science and Engineering of China*);

17:40 The Nonlinear Optical Response and Electron Dynamics in Transparent Conducting Oxides
Ieng-Wai Un (*South China Normal University*); *Subhajit Sarkar* (*Ben-Gurion University of the Negev*); *Yonatan Sivan* (*Ben-Gurion University of the Negev*);

17:55 Saturable Absorbers Based on ENZ Materials for Lase Pulse Generation
Xiaofeng Liu (*Zhejiang University*);

Session 3P3
Reconfigurable Array, Transmitarray, Conformal Array, Array Theory and Applications

Wednesday PM, April 24, 2024

Room 3 - Jincheng 2

Chaired by Yanhong Xu, Yan Wang

13:00 Invited The Advanced Grey Wolf Optimizer and Its Applications in Electromagnetics
Xun Li (*Xidian University*);

13:20 Conical Beam Scanning Antenna Based on Leaky Wave Antenna Technology
Wen Jie Zhang (*Xi'an Jiaotong University*); *Yuanxi Cao* (*Xi'an Jiaotong University*); *Jianxing Li* (*Xi'an Jiaotong University*); *Sen Yan* (*Xi'an Jiaotong University*); *Juan Chen* (*Xi'an Jiaotong University*);

13:35 Low Cost Reconfigurable One-bit Phased Array Antenna for Mobile Communication
Yan Wang (*Fudan University*);

13:50 A Low-cost Reconfigurable One-bit Phased Array with Wide-angle Scanning
Yan Wang (*Fudan University*); *Feng Xu* (*Fudan University*);

14:05 Adaptive Switched Beam Reconfigurable Antenna for Wireless Sensor Network Applications
Mukendi Leingthone Muamba (*Universite de Quebec en Abitibi-Temiscamingue and Underground Communications Research Laboratory (LRTCS)*);

14:20 A Novel Polarization-reconfigurable Dielectric Resonator Antenna Based on Liquid Material
Dan Ni Lin (*Tongji University*); *Ajay K. Poddar* (*Synergy Microwave Corporation*); *Ulrich L. Rohde* (*Synergy Microwave Corporation*); *Mei Song Tong* (*Tongji University*);

14:35 A New Subarray Partition Method for Generating Arbitrary Shaped Beam Patterns
Y. H. Li (*Hubei Key Laboratory of Intelligent Vision Based Monitoring for Hydroelectric Engineering (China Three Gorges University)*); *Qinghe Zhang* (*Three Gorges University*);

14:50 A Compact Transmitarray Element Based on 3-D Printing Technology
Yuying Li (*North China Electric Power University*); *Yang Li* (*North China Electric Power University*); *Xiangyu Li* (*North China Electric Power University*); *Xiayuan Yao* (*North China Electric Power University*);

15:05 Design of Transmitarray Based on Optimization Algorithm for Compact Antenna Test Range
Yan Zhang (*Beijing University of Aeronautics and Astronautics (BUAA)*); *Haoran Ye* (*Beihang University*); *Chao Chao Zhao* (*Beihang University*); *Xurui Zhang* (*Beihang University*);

15:20 On the Feasibility of Uniform-Kaiser Weighting Configuration on Power-weighted Planar Array Design
Hartuti Mistialustina (*Institut Teknologi Bandung*); *Chairunnisa* (*Institut Teknologi Bandung*); *Achmad Munir* (*Bandung Institute of Technology*);

15:35 **Coffee Break**

16:00 Design of a 2.4 GHz Directional Antenna Array for Wi-Fi Applications
Junyu Zhou (*Guangdong Polytechnical Normal University*); *Zixuan Liu* (*South China Normal University*); *Yi He* (*Guangdong Polytechnical Normal University*); *Weiliang Zeng* (*Guangdong Polytechnical Normal University*); *Chen Zhao* (*Guangdong Polytechnical Normal University*); *Liu Hui* (*Guangdong Polytechnical Normal University*);

16:15 Measurement of Polarization Efficiency on a Switchable Polarized Triangular Antenna Array
Trasma Yunita (*Institut Teknologi Bandung*); *Chairunnisa* (*Institut Teknologi Bandung*); *Aloysius Adya Pramudita* (*Telkom University*); *Achmad Munir* (*Bandung Institute of Technology*);

16:30 A Wideband Circularly Polarized Vivaldi Array Antenna with Axial Ratio Enhancement
Min Wang (*Chongqing University of Posts and Telecommunications*); *Xuan Li* (*Chongqing University of Posts and Telecommunications*); *Wei Luo* (*Chongqing University of Posts and Telecommunications*); *Hao Chen* (*Chongqing University of Posts and Telecommunications*); *Shu-Lin Chen* (*University of Technology Sydney (UTS)*);

16:45 Synthesis of Linear Sparse Arrays by Adaptive Alternating Convex Optimization
Xiaowen Zhao (*National Space Science Center, Chinese Academy of Sciences*); *Jixi Lu* (*National Space Science Center, Chinese Academy of Sciences*); *Yunhua Zhang* (*National Space Science Center, Chinese Academy of Sciences*);

17:00 Circularly Polarized Spherical-conformal Dielectric Resonator Antenna with Wideband and Wide Beamwidth
Sihan Liu (*Dalian Maritime University*); *Hongmei Liu* (*Dalian Maritime University*); *T. Ma* (*Dalian Maritime University*); *Yan Zhang* (*Dalian Maritime University*); *Xinlei Sun* (*Dalian Maritime University*);

17:15 Generation of Microwave Vortex Waves by a Flexible Graphene-based Antenna
Zuxian He (*Jilin University*); *Volodymyr I. Fesenko* (*Institute of Radio Astronomy of NASU*); *Shoudong Gu* (*Jilin University*); *Xiaolong Wang* (*Jilin University*); *Vladimir R. Tuz* (*Jilin University*);

17:30 A Low-profile UHF-RFID Tag Antenna with Interdigitated Inductive-coupling-fed for Metallic Objects
Xuan He (*Southwest Jiaotong University*); *Quanyuan Feng* (*Southwest Jiaotong University*); *Tao Li* (*Southwest Jiaotong University*); *Zhangmin Wang* (*Southwest Jiaotong University*);

17:45 An ANN-ANN Iterative Optimization Algorithm for Pattern Synthesis of Arbitrary Conformal Arrays
Hailong Sun (*Southwest Jiaotong University*); *You-Feng Cheng* (*Southwest Jiaotong University*); *Guo Bai* (*Southwest Jiaotong University*); *Xuan-Ming Zhong* (*Southwest Jiaotong University*); *Cheng Liao* (*Southwest Jiaotong University*);

18:00 Efficient Far-field Analysis and Synthesis of Arbitrary Conformal Arrays
You-Feng Cheng (*Southwest Jiaotong University*);

18:15 Far-field Diagnosis for Conformal Antenna Arrays Based on Conditional Adversarial Generative Networks
Guo Bai (*Southwest Jiaotong University*); *You-Feng Cheng* (*Southwest Jiaotong University*); *Xuan-Ming Zhong* (*Southwest Jiaotong University*); *Cheng Liao* (*Southwest Jiaotong University*);

Session 3P4
Electromagnetic Absorption, Thermal Manipulation and Their Coupling Effects 1 & 2

Wednesday PM, April 24, 2024

Room 4 - Jincheng 1

Organized by Tiancheng Han, Cheng-Wei Qiu, Ying Li

Chaired by Tiancheng Han, Ying Li

13:00 Invited Metamaterials with Unusual Thermal Expansion and Thermal Flux Manipulation Performance
Lingling Wu (*Xi'an Jiaotong University*); *Xiaochang Xing* (*Zhejiang University*); *Xiaoyong Tian* (*Xi'an Jiaotong University*); *Dichen Li* (*Xi'an Jiaotong University*);

13:20 Invited Quantum-like Effects in Diffusive Transport
Guoqiang Xu (*National University of Singapore*);

13:40 Topology Optimization of Transformation Multiphysics Metamaterials
Invited
Run Hu (*Huazhong University of Science and Technology*);

14:00 Diffusion Control with Metamaterials
Invited
Liujun Xu (*Graduate School of China Academy of Engineering Physics*);

14:20 Research Advance in Transparent Electromagnetic Shielding Materials and Reinforcement of Optical Channel Shielding
Invited
Xianjun Huang (*National University of Defense Technology*); *Yuanlong Liang* (*National University of Defense Technology*); *Wencong Liu* (*National University of Defense Technology*); *Lixiang Yao* (*National University of Defense Technology*); *Kui Wen* (*National University of Defense Technology*);

14:40 The Realization of Broadband Electromagnetically Induced Transparency Metastructure Based on Micro-strip Lines
Hai-Ning Ye (*Nanjing University of Posts and Telecommunications*); *Hai Feng Zhang* (*Nanjing University of Posts and Telecommunications*);

14:55 Multi-physics Analysis of a Rasorber
Kaihuai Wen (*University of Electronic Science and Technology of China*); *Haiyan Xie* (*University of Electronic Science and Technology of China*); *Xiuli Yue* (*University of Electronic Science and Technology of China*); *Mutian Xie* (*University of Electronic Science and Technology of China*); *Tiancheng Han* (*University of Electronic Science and Technology of China*);

15:10 Driving Thermal Vacuum Photons by Time-modulated Media
Invited
Deng Pan (*East China Normal University*); *Hongxing Xu* (*Wuhan University*);

15:30 **Coffee Break**

16:00 Electro-magnetic Collaborative Design and Micromechanism Research on MXene-based Microwave Absorption Composites
Xiao Li (*Xi'an Jiaotong University*);

16:15 Microwave Absorption of Composite Materials Based on Different Types of Magnetic Flakes
Dzmitry S. Bychanok (*Research Institute for Nuclear Problems Belarusian State University*); *E. Gurnevich* (*Research Institute for Nuclear Problems Belarusian State University*); *A. Sukhotski* (*Research Institute for Nuclear Problems Belarusian State University*); *G. Gorokhov* (*Research Institute for Nuclear Problems Belarusian State University*); *A. Gilev* (*Research Institute for Nuclear Problems Belarusian State University*); *S. Maksimenko* (*Research Institute for Nuclear Problems Belarusian State University*); *H. Lihua* (*Beijing Institute of Aeronautical Materials*); *Z. Youwei* (*Beijing Institute of Aeronautical Materials*); *C. Kelong* (*Beijing Institute of Aeronautical Materials*); *L. Pengrui* (*Beijing Institute of Aeronautical Materials*);

16:30 Investigation of Polarization-insensitive Near-omnidirectional Microwave Absorption
Ting Shi (*Southwest Jiaotong University*); *He-Xiu Xu* (*Air Force Engineering University*);

16:45 Recent Progress in Microwave and Infrared Bi-stealth Metamaterial
Ping Chen (*Nanjing University*); *Shiju Liu* (*Nanjing University*);

17:00 Reconfigurable Thermal Emission in PS/W-doped VO_2 Bilayer Material and Its Application
Jiong Wang (*University of Electronic Science and Technology of China*); *Maoren Wang* (*University of Electronic Science and Technology of China*); *Qindong Xie* (*University of Electronic Science and Technology of China*); *Wenxin Li* (*AVIC Chengdu Aircraft Industrial (Group) Co., Ltd.*); *Li Zhang* (*University of Electronic Science and Technology of China*); *Linbo Zhang* (*University of Electronic Science and Technology of China*); *Jianliang Xie* (*University of Electronic Science and Technology of China*); *Pei-Heng Zhou* (*University of Electronic Science and Technology of China*);

17:15 Manipulating Electromagnetic Absorption and Heat Transfer Simultaneously
Yun Wang (*University of Electronic Science and Technology of China*); *Tiancheng Han* (*University of Electronic Science and Technology of China*); *Difei Liang* (*University of Electronic Science and Technology of China*); *Long-Jiang Deng* (*University of Electronic Science and Technology of China*);

17:30 Broadband Anomalous Reflection and Radar Cross Section Reduction Metasurface Based on Deep Learning
Xiuli Yue (*University of Electronic Science and Technology of China*); *Haiyan Xie* (*University of Electronic Science and Technology of China*); *Kaihuai Wen* (*University of Electronic Science and Technology of China*); *Quanfang Chen* (*University of Electronic Science and Technology of China*); *Wenjiang Xu* (*University of Electronic Science and Technology of China*); *Tiancheng Han* (*University of Electronic Science and Technology of China*);

17:45 Planar Chiral Electromagnetic Absorber with Tunability of Chiroptical Response
Tao Zhang (*Nanjing University of Posts and Telecommunications*); *Hai Feng Zhang* (*Nanjing University of Posts and Telecommunications*);

Session 3P5a
Advanced Photonic Technologies for Spectroscopic Applications 2

Wednesday PM, April 24, 2024

Room 5 - Yingbin

Organized by Lei Dong, Ulrike Willer

Chaired by Tao Wu, Yufei Ma

13:00 Development of Optical Parameters Estimation Technique in Subsurface Structure Using NIR Backscattered Light - For Noninvasive Blood Turbidity Measurement in Subcutaneous Blood Vessels -
Shiyang Liang (*Waseda University*); *Takeo Miyake* (*Waseda University*); *Koichi Shimizu* (*Xidian University*);

13:15 Invited An Approach for Evaluating and Predicting Battery State of Health (SOH) Using Multi-point Fiber Optic Temperature Sensor under Real-world Operating Conditions
Yi Jiang (*Clausthal University of Technology*);

13:35 Invited The One Health Approach: Perspectives for Quartz-enhanced Photoacoustic Spectroscopy
Pietro Patimisco (*Universita degli Studi di Bari and Politecnico di Bari*); *Andrea Zifarelli* (*Universita degli Studi di Bari and Politecnico di Bari*); *Raffaele De Palo* (*Universita degli Studi di Bari and Politecnico di Bari*); *Marilena Giglio* (*University and Politecnico of Bari*); *Angelo Sampaolo* (*University and Politecnico of Bari*); *Vincenzo Spagnolo* (*University and Politecnico of Bari*);

13:55 Invited Two-dimensional CRDS in Gas-phase Free Radical Spectroscopy Measurements and Reaction Kinetics
Chuanliang Li (*Taiyuan University of Science and Technology*);

14:15 Invited Waveguide-on-silicon On-chip Infrared Gas Sensing Technique
Chuantao Zheng (*Jilin University*); *Huan Zhao* (*Jilin University*); *Mingquan Pi* (*Jilin University*); *Zihang Peng* (*Jilin University*); *Yiding Wang* (*Jilin University*);

14:35 Symmetrized Dot Pattern Infrared Absorption Spectroscopy
Weilin Ye (*Shantou University*); *Yifei Huang* (*Shantou University*); *Linfeng He* (*Shantou University*); *Lifu Duan* (*Shantou University*); *Zhidan Zheng* (*Shantou University*);

14:50 Invited Optical Diagnostics of Second-life Lithium Batteries — Sensors, Artificial Intelligence and Applications
Wolfgang Schade (*Fraunhofer Heinrich Hertz Institute*); *Fangqi Li* (*Fraunhofer Heinrich Hertz Institute*); *Antonio Nedjalkov* (*Fraunhofer Heinrich Hertz Institute*);

15:10 Invited Development of Photonic Instruments for Measurement of Aerosol Optical Properties
Gaoxuan Wang (*Zhejiang University*); *Pierre Kulinski* (*Université du Littoral Côte d'Opale*); *Hongming Yi* (*Universite du Littoral Cote d'Opale*); *Patrice Hubert* (*Université de Lille 1*); *Alexandre Deguine* (*Université de Lille 1*); *Denis Petitprez* (*Université de Lille 1*); *Eric Fertein* (*University of the Littoral Opal Coast*); *Marc Fourmentin* (*Universite du Littoral Cote d'Opale*); *Karine Deboudt* (*Université du Littoral Côte d'Opale*); *Pascal Flament* (*Université du Littoral Côte d'Opale*); *Markus W. Sigrist* (*ETH Zurich*); *Dean S. Venables* (*University College Cork*); *Wei Dong Chen* (*Université du Littoral Côte d'Opale*);

15:30 **Coffee Break**

16:00 Trace Formaldehyde Gas Detection Based on the Spectroscopy Sensing Methods
Xiu Yang (*Xidian University*); *Jinshou Wang* (*Xidian University*); *Chenchen Zhu* (*Xidian University*); *Xing Zhou* (*Xidian University*); *Qiaoyan Hu* (*Xidian University*); *Xukun Yin* (*Xidian University*);

16:15 Invited Recent Progress in Laser Absorption Spectroscopy and Applications
Kun Liu (*Anhui Institute of Optics & Fine Mechanics, Chinese Academy of Sciences*); *Wei Dong Chen* (*Université du Littoral Côte d'Opale*); *Xiaoming Gao* (*Hefei Institutes of Physical Science, Chinese Academy of Sciences*);

16:35 Invited Radial Cavity Quartz-enhanced Photoacoustic Spectroscopy
Huadan Zheng (*Jinan University*); *Bin Liu* (*Foshan University*);

Session 3P5b
Optical Sensors for Professional and Consumer Use, with Additional Functionality Enabled by Artificial Intelligence

Wednesday PM, April 24, 2024

Room 5 - Yingbin

Organized by Cees Ronda, Gaoxuan Wang

Chaired by Hans M. Wyss

16:55 Laser Absorption Spectroscopy for Trace Gases Measurements
Kun Liu (*Anhui Institute of Optics & Fine Mechanics, Chinese Academy of Sciences*); *Yuan Cao* (*Anhui Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Xiaoming Gao* (*Anhui Institutes of Physical Science, Chinese Academy of Sciences*);

17:10 Invited A New Platform for High-throughput Measurements of Phase Separation Processes Using Microfluidics
Hailin Fu (*TU Eindhoven*); *Chris Li* (*TU Eindhoven*); *Kalpit Bakal* (*TU Eindhoven*); *Jaap Den Toonder* (*TU Eindhoven*); *Bert Meijer* (*TU Eindhoven*); *Hans M. Wyss* (*TU Eindhoven*);

17:30 A Dual-gas Sensor for Simultaneous and Fast Optical Sensing of HONO and CH_4 in Ambient Air Based on a Quantum Cascade Laser
Xiaojuan Cui (*Anhui University*); *Chaochao Jiang* (*Anhui Univerisitry*); *Xiaohan Cui* (*Anhui Univerisitry*); *Yafan Li* (*Anhui Univerisitry*); *Qizhi Zhu* (*Anhui Univerisitry*); *Shuaikang Yin* (*Anhui Univerisitry*); *Xin Shi* (*Anhui Univerisitry*); *Siru Yang* (*Anhui Univerisitry*); *Yang Hong* (*Jianghuai Advance Technology Center*);

17:45 Development and Research of a Monoblock Ring Confocal Resonator
Yuri V. Filatov (*Saint Petersburg Electrotechnical University "LETI"*); *Alina V. Gorelaya* (*Saint Petersburg Electrotechnical University "LETI"*); *H. Alhasan* (*Saint Petersburg Electrotechnical University "LETI"*); *V. A. Nevzorov* (*Saint Petersburg Electrotechnical University "LETI"*); *Egor V. Shalymov* (*Saint Petersburg Electrotechnical University "LETI"*); *Anastasia V. Venediktova* (*St. Petersburg State University*); *Vladimir Yu. Venediktov* (*Saint Petersburg State Electrotechnical University "LETI"*);

Session 3P6a
Plasmonics and Photonics for Sustainability 2

Wednesday PM, April 24, 2024

Room 6 - Huanhua

Organized by Emiliano Cortes, Matias Herran

Chaired by Emiliano Cortes, Matias Herran

13:00 Invited Engineering Plasmonic Nanocatalysts for Efficient Hydrogen Production Using Sunlight
Ana Sousa-Castillo (*Centro de Investigación en Nanomateriais e Biomedicina*);

13:20 Harnessing Sunlight-driven Microrobots for Efficient Microplastic Degradation in Natural Environments
Mohsen Beladi Mousavi (*Ludwig-Maximillians-University, Munich (LMU)*); *E. Cortes* (*Ludwig-Maximillians-University, Munich (LMU)*);

13:35 Real-time Imaging of Catalytic Interfaces
Christoph G. Gruber (*Ludwig-Maximilians-Universität München*); *F. Gröbmeyer* (*Ludwig-Maximilians-Universität München*); *S. M. Beladi-Mousavi* (*Ludwig-Maximilians-Universität München*); *A. Mancini* (*Ludwig-Maximilians-Universität München*); *E. Cortés* (*Ludwig-Maximilians-Universität München*);

13:50 Invited Modelling Hot Carriers in Metallic Nanoparticles: From Creation to Catalysis
Johannes Lischner (*Imperial College London*);

14:10 Invited Light-induced Atomic Reconfigured Photoanodes for Water Splitting with Stability beyond 250 Hours and Enhanced Efficiency
Fei Xiang (*King Abdullah University of Science and Technology (KAUST)*); *Ning Li* (*King Abdullah University of Science and Technology (KAUST)*); *Arturo Burguete-Lopez* (*King Abdullah University of Science and Technology (KAUST)*); *Zhao He* (*King Abdullah University of Science and Technology (KAUST)*); *Maxim Elizarov* (*King Abdullah University of Science and Technology (KAUST)*); *Andrea Fratalocchi* (*King Abdullah University of Science and Technology (KAUST)*);

14:30 Invited Hot-electron Generation in Chiral Plasmonic Nanomaterials and Chiral Plasmon-assisted Photochemistry
Alexander O. Govorov (*Ohio University*);

14:50 Invited Selective SERS on Plasmonic Metal-organic Frameworks
Ramon A. Alvarez-Puebla (*ICREA*);

15:10 Invited Hot-electron-mediated Tuning of Plasmon Resonances with Light
Tao Ding (*Wuhan University*);

15:30 **Coffee Break**

Session 3P6b
Recent Advances in Optical Metasurfaces 2

Wednesday PM, April 24, 2024

Room 6 - Huanhua

Organized by Fei Ding, Cheng Zhang

Chaired by Fei Ding, Cheng Zhang

16:00 Invited Nanowire Metasurfaces
Ruixing Xia (*University of Science and Technology of China*); *Dong Zhao* (*University of Science and Technology of China*); *Kun Huang* (*University of Science and Technology of China*);

16:20 Invited All-optical Light Modulation at ENZ Wavelength
Lei Zhang (*Xi'an Jiaotong University*); *Yaping Hou* (*Xi'an Jiaotong University*);

16:40 Invited Functional Metasurface for Improving Imaging Performance
Haowen Liang (*Sun Yat-Sen University*); *Juntao Li* (*Sun Yat-Sen University*);

17:00 Invited On-chip Wavefront Control of Semiconductor Lasers Using Integrated Metasurfaces
Pei-Nan Ni (*Zhengzhou University*); *Fei Ding* (*University of Southern Denmark*);

17:20 Hafnium Oxide Pancharatnam-Berry Metasurfaces for Flat-top Beam Shaping in the Ultraviolet
Hao Gao (*Huazhong University of Science and Technology*); *Zhelin Lin* (*Huazhong University of Science and Technology*); *Cheng Zhang* (*Huazhong University of Science and Technology*);

17:35 All-optical Differentiator of Various Orders Based on Single-layer Multiplexed Metasurfaces
Niu Liu (*Huazhong University of Science and Technology*); *Zhenyu Xing* (*Huazhong University of Science and Technology*); *Zhelin Lin* (*Huazhong University of Science and Technology*); *Huixian Zhou* (*Huazhong University of Science and Technology*); *Cheng Zhang* (*Huazhong University of Science and Technology*); *Xinliang Zhang* (*Huazhong University of Science and Technology*);

17:50 High-performance Ultraviolet Metasurfaces Based on Tantalum Pentoxide
Zhelin Lin (*Huazhong University of Science and Technology*); *Cheng Zhang* (*Huazhong University of Science and Technology*);

18:05 Photonic Spin-multiplexing Metalens for Spiral Phase Contrast and Bright Field Imaging
Zhenyu Xing (*Huazhong University of Science and Technology*); *Zhelin Lin* (*Huazhong University of Science and Technology*); *Niu Liu* (*Huazhong University of Science and Technology*); *Cheng Zhang* (*Huazhong University of Science and Technology*);

18:20 Polarization Engineered Second Harmonic Generation in Antenna-coupled Lithium Niobate Thin Films
Yiwen Liu (*University of Southern Denmark*); *Fei Ding* (*University of Southern Denmark*); *Chao Meng* (*University of Southern Denmark*); *Sergey I. Bozhevolnyi* (*University of Southern Denmark*);

Session 3P7
Advances in Tunable Photonic Integrated Waveguide Chips

Wednesday PM, April 24, 2024

Room 7 - Xiling

Organized by Jieyun Wu, Quandong Huang

Chaired by Jieyun Wu, Quandong Huang

13:00 Invited Graphene-buried Polymer-waveguide Platform for the Study of Nonlinear Mode Coupling
Kin Seng Chiang (*City University of Hong Kong*); *Lianzhong Jiang* (*City University of Hong Kong*);

13:20 Invited Tunable Photonic Devices Based on Micro and Nanostructured Thin Film Lithium Niobate
Huihui Lu (*Jinan University*);

13:40 Invited Integrated Lithium Niobate Photonics: From Communications to Metrology
Yang Li (*Tsinghua University*);

14:00 Tunable Optical Waveguide Filter Based on Phase-change Laser Induced Periodic Surface Structures
Evgenii V. Menshikov (*ITMO University*); *Petr I. Lazarenko* (*National Research University of Electronic Technology*); *V. V. Kovalyuk* (*Moscow State Pedagogical University*); *Aleksey I. Prokhodtsov* (*National Research University of Electronic Technology*); *Sergey A. Kozyukhin* (*Institute of General and Inorganic Chemistry*); *Ivan S. Sinev* (*Ecole Polytechnique Federale de Lausanne*);

14:15 Photonic Chiplet Integration on Optical Interposer: Can Hybrid Bonding Realize Passive Optical Coupling?
How Yuan Hwang (*Tyndall National Institute*); *Peter O'Brien* (*Tyndall National Institute*);

14:30 High-performance Thin-film Lithium Niobate Mach-Zehnder Modulator Based on Dual-capacitor Structure
Xiaofeng Liu (*Guangdong University of Technology*); *Bin Xiao* (*Guangdong University of Technology*); *Ou Xu* (*Guangdong University of Technology*); *Yuwen Qin* (*Guangdong University of Technology*); *Quandong Huang* (*Guangdong University of Technology*);

14:45 Highly Sensitive and Cost-effective Liquid Refractive Index Sensor Based on Polymer Two-mode Waveguide Interferometer
Yinglu Zhang (*University of Electronic Science and Technology of China*); *M. T. Chen* (*University of Electronic Science and Technology of China*); *Kaixin Chen* (*University of Electronic Science and Technology of China*);

15:30 **Coffee Break**

16:00 Invited The Organic-based Electro-optic Materials and Modulators
Shuhui Bo (*Minzu University of China*); *Zhuo Chen* (*Technical Institute of Physics and Chemistry, Chinese Academy of Sciences*); *Chuanbo Li* (*Minzu University of China*); *Shuai Feng* (*Minzu University of China*); *Genxiang Chen* (*Minzu University of China*);

16:20 Invited Mode-insensitive Optical Switch Based on Mach-Zehnder Interferometer Integrated with Multimode Interferometers
Xi-Bin Wang (*Jilin University*); *Shijie Sun* (*Jilin University*); *Daming Zhang* (*Jilin University*);

16:40 High-Q Thin-film Lithium Niobate Asymmetric Microring Resonator with Different Etching Depths and a Multimode Interferometer Coupler
Wanzhen Wu (*University of Electronic Science and Technology of China*); *Kaixin Chen* (*University of Electronic Science and Technology of China*);

16:55 EO-tunable Long-period Waveguide Grating Based on Electro-optic Polymer
Xingyue Wang (*University of Electronic Science and Technology of China*); *Yingzhou Yu* (*University of Electronic Science and Technology of China*); *Kaixin Chen* (*University of Electronic Science and Technology of China*); *Jieyun Wu* (*University of Electronic Science and Technology of China*);

17:10 Highly Efficient and Stable Binary Cross-linkable Organic Nonlinear Optical Chromophore for Electro-optic Modulation
Fuyang Huo (*Guangzhou University*); *Weijun Zhang* (*Guangzhou University*); *Lian Zhang* (*Guangzhou University*); *Fenggang Liu* (*Guangzhou University*);

17:25 Metal-organic Decomposition-made Bi:YIG Crystallized by Laser Radiation for Magnetophotonic Crystals and Waveguide Modulators
Georgiy M. Yankovskii (*Dukhov Automatics Research Institute (VNIIA)*); *Artem V. Shelaev* (*Dukhov Automatics Research Institute (VNIIA)*); *Yevgeniy M. Sgibnev* (*Lomonosov Moscow State University*); *Andrey.G. Shishkin* (*Dukhov Automatics Research Institute (VNIIA)*); *Peter N. Tananaev* (*Dukhov Automatics Research Institute (VNIIA)*); *Konstantin N. Afanasyev* (*Institute of Theoretical and Applied Electrodynamics, RAS*); *Alexander V. Baryshev* (*Dukhov Research Institute of Automatics*);

17:40 Bi Substituted YIG Thin Films of Different Thickness via MOD Process: Laser Crystallization on Si/SiO_2
Peter N. Tananaev (*Dukhov Automatics Research Institute (VNIIA)*); *Artem V. Shelaev* (*Dukhov Automatics Research Institute (VNIIA)*); *Yevgeniy M. Sgibnev* (*Lomonosov Moscow State University*); *Daria P. Kulikova* (*Lomonosov Moscow State University*); *Alexander V. Baryshev* (*Dukhov Research Institute of Automatics*);

Session 3P8a
Nanomaterials and Nanophotonics for Sensing

Wednesday PM, April 24, 2024

Room 8 - Guixiang

Organized by Pier Paolo Pompa, Antonello Cutolo

Chaired by Pier Paolo Pompa, Antonello Cutolo

13:20 Invited A Suite of Novel Genetically Encoded Fluorescent Probes for Monitoring Biological Signals
Hanbin Zhang (*Westlake University*); *Shihao Zhou* (*Westlake University*); *Lina Yang* (*Westlake University*); *Kiryl D. Piatkevich* (*Westlake University*);

13:40 Invited Optical Fiber Sers Probes for Cancer Biomarker Detection
Marco Pisco (*University of Sannio*); *M. A. Cutolo* (*University of Sannio*); *C. Esposito* (*University of Sannio*); *V. Iazzetta* (*University of Sannio*); *M. Janneh* (*University of Sannio*); *S. Spaziani* (*University of Sannio*); *Andrea Cusano* (*University of Sannio*);

14:00 In-line Mach-Zehnder Interferometer Sensor for Accurate Measurement of Strain
Shabnam Abutalebi B.A. (*Sharif University of Technology*); *Seyed Mahmoud Ashrafi* (*Sharif University of Technology*); *Hamed Namifard* (*Sharif University of Technology*); *Abolfazl Bahrampour* (*Sharif University of Technology*); *Ali Reza Bahrampour* (*Sharif University*);

14:15 Application of Simple In-line Mach-Zehnder Interferometer for Simultaneous Analysis of Water and Temperature
Shabnam Abutalebi B. A. (*Sharif University of Technology*); *Mohammad Khanzadeh* (*Vali-e-Asr University of Rafsanjan*); *Hamed Namifard* (*Sharif University of Technology*); *Seyed Mahmoud Ashrafi* (*Sharif University of Technology*); *Abolfazl Bahrampour* (*Sharif University of Technology*); *Ali Reza Bahrampour* (*Sharif University*);

14:30 Invited Lab on Fiber: A Key Enabling Technology for Precision Medicine
Andrea Cusano (*University of Sannio*);

14:50 Advanced Integrated Optical Devices for Ultrasound Diagnostics
Barbara Rossi (*University of Naples Federico II*); *Martino Giaquinto* (*University of Sannio*); *M. A. Cutolo* (*University of Sannio*); *Andrea Cusano* (*University of Sannio*);

15:05 Plasmonic Colorimetric Biosensors for Point-of-care Applications
Helena Torné-Morató (*Istituto Italiano di Tecnologia*); *P. Donati* (*Istituto Italiano di Tecnologia*); *V. Tripathi* (*Istituto Italiano di Tecnologia*); *Pier Paolo Pompa* (*Italian Institute of Technology*);

15:20 On mechanisms of Coloration of Tungsten Trioxide in Hydrogen via Retrieval of the Complex Dielectric Permittivity
Daria P. Kulikova (*Lomonosov Moscow State University*); *Yevgeniy M. Sgibnev* (*Lomonosov Moscow State University*); *Eugeny D. Chubchev* (*Lomonosov Moscow State University*); *Aleksandr S. Baburin* (*BMSTU*); *Evgeniy S. Lotkov* (*Lomonosov Moscow State University*); *Alexander V. Dorofeenko* (*Lomonosov Moscow State University*); *Ilya A. Rodionov* (*Bauman Moscow State Technical University*); *Alexander V. Baryshev* (*Dukhov Research Institute of Automatics*);

15:35 **Coffee Break**

Session 3P8b
Harvesting Losses in Nanophotonics: Hot Electrons and Heat, Chirality, and Bio-sensing

Wednesday PM, April 24, 2024

Room 8 - Guixiang

Organized by Alexander O. Govorov, Peng Yu

Chaired by Alexander O. Govorov

16:00 Keynote Chirality in Plasmonic Gold Nanoparticle
Ki Tae Nam (*Seoul National University*);

16:30 Investigating Losses in Single Plasmonic Nanoparticles
Emiliano Cortes (*University of Munich (LMU)*);

16:45 Low Level Light Biothermal Characterization at a Cellular Level
Taeyul Choi (*University of North Texas*);

17:00 Harvesting Plasmonic Losses for Photocatalysis
Alberto Naldoni (*University of Turin*);

17:15 Plasmonic-catalytic 2D Supercrystals for H_2 Production
Matias Herran (*Fritz Haber Institute*); *Sabrina Juergensen* (*Freie Universitaet Berlin*); *Ana Sousa-Castillo* (*Ludwig-Maximilians-Universitat Munchen*); *Holger Lange* (*University of Potsdam*); *Stephanie Reich* (*Freie Universitaet Berlin*); *Florian Schulz* (*University of Hamburg*); *Emiliano Cortes* (*University of Munich (LMU)*);

17:30 Chiral Sensing with Plasmonic Nanostructures
Chi Zhang (*Wuhan University*); *Yong Li* (*Wuhan University*); *Xiaolin Lu* (*Wuhan University*); *Tao Ding* (*Wuhan University*);

17:45 Harvesting Losses in Plasmonic Nanostructures for Photodetection in Telecommunication Band
Cheng Zhang (*Soochow University*); *Xiaofeng Li* (*Soochow University*);

18:00 Chiral Interaction in an On-chip DNA-assembled Hybrid Nanostructure
Li Ma (*University of Electronic Science and Technology of China*); *Alexander O. Govorov* (*Ohio University*); *Zhiming Wang* (*University of Electronic Science and Technology of China*);

18:15 Harnessing Hot Electrons in Colloidal Quantum Dots for Efficient Photocatalytic Hydrogen Generation
Xin Tong (*University of Electronic Science and Technology of China*); *Zhiming M. Wang* (*University of Electronic Science and Technology of China*);

Session 3P9
Functional Optoelectronic Devices: Light Sources and Detectors

Wednesday PM, April 24, 2024

Room 9 - Xinyu

Organized by Jingxuan Wei, Yang Chen

Chaired by Jingxuan Wei, Yang Chen

13:00 Invited Spin Light Sources Generated from Berry-phase Photonic Crystals
Bo Wang (*Shanghai Jiao Tong University*);

13:20 Invited Resonant Metasurfaces for Polarized Light Emission
Zi-Lan Deng (*Jinan University*); *Tan Shi* (*Jinan University*); *Zhiwei Feng* (*Jinan University*);

13:40 Invited Optically Switchable Chiral Emission Based on Achiral Metasurfaces
Yang Chen (*University of Science and Technology of China*);

14:00 Invited Interface Polaritonics in van der Waals Materials for Advanced Optoelectronic Devices
Qing Zhang (*University of Electronic Science and Technology of China*); *Yihua Bai* (*University of Electronic Science and Technology of China*); *Haoran Lv* (*University of Electronic Science and Technology of China*);

14:20 Invited Hybrid Integrated Two-dimensional Material Optoelectronic Devices on Silicon
Junjia Wang (*Southeast University*);

14:40 Invited Metasurface-based Spectrometers and Tunable Colorfilters
Dandan Wen (*Northwestern Polytechnical University*);

15:00 Invited Controllable Distant Interactions at Bound State in the Continuum
Haijun Tang (*Harbin Institute of Technology*); *Qinghai Song* (*Harbin Institute of Technology*); *Can Huang* (*Harbin Institute of Technology*);

15:30 **Coffee Break**

16:00 Invited Chiroptical Detection by Photonic Orbital Angular Momentum
Jincheng Ni (*University of Science and Technology of China*);

16:20 Invited Towards Broadband Photodetection Using Low-dimensional Materials
Shaojuan Li (*Changchun Institute of Optics, Fine Mechanics and Physics (CIOMP), Chinese Academy of Sciences*);

16:40 Invited Nanoantenna Enhanced Integrated Infrared Polarization Detectors
Jing Zhou (*Shanghai Institute of Technical Physics, Chinese Academy of Sciences*); *Jie Deng* (*Shanghai Institute of Technical Physics, Chinese Academy of Sciences*); *Yonghao Bu* (*Shanghai Institute of Technical Physics, Chinese Academy of Sciences*); *Tianyun Zhu* (*Shanghai Institute of Technical Physics, Chinese Academy of Sciences*); *Wenji Jing* (*Shanghai Institute of Technical Physics, Chinese Academy of Sciences*); *Xiansong Ren* (*Shanghai Institute of Technical Physics, Chinese Academy of Sciences*); *Jiexian Ye* (*Shanghai Institute of Technical Physics, Chinese Academy of Sciences*); *Wei-Da Hu* (*Shanghai Institute of Technical Physics, Chinese Academy of Sciences*); *Xiaoshuang Chen* (*Shanghai Institute of Technical Physics, Chinese Academy of Sciences*); *Wei Lu* (*Shanghai Institute of Technical Physics, Chinese Academy of Sciences*);

17:00 Invited Enhancing Photodetector Performance of Graphene Detector at near Infrared Region with Localized Field
Jiayue Han (*University of Electronic Science and Technology of China*); *Chao Han* (*University of Electronic Science and Technology of China*); *Xingwei Han* (*University of Electronic Science and Technology of China*); *Meiyu He* (*University of Electronic Science and Technology of China*); *Jun Wang* (*University of Electronic Science and Technology of China*);

17:20 Shortwave Infrared Photodetectors Based on Interlayer Transition in van der Waals $MoS_2/MoTe_2$ Heterostructures
Jiong Yang (*Soochow University*);

17:35 Novel Polarization-sensitive Photodetectors Based on Optoelectronic Nanostructures
Invited
Jingxuan Wei (*University of Electronic Science and Technology of China*);

17:55 All-optical Hot Plugging Polariton Classifier
Chuyuan Zheng (*University of Electronic Science and Technology of China*); *Wei Li Zhang* (*University of Electronic Science and Technology of China*);

Session 3P10a
Radar Target Scattering Signature Modeling and Application

Wednesday PM, April 24, 2024

Room 10 - Shuliu

Organized by Si-Yuan He, Yunhua Zhang

Chaired by Si-Yuan He, Yunhua Zhang

13:00 Modeling and Analysis of Creeping Wave Diffraction of Complex Target Surface Based on Planar Mesh Model
Yuan Long Li (*Wuhan University*); *Si-Yuan He* (*Wuhan University*); *Yunhua Zhang* (*Wuhan University*); *Qi Huang* (*Wuhan University*);

13:15 Extraction of Scattering Centers by Physics-informed Deep Learning Model
Jianghan Bao (*Southeast University*); *Che Liu* (*Southeast University*); *Tie Jun Cui* (*Southeast University*);

13:30 A Study of the Inherent Physical Attributes of Component-level Scattering Center Position
Wancong Li (*Wuhan University*); *Si-Yuan He* (*Wuhan University*); *Zhengqiu Tian* (*Wuhan University*);

13:45 Forward Modeling of Bistatic Scattering Center for Complex Target
Zhi-Dan Bian (*Wuhan University*); *Yan Zhu* (*Wuhan University*); *Jia Ning Yin* (*Wuhan University*); *Si-Yuan He* (*Wuhan University*);

14:00 A Forward Parametric Modeling Method for Buried Targets
Yan Zhu (*Wuhan University*); *Zhi Dan Bian* (*Wuhan University*); *Si-Yuan He* (*Wuhan University*);

14:15 Research on Forward Modeling of Robust Scattering Centers from Ships on Time-varying Sea Surface
Ru-Meng Chen (*Wuhan University*); *Jia Ning Yin* (*Wuhan University*); *Si-Yuan He* (*Wuhan University*);

14:30 Applicability Analysis of Creeping Wave Diffraction Mechanism in Attributed Scattering Center Model
Qi Huang (*National Key Laboratory of Scattering and Radiation*); *Hua Yan* (*National Key Laboratory of Scattering and Radiation*); *Lei Zhang* (*National Key Laboratory of Scattering and Radiation*); *Jinwen Lu* (*National Key Laboratory of Scattering and Radiation*); *Xiaoyan Huang* (*National Key Laboratory of Scattering and Radiation*); *Yanming Hu* (*National Key Laboratory of Scattering and Radiation*); *Hongcheng Yin* (*National Key Laboratory of Scattering and Radiation*);

14:45 Radar Target Characteristic Supplement Based on Forward Modeling
Wei Gong (*Wuhan University*); *Mengbo Hua* (*Wuhan University*); *Zhihao Cai* (*Wuhan University, China*); *Xiaoyi Wang* (*Wuhan University*); *Si-Yuan He* (*Wuhan University*);

15:00 Physical Optics Solution of Electromagnetic Scattering by Biaxial Anisotropic Slab
Zhihao Cai (*Wuhan University*); *Si-Yuan He* (*Wuhan University*); *Mengbo Hua* (*Wuhan University*); *Wei Gong* (*Wuhan University*); *Zhengqiu Tian* (*Wuhan University*); *Xiaoyi Wang* (*Wuhan University*); *Lumin Luo* (*Wuhan University*);

15:30 **Coffee Break**

Session 3P10b
Micro-processing and Micro-fabrication with Lasers

Wednesday PM, April 24, 2024

Room 10 - Shuliu

Organized by You Wang, Dongdong Wang

Chaired by You Wang, Dongdong Wang

16:00 Theoretical Study of Morphology of Holes Drilled by a Double-pulsed Laser Train
Jiaqi Wang (*Southwest Institute of Technical Physics*); *Di Song* (*Southwest Institute of Technical Physics*); *Meng Zhang* (*Southwest Institute of Technical Physics*); *Liancong Gao* (*Southwest Institute of Technical Physics*); *Dongdong Wang* (*Southwest Institute of Technical Physics*); *Yaqing Jin* (*Southwest Institute of Technical Physics*); *He Cai* (*Southwest Institute of Technical Physics*); *Xiaoxu Liu* (*Southwest Institute of Technical Physics*); *Chenghuan Su* (*Southwest Institute of Technical Physics*); *You Wang* (*Southwest Institute of Technical Physics*);

16:15 Comparison of Characteristics of Drilled Holes Using a Gaussian Beam and a Flat-top Beam in Laser Perforation
Di Song (*Southwest Institute of Technical Physics*); *Jiaqi Wang* (*Southwest Institute of Technical Physics*); *Xi Yang* (*Southwest Institute of Technical Physics*); *Yalan Wang* (*Southwest Institute of Technical Physics*); *Qing Luo* (*Southwest Institute of Technical Physics*); *Song Wang* (*Southwest Institute of Technical Physics*); *Menglin Guo* (*Southwest Institute of Technical Physics*); *Juhong Han* (*Southwest Institute of Technical Physics*); *He Cai* (*Southwest Institute of Technical Physics*); *Guofei An* (*Southwest Institute of Technical Physics*); *You Wang* (*Southwest Institute of Technical Physics*);

16:30 Micro/Nanofabrication through Partition Laser Assembling (PLA) Techniques
Wei Zhao (*Northwest University*);

16:45 Utilizing Two-photon Polymerization for a Fiber-end Phase Mask in Precise Micro/nanofiber Fabrication
Xingyu Zhao (*Zhejiang University*); *Xuefeng Luo* (*Zhejiang University*); *Wei Fang* (*Zhejiang University*); *Limin Tong* (*Zhejiang University*);

17:00 A Wet Etching-based Polarization Independent 3D-2D Taper Edge Coupler for Integrated Lithium Niobate Photonics
Jing Shang (*Tsinghua University*); *Rongjin Zhuang* (*Tsinghua University*); *Yang Li* (*Tsinghua University*);

17:15 Nanosecond-femtosecond Laser-materials Processes and the Functional Structures Preparation of Thin Film
Dongfeng Qi (*Shandong University of Technology*); *Letian Wang* (*University of California*); *Songyan Chen* (*Xiamen University*); *Costas P. Grigoropoulos* (*University of California, Berkeley*);

17:30 Photoinduced Enhanced Raman Spectroscopy with Periodic Nanostructures on LNOI Fabricated by Femtosecond Laser Inscription
Yingying Ren (*Shandong Normal University*); *Peng An* (*Shandong Normal University*); *Shenglin Luo* (*Shandong Normal University*); *Yangjian Cai* (*Shandong Normal University & Soochow University*); *Zhen Li* (*Shandong Normal University & Soochow University*);

17:45 Ultrafast Laser Direct Writing of Bandgap-tunable Perovskite Nanocrystals in Glass
Dezhi Tan (*Zhejiang Lab*);

Session 3P11a
Advanced Optical and Digital Signal Processing in Optical Communication Networks 2

Wednesday PM, April 24, 2024

Room 11 - Xiangyu

Organized by Feng Wen, Mingming Tan, Tianhua Xu

Chaired by Feng Wen

13:00 Invited High-capacity Wavelength Selective Switches and the Emerging Applications
Haining Yang (*Southeast University*);

13:20 Invited Increasing the Sensitivity Gains via Four-dimensional Geometric Shaping-based Coded Modulation for Optical Communication
Bin Chen (*Hefei University of Technology*); *Yajie Sheng* (*Hefei University of Technology*); *Yi Lei* (*Hefei University of Technology*); *Jiwei Xu* (*Hefei University of Technology*); *Weiqin Zhou* (*ZTE Corporation*); *Kai Tao* (*ZTE Corporation*);

13:40 Invited Long-period Grating for Multimode and Multicore Fibers
Yunhe Zhao (*Shanghai Maritime University*);

14:00 Reservoir Computing Networks by Using Gain Saturation in a Semiconductor Optical Amplifier (SOA) Applied to Nonlinear Channel Equalization
Xiyong Liu (*University of Electronic Science and Technology of China*); *Hanwen Gao* (*University of Electronic Science and Technology of China*); *Huiwen Luo* (*University of Electronic Science and Technology of China*); *Feng Wen* (*University of Electronic Science and Technology of China*);

14:15 Invited The Advanced Transmission Technology
Feng Tian (*Beijing University of Posts and Telecommunications*);

Session 3P11b
Optical Wireless Communication

Wednesday PM, April 24, 2024

Room 11 - Xiangyu

Organized by Jianyang Shi, Chao Fei

Chaired by Jianyang Shi, Chao Fei

14:40 Invited Optical Wireless Communications for the Heterogeneous Networks of Intelligent Transportation
Jian Song (*Tsinghua University*);

15:00 Invited On RIS-aided NLOS Underwater Wireless Optical Communication Systems
Zhou Gan (*Tsinghua University*); *Mitchell A. Cox* (*University of the Witswatersrand*); *Yuhan Dong* (*Tsinghua University*);

15:20 Invited Key Technologies and Prospects of Intelligent Optical Wireless Communication for 6G
Jianyang Shi (*Fudan University*);

15:40 **Coffee Break**

16:00 Availability of Optical and mmWave Terrestrial Links at Low and Mid Latitudes
Elizabeth Verdugo (*Pontifical Catholic University of Rio de Janeiro*); *Lorenzo Luini* (*Politecnico di Milano*); *Carlo Riva* (*Politecnico di Milano*); *Luiz Da Silva Mello* (*Pontifical Catholic University of Rio de Janeiro*); *Laura Resteghini* (*Huawei Technologies Italia S.r.l.*); *Alessandro D'Acierno* (*Huawei Technologies Italia S.r.l.*); *Renato Lombardi* (*Huawei Technologies Italia S.r.l.*); *Zhao Ying* (*Huawei Technologies Co., Ltd.*); *Roberto Nebuloni* (*CNR-Istituto di Elettronica e di Ingegneria dell'Informazione e delle Telecomunicazioni*);

16:15 50-m/20-Mbps Underwater Wireless Optical Communication Enabled by a Large Beam Divergence Angle Light-emitting Diode
Qingrui Chen (*Zhejiang University*);

16:30 Scintillation Index of Plane and Spherical Laser Beams Propagating in Arbitrary Oceanic Turbulence
Weijie Dai (*Tsinghua University*); *Liyan Zhang* (*Tsinghua University*); *Jiaming Lin* (*Tsinghua University*); *Kun Wu* (*Tsinghua University*); *Tiankuo Wei* (*Tsinghua University*); *Zongyao Zhao* (*Tsinghua University*); *Xinke Tang* (*Peng Cheng Laboratory*); *Jian Song* (*Tsinghua University*); *Xiao-Ping Zhang* (*Tsinghua University*); *Yuhan Dong* (*Tsinghua University*);

16:45 Joint Channel Estimator Combining Deterministic and Random Noise for Wireless Optical Communication
Yuan Wei (*Fudan University*); *Chaoxu Chen* (*Fudan University*); *Ziwei Li* (*Fudan University*); *Chao Shen* (*Fudan University*); *Junwen Zhang* (*Fudan University*); *Nan Chi* (*Fudan University*); *Jianyang Shi* (*Fudan University*);

17:00 Indoor Health Monitoring with VLC-based Passive Posture Monitoring
Jiarong Li (*Tsinghua University*); *Zixuan Xie* (*Tsinghua University*); *Chenxin Liang* (*Tsinghua University*); *Chihan Xu* (*Tsinghua University*); *Changshuo Ge* (*Tsinghua University*); *Zhancong Xu* (*Tsinghua University*); *Jingyang Wang* (*Tsinghua University*); *Liguang Ruan* (*Tsinghua University*); *Weihua Gui* (*Central South University*); *Xiaojun Liang* (*Peng Cheng Laboratory*); *Wenbo Ding* (*Tsinghua University*);

17:15 LiFall: Passive Indoor Fall Detection System Based on Illumination and Visible Light Communication Networks
Zhancong Xu (*Tsinghua University*); *Chenxin Liang* (*Tsinghua University*); *Jingyang Wang* (*Tsinghua University*); *Liguang Ruan* (*Tsinghua University*); *Jiarong Li* (*Tsinghua University*); *Yuhan Dong* (*Tsinghua University*); *Wenbo Ding* (*Tsinghua University*); *Jian Song* (*Tsinghua University*);

17:30 Invited Dual-polarization Multiplexing and Nonlinear Equalization Assisted in LED-based Underwater Wireless Optical Communication
Yitong Xie (*Zhejiang University*); *Fei Zhang* (*Zhejiang University*); *Junwei Zhang* (*The Hong Kong Polytechnic University*); *Tianyi Zhang* (*Zhejiang University*); *Yuan Wang* (*Zhejiang University*); *Jiahan Tian* (*Zhejiang University*); *Xiaojian Hong* (*Zhejiang University*); *Chao Fei* (*Zhejiang University*); *Guowu Zhang* (*Zhejiang University*); *Gaoxuan Wang* (*Zhejiang University*); *Sailing He* (*Royal Institute of Technology & Zhejiang University*);

17:50 Hybrid Artificial Noise Design for Indoor MISO VLC Wiretap Systems
Weishen Wang (*Tsinghua University*); *Fan Yang* (*Tsinghua University*); *Liang Li* (*Tsinghua University*); *Weijie Dai* (*Tsinghua University*); *Yuhan Dong* (*Tsinghua University*);

Session 3P12a
Recent Advances in Artificial Intelligence Applications to the High Power Electromegnetics (HPEM) Effect of Electronic Systems 1 & 2

Wednesday PM, April 24, 2024

Room 12 - Siji 1

Organized by Chuanbao Du, Congguang Mao, Wanzhi Ma

Chaired by Chuanbao Du, Congguang Mao, Mintao Zhang

13:00 Field-line Coupling Effect under High Power Microwave
Yihao Guo (*Sun Yat-sen University*); *Jinyuan Xiang* (*Sun Yat-sen University*); *Zong Qi Cai* (*CEPREI*); *Qifeng Huang* (*Sun Yat-sen University*); *Yongyi Tan* (*Sun Yat-sen University*); *Wenxiao Fang* (*Sun Yat-sen University*);

13:15 Monte Carlo Simulation of BOPP Metalized Film Breakdown under High-amplitude Electric Stress
Yuanjin Xiang (*Xiangtan University*); *Wenxiao Fang* (*Sun Yat-sen University*); *Zhe Zhu* (*Xiangtan University*);

13:30 Study on Immunity of Interface Integrated Circuit under Electromagnetic Pulse Interference
Rui Ding (*China Electronic Product Reliability and Environmental Testing Research Institute*); *Chengyang Luo* (*China Electronic Product Reliability and Environmental Testing Research Institute*); *Wenxiao Fang* (*Sun Yat-sen University*); *Weiheng Shao* (*China Electronic Product Reliability and Environmental Testing Research Institute*);

13:45 Analysis of Coupling Response in Communication Systems under High-altitude Electromagnetic Pulse Environment
Mintao Zhang (*Xihua University*); *Chuanbao Du* (*Northwest Institute of Nuclear Technology*); *Yinjie Zhang* (*Xihua University*); *Wanzhi Ma* (*University of Electronic Science and Technology of China*); *Congguang Mao* (*Northwest Institute of Nuclear Technology*);

14:00 Comprehensive Evaluation of Shielding Effect of Electronic Enclosures Based on EM Norms
Jin Tian (*Xidian University*); *Jiang-Wei Guo* (*Xidian University*); *Lu Sun* (*Xidian University*); *Chuanbao Du* (*Northwest Institute of Nuclear Technology*); *Yang Qiu* (*Xidian University*);

14:15 Application of Scattering Parameters in Source Waveform Reconstruction of Bounded Wave Simulator
Zhuo Wang (*Xidian University*); *You-Huo Huang* (*Xidian University*); *Jing-Li Guo* (*Xidian University*); *Chuanbao Du* (*Northwest Institute of Nuclear Technology*); *Zhitong Cui* (*Northwest Institute of Nuclear Technology*); *Linshen Xie* (*Northwest Institute of Nuclear Technology*);

14:30 Study on Coupling Effect of Typical Communication Interface and Cable under Strong Electromagnetic Pulse Excitation
Ya-Nan Du (*Xidian University*); *Lu Sun* (*Xidian University*); *Jin Tian* (*Xidian University*); *Chuanbao Du* (*Northwest Institute of Nuclear Technology*); *Yang Qiu* (*Xidian University*);

14:45 Equivalent Circuit Modeling for Antenna Feed Networks in HPEM Environments
Zhuo Wang (*Xidian University*); *Chuanbao Du* (*Northwest Institute of Nuclear Technology*); *Wei Wang* (*Northwest Institute of Nuclear Technology*); *Zhitong Cui* (*Northwest Institute of Nuclear Technology*); *You-Huo Huang* (*Xidian University*);

15:00 Analysis of HEMP Coupled Responses for RF Front-End Circuit of Wireless Communication Equipment
Yinjie Zhang (*Xihua University*); *Chuanbao Du* (*Northwest Institute of Nuclear Technology*); *Mintao Zhang* (*Xihua University*); *Wanzhi Ma* (*University of Electronic Science and Technology of China*); *Congguang Mao* (*Northwest Institute of Nuclear Technology*); *Xin Nie* (*Northwest Institute of Nuclear Technology*);

15:15 Sample Size Uncertainty Analysis in the System Vulnerability Assessment Results for IEMI
Keyue Wang (*Xi'an Jiaotong University*); *Jinru Sun* (*Xi'an Jiaotong University*); *Xueling Yao* (*Xi'an Jiaotong University*); *Congguang Mao* (*Northwest Institute of Nuclear Technology*);

15:30 **Coffee Break**

Session 3P12b
Microwave and Millimeter Wave Circuits and Devices 1

Wednesday PM, April 24, 2024

Room 12 - Siji 1

Chaired by Lei Kuang

16:00 Compact Wideband Four-coupled-line Based Filtering Directional Coupler with Wide Upper Stopband
Yan Zhang (*Dalian Maritime University*); *Hongmei Liu* (*Dalian Maritime University*); *Yanjie Pei* (*Dalian Maritime University*); *Teng Ma* (*Dalian Maritime University*); *Siran Zhang* (*Dalian Maritime University*);

16:15 Design of U-band Frequency Doubler Based on Schottky Diode MA4E1317
Xi Fang (*Chongqing University of Posts and Telecommunications*); *Bo Zhang* (*Universtity of Electronic Science and Technology of China*); *Yunhan Qin* (*China National Accreditation Service for Conformity Assessment*); *Yuanbo Wen* (*Chongqing University of Posts and Telecommunications*);

16:30 Micro-magnetic Simulation Study on High-frequency Microwave Generators Utilizing Spin Torque Oscillation in Orthogonal Magnetization Disks with Strong Biquadratic Magnetic Coupling
Chuhan Liu (*Kyushu University*); *Yuichiro Kurokawa* (*Kyushu University*); *Naoki Hashimoto* (*Kyushu University*); *Terumitsu Tanaka* (*Kyushu University*); *Hiromi Yuasa* (*Kyushu University*);

16:45 A Compact Surface Wave Launcher with Higher Directivity for Leaky Wave Antenna of Producing Hologram
Yi Ruo Wang (*Tongji University*); *Zhen Wang* (*Tongji University*); *Ajay K. Poddar* (*Synergy Microwave Corporation*); *Ulrich L. Rohde* (*Synergy Microwave Corporation*); *Mei Song Tong* (*Tongji University*);

17:00 Fast Simulation of SAW Devices Using the Improved Hierarchical Cascading Technique
Bangwei Xu (*East China Normal University*); *Shaoqing Duan* (*East China Normal University*); *Lei Kuang* (*East China Normal University*);

Session 3P13a
Quantum Technologies Related to Electromagnetics

Wednesday PM, April 24, 2024

Room 13 - Siji 2

Organized by Weng Cho Chew, Dong-Yeop Na

Chaired by Weng Cho Chew, Dong-Yeop Na

13:00 Quantum Computing Method to Solve the Finite Element Equation in EM Problems
Tian Jian Peng (*Southeast University*); *Jianan Zhang* (*Southeast University*); *Jianwei You* (*Southeast University*); *Tie Jun Cui* (*Southeast University*);

13:15 Recent Research Progresses of Quantum Radar
Hai-Zhi Song (*Southwest Institute of Technical Physics & UESTC*); *Zichang Zhang* (*Southwest Institute of Technical Physics*); *Jing Qiu* (*Southwest Institute of Technical Physics*); *Mochou Yang* (*Southwest Institute of Technical Physics*); *Beitong Cheng* (*Southwest Institute of Technical Physics*);

13:30 Metalens-array-based High-dimensional Quantum Random Number Generator
Yubin Fan (*City University of Hong Kong*); *Mu Ku Chen* (*City University of Hong Kong*); *Din Ping Tsai* (*City University of Hong Kong*);

13:45 Numerical Modeling of the Dynamics of Multiple Atoms in a Lossy Cavity from the Fully-quantum-theoretic Aspect
Dong-Yeop Na (*Pohang University of Science and Technology*); *Christopher Jayun Ryu* (*University of Illinois Urbana-Champaign*); *Weng Cho Chew* (*Purdue University*);

14:00 On the Stability Conditions of FDTD Methods for Maxwell and Schrodinger Equations
Eng Leong Tan (*Nanyang Technological University*);

14:15 Controllable Multi-photon Entanglement in Optical Synthetic Dimensions
Junlin Wang (*Zhejiang University*); *Luqi Yuan* (*Shanghai Jiao Tong University*); *Lei Ying* (*Zhejiang University*);

14:30 Numerical Study of Amplitude-modulation Receivers Based on Rydberg Atoms
Wenjie Ding (*Anhui University*); *Wei E. I. Sha* (*Zhejiang University*); *Zhi-Xiang Huang* (*Anhui University*); *Pan Pan* (*Anhui University*); *Guoda Xie* (*Anhui University*);

14:45 Modeling of a Flux Qubit Coupled to a Coplanar Waveguide Resonator Using Discrete Exterior Calculus
Christopher Jayun Ryu (*University of Illinois Urbana-Champaign*); *Boyuan Zhang* (*Purdue University*); *Dong-Yeop Na* (*Pohang University of Science and Technology*); *Kudeki Erhan* (*University of Illinois*); *Weng Cho Chew* (*Purdue University*);

15:00 Study on the Spectrum Splitting by Dielectric Loading for Room-temperature Optical Quantum Bits Design
Boyuan Zhang (*Purdue University*); *Jie Zhu* (*Purdue University*); *Dong-Yeop Na* (*Pohang University of Science and Technology*); *Thomas E. Roth* (*Purdue University*); *Weng Cho Chew* (*Purdue University*);

Session 3P13b
Advancement of UAV/Drone Applications for Earth Resource Monitoring

Wednesday PM, April 24, 2024

Room 13 - Siji 2

Organized by Voon Chet Koo, Hean-Teik Chuah

Chaired by Yee Kit Chan

16:00 Monitoring Coastal Blue Carbon Ecosystems by Combing Satellite and UAV Remote Sensing Data in Southern China
Di Dong (*South China Sea Development Research Institute, MNR*); *Huamei Huang* (*South China Sea Development Research Institute, MNR*); *Qing Gao* (*South China Sea Development Research Institute, MNR*);

16:15 Design and Development of Drone Based Synthetic Aperture Radar (SAR) System for Environmental and Disaster Monitoring
Yee Kit Chan (*Multimedia University*); *Voon Chet Koo* (*Multimedia University*); *Chee-Siong Lim* (*Multimedia University*); *Tien Sze Lim* (*Multimedia University*);

16:30 Large Scale Oil Palm Tree Detection and Counting Using Deep Learning
Chee Cheong Lee (*Multimedia University*); *Voon Chet Koo* (*Multimedia University*); *Tien Sze Lim* (*Multimedia University*);

16:45 Study on the Evaluation Index of Vehicle Tracking on Two-lane Road by Using Fractal Image Analysis
Yifan Wu (*Nihon University*); *Syota Yazawa* (*Nihon University*); *Kiyozumi Niizuma* (*Nihon University*); *Takashi Kuroiwa* (*Nihon University*);

17:00 The Utilization of Drones as a Catalyst for Igniting Passion in STEM Education in Malaysia
Danny Wee Kiat Ng (*Universiti Tunku Abdul Rahman*); *Ban Hoe Kwan* (*Universiti Tunku Abdul Rahman*); *Yeong-Nan Phua* (*Universiti Tunku Abdul Rahman*); *Kiah Ju Ong* (*Universiti Tunku Abdul Rahman*); *Faidz Abd-Rahman* (*Universiti Tunku Abdul Rahman*);

Session 3P13c
Progress on Electromagnetics for Biomedical Imaging Methods and Systems

Wednesday PM, April 24, 2024

Room 13 - Siji 2

Organized by Shao Ying Huang, Xiuzhu Ye

Chaired by Xiuzhu Ye

17:15 Novel UWB Antennas for Microwave Breast Cancer Detection
Yiyi Yao (*Harbin Institute of Technology, Weihai*); *Qihang Zhou* (*University of Electronic Science and Technology of China (UESTC)*);

17:30 A Microwave Device for Human Cerebral Hemodynamics Measurement
Mengchu Wang (*Tsinghua University*); *Rui Guo* (*Tsinghua University*); *Maokun Li* (*Tsinghua University*); *Fan Yang* (*Tsinghua University*); *Shenheng Xu* (*Tsinghua University*);

17:45 Magnetic Resonance Electrical Property Tomography with Inhomogeneous Background Prior Information
Yuyue Zhang (*National University of Singapore*); *Xudong Chen* (*National University of Singapore*);

18:00 Sample Entropy-based Characterization of Electrical Impedance in Epilepsy
Xiaoxiao Bai (*Northwestern Polytechnical University*); *Jiaming Xu* (*Northwestern Polytechnical University*); *Jingrong Yang* (*Northwestern Polytechnical University*); *Lei Wang* (*Institute of Medical Research, Northwestern Polytechnical University*);

18:15 Inverse Scattering Imaging of Metal Targets inside Human Body Based on Compressive Sensing
Xinhui Zhang (*Beijing Institute of Technology*); *Naike Du* (*Beijing Institute of Technology*); *Xiuzhu Ye* (*Beijing Institute of Technology*);

Session 3P14
Ocean and Coastal Remote Sensing: The AI Approach

Wednesday PM, April 24, 2024
Room 14 - Siji 3
Organized by Xiaofeng Li, Xiaofeng Yang
Chaired by Xiaofeng Yang

13:00 Information Fusion for GNSS-R Wind Speed Retrieval Based on Residual Fully Connected Network
Hao Du (*Institute of Space Sciences (ICE, CSIC)*); *Weiqiang Li* (*Institute of Space Sciences (ICE, CSIC)*); *E. Cardellach* (*Institute of Space Sciences (ICE, CSIC)*); *Serni Ribo* (*Institute of Space Sciences (ICE, CSIC)*); *Antonio Rius* (*Institute of Space Sciences (ICE, CSIC)*);

13:15 Tropical Cyclone Surface Pressure Fields Estimation Using the Fengyun Satellite 50–60 GHz and 118 GHz Passive Microwave Measurements over Oceans
Zijin Zhang (*National Space Science Center, Chinese Academy of Sciences*); *Xiaolong Dong* (*National Space Science Center, Chinese Academy of Sciences*);

13:30 Sea Surface Wind Direction Retrieval from Satellite SAR Images Using Deep Learning
Xiaofeng Yang (*Aerospace Information Research Institute, Chinese Academy of Sciences*);

13:45 Inversion of Oil Slick Thickness Using SAR Data Based on ANN
Tingyu Meng (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Xiaofeng Yang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Kun-Shan Chen* (*Nanjing University*);

14:00 Reconstruction of Ocean Temperature Field Based on a Temperature Profile
Xuanwei Wan (*Ministry of Natural Resources*); *Gang Zheng* (*The Second Institute of Oceanography, Chinese Ministry of Natural Resources*); *Xiaofeng Li* (*Institute of Oceanography, Chinese Academy of Sciences*); *Lizhang Zhou* (*Zhejiang University*);

14:15 Mangrove and Salt Marsh Detection in a Mangrove-saltmarsh Ecotone Using Segment Anything Model from Drone Imagery
Di Dong (*South China Sea Development Research Institute, MNR*); *Huamei Huang* (*South China Sea Development Research Institute, MNR*); *Bingxin Guo* (*Henan University of Urban Construction*); *Jia Yang* (*Henan University of Urban Construction*); *Qing Gao* (*South China Sea Development Research Institute, MNR*); *Zheng Wei* (*South China Sea Development Research Institute, MNR*); *Yuchao Sun* (*South China Sea Development Research Institute, MNR*);

14:30 Deep Learning Based Tropical Cyclone Center Fixing from Satellite Infrared Images
Qing Xu (*Ocean University of China*); *Han Wang* (*Ocean University of China*); *Xiaobin Yin* (*Ocean University of China*); *Yongcun Cheng* (*PIESAT Information Technology Co., Ltd.*);

14:45 Transfer Learning-driven Retrieval of Subsurface Temperature and Salinity for Mesoscale Eddies in the Oyashio Current
Yingjie Liu (*Institute of Oceanology, Chinese Academy of Sciences*); *Le Gao* (*Institute of Oceanography, Chinese Academy of Sciences*); *Haoyu Wang* (*Institute of Oceanology, Chinese Academy of Sciences*); *Fei Jiang* (*Institute of Oceanology, Chinese Academy of Sciences*); *Xiaofeng Li* (*Institute of Oceanography, Chinese Academy of Sciences*);

15:30 **Coffee Break**

16:00 A Direct Sun Correction Method for Interferometric Microwave Radiometer Based on SMOS Data
Xiaobin Yin (*Ocean University of China*); *Dunchao Du* (*Ocean University of China*); *Yan Li* (*Ocean University of China*); *Wu Zhou* (*National Satellite Ocean Application Service*); *Chaofei Ma* (*National Satellite Ocean Application Service*); *Huan Zhang* (*China Academy of Space Technology*); *Yinan Li* (*China Academy of Space Technology (Xi'an)*); *Jingjing Ren* (*China Academy of Space Technology*);

16:15 Multi-source Satellite Observation on Internal Solitary Waves in the Lombok Strait
Chuyuan Zhuang (*Institute of Oceanology, Chinese Academy of Sciences*); *Xiaofeng Li* (*Institute of Oceanology, Chinese Academy of Sciences*); *Dongliang Shen* (*Institute of Oceanology, Chinese Academy of Sciences*); *Xudong Zhang* (*Institute of Oceanology, Chinese Academy of Sciences*);

16:30 Improved Tropical Cyclone Observations by Scatterometers, Using SAR Learning
Weicheng Ni (*National University of Defense Technology*); *Ad Stoffelen* (*Royal Netherlands Meteorological Institute (KNMI)*); *Kaijun Ren* (*National University of Defense Technology*); *Jur Vogelzang* (*Royal Netherlands Meteorological Institute*); *Yanlai Zhao* (*National University of Defense Technology*); *Wuxin Wang* (*National University of Defense Technology*);

16:45 Deep Learning-driven Forecasting of Daily Sea Surface Temperatures in the South China Sea
Jifeng Qi (*Institute of Oceanology, Chinese Academy of Sciences*); *Bowen Xie* (*Institute of Oceanology, Chinese Academy of Sciences*); *Dezhou Yang* (*Institute of Oceanology, Chinese Academy of Sciences*); *Delei Li* (*Institute of Oceanology, Chinese Academy of Sciences*); *Baoshu Yin* (*Institute of Oceanology, Chinese Academy of Sciences*);

17:00 Extraction of Nearshore Aquaculture Raft Regions through Spatial-frequency Domain Feature Fusion Network
Yuan Zhou (*Tianjin University*); *Mengda Chao* (*Tianjin University*); *J. W. Tang* (*Laoshan Laboratory*); *Q. Li* (*Xidian University*); *Xiaofeng Li* (*Institute of Oceanology, Chinese Academy of Sciences*);

17:15 Coastal Sea Fog Detection Based on Multi-channel Fusion Transformer
Keran Chen (*Tianjin University*); *Yuan Zhou* (*Tianjin University*); *Xiaofeng Li* (*Institute of Oceanology, Chinese Academy of Sciences*);

17:30 A Four-dimensional Variational Constrained Neural Network-based Data Assimilation Method
Wuxin Wang (*National University of Defense Technology*); *Kaijun Ren* (*National University of Defense Technology*); *Boheng Duan* (*National University of Defense Technology*); *Junxing Zhu* (*National University of Defense Technology*); *Xiaoyong Li* (*National University of Defense Technology*); *Weicheng Ni* (*National University of Defense Technology*); *Jingze Lu* (*National University of Defense Technology*); *Taikang Yuan* (*National University of Defense Technology*);

17:45 Aptcnet: Enhancing Wind Retrieval in Satellite Remote Sensing with Adaptive Penalty and Triple Collocation
Xinjie Shi (*National University of Defense Technology*); *Qingguo Su* (*National University of Defense Technology*); *Wuxin Wang* (*National University of Defense Technology*); *Boheng Duan* (*National University of Defense Technology*); *Weicheng Ni* (*National University of Defense Technology*); *Kaijun Ren* (*National University of Defense Technology*);

Session 3P15a
Advanced Modeling and Simulation Methods for Multiphysics and Multiscale Problems

Wednesday PM, April 24, 2024

Room 15 - Siji 4

Organized by Ming Jiang, Wei Yang

Chaired by Ming Jiang, Huan Huan Zhang

13:00 Analysis Method for the Energy-decoupled Transmitting Modes of Horn-fed Metamaterial Lens (Metalens)
Ren-Zun Lian (*Xidian University*);

13:15 Plasmonic Nanostructures Analysis Using Characteristic Mode Method
Xuechun Wang (*Nanjing University of Posts and Telecommunications*); *Ting Wan* (*Nanjing University of Posts and Telecommunications*);

13:30 Simulation Implementation on EM Scattering of a Target Coated by a Plasma by Volumetric-SBR
Wei Yang (*University of Electronic Science and Technology of China*); *Yu-Feng Cai* (*University of Electronic Science and Technology of China*); *Hao-Quan Hu* (*University of Electronic Science and Technology of China*);

13:45 Multi-Scale Simulation Analysis of Millimeter Wave Propagation Characteristics in Mountainous UAV-aided Communications Based on Ray Tracing Method
Jian Song (*Kunming University of Science and Technology*); *Penghui Ding* (*Kunming University of Science and Technology*); *Jiangling Dou* (*Kunming University of Science and Technology*); *Qingwang Wang* (*Kunming University of Science and Technology*); *Yebo Gu* (*Kunming University of Science and Technology*); *Tao Shen* (*Kunming University of Science and Technology*);

14:00 Signal Integrity Analysis of Integrated Circuits Based on DGTD Method
Heng Fei Ma (*Xidian University*); *Qing Nan Fan* (*Xidian University*); *Zheng Lang Jia* (*Xidian University*); *Huan Huan Zhang* (*Xidian University*);

14:15 Analysis of the Influence of Radome on Seeker Antenna with the Consideration of Multiphysics Effects
Qing Nan Fan (*Xidian University*); *Heng Fei Ma* (*Xidian University*); *Zheng Lang Jia* (*Xidian University*); *Huan Huan Zhang* (*Xidian University*);

14:30 Electromagnetic-circuital-thermal-mechanical Multiphysics Numerical Simulation Method for Microwave Circuits and Antennas
Huan Huan Zhang (*Xidian University*); *Ying Liu* (*Xidian University*); *Lijun Jiang* (*Missouri University of Science and Technology*); *Wei E. I. Sha* (*Zhejiang University*); *Da-Zhi Ding* (*Nanjing University of Science and Technology*);

14:45 Accurate Electromagnetic Scattering Analysis of Multiscale Objects by Discontinuous Galerkin Integral Equation Method with Buffa-Christiansen Functions
Zi-Yang Liang (*Beijing Institute of Technology*); *Hong-Wei Gao* (*Beijing Institute of Technology*); *Zhen Peng* (*Beijing Institute of Technology*);

15:00 A Hierarchical Approximation Inversion Preconditioner for Surface Integral Equations in Electromagnetic Analysis of Multi-scale Objects
Jin-Gang Liu (*Beijing Institute of Technology*); *Xiao-Wei Huang* (*Beijing Institute of Technology*); *Shi-Yin Liu* (*Beijing Institute of Technology*); *Dan Guo* (*Beijing Institute of Technology*); *Xin-Qing Sheng* (*Beijing Institute of Technology*);

15:15 An Efficient Domain Decomposition Method for Multiphysics Simulation of Chiplet
Y. Xu (*Xiamen University*); *Qiuyue Wu* (*Xiamen University*); *Mingwei Zhuang* (*Xiamen University*); *Na Liu* (*Xiamen University*);

15:30 Electromagnetic-thermal Co-simulation Based on Subgrid Method
Guanghuan Zhang (*Anhui University*); *Kaikun Niu* (*Anhui University*); *Zhi-Xiang Huang* (*Anhui University*);

15:45 **Coffee Break**

Session 3P15b
Numerical Methods for the Approximation of Maxwell's Equations

Wednesday PM, April 24, 2024

Room 15 - Siji 4

Organized by Daniele Boffi, Lucia Gastaldi

Chaired by Daniele Boffi, Lucia Gastaldi

16:00 On the Finite Element Approximation of Maxwell's Eigenvalues
Daniele Boffi (*King Abdullah University of Science and Technology (KAUST)*);

16:15 Approximation of the Maxwell Eigenvalue Problem in a Least-squares Setting
Fleurianne Bertrand (*Fakultat fur Mathematik, TU Chemnitz*); *Daniele Boffi* (*King Abdullah University of Science and Technology (KAUST)*); *Lucia Gastaldi* (*University of Brescia*);

16:30 Convergence of Adaptive Finite Element Methods in Finite Element Exterior Calculus
Yuwen Li (*Zhejiang University*);

16:45 Band Structure Calculations of Dispersive Photonic Crystals in 3D Using Holomorphic Operator Functions
Wenqiang Xiao (*Inner Mongolia University*); *Bo Gong* (*Beijing University of Technology*); *Junshan Lin* (*Auburn University*); *Jiguang Sun* (*Michigan Technological University*);

17:00 An Analysis of Schwarz Methods for Frequency-domain Wave Equations Using Impedance Boundary Conditions or PMLs
Shihua Gong (*The Chinese University of Hong Kong (Shenzhen)*);

17:15 Deep Neural Networks and Finite Elements
Juncai He (*King Abdullah University of Science and Technology (KAUST)*);

17:30 Analysis of Nitsche's Method to Weakly Prescribe the Dirichlet Boundary Conditions in FEM Approximations of Maxwell's Problem
Daniele Boffi (*King Abdullah University of Science and Technology (KAUST)*); *Ramon Codina* (*Universitat Politècnica de Catalunya*); *Onder Türk* (*Middle East Technical University*);

17:45 An Extended Lagrange FEM for the Maxwell Eigenvalue Problem
Jiayu Han (*Guizhou Normal University*);

18:00 Guaranteed Computation for Maxwell Equations
Xufeng Liu (*Tokyo Woman's Christian University*);

Session 3P16a
Bound States in the Continuum and Singular Optics 1

Wednesday PM, April 24, 2024

Room 16 - Mudan

Organized by Wenzhe Liu, Dezhuan Han, Chao Peng

Chaired by Wenzhe Liu, Dezhuan Han

13:00 Lasing Control with Different Bound States in Continuum Based on Phase Change Material
Xinghong Chen (*Shanghai Jiao Tong University*); *Mingxuan Gu* (*Shanghai Jiao Tong University*); *Jiankai Tang* (*Shanghai Jiao Tong University*); *Yifei Mao* (*Shanghai Jiao Tong University*);

13:15 Dynamically Switchable Unidirectional Radiation Enabled by Topological Charges
Kong Zhang (*Shanghai Jiao Tong University*); *Guanjie Zhang* (*Shanghai Jiao Tong University*); *Yifei Mao* (*Shanghai Jiao Tong University*);

13:30 Dynamics of Bound States in the Continuum under Non-Hermitian Perturbations
Qianju Song (*Southwest University of Science and Technology*); *Dezhuan Han* (*Chongqing University*);

13:45 Topologically Complex Singular Electromagnetic Waves
Invited
Yijie Shen (*Nanyang Technological University*);

14:05 Interference Methods for the Structured Light Formation
Boris A. Evtushenko (*Saint Petersburg State Electrotechnical University "LETI"*); *Anastasia A. Ryzhaya* (*Saint Petersburg State Electrotechnical University "LETI"*); *Alexander A. Sevryugin* (*Saint Petersburg Electrotechnical University*); *Egor V. Shalymov* (*Saint Petersburg Electrotechnical University "LETI"*); *Ekaterina K. Yuryeva* (*Saint Petersburg State Electrotechnical University "LETI"*); *Vladimir Yu. Venediktov* (*Saint Petersburg State Electrotechnical University "LETI"*);

14:20 Diabolic and Exceptional Singularities in Scattering Ma-
Invited trices of Photonic Systems
Wenzhe Liu (*The Hong Kong University of Science and Technology*); *Jiangguang Chen* (*Fudan University*); *Lei Shi* (*Fudan University*); *Jian Zi* (*Fudan University*); *Che Ting Chan* (*The Hong Kong University of Science and Technology*);

14:40 Generic and Non-generic Bound States in the Continuum: Definitions and Properties
Nan Zhang (*City University of Hong Kong*); *Ya Yan Lu* (*City University of Hong Kong*);

14:55 Enhance the Quality Factors of Bound States in the Continuum in Entire Brillouin Zone
Guanjie Zhang (*Shanghai Jiao Tong University*); *Yifei Mao* (*Shanghai Jiao Tong University*);

15:30 **Coffee Break**

Session 3P16b
Nanophotonics and Topological Photonics 3

Wednesday PM, April 24, 2024

Room 16 - Mudan

Organized by Lin Chen, Cuicui Lu, Zhiwei Guo

Chaired by Cuicui Lu, Zhiwei Guo

16:00 Experimental Realization of a Three-dimensional Higher-order Photonic Topological Insulator
Ziyao Wang (*Southern University of Science and Technology*); *Zhen Gao* (*Southern University of Science and Technology*);

16:15 Realization of Topology-controlled Photonic Cavities in Valley Photonic Crystals
Bei Yan (*Southern University of Science and Technology*); *Zhen Gao* (*Southern University of Science and Technology*);

16:30 Photonic $\mathbb{Z}_2$ Topological Anderson Insulators
Xiaohan Cui (*The Hong Kong University of Science and Technology*); *Ruo-Yang Zhang* (*The Hong Kong University of Science and Technology*); *Xiao-Dong Chen* (*Sun Yat-Sen University*); *Che Ting Chan* (*The Hong Kong University of Science and Technology*);

16:45 Multiorbital Topological Waveguide Arrays
Invited
Shaolin Ke (*Wuhan Institute of Technology*); *Yang Liu* (*Wuhan Institute of Technology*); *Fengyi Zhang* (*Wuhan Institute of Technology*);

17:05 Band Structure Engineering and Its Impact on Light Behavior in Topological Photonic Lattices
Invited
Xinyuan Qi (*Northwest University*); *Junhao Yang* (*Northwest University*); *Yu Lin* (*Northwest University*); *Yixuan Fu* (*Northwest University*);

17:25 Spin-selective Light Manipulation Based on Chiral Artificial Nanostructures
Invited
Zhancheng Li (*Nankai University*); *Jiaqi Cheng* (*Nankai University*); *Shuqi Chen* (*Nankai University*);

17:45 Design of a Photonic Router via Sandwiched Valley-Hall Interface States
Invited
Jiayu Fan (*The Hong Kong University of Science and Technology (Guangzhou)*); *Xiaoxiao Wu* (*The Hong Kong University of Science and Technology (Guangzhou)*);

18:05 Magnetically Controllable Multimode Interference in Topological Photonic Crystals
Weiyuan Tang (*The University of Hong Kong*); *Mudi Wang* (*The Hong Kong University of Science and Technology*); *Shaojie Ma* (*The University of Hong Kong*); *Che Ting Chan* (*The Hong Kong University of Science and Technology*); *Shuang Zhang* (*The University of Hong Kong*);

Session 3P17
Phononic Crystals, Acoustic/Elastic Metamaterials and Metasurfaces 3

Wednesday PM, April 24, 2024

Room 17 - Furong

Organized by Fuyin Ma, Rui Zhu, Xue Jiang

Chaired by Fuyin Ma, Xue Jiang

13:00 Sound Insulation Properties of Truss-based Inertial Amplification Double-panel Acoustic Metamaterial
Yonghang Sun (*Shanghai Jiao Tong University*); *Jingjie Dong* (*Shanghai Jiao Tong University*); *Heow Pueh Lee* (*National University of Singapore*); *Hui Zheng* (*Shanghai Jiao Tong University*);

13:15 Specified-state Metasurfaces in OAM Beam Generation: An Inverse-design Approach
Chuanxin Zhang (*Fudan University*); *Xue Jiang* (*Fudan University*);

13:30 Acoustic Metamaterials for Sensing Application
Invited
Yabin Jin (*Tongji University*);

13:50 Acoustic Metasurface Design for Aeroacoustic Reduction
Invited
Jie Zhou (*Northwestern Polytechnical University*);

14:10 Multifunctional and Multi-frequency Acoustic Metasurface Based on Reconfigurable Slitted Round Tubes
Siyuan Peng (*East China University of Science and Technology*); *Ai Ling Song* (*East China University of Science and Technology*); *Yanxun Xiang* (*East China University of Science and Technology*);

14:25 Non-Hermitian Skin Effect in Acoustic Systems
Invited
Zhongming Gu (*Tongji University*); *Jie Zhu* (*Tongji University*);

14:45 Piezoelectric Metamaterials for Vibration Suppression and Energy Harvesting
Invited
Guobiao Hu (*Hong Kong University of Science and Technology*);

15:05 Thomson Scattering-induced Bandgap in Phononic Crystals
Invited
Jian Zhu (*Xi'an Jiaotong University*); *Wei Ding* (*Xi'an Jiaotong University*); *Rui Zhang* (*Xi'an Jiaotong University*); *Tian-Ning Chen* (*Xi'an Jiaotong University*);

15:30 **Coffee Break**

16:00 Far-field Subwavelength Ultrasound Imaging Using Metagrating Illumination through Obstacles
Liyang Lu (*Fudan University*); *Chuanxin Zhang* (*Fudan University*); *Xue Jiang* (*Fudan University*);

16:15 Reconfigurable Acoustic Metacage
Invited
Heow Pueh Lee (*National University of Singapore*); *Yung Boon Chong* (*National University of Singapore*); *Kian Meng Lim* (*National University of Singapore*);

16:35 Broadband Low-frequency Sound Attenuation by Composite Meta-liner under Grazing Flow
Hao Wang (*Northwestern Polytechnical University*); *Shuwei Ren* (*Northwestern Polytechnical University*); *Xiangyang Zeng* (*Northwestern Polytechnical University*); *Haitao Wang* (*Northwestern Polytechnical University*); *Ye Lei* (*Northwestern Polytechnical University*);

16:50 Invited Bio-inspired Design of 3D Horseshoe-shaped Soft Network Metamaterials
Dongjia Yan (*University of Science and Technology Beijing*); *Jinxuan Zhou* (*University of Science and Technology Beijing*); *Zheng-Yang Li* (*University of Science and Technology Beijing*); *Chuan-Zeng Zhang* (*University of Siegen*);

17:10 Invited Discrete Transformation Elasticity
Yangyang Chen (*The Hong Kong University of Science and Technology*);

17:30 Natural Tristability of a Confined Helical Filament with Anisotropic Bending Rigidities
Zicong Zhou (*Tamkang University*);

17:45 Broadening Absorption Bandwidth of Cavity-type Metamaterials by Acoustic Valve
Libo Wang (*Xihua University*);

Session 3P18a
Acoustic Topological Metamaterials 1

Wednesday PM, April 24, 2024

Room 18 - Meilan

Organized by Zhiwang Zhang, Hai-Xiao Wang, Jiuyang Lu

Chaired by Zhiwang Zhang, Hai-Xiao Wang

13:00 Invited Synergistic Acoustic Topological States in Periodic Structures
Zhen Huang (*Xi'an Jiaotong University*); *Fuyin Ma* (*Xi'an Jiaotong University*); *Jiu Hui Wu* (*Xi'an Jiaotong University*);

13:20 Hybrid-order and Variable-order Topological Insulators
Yating Yang (*Beijing University of Chemical Technology*); *Xueqin Huang* (*South China University of Technology*); *Jiuyang Lu* (*Wuhan University*); *Weiyin Deng* (*South China University of Technology*); *Zhengyou Liu* (*Wuhan University*);

13:35 Observation of Multiple Off-site Corner States Induced by Next-nearest-neighbor Coupling in a Sonic Crystal
Wei Xiong (*Nanjing University*); *Zhiwang Zhang* (*Nanjing University*); *Ying Cheng* (*Nanjing University*); *Xiao-Jun Liu* (*Nanjing University*);

13:50 Invited Customizable Second-order Phoxonic Topological Insulators via Inverse Design
Yafeng Chen (*The Hong Kong Polytechnic University*); *Zhongqing Su* (*The Hong Kong Polytechnic University*);

14:10 Invited Anti-Parity-Time Symmetry in a Su-Schrieffer-Heeger Sonic Lattice
Bolun Hu (*Jiangnan University*); *Zhiwang Zhang* (*Nanjing University*); *Ying Cheng* (*Nanjing University*); *Xiao-Jun Liu* (*Nanjing University*); *Johan Christensen* (*IMDEA Materials Institute*);

14:30 Observation of D-class Topology in an Acoustic Metamaterial
Shiqiao Wu (*Foshan University*);

14:45 Invited Orbital Higher-order Topological Acoustics
Feng Gao (*Huazhong University of Science and Technology*); *Yu-Gui Peng* (*Huazhong University of Science and Technology*); *Xue-Feng Zhu* (*Huazhong University of Science and Technology*);

15:05 A Frequency Selective Surface with Low Radar Cross Section Based on Flip Coding
Tiefu Li (*Air Force Engineering University*); *Chang Ding* (*Air Force Engineering University*); *Zuntian Chu* (*Air Force Engineering University*); *Ruichao Zhu* (*Air Force Engineering University*); *Jiafu Wang* (*Air Force Engineering University*); *Cun-Qian Feng* (*Air Force Engineering University*);

15:30 **Coffee Break**

Session 3P18b
Structured Light: From Classical to Quantum 2

Wednesday PM, April 24, 2024

Room 18 - Meilan

Organized by Zhi-Han Zhu, Carmelo Rosales-Guzmán

Chaired by Zhi-Han Zhu

16:00 Invited Characterization of Photon's OAM State
Yongnan Li (*Nankai University*);

16:20 Invited Free Modulation and Multidimensional Trapping of Vortex Beams
Xinzhong Li (*Henan University of Science and Technology*);

16:40 Invited High-dimensional Nonseparable States of Light
Yijie Shen (*Nanyang Technological University*);

17:00 Invited Spatiotemporal Hologram
Qian Cao (*University of Shanghai for Science and Technology*); *Qiwen Zhan* (*University of Shanghai for Science and Technology*);

17:20 Tight Focusing of Vector Beams without Longitudinal Component of the Electric Field
Sergey S. Stafeev (*Image Processing Systems Institute — Branch of the Federal Scientific Research Centre "Crystallography and Photonics" of RAS*); *Victor V. Kotlyar* (*Image Processing Systems Institute — Branch of the Federal Scientific Research Centre "Crystallography and Photonics" of RAS*);

17:35 Properties of Vortex Beams with a Squared Laguerre Polynomial
Elena Sergeevna Kozlova (*Image Processing Systems Institute of the Russian Academy of Sciences*); *A. A. Kovalev* (*Image Processing Systems Institute of the Russian Academy of Sciences*); *Alexandra A. Savelyeva* (*Image Processing Systems Institute of the Russian Academy of Sciences*); *Victor V. Kotlyar* (*IPSI RAS — Branch of the FSRC "Crystallography and Photonics" RAS*);

17:50 Generation of Laguerre-Gaussian Petal-like Beams from an Optical Vortex Parametric Oscillator
Yuxia Zhou (*Xinjiang Normal University*); *Palidan Aierken* (*Xinjiang Normal University*); *Jianqiang Ye* (*Xinjiang Normal University*); *Ying Wan* (*Nanjing University of Information Science & Technology*); *Jianxiang Wen* (*Shanghai University*); *Taximaiti Yusufu* (*Xinjiang Normal University*);

Session 3P19
Poster Session 6

Wednesday PM, April 24, 2024
14:00 PM - 18:00 PM
Room Exhibition Area

1 Characterization of Polarized SAR Scattering of Breaking Waves Caused by Internal Solitary Waves
Hao Zhang (*First Institute of Oceanography, Ministry of Natural Resources*); *Junmin Meng* (*First Institute of Oceanography, Ministry of Natural Resources*);

2 Broadband Radar Cross-Section Reduction Based on Polarization Conversion Metasurface
Jiawei Zhang (*University of Electronic Science and Technology of China*); *Shaojun Guo* (*National Institute of Defense Technology Innovation, Academy of Military Sciences PLA China*); *Chao Zhang* (*University of Electronic Science and Technology of China*); *Yan-Wen Zhao* (*National Institute of Defense Technology Innovation, Academy of Military Sciences PLA China*); *Tongsheng Shen* (*National Institute of Defense Technology Innovation, Academy of Military Sciences PLA China*);

3 Wideband Class-D Radio Frequency Power Amplifier Based on Novel Bootstrap Driver
Zhihui Luo (*Hangzhou Dianzi University*); *Xinyu Zhou* (*The Hong Kong Polytechnic University*); *Shichang Chen* (*Hangzhou Dianzi University*);

4 Prediction of Ionospheric F2 Layer Heights Obtained from HFSWR during Typhoons Utilizing GA-BP Neural Network Model
Xuekun Chen (*Harbin Institute of Technology at Weihai*); *Hongjuan Yang* (*Harbin Institute of Technology at Weihai*); *Jinze Gao* (*Harbin Institute of Technology at Weihai*); *Chang Jun Yu* (*Harbin Institute of Technology at Weihai*);

5 Analysis of Electromagnetic Scattering Properties of Hypersonic Turbulence
Zheng Bian (*Xi'an Electronic Engineering Research Institute*); *Xiaoyu Ma* (*Xi'an Electronic Engineering Research Institute*); *Kunmei Li* (*Xi'an Electronic Engineering Research Institute*); *Zhiwei Wang* (*Xi'an Electronic Engineering Research Institute*); *Kaige Wen* (*Xi'an Electronic Engineering Research Institute*); *Wei Xu* (*Xi'an Electronic Engineering Research Institute*);

6 Uncertainty of Radar Backscattering Coefficients from Bare Soil Surface Due to Roughness Sample Variances
Zhihua Wang (*Guilin University of Technology*); *Ying Yang* (*Nanjing University of Science and Technology*); *Kun-Shan Chen* (*Nanjing University*);

7 Optimizing Ultra-wideband Antennas Through Finite Element Numerical Simulations and Complex Material Integration
M. H. Zhao (*University of Electronic Science and Tech of China*); *Li Xu* (*University of Electronic Science and Technology of China*); *Hao Wang* (*University of Electronic Science and Tech of China*); *B. Q. Liu* (*University of Electronic Science and Tech of China*); *H. X. Liu* (*University of Electronic Science and Tech of China*);

8 A Low Power Oscillator with Temperature Compensation
Huchao Li (*Southwest Jiaotong University*); *Xiaoyan Wei* (*Southwest Jiaotong University*); *Quanyuan Feng* (*Southwest Jiaotong University*);

9 Simulations of Carbon Nano Tubes ***CNT*** Uses for Environment Protection from Heavy Metals and Toxics
Diyar Bajalan (*TU Wien*);

10 Research of Transmission Characteristics of Two-dimensional Photonic Crystal Resonant Cavity
Xue Zhou (*Dalian Maritime University*); *Shuo Bao* (*Southeast University*); *Zhixia Xu* (*Dalian Maritime University*);

11 Millimeter Wave Dual-function Low-side-lobe Multi-beam Reflectarray Antenna Based on Genetic Algorithm
Liu Luo (*Chongqing University of Posts and Telecommunications*); *Wei Luo* (*Chongqing University of Posts and Telecommunications*); *Meilin Liu* (*Chongqing Institute of Digital Arena*);

12 An Efficient Antenna Optimization Method Based on a Parameter Dimensionality Reduction Approach
Jiangling Dou (*Kunming University of Science and Technology*); *Chenyang Zhao* (*Kunming University of Science and Technology*); *Jian Song* (*Kunming University of Science and Technology*); *Qingwang Wang* (*Kunming University of Science and Technology*); *Tao Shen* (*Kunming University of Science and Technology*);

13 An X-band Fabry-Perot Cavity Antenna with Broadband and High-gain
Shuai Meng (*Hefei University of Technology*); *Zhaoneng Jiang* (*Hefei University of Technology*); *Hui Liang* (*Hefei University of Technology*); *Cheng Peng* (*Hefei University of Technology*); *Weixing Gao* (*Hefei University of Technology*);

14 Dual Circularly Polarized Hybrid Dielectric Resonant Antenna Based on Cross Slot Feeding
Guizhi Tian (*Hunan University*); *Hongbo Chu* (*Hunan University*); *Huanhuan Peng* (*Hunan University*); *Gaosheng Li* (*Hunan University*);

15 The Influence of Wheat Vegetation Cover on the Attenuation of Sensing UWB Impulse in MHz Frequency Range
Konstantin Victorovich Muzalevskiy (*Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences*);

16 Reducing Hysteresis in Perovskite Light-emitting Diodes
Xiaokang Fu (*Zhejiang University*); *Shengnan Liu* (*Zhejiang University*); *Puyang Li* (*Zhejiang University*); *Zhixiang Ren* (*Zhejiang University*); *Ke Zhou* (*Zhejiang University*); *Baodan Zhao* (*Zhejiang University*); *Dawei Di* (*Zhejiang University*);

17 Equivalent Circuit of 3D Printed SIW Bandpass Filter Loaded by Artificial Dielectric Material
Muhammad Farhan Maulana (*Institut Teknologi Bandung*); *Hartuti Mistialustina* (*Institut Teknologi Bandung*); *Zulfi* (*Institut Teknologi Bandung*); *Achmad Munir* (*Bandung Institute of Technology*);

18 A Survey and Practical Application of SLAM Algorithms
Roberts Beņķis (*Riga Technical Universit*); *Elans Grabs* (*Riga Technical University*); *Tianhua Chen* (*Riga Technical University*); *Artjoms Ratkuns* (*Riga Technical Universit*); *Dmitrijs Čulkovs* (*Riga Technical University*); *Arnis Ancans* (*Riga Technical University*); *Aleksandrs Ipatovs* (*Riga Technical University*);

19 Enhancement of Thermal Radiation via the Hybridation of Surface Phonon-polaritons and Guided Modes
Coral Maelie (*The University of Tokyo*); *Jose Ordonez-Miranda* (*The University of Tokyo*); *Yannick De Wilde* (*Institut Langevin*); *Laurent Jalabert* (*The University of Tokyo*); *Masahiro Nomura* (*The University of Tokyo*); *Sebastian Volz* (*Centre National de la Recherche Scientifique*);

20 Design of Multi-beam Anti-sorting Waveform for MIMO Radar Based on Spatial Angle Encoding
Xinan Zheng (*National University of Defense Technology*); *Jian Chen* (*National University of Defense Technology*); *Qinglong Bao* (*National University of Defense Technology*); *Jiameng Pan* (*National University of Defense Technology*); *Ziqiao Yuan* (*Xi'an Electronic Engineering Research Institute*);

21 Electron Guns for Highly Efficient Electron-Cyclotron Energy Converters
G. G. Denisov (*Institute of Applied Physics, Russian Academy of Sciences*); *Mikhail Yu. Glyavin* (*Institute of Applied Physics RAS*); *Vladimir N. Manuilov* (*Institute of Applied Physics RAS*); *I. V. Zotova* (*Institute of Applied Physics RAS*); *Ilya V. Zheleznov* (*Institute of Applied Physics, RAS*);

22 Fluoride Interfaces Enhance the Performance of Perovskite Light-emitting Diodes
Yucai Yuan (*Zhejiang University*); *Shiyu Xing* (*Zhejiang University*); *Gan Zhang* (*Zhejiang University*); *Shiang Zhang* (*Zhejiang University*); *Yaxiao Lian* (*Zhejiang University*); *Weidong Tang* (*Zhejiang University*); *Ke Zhou* (*Zhejiang University*); *Zhixiang Ren* (*Zhejiang University*); *Guoling Zhang* (*Zhejiang University*); *Baodan Zhao* (*Zhejiang University*); *Dawei Di* (*Zhejiang University*);

23 Test and Analysis of Electromagnetic Susceptibility of SPST Analog Switch
Wenxuan Huang (*Beihang University*); *Bing Li* (*Beihang University*); *Mengyuan Wei* (*Beihang University*); *Peng Huang* (*Beihang University*); *Xiaozong Huang* (*The 24th Research Institute of China Electronics Technology Group Corporation*); *Shuling Zhou* (*The 24th Research Institute of China Electronics Technology Group Corporation*); *Xiaokang Wen* (*The 24th Research Institute of China Electronics Technology Group Corporation*);

24 Nonadiabatic Effects in the Electron-optical System of a Relativistic Millimeter-wave Gyrotron
Alexander Nikolaevich Leontyev (*Institute of Applied Physics of the Russian Academy of Sciences*); *Vladislav Evgen'evich Nechaev* (*Institute of Applied Physics of the Russian Academy of Sciences*); *Oleg Petrovich Plankin* (*Institute of Applied Physics of the RAS*); *Evgeny Sergeevich Semenov* (*Institute of Applied Physics of the Russian Academy of Sciences*); *Roman Markovich Rozental* (*Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)*);

25 Quasi-bound States in the Continuum Lasing in High Order Surface Grating Edge-emitting Laser
Yingqiu Dai (*Institute of Semiconductors, CAS*); *Xin Qi* (*Tongji University*); *Yufei Wang* (*Institute of Semiconductors, CAS*); *Ting Fu* (*Institute of Semiconductors, CAS*); *Jingxuan Chen* (*Institute of Semiconductors, CAS*); *Ziyuan Liao* (*Institute of Semiconductors, CAS*); *Haiyang Ji* (*Institute of Semiconductors, CAS*); *Yang Chen* (*Institute of Semiconductors, CAS*); *Yong Sun* (*Tongji University*); *Wanhua Zheng* (*Institute of Semiconductors, CAS*);

26 Atmospheric Numerical Prediction Based on Graph Convolution, Waveguide Discrimination, and Electromagnetic Transmission
Yuxuan Wang (*Xidian University*); *Jiangting Li* (*Xidian University*); *Tong Xu* (*China Institute of Radio Wave Propagation*); *Yan Zheng* (*Xidian University*); *Zhangyi Li* (*Xidian University*);

27 Drone Cooperation, NAT Traversal and Performance
Dmitrijs Rjazanovs (*Riga Technical University*); *Elans Grabs* (*Riga Technical University*); *Ernests Pētersons* (*Riga Technical University*); *Daniils Aleksandrovs-Moisejs* (*Riga Technical University*); *Tianhua Chen* (*Riga Technical University*); *Dmitrijs Čulkovs* (*Riga Technical University*); *Māris Aleksandrovs* (*Riga Technical University*); *Aleksandrs Ipatovs* (*Riga Technical University*);

28 Antenna Element Design for Emitting UWB Signals
Polina Mikhailovna Nikitina (*National Research University "Moscow Power Engineering Institute"*); *A. M. Ignatov* (*National Research University "Moscow Power Engineering Institute"*); *V. V. Trubetskoy* (*Moscow Technical University of Communications and Informatics (MTUCI)*); *S. A. Serov* (*National Research University "Moscow Power Engineering Institute"*); *Mikhail Sergeyevich Mikhailov* (*National Research University "Moscow Power Engineering Institute"*);

29 Design of a Circular Polarized Filter-antenna
Mikhail Sergeyevich Mikhailov (*National Research University "Moscow Power Engineering Institute"*); *Feras Habib Rammah* (*National Research University "Moscow Power Engineering Institute"*); *A. A. Komarov* (*National Research University "Moscow Power Engineering Institute"*);

30 A Design of Wireless Sensor Network with Ultra-low Power for Air Quality Detection
Peng Cheng Kong (*Shanghai Institute of Technology*); *Lan Chen* (*Shanghai Institute of Technology*); *Dan Ni Lin* (*Tongji University*); *Mei Song Tong* (*Tongji University*);

31 Optical Super-resolution Imaging under Different Fluorescence Temporal Fluctuations
Zhiping Zeng (*Fuzhou University*); *Jin Qiu* (*Fuzhou University*); *Biqing Xu* (*Fuzhou University*); *Xinyi Chen* (*Fuzhou University*);

32 Reuse of Electromagnetic Band Gap Structures and Antennas
Hui Zhong (*Guangdong University of Technology*);

33 A Novel Switchable Absorber/Reflector Based on Diode-embedded Square-loop Array
Jiwen Sun (*Huaiyin Normal University*); *Qing-Bo Li* (*Huaiyin Normal University*); *Lin Zhu* (*Nanjing University of Aeronautics and Astronautics*); *Qunsheng Cao* (*Nanjing University of Aeronautics and Astronautics*);

34 Numerical Simulation and Analysis of Microwave Backscattering Characteristics from Sea Surface with Breaking Waves and Foam
Pengbo Du (*Ocean University of China*); *Yunhua Wang* (*Ocean University of China*); *Yushi Zhang* (*Ocean University of China*); *Xin Li* (*National Key Laboratory of Electromagnetic Environment of China Research Institute of Radio Wave Propagation*); *Jinpeng Zhang* (*National Key Laboratory of Electromagnetic Environment*); *Chunzhi Hou* (*National Key Laboratory of Electromagnetic Environment*);

35 Characterization of Slotted Microstrip Patch Array Antenna for UAV Communication System
Achmad Munir (*Bandung Institute of Technology*); *Novelita Rahayu* (*National Research and Innovation Agency (BRIN)*); *Radial Anwar* (*Telkom University*); *Dwi Andi Nurmantris* (*Telkom University*); *Muhamad Hilman Fauzi* (*Universitas Pendidikan Indonesia*); *Farohaji Kurniawan* (*National Research and Innovation Agency*);

36 Energy Dissipation of Superthermal Electrons in the Ionosphere
Nurken E. Aktaev (*Harbin Institute of Technology*); *Anatoly A. Kudryavtsev* (*Harbin Institute of Technology*); *Mohamed M. Mandour* (*Harbin Institute of Technology*); *Aziza Kaliyeva* (*L. N. Gumilyov Eurasian National University*); *Chengxun Yuan* (*Harbin Institute of Technology*);

37 Bound States at Disclinations: An Additive Rule of Real and Reciprocal Space Topology
Qinghua He (*Ningbo University*); *Feng Liu* (*Ningbo University*);

38 A Hybrid Excitation Method of Finite-gap Port Model and Plane Wave in SIE for Electromagnetic Problems
Qiangming Cai (*Southwest University of Science and Technology*); *Zi-Qiang Wu* (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Haoran Li* (*Southwest University of Science and Technology*); *Zhen-Yong Du* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yixiang Li* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yuyu Zhu* (*Southwest University of Science and Technology*); *Yu-Teng Zheng* (*DeTooLIC Technology Co., Ltd*); *Bo Pu* (*DeTooLIC Technology Co., Ltd*); *Jun Fan* (*Southwest University of Science and Technology*);

39 Evaluation of FY3G Brightness Temperature Using Microwave Radiation Transfer Model
Ruanyu Zhang (*Shanghai Spaceflight Institute of TT&C and Telecommunication*); *Xiaodong Zhang* (*Shanghai Spaceflight Institute of TT&C and Telecommunication*); *Fangli Dou* (*National Satellite Meteorological Center (National Centre for Space Weather)*); *Enchen Li* (*Shanghai Spaceflight Institute of TT&C and Telecommunication*); *Xue Li* (*Shanghai Spaceflight Institute of TT&C and Telecommunication*);

40 Reconfigurable Microwave Signal Processor Based on Branch-Line Coupler and Loop Resonator
Junzai Chen (*Tongji University*); *Xiaoyi Wang* (*Tongji University*);

41 Lens-loaded Technique in Monopulse Goniometry
Siyu Qi (*Space Engineering University*); *Guoting Zhang* (*Beijing Institute of Tracking and Telecommunication Technology*); *Hong Ma* (*Space Engineering University*); *Yang Cai* (*Space Engineering University*); *Yufan Cao* (*Space Engineering University*); *Tao Wu* (*Space Engineering University*);

42 A Two-dimensional Joint Estimation Method Based on Deep Unfolding Iterative Adaptive Algorithm
Xiao Sun (*National University of Defense Technology*); *Panhe Hu* (*National University of Defense Technology*); *Zhiliang Pan* (*National University of Defense Technology*); *Xiaolong Su* (*National University of Defense Technology*); *Wei Yang* (*National University of Defense Technology*);

43 L/C Dual Band Vertical Polarized Shared-aperture Antenna
Hailing Zhao (*Southwest University of Science and Technology*); *Chao Zou* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Haoran Li* (*Southwest University of Science and Technology*); *Zhen-Yong Du* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yixiang Li* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yuyu Zhu* (*Southwest University of Science and Technology*); *Yu-Teng Zheng* (*DeTooLIC Technology Co., Ltd.*); *Bo Pu* (*DeTooLIC Technology Co., Ltd.*); *Jun Fan* (*Southwest University of Science and Technology*);

44 On-chip Spectrometer with a Microring Resonator and a Lattice Filter
Shiqi Zhang (*Beijing University of Posts and Telecommunication*); *Tongxin Yang* (*Beijing University of Posts and Telecommunications*); *Xiuli Fu* (*Beijing University of Posts and Telecommunications*); *Lei Zhang* (*Beijing University of Posts and Telecommunications*);

45 TV-Driven MMW 3-D Radar Imaging of Non-line-of-sight Environments
Xiang Cai (*University of Electronic Science and Technology of China*); *Shun-Jun Wei* (*University of Electronic Science and Technology of China*); *Yanbo Wen* (*University of Electronic Science and Technology of China*); *Jiangbo Hu* (*University of Electronic Science and Technology of China*); *Mou Wang* (*University of Electronic Science and Technology of China*); *Jun Shi* (*University of Electronic Science and Technology of China*); *Xiaoling Zhang* (*University of Electronic Science and Technology of China*);

46 Dual-band Electromagnetically Induced Transparency-like on All-dielectric Metamaterials
Renxia Ning (*Nanjing University of Aeronautics and Astronautics*); *Yanfei Zhang* (*Nanjing University of Aeronautics and Astronautics*); *Shaobin Liu* (*Nanjing University of Aeronautics and Astronautics*);

47 Evaluation of the Number of Nanogold Layers Onto Optical Fiber Tapers for Glucose Detection
Mariam Nasser (*Khalifa University*); *Manal Alhammadi* (*Khalifa University*); *Meera Alhosani* (*Khalifa University*); *Sagar Arya* (*Khalifa University*); *Jaime Viegas* (*Khalifa University*); *Anna Maria Pappa* (*Khalifa University*); *M. Fatima Domingues* (*Khalifa University*);

48 A Ray Model of Radio Wave Propagation in Tropospheric Waveguides
Andrey Alexeevich Pimenov (*National Research University "Moscow Power Engineering Institute"*); *A. S. Filimonov* (*National Research University "Moscow Power Engineering Institute"*); *A. A. Novikov* (*National Research University "Moscow Power Engineering Institute"*); *Kirill Sergeyevich Sychev* (*National Research University "Moscow Power Engineering Institute"*); *Alexandr Alexandrovich Gladchenko* (*National Research University "Moscow Power Engineering Institute"*); *Mikhail Sergeyevich Mikhailov* (*National Research University "Moscow Power Engineering Institute"*);

49 Tight Focusing of Optical Vortices with Hybrid Polarization
Vladislav D. Zaitsev (*Samara National Research University*); *Sergey S. Stafeev* (*Image Processing Systems Institute — Branch of the Federal Scientific Research Centre "Crystallography and Photonics" of RAS*); *Victor V. Kotlyar* (*Image Processing Systems Institute — Branch of the Federal Scientific Research Centre "Crystallography and Photonics" of RAS*);

50 Aperture Miniaturized Magneto-electric Dipole with Dual Linearly Polarization for 28/38 GHz Millimeter-wave Applications
Yanhong Xu (*Xi'an University of Science and Technology*); *Wanshan Hu* (*Xi'an University of Science and Technology*); *Zheng Wang* (*Xi'an University of Science and Technology*); *Haoxiang Li* (*Xi'an University of Science and Technology*);

51 A High-gain Antipodal Vivaldi Antenna Loaded with Metamaterial and Semi-trapezoidal Slots
Jiayuan Hu (*Southwest University of Science and Technology*); *Zuxue Xia* (*Southwest University of Science and Technology*); *Wenhai Xia* (*Zhejiang Lierda Internet of Things Technology Co. Ltd.*); *Xin Cao* (*Southwest University of Science and Technology*); *Xin Xiong* (*Southwest University of Science and Technology*); *Rui Cheng* (*Southwest University of Science and Technology*); *Haoxin Luo* (*Southwest University of Science and Technology*);

52 Intelligent Traffic Routing Algorithm for Wireless Sensor Networks
Jurijs Titovičs (*Riga Technical University*); *Romualds Beļinskis* (*Riga Technical University*); *Nikolajs Bogdanovs* (*Riga Technical University*); *Sandis Spolitis* (*Riga Technical University*); *Elans Grabs* (*Riga Technical University*); *Tianhua Chen* (*Riga Technical University*); *Aleksandrs Ipatovs* (*Riga Technical University*);

53 Polarization-insensitive $\mathbf{1 \times 2}$ Multi-mode Interference Coupler on SOI
Liuwei Chen (*Beijing University of Posts and Telecommunications*); *Enge Zhang* (*Beijing University of Posts and Telecommunications*); *Lei Zhang* (*Beijing University of Posts and Telecommunications*);

54 Extremely Low Power Consumption Ultraviolet Sensor Design for Low Light Signal Processing Demodulation with Photomultiplier Tube
Tianzheng Ren (*Beijing University of Posts and Telecommunications*); *Dahai Han* (*Beijing University of Posts and Telecommunications*); *Min Zhang* (*Beijing University of Posts and Telecommunications*); *Tongtong Wan* (*Beijing University of Posts and Telecommunications*); *Qibin Xu* (*Beijing University of Posts and Telecommunications*);

55 Spectrum Situational Awareness Model Based on Wave Propagation Loss Characteristics and Distributed Electromagnetic Spectrum Detection Method
Geyu Hou (*Hainan University*); *Zhenjia Chen* (*Hainan University*); *Ran Chen* (*Hainan University*);

56 WiFi Testing and Analysis Based on Interference Scenarios
Kai Zhao (*China Electronic Product Reliability and Environmental Testing Institute*); *Huawei Xu* (*China Electronic Product Reliability and Environmental Testing Institute*); *Linyi Huang* (*China Electronic Product Reliability and Environmental Testing Institute*); *Binhui Liu* (*The 5th Electronic Research Institute, Ministry of Industry and Information Technology*);

57 Reference Frame Independent Quantum Key Distribution
Shihai Sun (*Sun Yat-Sen University*);

58 Kalman Filter for Temperature Estimation in Fiber System
Yinong Zhao (*Hangzhou Dianzi University*); *Jia Kong* (*Hangzhou Dianzi University*);

59 Expert System Research for Electromagnetic Simulation Algorithm Recommendation
Jiaxin Shi (*Harbin Institute of Technology at Weihai*); *Jun Hu* (*University of Electronic Science and Technology of China*); *Huapeng Zhao* (*University of Electronic Science and Technology of China*); *Ran Zhao* (*University of Electronic Science and Technology of China*); *Ming Zhang* (*Harbin Institute of Technology at Weihai*); *Lizhong Song* (*Harbin Institute of Technology*);

60 $\mathbf{Te_xSe_{1-x}}$ Photodiode Shortwave Infrared Detection and Imaging
Sen Li (*Huazhong University of Science and Technology*); *Chao Chen* (*Huazhong University of Science and Technology*);

61 Soliton Microcombs in the High-Q Lithium Niobate Microresonators
Pi-Yu Wang (*University of Science and Technology of China*); *Shuai Wan* (*University of Science and Technology of China*); *Rui Ma* (*Nankai University*); *Fang Bo* (*Nankai University*); *Guang-Can Guo* (*University of Electronic Science and Technology of China*); *Chun-Hua Dong* (*University of Science and Technology of China*);

62 Excitation of Terahertz Plasmonic Waves in Double-layer Convective 2DEG Structures
Shengpeng Yang (*University of Electronic Science and Technology of China*); *Yubin Gong* (*University of Electronic Science and Technology of China*);

63 Enhanced Transmission Efficiency in Inductively Coupled Wireless Power Transfer Using Deep Adaptive Impedance Matching
Xu Xu (*Chengdu University of Information and Technology*); *Ruoyue Wei* (*Chengdu University of Information Technology*); *Yucheng Yao* (*Chengdu University of Information Technology*); *Junqing Lan* (*Chengdu University of Information Technology*);

64 Wavefront Shaping Based on Coordinate Transformation
Dingran Xia (*Shenzhen University*); *Kedi Wu* (*Shenzhen University*); *Guo Ping Wang* (*Shenzhen University*);

65 Cascade Enhancement of Magnetic Dipole Emission and Efficient Collection of Photons by the Hybrid Topological Structure
Yali Jia (*Peking University*); *Zhaohua Tian* (*Peking University*); *Qi Liu* (*Peking University*); *Zihan Mo* (*Peking University*); *Qihuang Gong* (*Peking University*); *Ying Gu* (*Peking University*);

66 Noise Analysis of Quantum Correlation Imaging Based on Fourier Wavefront Coding
Xiangguo Xiao (*Xi'an Institute of Applied Optics*); *Ruichang Li* (*Xi'an Institute of Applied Optics*); *Jing Gao* (*Xi'an Institute of Applied Optics*); *Hua Qiang* (*Xi'an Institute of Applied Optics*); *Jiaheng Li* (*Xi'an Institute of Applied Optics*);

67 Theoretical and Experimental Studies of Eigenmodes of Surface-wave Bragg Resonators
Andrey M. Malkin (*Institute of Applied Physics, Russian Academy of Sciences*); *Vladislav Yur'evich Zaslavsky* (*Institute of Applied Physics, Russian Academy of Sciences*); *Naum S. Ginzburg* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Mikhail D. Proyavin* (*Institute of Applied Physics, Russian Academy of Sciences*); *Dmitry I. Sobolev* (*Institute of Applied Physics, Russian Academy of Sciences*); *Ilya V. Zheleznov* (*Institute of Applied Physics, RAS*); *A. A. Orlovsky* (*Institute of Applied Physics, Russian Academy of Sciences*); *Alexander S. Sergeev* (*Institute of Applied Physics, Russian Academy of Sciences*);

68 Dynamic Strong Light-matter Interaction Tailored by 3D Bound State in Continuum Metasurface for $\boldsymbol{Q}$-switched Nanophotonic Biosensor
Jiacheng Sun (*Westlake University*); *Liaoyong Wen* (*Westlake University*);

Session 4A1
Quantum Entanglement and Its Applications 1

Thursday AM, April 25, 2024

Room 1 - Yarui

Organized by Yu Xiang, Meihong Wang, Xiaolong Su

Chaired by Yu Xiang, Meihong Wang

8:00 Inseparability of Triple-photon States
Invited
Da Zhang (*Shanxi Normal University*);

8:20 Nonreciprocity and Non-Hermitian Skin Effect Induced
Invited by Losses
Xinyao Huang (*Beihang University*); *Yong-Chun Liu* (*Tsinghua University*);

8:40 Faithful Geometric Measures for Genuine Tripartite En-
Invited tanglement
Xiaozhen Ge (*Tongji University*); *Yong Wang* (*Tongji University*); *Yu Xiang* (*Tongji University*); *Guofeng Zhang* (*The Hong Kong Polytechnic University*); *Lijun Liu* (*Shanxi Normal University*); *Li Li* (*Tongji University*); *Shuming Cheng* (*Tongji University*);

9:00 Quantum-enhanced Metrology Using 100-photon Fock
Invited States
Xiaowei Deng (*Southern University of Science and Technology*); *Sai Li* (*Southern University of Science and Technology*); *Zi-Jie Chen* (*Southern University of Science and Technology*); *Zhongchu Ni* (*Southern University of Science and Technology*); *Yanyan Cai* (*Southern University of Science and Technology*); *Jiasheng Mai* (*Southern University of Science and Technology*); *Libo Zhang* (*Southern University of Science and Technology*); *Pan Zheng* (*Southern University of Science and Technology*); *Haifeng Yu* (*Southern University of Science and Technology*); *Chang-Ling Zou* (*Southern University of Science and Technology*); *Song Liu* (*Southern University of Science and Technology*); *Fei Yan* (*Southern University of Science and Technology*); *Yuan Xu* (*Southern University of Science and Technology*); *Dapeng Yu* (*Southern University of Science and Technology*);

9:20 Characteristic Mode-based Quantization of Electromag-
Invited netic Scattering
Ilay Levie (*Tel Aviv University*); *Gregory Slepyan* (*Tel Aviv University*); *Amir Boag* (*Tel Aviv University*);

9:40 Detecting Bell Correlations in Multipartite Non-Gaussian Spin States
Jiajie Guo (*Peking University*); *Jordi Tura* (⟨aQa^L⟩ *Applied Quantum Algorithms Leiden*); *Qiong Yi He* (*Peking University*); *Matteo Fadel* (*ETH Zürich*);

9:55 Preparation of Hybrid Entangled State Carrying Orbital Angular Momentum
Fengyi Xu (*Shanxi University*); *Shujing Li* (*Shanxi University*); *Chenyu Qiao* (*Shanxi University*); *Rong Ma* (*Shanxi University*); *Meihong Wang* (*Shanxi University*); *Xiaolong Su* (*Shanxi University*);

10:10 **Coffee Break**

10:30 All-optical Quantum Information Protocols Based on
Invited Four-wave Mixing Process
Shengshuai Liu (*East China Normal University*);

10:50 Quantum Control and Quantum Precision Measurement
Invited of Silicon Carbide Color Centers
Junfeng Wang (*Sichuan University*);

11:10 Distillation of Quantum Resources: Steering, Coherence
Invited and Entanglement
He Lu (*Shandong University*);

11:30 Resource Theory of Imaginarity: New Distributed Scenarios
Kang-Da Wu (*University of Science and Technology of China, CAS*); *Tulja Varun Kondra* (*University of Warsaw*); *Carlo Maria Scandolo* (*University of Calgary*); *Swapan Rana* (*Indian Statistical Institute*); *Guo-Yong Xiang* (*University of Science and Technology of China, CAS*); *Chuan-Feng Li* (*University of Science and Technology of China, CAS*); *Guang-Can Guo* (*University of Science and Technology of China*); *Alexander Streltsov* (*University of Warsaw*);

11:45 Continuous-variable Quantum Dense Coding in the Fiber Channel
Siyu Ren (*Shanxi University*); *Yanru Yan* (*Shanxi University*); *Xiaolong Su* (*Shanxi University*);

Session 4A2a
Advances in Modeling and Measurement Techniques for Electromagnetic Safety Assessment and Biomedical Applications

Thursday AM, April 25, 2024

Room 2 - Jincheng 3

Organized by Yinliang Diao, Junqing Lan

Chaired by Yinliang Diao, Kun Li

8:00 An Evaluation of Field Uniformity for a Novel Wireless Transmission System for Implantable Medical Devices
Ruoyue Wei (*Chengdu University of Information Technology*); *Xu Xu* (*Chengdu University of Information Technology*); *Yucheng Yao* (*Chengdu University of Information Technology*); *Junqing Lan* (*Chengdu University of Information Technology*);

8:15 A Statistical Analysis for Predicting Human Skin Exposure Level in Millimeter Wave Wireless Systems
Kun Li (*The University of Electro-Communications*);

8:30 A New Coil Design to Achieve Deep Penetration for Transcranial MagneticStimulation
Li Liu (*South China Agricultural University*); *Yinliang Diao* (*South China Agricultural University*);

8:45 A Rapid Evaluation Model for Mobile Phone Antenna Performance
Hui Zhao (*China Academy of Information and Communications Technology*); *Congsheng Li* (*China Academy of Information and Communications Technology*);

9:00 Fast Estimation of Specific Absorption Rate Based on Biplane Phase-free Measurements
Ruijie Xiao (*Northwestern Polytechnical University*); *Miao Cao* (*Northwestern Polytechnical University*); *Zhan Wang* (*Zhejiang Energy Digital Technology Co., Ltd.*); *Zicheng Liu* (*Northwestern Polytechnical University*);

9:15 Assessment of Induced Electric Field Using Adaptively Sampled Magnetic Fields
Zexin Chen (*South China Agricultural University*); *Yinliang Diao* (*South China Agricultural University*);

9:30 Assessment of the Incident Power Density Using Amplitude-only Planar Near-field Measurement at Millimeter Wave band
Wei Liao (*Chengdu University of Information Technology*);

10:00 **Coffee Break**

Session 4A2b
RF and Microwave Metamaterials for Wireless Communications 1

Thursday AM, April 25, 2024

Room 2 - Jincheng 3

Organized by Xiaojun Huang, He-Lin Yang

Chaired by Xiaojun Huang

11:00 Manipulation of Orbital Angular Momentum Energy by Huygens' Metasurfaces with Donut-shaped Phase Distribution
Xiaojun Huang (*Xi'an University of Science and Technology*);

11:15 A Novel Reconfigurable Polarization Conversion Metasurface Based on Water Structure
Fan Ding (*The China Ship Development and Design Center*); *Qing Xu* (*The China Ship Development and Design Center*); *Yang Fu* (*Central China Normal University*); *Houyuan Cheng* (*Central China Normal University*); *He-Lin Yang* (*Huazhong Normal University*);

11:30 W-band High-gain Circularly Polarized Lens
Yueming Lei (*University of Electronic Science and Technology of China (UESTC)*); *Bingyang Liang* (*University of Electronic Science and Technology of China (UESTC)*); *Zhanliang Wang* (*University of Electronic Science and Technology of China (UESTC)*); *Yubing Gong* (*University of Electronic Science and Technology of China*);

Session 4A3
Physics and Applications in Photonic/Acoustic Micro-/Nano-Structures 2

Thursday AM, April 25, 2024

Room 3 - Jincheng 2

Organized by Ying Chen, Feng Wu, Hongwei Wang

Chaired by Ying Chen, Feng Wu

8:00 Invited Robust and Broadband On-chip Mode Multiplexing Based on Thouless Pumping Mechanism
Lu Sun (*Shanghai Jiao Tong University*); *Yingdi Pan* (*Shanghai Jiao Tong University*); *Yikai Su* (*Shanghai Jiao Tong University*);

8:20 Invited Polarization-independent Near-infrared Super Absorption in Transition-metal-dichalcogenide Huygens' Metasurfaces by Degenerate Critical Coupling
Hongju Li (*Hefei University of Technology*); *Gangao Wei* (*Hefei University of Technology*); *Hongmiao Zhou* (*Hefei University of Technology*); *Haixiao Xiao* (*Hefei University of Technology*); *Meng Qin* (*Hefei University of Technology*); *Shengxuan Xia* (*Hunan University*); *Feng Wu* (*Guangdong Polytechnic Normal University*);

8:40 Loss Reduction for High-Q Plasmonic Optical Sensing in the Near-infrared Wavelength
Zi-Ming Meng (*Guangdong University of Technology*); *Han-Lei Xu* (*Guangdong University of Technology*); *Jin-Yue Su* (*Guangdong University of Technology*); *Ze-Zhou Fang* (*Guangdong University of Technology*); *Gao-Jing Liu* (*Guangdong University of Technology*); *Yuan-Hao Liu* (*Guangdong University of Technology*); *Jinyun Zhou* (*Guangdong University of Technology*);

8:55 Realization of Photonic Nodal Ring in One-dimensional Photonic Crystals
Weimin Deng (*Nanchang University*); *Wenjie Chen* (*Sun Yat-Sen University*); *Jian-Wen Dong* (*Sun Yat-Sen University*);

9:10 Invited Detecting Higher-order and Fragile Band Topology through Bulk-defect Correspondence in Acoustic Systems
Zhi-Kang Lin (*Soochow University*); *Ying Wu* (*Nanjing University of Science and Technology*); *Feng Li* (*Beijing Institute of Technology*); *Jian-Hua Jiang* (*Soochow University*);

9:30 Gradient Index Porous Core Photonic Crystal Fiber for Sub-wavelength Field Confinement
K. Renuka Rani (*Vellore Institute of Technology*); *Natesan Yogesh* (*National Institute of Technology Calicut*); *Barakathulla Asrafali* (*Shenzhen University*); *Zhengbiao Ouyang* (*Shenzhen University*); *Krishnan Chitra* (*Vellore Institute of Technology*);

10:00 **Coffee Break**

10:30 Invited Critical Issues in the Fabrication of Color Conversion Layers for Micro-LED Display via Electrohydrodynamic Inject Printing
Yue Lin (*Xiamen University*); *Xiaotong Fan* (*Xiamen University*); *Xiao Yang* (*Xiamen University*); *Yihang Chen* (*Xiamen University*); *Tianqi Zhang* (*Xiamen University*); *Guolong Chen* (*Xiamen University*); *Shuli Wang* (*Xiamen University*); *Zhong Chen* (*Xiamen University*);

10:50 Applications of the Topological Photonics in Optical Communications
Hongwei Wang (*Shanghai Jiao Tong University*); *Yong Zhang* (*Shanghai Jiao Tong University*); *Yikai Su* (*Shanghai Jiao Tong University*);

11:05 Space-coiled Photonic Structures for Waveshaping and Light Confinement Applications
Sneha Mary Biju (*National Institute of Technology Calicut*); *S. Gokul* (*National Institute of Technology Calicut*); *P. Sandra* (*National Institute of Technology Calicut*); *Natesan Yogesh* (*National Institute of Technology Calicut*);

11:20 Invited Unsupervised Learning of Topological Non-Abelian Braiding in Non-Hermitian Bands
Yang Long (*Nanyang Technological University*); *Baile Zhang* (*Nanyang Technological University*);

11:40 Optimum Laser Parameters for Efficient Laser Propulsion and Active Debris Removal
Claude R. Phipps (*Photonic Associates, LLC*);

Session 4A4a
Millimeter Wave and Terahertz Metasurfaces: Fundamentals and Applications

Thursday AM, April 25, 2024

Room 4 - Jincheng 1

Organized by Xiaojian Fu, Xinxi Zeng

Chaired by Xinxi Zeng

8:00 Physics-informed Inverse Design of Multi-bit Programmable Terahertz Metasurface
Yu Cheng Xu (*Nanjing University*); *Jia-Qi Yang* (*State Key Laboratory for Novel Software*); *Sheng Wang* (*Nanjing University*); *Hangbing Guo* (*Nanjing University*); *Jingbo Wu* (*Nanjing University*); *Caihong Zhang* (*Nanjing University*); *De-Chuan Zhan* (*State Key Laboratory for Novel Software*); *Biaobing Jin* (*Nanjing University*); *Kebin Fan* (*Nanjing University*);

8:15 A DC-20 GHz 5-bit CMOS Digital Step Attenuator for Phased-array Applications
Jian Pei Dong (*Hangzhou Dianzi University*); *Wen Zhu Zhang* (*Hangzhou Dianzi University*); *Jiang Luo* (*Hangzhou Dianzi University*); *Xiang Wang* (*Hangzhou Dianzi University*); *Jun Liu* (*Hangzhou Dianzi University*);

8:30 A DC-40 GHz Single-Pole-Single-Throw Switch in 130 nm SiGe BiCMOS Technology
Ze Yu Xie (*Southeast University*); *Zi Wen Zhang* (*Southeast University*); *Jiang Luo* (*Hangzhou Dianzi University*); *Junyan Dai* (*Southeast University*); *Qiang Cheng* (*Southeast University*);

8:45 Advancing Millimeter Wave/Terahertz Broadband Wireless Communications: A Novel Perspective through Space-time Coding Metasurface Transmitters
Yujie Liu (*Southeast University*);

9:00 Dual-channel Transformation of Scalar and Vector Beams in Terahertz Band Based on Metasurfaces
Jie Li (*Chengdu University of Information Technology*); *Xiao Liu* (*Chengdu University of Information Technology*); *Chen Liu* (*Chengdu University of Information Technology*); *Hui Li* (*Tianjin University*); *Hang Xu* (*Tianjin University*); *Yuxin Zou* (*Chengdu University of Information Technology*); *Li Luo* (*Chengdu University of Information Technology*); *Tingting Tang* (*Chengdu University of Information Technology*); *Jian-Quan Yao* (*Tianjin University*);

9:15 Generation of Dark Field Spatial Patterns Using Phase Profile Coded Metasurfaces for Optical Trapping Applications
B. Aravind (*National Institute of Technology Calicut*); *V. Shanto* (*National Institute of Technology Calicut*); *M. Pavithra* (*University of Madras (Guindy Campus)*); *K. Ravichandran* (*University of Madras (Guindy Campus)*); *Barkathulla Asrafali* (*Shenzhen University*); *Zhengbiao Ouyang* (*Shenzhen University*); *Natesan Yogesh* (*National Institute of Technology Calicut*);

9:30 Invited 3D Printing Metasurfaces for Switching Terahertz Absorptions
Xinxi Zeng (*University of Science & Technology Beijing*);

9:50 A Digitally Controlled CMOS Vector-sum Phase Shifter with Low RMS Phase Error for Ka-band Phased-arrays
Huanhuan He (*Nanjing Electronic Devices Institute*); *Feng Wang* (*Nanjing Electronic Devices Institute*); *Hongyun Zhang* (*Hangzhou Dianzi University*); *Licheng Zhang* (*Hangzhou Dianzi University*); *Jiankang Li* (*Nanjing Electronic Devices Institute*); *Jiang Luo* (*Hangzhou Dianzi University*);

10:05 **Coffee Break**

Session 4A4b
Metamaterial Inspired Beam Steering Antennas

Thursday AM, April 25, 2024

Room 4 - Jincheng 1

Organized by Liang Peng, Zhen Liao

Chaired by Liang Peng, Zhen Liao

10:30 Mode-reconfigurable Beam Steering Antenna Based on Spoof Surface Plasmon Polariton
Zhi-Jun Qin (*Jilin University*); *Zhaohua Xu* (*Jilin University*); *Wenya Xu* (*Suzhou Institute of Nano-tech and Nano-bionics, Chinese Academy of Sciences*); *Wen-Ming Su* (*Suzhou Institute of Nano-tech and Nano-bionics, Chinese Academy of Sciences*); *Su Xu* (*Jilin University*);

10:45 Knowledge-inherited Learning for Intelligent Metasurface Design and Assembly
Yuetian Jia (*Zhejiang University*); *Chao Qian* (*Zhejiang University*); *Liang Peng* (*Hangzhou City University*); *Hongsheng Chen* (*Zhejiang University*);

11:00 A Compact Helical OAM Antenna Based on Spoof Surface Plasmon Polaritons
Zhen Liao (*Nanjing University of Posts and Telecommunications*);

11:15 Metamaterial Assisted Fast Beam Scanning Leaky Wave Antennas
Lihui Lv (*Hangzhou City University*); *Wenjing Wu* (*Hangzhou City University*); *Lina Shang* (*Hangzhou City University*); *Liang Peng* (*Hangzhou City University*);

11:30 Microwave Imaging with Sparse MIMO Array for Suppressed Sidelobe
Zhengyue Dong (*Hangzhou Dianzi University*); *Liang Peng* (*Hangzhou City University*); *Kuiwen Xu* (*Hangzhou Dianzi University*);

Session 4A5
Ultrafast Optics

Thursday AM, April 25, 2024

Room 5 - Yingbin

Organized by Guangyu Fan, Qian Cao

Chaired by Qian Cao

8:00 High-power Yb:CALGO Regenerative Amplifier and Nonlinear Pulse Compression through Cascaded Filamentation in Air
Houkun Liang (*Sichuan University*);

8:15 Ultra-stable Self-started Femtosecond Thin-disk Oscillator
Tingting Yang (*Huazhong University of Science and Technology*); *Fan Wu* (*Huazhong University of Science and Technology*); *He Yan Liu* (*Huazhong University of Science and Technology*); *Jinwei Zhang* (*Huazhong University of Science and Technology*);

8:30 Ultrafast Quantum Control of Atomic Excited States via Interferometric Two-photon Rabi Oscillations
Yudong Chen (*Fudan University*); *Sainan Peng* (*Fudan University*); *Zongyuan Fu* (*Fudan University*); *Liyang Qiu* (*Fudan University*); *Guangyu Fan* (*University of Shanghai for Science and Technology*); *Yi Liu* (*University of Shanghai for Science and Technology*); *Saijun Wu* (*Fudan University*); *Xinhua Xie* (*SwissFEL, Paul Scherrer Institute*); *Zhensheng Tao* (*Fudan University*);

8:45 Timing Fluctuation Correction for the Front End of a 100-PW Laser
Hongyang Li (*Tongji University*);

9:00 Self-compression of Ultrahigh-intensity Femtosecond Pulse in Normally Dispersive Region
Renjing Chen (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Wenhai Liang* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Yilin Xu* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Xiong Shen* (*Zhangjiang Laboratory*); *Peng Wang* (*Zhangjiang Laboratory*); *Jun Liu* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Ruxin Li* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*);

10:00 **Coffee Break**

10:30 The Mechanism of N_2^+ Air Lasing: Population with or without Inversion
Huailiang Xu (*Jilin University*);

10:45 Wavelength Tunable Ytterbium-doped Fiber Laser Based on a Dispersion-managed Nonlinear Amplifier Loop Mirror
Kong Gao (*Shandong University*); *Yizhou Liu* (*Shandong University*); *Dechun Li* (*Shandong University*);

11:00 Femtosecond Laser Direct Written Active 45°-tilted Fiber Grating for Mode-locked Fiber Laser
Zinan Huang (*Shanghai Institute of Technical Physics of the Chinese Academy of Sciences*); *Andreas Ioannou* (*Cyprus University of Technology*); *Kyriacos Kalli* (*Cyprus University of Technology*); *Tao Chen* (*Shanghai Institute of Technical Physics of the Chinese Academy of Sciences*); *Wei Kong* (*Shanghai Institute of Technical Physics of the Chinese Academy of Sciences*); *Chengbo Mou* (*Shanghai University*); *Rong Shu* (*Shanghai Institute of Technical Physics, Chinese Academy of Sciences*);

11:15 Generation and Application of High-dimensional Optical Soliton Light Sources
Guangyu Fan (*University of Shanghai for Science and Technology*);

11:30 A Dual-comb Thin-disk Laser
Quanming Li (*GBA Branch of Aerospace Information Research Institute, Chinese Academy of Sciences*); *Hanze Bai* (*GBA Branch of Aerospace Information Research Institute, Chinese Academy of Sciences*); *Xiaodan Teng* (*GBA Branch of Aerospace Information Research Institute, Chinese Academy of Sciences*); *Hanghang Yu* (*GBA Branch of Aerospace Information Research Institute, Chinese Academy of Sciences*); *Hongwen Xuan* (*GBA Branch of Aerospace Information Research Institute, Chinese Academy of Sciences*);

Session 4A6
Bound States in the Continuum and Singular Optics 2

Thursday AM, April 25, 2024

Room 6 - Huanhua

Organized by Wenzhe Liu, Dezhuan Han, Chao Peng

Chaired by Wenzhe Liu, Dezhuan Han

8:15 Scalar Topological Photonic Meta-crystals
Invited
Biao Yang (*National University of Defence Technology*);

8:35 Do Vortex Beams Carry Orbital Angular Momentum?
Invited
Wei Liu (*National University of Defense Technology*);

8:55 Origins and Conservation of Topological Polarization Defects in Periodic Photonic Structure
Invited
Xuefan Yin (*Peking University*); *Chao Peng* (*Peking University*);

9:15 Chiral BIC Nanophotonics: From Passive to Active Metasurfaces
Keynote
Cheng-Wei Qiu (*National University of Singapore*);

10:00 **Coffee Break**

10:30 Bound States in the Continuum in a Wire Medium
Invited
I. Matchenya (*ITMO University*); *G. Karsakov* (*ITMO University*); *E. Koreshin* (*ITMO University*); *S. Gladyshev* (*ITMO University*); *R. Balafendiev* (*ITMO University*); *I. Terekhov* (*ITMO University*); *Pavel A. Belov* (*ITMO University*); *Andrey A. Bogdanov* (*Harbin Engineering University*);

10:50 Finite Barrier Bound States
Invited
Meng Xiao (*Wuhan University*);

11:10 Spin-Orbit-Locking Chiral Bound States in the Continuum
Xingqi Zhao (*Fudan University*); *Jiajun Wang* (*Fudan University*); *Wenzhe Liu* (*The Hong Kong University of Science and Technology*); *Zhiyuan Che* (*Fudan University*); *Xinhao Wang* (*Fudan University*); *Che Ting Chan* (*The Hong Kong University of Science and Technology*); *Lei Shi* (*Fudan University*); *Jian Zi* (*Fudan University*);

11:25 Continuous Spectral and Coupling Encoding with Dual-gradient Metasurfaces
Andreas Aigner (*Ludwig-Maximilians-University Munich*); *Thomas Weber* (*Ludwig-Maximilians-Universität München*); *Alwin Wester* (*Ludwig-Maximilians-University Munich*); *Stefan A. Maier* (*Monash University*); *Andreas Tittl* (*Ludwig-Maximilians-Universität München*);

Session 4A7a
High-Q Photonic Resonances in All-dielectric Nanostructures and Their Applications 2

Thursday AM, April 25, 2024

Room 7 - Xiling

Organized by Zhanghua Han, Wei Wang

Chaired by Zhanghua Han

8:00 Ultranarrow and Angle-independence Metasurface Thermal Emitters Based on Bound States in the Continuum
Invited
J. H. Zhou (*Shanghai Jiao Tong University*); *M. Q. Liu* (*Shanghai Jiao Tong University*); *Boxiang Wang* (*Shanghai Jiao Tong University*); *Changying Zhao* (*Shanghai Jiao Tong University*);

8:20 Dual-coupled Optical Resonant Systems for Efficient Spectral Engineering and Their Applications in Energy Devices
Invited
Boxiang Wang (*Shanghai Jiao Tong University*);

8:40 Design and Analysis of High-precision Frame-type Optomechanical Gyroscope
Chengwei Xian (*University of Electronic Science and Technology of China*); *Pengju Kuang* (*University of Electronic Science and Technology of China*); *Zihan Huang* (*University of Electronic Science and Technology of China*); *Senyu Zhang* (*University of Electronic Science and Technology of China*); *Zhe Li* (*University of Electronic Science and Technology of China*); *Guangjun Wen* (*University of Electronic Science and Technology of China*); *Yongjun Huang* (*University of Electronic Science and Technology of China*);

8:55 Invited Multidimensional Manipulation of Optical Field Based on Metasurfaces
Zhang-Kai Zhou (*Sun Yat-Sen University*);

9:15 Steerable Q-factor Scaling Rules in Momentum Space
Chuanlin Li (*University of Electronic Science and Technology of China*); *Aobo Ren* (*University of Electronic Science and Technology of China*); *Jiang Wu* (*University of Electronic Science and Technology of China*);

9:30 Quasi-BIC on a Hybrid Anapole Regime in All-dielectric Nanocones
Aleksei V. Kuznetsov (*Moscow Institute of Physics and Technology*); *Vjaceslavs Bobrovs* (*Riga Technical University*); *Mikhail V. Rybin* (*ITMO University*); *Alexander Sergeevich Shalin* (*Moscow Institute of Physics and Technology*);

9:45 Invited Superchiral Metasurfaces Based on Brillouin Zone Folding-induced Bound States in the Continuum
Tianyao Sheng (*Nanjing University of Science and Technology*); *Zhenhong Fan* (*Nanjing University of Science and Technology*); *Yefeng Yu* (*Nanjing University of Science and Technology*);

10:05 **Coffee Break**

Session 4A7b
Novel Optical Fiber Based Sensors

Thursday AM, April 25, 2024

Room 7 - Xiling

Organized by Hongyan Fu, Daru Chen

Chaired by Xuewen Shu

10:30 Invited Femtosecond Laser Inscribed Optical Fiber Microstructures for Curvature Sensing
Xuewen Shu (*Huazhong University of Science and Technology*);

10:50 Invited Diaphragm Fiber Optic FP Sensor and Its Applications
Sheng Peng Wan (*Nanchang Hangkong University*); *Yangfeng Wang* (*Nanchang Hangkong University*); *Mingqi Wang* (*Nanchang Hangkong University*); *Junsong Yu* (*Nanchang Hangkong University*);

11:10 Invited Cascaded Optical Fiber Sensor for Measurement of Pulse Wave Signals
Zhangwei Yu (*Zhejiang Normal University*); *Yang Li* (*Zhejiang Normal University*); *Zhiwei Duan* (*Zhejiang Normal University*); *Qishuang Zhang* (*Zhejiang Normal University*); *Qiang Ling* (*Zhejiang Normal University*); *Daru Chen* (*Zhejiang Normal University*);

11:30 An Efficient Method to Build Fiber Meta-tip
Song Sun (*Microsystem and Terahertz Research Center, China Academy of Engineering Physics*); *N. N. Li* (*Microsystem and Terahertz Research Center, China Academy of Engineering Physics*); *L. Zhang* (*Wuhan University of Technology*); *Q. G. Du* (*Wuhan University of Technology*);

11:45 Hybrid Two-stage Preamplification for Small Signal Enhancement in φ-OTDR Distributed Acoustic Sensing
Leonardo Rossi (*IMM, National Research Council*); *Francesco Falcetelli* (*University of Bologna*); *Lun-Kai Cheng* (*TNO*); *Wim De Jong* (*TNO*); *Rob Jansen* (*TNO*); *Gabriele Bolognini* (*IMM, National Research Council*);

12:00 Agarose-coated FBG Humidity Sensor for Real-time Respiratory Rate Monitoring
Si Luo (*Zhejiang Normal University*); *Zijun Liao* (*Zhejiang Normal University*); *Yunlian Ding* (*Zhejiang Normal University*); *Haichao Han* (*Zhejiang Normal University*); *Rujun Zhou* (*Zhejiang Normal University*); *Jiahui Lin* (*Zhejiang Normal University*); *Hao Chen* (*Zhejiang Normal University*); *Qiang Ling* (*Zhejiang Normal University*);

Session 4A8
Optical Soliton and Applications

Thursday AM, April 25, 2024

Room 8 - Guixiang

Organized by Yudong Cui, Junsong Peng

Chaired by Yudong Cui

8:00 Invited Recent Progress in Spatiotemporal Mode-locked Lasers
Xiaosheng Xiao (*Beijing University of Posts and Telecommunications*);

8:20 Invited Deep Neural Network for Modeling Soliton Dynamics in the Mode-locked Laser
Zhi-Zeng Si (*Zhejiang A&F University*); *Yin Fang* (*Zhejiang A&F University*); *Xue-Peng Wang* (*Zhejiang A&F University*); *Yue Yue Wang* (*Zhejiang A&F University*); *Chao-Qing Dai* (*Zhejiang Agriculture and Forestry University*);

8:40 Invited Unveiling the Ultrafast Dynamics in Optical Frequency Combs
Zhangru Shi (*University of Electronic Science and Technology of China*); *Bowen Li* (*University of Electronic Science and Technology of China*);

9:00 Attosecond Precision Quasi-period Dynamics of Soliton Molecules in an Ultrafast Fiber Laser
Defeng Zou (*Tianjin University*); *Youjian Song* (*Tianjin University*); *Perry Ping Shum* (*Southern University of Science and Technology*); *Ming-Lie Hu* (*Tianjin University*);

9:15 Information Encoding and Storage Based on the Mode-locked Fiber Laser
Invited
Xue-Peng Wang (*Zhejiang A&F University*); *Zhi-Zeng Si* (*Zhejiang A&F University*); *Zhao-Xuan Li* (*Zhejiang A&F University*); *Yue Yue Wang* (*Zhejiang A&F University*); *Chao-Qing Dai* (*Zhejiang Agriculture and Forestry University*);

10:00 **Coffee Break**

10:30 Soliton Behavioral Similarity in Bidirectional Ultrafast Fiber Lasers
Invited
Zhi-Chao Luo (*South China Normal University*);

10:50 Pulsating and Starting Dissipative Soliton Dynamics in Mamyshev Oscillators
Invited
Chengying Bao (*Tsinghua University*);

11:10 Polychromatic Soliton Complexes in Fiber Laser
Invited
Dong Mao (*Northwestern Polytechnical University*);

11:30 Dissipative Kerr Solitons in Optical Microresonators
Invited
Weiqiang Wang (*University of Chinese Academy of Sciences*); *Zhizhou Lu* (*Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences*); *Yang Wang* (*Xi'an Institute of Optics and Precision Mechanics (XIOPM), Chinese Academy of Sciences (CAS)*); *Wenfu Zhang* (*Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences*);

Session 4A9
Low Dimensional Optoelectronic Materials and Advanced Semiconductor Lasers

Thursday AM, April 25, 2024

Room 9 - Xinyu

Organized by Cheng-Ao Yang, Ying Yu

Chaired by Cheng-Ao Yang, Ying Yu

8:00 Frequency Combs and Dissipative Kerr Solitons in Ring Quantum Cascade Lasers
Invited
Bo Meng (*Fine Mechanics and Physics, Chinese Academy of Sciences*); *Matthew Singleton* (*Empa*); *J. Hillbrand* (*Sensirion*); *Martin Franckié* (*Mathrix Group*); *Mattias Beck* (*ETH Zürich*); *Jerome Faist* (*ETH Zurich*);

8:20 Mid-infrared Laser-based Gas Sensors with Low Power Consumption
Invited
Chenlu Liu (*Qilu University of Technology (Shandong Academy of Sciences)*); *Weihua Gong* (*Qilu University of Technology (Shandong Academy of Sciences)*); *Zhaowei Wang* (*Qilu University of Technology (Shandong Academy of Sciences)*); *Yubin Wei* (*Qilu University of Technology (Shandong Academy of Sciences)*); *Tingting Zhang* (*Qilu University of Technology (Shandong Academy of Sciences)*); *Tongyu Liu* (*Qilu University of Technology (Shandong Academy of Sciences)*);

8:40 Monolithic Integration of III-V Quantum Dot Lasers and Silicon Waveguides on SOI Substrates
Wen-Qi Wei (*Institute of Physics, Chinese Academy of Sciences*); *Zihao Wang* (*Institute of Physics, Chinese Academy of Sciences*); *Ting Wang* (*Songshan Lake Materials Laboratory*); *Jian-Jun Zhang* (*Institute of Physics, Chinese Academy of Sciences*);

8:55 Development of $\mathbf{3^\circ \times 3^\circ}$ Free-space Collimated 1030 nm Semiconductor Laser Pointer
Dongxin Xu (*Hainan Normal University*); *Wenjun Yu* (*Hainan Normal University*); *Qi Wu* (*Hainan Normal University*); *Yi Qu* (*Hainan Normal University*); *Guojun Liu* (*Hainan Normal University*); *Zhongliang Qiao* (*Hainan Normal University*); *Zaijin Li* (*Hainan Normal University*); *Lina Zeng* (*Hainan Normal University*); *Lin Li* (*Hainan Normal University*); *Zhibin Zhao* (*Hainan Normal University*);

9:10 Multibeam Lasing Action from Bound States in the Continuum of Photonic Crystal Slab Waveguides
Jitong Wang (*University College London*); *Danqi Lei* (*University College London*); *Mingchu Tang* (*University College London*); *Nicolae-Coriolan Panoiu* (*University College London*);

9:25 Research Progress on Littman Tunable External Cavity Semiconductor Lasers in the Near-infrared Band
Wei Luo (*Hainan Normal University*); *Xuan Li* (*Hainan Normal University*); *Linyu Zhang* (*Hainan Normal University*); *Zaijin Li* (*Hainan Normal University*); *Dongxin Xu* (*Hainan Normal University*); *Yi Qu* (*Hainan Normal University*); *Zhongliang Qiao* (*Hainan Normal University*); *Lin Li* (*Hainan Normal University*);

9:40 Quantum Dot Lasers with High Working Temperature
Invited
Xiao-Guang Yang (*Institute of Semiconductors, CAS*); *Tao Yang* (*Institute of Semiconductors, CAS*);

10:00 **Coffee Break**

10:30 Invited MBE Growth the InGaAs/InAlAs Materials and Structure Optimization of High Power Quantum Cascade Laser
Dong-Liang Zhang (*Beijing Information Science & Technology University*); *Wang Tian* (*Beijing Information Science & Technology University*); *Ruo-Ke Yang* (*Beijing Information Science & Technology University*); *Rui Wang* (*Beijing Information Science & Technology University*); *Xian-Tong Zheng* (*Beijing Information Science & Technology University*); *Lianqing Zhu* (*Beijing Information Science and Technology University*);

10:50 Sustainable Ultrawide Bandgap 2D Semiconductors for Electronics and Optoelectronics Applications
Yee Sin Ang (*Singapore University of Technology and Design (SUTD)*); *Chuin Wei Tan* (*Harvard University*);

11:05 Kekulé-distorted Topological Bulk Cavity for Intrinsic Lateral Beam Shifting of High-purity Linear-polarized Light Emission
Zichen Li (*Zhejiang University*); *Hongsheng Chen* (*Zhejiang University*); *Song Han* (*Zhejiang University*);

11:20 Statistical Analysis of the Polarization Noise of a 1.55-μm Vertical Cavity Emitting Laser
Tao Wang (*Xidian University*); *Gian Luca Lippi* (*Université Cote d'Azur*);

11:35 Research Progress of Narrow Linewidth Blue Semiconductor Lasers
Linyu Zhang (*Hainan Normal University*); *Xuan Li* (*Hainan Normal University*); *Wei Luo* (*Hainan Normal University*); *Zaijin Li* (*Hainan Normal University*); *Dongxin Xu* (*Hainan Normal University*); *Yi Qu* (*Hainan Normal University*); *Zhongliang Qiao* (*Hainan Normal University*); *Lin Li* (*Hainan Normal University*);

11:50 Research on 1.55 μm Waveband Discrete External Cavity Tunable Semiconductor Lasers
Xuan Li (*Hainan Normal University*); *Linyu Zhang* (*Hainan Normal University*); *Wei Luo* (*Hainan Normal University*); *Zaijin Li* (*Hainan Normal University*); *Dongxin Xu* (*Hainan Normal University*); *Yi Qu* (*Hainan Normal University*); *Zhongliang Qiao* (*Hainan Normal University*); *Lin Li* (*Hainan Normal University*);

Session 4A10
Theories, Experiments, and Applications: Ferroelectrics and Electroceramics

Thursday AM, April 25, 2024

Room 10 - Shuliu

Organized by Shi-Gu Cao, Yunya Liu

Chaired by Yunya Liu, Shi-Gu Cao

8:00 Electrocaloric Effect of Nanoparticle-filled Ferroelectric Polymers
Da Zu (*Xiangtan University*); *Yunya Liu* (*Xiangtan University*);

8:15 Invited Electrocaloric Effect in Ferroelectrics Investigated by Phase-field Simulations
Yunya Liu (*Xiangtan University*);

8:35 The Electrocaloric Response Distribution and Structure Optimization of Multilayer Ceramic Capacitor
Chunbiao Zhang (*Xiangtan University*); *Dongliang Shan* (*Xiangtan University*);

8:50 Local Electrocaloric Effect Measurement by Scanning Thermal Microscopy
Dongliang Shan (*Xiangtan University*); *Yunya Liu* (*Xiangtan University*); *Jiangyu Li* (*Southern University of Science and Technology*);

9:05 Invited Two-dimensional Ferroelectric Devices Based on van Der Waals Heterostructure
Shuo Guo Yuan (*China University of Geosciences*);

10:30 Invited Optimization of Nanoporous Metallic Actuators by Combining Multiscale Calculations and Machine Learning
Sheng Sun (*Shanghai University*); *Menghuan Wang* (*Shanghai University*); *Hanqing Jiang* (*Westlake University*); *Ying Zhang* (*Shanghai University*); *Hang Qiao* (*Shanghai University*); *Tong-Yi Zhang* (*Shanghai University*);

10:50 Stress Induced Twinning and Phase Transition in Ferroelectric Perovskites
Shi-Gu Cao (*HKUST Shenzhen-Hong Kong Collaborative Innovation Research Institute*);

11:05 Progress and Prospects of Machine Learning on Ferroelectric Materials
Shi-Gu Cao (*HKUST Shenzhen-Hong Kong Collaborative Innovation Research Institute*);

Session 4A11a
LiDAR: Photonic Integration, Signal processing, Imaging, Applications

Thursday AM, April 25, 2024

Room 11 - Xiangyu

Organized by Jingguo Zhu, Dong Liu

Chaired by Xiaochen Sun

8:00 A Three-frequency Ca^+ Doppler Lidar for Ion Density and Temperature Measurements in the E and F Regions
Fang Wu (*National Space Science Center, Chinese Academy of Sciences*); *Lifang Du* (*National Space Science Center, Chinese Academy of Sciences*); *Haoran Zheng* (*National Space Science Center, Chinese Academy of Sciences*); *Zelong Wang* (*National Space Science Center, Chinese Academy of Sciences*); *Xuewu Cheng* (*Innovation Academy for Precision Measurement Science and Technology, Chinese Academy of Sciences*); *Jing Jiao* (*National Space Science Center, Chinese Academy of Sciences*); *Fuju Wu* (*National Space Science Center, Chinese Academy of Sciences*); *Yuan Xia* (*Nanjing Xiaozhuang University*); *Wei Wang* (*Innovation Academy for Precision Measurement Science and Technology, Chinese Academy of Sciences*); *Kexin Wang* (*National Space Science Center, Chinese Academy of Sciences*); *Yuchang Xun* (*National Space Science Center, Chinese Academy of Sciences*); *Guo Tao Yang* (*National Space Science Center, Chinese Academy of Sciences*);

8:15 Single-photon Imaging LIDAR for Real-time 3D Imaging over Long Distance
Xing Wang (*Xi'an Institute of Optics and Precision Mechanics (XIOPM), Chinese Academy of Sciences (CAS)*);

8:30 Research on Retina-like Scanning Imaging Based on MEMS Mirror
Long Liang (*Beijing Institute of Technology*); *Hui Wang* (*Beijing Institute of Astronautical Systems Engineering*); *Jie Cao* (*Beijing Institute of Technology*); *Yang Li* (*Beijing Institute of Technology*);

8:45 Si Photonics FMCW Optical Engine for High Precision Ranging
Qihao Zhang (*Luminwave Technology*); *Linpeng Gu* (*Luminwave Technology*); *Yulin Zhu* (*Luminwave Technology*); *Hao Wang* (*Luminwave Technology*); *Shiquan Yang* (*Luminwave Technology*); *Xiaochen Sun* (*LuminWave Technology*);

9:00 Discriminative Fusion Methods for FMCW LiDAR: Leveraging All-phase FFT and Time-shifted Phase Difference
Ye Yuan (*Institute of Microelectronics, Chinese Academy of Sciences*); *Jingguo Zhu* (*Institute of Microelectronics, Chinese Academy of Sciences*); *Chenghao Jiang* (*Institute of Microelectronics, Chinese Academy of Sciences*); *Fude Huang* (*Institute of Microelectronics, Chinese Academy of Sciences*); *Ming Wu* (*Institute of Microelectronics, Chinese Academy of Sciences*); *Ruqing Liu* (*Institute of Microelectronics, Chinese Academy of Sciences*); *Dingfu Zhou* (*Southwest Institute of Technical Physics*);

9:15 Lidar in the Study of Marine Systems
Yudi Zhou (*Zhejiang University*); *Dong Liu* (*Zhejiang University*);

9:30 An Iterative Neural Network for Imaging Multi-layer Targets in Single-photon Applications
Zixuan Zhang (*Zhejiang University - University of Illinois Urbana-Champaign Institute*); *Yuyang Zhao* (*Institute of Microelectronics of the Chinese Academy of Sciences*); *Jingguo Zhu* (*Institute of Microelectronics, Chinese Academy of Sciences*);

9:45 Invited Photonic Integrated Circuit with Multiple Waveguide Layers for Broadband High-efficient 3D Optical Phased Arrays
D. Wu (*University of Michigan*); *K. Owen* (*University of Michigan*); *Yasha Yi* (*University of Michigan*);

10:05 **Coffee Break**

10:30 SPAD dToF Technology in 3D Sensing for Consumer Market
Hesong Xu (*Microparity Company*);

10:45 A Novel Radial Phase Modulation Technique Aided LiDAR System
Ruotong Wang (*Tongji University*); *Chengwen Huang* (*Tongji University*); *Hao Xie* (*Tongji University*); *Junhe Zhou* (*Tongji University*);

Session 4A11b
Beamforming in Optical and RF Domain 1

Thursday AM, April 25, 2024

Room 11 - Xiangyu

Organized by Lei Zhang, Xin Fu

Chaired by Lei Zhang, Xin Fu

11:00 Invited Spectral Scanning Technologies in LiDARs
Hongyan Fu (*Tsinghua University*);

11:20 Invited Optical Phased Array Lidar
Junfeng Song (*Jilin University*); *Bosong Chen* (*Jilin University*); *Heming Hu* (*Jilin University*); *Qijie Xie* (*Peng Cheng Laboratory*); *Quanxin Na* (*Peng Cheng Laboratory*); *Xiaolong Hu* (*Jilin University*); *Min Tao* (*Jilin University*); *Xueyan Li* (*Jilin University*);

11:40 Invited OPA LiDAR Transmitter on the Multi-layer Silicon Photonics Platform
Weihan Xu (*Shanghai Jiao Tong University*); *Yuyao Guo* (*Shanghai Jiao Tong University*); *Xinhang Li* (*Shanghai Jiao Tong University*); *Chuxin Liu* (*Shanghai Jiao Tong University*); *Liangjun Lu* (*Shanghai Jiao Tong University*); *Jianping Chen* (*Shanghai Jiao Tong University*); *Linjie Zhou* (*Shanghai Jiao Tong University*);

Session 4A12
Terahertz Technology and Applications

Thursday AM, April 25, 2024

Room 12 - Siji 1

Organized by Xiaodong Chen, Bo Zhang

Chaired by Bo Zhang

8:00 Design and Simulation of a Sub-terahertz Metasurface for 6G Communication Systems
Hisham Khalil (*The University of Lahore*); *Saeed Ur Rahman* (*Xidian University*);

8:15 Invited Switchable Broadband Terahertz Absorbers Based on Conducting Polymer-cellulose Aerogels
Shangzhi Chen (*Linkoping University*); *Chaoyang Kuang* (*Linkoping University*); *Qiye Wen* (*University of Electronic Science and Technology of China*); *Magnus P. Jonsson* (*Linkoping University*);

8:35 A Graphene-based Broadband Absorber at Terahertz Regime
Kai-Da Xu (*Xi'an Jiaotong University*); *Dongxu Wang* (*Xi'an Jiaotong University*); *Qiang Chen* (*Tohoku University*);

8:50 Intelligent Detection of Multiple Objects for Terahertz Imaging Based on Deep-learning Technique
Xinyi Du (*Brunel University London*); *Shaoqing Hu* (*Brunel University London*); *Xiaodong Chen* (*Queen Mary University of London*); *Xin Rao* (*Hangzhou Dianzi University*);

9:05 Terahertz Phased-array Fed Transmitting Antenna and Its System Implementation
Yihong Su (*University of Electronic Science and Technology of China*); *Haozhong Liu* (*University of Electronic Science and Technology of China*); *Xian Qi Lin* (*University of Electronic Science and Technology of China*); *Zhong Bo Zhu* (*Xi'an Branch of China Academy of Space Technology*);

9:20 Simulation on the Membrane Potential Variations by THz Unipolar Stimulation with Triangle Envelope
Wenfei Bo (*University of Electronic Science and Technology of China*); *Rong Che* (*National University of Defense Technology*); *Lemeng Guo* (*National University of Defense Technology*); *Xiaobo Zhang* (*National University of Defense Technology*); *Qiang Liu* (*National University of Defense Technology*); *Bo Tao* (*National University of Defense Technology*); *Baosong Duan* (*National University of Defense Technology*); *Yuansheng Li* (*National University of Defense Technology*); *Yu-Bin Gong* (*University of Electronic Science and Technology of China*);

9:35 Terahertz 2-to-1 Data Selector Based on VO_2-integrated Cascaded Metasurfaces
W. Xiong (*Chongqing University of Posts and Telecommunications*); *Yi Ren* (*Chongqing University of Posts and Telecommunications*); *Jia Ran* (*Chongqing University of Posts and Telecommunications*);

10:00 **Coffee Break**

10:30 220 GHz and 205 GHz Orthogonal Modulators Used in a Real Time Communication System
Ge Liu (*Microsystem and Terahertz Research Center, China Academy of Engineering Physics*); *Yue He* (*Microsystem and Terahertz Research Center, China Academy of Engineering Physics*); *Jun Jiang* (*Institute of Electronic Engineering, China Academy of Engineering Physics*);

10:45 D-band Duplexer Based on Directly Coupled Microcoaxial Line Bandpass Filters
Xinyao Liu (*Chongqing University*); *Daotong Li* (*Chongqing University*);

11:00 Multi-band Polarization-insensitive Terahertz Metamaterial Absorber Based on Composite Circular Ring Structure
Dongyi Sui (*Chongqing University*); *Daotong Li* (*Chongqing University*); *Xinyao Liu* (*Chongqing University*); *Lanlan Yang* (*Chongqing University*); *Naoki Shinohara* (*Kyoto University*);

11:15 WR-4 band Frequency Division Duplexer Real-time Communication Systems with Transmission Distances of 1050 m
Yinian Feng (*University of Electronic Science and Technology of China*); *Bo Zhang* (*University of Electronic Science and Technology of China*);

11:30 Reflective Spatial Modulators of Subterahertz Radiation Based on Liquid Crystal Metastructures
Sergei A. Kuznetsov (*Institute of Semiconductor Physics SB RAS*); *Valeri I. Lapanik* (*A. N. Sevchenko Institute of Applied Physical Problems*); *Anatoliy A. Lugouskiy* (*A. N. Sevchenko Institute of Applied Physical Problems*); *Sergey N. Timofeev* (*A. N. Sevchenko Institute of Applied Physical Problems*); *Andrei S. Mitrofanov* (*Novosibirsk State University*); *Pavel Alexandrovich Lazorskiy* (*Institute of Semiconductor Physics SB RAS*); *Alina A. Rybak* (*Novosibirsk State University*); *Nazar A. Nikolaev* (*Institute of Semiconductor Physics SB RAS*);

Session 4A13a
SAR Electromagnetic Scattering Characteristic Analysis, Extraction, Imaging and Recognition

Thursday AM, April 25, 2024

Room 13 - Siji 2

Organized by Junjie Wu, Wei Pu

Chaired by Junjie Wu, Wei Pu

8:00 Microwave Photonic Radar Structured Imaging Based on Scattering Inversion and Structure Reconstruction
Yu Hai (*University of Electronic Science and Technology of China*); *Zhaoyi Shao* (*University of Electronic Science and Technology of China*); *Wei Pu* (*University of Electronic Science and Technology of China*); *Junjie Wu* (*University of Electronic Science and Technology of China*); *Anle Wang* (*Early Warning Academy*); *Yulin Huang* (*University of Electronic Science and Technology of China*); *Jianyu Yang* (*University of Electronic Science and Technology of China*);

8:15 BiSAR Image Autofocus Method Based on Target Scattering Parameters
Yue Song (*University of Electronic Science and Technology of China*); *Zihao Ren* (*University of Electronic Science and Technology of China*); *Wei Pu* (*University of Electronic Science and Technology of China*); *Junjie Wu* (*University of Electronic Science and Technology of China*); *Jianyu Yang* (*University of Electronic Science and Technology of China*);

8:30 MWP-ISAR Imaging Algorithm Based on Improved TSPN-TV-ADMM Algorithm
Haoyu Wang (*University of Electronic Science and Technology of China*); *Yu Hai* (*University of Electronic Science and Technology of China*); *Junjie Wu* (*University of Electronic Science and Technology of China*); *Wei Pu* (*University of Electronic Science and Technology of China*); *Anle Wang* (*Air Force Early Warning Academy*);

8:45 The Study of Consistency Imaging Method for Optics and SAR Based on Common Aperture
Ke Wang (*University of Chinese Academy of Sciences*); *Chong Song* (*Aerospace information Research Institute, Chinese Academy of Sciences*); *Yinshen Wang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Bingnan Wang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Maosheng Xiang* (*Institute of Electronics, Chinese Academy of Sciences*);

9:00 MD-JoSAR Imaging System and Application Based on Multidimensional Joint Spatial Observations
Zhengyang Yao (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Qinghai Dong* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Chong Song* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Zekun Jiao* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Bingnan Wang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Maosheng Xiang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*);

9:15 Comparative Analysis of Statistical Characteristics between Bi-SAR Images and Mon-SAR Images
Xiaoting Wang (*University of Electronic Science and Technology of China*); *Yue Song* (*University of Electronic Science and Technology of China*); *Zihao Ren* (*University of Electronic Science and Technology of China*); *Wei Pu* (*University of Electronic Science and Technology of China*); *Junjie Wu* (*University of Electronic Science and Technology of China*);

9:30 SAR Automated Imaging Software for Maritime Ship Targets
Qian Liu (*University of Electronic Science and Technology of China*); *Junao Li* (*University of Electronic Science and Technology of China*); *Qing Yang* (*University of Electronic Science and Technology of China*); *Zhongyu Li* (*University of Electronic Science and Technology of China*); *Junjie Wu* (*University of Electronic Science and Technology of China*); *Jianyu Yang* (*University of Electronic Science and Technology of China*);

9:45 SAR Radio Frequency Interference Measurement Method and Software Verification
Chi Zhang (*University of Electronic Science and Technology of China*); *Hongyang An* (*University of Electronic Science and Technology of China*); *Mingyue Lou* (*University of Electronic Science and Technology of China*); *Bowen Yang* (*University of Electronic Science and Technology of China*); *Zhu Liu* (*University of Electronic Science and Technology of China*); *Zhongyu Li* (*University of Electronic Science and Technology of China*); *Junjie Wu* (*University of Electronic Science and Technology of China*); *Jianyu Yang* (*University of Electronic Science and Technology of China*);

10:30 VMD-based Micro-Doppler Feature Extraction Method of UAVS for Millimeter Wave Radar
Liang Gui (*University of Electronic Science and Technology of China*); *Yu Hai* (*University of Electronic Science and Technology of China*); *Hui Kuang* (*China Academy of Space Technology*); *Junjie Wu* (*University of Electronic Science and Technology of China*); *Zhongyu Li* (*University of Electronic Science and Technology of China*); *Jianyu Yang* (*University of Electronic Science and Technology of China*);

10:45 Multi-task Cooperative Scheduling for Swarm UAV SAR Based on Two-stage Optimization Framework
Yinsong Luo (*University of Electronic Science and Technology of China*); *Zhichao Sun* (*University of Electronic Science and Technology of China*); *Zi Guan* (*University of Electronic Science and Technology of China*); *Hang Ren* (*University of Electronic Science and Technology of China*); *Junjie Wu* (*University of Electronic Science and Technology of China*); *Jianyu Yang* (*University of Electronic Science and Technology of China*);

Session 4A13b
Advanced and Intelligent Techniques in Electromagnetic Scattering and Imaging

Thursday AM, April 25, 2024

Room 13 - Siji 2

Organized by Xiao-Min Pan, Kuiwen Xu

Chaired by Xiao-Min Pan

11:00 Electromagnetic Inverse Scattering Super-resolution Imaging Based on Orbital Angular Momentum Wave
Shasha Hou (*Hangzhou Dianzi Univerisity*); *Kuiwen Xu* (*Hangzhou Dianzi University*);

11:15 Space Satellite Target Identification Based on Squeeze-and-Excitation Network
Dong Zeng (*Nanjing University of Science and Technology*); *Shaoran Wang* (*Nanjing University of Science and Technology*); *Ruixin Lai* (*Nanjing University of Science and Technology*); *Mengmeng Li* (*Nanjing University of Science and Technology*); *Dazhi Ding* (*Nanjing University of Science and Technology*);

11:30 A Channel Estimation Scheme for Internet of Vehicles Communications
Zheng Liu (*Beijing Institute of Technology*); *Xiao-Min Pan* (*Beijing Institute of Technology*);

11:45 Preliminary Test Study on RI Reconstruction Performance with Label-free Microscope Data by Inverse Scattering Algorithms
Yingying Qin (*UiT The Arctic University of Norway*); *Ankit Butola* (*UiT The Arctic University of Norway*); *Krishna Agarwal* (*UiT The Arctic University of Norway*);

12:00 Identification and Examination of Protein Compounds Using Raman Scattering and Machine Learning
Ekaterina Ponkratova (*ITMO University*);

Session 4A14
Recent Advances in Random Medium Scattering Theory and Remote Sensing Techniques

Thursday AM, April 25, 2024

Room 14 - Siji 3

Organized by Shurun Tan, Yanlei Du

Chaired by Shurun Tan, Yanlei Du

8:00 Effective Permittivity of Bi-continuous Media for the Applications in Microwave Remote Sensing of Firn Aaquifer and Wet Snow at L-band
Haokui Xu (*University of Michigan*); *Zhenming Huang* (*University of Michigan*); *Leung Tsang* (*University of Michigan*); *Brooke Medley* (*Earth Sciences Division, NASA Goddard Space Flight Center*); *Joel T. Johnson* (*The Ohio State University*); *Firoz Borah* (*University of Michigan*); *Roger de Roo* (*University of Michigan*);

8:15 An Extension of Comprehensive Layer Emission Model Based on Scattering Operators for Mountain Glacier with Basal Slope
Dongjin Bai (*National Space Science Center, Chinese Academy of Sciences*); *Xiaolong Dong* (*National Space Science Center, Chinese Academy of Sciences*); *Saibun Tjuatja* (*University of Texas at Arlington*); *Di Zhu* (*National Space Science Center, Chinese Academy of Sciences*); *Zijin Zhang* (*National Space Science Center, Chinese Academy of Sciences*);

8:30 Recent Advances in Geometric Representation of Wet Snow through a Tri-continuous Random Composite and Its Scattering Characterization with the Discrete Dipole Approximation
Jiayi Du (*University of Waterloo*); *Xin Lv* (*Zhejiang University*); *Yuanhao Cao* (*University of Waterloo*); *Shurun Tan* (*Zhejiang University/University of Illinois at Urbana-Champaign Institute*);

8:45 Microwave Scattering and Emission Variability from Snow-covered Sea Ice
Qi Song Wei (*Guilin University of Technology*); *Ying Yang* (*Nanjing University of Science and Technology*); *Kun-Shan Chen* (*Nanjing University*);

9:00 Abnormal Dip in Bistatic Transmission Coefficients for VV and VH Polarizations from Slightly Rough Surfaces with Exponential Correlation Functions
Honghu Wan (*Hubei University of Technology*); *Peng Xu* (*Hubei University of Technology*);

9:15 Analysis of P- to L-band Microwave Signatures from Snowmelt over Polar Ice Sheets Through a Partially Coherent Model
Syed Imran Haider (*Zhejiang University*); *Shurun Tan* (*Zhejiang University/University of Illinois at Urbana-Champaign Institute*);

9:30 THz Polarized Bistatic Scattering from Multiscale Rough Surface
Ying Yang (*Nanjing University of Science and Technology*); *Kun-Shan Chen* (*Nanjing University*);

9:45 Estimation of 1-km All-sky Land Surface Temperature by Integration of Passive Microwave and Thermal Infrared Remote Sensing Data through Random Forest
Xiaodong Zhang (*Shanghai Spaceflight Institute of TT&C and Telecommunication*); *Ruanyu Zhang* (*Shanghai Spaceflight Institute of TT&C and Telecommunication*); *Pingkai Wang* (*Shanghai Spaceflight Institute of TT&C and Telecommunication*); *Kesong Dong* (*Shanghai Spaceflight Institute of TT&C and Telecommunication*); *Lingge Qu* (*Shanghai Center for Meteorological Disaster Prevention Technology (Shanghai Lightning Protection Center)*); *Lifei Jiang* (*Shanghai Spaceflight Institute of TT&C and Telecommunication*);

10:00 **Coffee Break**

10:30 Inhomogeneous Soil Scattering through a Volume Integral Equation Based Numerical Maxwell Model of 3-D Simulations
Xuyang Bai (*Zhejiang University*); *Kaiqi Chen* (*Zhejiang University*); *Shurun Tan* (*Zhejiang University/University of Illinois at Urbana-Champaign Institute*);

10:45 A Backscattering Model for Non-Gaussian Sea Surface
Yuhua Guo (*State Key Laboratory of Space-Ground Integrated Information Technology*); *Zhilong Zhao* (*State Key Laboratory of Space-Ground Integrated Information Technology*); *Meng Wang* (*State Key Laboratory of Space-Ground Integrated Information Technology*); *Wenning Gao* (*State Key Laboratory of Space-Ground Integrated Information Technology*); *Xin Liu* (*State Key Laboratory of Space-Ground Integrated Information Technology*); *Yao Zhang* (*State Key Laboratory of Space-Ground Integrated Information Technology*); *Changhu Xue* (*State Key Laboratory of Space-Ground Integrated Information Technology*); *Zongqiang Liu* (*State Key Laboratory of Space-Ground Integrated Information Technology*); *Ying Zhang* (*State Key Laboratory of Space-Ground Integrated Information Technology*); *Zhenghuan Xia* (*Beijing Institute of Satellite Information Engineering*); *Shichao Jin* (*State Key Laboratory of Space-Ground Integrated Information Technology*);

11:00 A Comprehensive Multiple Scattering Characterization of Vegetated Land Surface Emission at L-band Using Radiative Transfer Theory
Shurun Tan (*Zhejiang University/University of Illinois at Urbana-Champaign Institute*); *Kaiqi Chen* (*Zhejiang University*);

11:15 Coastline Detection in Polarimetric SAR Images Based on GMM-HMM Segmentation Using Volume Scattering Component
Chun Liu (*Northwestern Polytechnical University*); *Yongchao Cheng* (*Northwestern Polytechnical University*); *Shicong Liu* (*Northwestern Polytechnical University*); *Qun Sun* (*Northwestern Polytechnical University*);

11:30 A Deep-learning-based Frontal Detection in the China Sea
Le Gao (*Institute of Oceanography, Chinese Academy of Sciences*); *Yi Yang* (*Institute of Oceanography, Chinese Academy of Sciences*); *Meng Jiao Wang* (*Institute of Oceanography, Chinese Academy of Sciences*); *Xiaofeng Li* (*Institute of Oceanology, Chinese Academy of Sciences*);

11:45 An Improved Doppler Radar Imaging Model for Retrieving Ocean Current Velocity from SAR Image under DCA Framework
Yanlei Du (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Junjun Yin* (*University of Science and Technology Beijing*); *Jian Yang* (*Tsinghua University*);

Session 4A15a
Computational Electromagnetics, Hybrid Methods and EMC 2

Thursday AM, April 25, 2024

Room 15 - Siji 4

Chaired by Naixing Feng, Yuxian Zhang

8:00 Random Forest Regression-based Model for Fitting Multilayer Isotropic Medium Scattering Problems
Shuiqing Zeng (*Anhui University*); *Huan Wang* (*Anhui University*); *Yuxian Zhang* (*Anhui University*); *ZhiXiang Huang* (*Anhui University*); *Naixing Feng* (*Anhui University*);

8:15 A Well-posed Spurious-free Electric-field Integral Equation Solver for Non-conformal h-adaptivity Electromagnetic Modeling
Ran Zhao (*University of Electronic Science and Technology of China*); *Yuyu Lu* (*Anhui University*); *Haojie Cao* (*University of Electronic Science and Technology of China*); *Jun Hu* (*University of Electronic Science and Technology of China*);

8:30 Fast Electromagnetic Simulations through Reduced-order Modeling
Liang Li (*University of Electronic Science and Technology of China*); *Kun Li* (*Southwestern University of Finance and Economics*); *Stephane Lanteri* (*Cote d'Azur University, Inria, CNRS, LJAD*); *Bin Li* (*University of Electronic Science and Technology of China*);

8:45 Reliable and Efficient Finite Elements Domain Decomposition Solvers for Large-scale Electromagnetic Computations
Wei Wang (*Hangzhou Dianzi University*);

9:00 A Theoretical Approach to Analyzing Electric Field Characteristics inside a Columnar Insulator with Exponentially Nonlinear Conductivity under Pulse Excitation
Minyu Mao (*Xi'an Jiaotong University*); *Jiawei Wang* (*Xi'an Jiaotong University*); *Jinghui Shao* (*Xi'an Jiaotong University*);

9:15 Random Forest Algorithm Based High Dimensional Space-mapping Method for Stratified Medium
Huan Wang (*Anhui University*); *Shuiqing Zeng* (*Anhui University*); *Yuxian Zhang* (*Anhui University*); *ZhiXiang Huang* (*Anhui University*); *Naixing Feng* (*Anhui University*);

9:30 Simulation of Simplified Cascade Waveguide Plasma Limiter under High Power Microwave
Lin Wang (*China West Normal University*); *Jiamin Wu* (*China West Normal University*); *Yusen Yang* (*China West Normal University*);

10:00 **Coffee Break**

Session 4A15b
Advanced Computational Electromagnetic Methods and Theory

Thursday AM, April 25, 2024

Room 15 - Siji 4

Organized by Juan Chen, Bing Wei

Chaired by Juan Chen

10:30 Optimization of Electric Field Sampling in DGTD Thin Wire Studies
Qian Yang (*Xidian University*); *Bing Wei* (*Xidian University*); *Linqian Li* (*Xidian University*);

10:45 Effects of Tangent Plane Approximation and Divergence Factor in Light Scattering by a Large Dielectric Object with Curved Surface
Ce Zhang (*Southeast University*); *Kuan Fang Ren* (*Normandie Universite, CNRS, Universite et INSA de Rouen*); *Wenming Yu* (*Southeast University*);

11:00 Propagation Characteristics of Layered Bianisotropic Chiral Media Based on Transfer Matrix Method
Samira Nemati Pehrabad (*University of Electronic Science and Technology of China*); *Mao Yan Wang* (*University of Electronic Science and Technology of China*); *Bing Liu* (*University of Electronic Science and Technology of China*);

11:15 Efficient Heterogeneous Scalable Finite Element Exterior Calculus Simulations for Electromagnetic Scattering on Manifold
Yifan Feng (*Zhengzhou University*); *Qiang Chen* (*Zhengzhou University*); *Tiankuo Wang* (*Zhengzhou University*); *Zeze Ning* (*Zhengzhou University*); *Xv Tao* (*Zhengzhou University*);

11:30 Analysis of the Influence of Underground Media on the Ground Field Characteristics in Low Altitude Explosion Source Areas
Zhao-Min Li (*Xidian University*); *Jia-Rong Dong* (*Xidian University*); *Bing Wei* (*Xidian University*);

11:45 Pushing the Discrete Dipole Approximation beyond the Limits
Evgenij Zubko (*Planetary Atmospheres Group, Institute for Basic Science (IBS)*); *Anton Kochergin* (*Institute of Applied Astronomy, Russian Academy of Science*); *Gorden Videen* (*Space Science Institute*);

Session 4A18a
Topological Optics

Thursday AM, April 25, 2024

Room 18 - Meilan

Organized by Shenhe Fu, Xinrui Lei

Chaired by Shenhe Fu, Xinrui Lei

8:00 Conversion and Superposition of Optical Stokes Skyrmion Topologies
Houan Teng (*University of Shanghai for Science and Technology*); *Jinzhan Zhong* (*University of Shanghai for Science and Technology*); *Jian Chen* (*University of Shanghai for Science and Technology*); *Xinrui Lei* (*University of Shanghai for Science and Technology*); *Qiwen Zhan* (*University of Shanghai for Science and Technology*);

8:15 Nanoplasmonic Color Router Utilizing Ultrasmall Asymmetric Structure for Communication Bands
Xianghua Liu (*University of Chinese Academy of Sciences*); *Jiahao Peng* (*University of Chinese Academy of Sciences*); *Ruxue Wang* (*University of Chinese Academy of Sciences*); *Aimin Wu* (*University of Chinese Academy of Sciences*);

8:30 Higher-order Topological States in Multidimensional Topological Photonic Crystals
Xiaoxue Li (*Southeast University*); *Guanghao Rui* (*Southeast University*); *Bing Gu* (*Southeast University*);

8:45 Manipulation of the Photonic Topological Spin Textures
Min Lin (*Shenzhen University*); *Luping Du* (*Shenzhen University*); *Xiao-Cong Yuan* (*Shenzhen University*);

9:00 Micro Optical Sensing Chips Based on Quasi-bound State
Junfeng Li (*Nanjing University of Science and Technology*); *Zekai Wang* (*Nanjing University of Science and Technology*); *Wenjie Sun* (*Nanjing University of Science and Technology*); *Yikai Chen* (*Nanjing University of Science and Technology*);

9:15 Dynamics of Topological Polarization Singularities in Momentum Space Based on Far-field Interference
Liangliang Liu (*University of Science and Technology of China*); *Haoqi Luo* (*University of Science and Technology of China*); *Yonghua Lu* (*University of Science and Technology of China*);

9:45 Multi-objective Optimization Design of Reflective Dual-band Linear-circular Polarizer Based on Surrogate Method
S. X. Wu (*China Three Gorges University*); *Z. Y. Wang* (*China Three Gorges University*); *Qinghe Zhang* (*Three Gorges University*);

10:00 **Coffee Break**

Session 4A18b
Metamaterials & Metasurface 1

Thursday AM, April 25, 2024

Room 18 - Meilan

Chaired by Diana V. Semenikhina

10:30 Underwater Ultrasound Non-diffractive Focusing Based on Airy Beams
Shumeng Yu (*Fudan University*); *Chuanxin Zhang* (*Fudan University*); *Xue Jiang* (*Fudan University*);

10:45 A Time-modulated Metasurface with Polarization Division Multiplexing for Wireless Communication Systems
Xiao Jie Lu (*Tongji University*); *Xiaoyi Wang* (*Tongji University*); *Mei Song Tong* (*Tongji University*);

11:00 Switchable Reflective Metasurfaces Composed of Line Resonators for Beam Control Function in X-band Range
Dwi Andi Nurmantris (*Telkom University*); *Achmad Munir* (*Bandung Institute of Technology*);

11:15 Combined Phase Coding of PB-metasurfaces with OAM Generation for Wide-angle RCS Reduction
Andrey I. Semenikhin (*Southern Federal University*); *Diana V. Semenikhina* (*Southern Federal University*); *Yury Vladimirovich Yukhanov* (*Southern Federal University*);

11:30 Digital PB-metasurfaces Based on 2-bit OAM Modules for Wide-angle RCS Reduction
Andrey I. Semenikhin (*Southern Federal University*); *Diana V. Semenikhina* (*Southern Federal University*); *Yury Vladimirovich Yukhanov* (*Southern Federal University*);

Session 4A19
Poster Session 7

Thursday AM, April 25, 2024
8:00 AM - 12:00 AM
Room Exhibition Area

1 Decoupling of Antipodal Vivaldi Antenna Array with Polarization Conversion Metasurface
Xiao-Jun Zou (*National University of Defense Technology*); *Ming Tan* (*National University of Defense Technology*); *Ya-Wei Wang* (*Air Force Engineering University*); *Wei Song* (*National University of Defense Technology*); *Hang Zhu* (*National University of Defense Technology*); *Hai-Yan Lv* (*National University of Defense Technology*); *Guo-Qin Kang* (*National University of Defense Technology*); *Guang-Ming Wang* (*Air Force Engineering University*);

2 Using FY-3E Data to Independently Retrieve Sea Ice Thickness
Yunjian Xie (*Nanjing University of Information Science and Technology*); *Yinqing Zhen* (*Nanjing University of Information Science and Technology*); *Qingyun Yan* (*Nanjing University of Information Science and Technology*);

3 Design of SIW Filtering Power Dividers Based on Fractal Metamaterial Slotted Resonators
Zhilin He (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Haoran Li* (*Southwest University of Science and Technology*); *Yuyu Zhu* (*Southwest University of Science and Technology*);

4 Design of a Miniaturized Low Sidelobe Slot Antenna Based on Dielectric Waveguide in X-band
Huai Jie Ke (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Yuyu Zhu* (*Southwest University of Science and Technology*); *Wei Yang* (*Southwest University of Science and Technology*);

5 Few-shot ISAR Target Recognition Method Based on Improved Prototype Networks
Shuai Xia (*Harbin Institute of Technology at Weihai*); *Aijun Liu* (*Harbin Institute of Technology at Weihai*); *Chang Jun Yu* (*Harbin Institute of Technology at Weihai*); *Benteng Lyu* (*Harbin Institute of Technology at Weihai*); *Hongbo Fei* (*Harbin Institute of Technology at Weihai*);

6 Enhanced Fourier Series for Precise Signal Analysis
Hsin-Jung Lee (*National Taiwan University*); *Cheng-Che Lee* (*National Taiwan University*); *Yi-Min Yang* (*National Taiwan University*); *Wei-Yu Lee* (*National Taiwan University*); *Chieh-Hsiung Kuan* (*National Taiwan University*);

7 A Study of Performance Assessment in Automotive Millimeter Wave Radar Industry
Huanlei Chen (*Shanghai Motor Vehicle Inspection Certification & Tech Innovation Center Co., Ltd.*); *Xiaolei Zhang* (*Shanghai Motor Vehicle Inspection Certification & Tech Innovation Center Co., Ltd.*); *Yafei Shen* (*Shanghai Motor Vehicle Inspection Certification & Tech Innovation Center Co., Ltd.*); *Li Shen* (*Shanghai Motor Vehicle Inspection Certification & Tech Innovation Center Co., Ltd.*);

8 Performance Evaluation Method of LiDAR in Rainfall Conditions
Xiaolei Zhang (*Shanghai Motor Vehicle Inspection Certification & Tech Innovation Center Co., Ltd.*); *Yafei Shen* (*Shanghai Motor Vehicle Inspection Certification & Tech Innovation Center Co., Ltd.*); *Li Shen* (*Shanghai Motor Vehicle Inspection Certification & Tech Innovation Center Co., Ltd.*);

9 A Broadband Circularly Polarized Patch Antenna Based on Bowknot-shaped Slot-coupled Feeding for UHF RFID Application
Hongmei Wang (*Dalian Maritime University*); *Zhongbao Wang* (*Dalian Maritime University*); *Yan Zhang* (*Dalian Maritime University*); *Shipeng Zhao* (*Dalian Maritime University*); *Hongmei Liu* (*Dalian Maritime University*);

10 Design of a New Low-power Relaxation Oscillator without Comparator
Jiaxiong Deng (*Southwest Jiaotong University*); *Quanyuan Feng* (*Southwest Jiaotong University*); *Zujing Zhang* (*Southwest Jiaotong University*);

11 Simulation Carbon Nano Tubes ***CNT*** Reliability for Hydrogen ***H*** Storage
Diyar Bajalan (*TU Wien*);

12 Equivalent Circuit Analysis Accelerated for Design of Bandpass Frequency Selective Surfaces
Minxin Zhao (*Nanjing University*); *Yuan-Cheng Shi* (*Nanjing University*); *Kai Xu* (*Nanjing University*); *Yangchen Hao* (*Nanjing University*); *Ruixin Wu* (*Nanjing University*);

13 Design of a Broadband High-gain Patch Antenna for 5G Millimeter-wave Applications
Tianhang Zhang (*Henan University*); *Ruina Lian* (*Xidian University*); *Di Wu* (*Shenzhen University*); *Mian Qin* (*Henan University*); *Jinlong Zhang* (*Henan University*);

14 A Multi-objective Antenna Optimization Method Based on Preferred Parameter Spaces
Jiangling Dou (*Kunming University of Science and Technology*); *Siyu Lin* (*Kunming University of Science and Technology*); *Jian Song* (*Kunming University of Science and Technology*); *Qingwang Wang* (*Kunming University of Science and Technology*); *Tao Shen* (*Kunming University of Science and Technology*);

15 A Conformal CP Antenna Based on Isotropic Holographic Metasurface
Hui Liang (*Hefei University of Technology*); *Zhaoneng Jiang* (*Hefei University of Technology*); *Shuai Meng* (*Hefei University of Technology*); *Cheng Peng* (*Hefei University of Technology*); *Weixing Gao* (*Hefei University of Technology*);

16 Investigation on X-band Wave Absorber Performance Characterized Using Two Horn Antennas
Budi Syihabuddin (*Institut Teknologi Bandung*); *Junas Haidi* (*Institut Teknologi Bandung*); *Mohammad Ridwan Effendi* (*Institut Teknologi Bandung*); *Achmad Munir* (*Bandung Institute of Technology*);

17 Mach-Zehnder Type Fiber Optic Sensor for pH Detection in Alizarin Red S Solutions
Mario Angel Rico-Mendez (*Universidad Autonoma de Nuevo Leon*); *Romeo Selvas-Aguilar* (*Universidad Autonoma de Nuevo Leon*); *Norma Patricia Puente-Ramirez* (*Universidad Autonoma de Nuevo Leon*); *Daniel Toral-Acosta* (*Universidad Autonoma de Nuevo Leon*); *Oxana V. Kharissova* (*Universidad Autonoma de Nuevo Leon*);

18 Intelligent Inversion of Magnetic Resonance Sounding Data Using Convolutional Neural Network
Meng Wei (*Jilin University*); *Yujing Yang* (*Jilin University*); *Tingting Lin* (*Jilin University*);

19 Development of Array Feeding Network with Beamforming Feature for Local Positioning System
Thirza Nabila Syafriady (*Institut Teknologi Bandung*); *Sarah Rahayu* (*Institut Teknologi Bandung*); *Budi Syihabuddin* (*Institut Teknologi Bandung*); *Hartuti Mistialustina* (*Institut Teknologi Bandung*); *Achmad Munir* (*Bandung Institute of Technology*);

20 Research Progress in Quantum Weak Measurement Methods for Chiral Molecule Detection
Yuanchang Zhang (*Southwest Institute of Technical Physics*); *Wei Zhang* (*Southwest Institute of Technical Physics*); *Pu Zeng* (*Southwest Institute of Technical Physics*); *Chaojun Zhao* (*Southwest Institute of Technical Physics*); *Shuai Huang* (*Southwest Institute of Technical Physics*); *Tong Li* (*Southwest Institute of Technical Physics*); *Xuele Wang* (*Southwest Institute of Technical Physics*); *Hai-Zhi Song* (*Southwest Institute of Technical Physics & UESTC*);

21 Predictive Analysis of IoT Systems Performance
Igor Tasic (*Universidad Politécnica de Cartagena*); *Tianhua Chen* (*Riga Technical University*); *Elans Grabs* (*Riga Technical University*); *Aleksandrs Ipatovs* (*Riga Technical University*); *Maria-Dolores Cano* (*Universidad Politécnica de Cartagena*);

22 TE Mode Surface Waves Excitation with Polarization-controlled Propagation Direction for Orthogonal Linear Polarized Incidences
Yueyu Meng (*Air Force Engineering University*); *Hua Ma* (*Air Force Engineering University*); *Weiyu Wang* (*Air Force Engineering University*); *Jingming Jiang* (*Air Force Engineering University*); *Lin Zheng* (*Air Force Engineering University*); *Jiafu Wang* (*Air Force Engineering University*); *Shaobo Qu* (*Air Force Engineering University*);

23 Project of 700 GHz/300 kW/10 ms Pulsed Gyrotron for Initiating and Studying Localized Gas Discharges
Mikhail Yu. Glyavin (*Institute of Applied Physics RAS*); *Vladimir N. Manuilov* (*Institute of Applied Physics RAS*); *I. V. Zotova* (*Institute of Applied Physics RAS*); *Ilya V. Zheleznov* (*Institute of Applied Physics, RAS*); *Houxiu Xiao* (*Huazhong University of Science and Technology*); *Xiaotao Han* (*Huazhong University of Science and Technology*); *Xianfei Chen* (*Huazhong University of Science and Technology*); *Shaozhe Zhang* (*Huazhong University of Science and Technology*);

24 Multi-target Tracking Method of Non-cooperative Bistatic Radar System Based on Improved PHD Filter
Chun Li (*National University of Defense Technology*); *Qinglong Bao* (*National University of Defense Technology*); *Jiameng Pan* (*National University of Defense Technology*);

25 The Influence of Cable Paths on Shielding Effectiveness Testing in a Reverberation Chamber
Wenxuan Huang (*Beihang Universary*); *Zongfei Zhou* (*Beihang University*); *Bing Li* (*Beihang University*);

26 Study of a Miniaturized Folded Waveguide Terahertz Traveling Wave Tube with the Cold Cathode Electron Source
Ruirui Jiang (*Nantong University*); *G. X. Wu* (*Nantong University*); *J. Shi* (*Nantong University*);

27 A Lightweight and Scalable Half-brick and Half-tile Design for X-band Digital T/R Sub-array
Nan Zhao (*Nanjing Marine Radar Institute*); *Tingfeng Jin* (*Nanjing Marine Radar Institute*); *Liu Yang* (*Nanjing Marine Radar Institute*); *Yuan Huang* (*National Key Laboratory of Electromagnetic Effect and Security on Marine Equipment and Nanjing Marine Radar Institute*); *Honghu Wu* (*Nanjing Marine Radar Institute*); *Xinmin Zhang* (*Nanjing Marine Radar Institute*);

28 Lateral Cavity Photonic Crystal Surface-emitting Quantum Cascade Laser at 9.4 µm
Ziyuan Liao (*Institute of Semiconductors, CAS*); *Yufei Wang* (*Institute of Semiconductors, CAS*); *Xuyan Zhou* (*Institute of Semiconductors, CAS*); *Yuzhe Lin* (*Institute of Semiconductors, CAS*); *Qi Aiyi* (*Institute of Semiconductors, Chinese Academyof Sciences*); *Wanhua Zheng* (*Institute of Semiconductors, CAS*);

29 A Spatiotemporal Correlation Sea Clutter Generation Method Based on Measured Data Characteristics
Zeng Peng (*China Research Institute of Radio Wave Propagation*); *Yushi Zhang* (*China Research Institute of Radio Wave Propagation*); *Xiaoyun Xia* (*Research Institute of Radio Wave Propagation*); *Jinpeng Zhang* (*National Key Laboratory of Electromagnetic Environment*); *Pengbo Du* (*Ocean University of China*); *Zhaohe Zeng* (*China Research Institute of Radio Wave Propagation*); *Zhi Heng Hua* (*Ocean University of China*);

30 Creating a Printed UWB Antenna for Local Navigation
A. M. Ignatov (*National Research University "Moscow Power Engineering Institute"*); *Polina Mikhailovna Nikitina* (*National Research University "Moscow Power Engineering Institute"*); *V. V. Trubetskoy* (*Moscow Technical University of Communications and Informatics (MTUCI)*); *S. A. Serov* (*National Research University "Moscow Power Engineering Institute"*); *Mikhail Sergeyevich Mikhailov* (*National Research University "Moscow Power Engineering Institute"*);

31 A High-Stability Crystal Oscillator with a Controllable Oscillation Amplitude
Lei Zhao (*Tongji University*); *Zhi Chong Wan* (*Tongji University*); *Mei Song Tong* (*Tongji University*);

32 Design of Chebyshev's Bandpass Filter Based on Square Open Loop Resonator (SOLR) at 5.8 GHz
Mikhail Sergeyevich Mikhailov (*National Research University "Moscow Power Engineering Institute"*); *Feras Habib Rammah* (*National Research University "Moscow Power Engineering Institute"*); *A. A. Komarov* (*National Research University "Moscow Power Engineering Institute"*);

33 A Wideband Monostatic Co-Circularly Polarized Simultaneous Transmit and Receive Antenna for 60-GHz Applications
Yaxin Li (*Shenzhen University*); *Junze Liang* (*Shenzhen University*); *Xudong Lu* (*Shenzhen University*); *Xiao-Chong Zhang* (*Shenzhen University*); *Yu-Xiang Sun* (*Shenzhen University*); *Di Wu* (*Shenzhen University*);

34 High-precision Atmospheric Aerosol Detection by Mi-escattering Lidar Combine with Raman Lidar
Jiyuan Cheng (*North MinZu University*); *Hu Zhao* (*North MinZu University*);

35 Microwave Energy Harvesting Metamaterial Absorber at Mobile Phone Communication Waveband (2.44 GHz)
C. Abdul Varis (*National Institute of Technology Calicut*); *Amogh Suseelan* (*National Institute of Technology Calicut*); *P. V. Arjun* (*National Institute of Technology Calicut*); *Barakathulla Asrafali* (*Shenzhen University*); *Zhengbiao Ouyang* (*Shenzhen University*); *Natesan Yogesh* (*National Institute of Technology Calicut*);

36 A Delay Calibration Method for the Multi-channel Broadband Microwave Photonic System
Yuan Huang (*National Key Laboratory of Electromagnetic Effect and Security on Marine Equipment and Nanjing Marine Radar Institute*); *Nan Zhao* (*Nanjing Marine Radar Institute*); *Shengguo Zhou* (*National Key Laboratory of Electromagnetic Effect and Security on Marine Equipment and Nanjing Marine Radar Institute*); *Mingming Sun* (*Nanjing Marine Radar Institute*); *Xinmin Zhang* (*Nanjing Marine Radar Institute*);

37 Control Points Rearrangement of Spline-based CPW-fed Spearhead Monopole Antenna Using Particle Swarm Optimizer
Agus Dwi Prasetyo (*Institut Teknologi Bandung*); *Trasma Yunita* (*Telkom University*); *Deny Hamdani* (*Institut Teknologi Bandung*); *Achmad Munir* (*Bandung Institute of Technology*);

38 Plasmonic Self-complementary Metasurface Supporting Broadband Polarization Degeneracy
Abanoub Mikhail (*ITMO University*); *Zarina F. Kondratenko (Sadrieva)* (*ITMO University*); *S. M. Asadulina* (*ITMO University*);

39 A Hybrid Excitation Method of Finite-gap Port Model in SIE for Electromagnetic Radiation Analysis
Zi-Qiang Wu (*Southwest University of Science and Technology*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Haoran Li* (*Southwest University of Science and Technology*); *Zhen-Yong Du* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yixiang Li* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yuyu Zhu* (*Southwest University of Science and Technology*); *Yu-Teng Zheng* (*DeTooLIC Technology Co., Ltd.*); *Bo Pu* (*DeTooLIC Technology Co., Ltd.*); *Jun Fan* (*Southwest University of Science and Technology*);

40 Coastal Regions Sea Surface Salinity Retrieval of SMAP MISSION Based on Light Gradient Boosting Model
Haoming Song (*Beijing Information Science and Technology University*); *Yifan Zhang* (*Beijing Information Science and Technology University*); *Biao Zhang* (*Beijing Information Science and Technology University*); *Yanfang Lv* (*Beijing Information Science and Technology University*); *Lanjie Zhang* (*Beijing Information Science and Technology University*);

41 Research on Construction Method of Maritime Environment Model Based on Distributed Electromagnetic Spectrum Monitoring System
Lihui Wang (*Hainan University*); *Yonghui Zhang* (*Hainan University*); *Zhenjia Chen* (*Hainan University*); *Po Shao* (*Hainan University*); *Ran Chen* (*Hainan University*); *Geyu Hou* (*Hainan University*);

42 Edge Detection of Plant Root Images Based on Improved Canny Algorithm
Ting Fang Tan (*Hainan University*); *Lihui Wang* (*Hainan University*); *Wen Long Zhou* (*Hainan University*);

43 Spatial Multiplexing Cascaded Metasurfaces
Zhixiang Fan (*Zhejiang University*); *Yuetian Jia* (*Zhejiang University*); *Chao Qian* (*Zhejiang University*); *Hongsheng Chen* (*Zhejiang University*);

44 Accurate RLC Extraction for Stripline Structures Using 2D-FEM
Chenxi Liu (*Southwest University of Science and Technology*); *Xiaoping Li* (*Southwest University of Science and Technology*); *Quan Deng* (*Southwest University of Science and Technology*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Yuyu Zhu* (*Southwest University of Science and Technology*); *Jun Fan* (*Southwest University of Science and Technology*);

45 A Multilayer Low-pass Frequency Selective Surface with Wide Stopband
Hao-Nan Huang (*Southwest University of Science and Technology*); *Chao Zou* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Haoran Li* (*Southwest University of Science and Technology*); *Zhen-Yong Du* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yixiang Li* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yuyu Zhu* (*Southwest University of Science and Technology*); *Yu-Teng Zheng* (*DeTooLIC Technology Co., Ltd.*); *Bo Pu* (*DeTooLIC Technology Co., Ltd.*); *Jun Fan* (*Southwest University of Science and Technology*);

46 Sensitivity-tunable Glucose Sensor Based on Tilted Fiber Bragg Gratings
Ruichen Dai (*Shanghai Maritime University*); *Feng Xu* (*Shanghai Maritime University*); *Jie Cao* (*Shanghai Maritime University*); *Xin Wang* (*Shanghai Maritime University*); *Mengjiao Ding* (*Shanghai Maritime University*); *Yunhe Zhao* (*Shanghai Maritime University*);

47 Research on Few-sample Target Recognition Algorithm Based on GAN Network
Bo Peng (*East China Normal University*); *Lei Kuang* (*East China Normal University*);

48 Development of a $\mathbf{4 \times 4}$ Microstrip Antenna Array in the X-band
A. S. Filimonov (*National Research University "Moscow Power Engineering Institute"*); *Andrey Alexeevich Pimenov* (*National Research University "Moscow Power Engineering Institute"*); *A. A. Novikov* (*National Research University "Moscow Power Engineering Institute"*); *Kirill Sergeyevich Sychev* (*National Research University "Moscow Power Engineering Institute"*); *Alexandr Alexandrovich Gladchenko* (*National Research University "Moscow Power Engineering Institute"*); *Mikhail Sergeyevich Mikhailov* (*National Research University "Moscow Power Engineering Institute"*);

49 Spin-orbital Conversion in Tightly Focused Optical Vortices with Vector Polarization
Sergey S. Stafeev (*Image Processing Systems Institute — Branch of the Federal Scientific Research Centre "Crystallography and Photonics" of RAS*); *Victor V. Kotlyar* (*Image Processing Systems Institute — Branch of the Federal Scientific Research Centre "Crystallography and Photonics" of RAS*);

50 Optical Hall Effect at the Tight Focus of Hybrid Vector Beams
Vladislav D. Zaitsev (*Samara National Research University*); *Sergey S. Stafeev* (*Image Processing Systems Institute — Branch of the Federal Scientific Research Centre "Crystallography and Photonics" of RAS*); *Victor V. Kotlyar* (*Image Processing Systems Institute — Branch of the Federal Scientific Research Centre "Crystallography and Photonics" of RAS*);

51 Beampattern Synthesis of Thinned Linear Arrays Using Artificial Neural Network
Can Cui (*Xi'an University of Science and Technology*); *Yue Hou* (*Xi'an University of Science and Technology*); *Yanhong Xu* (*Xi'an University of Science and Technology*); *Xuhui Fan* (*Xi'an University of Science and Technology*);

52 Terrain Classification with Airborne Multi-band PolSAR Data Based on Polarization Feature Registration
Shuo Li (*Beijing University of Chemical Technology*); *Hong Yang* (*Aerospace Information Research Institute, Chinese Academy of Sciences*); *Qiang Yin* (*Beijing University of Chemical Technology*); *Fan Zhang* (*Beijing University of Chemical Technology*);

53 Effect of Two PEC Metal Netting Models on Fields of Bounded-wave EMP Simulator
Xiang-Qin Zhu (*Northwest Institute of Nuclear Technology*); *Wei Wu* (*National Key Laboratory of Intense Pulsed Radiation Simulation and Effect*); *Yinjun Gao* (*National Key Laboratory of Intense Pulsed Radiation Simulation and Effect*); *Hongfu Xia* (*National Key Laboratory of Intense Pulsed Radiation Simulation and Effect*);

54 Thickness Dependent Electronic and Optical Characteristics of Mutilayer hBN/Graphene/MoS_2
Beitong Cheng (*Southwest Institute of Technical Physics*); *Yuyan Zhao* (*Southwest Institute of Technical Physics*); *Yong Zhou* (*Chengdu Technological University*); *Ruomei Jiang* (*Southwest Institute of Technical Physics*); *Xule Wang* (*Southwest Institute of Technical Physics*); *Shuai Huang* (*Southwest Institute of Technical Physics*); *Wei Zhang* (*Southwest Institute of Technical Physics*); *Hai-Zhi Song* (*Southwest Institute of Technical Physics & UESTC*);

55 Topology Construction Method of Distributed AD Hoc Network for Complex Maritime Electromagnetic Spectrum Environment
Songkun Chu (*Hainan University*); *Zhenjia Chen* (*Hainan University*); *Min Wang* (*Hainan University*);

56 The Relationship Between Microwave Irradiation Power Density and Rock Damage in Microwave-assisted Rock Breakage
Xiaoyun Zhao (*Chengdu University of Technology*);

57 Cross-domain SAR Object Detection by Efficiently Fine-tuning SAM
Kaiou Hu (*Beijing University of Chemical Technology*); *Hongjie Wan* (*Beijing University of Chemical Technology*); *Fei Ma* (*Beijing University of Chemical Technology*); *Fan Zhang* (*Beijing University of Chemical Technology*);

58 A Compact High-gain Array Antenna Based on Gap Waveguide Feed in W-band
Peng Sheng Nie (*Guilin University of Electronic Technology*); *YiJie Cao* (*The University of Sheffield*); *Li Li Sheng* (*Guilin University of Electronic Technology*); *Wei-Ping Cao* (*Guilin University of Electronic Technology*);

59 State Switching, Soliton Explosion and Chaos in the Multi-wavelength Ultrafast Fiber Laser
Zhi-Zeng Si (*Zhejiang A&F University*); *Zhen-Tao Ju* (*Zhejiang A&F University*); *Yue Yue Wang* (*Zhejiang A&F University*); *Chao-Qing Dai* (*Zhejiang Agriculture and Forestry University*);

60 Kinetic Vacuum Plasma Expansion Beyond the "Plasma Approximation"
Vasily Yu. Kozhevnikov (*Harbin Institute of Technology*); *Vladislav S. Igumnov* (*Harbin Institute of Technology*); *Chengxun Yuan* (*Harbin Institute of Technology*);

61 Broadband Independent Absorption Control for Orthogonal Circular Polarized Waves Using Achiral Active Metasurface
Yan Pang (*Air Force Engineering University*); *Yueyu Meng* (*Air Force Engineering University*);

62 High-Q Refractive Index Sensor Exploiting Quasi-bound States in the Continuum with Dielectric Metasurfaces for Enhanced Exosome Detection
Dang Du Nguyen (*Sungkyunkwan University*); *Inki Kim* (*Sungkyunkwan University*);

63 MBE Growth of Optically Active Ge Shell on GaAs Nanowires
Ziyue Yin (*University College London*); *Haotian Zeng* (*University College London*); *Giorgos Boras* (*University College London*); *Mingchu Tang* (*University College London*); *Huiyun Liu* (*University College London*);

64 Second Harmonic Generation with 9972%/W Efficiency on thin Film Lithium Niobate
Jian Cheng (*Huazhong University of Science and Technology*); *Yuzhao Dong* (*Huazhong University of Science and Technology*); *Dingshan Gao* (*Huazhong University of Science and Technology*);

65 A Scale-invariant Large-area Single-mode Topological Photonic Cavity
Zhongfu Li (*The Chinese University of Hong Kong, Shenzhen*); *Shiqi Li* (*Nanjing University*); *Bei Yan* (*Southern University of Science and Technology*); *Hsun-Chi Chan* (*The University of Hong Kong*); *Jing Li* (*The Chinese University of Hong Kong, Shenzhen*); *Jun Guan* (*The Chinese University of Hong Kong, Shenzhen*); *Wengang Bi* (*The Chinese University of Hong Kong, Shenzhen*); *Yuanjiang Xiang* (*Hunan University*); *Zhen Gao* (*Southern University of Science and Technology*); *Shuang Zhang* (*The University of Hong Kong*); *Peng Zhan* (*Nanjing University*); *Zhenlin Wang* (*Nanjing University*); *Biye Xie* (*The Chinese University of Hong Kong, Shenzhen*);

66 Simulation of Microwave Frequency Combs Generation in a W-band Helical Waveguide Gyro-TWT Locked by a Saturable Absorber
Michael Vilkov (*A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Naum S. Ginzburg* (*A. V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Irina V. Zotova* (*Institute of Applied Physics, RAS*); *Sergey V. Samsonov* (*Institute of Applied Physics, Russian Academy of Sciences*); *Alexander S. Sergeev* (*Institute of Applied Physics, RAS*);

67 Investigate Strong Coupling between Monolayer Crystal Light Emission and One-dimensional Bound States in the Continuums
Xinyi Zhao (*The Chinese University of Hong Kong*); *Fuhuan Shen* (*The Chinese University of Hong Kong*); *Zefeng Chen* (*The Chinese University of Hong Kong*); *Jianbin Xu* (*The Chinese University of Hong Kong*);

68 Functionality Multiplexing in High-efficiency Metasurfaces Based on Coherent Wave Interferences
Yuejiao Zhou (*Fudan University*); *Tong Liu* (*The Hong Kong University of Science and Technology*); *Changhong Dai* (*Fudan University*); *Dongyi Wang* (*Hongkong Baptist University*); *Lei Zhou* (*Fudan University*);

Session 4P1a
Quantum Entanglement and Its Applications 2

Thursday PM, April 25, 2024

Room 1 - Yarui

Organized by Yu Xiang, Meihong Wang, Xiaolong Su

Chaired by Yu Xiang, Meihong Wang

13:00 Invited Generation and Coherent Control of Multimode Entanglement Networks
Yin Cai (*Xi'an Jiaotong University*);

13:20 Invited Multi-wavelength Quantum Light Source in the Telecom C band
Yun-Ru Fan (*University of Electronic Science and Technology of China*);

13:40 Experimental Aspects of Causal Nonseparability
Yu Guo (*University of Science and Technology of China*);

13:55 Quantum Steering Swapping with Gaussian Entangled State
Na Wang (*Shanxi University*); *Meihong Wang* (*Shanxi University*); *Xiaolong Su* (*Shanxi University*);

Session 4P1b
Quantum Algorithms from The Ground Up

Thursday PM, April 25, 2024

Room 1 - Yarui

Organized by Hao Tang, Zizhu Wang

Chaired by Hao Tang

14:15 Gaussian Boson Sampling Validation via Detector Binning
Gabriele Bressanini (*Imperial College London*);

14:30 Invited Demystify Problem-dependent Power of Quantum Neural Networks on Multi-class Classification
Yuxuan Du (*JD Explore Academy*); *Yibo Yang* (*JD Explore Academy*); *Dacheng Tao* (*JD Explore Academy*); *Min-Hsiu Hsieh* (*Hon Hai (Foxconn) Research Institute*);

14:50 Information Compression via Hidden Subgroup Quantum Autoencoders
Feiyang Liu (*Southern University of Science and Technology*); *Kaiming Bian* (*Southern University of Science and Technology*); *Fei Meng* (*City University of Hong Kong*); *Wen Zhang* (*HiSilicon Research, Huawei Technology*); *Oscar Dahlsten* (*City University of Hong Kong*);

15:05 Invited Quantumness of Energy-storing Quantum Systems
Shao-Ming Fei (*Capital Normal University*); *Ming-Xing Luo* (*Southwest Jiaotong University*);

15:25 **Coffee Break**

16:00 Fast-forwarding with NISQ Processors without Feedback Loop
Kian Hwee Lim (*National University of Singapore*); *Tobias Haug* (*Imperial College London*); *Leong Chuan Kwek* (*National University of Singapore*); *Kishor Bharti* (*National University of Singapore*);

16:15 Invited Quantum Walks of Correlated Photons in Non-Hermitian Photonic Lattices
Chong Sheng (*Nanjing University*);

16:35 Invited Virtual Quantum Markov Chains
Yu-Ao Chen (*Hong Kong University of Science and Technology (Guangzhou)*); *Chengkai Zhu* (*Hong Kong University of Science and Technology (Guangzhou)*); *Keming He* (*Hong Kong University of Science and Technology (Guangzhou)*); *Mingrui Jing* (*Hong Kong University of Science and Technology (Guangzhou)*); *Xin Wang* (*Hong Kong University of Science and Technology (Guangzhou)*);

16:55 Invited Equivalence Checking of Quantum Circuits by Nonlocality
Weixiao Sun (*Tsinghua University*); *Zhaohui Wei* (*Tsinghua University*);

17:15 Analog Counterdiabatic Quantum Computing towards Quantum Usefulness
Qi Zhang (*Kipu Quantum*); *Enrique Solano* (*Kipu Quantum*); *Eric Michon* (*Kipu Quantum*);

17:30 Digitized Counterdiabatic Quantum Computing
Eric Michon (*Kipu Quantum*); *Qi Zhang* (*Kipu Quantum*); *Enrique Solano* (*Kipu Quantum*);

17:45 Measurement-driven Quantum Dynamics on a Photonic Chip
Hao Tang (*Shanghai Jiao Tong University*); *Xian-Min Jin* (*Shanghai Jiao Tong University*); *Xuan Chen* (*Shanghai Jiao Tong University*);

Session 4P2a
RF and Microwave Metamaterials for Wireless Communications 2

Thursday PM, April 25, 2024

Room 2 - Jincheng 3

Organized by Xiaojun Huang, He-Lin Yang

Chaired by Xiaojun Huang

13:00 Low-profile Dual-channel Coded Metasurface for Independent Phase Manipulation of Electromagnetic Waves
Xiaojun Huang (*Xi'an University of Science and Technology*);

13:15 Bifunctional Metamaterials with Linear-to-linear Polarization Conversion and Broadband Absorption
Zhaoyang Shen (*China Three Gorges University*);

13:30 Water-based Metamaterial with Thermal Tunability for Dual-band Absorption
Shangru Li (*Central China Normal University*); *He-Lin Yang* (*Huazhong Normal University*); *Shuyuan Gong* (*China Normal University*);

13:45 A Low-scattering Water-based Metasurface Array Antenna
Yuejie Yang (*Central China Normal University*); *Helin Yang* (*Central China Normal University*); *Shangru Li* (*Central China Normal University*);

14:00 A Metasurface with Switchable Reflection, Transmission and Absorption Functionalities
Xia Ma (*Northwestern Polytechnical University*); *Yanni Wang* (*Northwestern Polytechnical University*); *Feiran Bai* (*Northwestern Polytechnical University*); *Chen-Jiang Guo* (*Northwestern Polytechnical University*);

14:15 Broadband Polarization Reconfigurable Metasurface Antenna Using Characteristic Mode Analysis
Feiran Bai (*Northwestern Polytechnical University*); *Xun Qu* (*Northwestern Polytechnical University*); *Xia Ma* (*Northwestern Polytechnical University*); *Jun Ding* (*Northwestern Polytechnical University*);

14:30 A New Design Approach for CMT-based Low RCS Metasurface and Antenna
Yanni Wang (*Northwestern Polytechnical University*); *Xia Ma* (*Northwestern Polytechnical University*); *Feiran Bai* (*Northwestern Polytechnical University*); *Chen-Jiang Guo* (*Northwestern Polytechnical University*);

14:45 Imaging Quality Enhancement Based on Near-field Focusing and Synthetic Aperture Algorithm
Qifei Zhang (*China University of Geoscience*);

15:30 **Coffee Break**

Session 4P2b
Active and Reconfigurable Metasurfaces: Fundamentals and Applications

Thursday PM, April 25, 2024

Room 2 - Jincheng 3

Organized by Fuli Zhang, Yuancheng Fan

Chaired by Yuancheng Fan

16:00 Invited Artificial Optical Nonlinearity Generated by Metamaterial and Terahertz Applications
Yongzheng Wen (*Tsinghua University*);

16:20 Invited Band Degeneracy Conversions Determined by the Relative Homotopy: Realization and Characterization
Qian Zhao (*Tsinghua University*); *Maopeng Wu* (*Tsinghua University*); *Mingze Weng* (*Tsinghua University*); *Yonggang Meng* (*Tsinghua University*); *Ji Zhou* (*Tsinghua University*);

16:40 Nonreciprocal Wave Control with Active Acoustic Metamaterials
Xinhua Wen (*The Hong Kong University of Science and Technology*); *Jensen Li* (*Hong Kong University of Science and Technology*);

16:55 Smart Electromagnetic Manipulation Based on Programmable Metasurfaces
Yuanke Liu (*Southeast University*); *Wei Xiang Jiang* (*Southeast University*);

17:10 Smart Metasurface for Active and Passive Cooperative Manipulation of Electromagnetic Waves
Lixin Jiang (*Airforce Engineering University*); *Hao Yang* (*Airforce Engineering University*); *Yongfeng Li* (*Air Force Engineering University*); *Lin Zheng* (*Air Force Engineering University*); *Zhibiao Zhu* (*Air Force Engineering University*); *Zhe Qin* (*Air Force Engineering University*); *Yongqiang Pang* (*Air Force Engineering University*); *Jiafu Wang* (*Air Force Engineering University*); *Hongya Chen* (*Air Force Engineering University*); *Wanwan Yang* (*Air Force Engineering University*); *Shaobo Qu* (*Air Force Engineering University*);

17:25 Janus Faces of Dipole-matter Interactions with an Oriented Misalignment
Chenxu Bian (*Zhejiang University*); *Yuhan Zhong* (*Zhejiang University*); *Xuhuinan Chen* (*Zhejiang University*); *Tony Low* (*University of Minnesota*); *Hongsheng Chen* (*Zhejiang University*); *Baile Zhang* (*Nanyang Technological University*); *Xiao Lin* (*Zhejiang University*);

17:40 Dual-band Functionalities Switchable Reconfigurable Metasurface
Hamza Asif Khan (*Southeast University*); *Jingjing Zhang* (*Southeast University*); *Jun Wei Zhang* (*Southeast University*);

17:55 2-bit Conformal Reconfigurable Intelligent Metasurface for RCS Reduction
Pu-Fan Li (*Xidian University*); *Jia-Yuan Yin* (*Xidian University*); *Jing-Ya Deng* (*Xidian University*);

18:10 Dual Quasi-bound State Strongly Enhanced Second Harmonic Generation Using in Lithium Niobate Metasurfaces
Zhehao Ye (*Northwestern Polytechnical University*); *Kangyao Sun* (*Northwestern Polytechnical University*); *Weixi Qiu* (*Northwestern Polytechnical University*); *Hongkui Shi* (*Northwestern Polytechnical University*); *Yuancheng Fan* (*Northwestern Polytechnical University*); *Fuli Zhang* (*Northwestern Polytechnical University*);

Session 4P3
Mie-tronics and Metaphotonics 3

Thursday PM, April 25, 2024

Room 3 - Jincheng 2

Organized by Andrey A. Bogdanov, Yuri S. Kivshar

Chaired by Andrey A. Bogdanov, Yuri S. Kivshar

13:00 Invited Ultra-low-loss Optical Interconnect Enabled by Topological Unidirectional Radiation
Haoran Wang (*Peking University*); *Chao Peng* (*Peking University*);

13:20 Hybrid and Heterostructured Van Der Waals Metasurfaces for Control of Collective and Coherent Optical Effects
Alexei V. Prokhorov (*Moscow Institute of Physics and Technology*); *Alexander I. Chernov* (*Moscow Institute of Physics and Technology*); *Mikhail Yu. Gubin* (*Vladimir State University named after A. G. and N. G. Stoletovs*); *Sergey M. Novikov* (*Moscow Institute of Physics and Technology*); *Roman V. Kirtaev* (*Moscow Institute of Physics and Technology*); *Elena I. Titova* (*Moscow Institute of Physics and Technology*); *Davit A. Ghazaryan* (*Moscow Center for Advanced Studies*); *Adilet N. Toksumakov* (*Moscow Center for Advanced Studies*); *Alexander V. Shesterikov* (*Vladimir State University named after A. G. and N. G. Stoletovs*); *Mikhail K. Tatmyshevskiy* (*Moscow Center for Advanced Studies*); *Dmitry I. Yakubovsky* (*Mocsow Institute of Physics and Technology*); *Elena S. Zhukova* (*Moscow Institute of Physics and Technology*); *Aleksey V. Arsenin* (*Emerging Technologies Research Center, XPANCEO*); *Valentyn S. Volkov* (*Yerevan State University*);

13:35 Invited New Twists on Dielectric Chiral Meta-mirrors: Cavities, Polaritons, and van der Waals Platforms
Denis G. Baranov (*Chalmers University of Technology*);

13:55 Invited Chiral Electroluminescence from Perovskite Metacavities
Young Chul Jun (*Ulsan National Institute of Science and Technology*);

14:15 Chiral Luminescence by Metasurfaces with Maximum-chiral Eigenstates
Alexander Antonov (*Shubnikov Institute of Crystallography, FSRC "Crystallography and Photonics", RAS*); *Maxim V. Gorkunov* (*A. V. Shubnikov Institute of Crystallography, Russian Academy of Sciences*);

14:30 Temperature-tunable Photonic Bound State in the Continuum
Pavel Sergeevich Pankin (*Siberian Federal University*);

14:45 Invited Quasi-bound States in the Continuum in Ensembles of Quantum Emitters
Mihail I. Petrov (*ITMO University*); *N. Ustimenko* (*ITMO University*); *Danil F. Kornovan* (*ITMO University*); *Ilya A. Volkov* (*ITMO University*); *Roman S. Savelev* (*ITMO University*); *A. Sheremet* (*ITMO University*);

15:05 Enhancement of Photoluminescence of Colloidal Quantum Dots in Plasmonic Metasurfaces Supporting Bound State in the Continuum
Albert A. Seredin (*ITMO University*); *Kseniia V. Baryshnikova* (*ITMO University*); *Mihail I. Petrov* (*ITMO University*); *Aleksandr A. Sergeev* (*Institute of Automation and Control Processes, FEB, RAS*); *D. V. Pavlov* (*Institute of Automation and Control Processes of the FEB RAS*); *Aleksandr A. Kuchmizhak* (*Institute of Automation and Control Processes, Far Eastern Branch, Russian Academy of Science*); *K. A. Sergeeva* (*City University of Hong Kong*); *A. Sokolova* (*City University of Hong Kong*); *Andrey L. Rogach* (*City University of Hong Kong*);

15:20 Inverse Design of Stacked Cylinders Scatterers by Evolutionary Optimization
Vladimir Dmitrievich Igoshin (*ITMO University*); *Alexey Kokhanovskiy* (*Novosibirsk State University*); *Mihail I. Petrov* (*ITMO University*);

15:35 **Coffee Break**

16:00 Invited Hybrid Metal-dielectric Nanostructures: Optical Properties and Applications
Dmitry A. Zuev (*ITMO University*);

16:20 Invited Opto-mechanical Manipulation of $CrPbBr_3$ Perovskite Particles
Alexey Kokhanovskiy (*ITMO University*); *Mihail Vdovichenko* (*ITMO University Lomonosov*); *Gavriil Romanenko* (*ITMO University Lomonosov*); *Natalia Kostina* (*ITMO University Lomonosov*); *Qinghao Song* (*ITMO University Lomonosov*); *Irina Koryakina* (*ITMO University Lomonosov*); *Alexey Blazhenov* (*ITMO University*); *Olga Dalevskaya* (*ITMO University*); *Larisa Brylevskaya* (*ITMO University*); *Mikhail Zyuzin* (*ITMO University Lomonosov*); *Sergey Makarov* (*ITMO University*); *Mihail I. Petrov* (*ITMO University*);

16:40 Invited Encapsulated Plasmons in Dielectrics for Photonic Applications
Feng Chen (*Shandong University*);

17:00 Photonics of Topological Transition from Dielectric Ring to Split Ring
Mikhail E. Bochkarev (*ITMO University*); *Nikolay S. Solodovchenko* (*ITMO University*); *Kirill B. Samusev* (*ITMO University*); *Mikhail F. Limonov* (*ITMO University*);

17:15 Scattering Spectra and Hot Spots in Dielectric Ring and Ring-disk Dimer
Alina P. Chetverikova (*ITMO University*); *Kirill A. Bronnikov* (*Novosibirsk National Research State University*); *Nikolay S. Solodovchenko* (*ITMO University*); *Mikhail E. Bochkarev* (*ITMO University*); *Kirill B. Samusev* (*ITMO University*); *Mikhail F. Limonov* (*ITMO University*);

17:30 Rewritable Structure of an Arbitrary Topological Charge
Alexander I. Solomonov (*ITMO University*);

17:45 Semiconductor Nanowires for Resonant Enhancement, Light Guiding and Hybrid Sources Development
Invited
Alexey D. Bolshakov (*Moscow Institute of Physics and Technology*);

18:05 Tunable Microwave Cavity for Axion Dark Matter Search
Invited
R. Balafendiev (*ITMO University*); *Maxim A. Gorlach* (*ITMO University*); *Pavel A. Belov* (*ITMO University*);

Session 4P4a
Electromagnetic Metasurfaces and Their Applications in Antenna Designs

Thursday PM, April 25, 2024

Room 4 - Jincheng 1

Organized by Ke Chen, Kuang Zhang

Chaired by Ke Chen, Kuang Zhang

13:00 Design of Low-cost All Metal Electromagnetic Lens Based on Near-field Energy Focusing
Qifei Zhang (*China University of Geoscience*); *Linyan Guo* (*China University of Geosciences, Beijing*);

13:15 Dipolar Huygens-Kerker Radiation
Xuhuinan Chen (*Zhejiang University*); *Chan Wang* (*Zhejiang University*); *Yuhan Zhong* (*Zhejiang University*); *Baile Zhang* (*Nanyang Technological University*); *Hongsheng Chen* (*Zhejiang University*); *Xiao Lin* (*Zhejiang University*);

13:30 Waveguide Cavity Filter Based Gain-filtering 3D Transmitarray for Arbitrary Polarization and Wavefront Manipulation
Sen Yan (*Xi'an Jiaotong University*); *Yuanxi Cao* (*Xi'an Jiaotong University*);

13:45 A Novel Equivalent Circuit Model for the Design and Analysis of Square Loop Metamaterials
Ismail Abiola Shittu (*Khalifa University*); *Ibrahim (Abe) M. Elfadel* (*Khalifa University*);

14:00 Microwave Bifunctional Polarization-selective Metagratings
Ruimeng Zhang (*Xi'an Jiaotong University*); *Jiahui Ji* (*Xi'an Jiaotong University*); *Ziang Jiang* (*Xi'an Jiaotong University*); *Shixiong Wang* (*Xi'an Jiaotong University*); *Jian Jia Yi* (*Xi'an Jiaotong University*);

14:15 Tri-layered Metasurface for Diode-like Asymmetric Reflection of Circularly Polarized Electromagnetic Waves
V. Shanto (*National Institute of Technology Calicut*); *B. Aravind* (*National Institute of Technology Calicut*); *M. Pavithra* (*University of Madras (Guindy Campus)*); *K. Ravichandran* (*University of Madras (Guindy Campus)*); *Barkathulla Asrafali* (*Shenzhen University*); *Zhengbiao Ouyang* (*Shenzhen University*); *Natesan Yogesh* (*National Institute of Technology Calicut*);

14:30 Scattering Manipulation of Polarization Independent Metagratings with Large-angle Incidence
Shaojie Wang (*Nanjing University*); *Ke Chen* (*Nanjing University*); *Yijun Feng* (*Nanjing University*);

14:45 Polarization-Insensitive Rotationally Reconfigurable 2D Beam Scanning Based on Few-layer Bi-isotropic Huygens' Metasurfaces
Jinxing Li (*Harbin Institute of Technology*); *Yueyi Yuan* (*Harbin Institute of Technology*); *Qun Wu* (*Harbin Institute of Technology*); *Kuang Zhang* (*Harbin Institute of Technology*);

15:00 Coupling Reduction for Microstrip Antenna Array with Low RCS Performance
Xianliang Zeng (*National Key Laboratory of Electromagnetic Effect and Security on Marine Equipment*); *Weijun Wu* (*National Key Laboratory of Electromagnetic Effect and Security on Marine Equipment*); *Shuang Li* (*National Key Laboratory of Electromagnetic Effect and Security on Marine Equipment*); *Li Tao* (*National Key Laboratory of Electromagnetic Effect and Security on Marine Equipment*); *Jianpu Qiao* (*National Key Laboratory of Electromagnetic Effect and Security on Marine Equipment*); *Bo Luo* (*Changjiang Polytechnic*);

Session 4P4b
Metamaterials & Metasurface 2

Thursday PM, April 25, 2024

Room 4 - Jincheng 1

Chaired by Domna G. Kotsifaki

16:00 Tunable Asymmetric Transmission in Bulk Dirac Semimetal Based Terahertz Metamaterial
M. Pavithra (*University of Madras (Guindy Campus)*); *Barkathulla Asrafali* (*Shenzhen University*); *Zhengbiao Ouyang* (*Shenzhen University*); *K. Ravichandran* (*University of Madras (Guindy Campus)*); *Natesan Yogesh* (*National Institute of Technology Calicut*);

16:15 Sierpinski Metamaterial for Near-perfect Terahertz Tunable Broadband Absorber Using Vanadium Dioxide
Barkathulla Asrafali (*Shenzhen University*); *Fahim Khan* (*Shenzhen University*); *M. Pavithra* (*University of Madras (Guindy Campus)*); *K. Renuka Rani* (*Vellore Institute of Technology*); *Yaoxian Zheng* (*Xidian University*); *Natesan Yogesh* (*National Institute of Technology Calicut*); *Yin-Bing An* (*Shenzhen University*); *Zhengbiao Ouyang* (*Shenzhen University*);

16:30 Design of Reflective Metasurfaces and Signal Enhancement in Mine Tunnels
Xiaojun Huang (*Xi'an University of Science and Technology*);

16:45 Simultaneous Transmitting and Reflecting (STAR) Metasurface for Spin-decoupled Full-space Quadruplex Channels Independent Phase Modulation
Jianfeng Zhu (*South China University of Technology*); *Yang Yang* (*University of Technology Sydney*); *Shaowei Liao* (*South China University of Technology*); *Quan Xue* (*South China University of Technology*);

17:00 Optical Instrumentation Based on Metasurface Augmented Camera Systems at Visible Wavelenghts
Arturo Burguete-Lopez (*King Abdullah University of Science and Technology (KAUST)*); *M. Makarenko* (*King Abdullah University of Science and Technology (KAUST)*); *Q. Wang* (*King Abdullah University of Science and Technology (KAUST)*); *A. Fratalocchi* (*King Abdullah University of Science and Technology (KAUST)*);

17:15 Graphene-based Nonlinear Metasurfaces for Efficient
Invited Third Harmonic Generation at THz Frequencies
Odysseas Tsilipakos (*National Hellenic Research Foundation*); *A. Theodosi* (*Foundation for Research and Technology-Hellas*); *Maria Kafesaki* (*Research and Technology Hellas (FORTH)*); *Thomas Christopoulos* (*Aristotle University of Thessaloniki*); *Emmanouil E. Kriezis* (*Aristotle University of Thessaloniki*);

17:35 Microwave Computational Imaging with Programmable Metasurface through a Binary Inversion Method
Fang-Fang Wang (*Nanjing University of Posts and Telecommunications*); *Ming-Le Xu* (*Nanjing University of Posts and Telecommunications*);

17:50 Metal-enhanced Fluorescence Platform Based on Plasmonic Metamaterial
Yifei Gao (*Duke Kunshan University*); *Zilin Jiang* (*Duke Kunshan University*); *Domna G. Kotsifaki* (*Duke Kunshan University*);

18:05 Metasurface Encoder-based AI Sensing Platform for Ultra-sensitive Detection
Qizhou Wang (*King Abdullah University of Science and Technology (KAUST)*); *Ning Li* (*King Abdullah University of Science and Technology (KAUST)*); *Zhao He* (*King Abdullah University of Science and Technology (KAUST)*); *Arturo Burguete-Lopez* (*King Abdullah University of Science and Technology (KAUST)*); *Fei Xiang* (*King Abdullah University of Science and Technology (KAUST)*); *Andrea Fratalocchi* (*King Abdullah University of Science and Technology (KAUST)*);

Session 4P5a
Ultrafast Opto-spintronics Based Terahertz Radiation Sources and Their Applications

Thursday PM, April 25, 2024

Room 5 - Yingbin

Organized by Zuanming Jin

Chaired by Guohong Ma, Zhensheng Tao

13:00 Flexible Generation of Structured Terahertz Fields via
Invited Programmable Exchange-biased Spintronic Emitters
Shunjia Wang (*Fudan University*); *Wentao Qin* (*Fudan University*); *Tongyang Guan* (*Fudan University*); *Jingyu Liu* (*Capital Normal University*); *Qingnan Cai* (*Fudan University*); *Sheng Zhang* (*Fudan University*); *Lei Zhou* (*Fudan University*); *Yan Zhang* (*Capital Normal University*); *Yizheng Wu* (*Fudan University*); *Zhensheng Tao* (*Fudan University*);

13:20 Anomalous Nernst Effect Induced Terahertz Emission in
Invited a Single Ferromagnetic Film
Zheng Feng (*Institute of Electronic Engineering, CAEP*);

13:40 Terahertz Emission via Ultrafast Photothermoelectric
Invited Effects in Topological Semimetal Cd_3As_2
Wei Lu (*Songshan Lake Materials Laboratory*); *Dong Sun* (*Peking University*);

14:00 Superdiffusive Spin Transport in Cu Detected by Terahertz Time Domain Spectroscopy
C. Q. Liu (*National University of Defense Technology*);

14:15 Ultrafast Charge Transfer and Terahertz Emission in
Invited Graphene/TMDCs Heterostructures
Yuqing Zou (*Shanghai University*); *Yifan Cheng* (*Shanghai University*); *Cheng Wang* (*Shanghai University*); *Peng Suo* (*Shanghai University*); *Xian Lin* (*Shanghai University*); *Guohong Ma* (*Shanghai University*);

14:35 Intensity Enhancement and Active Manipulation of
Invited Spintronic Terahertz Emitters
Qiuping Huang (*University of Science and Technology of China*);

14:55 Ultrastrong Magnon-magnon Coupling in a c-cut Ter-
Invited bium Orthoferrite at 1.6 K
Xiangfeng Wang (*Fuzhou University*);

15:15 Cascaded Amplification and Manipulation of Terahertz
Invited Pulses Emitted from Flexible Spintronic Heterostructures
Zuanming Jin (*University of Shanghai for Science and Technology*); *Zhangshun Li* (*University of Shanghai for Science and Technology*); *Yingyu Guo* (*University of Shanghai for Science and Technology*); *Huixiang Hong* (*University of Shanghai for Science and Technology*); *Yan Peng* (*University of Shanghai for Science and Technology*); *Yiming Zhu* (*University of Shanghai for Science and Technology*);

15:35 **Coffee Break**

Session 4P5b
Space Time Optics

Thursday PM, April 25, 2024

Room 5 - Yingbin

Organized by Chenhao Wan, Wei Chen

Chaired by Wei Chen, Qian Cao

16:00 Invited — Spatiotemporal Coupling Induced Controllable Orientation of Photonic Orbital Angular Momentum
Guanghao Rui (*Southeast University*); *Zhaorui Zhang* (*Southeast University*);

16:20 Invited — Observation of Spatiotemporal Optical Vortices Enabled by Nonlocal Metasurfaces
Ting Xu (*Nanjing University*); *Pengcheng Huo* (*Nanjing University*);

16:40 Invited — Single-shot Recognition of Spatiotemporal Optical Vortex String and Its Application in Optical Communication
Shunlin Huang (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Jinping Yao* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Jun Liu* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Ruxin Li* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*);

17:00 Recent Progress in Spatiotemporal Optics Study
Qian Cao (*University of Shanghai for Science and Technology*); *Qiwen Zhan* (*University of Shanghai for Science and Technology*);

17:15 Invited — Generation of Spatiotemporal Acoustic Vortices with Arbitrarily Oriented Orbital Angular Momentum
Hao Ge (*Nanjing University*); *Shuai Liu* (*Nanjing University*); *Ming-Hui Lu* (*Nanjing University*); *Yan-Feng Chen* (*Nanjing University*);

17:35 Invited — Vectorial Liquid-crystal Holography
Zeyu Wang (*Nanjing University*); *Zhou Zhou* (*National University of Singapore*); *Han Zhang* (*Nanjing University*); *Yang Wei* (*Nanjing University*); *Hong-Guan Yu* (*Nanjing University*); *Wei Hu* (*Nanjing University*); *Wei Chen* (*Nanjing University*); *Haitao Dai* (*Tianjin University*); *Ling-Ling Ma* (*Nanjing University*); *Cheng-Wei Qiu* (*National University of Singapore*); *Yan-Qing Lu* (*Nanjing University*);

17:55 Invited — Real Time Measurements of Ultrafast Instabilities in a Dissipative Soliton System
Fanchao Meng (*Jilin University*);

18:15 Observation of Acoustic Floquet $\boldsymbol{\pi}$ Modes in a Time-varying Lattice
Zhaoxian Chen (*Nanjing University*); *An Chen* (*Nanjing University*); *Yu-Gui Peng* (*Huazhong University of Science and Technology*); *Zheng-Wei Li* (*Nanjing University*); *Bin Liang* (*Nanjing University*); *Jing Yang* (*Nanjing University*); *Xuefeng Zhu* (*Nanjing University*); *Yan-Qing Lu* (*Nanjing University*); *Jian-Chun Cheng* (*Nanjing University*);

Session 4P6
Acoustic Topological Metamaterials 2

Thursday PM, April 25, 2024

Room 6 - Huanhua

Organized by Zhiwang Zhang, Hai-Xiao Wang, Jiuyang Lu

Chaired by Zhiwang Zhang, Hai-Xiao Wang

13:00 Invited — Higher-order Topological Insulators in Two-dimensional Acoustic Crystals
Xueqin Huang (*South China University of Technology*); *Weiyin Deng* (*Wuhan University*); *Jiuyang Lu* (*Wuhan University*); *Gang Chen* (*Zhengzhou University*); *Zhengyou Liu* (*Wuhan University*);

13:20 Three-dimensional Flat Landau Levels in an Inhomogeneous Acoustic Crystal
Zheyu Cheng (*Nanyang Technological University*); *Yi-Jun Guan* (*Jiangsu University*); *Haoran Xue* (*The Chinese University of Hong Kong*); *Yong Ge* (*Institute of Acoustics, Chinese Academy of Sciences*); *Ding Jia* (*Jiangsu University*); *Yang Long* (*Nanyang Technological University*); *Shou-Qi Yuan* (*Jiangsu University*); *Hong-Xiang Sun* (*Jiangsu University*); *Yidong Chong* (*Nanyang Technological University*); *Baile Zhang* (*Nanyang Technological University*);

13:35 Invited — Topological States in Hermitian and Non-Hermitian Beams
Yabin Jin (*Tongji University*);

13:55 Braiding of Bloch Eigenmodes in a Non-Abelian Topological Phase with Quaternion Charge
Xiaoming Wang (*Hong Kong Baptist University*); *Guancong Ma* (*Hong Kong Baptist University*);

14:10 Boundary Induced Chiral Anomaly Bulk States and Their Transport Properties
Mudi Wang (*The Hong Kong University of Science and Technology*); *Zhengyou Liu* (*Wuhan University*); *Che Ting Chan* (*The Hong Kong University of Science and Technology*);

14:25 Engineering Topological States in Non-Hermitian Acoustic Crystals
Xulong Wang (*Hong Kong Baptist University*); *Wei Wang* (*Hong Kong Baptist University*); *Guancong Ma* (*Hong Kong Baptist University*);

14:40 Acoustic Realization of Multiple Topological Corner Modes in a Coupling-inverted Phononic Crystal
Dongyi Wang (*Hongkong Baptist University*); *Yuanchen Deng* (*The Pennsylvania State University*); *Jun Ji* (*The Pennsylvania State University*); *Mourad Oudich* (*The Pennsylvania State University*); *Wladimir A. Benalcazar* (*Emory University*); *Guancong Ma* (*Hong Kong Baptist University*); *Yun Jing* (*The Pennsylvania State University*);

14:55 Invited Stiefel-Whitney Topological Charges in a Three-dimensional Acoustic Nodal-line Crystal
Haoran Xue (*The Chinese University of Hong Kong*); *Z. Y. Chen* (*Nanjing University*); *Zheyu Cheng* (*Nanyang Technological University*); *J. X. Dai* (*Nanjing University*); *Yang Long* (*Nanyang Technological University*); *Yixin Zhao* (*Nanjing University*); *Baile Zhang* (*Nanyang Technological University*);

15:15 Invited Topological Materials for Full-vector Elastic Waves
Ying Wu (*Nanjing University of Science and Technology*); *Jiuyang Lu* (*Wuhan University*); *Xueqin Huang* (*South China University of Technology*); *Feng Li* (*Beijing Institute of Technology*); *Weiyin Deng* (*Wuhan University*); *Zhengyou Liu* (*Wuhan University*);

15:35 **Coffee Break**

16:00 Anomalous Floquet Topological Edge States in Active System
Minqi Cheng (*Southern University of Science and Technology*); *Jingming Chen* (*Southern University of Science and Technology*); *Linyun Yang* (*Southern University of Science and Technology*); *Zhen Gao* (*Southern University of Science and Technology*);

16:15 Invited Analytic Solution of n-dimensional Su-Schrieffer-Heeger Model
Feng Liu (*Ningbo University*);

16:35 Realization of the Quantum Spin Hall Effect Based on Tunable Topological Acoustic Metamaterials
Jia-He Chen (*Soochow University*); *Zhi Hong Hang* (*Soochow University*);

16:50 Invited Robust Topological Edge States Induced by Latent Mirror Symmetry
Li-Yang Zheng (*Shenzhen Campus of Sun Yat-sen University*);

17:10 Acoustic Three-dimensional Chern Insulators with Arbitrary Chern Vectors
Linyun Yang (*Southern University of Science and Technology*); *Xiang Xi* (*Southern University of Science and Technology*); *Yan Meng* (*Southern University of Science and Technology*); *Zhenxiao Zhu* (*Southern University of Science and Technology*); *Bei Yan* (*Southern University of Science and Technology*); *Gui-Geng Liu* (*Nanyang Technological University*); *Baile Zhang* (*Nanyang Technological University*); *Zhen Gao* (*Southern University of Science and Technology*);

17:25 Tunable Topological States in Typical Two-dimensional Intrinsic Magnetic Topological Materials
Jiaheng Li ();

17:40 Brillouin Klein Space and Half-turn Space in Three-dimensional Acoustic Crystals
Zhenxiao Zhu (*Southern University of Science and Technology*); *Zhen Gao* (*Southern University of Science and Technology*);

17:55 Observation of Topological Properties of Non-Hermitian Acoustic Crystals with Diversified Coupled Resonators Units
Weiying Sun (*Guangdong University of Technology*); *Kaiyan Zhang* (*Guangdong University of Technology*); *Li Luo* (*Guangdong University of Technology*); *Xin Zhang* (*Guangdong University of Technology*);

18:10 Invited Antichirality Emergent in Type-II Weyl Sonic Crystals
Mou Yan (*Zhengzhou University*); *Xueqin Huang* (*South China University of Technology*); *Jien Wu* (*South China University of Technology*); *Weiyin Deng* (*Wuhan University*); *Jiuyang Lu* (*South China University of Technology*); *Zhengyou Liu* (*Wuhan University*);

Session 4P7
Emerging Technologies in Optical Metasurfaces

Thursday PM, April 25, 2024

Room 7 - Xiling

Organized by Dandan Wen, Xianzhong Chen

Chaired by Xianzhong Chen

13:00 Invited Metasurfaces for Engineering 3D Polarization Structures and Grafted Vortex Beams
Xianzhong Chen (*Heriot-Watt University*);

13:20 Invited Efficient Polarization Conversionwith Double-layer Metal Metasurface
Yan Zhang (*Capital Normal University*); *Jingyu Liu* (*Capital Normal University*); *Xinke Wang* (*Capital Normal University*);

13:40 Multi-foci Metalens with Customized Polarization and Dispersion
Ruoxing Wang (*North China Electric Power University*);

13:55 Nanoprinted Diffractive Layers-integrated Vertical-cavity Surface-emitting Vortex Lasers with Scalable Topological Charge
Yibo Dong (*University of Shanghai for Science and Technology*); *Xinyuan Fang* (*University of Shanghai for Science and Technology*);

14:10 Invited The Complex Optical Response of Hybrid Metasurfaces
D. Ray (*Indian Institute of Technology Kanpur*); *A. Kiselev* (*Swiss Federal Institute of Technology Lausanne (EPFL)*); *Olivier J. F. Martin* (*Swiss Federal Institute of Technology Lausanne (EPFL)*);

14:30 Vectorial Holography for Independent Intensity and Polarization Control
Kai Pan (*Northwestern Polytechnical University*); *Xuanguang Wu* (*Northwestern Polytechnical University*); *Liang Zhou* (*Northwestern Polytechnical University*); *Bing-Yan Wei* (*Northwestern Polytechnical University*); *Dong Li* (*Northwestern Polytechnical University*); *Sheng Liu* (*Northwestern Polytechnical University*); *Peng Li* (*Northwestern Polytechnical University*); *Dexing Yang* (*Northwestern Polytechnical University*); *Jian-Lin Zhao* (*Northwestern Polytechnical University*); *Dandan Wen* (*Northwestern Polytechnical University*);

14:45 Design Method for Broadband Metasurfaces with a Function of a Two-dimensional Axicon Lens
Tsutomu Nagayama (*Kagoshima University*);

15:00 **Coffee Break**

16:00 Topological Corner States of 2D SSH Metasurfaces for Wireless Power Transfer
Jie Jiang (*Tongji University*); *Zhiwei Guo* (*Tongji University*); *Hong Chen* (*Tongji University*);

16:15 Visible and Near-infrared Spectroscopy Based on Silicon Metasurface
Kaikai Gao (*Northwestern Polytechnical University*); *Dandan Wen* (*Northwestern Polytechnical University*);

16:30 Tunable All-dielectric Metasurface with Indium Tin Oxide for Active Control of Light Transmission
Ruize Ma (*Northwestern Polytechnical University*); *Dandan Wen* (*Northwestern Polytechnical University*);

16:45 Inverse Design of Metasurface with Arbitrary Q-factor
Invited Fano Resonance via Bidirectional Neural Networks
Qingguo Du (*Wuhan University of Technology*); *Lei Zhang* (*Wuhan University of Technology*); *Yi Tian* (*Wuhan University of Technology*); *Song Sun* (*Wuhan University of Technology*);

17:05 Monocular Metasurface Camera for Single-shot Multi-
Invited dimensional Imaging
Yuanmu Yang (*Tsinghua University*);

Session 4P8a
Integrated Nano-opto-(electro-)mechanical Systems (NOEMS and NOMS)

Thursday PM, April 25, 2024

Room 8 - Guixiang

Organized by Huan Li, Lei Wan

Chaired by Huan Li, Lei Wan

13:00 Frequency Conversion in Optomechanical Microres-
Invited onators
Zhen Shen (*University of Science and Technology of China*); *Yan-Lei Zhang* (*University of Science and Technology of China*); *Guan-Ting Xu* (*University of Science and Technology of China*); *Mai Zhang* (*University of Science and Technology of China*); *Yu Wang* (*University of Science and Technology of China*); *Cheng-Zhe Chai* (*University of Science and Technology of China*); *Changling Zou* (*University of Science and Technology of China*); *Guang-Can Guo* (*University of Electronic Science and Technology of China*); *Chun-Hua Dong* (*University of Science and Technology of China*);

13:20 Several Novel Applications of Integrated Optomechani-
Invited cal Devices
Lei Shi (*Huazhong University of Science and Technology*);

13:40 The Casimir Effect and Its Applications in Micro/Nano Manipulations
Lixin Ge (*Xinyang Normal University*); *Xi Shi* (*Shanghai Normal University*); *Ke Gong* (*Xinyang Normal University*);

13:55 Mode-coupling and Phonon Dynamics in Nano-electro-
Invited mechanical Systems
Guangwei Deng (*University of Electronic Science and Technology of China*);

14:15 Efficient and Wideband Acousto-optic Modulation
Invited Based on Chalcogenide Loaded Lithium Niobate on Insulator Platform
Jiantao Jiang (*Jinan University*); *Lei Wan* (*Jinan University*); *Jiying Huang* (*Jinan University*); *Hongyi Huang* (*Jinan University*); *Weiping Liu* (*Jinan University*); *Zhaohui Li* (*Sun Yat-sen University*);

14:35 Highly Efficient In-plane Electronic-photonic-phononic
Invited Circuit Crossings for Suspended Silicon Photonics
Bingrui Lu (*Technical University of Denmark*); *Babak Vosoughi Lahijani* (*Technical University of Denmark*); *Marcus Albrechtsen* (*Technical University of Denmark*); *Rasmus E. Christiansen* (*Technical University of Denmark*); *Christian A. Rosiek* (*Technical University of Denmark*); *Konstantinos Tsoukalas* (*Technical University of Denmark*); *Mathias T. Sutherland* (*Technical University of Denmark*); *Soren Stobbe* (*Technical University of Denmark*);

14:55 Harnessing MEMS to Expand the Horizons of Silicon
Invited Photonics: Optical Switch, Programmable Photonics, LiDAR, and Ultrasound Sensor
Sangyoon Han (*Daegu Gyeongbuk Institute of Science and Technology (DGIST)*);

15:15 Integrated Silicon Photonic MEMS Devices and Circuits
Invited
Huan Li (*Zhejiang University*); *Yinpeng Hu* (*Zhejiang University*); *Ye Lu* (*Zhejiang University*); *Qian Ma* (*Zhejiang University*); *Daoxin Dai* (*Zhejiang University*);

15:35 **Coffee Break**

Session 4P8b
Liquid Crystal Photonics

Thursday PM, April 25, 2024

Room 8 - Guixiang

Organized by Deng-Ke Yang

Chaired by Peter Palffy-Muhoray, Huai Yang

16:00 Flexoelectric Effect in Liquid Crystals and Its Applications in Smart Window
Deng-Ke Yang (*Kent State University*); *Yunho Shin* (*Kent State University*); *Yingfei Jiang* (*Kent State University*); *Suman Halder* (*Kent State University*); *Ziyuan Zhou* (*Kent State University*); *Xinfang Zhang* (*Kent State University*); *Lang Hu* (*Kent State University*);

16:15 Invited Nontrivial Polar Switching in Ferroelectric Nematic Fluids
Satoshi Aya (*South China Advanced Institute for Soft Matter Science and Technology (AISMST)*);

16:30 Ferroelectric Nematic Liquid Crystal Materials with Large Birefringence and Low Driving Voltage
Mingjun Huang (*South China University of Technology*); *Satoshi Aya* (*South China University of Technology*); *Yaohao Song* (*South China University of Technology*);

16:45 Invited Beam Shaping via Photopatterned Liquid Crystals
Wei Hu (*Nanjing University*); *Chun-Ting Xu* (*Nanjing University*); *Quan-Ming Chen* (*Nanjing University*);

17:00 Invited Photopatterning of Molecular Orientations and Its Applications
Miao Jiang (*Southern University of Science and Technology*); *Hai Yun* (*Southern University of Science and Technology*); *Songxu Jiang* (*Southern University of Science and Technology*); *Hao Chen* (*Southern University of Science and Technology*); *Qi-Huo Wei* (*Southern University of Science and Technology*);

17:15 Chirality and Optical Torque
Xiaoyu Zheng (*Kent State University*); *Peter Palffy-Muhoray* (*Kent State University*);

17:30 Invited Intelligent Light Transmittance Controllable Films Based on a Polymer Dispersed & Stabilized Liquid Crystal System
Huai Yang (*Peking University*);

17:50 Photoelectric Display Film of Liquid Crystals
Zemin He (*Northwestern Polytechnical University*); *Zongcheng Miao* (*Northwestern Polytechnical University*);

18:05 2D Soft Robotic Functions Formed in Liquid Crystal Polymer Networks
Danqing Liu (*Eindhoven University of Technology*);

Session 4P9a
Advanced Materials and Devices for Photoelectric Detection

Thursday PM, April 25, 2024

Room 9 - Xinyu

Organized by Yan-Li Shi, Donghai Wu

Chaired by Yan-Li Shi, Donghai Wu

13:00 Invited Broadband Colloidal Quantum-dot Infrared Imagers
Xin Tang (*Beijing Institute of Technology*);

13:15 Invited HOT MWIR Photodetector Development with Ga-free Type-II Superlattices
Donghai Wu (*Institute of Semiconductor, CAS*); *Yifan Shan* (*Institute of Semiconductors, Chinese Academy of Sciences*); *Dongwei Jiang* (*Institute of Semiconductors, Chinese Academy of Sciences*); *Hongyue Hao* (*Institute of Semiconductors, Chinese Academy of Sciences*); *Guowei Wang* (*Institute of Semiconductors, Chinese Academy of Sciences*); *Yingqiang Xu* (*Institute of Semiconductors, Chinese Academy of Sciences*); *Zhichuan Niu* (*Institute of Semiconductors, Chinese Academy of Sciences*);

13:30 Invited Se-stabilized HgTe Quantum Dots for High-performance Photodetectors
Mengxuan Yu (*Huazhong University of Science and Technology*); *Ji Yang* (*Huazhong University of Science and Technology*); *Xingchen Zhang* (*Huazhong University of Science and Technology*); *Mohan Yuan* (*Huazhong University of Science and Technology*); *Xinzheng Lan* (*Huazhong University of Science and Technology*);

13:45 Infrared Photodetection Based on Plasmon-induced Hot Carriers
Yuanfang Yu (*Nanjing University of Posts and Telecommunications*);

14:00 Invited Key Technologies of SPAD Interface Circuit
Lixia Zheng (*Southeast University*);

14:15 Invited Neuron Inspired Printable Photochromic Micro Power Supply
Zelin Lu (*Beihang University*); *Fan Wang* (*Beihang University*); *Xiaolan Zhong* (*Beihang University*);

14:30 Invited Digital Readout Techniques for Infrared Focal Plane Arrays
Libin Yao (*Kunming Institute of Physics*);

14:45 Invited Linear/Single-photon Dual-mode Adaptive Detection in the Near-infrared with InGaAs/InP SPAD
Linshan Sun (*Shandong University*); *Junliang Liu* (*Shandong University*); *Yakui Dong* (*Shandong University*); *Yongfu Li* (*Shandong University*); *Xian Zhao* (*Shandong University*);

15:00 Recent Progress in Type II Superlattice Based MW-LW Dual-band Infrared Photodetectors
Invited
Ming Liu (*North China Research Institute of Electro-Optics*); *Yunong Hu* (*North China Research Institute of Electro-Optics*); *Peng Zhou* (*North China Research Institute of Electro-Optics*);

15:15 Enhancing Infrared Detection through Metamaterial Perfect Absorber and Metasurface Micro-lens Array
Invited
Song Yue (*Institute of Microelectronics of the Chinese Academy of Sciences*); *Xinyu Liu* (*Institute of Microelectronics of Chinese Academy of Sciences*); *Maojing Hou* (*Institute of Microelectronics of Chinese Academy of Sciences*); *Ran Wang* (*Institute of Microelectronics of Chinese Academy of Sciences*); *Zichen Zhang* (*Institute of Microelectronics of Chinese Academy of Sciences*);

15:35 **Coffee Break**

16:00 Performance Optimization of 3-gain-stage InGaAs/InAlAs Avalanche Photodetector
Invited
Tong Sun (*Beijing University of Posts and Telecommunications*); *Xiaoning Guan* (*Beijing University of Posts and Telecommunications*); *Xueyan Yang* (*Beijing University of Posts and Telecommunications*); *Pengfei Lu* (*Beijing University of Posts and Telecommunications*); *Feng Zhou* (*Beijing University of Posts and Telecommunications*);

16:15 A Discussion on the Design Space of GaN APDs
Invited
Dong Ji (*The Chinese University of Hong Kong*);

16:30 Deep UV Photodetector with Ultra-low Dark Current Using Self-assembled hBN Nanosheets
Invited
Qiang Li (*Xi'an Jiaotong University*); *Qifan Zhang* (*Xi'an Jiaotong University*); *Feng Yun* (*Xi'an Jiaotong University*); *Tao Wang* (*University of Sheffield*); *Yue Hao* (*Xidian University*);

Session 4P9b
Advanced Simulation Methods, Designs and Mechanisms for Energy Photonics

Thursday PM, April 25, 2024

Room 9 - Xinyu

Organized by Zhenhai Yang, Guoyang Cao

Chaired by Zhenhai Yang, Guoyang Cao

17:00 High-efficiency Dopant-free Interdigitated Back Contact Silicon Solar Cells by Optimizing the Transition Region
Zhaolang Liu (*Sun Yat-sen University*); *Hao Lin* (*Sun Yat-sen University*); *Pingqi Gao* (*Sun Yat-sen University*);

17:15 Optical and Electrical Analysis of an Advanced 4T All-perovskite Tandem Solar Cell
Zhaosheng Xia (*Anhui University*); *Xingang Ren* (*Anhui University*); *Shengyang Wei* (*Anhui University*); *Zhi-Xiang Huang* (*Anhui University*);

17:30 Simulation and Experiments of All-perovskite Tandem Solar Cells
Changlei Wang (*Soochow University*); *Dewei Zhao* (*Sichuan University*); *Xiaofeng Li* (*Soochow University*);

17:45 Halide Controlling in Perovskites Solar Cells
Weichuang Yang (*Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences*); *Zhenhai Yang* (*Soochow University*); *Jichun Ye* (*Ningbo Institute of Material Technology and Engineering, Chinese Academy of Sciences*);

18:00 Recent Advances in the Optical Management of Perovskite/Silicon Tandem Cells
Zhiqin Ying (*Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences (CAS)*); *Xi Yang* (*Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences (CAS)*); *Jichun Ye* (*Ningbo Institute of Material Technology and Engineering, Chinese Academy of Sciences*);

Session 4P10a
Antennas, Array Antennas, MIMO Antenna for 5G

Thursday PM, April 25, 2024

Room 10 - Shuliu

Chaired by Mikhail Sergeyevich Mikhailov, Qing Zhao

13:00 Toward Dual-band Circularly Polarized Antenna for High-precision Marine BeiDou Satellite Navigation Application — Improvements of Antenna Structure and Quadrature Feed Network
Yan Zhang (*Dalian Maritime University*); *Hongmei Liu* (*Dalian Maritime University*); *Sihan Liu* (*Dalian Maritime University*); *Youjie Zeng* (*Dalian Maritime University*); *Shuo Li* (*Dalian Maritime University*);

13:15 Low-profile Triple-band $\mathbf{4 \times 4}$ MIMO Antenna for 5G Mobile Terminal Applications
Le Chang (*Xi'an Jiaotong University*); *Heng Zhang* (*Xi'an Jiaotong University*);

13:30 Millimeter Wave Broadband Antenna in Package for 5G Communication
Guo-Hong Du (*University of Science and Technology of China*); *Mingli Chen* (*Chengdu University of Information Technology*); *Yunhao Li* (*Chengdu University of Information Technology*); *Xiangyong Mou* (*Chengdu University of Information Technology*); *Xiaofeng Sun* (*Chengdu University of Information Technology*);

13:45 A Four-element Ultra-wideband MIMO Antenna with High Isolation for IOT Applications
Lu Yi Liu (*Tongji University*); *Peng Rui Zhang* (*Tongji University*); *Ajay K. Poddar* (*Synergy Microwave Corporation*); *Ulrich L. Rohde* (*Synergy Microwave Corporation*); *Mei Song Tong* (*Tongji University*);

14:00 Solid-state Quad-nanopore Array for High-resolution Single-molecule Analysis and Discrimination
Qing Zhao (*Peking University*);

14:15 A SISL High Gain Filtering Dielectric Resonator Antenna for 5G Millimeter-wave Applications
Hongyan Yuan (*Tianjin University*); *Ningning Yan* (*Tianjin University*); *Yu Luo* (*Tianjin University*); *Kaixue Ma* (*Tianjin University*);

14:30 Algorithm for Discrete Message Receiving in MIMO Antennas Using a Memory Model
Anvar Maratovich Ibragimov (*National Research University "MPEI"*); *Mikhail Sergeyevich Mikhailov* (*National Research University "Moscow Power Engineering Institute"*); *Evgeniy P. Smirnov* (*JSC "VNIIRT"*);

Session 4P10b
Metamaterials/Metasurface Antennas

Thursday PM, April 25, 2024

Room 10 - Shuliu

Chaired by Yujie Zhang

14:45 A High-gain Circularly Polarized Magnetoelectric Dipole Antenna Array
Jin Tian (*Jimei University*); *Jun Xiao* (*Jimei University*); *Jing Wu* (*Jimei University*); *Qiubo Ye* (*Jimei University*);

15:00 Design of Flexible Wearable Antenna Based on Artificial Magnetic Conductor Structure
Yong Zhou (*NUIST*); *Jiajie Zhuang* (*NUIST*); *Jiahao Zhou* (*NUIST*);

15:15 Enhanced Wideband Circularly Polarized Fabry-Perot Antenna with Dual-layer Partially Reflective Surface for X-band Satellite Communications
Muhammad Usman Raza (*Xi'an Jiaotong University*); *Sen Yan* (*Xi'an Jiaotong University*);

15:30 **Coffee Break**

16:00 Artificial Magnetic Conductor for Dual-band High-gain Low-profile Wi-Fi Antenna
Yanwen Zhang (*Guangdong Polytechnical Normal University*); *Jiahao Huang* (*Guangdong Polytechnical Normal University*); *Xiahua Dong* (*Guangdong Polytechnical Normal University*); *Junyu Zhou* (*Guangdong Polytechnical Normal University*); *Liu Hui* (*Guangdong Polytechnical Normal University*);

16:15 Changing Polarization from Linear to Circular for Ultra-wideband Antenna by Metasurface Structure
Yue Wu (*Hebei University of Technology*); *Hong-Xing Zheng* (*Hebei University of Technology*);

16:30 Holographic Stealth Antenna Based on Resonant Absorbing Metasurface
Yao Zhou (*Southwest University of Science and Technology*); *Wei Tong Min* (*Southwest University of Science and Technology*); *Lunyi Liu* (*Southwest University of Science and Technology*); *Yue Hu* (*Southwest University of Science and Technology*); *Qi Chen* (*Southwest University of Science and Technology*);

16:45 Reconfigurable Intelligent Electromagnetics: From Antenna to Surface Design
Yujie Zhang (*National University of Singapore*); *Xudong Chen* (*National University of Singapore*);

17:00 A Miniaturized Low-profile Wideband Pattern Diversity Metasurface Antenna for 5G-NR
Zhangmin Wang (*Southwest Jiaotong University*); *Quanyuan Feng* (*Southwest Jiaotong University*); *Xuan He* (*Southwest Jiaotong University*); *Tao Li* (*Southwest Jiaotong University*);

17:15 A Transverse Scanning Periodic Leaky Wave Antenna Loaded with Metamaterials
Tao Li (*Southwest Jiaotong University*); *Quanyuan Feng* (*Southwest Jiaotong University*); *Xuan He* (*Southwest Jiaotong University*); *Zhangmin Wang* (*Southwest Jiaotong University*);

17:30 An Efficient Machine Learning-based Optimization Method for Broadband Metasurface Antennas
Jianing Zhao (*University of Electronic Science and Technology of China*);

17:45 Impedance Matching Layer for Enhancing Transmission Efficiency of Dual-band Implantable Antenna
Yibo Pan (*University of Electronic Science and Technology of China*); *Wenjie Fu* (*University of Electronic Science and Technology of China*); *Dun Lu* (*University of Electronic Science and Technology of China*); *Qinglin Zeng* (*University of Electronic Science and Technology of China*); *Fengqiong Zeng* (*University of Electronic Science and Technology of China*); *Yang Yan* (*University of Electronic Science and Technology of China*);

18:00 Active Metasurface-enabled Antenna with Reconfigurable Radar Cross Section
Heng Luo (*Central South University*);

Session 4P11a
Beamforming in Optical and RF Domain 2

Thursday PM, April 25, 2024

Room 11 - Xiangyu

Organized by Lei Zhang, Xin Fu

Chaired by Lei Zhang, Xin Fu

13:00 Integrated Optical Phased Array for Solid-state LiDAR
Invited
Hao Hu (*Technical University of Denmark*);

13:20 Microwave Photonic Beamforming Chip
Invited
Binfeng Yun (*Southeast University*);

13:40 Invited Research on Focal Plane Array Chips for Lidar Applications
Pengfei Wang (*Institute of Semiconductor, Chinese Academy of Science*); *Lei Yu* (*Institute of Semiconductors, Chinese Academy of Sciences*); *Yifan Xin* (*Institute of Semiconductors, Chinese Academy of Sciences*); *Yejin Zhang* (*Institute of Semiconductors, Chinese Academy of Science*); *Jiaoqing Pan* (*Institute of Semiconductors, Chinese Academy of Science*);

14:00 The Phase Encoding Signal Generation Based on the Time Domain Mode Locking Optoelectronic Oscillator
Feng Xiong (*Hubei University*); *Yalan Wang* (*Air Force Early Warning Academy*); *Jichen Wen* (*Air Force Early Warning Academy*); *Yibei Wang* (*Hubei University*); *Jin Zhang* (*Air Force Early Warning Academy*); *Anle Wang* (*Air Force Early Warning Academy*); *Hongyi Wang* (*Air Force Early Warning Academy*); *Xiaotong Liu* (*Air Force Early Warning Academy*); *Dongyu Li* (*Air Force Early Warning Academy*); *Dangwei Wang* (*Air Force Early Warning Academy*); *Xiaoniu Peng* (*Hubei University*);

14:15 Wafer-thick GaAs Photonic-electronic Platform for Fast Terahertz Beam Steerers
Alexander Shurakov (*Moscow Pedagogical State University*); *A. Prikhodko* (*National Research University "Higher School of Economics"*); *I. Belikov* (*National Research University "Higher School of Economics"*); *Grigory N. Gol'tsman* (*Moscow Pedagogical State University*);

14:30 Invited Silicon-based Optical Phased Arrays for Beamforming & Steering and Related Applications
Guihan Wu (*Nanjing University*); *Shicong Yang* (*Nanjing University*); *Yu Xin* (*Nanjing University*); *Wei Jiang* (*Nanjing University*);

14:50 Invited Recent Progress in Chip-scale Lidar Using Optical Phased Array
Tianbo Sun (*LightIC Technologies Ltd*);

15:30 **Coffee Break**

Session 4P11b
Unconventional Antenna Array Design, Beamforming and DOA Estimation Algorithms

Thursday PM, April 25, 2024

Room 11 - Xiangyu

Organized by Le Zuo, Yanhui Liu

Chaired by Yanhui Liu, Le Zuo

16:00 An Ultra-wideband Circular Array Interferometer and Direction Finding Algorithm
Qiancheng Ying (*Southwest Institute of Electronic Equipment*); *Le Zuo* (*Southwest Institute of Electronic Equipment*);

16:15 A High-gain 3D-printed Phased Array Antenna for Satellite Applications
Jiahao Xie (*Science and Technology on Electronic Information Control Laboratory*); *Kuo Zhang* (*Southwest Electronic Equipment Research Institute*); *Le Zuo* (*Southwest Institute of Electronic Equipment*);

16:30 Design of Low Cross Polarization Phased Antenna Arrays for X-band Spaceborne SAR Applications
Kuo Zhang (*Southwest Electronic Equipment Research Institute*); *Jiahao Xie* (*Science and Technology on Electronic Information Control Laboratory*); *Zhen-Yang Liu* (*Science and Technology on Electronic Information Control Laboratory*); *Song-Tao Yu* (*Xidian University*);

16:45 Synthesis of Ultra-wideband Beam Scanning Sparse Planar Antenna Arrays by Iterative Convex Optimization with Fermat Spiral Initialization
Yang Liu (*University of Electronic Science and Technology of China*); *Liyang Chen* (*University of Electronic Science and Technology of China*); *Yanhui Liu* (*University of Electronic Science and Technology of China*);

17:00 Polarization Control Method for the Main Lobe Based on Phase-only Beamforming
Dongwei Lu (*National University of Defense Technology*); *Jiazhi Ma* (*National University of Defense Technology*);

17:15 Application of X-band High Isolation Phased Array Payload in Satellite Data Transmission Communication
Zhen-Yang Liu (*Science and Technology on Electronic Information Control Laboratory*); *Kuo Zhang* (*Southwest Electronic Equipment Research Institute*); *Hongfei Bao* (*Science and Technology on Electronic Information Control Laboratory*); *Yang Song* (*Science and Technology on Electronic Information Control Laboratory*);

17:30 Design of the Real-time Control System for a Large-scaled Phased Array Based on High-speed Serial Bus
Wei Wang (*Science and Technology on Electronic Information Control Laboratory*);

17:45 Fast and Accurate 2-D DOA Estimation with Uniform Circular Array Interferometers Exploiting Integral Transform
Le Zuo (*Southwest Institute of Electronic Equipment*); *J. Nie* (*Southwest Institute of Electronic Equipment*); *H. Zhang* (*Southwest Institute of Electronic Equipment*);

18:00 Simulation of the Effects Caused by Carrier Attitude Changing on the Polarization Characteristics between Wireless Transceiver Devices
Fei Yuan (*UNIKINFO*);

Session 4P12a
THz Technology

Thursday PM, April 25, 2024

Room 12 - Siji 1

Chaired by Amine El Moutaouakil, Xinlong Xu

13:00 Design of a Narrowband Terahertz Filter Based on Fabry-Pérot Etalon
Alina A. Rybak (*Novosibirsk State University*); *Sergei Alexandrovich Kuznetsov* (*Novosibirsk State University*); *Nazar A. Nikolaev* (*Novosibirsk State University*);

13:15 Broadband Photonic Terahertz Frequency-hopping Source Based on Two-stage Optical Injection Locking
Zhencan Yang (*University of Electronic Science and Technology of China*); *Fan Yang* (*University of Electronic Science and Technology of China*); *Yuchao Liu* (*University of Electronic Science and Technology of China*); *Mo Li* (*University of Electronic Science and Technology of China*); *Jian Zhang* (*University of Electronic Science and Technology of China*);

13:30 Orbitronics: Light-induced Orbital Currents in Ni Studied by Terahertz Emission Experiments
Yong Xu (*Beihang University*); *Fan Zhang* (*Beihang University*); *Albert Fert* (*Beihang University*); *Henri-Yves Jaffres* (*Université Paris-Saclay*); *Yongshan Liu* (*Beihang University*); *Renyou Xu* (*Beihang University*); *Yuhao Jiang* (*Beihang University*); *Houyi Cheng* (*Beihang University*); *Weisheng Zhao* (*Beihang University*);

13:45 Nonlinear Optical Responses in Metamaterials
Xinlong Xu (*Northwest University*);

14:00 Terahertz Emission Spectrum Characterization Using an Imaging Array and a Metamaterial Wavelength Encoder
Meng Chen (*National Engineering Research Center for Dangerous Articles and Explosives Detection Technologies*); *Ruifeng Liu* (*National Engineering Research Center for Dangerous Articles and Explosives Detection Technologies*); *Yingxin Wang* (*Tsinghua University*); *Ziran Zhao* (*Tsinghua University*);

14:15 Tunable THz Transmittance of Si Nanofilms by Graphene Plasmon Polaritons
Yunhui Wu (*University of Tokyo*); *Yuriy A. Kosevich* (*Russian Academy of Science*); *Jose Ordonez-Miranda* (*Centre National de la Recherche Scientifique*); *Kazuhiko Hirakawa* (*University of Tokyo*); *Sebastian Volz* (*Centre National de la Recherche Scientifique*); *Masahiro Nomura* (*The University of Tokyo*);

15:30 **Coffee Break**

Session 4P12b
Microwave and Millimeter Wave Circuits and Devices 2

Thursday PM, April 25, 2024

Room 12 - Siji 1

Chaired by Nagendra Prasad Yadav

14:45 Hierarchical Cascading Technique for Single Periodic SAW Models
Shaoqing Duan (*East China Normal University*); *Lei Kuang* (*East China Normal University*);

15:00 Four-channel Wavelength Selective Switch Based on Vernier Second-order Microring Resonators with Asymmetric Coupling Regions
Tao Song (*Beijing University of Posts and Telecommunications*); *Lei Zhang* (*Beijing University of Posts and Telecommunications*); *Xu Yang* (*The 54th Research Institute of China Electronic Technology Group Corporation*);

15:15 **Coffee Break**

16:00 A Resistor-free Absorptive Common-mode Filter Based on Transmission Space Separation Structure
Wensheng Zhao (*Hangzhou Dianzi University*); *Yi-Hao Ma* (*Hangzhou Dianzi University*);

16:30 Investigation of Magneto-dielectric Material Properties Using Substrate Integrated Waveguide Structure
Junas Haidi (*Institut Teknologi Bandung*); *Agustinus Agung Nugroho Sulistyo Hutomo* (*Institut Teknologi Bandung*); *Achmad Munir* (*Bandung Institute of Technology*);

16:45 High Selectivity Filtering Power Divider Based on SAW Resonator
Zhongxian Zheng (*Xi'an Jiaotong University*); *Jitao Chen* (*Xi'an Jiaotong University*); *Jianxing Li* (*Xi'an Jiaotong University*); *Sen Yan* (*Xi'an Jiaotong University*); *Juan Chen* (*Xi'an Jiaotong University*); *Wen Jie Zhang* (*Xi'an Jiaotong University*);

17:00 High Out-band Rejection, Ultra-wideband, Compact Band Pass Filter Based on SSPPs-DGS
Haihong Liu (*Wuhan University of Science and Technology*); *Lingling Yang* (*Wuhan Software Engineering Vocational College*); *Yongzhi Cheng* (*Wuhan University of Science and Technology*); *Hui Luo* (*Wuhan University of Science and Technology*); *Fu Chen* (*Wuhan University of Science and Technology*); *Xiangcheng Li* (*Wuhan University of Science and Technology*);

17:15 The Design and Realization Technology of the Amplitude Flatness of Multi-chip Interconnect in Ka Band Broadband Inverter
Meixia Ma (*China Academy of Space Technology*); *Jinhua Yu* (*China Academy of Space Technology*);

Session 4P13
Quantum Secure Communication and Its Beyond

Thursday PM, April 25, 2024

Room 13 - Siji 2

Organized by Shuang Wang, Qiang Zhou

Chaired by Qiang Zhou, Yun-Ru Fan

13:00 Entangled Two Photon Source in the Mid-infrared Band
Invited
Zhi-Yuan Zhou (*University of Science and Technology of China*); *Zheng Ge* (*University of Science and Technology of China*); *Baosen Shi* (*University of Science and Technology of China*);

13:20 Invited Free-space Continuous-variable Quantum Key Distribution: Techniques and Experiments
Peng Huang (*Shanghai Jiao Tong University*); *Shiyu Wang* (*Shanghai Jiao Tong University*); *Shurong Wei* (*Shanghai Jiao Tong University*); *Ping Wang* (*Shanghai Jiao Tong University*); *Mingqi Zhang* (*Shanghai Jiao Tong University*); *Feiyu Ji* (*Shanghai Jiao Tong University*); *Guihua Zeng* (*Shanghai Jiao Tong University*);

13:40 Invited Quantum Key Distribution and Multiparty Quantum Cryptography
Hua-Lei Yin (*Nanjing University*);

14:00 Invited Controlled Quantum Teleportation of Polarization State
Zhihui Yan (*Shanxi University*); *Jieli Yan* (*Shanxi University*); *Xiaojun Jia* (*Shanxi University*); *Changde Xie* (*Shanxi University*); *Kunchi Peng* (*Shanxi University*);

14:20 Invited Demonstration of Fiber-based Quantum Secure Clock Synchronization Network
Bo Liu (*National University of Defense Technology*); *Bangying Tang* (*National University of Defense Technology*); *Huan Chen* (*National University of Defense Technology*); *Hui Han* (*National University of Defense Technology*); *Bo Xu* (*National University of Defense Technology*); *Fang-Zhao Li* (*National University of Defense Technology*); *Wanrong Yu* (*National University of Defense Technology*);

14:40 Invited AlGaAs Bragg Reflection Waveguide Entangled Photon Pair Source for Quantum LAN
Bin Niu (*Science and Technology on Monolithic Integrated Circuits and Modules Laboratory*); *Xiaodong Zheng* (*Nanjing Electronic Devices Institute*); *Xu Jing* (*Nanjing Normal University*); *Cheng Qian* (*Nanjing Normal University*); *Yufu Li* (*Nanjing Electronic Devices Institute*); *Yuechan Kong* (*Nanjing Electronic Devices Institute*); *Tangsheng Chen* (*Nanjing Electronic Devices Institute*); *Liangliang Lu* (*Nanjing Normal University*);

15:00 Invited Topological Switch for Entanglement States in Non-Hermitian Quantum Walks
Tian Chen (*Beijing Institute of Technology*);

15:20 Practical Source Security of On-chip Continuous Variable Measurement Device Independent Quantum Key Distribution
Lang Li (*Shanghai Jiao Tong University*); *Tao Wang* (*Shanghai Jiao Tong University*); *Peng Huang* (*Shanghai Jiao Tong University*); *Yuehan Xu* (*Shanghai Jiao Tong University*); *Xu Liu* (*Shanghai Jiao Tong University*); *Huanxi Zhao* (*Shanghai Jiao Tong University*); *Guihua Zeng* (*Shanghai Jiao Tong University*);

15:35 **Coffee Break**

16:00 Invited Coherent Photons and Coherent Spins from Low-noise GaAs Quantum Dots
Liang Zhai (*University of Basel*); *Nguyen Giang N.* (*University of Basel*); *Clemens Spinnler* (*University of Basel*); *Julian Ritzmann* (*Ruhr-Universität Bochum*); *Alisa Javadi* (*University of Basel*); *Matthias C. Loebl* (*University of Basel*); *Mark R. Hogg* (*University of Basel*); *Marcel Erbe* (*University of Basel*); *Hans-Georg Babin* (*Ruhr-Universität Bochum*); *Andreas D. Wieck* (*Ruhr-Universität Bochum*); *Arne Ludwig* (*Ruhr-Universität Bochum*); *Richard J. Warburton* (*University of Basel*);

16:20 Invited Continuous-variable Quantum Key Distribution Access Network
Tao Wang (*Shanghai Jiao Tong University*); *Yuehan Xu* (*Shanghai Jiao Tong University*); *Lang Li* (*Shanghai Jiao Tong University*); *Xu Liu* (*Shanghai Jiao Tong University*); *Zicong Tan* (*Shanghai Jiao Tong University*); *Peng Huang* (*Shanghai Jiao Tong University*); *Guihua Zeng* (*Shanghai Jiao Tong University*);

16:40 Invited Integrated Quantum Photonics with Silicon Carbide
Yu Zhou (*Harbin Institute of Technology (Shenzhen)*);

17:00 Invited Experimental Demonstration of 5 GBaud Four-state Continuous-variable Quantum Key Distribution with Digital Signal Processing
Heng Wang (*Institute of Southwestern Communication*); *Yan Pan* (*Institute of Southwestern Communication*); *Bingjie Xu* (*Institute of Southwestern Communication*);

17:20 Invited Progresses on Security of Measurement-device-independent Quantum key Distribution
Zhen Qiang Yin (*University of Science and Technology of China*);

17:40 Invited Experimental Study on Silicon Photonics Integrated Continuous Variable Quantum Key Distribution
Xuyang Wang (*Shanxi University*); *Tao Zheng* (*Shanxi University*); *Yanxiang Jia* (*Shanxi University*); *Yu Zhang* (*Shanxi University*); *Yunjie Zhang* (*Shanxi University*); *Yizhuo Hou* (*Shanxi University*); *Yuqi Shi* (*Shanxi University*); *Qianru Zhao* (*Shanxi University*); *Jun Zou* (*Zhejiang University*); *Yongmin Li* (*Shanxi University*);

Session 4P14a
Efficient Processing and Interference Mitigation for Multidimensional Radar Signals

Thursday PM, April 25, 2024

Room 14 - Siji 3

Organized by Ye Yuan, Wujun Li

Chaired by Wei Yi

13:00 Persymmetric Target Detection with Data Dividing Dimensionality Reduction
Juexin Zhang (*Aerospace System Engineering Shanghai*); *Mingwen Li* (*Aerospace System Engineering Shanghai*); *Haoyuan Lu* (*Aerospace System Engineering Shanghai*); *Xiaoguang Jiao* (*Aerospace System Engineering Shanghai*);

13:15 Motion Compensation Based Track-before-detect Methods for Automotive Radar System
Qing Miao (*University of Electronic Science and Technology of China*); *Pan Mou* (*University of Electronic Science and Technology of China*); *Miao Li* (*University of Electronic Science and Technology of China*); *Wujun Li* (*University of Electronic Science and Technology of China*); *Wei Yi* (*University of Electronic Science and Technology of China*);

13:30 Extended Target Multi-frame TBD Algorithm in Heterogeneous Scenarios Based on Deep Learning
Pan Mou (*University of Electronic Science and Technology of China*); *Qing Miao* (*University of Electronic Science and Technology of China*); *Chuan Zhu* (*University of Electronic Science and Technology of China*); *Miao Li* (*University of Electronic Science and Technology of China*); *Wujun Li* (*University of Electronic Science and Technology of China*); *Wei Yi* (*University of Electronic Science and Technology of China*);

13:45 Robust Target Detection of Multi-band Coherent Processing UWB Systems
Jiale He (*Tsinghua University*); *Zongyao Zhao* (*Tsinghua University*); *Jianhua Pei* (*Tsinghua University*); *Yuhan Dong* (*Tsinghua University*);

14:00 Adjacent Multi-extended Targets Tracking in Traffic Scenes
Yunlian Tian (*University of Electronic Science and Technology of China*); *Wunjun Li* (*University of Electronic Science and Technology of China*); *Wei Yi* (*University of Electronic Science and Technology of China*);

14:15 Naive Bayesian Classifier-based Collaborative Tracking and Recognition for Multi-radar Systems
Shuoyang Ma (*University of Electronic Science and Technology of China*); *Ye Yuan* (*University of Electronic Science and Technology of China*); *Wei Yi* (*University of Electronic Science and Technology of China*);

Session 4P14b
Remote Sensing and Polarimetry, SAR

Thursday PM, April 25, 2024

Room 14 - Siji 3

Chaired by Xiongyao Xie, Yunhua Wang

14:30 Analysis of Microphysical Characteristics of Icing Clouds Based on Aircraft Probing
Wenhui Yan (*Chinese Flight Test Establishment*); *Wei Cheng* (*Beijing Institute of Applied Meteorology*); *Tiantian Yu* (*Chengdu University of Information Technology*); *Yue Sun* (*Institute of Atmospheric Physics, Chinese Academy of Sciences*); *Hui Xiao* (*Institute of Atmospheric Physics, Chinese Academy of Sciences*); *Shuangshuang Bian* (*State Key Laboratory of Geo-Information Engineering*); *Jinzhi Liao* (*China Meteorological Administration Radar Meteorology Key Laboratory*);

14:45 Comparative Study of Wind Field Measurements by Networked Weather Radars in the Hangzhou Area
Zhangwei Wang (*Zhejiang Atmospheric Observation Technology Support Center*); *Jing Liang* (*Chengdu University of Information Technology*); *Jie Fu* (*Chengdu University of Information Technology*); *Hao Chen* (*Zhejiang Atmospheric Observation Technology Support Center*); *Han Wang* (*Zhejiang Atmospheric Observation Technology Support Center*); *Xiaoqiong Zhen* (*Chengdu University of Information Technology*); *Tiantian Yu* (*Chengdu University of Information Technology*);

15:00 Investigation of Particle Spectra and Atmospheric Vertical Velocity Inversion under Non-precipitating Conditions
Jie Fu (*Meteorological Observation Centre, CMA*); *Fa Tao* (*Meteorological Observation Centre, CMA*); *Tiantian Yu* (*Chengdu University of Information Technology*); *Xiaoqiong Zhen* (*Chengdu University of Information Technology*);

15:15 Design and Application of Dual-polarization Weather Radar Signal Simulator
Yuxiang Wen (*Chengdu University of Information Technology*); *Zhao Shi* (*Chengdu University of Information Technology*); *Jianxin He* (*Chengdu University of Information Technology*);

15:30 **Coffee Break**

16:00 Attitude Error Analysis of Interferometric Radar Altimeter in the Ocean Surface Height Measurement
Qian Li (*Ocean University of China*); *Yunhua Wang* (*Ocean University of China*); *Yanmin Zhang* (*Ocean University of China*); *Hanwei Sun* (*Beijing Institute of Radio Measurement*);

16:15 A Research on Input Schemes of Polarimetric SAR Classification through Convolutional Neural Networks
Shuaiying Zhang (*National University of Defense Technology*); *Zhen Dong* (*National University of Defense Technology*); *Wentao An* (*National Satellite Ocean Application Service*);

16:30 A New Improved Three-stage Tree Height Inversion Algorithm Based on PolInSAR
Chenghao Lu (*University of Electronic Science and Technology of China*); *Taoli Yang* (*University of Electronic Science and Technology of China*); *Hanwen Yu* (*University of Electronic Science and Technology of China*);

16:45 Multitarget Vital Signs Detection Based on MIMO-FMCW Radar
Lele Qu (*Shenyang Aerospace University*); *Yang Yan* (*Shenyang Aerospace University*); *Qiyue Hu* (*Shenyang Aerospace University*);

17:00 View-spatial-attention Augmentation on Multi-view Micro-Doppler Spectra for Hidden Human Activity Recognition
Yimeng Zhao (*Chengdu University of Technology*); *Jianqi Wang* (*Fourth Military Medical University*); *Yong Jia* (*Chengdu University of Technology*); *Fu Gui Qi* (*Fourth Military Medical University*);

17:15 Radiometer Can be Used for Disclosing Stealth
Chao Wu (*Harbin Institute of Technology*); *Shuang Qiu* (*Hainan Hongke Innovation Research Institute Co., LTD*); *Jing-Hui Qiu* (*Harbin Institute of Technology*); *Oleksandr Denisov* (*Hainan Hongke Innovation Research Institute Co., LTD*); *Vasyl Molebny* (*Hainan Hongke Innovation Research Institute Co., LTD*);

17:30 GPR Data Analysis System Utilizing Artificial Intelligence and Elastic Compute Service for Backfill Grouting Thickness Detection in Shield Tunnels
Kang Li (*Tongji University*); *Xiongyao Xie* (*Tongji University*); *Changfu Huang* (*Tongji University*); *Biao Zhou* (*Tongji University*); *Honglin Lin* (*Xiamen Rail Transit Group Co Ltd*);

17:45 Inversion of Microphysical Parameters Based on Dual-polarization Radar
Wenhui Yan (*Chinese Flight Test Establishment*); *Wei Cheng* (*Beijing Institute of Applied Meteorology*); *Tiantian Yu* (*Chengdu University of Information Technology*); *Yue Sun* (*Institute of Atmospheric Physics, Chinese Academy of Sciences*); *Hui Xiao* (*Institute of Atmospheric Physics, Chinese Academy of Sciences*); *Shuangshuang Bian* (*State Key Laboratory of Geo-Information Engineering*); *Jinzhi Liao* (*China Meteorological Administration Radar Meteorology Key Laboratory*);

Session 4P15a
Advanced Time-domain Electromagnetic Methods and FDTD-based Methods for Multiscale Electromagnetic Analysis

Thursday PM, April 25, 2024

Room 15 - Siji 4

Chaired by Eng Leong Tan, Xuesong Meng

13:00 A Switched-Huygens-subgridding-based Combined FDTD-PITD Method for Fine Structures
Mingjun Chi (*Xi'an Jiaotong University*); *Xikui Ma* (*Xi'an Jiaotong University*); *Liang Ma* (*Xi'an Jiaotong University*);

13:15 Comparison of Time Integration Methods for the FDTD Method in Lossy Media
Ru Xiang (*Xi'an Jiaotong University*); *Xikui Ma* (*Xi'an Jiaotong University*); *Liang Ma* (*Xi'an Jiaotong University*); *Mingjun Chi* (*Xi'an Jiaotong University*); *Jiawei Wang* (*Xi'an Jiaotong University*);

13:30 An Upwind Condition-based Hybrid FDTD-PITD Method for Multiscale Problems
Liang Ma (*Xi'an Jiaotong University*); *Xi-Kui Ma* (*Xi'an Jiaotong University*); *Mingjun Chi* (*Xi'an Jiaotong University*); *Ru Xiang* (*Xi'an Jiaotong University*); *Xiaojie Zhu* (*Xi'an Jiaotong University*);

13:45 Numerical Calculation for Electromagnetic Radiation of RF MEMS Switch with a Cantilever Beam Based on FDTD Method
Wei Wang (*Xi'an Jiaotong University*); *Jiawei Wang* (*Xi'an Jiaotong University*); *Minyu Mao* (*Xi'an Jiaotong University*); *Jinghui Shao* (*Xi'an Jiaotong University*);

14:00 Numerical Analysis of Transient Electromagnetic Responses in Cuboidal Cavities Exposed to X-ray Radiation
Xuesong Meng (*Institute of Computational Mathematics and Applied Physics*); *Guangrong Li* (*Institute of Computational Mathematics and Applied Physics*); *Lingyu Zhang* (*Institute of Applied Physics and Computational Mathematics*);

14:15 Analysis of Transmission Coefficients in Multilayer Media Structures Using Scale Compressed Finite-Difference Time-Domain Method
Yilin Kang (*Anhui University*); *Naixing Feng* (*Anhui University*); *Yuxian Zhang* (*Anhui University*); *Xiaoli Feng* (*Anhui University*); *Huan Wang* (*Anhui University*); *Jiuyang Fan* (*Anhui University*); *Lixia Yang* (*Anhui University*); *Zhi-Xiang Huang* (*Anhui University*);

14:30 Application of Mur Absorbing Boundary Condition for Time Domain Integral Equation
Jing Yang (*Northwest Institute of Nuclear Technology*); *Mengtong Qiu* (*Northwest Institute of Nuclear Science*); *Zhizhen Zhu* (*Northwest Institution of Nuclear Technology*); *Yayun Dong* (*Northwest Institution of Nuclear Technology*); *Fei Cao* (*High-Tech Institute of Xi'an*); *Chuan He* (*Xi'an Research Institute of High Technology*);

14:45 Development Strategy of Teaching Textbooks in Military Academies under the Background of Digitalization
Zhi-Ming Deng (*Naval Petty Officer Academy*);

15:00 Accelerating Electromagnetic Field Prediction in Two-Dimensional Waveguides with Galerkin Neural Operator
Xiu-Zhen Gong (*Nanjing University of Aeronautics and Astronautics*); *Zheng Yu Huang* (*Nanjing University of Aeronautics and Astronautics*); *Eng Leong Tan* (*Nanyang Technological University*); *Xuezhi Zheng* (*KU Leuven*); *Yi-Ru Zheng* (*Nanjing University of Aeronautics and Astronautics*); *Han-Yan Duan* (*Nanjing University of Aeronautics and Astronautics*); *Feng Jiang* (*Nanjing University of Aeronautics and Astronautics*);

15:15 Revisiting Maxwell Equations on Field-Potential Dilemmas: Resolution, FDTD Computation and Enhanced Learning
Eng Leong Tan (*Nanyang Technological University*);

15:30 **Coffee Break**

Session 4P15b
Computational Electromagnetics, Hybrid Methods and EMC 3

Thursday PM, April 25, 2024

Room 15 - Siji 4

Chaired by Eng Leong Tan, Xuesong Meng

16:00 Sensitivity Testing Method and Characteristics Study of Active Filtering Amplifiers
Shixiang Zhou (*Beihang University*); *Hui Xu* (*Beihang University*);

16:15 The Electromagnetic Shielding Fabric Based on Graphene Layer-by-layer Assembly Improves the Absorption and Shielding Performance
Yajing Wang (*Xi'an Polytechnic University*); *Xiuchen Wang* (*Xi'an Polytechnic University*); *Zhe Liu* (*Xi'an Polytechnic University*);

16:30 Effect of Carbon Nanotube Fiber on Shielding Effectiveness of Stainless-steel Electromagnetic Shielding Fabric
Zhe Liu (*Xi'an Polytechnic University*); *Yichen Yang* (*Xi'an Polytechnic University*); *Jin Duan* (*Xi'an Polytechnic University*); *Xingli Xie* (*Puning Shing Fat Garment Co., Ltd.*); *Jindong Ye* (*Puning Shing Fat Garment Co., Ltd.*); *Xiuchen Wang* (*Xi'an Polytechnic University*);

16:45 Adverse Effect Reduction of Pores on Shielding Effectiveness of Electromagnetic Shielding Fabric via Split Ring Resonator
Xiuchen Wang (*Xi'an Polytechnic University*); *Zhuowu Yu* (*Xi'an Polytechnic University*); *Yajing Wang* (*Xi'an Polytechnic University*); *Zhe Liu* (*Xi'an Polytechnic University*);

Session 4P15c
Plasma, Electromagnetic Theory & Applications

Thursday PM, April 25, 2024

Room 15 - Siji 4

Chaired by Thomas T. Y. Wong

17:00 Electromagnetic Charge Density with a Causal Current Density Vector and Infinite Speed of Light
Namik Yener (*Istanbul Commerce University*);

17:15 Circuits Perspective of an Elementary Green's Function for the Poisson's Equation
Xavier Crawford (*Illinois Institute of Technology*); *Huiying Deng* (*Illinois Institute of Technology*); *Thomas T. Y. Wong* (*Illinois Institute of Technology*);

17:30 Copper-doped $BiFeO_3$ Prepared by Solution Plasma for Electrocatalytic Nitrate Reduction to Ammonia
Yuxiang Li (*Shihezi University*); *Zongyuan Wang* (*Shihezi University*); *Feng Yu* (*Shihezi University*); *Bin Dai* (*Shihezi University*);

17:45 Study on Reflection and Transmission Characteristics of Electromagnetic Waves Propagation in Different Medium Based on Constitutive Parameters
Sulistyaningsih (*Institut Teknologi Bandung*); *Umar Khayam* (*Institut Teknologi Bandung*); *Achmad Munir* (*Bandung Institute of Technology*);

Session 4P18a
Optical Manipulation of Micro-nano Objects

Thursday PM, April 25, 2024

Room 18 - Meilan

Organized by Fuxing Gu, Hongbao Xin

Chaired by Fuxing Gu, Jiaxin Yu

13:00 Invited Nanoscale Force Measurement in Solution by Ion-resonance Optical Tweezers
Fan Wang (*Beihang University*);

13:30 Invited Exotic Optical Forces in Optical Tweezers
Yuzhi Shi (*Tongji University (TJU)*);

13:45 Invited Optothermal Tweezers: Bio-nanoparticle Manipulation and Identification
Jiajie Chen (*Shenzhen University*); *Jianxing Zhou* (*Shenzhen University*); *Xiaoqi Dai* (*Shenzhen University*); *Han Zhang* (*Shenzhen University*); *Junle Qu* (*Shenzhen University*); *Yonghong Shao* (*Shenzhen University*);

14:00 Invited Versatile Nano-optomechanics: From Micro-manipulation to Meta-manipulation
Tianyue Li (*Nanjing University*);

14:15 Invited Off-axis Trapping and Orbital Rotation of Micro/Nano-particles in a Light Beam
Lei-Ming Zhou (*Hefei University of Technology*); *X.-Y. Zhu* (*Hefei University of Technology*);

14:30 Photothermal-shock Tweezers and Nano-conventional Robots (Invited)
Fuxing Gu (*University of Shanghai for Science and Technology*);

14:45 On-chip Optical Trapping and Mode Conversion with Integrated 3D Freeform Micro-optics (Invited)
Shaoliang Yu (*Zhejiang Laboratory*);

15:00 Research Progress of Precision Sensing Based on Optical Tweezers in Vacuum (Invited)
Nan Li (*Zhejiang University*);

15:15 A Nanowire-dimer Plasmonic Cavity with Advanced Optical Properties (Invited)
Jiaxin Yu (*University of Shanghai for Science and Technology*);

15:35 **Coffee Break**

16:00 Optical Surface-wave Nano-tweezers for Particle Manipulation and Application (Invited)
Changjun Min (*Shenzhen University*);

Session 4P18b
EM Manipulations with Advanced Materials in Metasurface and Antenna Applications

Thursday PM, April 25, 2024

Room 18 - Meilan

Organized by Daping He, Bian Wu

Chaired by Bian Wu

16:15 Topological Metadevices for Wireless Communication Based on Plasmonic Metasurface
Sijie Li (*Shanghai Jiao Tong University*); *Menglin L. N. Chen* (*The Hong Kong Polytechnic University*); *Ping Li* (*Shanghai Jiao Tong University*);

16:30 Planar Monopole Graphene Assembled Film Based Antenna for Wi-Fi 6E Applications
Zhi Luo (*Wuhan University of Technology*); *Biao Chen* (*Wuhan University of Technology*); *Rongguo Song* (*Wuhan University of Technology*); *Haoran Zu* (*Wuhan University of Technology*); *Daping He* (*Wuhan University of Technology*);

16:45 Design of Ultra-wideband Amplitude-adjustable Electromagnetic Absorber
Ran Liu (*Xidian University*); *Ding Zhang* (*Xidian University*); *Yu-Tong Zhao* (*Xidian University*); *Bian Wu* (*Xidian University*);

17:00 A Non-Hermitian Sensing via Matching Singularities Using Multi-port Excitation
Xintong Shi (*Central China Normal University*); *Jing Jin* (*Central China Normal University*); *Hai Lin* (*Central China Normal University*);

17:15 A Low-RCS Wearable Planar Monopole Antenna Based on Phase Cancellation
Taotao Yan (*Xi'an Jiaotong University*); *Pan Lu* (*Xi'an Jiaotong University*); *Jiaohao Zhang* (*Naval University of Engineering*); *Sen Yan* (*Xi'an Jiaotong University*);

17:30 AE-D2NN: Autoencoder in Diffractive Neural Network Form
Peijie Feng (*Peking University*); *Zong-Kun Zhang* (*Peking University*); *Ming-Zhe Chong* (*Peking University*); *Yunhua Tan* (*Peking University*);

17:45 Surface Termination and Interlayer Engineering Effects on the Microwave Absorption Properties of MXenes
Jin Duan (*Xi'an Polytechnic University*); *Zhe Liu* (*Xi'an Polytechnic University*); *Xiuchen Wang* (*Xi'an Polytechnic University*);

18:00 Array Excitation of Localized Spoof Surface Plasmons
Rui Zhou (*Central China Normal University*); *Xintong Shi* (*Central China Normal University*); *Menglin L. N. Chen* (*The Hong Kong Polytechnic University*); *Hai Lin* (*Central China Normal University*);

Session 4P19
Poster Session 8

Thursday PM, April 25, 2024

14:00 PM - 18:00 PM

Room Exhibition Area

1 A Wideband 1-Bit **16×16** Electronically Reconfigurable Reflectarray at X-band
Qia Wang (*China Academy of Space Technology (Xi'an)*); *Jixiang Wan* (*China Academy of Space Technology (Xi'an)*); *Li Yu* (*China Academy of Space Technology (Xi'an)*); *Langtao Bai* (*China Academy of Space Technology (Xi'an)*);

2 Estimation of Sea Ice Thickness Using FY-3E Data Based on Random Forest Method
Hongying Li (*Nanjing University of Information Science and Technology*); *Qingyun Yan* (*Nanjing University of Information Science and Technology*); *Yinqing Zhen* (*Nanjing University of Information Science and Technology*);

3 Parasitic Effects Analysis and Equivalent Circuit Modeling of Tapered Serpentine Interconnects of On-chip FBAR up to 67 GHz
Xin Cao (*Southwest University of Science and Technology*); *Weiping Li* (*East China Jiaotong University*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Yuyu Zhu* (*Southwest University of Science and Technology*);

4 Pedestrian Gait Recognition Method Based on Micro-Doppler and Power Spectrum
Benteng Lyu (*Harbin Institute of Technology at Weihai*); *Aijun Liu* (*Harbin Institute of Technology at Weihai*); *Chang Jun Yu* (*Harbin Institute of Technology at Weihai*); *Shuai Xia* (*Harbin Institute of Technology at Weihai*);

5 Dual-functional Metamaterial Device Controlled by a Singular Switch
Yong-Diao Wen (*Nanjing University of Aeronautics and Astronautics*); *Gang Li* (*Science and Technology on Electromechanical Dynamic Control Laboratory*); *Tie Li* (*Science and Technology on Electromechanical Dynamic Control Laboratory*);

6 Analysis of the Influence of Ground Reflection on Far-field RCS Measurement in Non-darkroom Environment
Jinshi Liu (*University of Electronic Science and Technology of China*); *Xiangbao Zhu* (*University of Electronic Science and Technology of China*); *Lin Qin* (*University of Electronic Science and Technology of China*); *Haoyu Wen* (*University of Electronic Science and Technology of China*); *Jiahao Zheng* (*University of Electronic Science and Technology of China*); *En Li* (*University of Electronic Science and Technology of China*);

7 A Wideband Filtering Rat-race Ring Coupler Based on Double-sided Parallel Striplines with Excellent Isolation
Bing Wang (*Dalian Maritime University*); *Zhongbao Wang* (*Dalian Maritime University*); *Yan Zhang* (*Dalian Maritime University*); *Shipeng Zhao* (*Dalian Maritime University*); *Hongmei Liu* (*Dalian Maritime University*);

8 A Segmented Compensation Wide Operating Range Bandgap Reference Voltage Source
Hao He (*Southwest Jiaotong University*); *Quanyuan Feng* (*Southwest Jiaotong University*); *Zujing Zhang* (*Southwest Jiaotong University*);

9 1-nm-resolution Sorting of sub-10-nm Nanoparticles Using a Dielectric Metasurface with Toroidal Responses
Hong Luo (*Tongji University*); *Yuzhi Shi* (*Tongji University (TJU)*); *Xinbin Cheng* (*Tongji University*);

10 Retrieval of Global Total Precipitable Water over Sea Surfaces from MWHS-II/FY-3D Data Using the BP Neural Network
Yifan Zhang (*Fudan University*); *Geng-Ming Jiang* (*Fudan University*);

11 Analysis of Magnetic Material Boundary Conditions Based on Generalized Maxwell Equations
Chao Wu (*Harbin Institute of Technology*); *Shuang Qiu* (*Hainan Hongke Innovation Research Institute Co., LTD*); *Jing-Hui Qiu* (*Harbin Institute of Technology*); *Oleksandr Denisov* (*Hainan Hongke Innovation Research Institute Co., LTD*); *Vasyl Molebny* (*Hainan Hongke Innovation Research Institute Co., LTD*);

12 An Effective Finite Element Method for Maxwell Eigenvalue Problem in a Radial Inhomogeneous Medium
Wei Wang (*Guizhou Normal University*); *Jihui Zheng* (*Guizhou Normal University*); *Jiayu Han* (*Guizhou Normal University*);

13 A Full-bridge LLC Resonator with Hybrid Control Mode for High-voltage Magnetron Power System
Gang Lei (*Southwest University of Science and Technology*); *Zuxue Xia* (*Southwest University of Science and Technology*); *Wenhai Xia* (*Zhejiang Lierda Internet of Things Technology Co. Ltd.*); *Haoran Li* (*Southwest University of Science and Technology*); *Rui Cheng* (*Southwest University of Science and Technology*); *Yuyu Zhu* (*Southwest University of Science and Technology*);

14 Conformal Compact Metasurface for Enhancing Performance of Brain Ultra-low-field Magnetic Resonance Imaging System
Yu Liu (*Tianjin University*); *Xia Xiao* (*Tianjin University*); *Xiangzheng Kong* (*Tianjin University*); *Yanwei Pang* (*Tianjin University*);

15 Design and Characterization of a Three-layer PCB Low-pass Filter for Enhanced Harmonic Suppression in Wi-Fi Frequency Bands: An Application of Characteristic Mode Analysis
Jingyan Mo (*Nokia Shanghai Bell Inc.*);

16 Effects of PEAI Post-treatments on the Ion Migration in Lead Iodide Perovskites
Puyang Li (*Zhejiang University*); *Shengnan Liu* (*Zhejiang University*); *Wenjing Qi* (*Zhejiang University*); *Xiaokang Fu* (*Zhejiang University*); *Ke Zhou* (*Zhejiang University*); *Baodan Zhao* (*Zhejiang University*); *Dawei Di* (*Zhejiang University*);

17 Near Fields in Conical Horn Reflector Antenna in High Power Microwave Source Application
Shih-Chung Tuan (*Asia Eastern University of Science and Technology*); *Shen Shou Max Chung* (*National Penghu University of Technology*);

18 Modelling and Analyses of the Range Gate Pull-off (RGPO) Effect on Radar Tracking
Yanfeng Wang (*National University of Defense Technology*); *Qihua Wu* (*National University of Defense Technology*); *Tiehua Zhao* (*National University of Defense Technology*); *Xiaobin Liu* (*National University of Defense Technology*); *Feng Zhao* (*National University of Defense Technology*); *Shunping Xiao* (*National University of Defense Technology*);

19 Theory and Simulations of Frequency-locking Operation of a MW-level Gyrotron
Grigory G. Denisov (*Institute of Applied Physics, Russian Academy of Sciences*); *Irina V. Zotova* (*Institute of Applied Physics, RAS*); *Ilya V. Zheleznov* (*Institute of Applied Physics, RAS*); *Andrey N. Kuftin* (*Institute of Applied Physics of the RAS*); *Naum S. Ginzburg* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Andrey Mihailovich Malkin* (*Institute of Applied Physics, Russian Academy of Sciences*); *Alexander S. Sergeev* (*Institute of Applied Physics, Russian Academy of Sciences*); *M. V. Manuilov* (*Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)*); *Mikhail Yu. Glyavin* (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*);

20 Frequency-tunable Sub-THz Gyrotrons with External Mirrors
Ilya V. Bandurkin (*Institute of Applied Physics RAS*); *Yuriy Kalynov* (*Institute of Applied Physics, RAS*); *Ivan V. Osharin* (*Institute of Applied Physics, RAS*); *Andrei V. Savilov* (*Institute of Applied Physics, RAS*); *Evgeny S. Semenov* (*Institute of Applied Physics of the Russian Academy of Sciences*);

21 Development of a Single-mode DFB Heterolaser with Surface-emitted Radiation Output
Ekaterina D. Egorova (*Institute of Applied Physics, Russian Academy of Science*); *V. R. Baryshev* (*Institute of Applied Physics, Russian Academy of Sciences*); *Naum S. Ginzburg* (*Institute of Applied Physics, Russian Academy of Sciences*); *E. R. Kocharovskaya* (*Institute of Applied Physics, Russian Academy of Sciences*); *Andrey M. Malkin* (*Institute of Applied Physics, Russian Academy of Sciences*); *Vladislav Yur'evich Zaslavsky* (*Institute of Applied Physics, Russian Academy of Sciences*); *Morozov Sergey* (*Institute for Physics of Microstructures, Russian Academy of Sciences*); *Alexander S. Sergeev* (*Institute of Applied Physics, Russian Academy of Sciences*);

22 Angle-resolved Polarized Raman Spectroscopy of Layered Germanium Disulfide
Ilya Zavidovskiy (*Moscow Center for Advanced Studies*); *A. S. Slavich* (*Moscow Center for Advanced Studies*); *M. K. Tatmyshevskiy* (*Moscow Center for Advanced Studies*); *A. N. Toksumakov* (*Moscow Center for Advanced Studies*); *A. V. Syuy* (*Moscow Center for Advanced Studies*); *K. V. Kravtsov* (*Moscow Center for Advanced Studies*); *Ivan Kruglov* (*Dukhov Research Institute of Automatics*); *D. A. Ghazaryan* (*Moscow Center for Advanced Studies*); *A. V. Arsenin* (*Moscow Center for Advanced Studies*); *V. S. Volkov* (*Yerevan State University*); *S. Novikov* (*Moscow Center for Advanced Studies*);

23 A Design of Linear Polarization Convert 2-bit Reconfigurable Reflectarray Element at Ku Band
Haoran Ye (*Beihang University*); *Xurui Zhang* (*Beihang University*); *Yan Zhang* (*Beijing University of Aeronautics and Astronautics (BUAA)*);

24 High Power Talbot Effect Based Tunable Divider of Millimeter Wave Beam
M. Yu. Shmelev (*A.V. Gaponov-Grekhov Institute of Applied Physics of the Russian Academy of Sciences*); *Grigory G. Denisov* (*Institute of Applied Physics, Russian Academy of Sciences*); *Dmitry I. Sobolev* (*Institute of Applied Physics, Russian Academy of Sciences*);

25 PT-symmetry Analysis by Manipulating Pump and Coupling Strength in Semiconductor Ridge Lasers
Yang Chen (*Institute of Semiconductors, CAS*); *Yufei Wang* (*Institute of Semiconductors, CAS*); *Ting Fu* (*Institute of Semiconductors, CAS*); *Jingxuan Chen* (*Institute of Semiconductors, CAS*); *Yingqiu Dai* (*Institute of Semiconductors, CAS*); *Ziyuan Liao* (*Institute of Semiconductors, CAS*); *Haiyang Ji* (*Institute of Semiconductors, CAS*); *Guangliang Sun* (*Institute of Semiconductors, CAS*); *Wanhua Zheng* (*Institute of Semiconductors, CAS*);

26 Development of Printed Antenna Models for GNSS C-band Antennas
V. V. Trubetskoy (*Moscow Technical University of Communications and Informatics (MTUCI)*); *A. M. Ignatov* (*National Research University "Moscow Power Engineering Institute"*); *Polina Mikhailovna Nikitina* (*National Research University "Moscow Power Engineering Institute"*); *S. A. Serov* (*National Research University "Moscow Power Engineering Institute"*); *Mikhail Sergeyevich Mikhailov* (*National Research University "Moscow Power Engineering Institute"*);

27 Measurements of Millimeter Wave Radar from the Wave Tank at Low Incidence Angles
Qinghui Xu (*Wuhan University*); *Chen Zhao* (*Wuhan University*); *Zezong Chen* (*Wuhan University*); *Sitao Wu* (*Wuhan University*); *Xiao Wang* (*Wuhan University*); *Haoyang Fan* (*Wuhan University*); *Faliang Guo* (*Wuhan University*); *Zhijie Hu* (*Wuhan University*);

28 Characterization of an Ion Trap Setup for Quantum Computations
Olga Lakhmanskaya (*Russian Quantum Center*); *N. Morozov* (*Russian Quantum Center*); *N. Sterligov* (*Russian Quantum Center*); *E. Anikin* (*Russian Quantum Center*); *L. A. Akopyan* (*Russian Quantum Center*); *N. Matveev* (*Russian Quantum Center*); *K. Lakhmanskiy* (*Russian Quantum Center*);

29 Circular Polarized Patch Antenna Array as an Element of the Antenna Field at 1.6 GHz
Mikhail Sergeyevich Mikhailov (*National Research University "Moscow Power Engineering Institute"*); *Feras Habib Rammah* (*National Research University "Moscow Power Engineering Institute"*); *A. A. Komarov* (*National Research University "Moscow Power Engineering Institute"*);

30 A Chipless Flexible Strain Sensor Based on Improved U-shaped Resonator Array
Han Zhang (*Tongji University*); *Guo Chun Wan* (*Tongji University*); *Mei Song Tong* (*Tongji University*);

31 A Single-layer Unit of Reflectarray Antenna Based on Mandelbrot Fractal Geometry for Dual-band Communications
Hou Yi Ding (*Tongji University*); *Lu Yi Liu* (*Tongji University*); *Yunyun Hu* (*Tongji University*); *Mei Song Tong* (*Tongji University*);

32 Chiral Metamaterial for Sensing Dielectric Objects Based on Cross-polarization Conversion Ratio at Microwave Frequencies
Akshay S. Nair (*National Institute of Technology Calicut*); *Adithya Danaj* (*National Institute of Technology Calicut*); *Barkathulla Asrafali* (*Shenzhen University*); *Zhengbiao Ouyang* (*Shenzhen University*); *Natesan Yogesh* (*National Institute of Technology Calicut*);

33 Research on Pulsed Laser Doppler Vibration Measurement Method
Shengguo Zhou (*National Key Laboratory of Electromagnetic Effect and Security on Marine Equipment and Nanjing Marine Radar Institute*); *Jinlong Tian* (*Nanjing Marine Radar Institute*); *Mingming Sun* (*Nanjing Marine Radar Institute*); *Yuan Huang* (*National Key Laboratory of Electromagnetic Effect and Security on Marine Equipment and Nanjing Marine Radar Institute*); *Weixiang Lv* (*Nanjing Marine Radar Institute*); *Xinmin Zhang* (*Nanjing Marine Radar Institute*);

34 Study on a Novel High-resolution and Wide-Swath SAR System with Mixed Baseline
Zongming Zhang (*University of Electronic Science and Technology of China*); *Taoli Yang* (*University of Electronic Science and Technology of China*); *Chenghao Lu* (*University of Electronic Science and Technology of China*);

35 Design and Realization of Axial-mode Helix-conical Antenna for ISM Band Wireless Communication
Sania Asri Monica (*Telkom University*); *Heroe Wijanto* (*Telkom University*); *Trasma Yunita* (*Institut Teknologi Bandung*); *Rheyuniarto Sahlendar Asthan* (*Institut Teknologi Sumatera*); *Achmad Munir* (*Bandung Institute of Technology*);

36 An Extended Maxwell Equation System
Kemin Sheng (*Southwest Jiaotong University*); *Xiufang Wang* (*Southwest Jiaotong University*);

37 Broadband Circularly Polarized Spin-selective Metadevice Based on Three-dimensional Printed Helical Structure
Shaojie Wang (*Air Force Engineering University*); *Yuxi Li* (*Air Force Engineering University*); *Tiefu Li* (*Air Force Engineering University*); *Ruichao Zhu* (*Air Force Engineering University*); *Jiafu Wang* (*Air Force Engineering University*);

38 Ship Detection by Tiangong-2 Interferometric Imaging Radar Altimeter
Xueyan Kang (*National Space Science Center, Chinese Academy of Sciences*); *Yunhua Zhang* (*National Space Science Center, Chinese Academy of Sciences*); *Xiao Dong* (*National Space Science Center, Chinese Academy of Sciences*); *Wenshuai Zhai* (*National Space Science Center, Chinese Academy of Sciences*);

39 Machine Learning Algorithm Based Plant Root Contour Extraction in Edge Devices
Peng Zhao (*Hainan University*); *Ting Fang Tan* (*Hainan University*); *Lihui Wang* (*Hainan University*);

40 Research on Construction Method of Dual-path Model Based on Complex Marine Environment
Lihui Wang (*Hainan University*); *Yonghui Zhang* (*Hainan University*); *Zhenjia Chen* (*Hainan University*); *Po Shao* (*Hainan University*); *Ran Chen* (*Hainan University*); *Songkun Chu* (*Hainan University*);

41 A 94.6 to 105.2 GHz CMOS Power Amplifier Achieving 17 dBm $\mathbf{P_{sat}}$, 12.5 dBm $\mathbf{OP_{1\,dB}}$ and 11.5% PAE with a Digital Power Detection Loop
Liangming Lian (*Guangzhou University*); *Yuxin Zhang* (*Guangzhou University*); *Yiqian Shan* (*Guangzhou University*); *Yuan Liang* (*Nanyang Technological University*); *Wen Jin* (*Guangzhou University*); *Ke Yang* (*Guangzhou University*);

42 Research on Background Electromagnetic Interference Suppression Method Based on MUSIC-LCMV Algorithm
Quan Deng (*Southwest University of Science and Technology*); *Qiangming Cai* (*Southwest University of Science and Technology*); *Xin Cao* (*Southwest University of Science and Technology*); *Longjian Zhou* (*Southwest University of Science and Technology*); *Haoran Li* (*Southwest University of Science and Technology*); *Zhen-Yong Du* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yixiang Li* (*Chengdu Juji Millimeter Wave Technology Co., Ltd*); *Yuyu Zhu* (*Southwest University of Science and Technology*); *Yu-Teng Zheng* (*DeTooLIC Technology Co., Ltd.*); *Bo Pu* (*DeTooLIC Technology Co., Ltd.*); *Jun Fan* (*Southwest University of Science and Technology*);

43 A Hybrid Optical Fiber Interferometer Based on Capillary and Three-core Fiber for Refractive Index Detection
Jie Cao (*Shanghai Maritime University*); *Feng Xu* (*Shanghai Maritime University*); *Ruichen Dai* (*Shanghai Maritime University*); *Mengjiao Ding* (*Shanghai Maritime University*); *Yunhe Zhao* (*Shanghai Maritime University*);

44 Quality Assessment of MAXSS Global Merged Wind Products under Tropical Cyclone Conditions
Weicheng Ni (*National University of Defense Technology*); *Kaijun Ren* (*National University of Defense Technology*); *Yanlai Zhao* (*National University of Defense Technology*); *Wuxin Wang* (*National University of Defense Technology*);

45 Higher-order Topological Insulators in Metamaterials
Changsheng He (*Fudan University*); *Shaojie Ma* (*Fudan University*);

46 Performance Analysis of Beamforming with Conjugate Field Matching in Phased Array Receiver
Kai Wang (*Xinjiang Astronomical Observatory, CAS*); *L. Cao* (*Xinjiang Astronomical Observatory, Chinese Academy of Sciences*); *H. Yan* (*Xinjiang Astronomical Observatory, Chinese Academy of Sciences*); *M. Z. Chen* (*Xinjiang Astronomical Observatory, Chinese Academy of Sciences*); *X. F. Duan* (*Xinjiang Astronomical Observatory, Chinese Academy of Sciences*); *J. H. Li* (*Xinjiang Astronomical Observatory, Chinese Academy of Sciences*);

47 Zone Plate Based Method for Measurement of Shift or Thickness
Sergey S. Stafeev (*Image Processing Systems Institute — Branch of the Federal Scientific Research Centre "Crystallography and Photonics" of RAS*); *Anton G. Nalimov* (*Image Processing Systems Institute — Branch of the Federal Scientific Research Centre "Crystallography and Photonics" of RAS*); *Elena Sergeevna Kozlova* (*Image Processing Systems Institute of the Russian Academy of Sciences*); *Victor V. Kotlyar* (*Image Processing Systems Institute — Branch of the Federal Scientific Research Centre "Crystallography and Photonics" of RAS*);

48 Poincare Beams in Tight Focus
Victor V. Kotlyar (*Image Processing Systems Institute — Branch of the Federal Scientific Research Centre "Crystallography and Photonics" of RAS*); *Sergey S. Stafeev* (*Image Processing Systems Institute — Branch of the Federal Scientific Research Centre "Crystallography and Photonics" of RAS*); *Vladislav D. Zaitsev* (*Samara National Research University*);

49 The Influence of Radiation Distance on Microwave Coupling Efficiency in Microwave-assisted Rock Breakage
Xiaoyun Zhao (*Chengdu University of Technology*);

50 Anomalous Electromagnetic Radiation Detection Method for Distributed Electromagnetic Spectrum Detection System Based on RF I/Q Signal in Pre-earthquake Period
Yupei Fan (*Hainan Earthquake Agency*); *Zhenjia Chen* (*Hainan University*); *Ting Su* (*Hainan University*);

51 Simple and High-precision Polarization Rotation Measurement Based on a High-order Vector Vortex Beam
Guojian Li (*Northwest Minzu University*); *Aning Ma* (*Lanzhou University*);

52 A 2.4 GHz Wireless Power Transmission: Design and Testing
Muthia Dwiwulandari (*Universitas Hasanuddin (UNHAS)*); *Elyas Palantei* (*Universitas Hasanuddin (UNHAS)*); *Intan Sari Areni* (*Universitas Hasanuddin*); *Zulfahmi Rizal* (*Universitas Hasanuddin (UNHAS)*);

53 Rapid FSS Design Method Based on Fourier Transform
Huanran Qiu (*Xidian University*); *Rui Xi* (*Xidian University*); *Ying Li* (*Xidian University*); *Hongsheng Chen* (*Zhejiang University*); *Bin Zheng* (*Zhejiang University*); *Long Li* (*Xidian University*);

54 Nonlinear Interaction Effects in a Three-mode Cavity Optomechanical System
Jing Qiu (*Southwest Institute of Technical Physics*); *Li-Jing Jin* (*Institute for Quantum Computing, Baidu Research*); *Zhen-Yang Peng* (*Institute of Theoretical Physics, Chinese Academy of Science*); *Hai-Zhi Song* (*Southwest Institute of Technical Physics & UESTC*); *Stefano Chesi* (*Beijing Computational Science Research Center*); *Ying-Dan Wang* (*Institute of Theoretical Physics, Chinese Academy of Science*);

55 Quantum Magnetic Gradiometer with Entangled Twin Light Beams
Jun Chen (*Shanghai Jiaotong University*); *Shuhe Wu* (*Shanghai Jiao Tong University*); *Guzhi Bao* (*Shanghai Jiao Tong University*); *Liqing Chen* (*East China Normal University*); *Weiping Zhang* (*Shanghai Jiao Tong University*);

56 Ultrafast Laser-induced Nano-structural Optical Storage Enhanced by Deep Learning
Chu-Han Wang (*Shanghai Jiao Tong University*); *Jie Ma* (*Shanghai Jiao Tong University*); *Xiaoyun Xu* (*Shanghai Jiao Tong University*); *Tian-Yu Zhang* (*Shanghai Jiao Tong University*); *Ke Cheng* (*Shanghai Jiao Tong University*); *Xian-Min Jin* (*Shanghai Jiao Tong University*);

57 Impact of Cu Ions on Optical Properties of the Thin Film within Composition $Cu_x(In_{0.6}, Ga_{0.4})_{2-x}Se_2$ and Their Application
Aeshah A. Alahmari (*King Khalid University*); *El Sayed Said Yousef* (*King Khalid University*); *H. H. Hegazy* (*King Khalid University*); *A. M. Alsabi* (*King Khalid University*);

58 Systematic Evaluation of a Sub-Terahertz CMOS Wireless Link with an Interposer-based Mushroom Antenna in a Heterogeneous Technology
Guangyu Zhong (*Guangzhou University*); *Zhikai Li* (*Guangzhou University*); *Yiqian Shan* (*Guangzhou University*); *Yuan Liang* (*Nanyang Technological University*); *Wen Jin* (*Guangzhou University*); *Ke Yang* (*Guangzhou University*);

59 Fault Diagnosis System for Automotive Air Conditioning Actuators Utilizing COPOD Algorithm
Hongwei Liu (*Changjiang Polytechnic*); *Wenjing Peng* (*Tohoku University*); *Jing Xiao* (*Hubei Science and Technology College*); *Qingyao Wang* (*China Ship Development and Design Centre*); *Fang Chen* (*Changjiang Polytechnic*); *Luo Bo* (*Changjiang Polytechnic*); *Chong-Hua Fang* (*China Ship Development and Design Center*);

60 Sub-80-fs All-solid-state Kerr-lens Mode-locked Laser Based on Yb: $GdScO_3$ Crystal
Siyuan Niu (*Xidian University*); *Yang Yu* (*Xidian University*); *Geyang Wang* (*Xidian University*); *Wenlong Tian* (*Xidian University*); *Xiaodong Xu* (*Jiangsu Normal University*); *Zhiyi Wei* (*Institute of Physics, Chinese Academy of Sciences*); *Jiangfeng Zhu* (*Xidian University*);

61 Research on Image Compression Technique by Deep Learning Algorithm with Semantic Coding and Decoding
Jiaqi Rong (*Beijing University of Posts and Telecommunication*); *Dahai Han* (*Beijing University of Posts and Telecommunications*); *Min Zhang* (*Beijing University of Posts and Telecommunications*); *Xu Kun Chen* (*Beijing University of Posts and Telecommunications*); *Sihang Liu* (*Beijing University of Posts and Telecommunications*);

62 A Polarization Reconfigurable Microstrip Antenna Based on a Return-shape Slot
Hui Zhang (*High-Tech Institute of Xi'an*); *Yanling Li* (*High-Tech Institute of Xi'an*); *Jianwei Zhan* (*High-Tech Institute of Xi'an*); *Fei Cao* (*High-Tech Institute of Xi'an*);

63 Synthesized Complex-frequency Excitation for Ultrasensitive Molecular Sensing
Kebo Zeng (*University of Hong Kong*); *Chenchen Wu* (*National Center for Nanoscience and Technology*); *Xiangdong Guo* (*National Center for Nanoscience and Technology*); *Fuxin Guan* (*University of Hong Kong*); *Yu Duan* (*National Center for Nanoscience and Technology*); *Lauren L. Zhang* (*Harvard University*); *Xiaoxia Yang* (*National Center for Nanoscience and Technology*); *Na Liu* (*University of Stuttgart*); *Qing Dai* (*National Center for Nanoscience and Technology*); *Shuang Zhang* (*University of Hong Kong*);

64 Dimension-confined-growth of Crack-free PbS Nanoplates Array for Infrared Image Sensing
Yu Wan (*Nanchang University*); *Yan Wang* (*Nanchang University*); *Shengpeng Yuan* (*Nanchang University*); *Zhiyang Wan* (*Nanchang University*); *Yan Lu* (*Nanchang University*); *Li Wang* (*Nanchang University*); *Qisheng Wang* (*Nanchang University*);

65 Plasmonic Metasurfaces and Metalenses Fabricated by Nano-imprinting Lithography
Yung-Chun Lee (*National Cheng-Kung University*);

66 Chiral Photonic Crystals from Sphere Packing
Duanduan Wan (*Wuhan University*);

67 Effect of Material and Creepage Distance on the Flashover Characteristics of Insulators under HEMP
Yixiong Wang (*Northwest Institute of Nuclear Technology*); *Wei Chen* (*Northwest Institute of Nuclear Technology*); *Feng Qin* (*Northwest Institute of Nuclear Technology*); *Xin Nie* (*Northwest Institute of Nuclear Technology*);

68 Utilizing 'Non-Hermitian Gain' to Realize Ultra-high-quality-factors in Optical Manipulation Systems
Yang Li (*Southern University of Science and Technology*); *Xiao Li* (*The Hong Kong University of Science and Technology*); *Jack Ng* (*Southern University of Science and Technology*);

	April 21 (Sunday PM)
Room 0 - Sichuan	0P0a - Mie-tronics and Metaphotonics 1 0P0b - Hot Topics in Photonics and Electromagnetics
Room 1 - Yarui	0P1 - Quantum Biology and Quantum Devices 1
Room 2 - Jincheng 3	0P2 - Quantum Sensing Methods and Applications
Room 3 - Jincheng 2	0P3 - New Antennas and Testing Techniques for 5G/B5G Communications and Sensing Applications
Room 4 - Jincheng 1	0P4 - Recent Advances in Optical Metasurfaces 1
Room 5 - Yingbin	0P5 - Advances of Numerical Methods in Computational Electromagnetics
Room 6 - Huanhua	0P6 - Plasmonics and Photonics for Sustainability 1
Room 7 - Xiling	0P7a - Metasurface: Concepts and Applications 0P7b - Oral Presentations for Best Student Paper Awards --- CEM, EMC, Scattering & EM Theory
Room 8 - Guixiang	0P8 - High Power Millimeter-wave and Terahertz Radiation Sources
Room 9 - Xinyu	0P9 - Near-/Mid-/Far-Infrared Semiconductor Optoelectronic Devices: Fundamentals and Applications
Room 10 - Shuliu	0P10a - Advances in EM Scattering and Propagation from Complex Land/Marine Environment: Theories, Measurements and Applications 0P10b - Wave Propagation and Scattering: Advances, Trends, and New Applications
Room 11 - Xiangyu	0P11 - Stimulated Scattering and Its Applications
Room 12 - Siji 1	0P12 - Gyrotrons and Fast Wave Devices 1
Room 13 - Siji 2	0P13 - Signal Processing Techniques in 4D Automotive Radar Imaging and Information Processing
Room 14 - Siji 3	0P14 - Synthetic Aperture Radar System, Method and Applications 1
Room 15 - Siji 4	0P15a - Progress in Electromagnetic Compatibility (EMC), Signal Integrity (SI), and Power Integrity (PI) 0P15b - Electromagnetic Modeling and Statistical Analysis of Dynamic Targets and Environments
Room 16 - Mudan	0P16 - Nanophotonics and Topological Photonics 1
Room 17 - Furong	0P17 - Light Emission from Particle-matter Interactions
Room 18 - Meilan	0P18 - New Topics on Metasurfaces: Structured Light Shaping and Artificial Intelligence

	April 22 (Monday AM)	April 22 (Monday PM)
Room 1 - Yarui	1A1a - Quantum Biology and Quantum Devices 2 1A1b - Quantum Measurement and Metrology	1P1a - Quantum Information Processing and Devices 1P1b - Foundation and Implementation of Optical Quantum Information
Room 2 - Jincheng 3	1A2a - Quantum Walks and Their Practical Applications 1A2b - Quantum Sensing	1P2 - Terahertz Meta-Devices 1 & 2
Room 3 - Jincheng 2	1A3a - Antenna and Antenna Array Design for Radiative WPT and Energy Harvesting 1A3b - Advanced Design for Wideband and High-Gain Millimeter/Terahertz Lens Antennas	1P3 - New Physics and Applications of Zero-index and Other Extraordinary Metamaterials
Room 4 - Jincheng 1	1A4 - Reconfigurable Metasurfaces and Applications	1P4a - Special Session on Quantum Frontiers 1P4b - Quantum Chip
Room 5 - Yingbin	1A5a - Microwave Photonics for Communication, Sensing and Measurements 1A5b - Plasmon-enhanced Raman Spectroscopy and Its Chemistry 1	1P5a - Plasmon-enhanced Raman Spectroscopy and Its Chemistry 2 1P5b - Miniaturization of Optical Spectrometers
Room 6 - Huanhua	1A6 - Non-Hermitian Physics: Theory and Applications 1	1P6 - Advances in Nanophotonics and Metasurfaces 1
Room 7 - Xiling	1A7 - Nonlinear Optical Effect in Complex Nanostructures 1	1P7a - Nonlinear Optical Effect in Complex Nanostructures 2 1P7b - Integrated Microwave Photonics
Room 8 - Guixiang	1A8 - Thermal Photonics: Fundamental Physics and Application 1	1P8 - Thermal Photonics: Fundamental Physics and Application 2
Room 9 - Xinyu	1A9 - Nonclassical Plasmonics and Nonlinear Optics 1	1P9a - Nonclassical Plasmonics and Nonlinear Optics 2 1P9b - Advances in Nanophotonics/Plasmonics/Metasurfaces and Their Applications
Room 10 - Shuliu	1A10a - Optical Interconnect Technologies for Datacom and Computercom 1A10b - Biotechnology Related to Electromagnetics	1P10a - Simulation of Radar Echo and Scattering Center Extraction Technology 1P10b - EM Modeling, and Inversion and Applications
Room 11 - Xiangyu	1A11 - Biophotonics Part 1	1P11a - Biophotonics Part 2 1P11b - Biophotonics Part 3
Room 12 - Siji 1	1A12a - Novel Electromagnetic Selective Structures and Applications 1A12b - Oral Presentations for Best Student Paper Awards --- Antennas and Microwave Technologies	1P12a - Gyrotrons and Fast Wave Devices 2 1P12b - Microwave and Millimeter Wave Devices and Systems
Room 13 - Siji 2	1A13 - Computational Imaging: Novel System Design and Reconstruction Algorithms 1	1P13a - Computational Imaging: Novel System Design and Reconstruction Algorithms 2 1P13b - Electromagnetic Quantitative Imaging via Machine Learning
Room 14 - Siji 3	1A14 - Synthetic Aperture Radar System, Method and Applications 2	1P14 - Remote Sensing of Atmosphere, Ocean and Land Using GNSS and Other Sensors
Room 15 - Siji 4	1A15a - Deep Learning Techniques in Computational Electromagnetics 1A15b - Emerging Computational Methodologies for Computer-aided EM Design and Optimization	1P15a - Numerical Methods in Analysis and Design of Metasurfaces 1P15b - Advanced Electromagnetic Methods and Channel Propagation Modeling in Indoor, Urban, and Terrestrial Environments
Room 16 - Mudan	1A16a - Topological Photonics: Fundamentals and Applications 1 1A16b - Wave Engineering in Complex Media	1P16 - Nanophotonics and Topological Photonics 2
Room 17 - Furong	1A17 - Acoustic/Phononic Metamaterials, Metasurfaces, and Metadevices 1	1P17a - Acoustic/Phononic Metamaterials, Metasurfaces, and Metadevices 2 1P17b - Recent Advances and Applications in Photonic/Acoustic Metasurfaces
Room 18 - Meilan	1A18 - Optical Metasurface for Light Manipulation and Novel Response	1P18 - Nascent Light-matter Interactions
Exhibition Area	1A19 - Poster Session 1	1P19 - Poster Session 2

	April 23 (Tuesday AM)	April 23 (Tuesday PM)
Room 1 - Yarui	2A1a - Quantum Information Physics, Materials and Devices 1 2A1b - High-dimensional Quantum Information	2P1a - Quantum Information Physics, Materials and Devices 2 2P1b - Atomic Quantum Optics
Room 2 - Jincheng 3	2A2 - Metasurface Inspired Antennas and Microwave Components	2P2 - Deep Learning-enabled Metasurface Design and Autonomous Meta-devices
Room 3 - Jincheng 2	2A3a - Advanced Antenna Design Technologies for Pattern Diversity and Reconfigurability 2A3b - Compact Antennas and Their Arrays for Modern Wireless Communications	2P3 - Antenna Designs, Measurements, and Trends for 5G/B5G and Satellite Communications
Room 4 - Jincheng 1	2A4 - Wave Phenomena in Space/Time Varying Metamaterials/Metasurfaces 1	2P4a - Wave Phenomena in Space/Time Varying Metamaterials/Metasurfaces 2 2P4b - Time-modulated Metamaterials and Time-variant Systems
Room 5 - Yingbin	2A5 - The Merge of Artificial Intelligence and Nanophotonics for Optical Computing, Sensing and Imaging	2P5a - Optics for AR, VR, and MR 2P5b - Emerging Biomedical Applications of Optical Imaging and Spectroscopy
Room 6 - Huanhua	2A6 - High Power Fiber Laser Technology and Applications	2P6a - Optical Skyrmions 1 2P6b - Optical Skyrmions 2
Room 7 - Xiling	2A7 - Integrated Nonlinear Photonics: From Materials to Devices and Applications	2P7a - New Trends in Nonlinear Optics and Emerging Platforms for The Generation of Complex Light 2P7b - Photonics & Nanophotonics
Room 8 - Guixiang	2A8a - Thermal Radiation: Principles, Progress, and Potentials 1 2A8b - Thermal Photonics: Fundamental Physics and Application 3	2P8 - Thermal Radiation: Principles, Progress, and Potentials 2
Room 9 - Xinyu	2A9a - Hybrid Optoelectronics 2A9b - Advanced Light Source Using Integrated Photonics Technologies	2P9 - Non-Hermitian and Topological Phenomena with Electromagnetic Waves
Room 10 - Shuliu	2A10a - Oral Presentations for Best Student Paper Awards --- Optics and Photonics 2A10b - Oral Presentations for Best Student Paper Awards --- Metamaterials, Plasmonics and Complex Media	2P10 - Interaction of Electromagnetic Waves with Ionized and Complex Media
Room 11 - Xiangyu	2A11a - Fiber Sensing Tech. and Fiber-based Devices 2A11b - Discharge Plasma in Contact with a Liquid 1	2P11 - Discharge Plasma in Contact with a Liquid 2
Room 12 - Siji 1	2A12 - AI/Machine Learning Based Modeling and Design Optimization Techniques in Microwaves	2P12 - High Power Microwave, Millimeter-Wave and Terahertz Wave Generation, Transmission and Radiation
Room 13 - Siji 2	2A13a - EM Medical Sensing and Imaging for Healthcare: Recent Progress, Clinical Applications and Future Prospects 2A13b - Oral Presentations for Best Student Paper Awards --- Remote Sensing, etc.	2P13a - Scientific Computing and Machine Learning in Subsurface Geophysical Prospecting 2P13b - Subsurface Detection and Imaging
Room 14 - Siji 3	2A14 - Advanced Optimization and Intelligent Processing Methodologies for Radar Systems	2P14 - Remote Sensing of Water and Energy Cycles
Room 15 - Siji 4	2A15 - Advanced Techniques in Electromagnetic Numerical Analysis and Applications	2P15a - Integral Equation Methods in Electromagnetics 2P15b - Intelligent Computing for Multiscale and Multiphysics Problem
Room 16 - Mudan	2A16 - Topological Condensed Matter and Artificial System 1	2P16 - Topological Condensed Matter and Artificial System 2
Room 17 - Furong	2A17 - Phononic Crystals, Acoustic/Elastic Metamaterials and Metasurfaces 1	2P17 - Mie-tronics and Metaphotonics 2
Room 18 - Meilan	2A18 - Optical and Acoustic Manipulation: Fundamental and Application 1	2P18a - Optical and Acoustic Manipulation: Fundamental and Application 2 2P18b - Meta-optics for Multidimensional Light Field Control 2P18c - Multiplexing Metasurfaces for Integrated EM Wave Manipulations
Exhibition Area	2A19 - Poster Session 3	2P19 - Poster Session 4

	April 24 (Wednesday AM)	April 24 (Wednesday PM)
Room 1 - Yarui	3A1 - Quantum Computation and Quantum Simulation	3P1a - Quantum Light Source and Quantum Interference 1 3P1b - Quantum Light Source and Quantum Interference 2
Room 2 - Jincheng 3	3A2 - Single Photon Detection: Device and Integration	3P2a - EM Modes in Metastructures and Their Applications 3P2b - ENZ Materials and ENZ Photonic Devices
Room 3 - Jincheng 2	3A3a - Advanced Decoupling Networks for Large-scale Arrays 3A3b - Advanced Mode-inspired Antennas for 5G/B5G Communications	3P3 - Reconfigurable Array, Transmitarray, Conformal Array, Array Theory and Applications
Room 4 - Jincheng 1	3A4 - Advances in Nanophotonics and Metasurfaces 2	3P4 - Electromagnetic Absorption, Thermal Manipulation and Their Coupling Effects 1 & 2
Room 5 - Yingbin	3A5 - Advanced Photonic Technologies for Spectroscopic Applications 1	3P5a - Advanced Photonic Technologies for Spectroscopic Applications 2 3P5b - Optical Sensors for Professional and Consumer Use, with Add. Functionality Enabled by AI
Room 6 - Huanhua	3A6a - Non-Hermitian Optics and Photonics, and Exceptional Point 3A6b - Non-Hermitian Physics: Theory and Applications 2	3P6a - Plasmonics and Photonics for Sustainability 2 3P6b - Recent Advances in Optical Metasurfaces 2
Room 7 - Xiling	3A7 - Integrated Photonics Beyond the Communication Waveband	3P7 - Advances in Tunable Photonic Integrated Waveguide Chips
Room 8 - Guixiang	3A8 - High-Q Photonic Resonances in All-dielectric Nanostructures and Their Applications 1	3P8a - Nanomaterials and Nanophotonics for Sensing 3P8b - Harvesting Losses in Nanophotonics: Hot Electrons and Heat, Chirality, and Bio-sensing
Room 9 - Xinyu	3A9 - Organic, Perovskite and Low-dimensional Light Sources: Emerging Phenomena and Applications	3P9 - Functional Optoelectronic Devices: Light Sources and Detectors
Room 10 - Shuliu	3A10a - Measurement-computation Fusion for Advanced Applications 3A10b - RF-THz Physical, Chemical and Biological Sensors and Measurement	3P10a - Radar Target Scattering Signature Modeling and Application 3P10b - Micro-processing and Micro-fabrication with Lasers
Room 11 - Xiangyu	3A11 - Advanced Optical and Digital Signal Processing in Optical Communication Networks 1	3P11a - Advanced Optical and Digital Signal Processing in Optical Communication Networks 2 3P11b - Optical Wireless Communication
Room 12 - Siji 1	3A12a - Passive Microwave and Millimeter-wave Components and Their Application for RF Frontend 3A12b - Advanced Mode-Inspired Filtering Techniques for 5G+/6G Communications	3P12a - Recent Advances in AI Applications to the HPEM Effect of Electronic Systems 3P12b - Microwave and Millimeter Wave Circuits and Devices 1
Room 13 - Siji 2	3A13a - New Mechanism and Data Processing of Ground Penetrating Radar 3A13b - Progress in Inversion Method and Machine Learning Enhanced Inversion Method and Their Applications	3P13a - Quantum Technologies Related to EMs 3P13b - Advancement of UAV/Drone Applications for Earth Resource Monitoring 3P13c - Progress on EMs for Biomedical Imaging Methods and Systems
Room 14 - Siji 3	3A14 - Advanced Signal and Data Processing Methodologies for Multistatic Radar System	3P14 - Ocean and Coastal Remote Sensing: The AI Approach
Room 15 - Siji 4	3A15a - Computational EMs, Hybrid Methods and EMC 1 3A15b - Efficient Algorithms in Computational EMs and Their Applications	3P15a - Advanced Modeling and Simulation Methods for Multiphysics and Multiscale Problems 3P15b - Numerical Methods for the Approximation of Maxwell's Equations
Room 16 - Mudan	3A16 - Topological Photonics: Fundamentals and Applications 2	3P16a - Bound States in the Continuum and Singular Optics 1 3P16b - Nanophotonics and Topological Photonics 3
Room 17 - Furong	3A17a - Phononic Crystals, Acoustic/Elastic Metamaterials and Metasurfaces 2 3A17b - Physics and Applications in Photonic/Acoustic Micro-/Nano-Structures 1	3P17 - Phononic Crystals, Acoustic/Elastic Metamaterials and Metasurfaces 3
Room 18 - Meilan	3A18a - Structured Light: From Classical to Quantum 1 3A18b - Light-matter Interaction in Disordered Structures and The Photonic Applications	3P18a - Acoustic Topological Metamaterials 1 3P18b - Structured Light: From Classical to Quantum 2
Exhibition Area	3A19 - Poster Session 5	3P19 - Poster Session 6

	April 25 (Thursday AM)	April 25 (Thursday PM)
Room 1 - Yarui	4A1 - Quantum Entanglement and Its Applications 1	4P1a - Quantum Entanglement and Its Applications 2 4P1b - Quantum Algorithms from The Ground Up
Room 2 - Jincheng 3	4A2a - Advances in Modeling and Measurement Techniques for EM Safety Assessment and Biomedical Applications 4A2b - RF and Microwave Metamaterials for Wireless Communications 1	4P2a - RF and Microwave Metamaterials for Wireless Communications 2 4P2b - Active and Reconfigurable Metasurfaces: Fundamentals and Applications
Room 3 - Jincheng 2	4A3 - Physics and Applications in Photonic/Acoustic Micro-/Nano-Structures 2	4P3 - Mie-tronics and Metaphotonics 3
Room 4 - Jincheng 1	4A4a - Millimeter Wave and Terahertz Metasurfaces: Fundamentals and Applications 4A4b - Metamaterial Inspired Beam Steering Antennas	4P4a - Electromagnetic Metasurfaces and Their Applications in Antenna Designs 4P4b - Metamaterials & Metasurface 2
Room 5 - Yingbin	4A5 - Ultrafast Optics	4P5a - Ultrafast Opto-spintronics Based Terahertz Radiation Sources and Their Applications 4P5b - Space Time Optics
Room 6 - Huanhua	4A6 - Bound States in the Continuum and Singular Optics 2	4P6 - Acoustic Topological Metamaterials 2
Room 7 - Xiling	4A7a - High-Q Photonic Resonances in All-dielectric Nanostructures and Their Applications 2 4A7b - Novel Optical Fiber Based Sensors	4P7 - Emerging Technologies in Optical Metasurfaces
Room 8 - Guixiang	4A8 - Optical Soliton and Applications	4P8a - Integrated Nano-opto-(electro-)mechanical Systems (NOEMS and NOMS) 4P8b - Liquid Crystal Photonics
Room 9 - Xinyu	4A9 - Low Dimensional Optoelectronic Materials and Advanced Semiconductor Lasers	4P9a - Advanced Materials and Devices for Photoelectric Detection 4P9b - Advanced Simulation Methods, Designs and Mechanisms for Energy Photonics
Room 10 - Shuliu	4A10 - Theories, Experiments, and Applications: Ferroelectrics and Electroceramics	4P10a - Antennas, Array Antennas, MIMO Antenna for 5G 4P10b - Metamaterials/Metasurface Antennas
Room 11 - Xiangyu	4A11a - LiDAR: Photonic Integration, Signal processing, Imaging, Applications 4A11b - Beamforming in Optical and RF Domain 1	4P11a - Beamforming in Optical and RF Domain 2 4P11b - Unconventional Antenna Array Design, Beamforming and DOA Estimation Algorithms
Room 12 - Siji 1	4A12 - Terahertz Technology and Applications	4P12a - THz Technology 4P12b - Microwave and Millimeter Wave Circuits and Devices 2
Room 13 - Siji 2	4A13a - SAR EM Scattering Characteristic Analysis, Extraction, Imaging and Recognition 4A13b - Advanced and Intelligent Techniques in EM Scattering and Imaging	4P13 - Quantum Secure Communication and Its Beyond
Room 14 - Siji 3	4A14 - Recent Advances in Random Medium Scattering Theory and Remote Sensing Techniques	4P14a - Efficient Processing and Interference Mitigation for Multidimensional Radar Signals 4P14b - Remote Sensing and Polarimetry, SAR
Room 15 - Siji 4	4A15a - Computational EMs, Hybrid Methods and EMC 2 4A15b - Advanced Computational Electromagnetic Methods and Theory	4P15a - Advanced Time-domain EM Methods and FDTD-based Methods for Multiscale Electromagnetic Analysis 4P15b - Computational Electromagnetics, Hybrid Methods and EMC 3 4P15c - Plasma, Electromagnetic Theory & Applications
Room 16 - Mudan		
Room 17 - Furong		
Room 18 - Meilan	4A18a - Topological Optics 4A18b - Metamaterials & Metasurface 1	4P18a - Optical Manipulation of Micro-nano Objects 4P18b - EM Manipulations with Advanced Materials in Metasurface and Antenna Applications
Exhibition Area	4A19 - Poster Session 7	4P19 - Poster Session 8

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[1] Institutions such as:
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[2] Results such as:

- 2022--**Nature**--Topological Chern vectors in three-dimensional photonic crystals
- 2019--**Nature**--Realization of a three-dimensional photonic topological insulator
- 2019--**Nature Material**--Acoustic higher-order topological insulator on a kagome lattice
- 2019--**Nature Physics**--Topological triply degenerate point with double Fermi arcs
- 2018--**Nature Physics**--Topologically protected refraction of robust kink stats in valley photonic crystal
- 2017--**Nature Material**--Valley photonic crystals for control of spin and topology

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MBE液氮输送循环系统

Liquid Nitrogen Transport Circulation System for MBE Equipment

系统简介
System Introduction

公司自主研发MBE设备专用液氮输送循环系统，是以真空绝热保温为基础的多功能自控系统。它由贮槽出液阀为始，MBE设备专用真空液氮接头为终，实现对液氮的输送、排杂质、减压、稳压、排氮气及循环利用等功能，全程均由低温传感器监测及PLC控制。采用动态真空系统，实时确保系统真空度。

目前，是国内稳定运行DCA、RIBER、FERMI等品牌设备的专业液氮输送循环系统厂商。

The Liquid Nitrogen Transport Circulation System starts from the storage tank and ends with the MBE equipment to realize the functions of liquid nitrogen transportation, impurity discharge, pressure reduction & regulation, nitrogen discharge and recycling. The whole process is monitored by cryogenic sensor and controlled by PLC, which can realize function switch between automatic and manual operation.

At present, The system stably operate MBE equipment from DCA, RIBER and FERMI manufacturers.

项目业绩表
Performance Table

2007年	中国电子科技集团 第十一研究所	2套
2014年	中国电子科技集团 第十一研究所	1套
2019年	中国科学院 上海技术物理研究所	1套
2019年	海思光电子有限公司	1套
2020年	海思光电子有限公司	1套
	中国科学院 上海技术物理研究所	1套
	中国电子科技集团 第十一研究所	1套
2021年	中国电子科技集团 第十一研究所	2套
	北京邮电大学	1套
	海思光电子有限公司	1套
	烟台睿创微纳技术有限公司	1套
	费勉仪器科技（南京）有限公司	1套
2022年	中国电子科技集团 第十一研究所	4套
	中国电子科技集团 第四十八研究所	3套
	海思光电子有限公司	1套
	中国科学院 苏州纳米技术与纳米仿生研究所	1套
	中国科学院 沈阳科学仪器股份有限公司	1套
	中国科学院 上海微系统与信息技术研究所	1套
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	费勉仪器科技（南京）有限公司	1套
	中国台湾项目	1套
2023年	苏州焜原光电有限公司	4套
	武汉延旌科技有限公司	2套
	中国电子科技集团 第五十五研究所	1套
	中国电子科技集团 第四十八研究所	1套
	中国科学院 重庆绿色智能技术研究院	1套
	费勉仪器科技（南京）有限公司	1套
	普源精电科技股份有限公司	1套
	俄罗斯项目	1套

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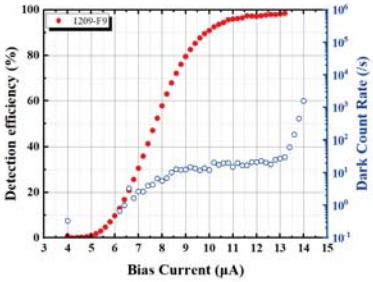

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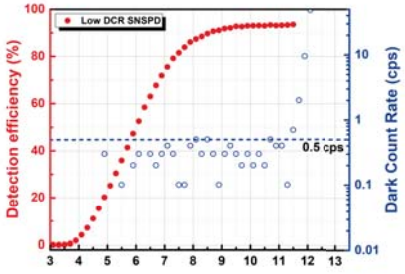

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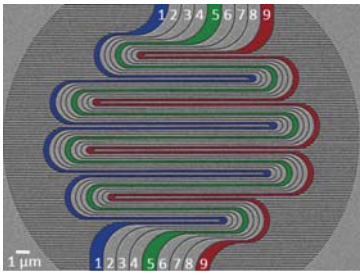

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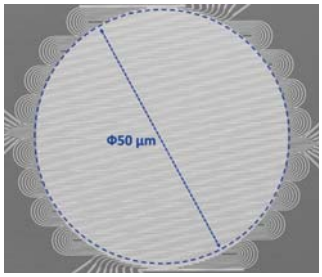

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