PIERS 2014 Guangzhou

Progress In Electromagnetics Research Symposium

Program

August 25–28, 2014
Guangzhou, CHINA

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www.piers.org

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Welcome to PIERS 2014 Guangzhou,

where microwave and lightwave communities meet

It is our great pleasure to invite you to participate in Progress in Electromagnetics Research Symposium (PIERS) 2014 and share the latest findings in the electromagnetic wave spectrum (including microwave and lightwave, and beyond).

This year is a special year because it marks the 150 years of Maxwell's Equations. James Clerk Maxwell presented his important finding to the British Royal Society in 1864. Both microwave and lightwave are governed by the same Maxwell's equations. However, many people in microwave rarely read papers in optics journals and "reinvented the wheel" from time to time, while many other people in optics rarely read papers in microwave journals and keep "reinventing the wheel". It is therefore very worthwhile to encourage the microwave community and the lightwave community to meet and talk (or listen) to each other in a conference. PIERS 2014 is a great event as a Family Reunion of Electromagnetic Waves, where microwave and lightwave communities meet.

PIERS 2013 Stockholm was a great success with 1,650 paper submissions and 1,135 registered/paid participants from 67 countries and many top-notch keynote/invited speakers of the areas. PIERS 2014 Guangzhou is setting a new record with over 2,000 paper submissions.

Like PIERS 2013 Stockholm, this year's conference will feature the following five tracks:

SC 1. Computational Electromagnetics, Electromagnetic Compatibility, Scattering and Electromagnetic Theory;

SC 2. Metamaterials, Plasmonics and Complex Media;

SC 3. Optics and Photonics;

SC 4. Antennas and Microwave Technologies;

SC 5. Remote Sensing, Inverse Problems, Imaging, Radar and Sensing.

PIERS 2014 Guangzhou features a full suite of plenary, keynote, invited, and contributed talks given by international academic and industrial researchers who are leaders in their respective fields.

The plenary Session is scheduled on the morning of Monday, August 24, with five outstanding speakers. Prof. Sir John Pendry (Imperial College London, UK) will give a plenary talk on metamaterials. Prof. David Miller of Stanford University will discuss low-energy integrated photonics for information processing. Prof. Akira Ishimaru (University of Washington, Seattle, USA) will talk about "Statistical Electromagnetic Theories Applied to Imaging in Geophysical and Biological Random Media". Prof. Federico Capasso of Harvard University will give a plenary talk "Flat Optics Based on Metasurfaces: Molding Wavefronts and Surface Waves". Prof. Lihong Wang (Washington University in St. Louis, USA) will give a presentation entitled "Photoacoustic Tomography: Ultrasonically Beating Optical Diffusion and Diffraction".

A sesquicentennial anniversary session to commemorate 150 years of Maxwell's equations is organized at PIERS 2014, with the following nine distinguished senior speakers of the electromagnetics community: Jean-Charles Bolomey, Federico Capasso, Weng Cho Chew, Raymond W. Chiao, Giorgio Franceschetti, Prabhakar H. Pathak, John B. Pendry, Donald R. Wilton, and Arthur D. Yaghjian.

Two mini-symposia have been organized in PIERS 2014, with many excellent keynote/invited speakers. One is on "Photovoltaics, LEDs and Other Optoelectronics in Energy" organized by Wallace C. H. Choy and Mario Dagenais. It consists of 6 sessions with different organizers. The other mini-symposium is on "Microwave Photonics" (organized by Christina Lim and Chao Wang) with 3 sessions on various related topics.

The feature of Focus sessions introduced in PIERS 2013 Stockholm continues this year. PIERS 2014 has about 20 focus sessions on various hot topics, such as Casimir Effect and Heat Transfer, Photoacoustic Tomography and Sensing, Disordered Photonics, Tunable and Reconfigurable Metamaterials and Plasmonics, etc..

In addition to the regular technical sessions, several pre-conference short courses have been planned for PIERS 2014.

Best Student Paper Awards will be given to students who are first authors and presenters of excellent contributed talks. Awards will be presented during the Banquet on August 27.

To encourage participants to meet with the authors and discuss technical issues in-depth, free beer will be provided at the poster session area around the coffee break time of the first three days.

A Welcome Reception will be held in the evening of August 24 on the 3rd floor of the conference hotel (the Langham Place Guangzhou).

If you want to visit any local Guangzhou institutions, organizations and companies, you may contact our local organizer, South China Normal University. They will be glad to assist you for any request you may have.

It is an enormous task to organize this big conference and it is impossible to succeed without the dedicated efforts of many supporters and volunteers. We are indebted to the entire Technical Program Committee, particularly, the Technical Program Committee Chairs, the Subcommittee Chairs, and the Session organizers who have worked persistently throughout the year to invite speakers and organize the technical sessions which results in the present excellent technical program.

We thank all the contributors and authors for making PIERS 2014 a truly unique, outstanding global event.

Sincerely,

Prof. Sailing He,

The Royal Inst. of Technology, Sweden
and JORCEP (Sino-Swedish Joint Research Center of Photonics), Lead General Co-chair

Prof. Kazuya Kobayashi

Chuo University, Japan, General Co-chair

Prof. Raj Mittra

Pennsylvania State University, USA, General Co-chair

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THE ELECTROMAGNETICS ACADEMY

The Progress in Electromagnetics Research Symposium (PIERS) 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.

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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.

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Progress In Electromagnetics Research Symposium
August 25–28, 2014
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- The Electromagnetics Academy at Zhejiang University, China
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- Biaoqi Electronics/Ocean Optics, China
- Luster LightTech, China
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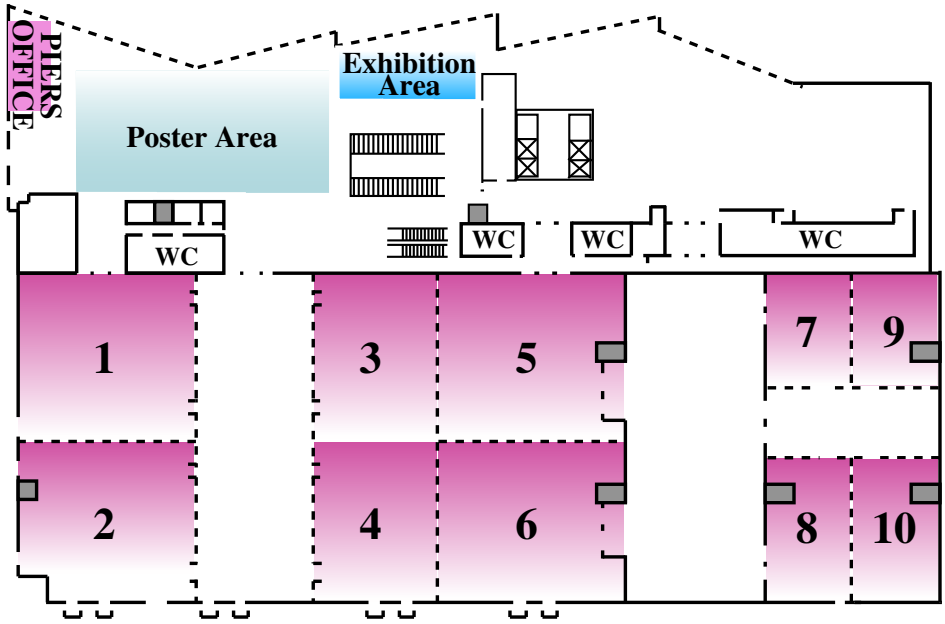
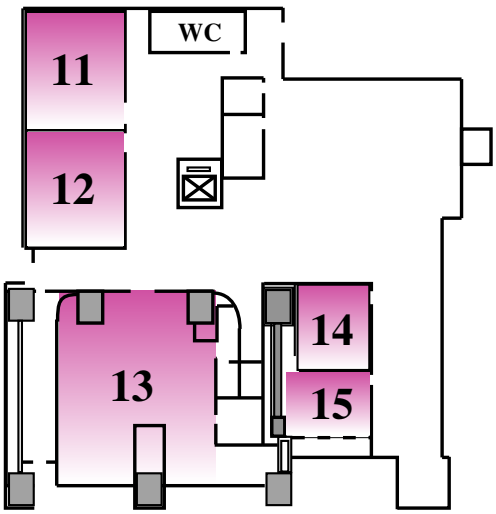


3rd Floor
LANGHAM PLACE GUANGZHOU



5th Floor
LANGHAM PLACE GUANGZHOU

*The remodelling of Chinese restaurant on the 3rd floor is scheduled to be completed by the conference date. Then five large rooms inside this adjacent Chinese restaurant may be used to replace rooms 11, 12, 13, 14 and 15.

SYMPOSIUM VENUE

The 2014 Progress in Electromagnetics Research Symposium will be held in Guangzhou during August 25–28, 2014, in the Langham Place Guangzhou.

REGISTRATION

The PIERS technical sessions will begin at 8:00 on Monday, August 25, 2014. You're encouraged to register during 10:00-18:00, Sunday, August 24, 2014, at the registration desk/room located in the Langham Place Guangzhou. Registration is also possible in the Langham Place Guangzhou from 08:00 to 18:00 during the Symposium, August 25–28, 2014.

The on-site registration fee is USD 680, and the reduced registration fee for a student is USD 400 (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 desk 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

On Sunday evening, August 24, 2014, all conference participants are invited to a welcome reception 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 August 10.

Symposium Banquet

On Wednesday evening, August 27, 2014, symposium banquet is planned for PIERS participants and their guests. A limited number of banquet tickets will be available. For all participants, the price is USD 80/RMB 480 per person. Please make reservation and pay by credit card (USD) in advance for the banquet by August 10.

PIERS ONLINE

Information on PIERS 2014 Guangzhou and future PIERS is posted at www.piers.org.

GUIDELINE FOR PRESENTERS

Oral Presentations

- **Load and TEST presentation files in advance:**
  Presenting authors should upload 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:**
  PDFs and Powerpoint files are recommended. Movies or animations in MPEG, Windows Media, etc, should be tested in PIERS computer in PIERS OFFICE no later than half day before the session. Presentation files in USB disk, CD-ROM, DVD are acceptable by PIERS Computer.
- **Report to Session Chair:**
  Presenters are required to report to their session chairs at least 10 minutes prior to the start of their session.
- **Length of your talk:**
  In a regular session, the time length for each talk is 20 minutes. In a focus session, the presentation time limit is 30 minutes for a keynote talk, 20 minutes for an invited talk, and 15 minutes for a contributed talk.
- **DO NOT change presentation sequence:**
  A session Chair should 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 talk and refrain from changing paper presentation sequence.

Poster Presentations

Presenters should indicate time slots of their presence on the panel and be present for interactive questions within the posted time slots. Each poster can be posted at 9:00–12:00 and 14:00–17:00, and all presenters are suggested to be present at least during 10:00–10:20 and 15:20-15:40.

One panel (about 1(W) x 2(H) m) will be available for each poster.

All presenters are required to put their papers on the poster panels one hour before their sessions start and remove them at the end of their sessions.

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 6.2 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: 9:00 – 17:00, from Monday to Sunday.
- **Government Office**
  Opening hours: 8:00 – 17:00, from Monday to Friday.
- **Store**
  Opening hours: usually 10:00 to 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.

MORE INFORMATION

http://www.jorcep.org/piers2014/

LIST OF SHORT COURSES

- **SC001: Transformation Electromagnetics, Cloaking and Metamaterials**

  (by Prof. Raj Mittra, The Pennsylvania State University, USA)

  Date: August 24, afternoon (3 hours), Tuition Fee: USD 150/RMB 900

- **SC002: The Progress of Organic Solar Cells**

  (by Dr. Wallace C. H. Choy, The University of Hong Kong, Hong Kong)

  Date: August 24, afternoon (3.5 hours), Tuition Fee: USD 150/RMB 900

- **SC003: Luminescence of Inorganic Compounds, Fundamentals and Applications**

  (by Prof. Cees Ronda, Philips Group Innovation-Research, Eindhoven, the Netherlands)

  Date: August 24, afternoon (4 hours), Tuition Fee: USD 150/RMB 900

- **SC004: Optical Sensors**

  (by Prof. Wei Jin, The Hong Kong Polytechnic University, Hong Kong)

  Date: August 26, Evening (3 hours), Tuition Fee: USD 150/RMB 900

- **SC005: Glass-free 3D Display**

  (by Prof. Jianying Zhou, Sun Yat-Sen University, Guangzhou 510275, China)

  Date: August 24, afternoon (3.5 hours), Tuition Fee: USD 150/RMB 900

To register for short course, please download the short course form from www.piers.org and email to PIERS OFFICE.

PIERS 2014 GUANGZHOU TECHNICAL PROGRAM

Session 1A1
Plenary Session

Monday AM, August 25, 2014

Room 1, 2

Chaired by Sailing He, Leung Tsang

08:00 Opening Address

08:20 Flat Optics Based on Metasurfaces: Molding Wave-
plenary fronts and Surface Waves
Federico Capasso (*Harvard University, USA*);

09:00 Low-energy Integrated Photonics for Information Pro-
plenary cessing
David A. B. Miller (*Stanford University, USA*);

09:40 **Coffee Break**

10:00 Statistical Electromagnetic Theories Applied to Imag-
plenary ing in Geophysical and Biological Random Media
Akira Ishimaru (*University of Washington, USA*);

10:40 Metamaterials
plenary
John B. Pendry (*Imperial College London, UK*);

11:20 Photoacoustic Tomography: Ultrasonically Beating
plenary Optical Diffusion and Diffraction
Li Hong V. Wang (*Washington University, USA*);

Session 1P1
FocusSession.SC1: Casimir Effect and Heat Transfer

Monday PM, August 25, 2014

Room 1

Organized by Mauro Antezza, Brahim Guizal

Chaired by Mauro Antezza, Brahim Guizal

13:10 Casimir Forces between Monolithic Silicon Structures
keynote with Nonconventional Shapes
Ho Bun Chan (*The Hong Kong University of Science and Technology, China*); *J. Zou* (*University of Florida, USA*); *Z. Marcet* (*The Hong Kong University of Science and Technology, China*); *Alejandro W. Rodriguez* (*Massachusetts Institute of Technology, USA*); *M. T. Homer Reid* (*Massachusetts Institute of Technology, USA*); *Alexander P. McCauley* (*Massachusetts Institute of Technology, USA*); *I. I. Kravchenko* (*Oak Ridge National Laboratory, USA*); *T. Lu* (*The Hong Kong University of Science and Technology, China*); *Y. Bao* (*University of Florida, USA*); *S. G. Johnson* (*Massachusetts Institute of Technology, USA*);

13:40 Electromagnetic Diffraction from Nanostractured Ob-
invited jects: Numerical Challenges
Brahim Guizal (*Université de Montpellier 2, France*); *A. Noto* (*University Montpellier 2, France*); *R. Messina* (*University of Montpellier 2, France*); *Mauro Antezza* (*Université Montpellier 2, France*);

14:00 Three-body Radiative Heat Transfer and Casimir-
invited Lifshitz Force Out of Thermal Equilibrium for Arbitrary Bodies
Riccardo Messina (*University of Montpellier 2, France*); *Mauro Antezza* (*Université Montpellier 2, France*);

14:20 On the Quantitative Measurement of Heat Transfer
invited at Nanoscale by Means of the Near Field Scanning Thermal Microscope
Achim Kittel (*University of Oldenburg, Germany*); *D. Hellmann* (*University of Oldenburg, Germany*); *K. Kloppstech* (*University of Oldenburg, Germany*); *N. Konne* (*University of Oldenburg, Germany*); *L. Worbes* (*University of Oldenburg, Germany*);

14:40 Near-field Thermal Radiation Transistor Based on
invited Phase Change Materials
Svend-Age Biehs (*Carl von Ossietzky Universität,, Germany*); *Philippe Ben-Abdallah* (*Institut d'Optique, CNRS, Universite Paris-Sud 11, France*);

15:00 Effective Thermal Conductivity of Metal/Organic Semiconductor Nanocomposites (invited)
Xinyu Wang (*The University of Hong Kong, China*); *Paddy K. L. Chan* (*The University of Hong Kong, China*);

15:20 **Coffee Break**

15:40 A Tutorial on Casimir Interactions between Nanostructured Materials (keynote)
Diego A. R. Dalvit (*Los Alamos National Laboratory, USA*);

16:10 QED Effects Involving Non-reciprocal Media (invited)
J. Klatt (*University of Freiburg, Germany*); *Stefan Yoshi Buhmann* (*University of Freiburg, Germany*);

16:30 Transformation Optics Makes van der Waals Force Calculation Easier (invited)
Rongkuo Zhao (*Imperial College London, UK*);

16:50 Dispersion Interaction of Highly Excited Systems (invited)
Stefan Scheel (*University of Rostock, Germany*);

17:10 How Does Casimir Energy Fall? (invited)
Kimball A. Milton (*Univ. Oklahoma, USA*); *K. V. Shajesh* (*Southern Illinois University, USA*); *S. A. Fulling* (*Texas A&M University, USA*); *Prachi Parashar* (*University of Oklahoma, USA*);

17:30 Resonant Interaction Energy between Two Identical Atoms in a Photonic Crystal (invited)
T. Fukuta (*Osaka Prefecture University, Japan*); *R. Incardone* (*Universita degli Studi di Palermo and CNISM, Italy*); *V. Notararigo* (*Universita degli Studi di Palermo and CNISM, Italy*); *Roberto Passante* (*Universita degli Studi di Palermo and CNISM, Italy*); *T. Petrosky* (*The University of Texas at Austin, USA*); *Lucia Rizzuto* (*Universita degli Studi di Palermo and CNISM, Italy*); *S. Tanaka* (*Osaka Prefecture University, Japan*);

17:50 A Varicap Based Microwave Parametric Amplifier for the Study of the Dynamical Casimir Effect (invited)
C. Braggio (*Dipartimento di Fisica e Astronomia, Italy*); *G. Carugno* (*INFN, Sezione di Padova, Italy*); *F. Della Valle* (*Dipartimento di Fisica and INFN, Sezione di Trieste, Italy*); *G. Galeazzi* (*Viale dell'Universita 2, Italy*); *A. Lombardi* (*Viale dell'Universita 2, Italy*); *Giuseppe Ruoso* (*Viale dell'Universita 2, Italy*); *D. Zanello* (*INFN, Sezione di Roma, Italy*); *V. V. Dodonov* (*Universidade de Brasilia, Brazil*);

Session 1P2a
MS-2.3: Focus Session on Integrated Microwave Photonics

Monday PM, August 25, 2014

Room 2

Organized by David Marpaung, Hiroshi Murata

Chaired by David Marpaung, Hiroshi Murata

13:10 THz Bandwidth RF-photonic 2D/3D Integrated Circuits for Optical Arbitrary Waveform Generation and Measurements (keynote)
S. J. Ben Yoo (*University of California, Davis, USA*);

13:40 Recent Progress in Silicon Nitride Waveguide-based Integrated Microwave Photonics (invited)
Leimeng Zhuang (*University of Twente, The Netherlands*); *Caterina Taddei* (*University of Twente, The Netherlands*); *Marcel Hoekman* (*LioniX BV, The Netherlands*); *Ruud M. Oldenbeuving* (*SATRAX BV, The Netherlands*); *Klaus-Jochen Boller* (*Laser Physics and Nonlinear Optics Group, The Netherlands*); *Chris G. H. Roeloffzen* (*University of Twente, The Netherlands*);

14:00 Ultrafast Photonic Differentiator and Integrator Employing Integrated Silicon Microring or MZI (invited)
Jianji Dong (*Huazhong University of Science and Technology, China*); *Shasha Liao* (*Huazhong University of Science and Technology, China*); *Aoling Zheng* (*Huazhong University of Science and Technology, China*); *Ting Yang* (*Huazhong University of Science and Technology, China*);

14:20 Photonic Crystal Structures for Integrated Coherent FIR Microwave Filter (invited)
Jerome Bourderionnet (*Thales Research & Technology, France*); *Sylvain Combrie* (*Thales Research & Technology, France*); *Z. Han* (*Université Paris-Sud 11, France*); *X. Checoury* (*Université Paris-Sud 11, France*); *A. De Rossi* (*Thales Research & Technology, France*);

14:40 Waveguide Bragg Gratings for Integrated Microwave Photonics Signal Processing (invited)
Maurizio Burla (*Institut National de la Recherche Scientifique — Energie, Materiaux et Telecommunications (INRS-EMT), Canada*);

15:00 invited Wireless Millimeter-wave to Lightwave Signal Converters Using Simple Planar Antennas on $LiNbO_3$ Optical Crystal
Yusuf Nur Wijayanto (*National Institute of Information and Communication Technology (NICT), Japan*); *Atsushi Kanno* (*National Institute of Information and Communications Technology, Japan*); *Tetsuya Kawanishi* (*National Institute of Information and Communications Technology, Japan*); *Hiroshi Murata* (*Osaka University, Japan*); *Yasuyuki Okamura* (*Osaka University, Japan*);

15:20 **Coffee Break**

15:40 invited Generation of 90-GHz Millimeter Wave Using Quantum Dot Two-mode Laser
Kouichi Akahane (*National Institute of Information and Communications Technology, Japan*); *Naokatsu Yamamoto* (*National Institute of Information and Communications Technology, Japan*); *Atsushi Kanno* (*National Institute of Information and Communications Technology, Japan*); *Keizo Inagaki* (*National Institute of Information and Communications Technology, Japan*); *Toshimasa Umezawa* (*National Institute of Information and Communications Technology, Japan*); *Tetsuya Kawanishi* (*National Institute of Information and Communications Technology, Japan*);

16:00 invited Applications of FWM in Millimeter-wave Signal Generation — Integration Perspectives
Borja Vidal (*Universitat Politecnica de Valencia, Spain*);

16:20 invited Nonlinear Integrated Microwave Photonics
David Marpaung (*University of Sydney, Australia*);

Session 1P2b
SC3: Solid-state Quantum Photonics

Monday PM, August 25, 2014

Room 2

Organized by Serkan Ates, Xuewen Chen

Chaired by Xuewen Chen

16:40 invited The Photonic Nanowire: An Emerging Platform for a Highly Efficient Quantum Light Source
Niels Gregersen (*Technical University of Denmark, Denmark*); *Julien Claudon* (*CEA/INAC/SP2M, France*); *M. Munsch* (*CEA/INAC/SP2M, France*); *J. Bleuse* (*CEA/INAC/SP2M, France*); *A. Delga* (*CEA/INAC/SP2M, France*); *J. Mork* (*Technical University of Denmark, Denmark*); *Jean-Michel Gerard* (*CEA/INAC/SP2M, France*);

17:00 invited Controlling On-chip Microwave Photons for Quantum Information Processing
Haohua Wang (*Zhejiang University, China*);

17:20 invited Towards Deterministic Generation of Bright Stream of Single Photons
Xuewen Chen (*Huazhong Universtiy of Science and Technology, China*);

17:40 invited Towards Quantum Computing and Quantum Networking with Solid-state Single Spins and Single Photons
Chao-Yang Lu (*University of Science and Technology of China, China*);

18:00 invited Self-assembled Low Density Quantum Dot and Quantum Dot-in-nanowire Structures for Quantum Photonics
Guo-Wei Zha (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Zhichuan Niu* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Ying Yu* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Xiangjun Shang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Jian-Xing Xu* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Si-Hang Wei* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Li-Juan Wang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Hai-Qiao Ni* (*Institute of Semiconductors, Chinese Academy of Sciences, China*);

18:20 invited Bright Single-photon Emission by Solid-state Sources in Engineered Nanophotonic Devices
Luca Sapienza (*NIST, USA*); *Marcelo Davanco* (*NIST, USA*); *Serkan Ates* (*NIST, USA*); *Krishna C. Balram* (*NIST, USA*); *Antonio Badolato* (*University of Rochester, USA*); *Kartik Srinivasan* (*NIST, USA*);

18:40 invited Quantum Dot Cavity Quantum Electrodynamics Using a Photonic Crystal Nanocavity with High $\boldsymbol{Q}$ and Small $\boldsymbol{V}$
Yasutomo Ota (*The University of Tokyo, Japan*); *Satoshi Iwamoto* (*The University of Tokyo, Japan*); *Yasuhiko Arakawa* (*The University of Tokyo, Japan*);

19:00 Numerical Study on Single Crystalline Diamond Waveguide-based Single Photon Emitter
Yunxiao Li (*Sun Yat-sen University, China*); *Yanfeng Zhang* (*Sun Yat-sen University, China*); *Yujie Chen* (*Sun Yat-sen University, China*); *Hui Chen* (*Sun Yat-sen University, China*); *Siyuan Yu* (*Sun Yat-sen University, China*); *Zelin Ma* (*Sun Yat-sen University, China*);

Session 1P3a
MS-1.1&MS-1.8: Inorganic & Semiconductor Photovoltaics

Monday PM, August 25, 2014

Room 3

Organized by Mario Dagenais, Jinwei Gao

Chaired by Krzysztof Kempa, Mario Dagenais

13:00 invited III-V Compound Semiconductor Quantum Dot and Nanowire Solar Cells
Chennupati Jagadish (*The Australian National University, Australia*);

13:20 invited Challenges to the Realization of Intermediate Band Solar Cells Using InAs/GaAs Quantum Dots
Tian Li (*University of Maryland, USA*); *Mario Dagenais* (*University of Maryland, USA*);

13:40 invited Prospects and Requirements for 30% Efficient Thin-film on Silicon Tandem Cells
Thomas P. White (*Australian National University, Australia*); *Niraj N. Lal* (*Australian National University, Australia*); *Kylie R. Catchpole* (*Australian National University, Australia*);

14:00 invited Fully Automated Development Process for High Efficiency CIGS Solar Cells
Sven Lindstrom (*Midsummer AB, Sweden*);

14:20 invited Surface Morphology-dependent Photoelectrochemical Responses of Silicon Nanowire Arrays Prepared by Chemical Etching
Shaolong Wu (*Soochow University, China*); *Xiaofeng Li* (*Soochow University, China*); *Yaohui Zhan* (*Soochow University, China*); *Rui-Ting Zheng* (*Beijing Normal University, China*); *Guo-An Cheng* (*Beijing Normal University, China*);

14:40 Solution-processed Silver Mesh as Transparent Conductive Electrode for Application in Solar Cell
Yuanlin Huang (*South China Normal University, China*); *Han Bing* (*South China Normal University, China*); *Krzysztof Kempa* (*Boston College, USA*); *Jinwei Gao* (*South China Normal University, China*);

15:00 invited Development of Quantum Wire Intermediate Band Solar Cells
V. P. Kunets (*University of Arkansas, USA*); *C. Furrow* (*University of Arkansas, USA*); *M. Ware* (*University of Arkansas, USA*); *Y. Hirono* (*University of Arkansas, USA*); *M. Benamara* (*University of Arkansas, USA*); *V. Dorogan* (*University of Arkansas, USA*); *Y. Mazur* (*University of Arkansas, USA*); *M. Mortazavi* (*University of Arkansas, USA*); *N. Al Saqri* (*University of Nottingham, UK*); *D. Jameel* (*University of Nottingham, UK*); *D. Taylor* (*University of Nottingham, UK*); *M. Henini* (*University of Nottingham, UK*); *Gregory J. Salamo* (*University of Arkansas, USA*);

15:20 **Coffee Break**

Session 1P3b
MS-1.9: Light Management for Photovoltaics

Monday PM, August 25, 2014

Room 3

Organized by Noel C. Giebink

Chaired by Noel C. Giebink

15:40 Solar Rectifying Antennas: A New Distinct Paradigm for Power Conversion
Jeffrey Gordon (*Ben-Gurion University of the Negev, Israel*);

16:00 Record Efficient Upconverter Solar Cell Devices
Jan Christoph Goldschmidt (*Fraunhofer Institute for Solar Energy Systems, Germany*); *Stefan Fischer* (*Fraunhofer Institute for Solar Energy Systems, Germany*); *Barbara Herter* (*Fraunhofer Institute for Solar Energy Systems, Germany*); *Benjamin Frohlich* (*Fraunhofer Institute for Solar Energy Systems, Germany*); *Karl W. Kramer* (*University of Bern, Switzerland*); *Bryce S. Richards* (*Heriot-Watt University, Scotland*); *Aruna Ivaturi* (*Heriot-Watt University, Scotland*); *Sean K. W. MacDougall* (*Heriot-Watt University, Scotland*); *Jose Marques Hueso* (*Heriot-Watt University, Scotland*); *Elena Favilla* (*Universita di Pisa, Italy*); *Mauro Tonelli* (*Universita di Pisa, Italy*);

16:20 Photonic Architectures for Beating Light Trapping and Efficiency Limits in Solar Cells
Jeremy N. Munday (*University of Maryland, USA*);

16:40 Light Management and Optical Requirements for Thin-film on Silicon Tandem Cells
Thomas P. White (*Australian National University, Australia*); *Niraj N. Lal* (*Australian National University, Australia*); *Kylie R. Catchpole* (*Australian National University, Australia*);

17:00 **Tea Break**

17:20 Ultrathin Metal-semiconductor Nanocomposites as Resource Efficient Light Absorbers for Photovoltaics
Carl Hagglund (*Uppsala University, Sweden*);

17:40 Photon Management with Lanthanides: Up and Down
Andries Meijerink (*Utrecht University, The Netherlands*); *Rosa Martin Rodriguez* (*Utrecht University, The Netherlands*);

18:00 The Up-conversion Process in Quantum Cutting Phosphors: Ce^{3+}-Yb^{3+} Co-doped YAG
Huiqi Ye (*Nanjing Institute of Astronomical Optics & Technology, Chinese Academy of Sciences, China*); *Liang Tang* (*Nanjing Institute of Astronomical Optics & Technology, Chinese Academy of Sciences, China*); *Dong Xiao* (*Nanjing Institute of Astronomical Optics & Technology, Chinese Academy of Sciences, China*);

18:20 Luminescent Manipulation of Sunlight for Photovoltaics and Biofuels
Noel C. Giebink (*The Pennsylvania State University, USA*);

18:40 Enhancing the Efficiency of Photovoltaics via Thin Photonics
Rajesh Menon (*University of Utah, USA*);

Session 1P4a
SC2: Plasmonic Nanophotonics 1 — Experiment, Measurement and Fabrication

Monday PM, August 25, 2014

Room 4

Organized by Din Ping Tsai, Yung-Chiang Lan

Chaired by Din Ping Tsai, Hai-Pang Chiang

13:00 THz Sensor Based on the Principle of Plasmon-induced Radiation Force
Kosei Ueno (*Hokkaido University, Japan*); *Hiroko Itoh* (*Hokkaido University, Japan*); *Wakako Nakano* (*Hokkaido University, Japan*); *Sho Nozawa* (*Hokkaido University, Japan*); *Hiroaki Misawa* (*Hokkaido University, Japan*);

13:20 Optical Trapping with Plasmonic Nano-islands
Zhiwen Kang (*The Chinese University of Hong Kong, China*); *Jiajie Chen* (*The Chinese University of Hong Kong, China*); *Shu-Yuen Wu* (*The Chinese University of Hong Kong, China*); *Aaron Ho-Pui Ho* (*The Chinese University of Hong Kong, China*);

13:40 Light Propagation in High Aspect Metal Structures Prepared Using Ordered Anodic Porous Alumina
Hideki Masuda (*Tokyo Metropolitan University, Japan*); *Toshiaki Kondo* (*Tokyo Metropolitan University, Japan*);

14:00 Improving Light Emission by Plasmonic Lattice Coupled to Waveguide
Yuntian Chen (*Huazhong University of Science and Technology, China*); *A. Femius Koenderink* (*FOM Institute AMOLF, The Netherlands*);

14:20 Ultracompact On-chip Long-wave Photodetector Based on Hybrid Plasmonic Waveguides
Hao Wu (*Zhejiang University, China*); *Xiaowei Guan* (*Zhejiang University, China*); *Daoxin Dai* (*Zhejiang University, China*);

14:40 Near-field Confinement in 3D SRR Metamolecules for Optical Refractive Index Sensor
Pin Chieh Wu (*National Taiwan University, Taiwan*); *Hsiang Lin Huang* (*National Taiwan Ocean University, Taiwan*); *Wei Ting Chen* (*National Taiwan University, Taiwan*); *Kuang Yu Yang* (*National Taiwan University, Taiwan*); *Ta-Jen (David) Yen* (*National Tsing Hua University, Taiwan*); *Din Ping Tsai* (*National Taiwan University, Taiwan, R.O.C.*); *Hai-Pang Chiang* (*National Taiwan Ocean University, Taiwan*);

15:00 UV and Visible Plasmonics of Topological Insulator
Jun-Yu Ou (*University of Southampton, UK*); *Jin-Kyu So* (*University of Southampton, UK*); *Zilong Wang* (*Nanyanag Technological University, Singapore*); *Jun Yin* (*University of Southampton, UK*); *Giorgio Adamo* (*Nanyanag Technological University, Singapore*); *Azat Sulaev* (*Nanyang Technological University, Singapore*); *Cesare Soci* (*Nanyanag Technological University, Singapore*); *Lan Wang* (*Nanyang Technological University, Singapore*); *Nikolay I. Zheludev* (*University of Southampton, UK*);

15:20 **Coffee Break**

Session 1P4b
SC2&3: Nano-focusing and Applications

Monday PM, August 25, 2014

Room 4

Organized by Ruoxi Yang

Chaired by Ruoxi Yang

15:40 Optical Manipulation with Nanostructured Plasmonic Fields
Keiji Sasaki (*Hokkaido University, Japan*);

16:00 Reproducible Ultrahigh SERS Enhancement in Gold Nanoparticle-plane Junctions under Radially Polarized Excitation
Tian Yang (*Shanghai Jiao Tong University, China*); *Jing Long* (*Shanghai Jiao Tong University, China*); *Hui Yi* (*Shanghai Jiao Tong University, China*); *Hongquan Li* (*Shanghai Jiao Tong University, China*);

16:20 Recent Progresses on Silicon Hybrid Nanoplasmonics for Ultra-dense Photonic Integration
Daoxin Dai (*Zhejiang University, China*);

16:40 Microfiber Bragg Grating Sensors
Bai-Ou Guan (*Jinan University, China*); *Yang Ran* (*Jinan University, China*); *Jie Li* (*Jinan University, China*); *Long Jin* (*Jinan University, China*);

17:00 High Efficiency Compact SiN Focusing Grating Coupler with a Metal Reflector for Visible Light
Yaoran Sun (*Zhejiang University, China*); *Yuguang Zhang* (*Zhejiang University, China*); *Pengxin Chen* (*Zhejiang University, China*); *Yaocheng Shi* (*Zhejiang University, China*); *Daoxin Dai* (*Zhejiang University, China*);

17:20 Exploiting Plasmonic Confinement for High-resolution Structural Colors and Sub-wavelength Nanolithography
L. Jay Guo (*The University of Michigan, USA*);

17:40 Aperture-independent Nano Focusing of Light by Surface and Bulky Plasmonic Structures
Changtao Wang (*Institute of Optics and Electronics, Chinese Academy of Sciences, China*); *Xiangang Luo* (*Institute of Optics and Electronics, Chinese Academy of Sciences, China*); *Jiayu He* (*Institute of Optics and Electronics, Chinese Academy of Sciences, China*); *Na Yao* (*Institute of Optics and Electronics, Chinese Academy of Sciences, China*); *Zeyu Zhao* (*Institute of Optics and Electronics, Chinese Academy of Sciences, China*);

18:00 Engineered Highly Efficient Nanofocusing Plasmonic Waveguides
Hyuck Choo (*California Institute of Technology, USA*);

18:20 Dynamic Plasmonic Trapping and Manipulation of Metallic Particles for SERS Application
Changjun Min (*Nankai University, China*); *Yuquan Zhang* (*Nankai University, China*); *Junfeng Shen* (*Nankai University, China*); *Wei Shi* (*Nankai University, China*); *X.-C. Yuan* (*Shenzhen University, China*);

18:40 Plasmon Coupling in Gold Nanostructures
Huanjun Chen (*Sun Yat-sen University, China*); *Lei Shao* (*The Chinese University of Hong Kong, China*); *Jianfang Wang* (*The Chinese University of Hong Kong, China*);

Session 1P5
FocusSession.SC2: Tunable and Reconfigurable Metamaterials and Plasmonics 1

Monday PM, August 25, 2014

Room 5

Organized by Yongmin Liu, Ranjan Singh

Chaired by Ranjan Singh

13:00 tutorial Optical Properties on Demand: Reconfigurable and Coherently Controlled Metadevices
Nikolay I. Zheludev (*University of Southampton, UK*);

13:40 invited Reconfigurable Plasmonic and Metamaterial Devices Using Liquid Metals
Jinqi Wang (*University of Utah, USA*); *Shuchang Liu* (*University of Utah, USA*); *Ajay Nahata* (*University of Utah, USA*);

14:00 invited Liquid Crystal Controlled and Tunable Metamaterials
Andrey E. Miroshnichenko (*Australian National University, Australia*); *Manuel Decker* (*Australian National University, Australia*); *Isabelle Staude* (*Australian National University, Australia*); *Alexander Minovich* (*Australian National University, Australia*); *Dragomir N. Neshev* (*Australian National University, Australia*); *Yuri S. Kivshar* (*Australian National University, Australia*);

14:20 Spontaneous Chiral Symmetry Breaking in Magneto-elastic Metamaterials
Mingkai Liu (*Australian National University, Australia*); *David A. Powell* (*Australian National University, Australia*); *Ilya V. Shadrivov* (*Australian National University, Australia*); *Mikhail Lapine* (*University of Sydney, Australia*); *Yuri S. Kivshar* (*Australian National University, Australia*);

14:40 invited Near-dispersionless, Broadband Transmission Enhancement in Plasmonic Quasicrystals
Venu Gopal Achanta (*Tata Institute of Fundamental Research, India*); *V. J. Yallapragada* (*Tata Institute of Fundamental Research, India*); *Sachin Kasture* (*Tata Institute of Fundamental Research, India*); *P. R. Ajith* (*Tata Institute of Fundamental Research, India*);

15:00 Making Structured Metals Transparent for White
invited Light by Surface Plasmons
Ru-Wen Peng (*Nanjing University, China*); *Ren-Hao Fan* (*Nanjing University, China*); *Xiang Xiong* (*Nanjing University, China*); *Mu Wang* (*Nanjing University, China*);

15:20 **Coffee Break**

15:40 3D Gyroid Networks Inspired by Butterfly Wings
keynote
Min Gu (*Swinburne University of Technology, Australia*);

16:10 Design and Implementation of Synthetic Multi-
invited spectral Materials
David R. S. Cumming (*University of Glasgow, UK*); *Iain J. H. McCrindle* (*University of Glasgow, UK*); *James Grant* (*University of Glasgow, UK*); *Timothy David Drysdale* (*University of Glasgow, UK*);

16:30 Controlling Surface Plasmon Polaritons Using Magneto-optical Cavities
Dmitry Alexandrovich Bykov (*Image Processing Systems Institute of RAS and Samara State Aerospace University, Russia*); *Leonid Leonidovich Doskolovich* (*Image Processing Systems Institute of the Russian Academy of Sciences, Russia*);

16:50 Reconfigurable THz Chiral Metamaterials and Tun-
invited able Hyperbolic Metamaterial Cavities
Junsuk Rho (*Pohang University of Science and Technology (POSTECH), Korea*); *Xiang Zhang* (*University of California, USA*);

17:10 Tailoring Artificial Plasmonic Nanostructures to
invited Visible-near IR Regime: Towards Versatile and Ultrasensitive Plasmonic Biosensors
Qihua Xiong (*Nanyang Technological University, Singapore*);

17:30 Surface Wave on Graphene by a Moving Charged Par-
invited ticle
Xihang Shi (*Nanyang Technological University, Singapore*); *Baile Zhang* (*Nanyang Technological University, Singapore*);

17:50 Active THz Phase Modulators Based on Graphene
invited Metamaterials
Ziqi Miao (*Fudan University, China*); *Qiong Wu* (*Fudan University, China*); *Xin Li* (*Fudan University, China*); *Qiong He* (*Fudan University, China*); *Zhenghua An* (*Fudan University, China*); *Yuanbo Zhang* (*Fudan University, China*); *Lei Zhou* (*Fudan University, China*);

18:10 Optically Controlled Active Terahertz Meta-surfaces
invited
Abul K. Azad (*MPA-CINT, Los Alamos National Laboratory, USA*); *Dibakar Roy Chowdhury* (*Los Alamos National Laboratory, USA*); *Hou-Tong Chen* (*MPA-CINT, Los Alamos National Laboratory, USA*); *Antoinette J. Taylor* (*MPA-CINT, Los Alamos National Laboratory, USA*);

18:30 Optical Control of Plasmonic Structures and Meta-
invited surfaces at THz Frequencies
Giorgos Georgiou (*FOM Institute AMOLF, The Netherlands*); *A. Bhattachary* (*FOM Institute AMOLF, The Netherlands*); *M. C. Schaafsma* (*FOM Institute AMOLF, The Netherlands*); *T. Steinbusch* (*FOM Institute AMOLF, The Netherlands*); *H. K. Tyagi* (*FOM Institute AMOLF, The Netherlands*); *J. Gomez-Rivas* (*FOM Institute AMOLF, The Netherlands*);

Session 1P6
FocusSession.SC3: Photoacoustic Tomography and Sensing

Monday PM, August 25, 2014

Room 6

Organized by Li Hong V. Wang

Chaired by Li Hong V. Wang

13:10 Mid-infrared Trace Gas Detection in Exhaled Breath
invited for Disease Diagnostics and Monitoring
Frank K. Tittel (*Rice University, USA*); *Wei Ren* (*Rice University, USA*); *Wenzhe Jiang* (*Rice University, USA*); *Yingchun Cao* (*Rice University, USA*); *Dongfang Jiang* (*Rice University, USA*);

13:30 Coregistered Functional-anatomical Mapping of Live
invited Tissue with Laser Optoacoustic Ultrasonic Imaging System (LOUIS)
Alexander A. Oraevsky (*University of Houston, USA*);

13:50 Real-time Interleaved Ultrasound and Photoacoustic
keynote Imaging System
Matthew O'Donnell (*University of Washington, USA*); *Chen-Wei Wei* (*University of Washington, USA*); *Thu-Mai Nguyen* (*University of Washington, USA*); *Bastien Arnal* (*University of Washington, USA*); *Ivan Pelivanov* (*University of Washington, USA*);

14:20 Recent Advancements in Photoacoustic Tomography
invited Image Reconstruction
Mark A. Anastasio (*Washington University in St. Louis, USA*);

14:40 Photoacoustic Image Features of Breast Carcinoma
invited with Conventional Imaging and Pathological Validation
Michelle Heijblom (*University of Twente, The Netherlands*); *Daniele Piras* (*University of Twente, The Netherlands*); *Johan Van Hespen* (*University of Twente, The Netherlands*); *Ton Van Leeuwen* (*University of Twente, The Netherlands*); *Wiendelt Steenbergen* (*University of Twente, The Netherlands*); *Srirang Manohar* (*University of Twente, The Netherlands*); *Frank Van den Engh* (*Medisch Spectrum Twente, The Netherlands*); *Margreet Van der Schaaf* (*Medisch Spectrum Twente, The Netherlands*); *Joost Klaase* (*Medisch Spectrum Twente, The Netherlands*); *Mariel Brinkhuis* (*Laboratory for Pathology East Netherlands, The Netherlands*);

15:00 Full Aberration Correction towards High-resolution
invited Deep Clinical Multimodal Optoacoustic and Ultrasound Imaging
Michael Jaeger (*University of Bern, Switzerland*); *Hidayet Gunhan Akarcay* (*University of Bern, Switzerland*); *Michael Grunig* (*University of Bern, Switzerland*); *Gerrit Held* (*University of Bern, Switzerland*); *Sara Peeters* (*University of Bern, Switzerland*); *Tigran Petrosyan* (*University of Bern, Switzerland*); *Stefan Preisser* (*University of Bern, Switzerland*); *Martin Frenz* (*University of Bern, Switzerland*);

15:20 **Coffee Break**

15:40 Enhanced Plasmonic Photothermal Therapy by Com-
invited bining Targeted Delivery of Gold Nanoparticles with Sonoporation
Yu-Hsin Wang (*National Taiwan University, Taiwan*); *Si-Ping Chen* (*National Taiwan University, Taiwan*); *Pai-Chi Li* (*National Taiwan University, Taiwan*);

16:00 Photoacoustic and Ultrasound Dual-modality Imag-
invited ing for Inflammatory Arthritis
Xueding Wang (*University of Michigan School of Medicine, USA*); *Guan Xu* (*University of Michigan School of Medicine, USA*); *David Chamberland* (*University of Michigan School of Medicine, USA*); *Gandikota Girish* (*University of Michigan School of Medicine, USA*);

16:20 The Application of Nonlinear Photoacoustic Cavita-
invited tion
Xinmai Yang (*The University of Kansas, USA*);

16:40 Dual-modal Whole Eye Photoacoustic Imaging
invited
Ning Wu (*Peking University, China*); *Qiushi Ren* (*Peking University, China*); *Changhui Li* (*Peking University, China*);

17:00 In Vivo Photoacoustic Tomography: Systems and
invited Contrast Agents
Chulhong Kim (*Pohang University of Science and Technology, Korea*);

17:20 Multi-scale Biomedical Imaging with Acoustic- and
invited Optical-resolution Photoacoustic Tomography
Liang Song (*Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China*);

17:40 Multiscale Photoacoustic Microscopy for Brain Imaging
Bowen Jiang (*Huazhong University of Science and Technology, China*); *Xiaoquan Yang* (*Huazhong University of Science and Technology, China*); *Hui Gong* (*Wuhan National Laboratory for Optoelectronics, Wuhan*); *Qingming Luo* (*Huazhong University of Science and Technology, China*);

17:55 Light Focusing and Imaging through Turbid Media
invited Using the Photo-acoustic Transmission-matrix
Thomas Chaigne (*Institut Langevin, ESPCI ParisTech, France*); *Jerome Gateau* (*Institut Langevin, ESPCI ParisTech, France*); *Ori Katz* (*ESPCI ParisTech and CNRS, France*); *Emmanuel Bossy* (*ESPCI ParisTech, France*); *Sylvain Gigan* (*Université Pierre et Marie Curie, France*);

Session 1P7
FocusSession.SC3: Nonlinear Optics: Structured Materials, Functional Devices and Applications 1

Monday PM, August 25, 2014

Room 7

Organized by Iam-Choon Khoo, Shiming Gao

Chaired by Iam-Choon Khoo, Shiming Gao

13:10 Towards Metamaterials with Efficient Second-order
invited Nonlinear Optical Response
Robert Czaplicki (*Tampere University of Technology, Finland*); *Hannu Husu* (*Tampere University of Technology, Finland*); *Jouni Makitalo* (*Tampere University of Technology, Finland*); *Roope Siikanen* (*Tampere University of Technology, Finland*); *Joonas Lehtolahti* (*University of Eastern Finland, Finland*); *Janne Laukkanen* (*University of Eastern Finland, Finland*); *Markku Kuitinen* (*University of Eastern Finland, Finland*); *Martti Kauranen* (*Tampere University of Technology, Finland*);

13:30 Low-threshold Optical Bistabilities in Ultra-thin Plas-
invited monic Films
Shiwei Tang (*Fudan University, China*); *Baocheng Zhu* (*Fudan University, China*); *Shiyi Xiao* (*Fudan University, China*); *Jung-Tsung Shen* (*Washington University in St. Louis, USA*); *Lei Zhou* (*Fudan University, China*);

13:50 Sub-wavelength Linear and Nonlinear Localized Dis-
invited crete Modes in Arrays of Coupled Metallic Nanowires
Fangwei Ye (*Shanghai Jiao Tong University, China*); *Boris A. Malomed* (*Tel Aviv University, Israel*); *Dumitru Mihalache* (*Shanghai Jiao Tong University, China*); *Nicolae-Coriolan Panoiu* (*University College London, United Kingdom*); *Xianfeng Chen* (*Shanghai Jiao Tong University, China*);

14:10 Iridium(III) Complexes as Nonlinear Absorbing Ma-
invited terials
Wenfang Sun (*North Dakota State University, USA*); *Yuhao Li* (*North Dakota State University, USA*); *Rui Liu* (*North Dakota State University, USA*); *Zhongjing Li* (*North Dakota State University, USA*); *Naveen Dandu* (*North Dakota State University, USA*); *Svetlana Kilina* (*North Dakota State University, USA*);

14:30 Widely Wavelength Tunable Femtosecond Laser Re-
invited sources Based on Nonlinear Optical Processes
Ming-Lie Hu (*Tianjin University, China*);

14:50 New Frontiers in Chip-based Nonlinear Optics
keynote
Benjamin J. Eggleton (*University of Sydney, Australia*);

15:20 **Coffee Break**

15:40 Silicon-on-insulator Optical Circuits with High Q,
invited Small Mode Volume Photonic Crystal Slot Microcavities: Nonlinear Response and Optical Trapping of Nanoparticles in Various Solvent Environments
Jeff F. Young (*University of British Columbia, Canada*); *S. Hamed Mirsadeghi* (*University of British Columbia, Canada*);

16:00 Graphene, Topological Insulator and Other 2-
invited dimensional Layered Materials for Microwave and Terahertz Photonics Applications
Shuangchun Wen (*Hunan University, China*);

16:20 Coherent Anti-Stokes Raman Holography
invited
Zhiwen Liu (*Pennsylvania State University, USA*); *Kebin Shi* (*Peking University, China*); *Perry S. Edwards* (*Pennsylvania State University, USA*); *Nikhil Mehta* (*Pennsylvania State University, USA*); *Alexander S. Cocking* (*Pennsylvania State University, USA*); *Demetri Psaltis* (*Ecole Polytechnique Federale de Lausanne (EPFL), Switzerland*);

16:40 Domain Engineered Lithium Niobate, a Versatile
invited Platform for Multifunctional Photonic Devices
Yan-Qing Lu (*Nanjing University, China*);

17:00 Four-wave Mixing Response of a Graphene Layer Covered on a Tapered Fiber
Jiamei Lu (*Zhejiang University, China*); *Qiang Jin* (*Zhejiang University, China*); *Xibin Li* (*Zhejiang University, China*); *Qiang Yan* (*Zhejiang University, China*); *Qianyu Gao* (*Zhejiang University, China*); *Shiming Gao* (*Zhejiang University, China*);

17:15 Reconfigurable All-optical Logic Operation Based on
invited Semiconductor Optical Amplifiers
Xinliang Zhang (*Huazhong University of Science and Technology, China*);

Session 1P8a
FocusSession.SC2&3: Plasmonic, Metallic, or Dielectric Nanolasers

Monday PM, August 25, 2014

Room 8

Organized by Cun-Zheng Ning, Tien-Chang Lu

Chaired by Cun-Zheng Ning

13:05 Integration of InP Nanowire Lasers on (001) Silicon Substrate by Selective Epitaxial Growth
Zhechao Wang (*Ghent University-IMEC, Belgium*); *Clement Merckling* (*IMEC, Belgium*); *Bin Tian* (*Ghent University-IMEC, Belgium*); *Weiming Guo* (*IMEC, Belgium*); *Marianna Pantouvaki* (*IMEC, Belgium*); *Joris Van Campenhout* (*IMEC, Belgium*); *Dries Van Thourhout* (*Ghent University-IMEC, Belgium*); *Philippe Absil* (*IMEC, Belgium*);

13:20 Semiconductor Plasmonic Nano-cavity Laser on Sili-
invited con: Simulation, Design and Fabrication
Qian Wang (*Data Storage Institute, Singapore*); *Chee Wei Lee* (*Data Storage Institute, Singapore*); *Kim Peng Lim* (*Data Storage Institute, Singapore*);

13:40 Mode and Polarization Control in Gallium Nitride Nanowire Lasers
invited
George T. Wang (*Sandia National Laboratories, USA*); *Jeremy B. Wright* (*Sandia National Laboratories, USA*); *Huiwen Xu* (*University of New Mexico, USA*); *Antonio Hurtado* (*University of Essex, UK*); *Changyi Li* (*University of New Mexico, USA*); *Steven R. J. Brueck* (*University of New Mexico, USA*); *Qiming Li* (*Sandia National Laboratories, USA*); *Ting-Shan Luk* (*Sandia National Laboratories, USA*); *Jeffery J. Figiel* (*Sandia National Laboratories, USA*); *Igal Brener* (*Sandia National Laboratories, USA*);

14:00 Metal-clad Nanolasers for Dense Chip-scale Integration
invited
Qing Gu (*University of California at San Diego, USA*); *Yeshaiahu Fainman* (*University of California at San Diego, USA*);

14:20 III-V Semiconductor Nanowire Lasers
keynote
Chennupati Jagadish (*The Australian National University, Australia*);

14:50 Quantum Nanoplasmonics and Spaser
keynote
Mark I. Stockman (*Georgia State University, USA*);

15:20 **Coffee Break**

15:40 Sizes Controllable Periodical Nanoslits Array for Surface Enhanced Raman Scattering (SERS)
Yunfei Zhu (*South China Normal University, China*); *Guofu Zhou* (*South China Normal University, China*); *Mingliang Jin* (*South China Normal University, China*);

15:55 Single-mode Single-nanowire FP Laser
Xiaowei Liu (*Zhejiang University, China*); *Jiabei Li* (*Zhejiang University, China*); *Zongyin Yang* (*Zhejiang University, China*); *Qing Yang* (*Zhejiang University, China*);

16:10 Strong Light-matter Coupling in ZnO Based Microcavities
Yu-Hsun Chou (*National Chiao Tung University, Taiwan*); *Ying-Yu Lai* (*National Chiao Tung University, Taiwan*); *Shing-Chung Wang* (*National Chiao Tung University, Taiwan*); *Tien-Chang Lu* (*National Chiao Tung University, Taiwan*);

Session 1P8b
SC3: Semiconductor Lasers

Monday PM, August 25, 2014

Room 8

Organized by Siyuan Yu, Yong-Zhen Huang

Chaired by Yong-Zhen Huang

16:30 Epitaxially Re-grown Photonic Crystal Surface Emitting Lasers
invited
Richard A. Hogg (*The University of Sheffield, UK*);

16:50 Semiconductor Nanostructure-based Photonic Devices for Ultrafast, Power-efficient Systems
invited
Osamu Wada (*Japan Society for the Promotion of Science (JSPS) Beijing Office, China*);

17:10 Photonic Temporal Integrator Based on Semicondcuctor Lasers Under Lasing Condition
invited
Ming Li (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Ningbo Huang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Reza Ashrafi* (*Institut National de la Recherche Scientifique-Énergie, Matériaux et Télécommunications (INRS-EMT), Canada*); *Xin Wang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Wei Li* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Lixian Wang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Jose Azana* (*Institut National de la Recherche Scientifique-Énergie, Matériaux et Télécommunications (INRS-EMT), Canada*); *Ninghua Zhu* (*Institute of Semiconductors, Chinese Academy of Sciences, China*);

17:30 Plasmon Lasers: Development, Features and Applications
invited
Renmin Ma (*Peking University, China*);

17:50 Semiconductor Lasers Working under Optical Injection Locking by Multiple Strong External Beams
invited
Siyuan Yu (*Sun Yat-sen University, China*);

18:10 Tunable V-cavity Semiconductor Laser and Module
invited
Jian-Jun He (*Zhejiang University, China*); *Xiaohai Xiong* (*Zhejiang University, China*); *Jianjun Meng* (*Zhejiang University, China*); *Sen Zhang* (*Zhejiang University, China*); *Xiaolu Liao* (*Zhejiang University, China*); *Hongli Zhu* (*Zhejiang University, China*); *Lin Wu* (*Zhejiang University, China*); *Li Zou* (*Lightip Technologies (Hangzhou) Co. Ltd., China*); *Lei Wang* (*Lightip Technologies (Hangzhou) Co. Ltd., China*); *Guoping Li* (*Lightip Technologies (Hangzhou) Co. Ltd., China*);

18:30 The Proposal of Pulse Synchronous Laser Signal Source Based on Coupled-microdisk Photonic Molecules
Bo-Wen Liu (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Yue-De Yang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Xiu-Wen Ma* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Yong-Zhen Huang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*);

18:50 Simulation of Thermal Tuning in V-coupled Cavity Laser with an On-chip Thin-film Heater
Haoyu Deng (*Zhejiang University, China*); *Jianjun Meng* (*Zhejiang University, China*); *Jian-Jun He* (*Zhejiang University, China*);

19:10 Dynamical Characteristics for Semiconductor Microdisk Laser Subject to Optical Injection
Ling-Xiu Zou (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Yong-Zhen Huang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Bo-Wen Liu* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Xiao Meng Lv* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Yue-De Yang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Jin-Long Xiao* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Yun Du* (*Institute of Semiconductors, Chinese Academy of Sciences, China*);

Session 1P9a
SC3: Functional Optical Fiber Devices

Monday PM, August 25, 2014

Room 9

Organized by Liyang Shao, Zhe Chen

Chaired by Liyang Shao, Zhe Chen

13:00 Regeneration and Fibre Gratings: Towards the Penultimate High Temperature Sensor
John Canning (*The University of Sydney, Australia*);

13:20 Optically Controllable Fiber Device
Vincent K. S. Hsiao (*National Chi Nan University, Taiwan*);

13:40 Plasma-modified Optical Fiber Bio-sensors
Mateusz Smietana (*Warsaw University of Technology, Poland*); *Marcin Koba* (*Warsaw University of Technology, Poland*); *Wojtek J. Bock* (*Université du Québec en Outaouais, Canada*);

14:00 Special Functions of Modified Optical Microfiber
Xueliang Zhang (*National University of Defense Technology, China*); *Yang Yu* (*National University of Defense Technology, China*); *Zhangqi Song* (*National University of Defense Technology, China*); *Yuzhong Chen* (*National University of Defense Technology, China*); *Zhou Meng* (*National University of Defense Technology, China*);

14:20 Long-period Gratings and Applications in Sensing Systems
Chun-Liu Zhao (*China Jiliang University, China*); *Xinyong Dong* (*China Jiliang University, China*); *Yongxing Jin* (*China Jiliang University, China*); *Juan Kang* (*China Jiliang University, China*); *Shangzhong Jin* (*China Jiliang University, China*);

14:40 Polarisation Dynamics in Carbon Nanotube Mode Locked Ultrafast Fibre Lasers
Chengbo Mou (*Aston University, UK*); *Sergey Sergeyev* (*Aston University, UK*); *Raz Arif* (*Aston University, UK*); *Aleksey Rozhin* (*Aston University, UK*); *Tatiana Habruseva* (*Aston University, UK*); *Veronika Tsatourian* (*Aston University, UK*); *Sergei K. Turitsyn* (*Aston University, UK*);

15:00 Fabrication and Applications of D-shaped Fiber Based Graphene Saturable Absorber and Polarizer
Lilin Yi (*Shanghai Jiao Tong University, China*); *Ran Zheng* (*Shanghai Jiao Tong University, China*); *Weixiong Li* (*Shanghai Jiao Tong University, China*); *Haiyan Nan* (*Southeast University, China*); *Zhenghua Ni* (*Southeast University, China*); *Weisheng Hu* (*Shanghai Jiao Tong University, China*);

15:20 **Coffee Break**

15:40 Nonlinear Effect in Carbon-nanotube-coated Optical Fiber Grating
Liyang Shao (*Southwest Jiaotong University, China*);

16:00 Miniaturized Fiber Interferometers and Their Applications as Fiber Sensors
Bo Dong (*Institute for Infocomm Research (I2R), Singapore*); *Banghong Zhang* (*Institute for Infocomm Research (I2R), Singapore*); *Junhong Ng* (*Institute for Infocomm Research (I2R), Singapore*); *Yixin Wang* (*Institute for Infocomm Research (I2R), Singapore*);

Session 1P9b
SC3-workshop: Integrated Nanophotonics for Optical Interconnects in Data Centers

Monday PM, August 25, 2014
Room 9
Organized by Lech Wosinski, Lin Yang
Chaired by Lech Wosinski, Lin Yang

16:20 Integrated Nanophotonic Devices for Optical Interconnections
Yidong Huang (*Tsinghua University, China*); *Xue Feng* (*Tsinghua University, China*); *Dengke Zhang* (*Tsinghua University, China*); *Hai Yan* (*Tsinghua University, China*); *Xiangdong Li* (*Tsinghua University, China*); *Kaiyu Cui* (*Tsinghua University, China*);

16:40 Silicon and Hybrid Silicon Photonics for Optical Interconnects in Datacenters
Andrew Wing On Poon (*The Hong Kong University of Science and Technology, China*); *Yu Zhang* (*The Hong Kong University of Science and Technology, China*); *Yu Li* (*The Hong Kong University of Science and Technology, China*); *Lei Zhang* (*The Hong Kong University of Science and Technology, China*);

17:00 Optical Interconnects for Datacenter Networks: Progress and Challenges
Xuezhi Hong (*South China Normal University, China*); *Matteo Fiorani* (*KTH Royal Institute of Technology, Sweden*); *Jiajia Chen* (*KTH Royal Institute of Technology, Sweden*);

17:20 Hybrid AlGaInAs/InP on Silicon Lasers for Optical Interconnects
Yue-De Yang (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Shao-Shuai Sui* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Ming-Ying Tang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Jin-Long Xiao* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Yong-Zhen Huang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*);

17:40 Group-IV Light Emitting Materials and Devices for Optical Interconnect
Buwen Cheng (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Zhi Liu* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Chao He* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Dongliang Zhang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Xu Zhang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Wenqi Huang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Chunlai Xue* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Chuanbo Li* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Qiming Wang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*);

18:00 Silicon Multimode Photonic Integrated Devices for On-chip Optical Interconnects
Daoxin Dai (*Zhejiang University, China*);

18:20 Optical Routers for Photonic Networks-on-chip
Lin Yang (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Fanfan Zhang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Qiaoshan Chen* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Jianfeng Ding* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Ruiqiang Ji* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Rui Min* (*Institute of Semiconductors, Chinese Academy of Sciences, China*);

18:40 A Universal Method for Constructing $\boldsymbol{N}$-port Nonblocking Optical Router Based on $\mathbf{2} \times \mathbf{2}$ Optical Switch
Qiaoshan Chen (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Fanfan Zhang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Ruiqiang Ji* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Lei Zhang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Lin Yang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*);

19:00 Energy-efficient and Fast Thermal-response in Silicon Hybrid Nanoplasmonic Waveguides
Xiaowei Guan (*Zhejiang University, China*); *Hao Wu* (*Zhejiang University, China*); *Daoxin Dai* (*Zhejiang University, China*);

19:20 Novel Hybrid Plasmonic Devices on Silicon Platform
Lech Wosinski (*KTH Royal Institute of Technology, Sweden*); *Fei Lou* (*KTH Royal Institute of Technology, Sweden*); *Lars Thylen* (*KTH Royal Institute of Technology, Sweden*);

Session 1P_10a
SC3: Advances in Optical Networking: Parts 1

Monday PM, August 25, 2014

Room 10

Organized by Jiajia Chen, David Payne, Lena Wosinska

Chaired by Jiajia Chen, Lena Wosinska

13:10 Photonic Networks in Big Data Era
keynote
Ken-ichi Kitayama (*Osaka University, Japan*);

13:40 Multi-domain Software Defined Optical Networks for
invited Data Center Migration
Jie Zhang (*Beijing University of Posts and Telecommunications, China*); *Yongli Zhao* (*Beijing University of Posts and Telecommunications, China*);

14:00 Transformable Optical Circuit and Packet Switching
invited for Data Center Network
Weisheng Hu (*Shanghai Jiao Tong University, China*); *Weiqiang Sun* (*Shanghai Jiao Tong University, China*);

14:20 Optical Networks for Energy-efficient Data Centers
invited
Lena Wosinska (*KTH — Royal Institute of Technology, Sweden*);

14:40 Survivable Techniques for Flex-grid Elastic Optical
invited Networks
Gangxiang Shen (*Soochow University, China*);

15:00 Software Defined Networking (SDN) Enabled Optical as a Service (OaaS) with Dynamic Network Provisioning
Yongli Zhao (*Beijing University of Posts and Telecommunications, China*); *Jie Zhang* (*Beijing University of Posts and Telecommunications, China*);

15:20 **Coffee Break**

15:40 Software-defined Elastic Optical Networking in Tem-
keynote poral, Spectral and Spatial Domains
S. J. Ben Yoo (*University of California, Davis, USA*);

Session 1P_10b
SC3: Onchip Multiplexing Technologies and Devices for Optical Interconnects

Monday PM, August 25, 2014

Room 10

Organized by Daoxin Dai, Di Liang

Chaired by Daoxin Dai

16:10 Si-photonic Based Optical OFDM Demultiplexer for Tb/s Transmission Links
L. Zimmermann (*IHP, Germany*); *A. Rahim* (*Universite Laval, Canada*); *Stefan Schwarz* (*Helmut-Schmidt-Universität, Germany*); *Jurgen Bruns* (*Technische Universitat Berlin, Germany*); *Karsten Voigt* (*Technical University of Berlin, Germany*); *G. Winzer* (*IHP, Germany*); *C. G. Schaffer* (*Helmut-Schmidt-Universitat, Germany*); *K. Petermann* (*Technical University of Berlin, Germany*);

16:30 III-V Quantum-dot Lasers Monolithically Grown on Si Substrates for Silicon Photonics
Siming Chen (*University College London, UK*); *Huiyun Liu* (*University College London, UK*);

16:50 Recent Progress in On-chip Multiplexing/Demultiplexing Silicon Photonic Devices and Technologies
Jian Wang (*Huazhong University of Science and Technology, China*);

17:10 Reconfigurable Two-mode Mux/Demux Device for Optical Interconnects
Andy H. P. Chan (*City University of Hong Kong, China*); *Wai Ying Chan* (*City University of Hong Kong, China*);

17:30 Low-crosstalk 8-channel Silicon Mode Demultiplexer with Grating Polarizers
Jian Wang (*Zhejiang University, China*); *Pengxin Chen* (*Zhejiang University, China*); *Sitao Chen* (*Zhejiang University, China*); *Yaocheng Shi* (*Zhejiang University, China*); *Daoxin Dai* (*Zhejiang University, China*);

17:50 Higher-order Ring Resonators and Delayed Interferometers Based on 300-mm SOI Technology for WDM Applications
Seok-Hwan Jeong (*Photonics Electronics Technology Research Association (PETRA), Japan*); *Yu Tanaka* (*Photonics Electronics Technology Research Association (PETRA), Japan*); *Ken Morito* (*Photonics Electronics Technology Research Association (PETRA), Japan*);

18:10 Photonic Crystal Cavities for Optical Interconnects
Liam O'Faolain (*University of St Andrews, UK*);

18:30 Silicon Reflective-type Arrayed-waveguide Grating (De)multiplexers with Micro Reflectors
Sitao Chen (*Zhejiang University, China*); *Daoxin Dai* (*Zhejiang University, China*);

Session 1P_11
SC4: Recent Progress on Magnetic and Multiferroic Materials

Monday PM, August 25, 2014

Room 11

Organized by Nian-Xiang Sun, Yungui Ma

Chaired by Nian-Xiang Sun, Yungui Ma

13:00 Tunable Bandpass Filters with Magnetodielectric and Multiferroic Materials
Guo-Min Yang (*Fudan University, China*); *Nian-Xiang Sun* (*Northeastern University, USA*);

13:20 Magnetoelectric and Magnetic Thin Film Microwave/RF Components
Xi Yang (*University of California, USA*); *Yuanxun E. Wang* (*University of California, USA*); *Nian-Xiang Sun* (*Northeastern University, USA*);

13:40 Magnetic Field Tuned Semiconducting Properties in Ferromagnetic/Semiconducting Composites
Junyi Zhai (*Beijing Institute of Nanoenergy and Nanosystems, Chinese Academy of Sciences, China*); *Mingzeng Peng* (*Beijing Institute of Nanoenergy and Nanosystems, Chinese Academy of Sciences, China*); *Ming Song* (*Beijing Institute of Nanoenergy and Nanosystems, Chinese Academy of Sciences, China*); *Yudong Liu* (*Beijing Institute of Nanoenergy and Nanosystems, Chinese Academy of Sciences, China*);

14:00 Self-assembly and Field-directed Assembly of Ferrite-ferroelectric Core-shell Nanocomposites: Studies on Magneto-electric Interactions
G. Sreenivasulu (*Oakland University, USA*); *Ferman Chavez* (*Oakland University, USA*); *Gopalan Srinivasan* (*Oakland University, USA*);

14:20 Multiferroics and Magnetoelectric Coupling Effects in Metal-organic Frameworks
Young Sun (*Institute of Physics, Chinese Academy of Sciences, China*); *Y. Tian* (*Institute of Physics, Chinese Academy of Sciences, China*); *J.-Z. Cong* (*Institute of Physics, Chinese Academy of Sciences, China*); *S.-P. Shen* (*Institute of Physics, Chinese Academy of Sciences, China*); *Y.-S. Chai* (*Institute of Physics, Chinese Academy of Sciences, China*); *L.-Q. Yan* (*Institute of Physics, Chinese Academy of Sciences, China*);

14:40 Composition-graded Magnetic Thin Films with Tunable Microwave Performance Controlled by Electrical Field
Nguyen Nguyen Phuoc (*National University of Singapore, Singapore*); *Chong Kim Ong* (*National University of Singapore, Singapore*);

15:00 Thin Film Magnetoelectric Composites as Biomagnetic Sensors
Andre Piorra (*University of Kiel, Germany*); *Christine Kirchhof* (*University of Kiel, Germany*); *Erdem Yarar* (*University of Kiel, Germany*); *Volker Robisch* (*University of Kiel, Germany*); *Dirk Meyners* (*University of Kiel, Germany*); *Eckhard Quandt* (*University of Kiel, Germany*);

15:20 **Coffee Break**

15:40 Strain-mediated Control of Magnetic Properties in Flexible Multilayered MagnetostrictiveFeGa Films
Qingfeng Zhan (*Ningbo Institute of Material Technology and Engineering, Chinese Academy of Sciences, China*); *Guohong Dai* (*Ningbo Institute of Material Technology and Engineering, Chinese Academy of Sciences, China*); *Xiaoshan Zhang* (*Ningbo Institute of Material Technology and Engineering, Chinese Academy of Sciences, China*); *Yiwei Liu* (*Ningbo Institute of Material Technology and Engineering, Chinese Academy of Sciences, China*); *Zhenghu Zuo* (*Ningbo Institute of Material Technology and Engineering, Chinese Academy of Sciences, China*); *Xing Rong* (*Ningbo Institute of Material Technology and Engineering, Chinese Academy of Sciences, China*); *Run-Wei Li* (*Ningbo Institute of Material Technology and Engineering, Chinese Academy of Sciences, China*);

16:00 Magnetization Dynamics of Ni-Fe Elliptical Dot Arrays Measured by the FMR Measurement with a CPW
Yasushi Endo (*Tohoku University, Japan*); *Masahiro Yamaguchi* (*Tohoku University, Japan*);

16:20 Multifunctional Materials for Electronics and Photonkeynote ics
Federico Rosei (*INRS, Canada*);

16:50 Enhanced Sensitivity in Magnetoelectric Laminate Sensors Based on Magnetoelectric Nonlinearity
Jie Jiao (*Shanghai Institute of Ceramics, Chinese Academy of Sciences, China*); *Yuting Liu* (*Shanghai Institute of Ceramics, Chinese Academy of Sciences, China*); *Jiashuai Ma* (*Shanghai Institute of Ceramics, Chinese Academy of Sciences, China*); *Xiangyong Zhao* (*Shanghai Institute of Ceramics, Chinese Academy of Sciences, China*); *Haosu Luo* (*Shanghai Institute of Ceramics, Chinese Academy of Sciences, China*);

17:10 Magnetoelasticity and Electrical Performances of Laminated ME Materials Used for Magnetic Anomaly Sensors
Haosu Luo (*Shanghai Institute of Ceramics, Chinese Academy of Sciences, China*); *Jie Jiao* (*Shanghai Institute of Ceramics, Chinese Academy of Sciences, China*); *Yuting Liu* (*Shanghai Institute of Ceramics, Chinese Academy of Sciences, China*); *Jiashuai Ma* (*Shanghai Institute of Ceramics, Chinese Academy of Sciences, China*); *Xiangyong Zhao* (*Shanghai Institute of Ceramics, Chinese Academy of Sciences, China*);

17:30 Low Loss Magnetodielectric Composites for RF and Microwave Applications
Hong Wang (*Xi'an Jiaotong University, China*);

17:50 Enhanced Magnetization in Highly Strained $BiFeO_3$ Films
Ying-Hao Chu (*National Chiao Tung University, Taiwan*);

18:10 Multiferroic Co_2Z Hexaferrite-$BaTiO_3$ Particulate Composites for Microwave Absorption Applications
Xian Wang (*Huazhong University of Science and Technology, China*); *Qifan Li* (*Huazhong University of Science and Technology, China*); *Yan Nie* (*Huazhong University of Science & Technology, China*); *Zekun Feng* (*Huazhong University of Science & Technology, China*); *Rongzhou Gong* (*Huazhong University of Science and Technology, China*);

18:30 Electric-field Modulated 180° Magnetization Switching in Multiferroic Heterostructures
Ya Gao (*Tsinghua University, China*); *Jia-Mian Hu* (*Tsinghua University, China*); *Li Shu* (*Tsinghua University, China*); *Jing Ma* (*Tsinghua University, China*); *C. W. Nan* (*Tsinghua University, China*);

18:50 Exceeding Natural Resonance Frequency Limit of Monodisperse Fe_3O_4 Nanoparticles via Superparamagnetic Relaxation
Ning-Ning Song (*Institute of Physics, Chinese Academy of Sciences, China*); *Hai-Tao Yang* (*Institute of Physics, Chinese Academy of Sciences, China*); *Hao-Liang Liu* (*Institute of Physics, Chinese Academy of Sciences, China*); *Xiao Ren* (*Institute of Physics, Chinese Academy of Sciences, China*); *Hao-Feng Ding* (*Institute of Physics, Chinese Academy of Sciences, China*); *Xiang-Qun Zhang* (*Institute of Physics, Chinese Academy of Sciences, China*); *Zhao-Hua Cheng* (*Institute of Physics, Chinese Academy of Sciences, China*);

Session 1P_12a
SC4: Si-based Microwave Devices and ICs

Monday PM, August 25, 2014

Room 12

Organized by Albert Chin, Hsuan-Ling Kao

Chaired by Albert Chin, Hsuan-Ling Kao

13:00 Widely Tunable Inductors Utilizing Transmission-line with Variable Distributed Load Capacitor for Millimeter-wave Applications
Yixiao Wang (*Peking University, China*); *Xiucheng Hao* (*Peking University, China*); *Le Ye* (*Peking University, China*); *Huailin Liao* (*Peking University, China*);

13:20 Investigation of a Miniature and High Gain On-chip V Band Microstrip Antenna
Li-Yan Xie (*University of Electronic Science and Technology of China, China*); *Jia-Qi Liu* (*University of Electronic Science and Technology of China, China*); *Yu-Bo Wang* (*University of Electronic Science and Technology of China, China*); *Chenghsin Chuang* (*National Chiao Tung University, Taiwan*); *Albert Chin* (*National Chiao Tung University, Taiwan*); *Joshua Le-Wei Li* (*Monash University, Malaysia*); *Kai Kang* (*University of Electronic Science and Technology of China, China*);

13:40 An Ultra-wideband and Low Phase Noise LC-VCO Using NMOS Varactor with MOM Digital Capacitor Switching Arrays
Mohammed Aqeeli (*University of Manchester, United Kingdom*); *Zhirun Hu* (*University of Manchester, UK*); *Xianjun Huang* (*University of Manchester, UK*); *Abdullah Alburaikan* (*University of Manchester, UK*); *Cahyo Muvianto* (*The University of Manchester, UK*);

14:00 Dual-band Bandpass Filter Based on GaN MMIC
Zhi Xia Du (*South China University of Technology, China*); *Xiu-Yin Zhang* (*South China University of Technology, China*); *Hsuan-Ling Kao* (*Chang Gung University, Taiwan*);

14:20 The Experimental Study of THz Power Detector Design in 0.18 µm CMOS Technology
Chih-Wei Lai (*National Chiao-Tung University, Taiwan*); *Wei-Cheng Chen* (*National Chiao-Tung University, Taiwan*); *Tzu-Chao Yan* (*National Chiao-Tung University, Taiwan*); *Chun-Hsing Li* (*National Chiao-Tung University, Taiwan*); *Ming-Ching Kuo* (*Industrial Technology Research Institute (ITRI), Taiwan*); *Chien-Nan Kuo* (*National Chiao-Tung University, Taiwan*);

14:40 Study of Response of PIN Diode to Electromagnetic Pulse
Yong Li (*Northwest Institute of Nuclear Technology, China*); *Haiyan Xie* (*Northwest Institute of Nuclear Technology, China*); *Chun Xuan* (*Northwest Institute of Nuclear Technology, China*); *Hongfu Xia* (*Northwest Institute of Nuclear Technology, China*); *Jianguo Wang* (*Northwest Institute of Nuclear Technology, China*);

15:00 Amplifier Design Using 0.18 µm CMOS Technology
Yuan Chun Li (*City University of Hong Kong, China*); *Hsuan-Ling Kao* (*Chang Gung University, Taiwan*);

15:20 **Coffee Break**

Session 1P_12b
Specialty Optical Fibers: Design, Applications, Devices, and Process

Monday PM, August 25, 2014

Room 12

Organized by Pramod R. Watekar

Chaired by Seongmin Ju, Pramod R. Watekar

15:40 THz False-color Imaging with Flexible Tube-lattice Fiber Probe
Wenliang Lu (*Beijing Jiaotong University, China*); *Shuqin Lou* (*Beijing Jiaotong University, China*); *Xin Wang* (*Beijing Jiaotong University, China*); *Alexander Argyros* (*University of Sydney, Australia*);

16:00 Temperature Profile of Soot Preform during Sintering Process
Ramesh Behera (*Sterlite Technollogies Ltd., India*); *Sham Nagarkar* (*Sterlite Technollogies Ltd., India*);

16:20 Yield Improvement of Optical Fiber Manufacturing through Redesign of OVD Burner
Ramesh Behera (*Sterlite Technollogies Ltd., India*); *Datta Pasare* (*Sterlite Technollogies Ltd., India*);

16:40 Core Profile Based Dispersion Optimization in Trench Assisted Bend-insensitive Optical Fibers
Pramod R. Watekar (*Sterlite Technologies Ltd., India*); *Archi Bhattacharya* (*Sterlite Technologies Ltd., India*); *Nagaraju Bezawada* (*Sterlite Technologies Ltd., India*);

17:00 Experimental Investigation of Modal Noise in Ultra Bend-insensitive Fibers
Nagaraju Bezawada (*Sterlite Technologies Ltd., India*); *Manoj Gupta* (*Sterlite Technologies Ltd., India*); *Pramod R. Watekar* (*Sterlite Technologies Ltd., India*);

17:20 Measurement of Nonlinear Coefficient of Ultra Bend-insensitive Optical Fiber
Manoj Gupta (*Research & Development Sterlite Technologies Ltd., India*); *Nagaraju Bezawada* (*Sterlite Technologies Ltd., India*); *Pramod R. Watekar* (*Sterlite Technologies Ltd., India*);

17:40 Surface Plasmon Resonance of Tapered Au Nanoparticles Cladding-doped Optical Fiber
Seongmin Ju (*Gwangju Institute of Science and Technology, South Korea*); *Seongmook Jeong* (*Gwangju Institute of Science and Technology, South Korea*); *Youngwoong Kim* (*Gwangju Institute of Science and Technology, South Korea*); *Sang-Hyun Lee* (*Gwangju Institute of Science and Technology, South Korea*); *Won-Taek Han* (*Gwangju Institute of Science and Technology, South Korea*);

18:00 Gamma-ray Irradiation Effect on Non-resonant Third-order Optical Nonlinearity of Germano-silicate Glass Optical Fiber
Youngwoong Kim (*Gwangju Institute of Science and Technology, South Korea*); *Seongmin Ju* (*Gwangju Institute of Science and Technology, South Korea*); *Seongmook Jeong* (*Gwangju Institute of Science and Technology, South Korea*); *Jong-Yeol Kim* (*Korea Atomic Energy Research Institute, Korea*); *Nam-Ho Lee* (*Korea Atomic Energy Research Institute, Korea*); *Hyun-Kyu Jung* (*Korea Atomic Energy Research Institute, Korea*); *Won-Taek Han* (*Gwangju Institute of Science and Technology, South Korea*);

18:20 Bending Effect on Optical Emission Properties of Yb/Al Doped Optical Fiber with Depressed Cladding Structure
Seongmook Jeong (*Gwangju Institute of Science and Technology, South Korea*); *Seongmin Ju* (*Gwangju Institute of Science and Technology, South Korea*); *Youngwoong Kim* (*Gwangju Institute of Science and Technology, South Korea*); *Yune Hyoun Kim* (*Korea Photonics Technology Institute, South Korea*); *Swook Hann* (*Korea Photonics Technology Institute, South Korea*); *Won-Taek Han* (*Gwangju Institute of Science and Technology, South Korea*);

Session 1P_13a
FocusSession.SC4: Optimal Antennas

Monday PM, August 25, 2014

Room 13

Organized by Mats Gustafsson, B. Lars G. Jonsson
Chaired by Mats Gustafsson, B. Lars G. Jonsson

13:20 Bandwidth Limitations and Trade-off Relations for Wide- and Multi-band Array Antennas over a Ground Plane (invited)
B. Lars G. Jonsson (*KTH — Royal Institute of Technology, Sweden*);

13:40 Low-cost Solutions for Optimal Antenna Design (invited)
Amalendu Patnaik (*Indian Institute of Technology, India*);

14:00 Determining Physical Bounds for Antennas above Ground Planes (invited)
Doruk Tayli (*Lund University, Sweden*); *Mats Gustafsson* (*Lund University, Sweden*);

14:20 Further Research on the Stored Energies and Radiation $\boldsymbol{Q}$ (invited)
Geyi Wen (*Nanjing University of Information Science and Technology, China*);

14:40 Computational Challenges in Convex Optimization for Antenna Analysis (invited)
Sven Nordebo (*Linnaeus University, Sweden*); *Mats Gustafsson* (*Lund University, Sweden*);

15:00 Antenna Lenses from Transformation Optics (invited)
Rhiannon C. Mitchell-Thomas (*University of Exeter, UK*); *Oscar Quevedo-Teruel* (*KTH Royal Institute of Technology, Sweden*);

15:20 **Coffee Break**

15:40 Quality Factor for Antennas: A Tutorial (keynote)
Arthur D. Yaghjian (*Electromagnetics Research Consultant, USA*);

16:10 An Overview of Current Optimization and Physical Bounds on Antennas (tutorial)
Mats Gustafsson (*Lund University, Sweden*);

Session 1P_13b
SC4: THz Antennas and Systems

Monday PM, August 25, 2014

Room 13

Organized by Xiaodong Chen, Junsheng Yu
Chaired by Yuan Yao, Xiaoming Liu

16:40 A Simple Experimental Method to Analyze the Properties of Terahertz-wave Propagation in Complex Atmosphere
Xian Qi Lin (*University of Electronic Science and Technology of China, China*); *Peng Mei* (*University of Electronic Science and Technology of China, China*); *X. F. Yang* (*Luoyang Electronic Equipment Center of China, China*); *Jia Wei Yu* (*University of Electronic Science and Technology of China, China*); *Yuan Jiang* (*University of Electronic Science and Technology of China, China*); *Yong Fan* (*University of Electronic Science and Technology of China, China*);

17:00 A General and Effective Clutter Filtering Strategy for Quiet Zone Evaluation in Tri-reflector Compact Range
Jingjuan Wang (*Beijing University of Posts and Telecommunications, China*); *Cheng Yang* (*Beijing University of Posts and Telecommunications, China*); *Yuan Yao* (*Beijing University of Posts and Telecommunications, China*); *Xiaoming Liu* (*Beijing University of Posts and Telecommunications, China*); *Junsheng Yu* (*Beijing University of Posts and Telecommunications, China*); *Xiaodong Chen* (*Queen Mary University of London, UK*);

17:20 Implementation of Three-dimensional Diffractive Gaussian Beam Analysis Method
Fangyuan Cheng (*Beijing University of Posts and Telecommunications, China*); *Zejian Lu* (*Beijing University of Posts and Telecommunications, China*); *Xiaoming Liu* (*Beijing University of Posts and Telecommunications, China*); *Hai Wang* (*Beijing University of Posts and Telecommunications, China*); *Junsheng Yu* (*Beijing University of Posts and Telecommunications, China*); *Xiaodong Chen* (*Queen Mary University of London, UK*);

17:40 A Fast Gaussian Beam Tracing Method for Quasi-optical System Analysis Based on Gabor Frame Expansion
Hai Wang (*Beijing University of Posts and Telecommunications, China*); *Zejian Lu* (*Beijing University of Posts and Telecommunications, China*); *Fangyuan Cheng* (*Beijing University of Posts and Telecommunications, China*); *Junsheng Yu* (*Beijing University of Posts and Telecommunications, China*); *Xiaodong Chen* (*Queen Mary University of London, UK*); *Xiaoming Liu* (*Beijing University of Posts and Telecommunications, China*); *Yuan Yao* (*Beijing University of Posts and Telecommunications, China*);

18:00 Evaluation of the Fast Scanning THz-TDS Unit Using Voice Coil Motor
Yuma Nanba (*Okayama University, Japan*); *Yasumasa Matsuoka* (*Okayama University, Japan*); *Kenji Sakai* (*Okayama University, Japan*); *Toshihiko Kiwa* (*Okayama University, Japan*); *Keiji Tsukada* (*Okayama University, Japan*);

Session 1P_14a
SC5: Inverse Problems: Theories, Computations, and Applications

Monday PM, August 25, 2014

Room 14

Organized by Xudong Chen, Qing Huo Liu

Chaired by Xudong Chen, Qing Huo Liu

13:00 Simultaneous Reconstruction of the PEC and Dielectric Scatterers Via Inverse Scattering Method
Xiuzhu Ye (*Beihang University, China*);

13:20 Subspace-based Optimization for Inverse Scattering Problems at Oblique Incidence
Qingyang Meng (*Zhejiang University, China*); *Dexin Ye* (*Zhejiang University, China*); *Qinyi Lv* (*Zhejiang University, China*); *Lixin Ran* (*Zhejiang University, China*);

13:40 Doppler Radar Sensor Based Small- and Large-scale Motion Imaging
Qinyi Lv (*Zhejiang University, China*); *Dexin Ye* (*Zhejiang University, China*); *Qingyang Meng* (*Zhejiang University, China*); *Shan Qiao* (*Zhejiang University City College, China*); *Lixin Ran* (*Zhejiang University, China*);

14:00 Imaging Dielectric Objects by Limited Diversity of Scattering Data
C. X. Yang (*Tongji University, China*); *R. P. Chen* (*Tongji University, China*); *Y. J. Zhang* (*Tongji University, China*); *C. N. Xu* (*Tongji University, China*); *S. C. Yan* (*Tongji University, China*); *Mei Song Tong* (*Tongji University, China*);

14:20 Time Reversal Imaging Using Minimum Norm Iterative Type Partial Noise Subspace Method
Qiang Gao (*University of Electronic Science and Technology of China, China*); *Wei Gao* (*University of Electronic Science and Technology of China, China*); *Xiao-Hua Wang* (*University of Electronic Science and Technology of China, China*); *Bing-Zhong Wang* (*University of Electronic Science and Technology of China, China*);

14:40 Contrast Source Inversion Method Using the Wavelet Basis
Oguz Semerci (*Schlumberger-Doll Research, USA*); *Maokun Li* (*Schlumberger-Doll Research, USA*); *Aria Abubakar* (*Schlumberger-Doll Research, USA*);

15:00 Non-contact Thermoacoustic Imaging
Xiong Wang (*University of Arizona, USA*); *Yexian Qin* (*University of Arizona, USA*); *Tao Qin* (*University of Arizona, USA*); *Huan Meng* (*University of Arizona, USA*); *Russell S. Witte* (*University of Arizona, USA*); *Hao Xin* (*University of Arizona, USA*);

15:20 **Coffee Break**

15:40 A Microwave Radiation Interferometry Method Based on Adaptive Super-sparse Sampling
Suhua Chen (*East China Jiaotong University, China*); *Lu Zhu* (*East China Jiaotong University, China*); *Yuanyuan Liu* (*East China Jiaotong University, China*);

16:00 Reconstructing 2D Perfectly Electric Conductors
Xudong Chen (*National University of Singapore, Singapore*); *Xiuzhu Ye* (*Beihang University, China*);

16:20 Multi-input Localized Electrical Property Retrieval — Theories and Numerical Examples
Shao Ying Huang (*Massachusetts Institute of Technology, USA*);

16:40 Fast Forward and Inverse Solution Methods for Magnetodielectric Materials
Qing Huo Liu (*Duke University, USA*); *Wenji Zhang* (*Duke University, USA*); *Zhiru Yu* (*Duke University, USA*); *Yunyun Hu* (*Duke University, USA*); *Yuan Fang* (*Duke University, USA*); *Jianyang Zhou* (*Duke University, USA*);

Session 1P_14b
SC5: Microwave Imaging: Detection, Localization and Profiling

Monday PM, August 25, 2014

Room 14

Organized by Rocco Pierri, Raffaele Solimene

Chaired by Jean-Charles Bolomey

17:00 Introduction to the Researches on Radar Conducted in MIRSL/CAS
Yunhua Zhang (*The Key Laboratory of Microwave Remote Sensing, Chinese Academy of Sciences, China*); *Xiaojin Shi* (*Center for Space Science and Applied Research, CAS, China*); *Xiang Gu* (*Center for Space Science and Applied Research, CAS, China*); *Wenshuai Zhai* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*); *Xueyan Kang* (*Center for Space Science and Applied Research, CAS, China*); *Yuan Deng* (*Chinese Academy of Sciences, China*); *Dong Li* (*Chinese Academy of Sciences, China*); *Xiao Dong* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*); *Jiefang Yang* (*The Key Laboratory of Microwave Remote Sensing, Chinese Academy of Sciences, China*); *Qilun Yang* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*); *Qingshan Yang* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*); *Yueying Tang* (*Center for Space Science and Applied Research, CAS, China*); *Xiangkun Zhang* (*National Space Science Center, Chinese Academy of Sciences, China*); *Jingshan Jiang* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*);

17:20 Nanoscale Imaging of a Transmission Mode Scanning Microwave Microscope Investigated by a 3D Finite-element Method
Abiola O. Oladipo (*University College London, UK*); *Andrea Lucibello* (*University of Roma Tor Vergata, Italy*); *Manuel Kasper* (*Johannes Kepler University Linz, Austria*); *Spyros Lavdas* (*University College London, UK*); *Giovanni M. Sardi* (*Institute of Microelectronics and Microsystems, Italy*); *Emanuela Proietti* (*Institute for Microelectronics and Microsystems, Italy*); *Ferry Kienberger* (*Agilent Technologies Austria GmbH, Austria*); *Romolo Marcelli* (*Institute of Microelectronics and Microsystems, Italy*); *Nicolae-Coriolan Panoiu* (*University College London, UK*);

17:40 Comparison of the Time-reversal MUSIC and BP Algorithms in Multi-target Detection
Bing Li (*South China University of Technology, China*); *Bin-Jie Hu* (*South China University of Technology, China*);

18:00 Development of Magnetic Phase Mapping for Analyzing the Internal Structure of the Spot Welding
Song Nannan (*Okayama University, Japan*); *Keisyu Shiga* (*Okayama University, Japan*); *Yuya Tsukamoto* (*Okayama University, Japan*); *Kenji Sakai* (*Okayama University, Japan*); *Toshihiko Kiwa* (*Okayama University, Japan*); *Weiying Cheng* (*Okayama University, Japan*); *Keiji Tsukada* (*Okayama University, Japan*);

Session 1P_15a
Oral Presentations for Best Student Paper Awards — SC4: Antennas and Microwave Technologies

Monday PM, August 25, 2014

Room 15

13:00 A Novel Parallel Double Helix Loop Resonator for Magnetic Coupled Resonance Wireless Power Transfer
Cheng Yang (*Chubu University, Japan*); *Koichi Tsunekawa* (*Chubu University, Japan*);

13:20 Parabolic Strip Telescope
Vladislav Kosejk (*Czech Technical University in Prague, Czech Republic*); *Goce Chadzitaskos* (*Czech Technical University in Prague, Czech Republic*); *Jaroslav Cerveny* (*Czech Technical University in Prague, Czech Republic*);

13:40 Frequency Tunable Antenna with Zeroth Order Resonator for UHF Near-field RFID Systems
Xiao-Dong Wei (*South China University of Technology, China*); *Honglin Zhang* (*South China University of Technology, China*); *Bin-Jie Hu* (*South China University of Technology, China*);

14:00 Electrical Lumped Model for Implemented RF-MEMS Capacitive Switch on Semi-suspended Coplanar-waveguide
Amin Khalili Moghaddam (*University of Malaya, Malaysia*); *Joon Huang Chuah* (*University of Malaya, Malaysia*); *Harikrishnan A/L Ramiah* (*University of Malaya, Malaysia*);

14:20 invited Edge Effects in a Strongly Coupled Dipole Element Array in Triangular Lattice
Christos I. Kolitsidas (*KTH Royal Institute of Technology, Sweden*); *B. Lars G. Jonsson* (*KTH Royal Institute of Technology, Sweden*);

14:40 The Multiple Periodic Structure Antenna Design
Zi Long Ma (*The University of Hong Kong, China*); *Li Jun Jiang* (*The University of Hong Kong, China*); *S. Gupta* (*The University of Hong Kong, China*); *Wei E. I. Sha* (*The University of Hong Kong, China*);

15:00 A Dual-band Circularly Polarized Antenna with Novel Feeding Method for BDS, GPS and GLONASS Application
Jin Zhang (*University of Electronic Science and Technology of China, China*); *Xian Qi Lin* (*University of Electronic Science and Technology of China, China*); *Li Ying Nie* (*University of Electronic Science and Technology of China, China*); *Fei Cheng* (*University of Electronic Science and Technology of China, China*); *Zan Yu Kang* (*University of Electronic Science and Technology of China, China*); *Yuan Jiang* (*University of Electronic Science and Technology of China, China*); *Jia Wei Yu* (*University of Electronic Science and Technology of China, China*);

15:20 **Coffee Break**

15:40 Broadband Circularly Polarized Loop Antenna Based on High-pass and Low-pass Filters for Handheld RFID Reader Applications
Bo Xu (*Zhejiang University, China*); *Qi Liu* (*Zhejiang University, China*); *Yusha Liu* (*Zhejiang University, China*);

Session 1P_15b
Oral Presentations for Best Student Paper Awards — SC1: CEM, EMC, Scattering & EM Theory

Monday PM, August 25, 2014
Room 15

16:00 Electromagnetic Heat-induced of Nanowire in Liquid: Computation of the Bubble Shape
Anis Chaari (*University of Technology of Troyes, France*); *Thomas Grosges* (*University of Technology of Troyes, France*); *Laurence Giraud-Moreau* (*University of Technology of Troyes, France*); *Dominique Barchiesi* (*University of Technology of Troyes, France*);

16:20 Computation of the Field Enhancement by Small Facet Angles of Metallic Nanoparticles: Adaptive Remeshing for Finite Element Method
Fadhil Mezghani (*University of Technology of Troyes, France*); *Dominique Barchiesi* (*University of Technology of Troyes, France*); *Abel Cherouat* (*University of Technology of Troyes, France*); *Thomas Grosges* (*University of Technology of Troyes, France*); *Houman Borouchaki* (*University of Technology of Troyes, France*);

16:40 A Unified Field Analysis Method for IR/MMW Beam Splitter
Yi Tian (*Beijing Institute of Technology, China*); *Hui Yan* (*Beijing Institute of Technology, China*); *Xin Wang* (*Beijing Institute of Technology, China*); *Li Zhang* (*Shanghai Institute of Electro-mechanical Engineering, China*); *Zhuo Li* (*Beijing Institute of Technology, China*);

17:00 Conductor Modeling Based on Volume Integral Equations
J. Zhang (*Tongji University, China*); *Mei Song Tong* (*Tongji University, China*);

Session 1P_15c
Oral Presentations for Best Student Paper Awards — SC5: Remote Sensing, Inverse Problems, Imaging, Radar and Sensing

Monday PM, August 25, 2014
Room 15

17:20 Localisation of Motionless Persons in 3D Space by UWB Radar
Peter Kazimir (*Technical University of Kosice, Slovakia*); *Dusan Kocur* (*Technical University of Kosice, Slovakia*); *J. Fortes* (*Technical University of Kosice, Slovakia*); *Rudolf Zetik* (*Ilmenau University of Technology, Germany*);

17:40 Research of Composite Electromagnetic Scattering from Targets and Rough Surface Basing on the Efficient Numerical Algorithm
Yu Liang (*Yangzhou University, China*); *Li-Xin Guo* (*Xidian University, China*); *Xiang-Hua Zeng* (*Yangzhou University, China*); *Zhen-Sen Wu* (*Xidian University, China*);

18:00 FPGA-based Real-time Generator of Combination Chaotic Frequency-modulated Signal for Noise Radar
Qilun Yang (*University of Chinese Academy of Sciences, China*); *Yunhua Zhang* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*); *Bingjie Li* (*University of Chinese Academy of Sciences, China*);

18:20 Uncertainty Estimation in Vector Wind Retrievals from Satellite-based Polarimetric Microwave Radiometer Measurements
Xiaolin Tong (*Huazhong University of Science and Technology, China*); *Zhenzhan Wang* (*National Space Science Center/Center for Space Science and Applied Research, Chinese Academy of Sciences, China*); *Qingxia Li* (*Huazhong University of Science and Technology, China*);

Session 1P0
Poster Session 1

Monday PM, August 25, 2014
14:00 PM - 17:00 PM
Room FOYER

1 Backward Angular Distribution of Air Lasing Induced by Femtosecond Laser Filamentation
T. Zeng (*Nankai University, China*); *J. Y. Zhao* (*Nankai University, China*); *Weiwei Liu* (*Nankai University, China*); *See Leang Chin* (*Universite Laval, Canada*);

2 A Novel Knowledge-aided Approach for Training Data Selection
Su-Dan Han (*National University of Defense Technology, China*); *Chongyi Fan* (*National University of Defense Technology, China*); *Xiao-Tao Huang* (*National University of Defense Technology, China*); *Zhi-Min Zhou* (*National University of Defense Technology, China*);

3 Novel Design and Implementation of Ultra-wideband Pulse Generator Based on Avalanche Transistor
Yu Guo (*National University of Defense Technology, China*); *Guo Fu Zhu* (*National University of Defense Technology, China*);

4 An Efficient Algorithm for the Calculation of Quantum Radar Cross Section of Flat Objects
Yun Lin (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Liangshuai Guo* (*Shanghai Key Laboratory of Electromagnetic Environmental Effects for Aerospace Vehicle Yangpu, China*); *Kun Cai* (*Science and Technology on Electromagnetic Scattering Laboratory, China*);

5 A Real Time 3D Multi Target Data Fusion for Multistatic Radar Network Tracking
El-Sayed Abdoul Moaty El-Badawy (*Alexandria University, Egypt*); *Tarek Reda Abd-ElShahid* (*Alexandria University, Egypt*); *Alaa El-Din Sayed Hafez* (*Alexandria University, Egypt*);

6 A New FPGA Prototype for Synchro to Digital Converter Using CORDIC Algorithm
Mohamed R. M. Rizk (*Alexandria University, Egypt*); *Ahmed Hossin* (*Alexandria University, Egypt*); *Alaa El-Din Sayed Hafez* (*Alexandria University, Egypt*);

7 Improved Design of Ku Band High Power Rectangular Waveguide Directional Coupler
Chao Wang (*University of Electronic Science and Technology of China, China*); *Gaofeng Guo* (*University of Electronic Science and Technology of China, China*); *En Li* (*University of Electronic Science and Technology of China, China*);

8 Magnetic Field Controlled Diffraction Grating
Guojing Huang (*South China Normal University, China*); *Henghe Jiang* (*South China Normal University, China*); *Bin Zhou* (*South China Normal University, China*); *Zhuo Chen* (*South China Normal University, China*);

9 Analysis of Immunity by RF Wireless Communication Signals
Hongsik Keum (*EletroMagnetic Wave Technology Institute, Korea*); *Jungyu Yang* (*Radio Research Agency, Korea*); *Heung-Gyoon Ryu* (*Chungbuk National University, Korea*);

10 Resonant Properties of HE_{111} Mode of a Complicated Microwave Cavity for a New Type of Rubidium Clock
Xiaoxiao Li (*Lanzhou University of Technology, China*); *Shang-Lin Hou* (*Lanzhou University of Technology, China*); *Yanjun Liu* (*Lanzhou University of Technology, China*); *Jingli Lei* (*Lanzhou University of Technology, China*);

11 Dielectric Properties of Rice Husk/Carbon Nanotubes Composites in Ku-band
Yeng Seng Lee (*University Malaysia Perlis (UniMAP), Malaysia*); *Mohd Fareq Bin Abdul Malek* (*University Malaysia Perlis (UniMAP), Malaysia*); *Ee Meng Cheng* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Wei Wen Liu* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Fwen Hoon Wee* (*University Malaysia Perlis (UniMAP), Malaysia*); *Muhammad Nadeem Iqbal* (*University Malaysia Perlis (UniMAP), Malaysia*); *Liyana Binti Zahid* (*Universiti Malaysia Perlis, Malaysia*); *Muhammad Shafiq Bin Mezan* (*University Malaysia Perlis (UniMAP), Malaysia*); *Farah Salwani Abdullah* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Mardianaliza Othman* (*Universiti Malaysia Perlis (UniMAP), Malaysia*);

12 Contribution of Evanescent Waves to Vortex Vector Field with Inhomogeneous Polarization in Near Field
Yin-Long Feng (*Zhejiang A & F University, China*); *Rui Pin Chen* (*Zhejiang A & F University, China*);

13 VEMC Computing System for Electromagnetic Compatibility of Integrated Circuits
Boyuan Zhu (*Griffith University, Australia*); *Hengxu Li* (*Griffith University, Australia*); *Jun-Wei Lu* (*Griffith University, Australia*); *Haiyan Sun* (*Nantong University, China*); *Ling Sun* (*Nantong University, China*); *Lingling Yang* (*Nantong University, China*);

14 Wide-angle Polarization-independent Planar Magnetic Metamaterials Based on Dielectric Resonators
Jiafu Wang (*Air Force Engineering University, China*); *Shaobo Qu* (*Air Force Engineering University, China*); *Zhuo Xu* (*Xi'an Jiaotong University, China*); *Hua Ma* (*Air Force Engineering University, China*); *Hongliang Du* (*Air Force Engineering University, China*); *Jun Wang* (*Air Force Engineering University, China*); *Hongya Chen* (*Air Force Engineering University, China*);

15 High-efficiency Anomalous Reflection Characteristics of an Ultra-thin Gradient Meta-surface Based on SRRs
Hongya Chen (*Air Force Engineering University, China*); *Jiafu Wang* (*Air Force Engineering University, China*); *Hua Ma* (*Air Force Engineering University, China*); *Shaobo Qu* (*Air Force Engineering University, China*); *Jieqiu Zhang* (*Air Force Engineering University, China*); *Yongfeng Li* (*Air Force Engineering University, China*); *Mingbao Yan* (*Air Force Engineering University, China*); *Yongqiang Pang* (*Air Force Engineering University, China*);

16 Microwave Plasma Reactor Based on Microwave Oven
Rungroj Pongsopon (*Thammasat University, Thailand*); *T. Chim-Oye* (*Thammasat University, Thailand*); *Manu Fuangfoong* (*Thammasat University, Thailand*);

17 An Experimental Investigation of the Concentration of KCl in Liquid Electrode of Atmospheric Pressure DBD
Fuangfoong Manu (*Thammasat University, Thailand*); *C. Tawee* (*Thammasat University, Thailand*); *F. Pollawat* (*Thammasat University, Thailand*); *F. Wasana* (*Thammasat University, Thailand*);

18 Study on Permittivity and Optimal Design of Metamaterial
Zihao Fu (*Communication University of China, China*); *Yanfang Li* (*Jiangxi Science & Technology Normal University, China*); *Guizhen Lu* (*Communication University of China, China*);

19 Independently Tunable Multichannel Terahertz Filtering in a Defect Resonator Embedded with Graphene Sheets
Fenghua Shi (*South China Normal University, China*); *Yihang Chen* (*South China Normal University, China*);

20 Concentration Measurements of Atmospheric CH_4, N_2O and H_2O Vapor Using a Quantum Cascade Laser-based QEPAS Sensor
Hongming Yi (*Universite du Littoral Cote d'Opale, France*); *Olivier Laurent* (*Laboratoire des Sciences du Climat et de l'Environnement, France*); *Wei Dong Chen* (*University of the Littoral Opal Coast, France*); *Michel Ramonet* (*Laboratoire des Sciences du Climat et de l'Environnement, France*); *Rabih Maamary* (*Université du Littoral Côte d'Opale, France*); *Eric Fertein* (*Université du Littoral Côte d'Opale, France*); *Xiaoming Gao* (*Anhui Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China*);

21 Nitrous Acid Detection with Quartz-enhanced Photoacoustic Spectroscopy Using an External Cavity Quantum Cascade Laser
Hongming Yi (*Universite du Littoral Cote d'Opale, France*); *Rabih Maamary* (*Universite du Littoral Cote d'Opale, France*); *Xiaoming Gao* (*Anhui Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China*); *Markus W. Sigrist* (*ETH Zurich, Switzerland*); *Wei Dong Chen* (*University of the Littoral Opal Coast, France*);

22 A Side Information Free PTS-PAPR Reduction in Coherent Optical OFDM Systems Using Superimposed Training
Haipeng Liu (*South China Normal University, China*); *Han Zhang* (*South China Normal University, China*); *Changjian Guo* (*South China Normal University, China*);

23 Photoelectrochemical Solar Cells Based on Micro/Nano-structured Silicon
Kangkang Dang (*South China Normal University, China*); *Wenbin Huang* (*South China Normal University, China*); *Yali Xue* (*South China Normal University, China*); *Xuyue Wang* (*South China Normal University, China*); *Yang Yang* (*South China Normal University, China*); *Xianyu Ao* (*South China Normal University, China*);

24 Dual-polarized FSS with Wide Frequency Tunability and Simple Bias Network
Hang Zhou (*Air Force Engineering University, China*); *Xin-Hua Wang* (*Air Force Engineering University, China*); *Shaobo Qu* (*Air Force Engineering University, China*); *Lin Zheng* (*Air Force Engineering University, China*); *Hangying Yuan* (*Air Force Engineering University, China*); *Mingbao Yan* (*Air Force Engineering University, China*); *Yongfeng Li* (*Air Force University of Engineering, China*); *Jiafu Wang* (*Air Force Engineering University, China*); *Hua Ma* (*Air Force Engineering University, China*); *Zhuo Xu* (*Xi'an Jiaotong University, China*);

25 Study and Design of the Novel Shunt Liner Active Power Filter for a Superconducting Magnet Power Supply
Jinglin Wu (*University of Science and Technology of China, China*); *Xiaoning Liu* (*University of Science and Technology of China, China*);

26 Design of Ku-band Dielectric Resonator Filter for Satellite Applications
Seyi Stephen Olokede (*Universiti Sains Malaysia, Malaysia*); *Nor Muzlifah Mahyuddin* (*Universiti Sains Malaysia, Malaysia*); *Majid Rafiee* (*Universiti Sains Malaysia (USM), Malaysia*); *Enoch Adama Jiya* (*Universiti Sains Malaysia, Malaysia*);

27 Deriving the Geometry of Frequency Selective Surfaces (FSS) and Metamaterials (MTM) Elements from Transmission Lines by Using Surrogate Metamodeling Techniques
Fabrizia Ghezzo (*Kuang-Chi Institute of Advanced Technology, China*); *Loris Serafino* (*Kuang-Chi Institute of Advanced Technology, China*); *Chunlin Ji* (*Kuang-Chi Institute of Advanced Technology, China*); *Xigeng Miao* (*Kuang-Chi Institute of Advanced Technology, China*); *Ruopeng Liu* (*Kuang-Chi Institute of Advanced Technology, China*);

28 Analysis and Design of Ku Band Coaxial-waveguide Transition
Chao Wang (*University of Electronic Science and Technology of China, China*); *Gaofeng Guo* (*University of Electronic Science and Technology of China, China*); *Junhu Wang* (*Aerospace Research Institute of Materials and Processing Technology, China*); *En Li* (*University of Electronic Science and Technology of China, China*);

29 A Novel Monopulse Microstrip Antenna Array with Compound Feed Network
Feng-Wei Yao (*Shanghai Key Laboratory of Electromagnetic Environment Effects for Aerospace Vehicle, China*); *Xiao-Qing Tian* (*Shanghai Key Laboratory of Electromagnetic Environment Effects for Aerospace Vehicle, China*); *Li-Li Zhu* (*Shanghai Key Laboratory of Electromagnetic Effect for Aerospace Vehicles, China*); *Yuan-Bo Shang* (*Shanghai Key Laboratory of Electromagnetic Environment Effects for Aerospace Vehicle, China*); *Xing-Zuo Dai* (*Shanghai Key Laboratory of Electromagnetic Environment Effects for Aerospace Vehicle, China*);

30 Development of Narrowband Filter Based on S-shaped Resonators for Terahertz Frequency Range
Egor Alexandrovitch Sedykh (*ITMO University, Russia*); *A. V. Vedeneev* (*ITMO University, Russia*); *M. K. Khodzitsky* (*ITMO University, Russia*);

31 IME-HF Instrument on Board TARANIS Satellite Dedicated to the Measurement of the EM Thunderstorm Lightning and TLEs Signatures
Jean Louis Rauch (*Centre National de la Recherche Scientifique, CNRS, France*); *O. Santolik* (*Institute of Atmospheric Physics AS CR, Czech Republic*); *I. Kolmasova* (*Institute of Atmospheric Physics AS CR, Czech Republic*); *A. Millet* (*Centre National de la Recherche Scientifique, CNRS, France*); *M. Chabassiere* (*Centre National de la Recherche Scientifique, CNRS, France*); *R. Lan* (*Institute of Atmospheric Physics AS CR, Czech Republic*); *L. Uhlír* (*Institute of Atmospheric Physics AS CR, Czech Republic*);

32 Design of Signal Source without External Reference for Fiber Optical Comb System
Changqi Yang (*Xi'an Shiyou University, China*);

33 RF Shielded Hat for Protecting Cameraman from EMF Exposure
Nurbaizatul Badrul Hisham (*Universiti Malaysia Perlis, Malaysia*); *Hasliza A. Rahim* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Mohd Fareq Bin Abdul Malek* (*University Malaysia Perlis (UniMAP), Malaysia*); *Muzammil Jusoh* (*Universiti Malaysia Perlis, Malaysia*); *F. A. A. Fuad* (*Universiti Malaysia Perlis, Malaysia*); *Farah Salwani Abdullah* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Muhammad Shafiq Bin Mezan* (*University Malaysia Perlis (UniMAP), Malaysia*);

34 Reflection Loss Performance and Performance Assessment of Pyramidal Microwave Absorber Using Agriculture Waste
Muhammad Shafiq Bin Mezan (*University Malaysia Perlis (UniMAP), Malaysia*); *Mohd Fareq Bin Abdul Malek* (*University Malaysia Perlis (UniMAP), Malaysia*); *Muhammad Shahar Jusoh* (*Universiti Malaysia Perlis, Malaysia*); *Farah Salwani Abdullah* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Nur Adyani Mohd Affendi* (*Universiti Malaysia Perlis (UniMAP), Malaysia*);

35 Grounding Microstrip Lines with Via Holes and General Reformulation of the Iterative Method F.W.C.I.P.
Sameh Toumi Sahli (*Engineers' National School of Tunis, Tunisia*); *Fethi Mejri* (*Ecole Nationale d'Ingenieurs de Tunis, Tunisia*); *Taoufik Aguili* (*Engineers' National School of Tunis, Tunisia*);

36 An Effective Optimization of Reliability of Co-phase Power Supply Device
H. Xu (*Southwest Jiaotong University, China*); *Shaofeng Xie* (*Southwest Jiaotong University, China*); *W.-L. Zhao* (*Southwest Jiaotong University, China*);

37 Tunable Single Bandpass Filter Based on Fluid-filled PCFs
Shengnan Wu (*Zhejiang University, China*); *Chengliang Wang* (*Zhejiang University, China*);

38 Beam Forming Antenna for WLAN
Ho-Jun Lee (*Korea Electronics Technology Institute, Korea*); *Min-Ki Woo* (*Innonet Co., Ltd., South Korea*); *Nae-In Lee* (*Innonet Co., Ltd., South Korea*); *Gene Yoo* (*Innonet Co., Ltd., South Korea*);

39 Wireless Power Transfer and NFC System Using Loop Antenna
Ho-Jun Lee (*Korea Electronics Technology Institute, Korea*); *Sek-Byoung Chae* (*Cenotech Co., Ltd., South Korea*);

40 Criss-Cross Metamaterial Based Radiating Structures for C-band Applications
Kirti Inamdar (*ECED, India*); *Yogesh P. Kosta* (*Marwadi Education Foundation's Group of Institutions, India*); *Suprava Patnaik* (*St. Xavier's Institute of Engineering, India*);

41 Microstrip Patch Antenna Design with Criss-Cross Metamaterial Based Radome Cover
Kirti Inamdar (*ECED, India*); *Yogesh P. Kosta* (*Marwadi Education Foundation's Group of Institutions, India*); *Suprava Patnaik* (*St. Xavier's Institute of Engineering, India*);

42 A Multi-channel Digital Temperature Acquisition System Based on SOPC
W. He (*Southwest Jiaotong University, China*); *Quanyuan Feng* (*Southwest Jiaotong University, China*); *Ding-Hong Jia* (*Southwest Jiaotong University, China*);

43 A High Precision and Externally Synchronous CMOS Relaxation Oscillator
Y.-Y. Deng (*Southwest Jiaotong University, China*); *Quanyuan Feng* (*Southwest Jiaotong University, China*); *Ding-Hong Jia* (*Southwest Jiaotong University, China*);

44 A Novel Algorithm of Landmine Detection
Xin-Yun Wang (*National University of Defense Technology, China*); *Qian Song* (*National University of Defense Technology, China*); *Hanhua Zhang* (*National University of Defense Technology, China*); *Zhi-Min Zhou* (*National University of Defense Technology, China*);

45 TDLAS Based Early-stage Forest Fire Detection System
Jiawei Zhang (*Northeast Forestry University, China*); *Mingbao Li* (*Northeast Forestry University, China*); *Wei Li* (*Northeast Forestry University, China*); *Hongli Zhang* (*Northeast Forestry University, China*);

46 N(h)-profiles of the Ionosphere and Values of the Total Electron Content
Olga A. Maltseva (*Southern Federal University, Russia*); *G. Zhbankov* (*Southern Federal University, Russia*); *Guanyi Ma* (*National Astronomical Observatories, Chinese Academy of Sciences, China*);

47 Forced Solitary Wave in Water Wave Basin under the Earth's Gravity Field
Shigehisa Nakamura (*Kyoto University, Japan*);

48 Parameterized Dynamic Range Reduction for UWB SAR Image
Chao Li (*National University of Defense Technology, China*); *Yueli Li* (*National University of Defense Technology, China*);

49 The Mikaelian's Magnetic Lens for Static Magnetic Field Enhancement
Fei Sun (*Zhejiang University, China*); *Sailing He* (*Zhejiang University, China*);

50 Skin Color Measurements: Usefulness of the Metric Hue Angle of Uniform Color Spaces for Dermatological Treatment
Makio Akimoto (*Kanto Gakuin University, Japan*); *Yurika Koshiishi* (*Tokyo University of Technology, Japan*); *Hikari Ikeda* (*Tokyo University of Technology, Japan*); *Kazuhisa Maeda* (*Tokyo University of Technology, Japan*); *Mieko Hata* (*Takano Medical Clinic, Japan*);

51 New Method for Automated Disk Diffusion Test
Pavel Krepelka (*Brno University of Technology, Czech Republic*); *Robert Kadlec* (*Vyzkumny Ustav Mlekarensky s.r.o, Czech Republic*); *Karel Bartusek* (*Institute of Scientific Instruments of the ASCR, Czech Republic*); *Martin Jakubec* (*Vyzkumny Ustav Mlekarensky s.r.o, Czech Republic*);

52 The Study of the Growth of Tissue Cultures under a Layer of Nanotextiles
Michaela Pokludová (*Brno University of Technology, Czech Republic*); *Pavel Krepelka* (*Brno University of Technology, Czech Republic*);

53 Plasmonic Focusing of Metallic Probe Patterned with Periodic Structure
Qinbai Qian (*Fudan University, China*); *Fuchun Xi* (*Fudan University, China*); *Peng Gou* (*Fudan University, China*); *Jie Xu* (*Fudan University, China*); *Zhenghua An* (*Fudan University, China*);

54 Characterization of Ultrashort Pulse Laser by Using $KNbO_3$ Nanoneedles Based Frequency-resolved Optical Gating (FROG)
Jiaxin Yu (*Lund University and Zhejiang University, China*); *Fuhong Cai* (*Lund University and Zhejiang University, China*);

55 FDTD-based CAD Simulator for Coaxial Applicator — Biomedical Application
Chia Wui Lee (*Universiti Teknologi Malaysia, Malaysia*); *Kok Yeow You* (*University Teknologi Malaysia, Malaysia*); *Chia Yew Lee* (*Universiti Teknologi Malaysia, Malaysia*);

56 To Elaborate the Low Observable Characteristic of Stealth Aircrafts
Faran Awais Butt (*University of Management and Technology (UMT), Pakistan*); *Ijaz Haider Naqvi* (*Syed Babar Ali School of Science and Engineering (SSE), Pakistan*); *Ali Imran Najam* (*National Electronics Complex (NECOP Design Centre), Pakistan*);

57 Sidelobe Blanking in Phased Array Radar System for Countering Radar Jamming
Faran Awais Butt (*University of Management and Technology (UMT), Pakistan*); *Madiha Jalil* (*University of Management and Technology (UMT), Pakistan*);

58 Shielding and Mutual Coupling Effect of Ground Penetrating Radar Antenna
Mohd Nazri A. Karim (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Mohd Fareq Abd Malek* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Mohd Faizal Jamlos* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Farah Salwani Abdullah* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Hana Abdull Halim* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Hassan Nornikman* (*Universiti Malaysia Perlis, Malaysia*);

59 Detection of Low-level Electromagnetic Signal of Partial Discharge by Means of Disturbed Acquisition Discrimination
Petr Drexler (*Brno University of Technology, Czech Republic*); *Martin Cap* (*Brno University of Technology, Czech Republic*); *Pavel Fiala* (*Brno University of Technology, Czech Republic*); *Miloslav Steinbauer* (*Brno University of Technology, Czech Republic*); *Milos Kaska* (*TES, Czech Republic*); *Lubomir Kocis* (*EGU HV Laboratory, Czech Republic*);

60 Dynamics of Radiative Heat Exchange between Parallel Plates of Silicon Carbide: The Role of Near Field
S. A. Dyakov (*Royal Institute of Technology, Sweden*); *J. Dai* (*Royal Institute of Technology, Sweden*); *Min Yan* (*Royal Institute of Technology, Sweden*); *Min Qiu* (*Zhejiang University, China*);

61 A Novel Design of Ku Band Coaxial-waveguide Directional Coupler Used for the Measurement of the Short-circuited Line Method
Qijia Liu (*University of Electronic Science and Technology of China, China*); *Chao Wang* (*University of Electronic Science and Technology of China, China*); *Binjie Tao* (*University of Electronic Science and Technology of China, China*); *En Li* (*University of Electronic Science and Technology of China, China*);

62 Frequency-tunable Circular Polarization Beam Splitter Using a Graphene-dielectric Sub-wavelength Film
Tuo Chen (*Zhejiang University, China*); *Sailing He* (*Zhejiang University, China*);

63 Nanoscale Plasmonic Switch at Far Infrared Frequencies Using Graphene
Jieer Lao (*South China Normal University, China*); *Jin Tao* (*Nanyang Technological University, China*); *Qi Jie Wang* (*Nanyang Technological University, Singapore*); *Xu Guang Huang* (*South China Normal University, China*);

64 Digital Multi-channel High Resolution Phase Locked Loop under Influence of Potential System Uncertainties
Mohamed R. M. Rizk (*Alexandria University, Egypt*); *Shawky Shaaban* (*Alexandria University, Egypt*); *Usama M. Aboul-Nadar* (*Alexandria University, Egypt*); *Alaa El-Din Sayed Hafez* (*Alexandria University, Egypt*);

65 Localization in One-dimensional Structures with Power-law Correlated Heterogeneity
Sepideh S. Zakeri (*Universita di Firenze, Italy*); *Stefano Lepri* (*Istituto dei Sistemi Complessi, Italy*); *Diederik S. Wiersma* (*University of Florence, Italy*);

66 TM Wave Mode Analysis of Circular Dielectric Resonator with Anisotropic Permittivity
Hepi Ludiyati (*Institut Teknologi Bandung, Indonesia*); *Andriyan Bayu Suksmono* (*Institut Teknologi Bandung, Indonesia*); *Achmad Munir* (*Institut Teknologi Bandung, Indonesia*);

67 Adaptive Optimal Polarization Detection of Target in Clutter Background Based on Generalized Rayleigh Quotient
Shiwen Lei (*University of Electronic Science and Technology of China, China*); *Zhiqin Zhao* (*University of Electronic Science and Technology of China, China*); *Zai-Ping Nie* (*University of Electronic Science and Technology of China, China*); *Qing Huo Liu* (*Duke University, USA*);

68 Scattering of a Partially Coherent Pulse on a Deterministic Sphere with Semisoft Boundaries
Haixia Wang (*Luoyang Normal University, China*); *Chaoliang Ding* (*Luoyang Normal University, China*); *Liuzhan Pan* (*Luoyang Normal University, China*);

69 Calculation of Shielding Effectiveness of an Apertured Rectangular Cavity Against Planar Electromagnetic Pulses
Xiaoning Shi (*North China Electric Power University, China*); *Chong-Qing Jiao* (*North China Electric Power University, China*); *Shuai Niu* (*North China Electric Power University, China*);

70 Parametric Inversion of 2-D Dielectric Rough Surface Based on SVM
Qiyuan Zou (*Three Gorges University, China*); *Qinghe Zhang* (*Three Gorges University, China*); *Fei Xu* (*Three Gorges University, China*);

71 Electormagnetic Field-focusing EBG Lens
G. A. Balykov (*Lomonosov Moscow State University, Russian*); *Vadim A. Kaloshin* (*Kotel'nikov Institute of Radio Engineering and Electronics of Russian Academy of Science, Russia*); *A. N. Semenov* (*Lomonosov Moscow State University, Russia*); *Aleksander P. Smirnov* (*Lomonosov Moscow State University, Russia*);

72 Performance Analysis of Parallel FDTD Algorithm on IBM BlueGene Supercomputer Series
Aleksander P. Smirnov (*Lomonosov Moscow State University, Russia*); *A. N. Semenov* (*Lomonosov Moscow State University, Russia*); *A. V. Pozdneev* (*IBM East Europe/Asia Ltd., Russia*);

73 Analytical Formulation for Electromagnetic Leakage from an Apertured Rectangular Cavity
Yue-Yue Li (*North China Electric Power University, China*); *Chong-Qing Jiao* (*North China Electric Power University, China*);

74 Transient Electromagnetic Topology Method for Complex Wiring Consisting of Random and Nonuniform Transmission Lines
Haiyan Xie (*Northwest Institute of Nuclear Technology, China*); *Yong Li* (*Northwest Institute of Nuclear Technology, China*); *Hongfu Xia* (*Northwest Institute of Nuclear Technology, China*); *Chun Xuan* (*Northwest Institute of Nuclear Technology, China*); *Jianguo Wang* (*Northwest Institute of Nuclear Technology, China*);

75 A Low Power PLL Synthesizer for ICD System
Jin-Sup Kim (*Korea Electronics Technology Institute, Republic of Korea*); *Se-Hwan Choi* (*Korea Electronics Technology Institute, Republic of Korea*);

76 Influence of the Socket on Chip-level ESD Testing
Yu Xiao (*Xiangtan University, China*); *Jiancheng Li* (*National University of Defense Technology, China*); *Jianfei Wu* (*National University of Defense Technology, China*); *Yunzhi Kang* (*TEDA, China*); *Jianwei Su* (*Xiangtan University, China*);

77 Solitary Wave Induced in a Sinusoidal Water Surface Wave Field of Hydrodynamics
Shigehisa Nakamura (*Kyoto University, Japan*);

78 The Casimir Force and Heat Conduction Viewed as Exclusion of Natural Spatial Energy and Lateral EM Coupling between the Walls of a Waveguide
Michael James Underhill (*Underhill Research Ltd., UK*);

79 Induced Polarization Method 3D Forward Modeling in Time Domain by Using Laplace Transformation
Wei Deng (*Kyushu University, Japan*); *Hideki Mizunaga* (*Kyushu University, Japan*); *Jinsong Shen* (*China Petroleum University, China*);

80 The Beam-wave Interaction for Different Modes in Three-gap Coupled Cavity Output Circuit
Jian Cui (*North China University of Technology, China*); *Jirun Luo* (*Institute of Electronics, Chinese Academy of Science, China*); *Wenkai Liu* (*North China University of Technology, China*); *Haiyan Sun* (*North China University of Technology, China*); *Zhi Liu* (*North China University of Technology, China*); *Ming Huang* (*North China University of Technology, China*);

81 Efficient Electromagnetic Scattering Simulation Approach of the Rotating Moving Complex Targets
Guoqing Zhu (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Chunzhu Dong* (*Communication University of China, China*); *Kainan Qi* (*Communication University of China, China*); *Jing Huang* (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Hongcheng Yin* (*National Electromagnetic Scattering Laboratory, China*);

82 The Research of Methods Based on Traveling Wave Suppression
Yongfeng Wang (*Communication University of China, China*); *Xiaonan Zhang* (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Kainan Qi* (*Communication University of China, China*);

83 Fan-shaped Patch Element Wideband Terahertz Metamaterial Perfect Absorber
Xiaodong Hao (*Nanjing University of Posts and Telecommunications, China*); *Weiping Qin* (*Nanjing University of Posts and Telecommunications, China*);

84 A Novel Tunable Dual-band Microwave Metamaterial Absorber Based on Split Ring Resonant
Jia-Lin Yuan (*Nanjing University of Aeronautics and Astronautics, China*); *Shaobin Liu* (*Nanjing University of Aeronautics and Astronautics, China*); *Bo-Rui Bian* (*Nanjing University of Aeronautics and Astronautics, China*); *Xiang-Kun Kong* (*Nanjing University of Aeronautics and Astronautics, China*); *Hai Feng Zhang* (*Nanjing University of Aeronautics and Astronautics, China*); *Ben Ma* (*Nanjing University of Aeronautics and Astronautics, China*); *Zhiwen Mao* (*Nanjing University of Aeronautics and Astronautics, China*); *Beiyin Wang* (*Nanjing University of Aeronautics and Astronautics, China*);

85 A Broadband Terahertz Metamaterial Absorber Based on Square Ring Resonators
Guo-Dong Wang (*Huazhong University of Science and Technology, China*); *Jun-Feng Chen* (*Huazhong University of Science and Technology, China*); *Xiwei Hu* (*Huazhong University of Science and Technology, China*); *Minghai Liu* (*Huazhong University of Science and Technology, China*);

Session 2A1
Focus Session: Education for Electromagnetics

Tuesday AM, August 26, 2014

Room 1

Organized by Ari Sihvola

Chaired by Ari Sihvola

08:10 invited When 'Light' Dawns upon Them: Mapping the Conceptual Understanding of Electromagnetism Students
Stefan Yoshi Buhmann (*University of Freiburg, Germany*);

08:30 invited Electromagnetic Education: Is There a Magic Bullet to Fix the Crisis?
Raj Mittra (*The Pennsylvania State University, USA*);

08:50 keynote Flux-cutting and Electromotive Force: How to Motivate Students into Electrodynamics
Ari Sihvola (*Aalto University School of Electrical Engineering, Finland*);

09:20 invited Alignment of Student Activities, through Exercises, Quizzes, Demonstrations, and Lectures, Applied to Electromagnetic Teaching
B. Lars G. Jonsson (*KTH — Royal Institute of Technology, Sweden*);

09:40 invited Electrical Engineering Education Systems in Finnish and Chinese Universities
Jiaran Qi (*Harbin Institute of Technology, China*);

10:00 **Coffee Break**

10:20 keynote Using Popular Science Summaries to Improve Writing Skills in Master Theses
Daniel Sjoberg (*Lund University, Sweden*);

10:50 Practices and Explorations on Introducing New Scientific Research Achievements into Electromagnetics Teaching for Undergraduates
Jing Liu (*National University of Defense Technology, China*); *Jun Zhang* (*National University of Defense Technology, China*); *Hanwu Yang* (*National University of Defense Technology, China*);

11:05 Study of Fraunhofer Diffraction Pattern Using Frequency Image Processing
Jimmy Alexander Cortes Osorio (*Universidad Tecnológica de Pereira, Colombia*); *Jairo Alberto Mendoza Vargas* (*Universidad Tecnológica de Pereira, Colombia*);

Session 2A2
MS-2.2: Focus Session on Radio-over-Fiber Systems

Tuesday AM, August 26, 2014

Room 2

Organized by Kun Xu, Woo-Young Choi

Chaired by Kun Xu

08:00 invited High-speed Photo-detectors for Millimeter-wave RoF Applications
Toshimasa Umezawa (*National Institute of Information and Communications Technology, Japan*); *Atsushi Kanno* (*National Institute of Information and Communications Technology, Japan*); *Tetsuya Kawanishi* (*National Institute of Information and Communications Technology, Japan*);

08:20 invited The Convergence of Wireless and Radio-over-Fiber Systems
Wai Pang Ng (*Northumbria University, UK*);

08:40 invited In-home Fiber Wireless Networks Incorporating Optical Microwave Beam Steering: System Architecture and Integrated Device
Zizheng Cao (*Eindhoven University of Technology, The Netherlands*); *A. M. J. Koonen* (*Eindhoven University of Technology, The Netherlands*); *Y. Jiao* (*Eindhoven University of Technology, The Netherlands*); *Q. Wang* (*Eindhoven University of Technology, The Netherlands*); *Henrie P. A. Van den Boom* (*Eindhoven University of Technology, The Netherlands*); *E. Tangdiongga* (*Eindhoven University of Technology, The Netherlands*);

09:00 invited High Capacity Radio over Fiber System at the 75–110 GHz Band
Lei Deng (*Hua Zhong University of Science and Technology, China*); *Songnian Fu* (*Huazhong University of Science and Technology (HUST), China*); *Ming Tang* (*Huazhong University of Science and Technology (HUST), China*); *Deming Liu* (*Hua Zhong University of Science and Technology, China*); *Perry Ping Shum* (*Nanyang Technological University, Singapore*);

09:20 keynote Wireless Backhaul Challenge: Optical-wireless Network Integration as a Solution
Thas Ampalavanapillai Nirmalathas (*The University of Melbourne, Australia*); *Chathurika Ranaweera* (*The University of Melbourne, Australia*); *Yizhuo Yang* (*The University of Melbourne, Australia*); *Elaine Wong* (*The University of Melbourne, Australia*); *Christina Lim* (*The University of Melbourne, Australia*);

10:00 **Coffee Break**

10:20 invited All-optical Frequency Conversion Techniques for Radio-over-fiber Applications
Jong-In Song (*Gwangju Institute of Science and Technology (GIST), South Korea*);

10:40 invited Multi-dimensional Digital Predistortion for Multi-band Radio-over-fiber Systems
Jianqiang Li (*Beijing University of Posts and Telecommunications, China*); *Hao Chen* (*Beijing University of Posts and Telecommunications, China*); *Yinqing Pei* (*Beijing University of Posts and Telecommunications, China*); *Chunjing Yin* (*Beijing University of Posts and Telecommunications, China*); *Kun Xu* (*Beijing University of Posts and Telecommunications, China*);

11:00 keynote Fiber-wireless System Techniques for Next-Gen Multi-Gb/s Wireless Applications
Anthony Ng'oma (*Corning Incorporated, USA*); *Hejie Yang* (*Eindhoven University of Technology, The Netherlands*); *Po-Tsung (Boris) Shih* (*Corning Taiwan Research Center, Taiwan, R.O.C.*);

11:20 invited Photonic-assisted Ultrafast THz Wireless Access
Xianbin Yu (*Technical University of Denmark, Denmark*); *Ying Chen* (*Technical University of Denmark, Denmark*); *Michael Galili* (*Technical University of Denmark, Denmark*); *Toshio Morioka* (*Technical University of Denmark, Denmark*); *Peter Uhd Jepsen* (*Technical University of Denmark, Denmark*); *Leif K. Oxenowe* (*Technical University of Denmark, Denmark*);

Session 2A3
MS-1.5: Organic and Hybrid Solar Cells 1

Tuesday AM, August 26, 2014

Room 3

Organized by Wallace C. H. Choy, Hin-Lap Yip

Chaired by Wallace C. H. Choy

08:00 keynote Organic and Hybrid-perovskite Photovoltaic Cells with High Performance
Yang Yang (*University of California, USA*);

08:30 tutorial Light Harvesting and Charge Separation with Semiconductor Quantum Dots
Andrey L. Rogach (*City University of Hong Kong, China*);

09:00 invited Dynamic Donor: Acceptor and Electrode Interfaces in Organic Bulk-heterojunction and Perovskite Solar Cells under Device-operating Condition
Bin Hu (*Huazhong University of Science and Technology, China*);

09:20 invited Film Morphology Control for High Efficiency Perovskite Solar Cells
Liyuan Han (*National Institute for Materials Science, Japan*); *Xudong Yang* (*National Institute for Materials Science, Japan*); *Chuanjiang Qin* (*National Institute for Materials Science, Japan*); *Yongzhen Wu* (*National Institute for Materials Science, Japan*); *Jian Liu* (*National Institute for Materials Science, Japan*);

09:40 invited Nickel Oxide Electrode Interlayer in $CH_3NH_3PbI_3$ Perovskite/PCBM Planar-heterojunction Hybrid Solar Cells
Jun-Yuan Jeng (*National Cheng Kung University, Taiwan*); *Kuo-Cheng Chen* (*National Cheng Kung University, Taiwan*); *Tsung-Yu Chiang* (*National Cheng Kung University, Taiwan*); *Tzung-Fang Guo* (*National Cheng Kung University, Taiwan*); *Peter Chen* (*National Cheng Kung University, Taiwan*);

10:00 **Coffee Break**

10:20 invited Organic and Hybrid Photovoltaics Based on Conjugated Polymers and Organo-lead Halides
Chih-Ping Chen (*Ming Chi University of Technology, Taiwan*);

10:40 P-type Solar Cells Based on Organometal Halide Perovskites Sensitized Mesoporous NiO Photocathodes
Xianwei Zeng (*Huazhong University of Science and Technology, China*); *Wei Chen* (*Huazhong University of Science and Technology, China*);

11:00 invited High-performance Planar Heterojunction Perovskite Solar Cells: Preserving Long Charge Carrier Diffusion Lengths and Interfacial Engineering
Yizheng Jin (*University of Surrey, China*); *Baoquan Sun* (*Soochow University, China*);

11:20 invited Interface Engineering and Morphology Control for High Performance Perovskite/Fullerene Planar Heterojunction Solar Cells
Hin-Lap Yip (*South China University of Technology, China*); *Qifan Xue* (*South China University of Technology, China*); *Chen Sun* (*South China University of Technology, China*); *Zhicheng Hu* (*South China University of Technology, China*); *Fei Huang* (*South China University of Technology, China*); *Yong Cao* (*South China University of Technology (SCUT), China*);

11:40 Room-temperature Near-infrared/Wide-band Pervoskite Whispering-gallery Planar Nanolasers
Qing Zhang (*Nanyang Technological University, Singapore*); *Son Tung Ha* (*Nanyang Technological University, Singapore*); *Xinfeng Liu* (*Nanyang Technological University, Singapore*); *Tze Chien Sum* (*Nanyang Technological University, Singapore*); *Qihua Xiong* (*Nanyang Technological University, Singapore*);

12:00 invited Two-dimensional Conjugated Benzo[1,2-b:4,5-b′]dithiophene-based Photovoltaic Polymers
Jianhui Hou (*Institute of Chemistry, Chinese Academy of Sciences, China*);

Session 2A4
SC2: Plasmonic Nanophotonics 2 — Design, Modeling and Simulation

Tuesday AM, August 26, 2014

Room 4

Organized by Din Ping Tsai, Yung-Chiang Lan

Chaired by Yung-Chiang Lan, Pin Han

08:00 Effective Model for Plasmonic Coupling
Meng Qiu (*Fudan University, China*); *Bin Xi* (*Fudan University, China*); *Shiyi Xiao* (*Fudan University, China*); *Hao Xu* (*Fudan University, China*); *Lei Zhou* (*Fudan University, China*);

08:20 Plasmonic Nanoantennas as Coherent Perfect Absorbers on SOI Waveguides for Modulators and All-optical Switches
Roman Bruck (*University of Southampton, UK*); *Otto L. Muskens* (*University of Southampton, UK*);

08:40 Perfect Optical Imaging in the Quasi-static Regime
David J. Bergman (*Tel Aviv University, Israel*);

09:00 Second-order Surface Plasmon Enhanced Photoresponse in Ge Photodetectors with Bull's Eye Antennas
Fang-Fang Ren (*The Australian National University, Australia*); *Hai Lu* (*Nanjing University, China*); *Hark Hoe Tan* (*The Australian National University, Australia*); *Chennupati Jagadish* (*The Australian National University, Australia*);

09:20 New Optical Properties of Nanoapertures and Their Applications
Vasily V. Klimov (*Lebedev Physical Institute, Russian Academy of Sciences, Russia*);

09:40 Magnetic Toroidal Moment in Coupled Plasmonic Nanodisks and Their Properties
Qiang Zhang (*Harbin Institute of Technology, China*); *Sheng Lei Wang* (*Harbin Institute of Technology, China*); *Fei Fei Qin* (*Harbin Institute of Technology, China*); *Jun Jun Xiao* (*Harbin Institute of Technology, China*);

10:00 **Coffee Break**

10:20 Plasmonics: Evolution from Sensors to Nanowire Waveguides for Interconnect Applications
Lech Wosinski (*KTH Royal Institute of Technology, Sweden*); *Fei Lou* (*KTH Royal Institute of Technology, Sweden*); *Lars Thylen* (*KTH Royal Institute of Technology, Sweden*);

10:40 Universal Eigenvalue Analysis for 2D Periodic Plasmonic Nanostructures
Wei E. I. Sha (*The University of Hong Kong, China*); *Hui Wang* (*Anhui University, China*); *Wallace C. H. Choy* (*The University of Hong Kong, China*); *Weng Cho Chew* (*University of Illinois, USA*);

11:00 Near-field Surface Plasmon Effects on Au-double-slit Diffraction for Polychromatic Light
Pin Han (*National Chung Hsing University, Taiwan*);

11:20 A Lagrange RLC Circuit Model for Split-ring Resonators
Hsun-Chi Chan (*National Taiwan University, Taiwan*); *Guang-Yu Guo* (*National Taiwan University, Taiwan*);

11:40 Optical Multiple Bistability in Metal-insulator-metal Plasmonic Waveguides Side-coupled with Twin Resonators
Ruei-Cheng Shiu (*National Cheng Kung University, Taiwan, R.O.C.*); *Guang-Yu Guo* (*National Taiwan University, Taiwan*); *Yung-Chiang Lan* (*National Cheng Kung University, Taiwan, R.O.C.*);

Session 2A5
FocusSession.SC2: Transfromation Optics 1

Tuesday AM, August 26, 2014

Room 5

Organized by Hongsheng Chen, Hui Liu, Jensen Li

Chaired by Hongsheng Chen, Hui Liu

08:00 Broadband Collection and Concentration of Light: A
invited Transformation Optics Approach
Yu Luo (*Imperial College London, UK*); *John B. Pendry* (*Imperial College London, UK*);

08:20 Unusual Geometrical Optics and Geodesic Lenses
invited
Aaron J. Danner (*National University of Singapore, Singapore*); *Alireza Akbarzadeh* (*National University of Singapore, Singapore*); *H. L. Dao* (*National University of Singapore, Singapore*); *Tomas Tyc* (*Masaryk University, Czech Republic*);

08:40 Manipulating Electromagnetic Energy Flux via
invited Transformation Devices and Metasurfaces
Bo Hou (*Soochow University, China*);

09:00 Metamaterial Stacked Transformation Optics Lens for
invited Subwavelength Imaging
Lian Shen (*Zhejiang University, China*); *Hongsheng Chen* (*Zhejiang University, China*);

09:20 Artificial Riemann Sheets: When the Two Science
invited Work Meet
Lin Xu (*Soochow University, China*); *Huanyang Chen* (*Soochow University, China*);

09:40 Controlling Transformation Optics through Enhanced
invited Photon Thermal Effect
Hui Liu (*Nanjing University, China*);

10:00 **Coffee Break**

10:20 Phase Preservation in Transformation Optics. II
invited
Baile Zhang (*Nanyang Technological University, Singapore*); *Yuan Luo* (*National Taiwan University, Taiwan, R.O.C.*);

10:40 Electromagnetic Invisibility Cloaks Based on Inverse
invited Design Methodology
Su Xu (*Zhejiang University, China*); *Qinghui Yan* (*Zhejiang University, China*); *Xiangxiang Cheng* (*Zhejiang University, China*); *Yuyu Jiang* (*Zhejiang University, China*); *Baile Zhang* (*Nanyang Technological University, Singapore*); *Hongsheng Chen* (*Zhejiang University, China*);

11:00 Electromagnetic Wavefront Control Using Subwavelength Dielectric Particles (invited)
Zongqi Xiao (*Tsinghua University, China*); *Qian Zhao* (*Tsinghua University, China*); *Fuli Zhang* (*Northwestern Polytechnical University, China*); *Junming Ma* (*Tsinghua University, China*); *Ming Qiao* (*Tsinghua University, China*); *Yonggang Meng* (*Tsinghua University, China*); *Chuwen Lan* (*Tsinghua University, China*); *Bo Li* (*Tsinghua University, China*); *Ji Zhou* (*Tsinghua University, China*);

11:20 Control of Microwaves Using Metamaterials and Metasurfaces (keynote)
Tie Jun Cui (*Southeast University, China*);

Session 2A6
FocusSession.SC3&2: Disordered Photonics

Tuesday AM, August 26, 2014

Room 6

Organized by Pedro David Garcia

Chaired by Pedro David Garcia, Jacopo Bertolotti

08:00 Imaging through Scattering Media (invited)
Jacopo Bertolotti (*University of Exeter, England*); *E. G. Van Putten* (*Philips Research Laboratories, The Netherlands*); *C. Blum* (*University of Twente, The Netherlands*); *Ad Lagendijk* (*University of Twente, The Netherlands*); *Willem L. Vos* (*University of Twente, The Netherlands*); *Allard P. Mosk* (*University of Twente, The Netherlands*);

08:20 Guiding a Non-classical State of Light Propagating through a Multiply Scattering Medium (invited)
Hugo Defienne (*Institut Langevin, ESPCI ParisTech, France*); *Marco Barbieri* (*University of Oxford, United Kingdom*); *Benoit Chalopin* (*Université Paul Sabatier, France*); *Beatrice Chatel* (*Université Paul Sabatier, France*); *Ian Walmsley* (*University of Oxford, United Kingdom*); *Brian Smith* (*University of Oxford, United Kingdom*); *Sylvain Gigan* (*Institut Langevin, ESPCI ParisTech, France*);

08:40 Making Materials to Engineer Generation and Transport of Light (keynote)
Ceferino Lopez Fernandez (*Instituto de Ciencia de Materiales de Madrid (CSIC), Spain*);

09:10 Subradiant Out-of-plane Scattering in Strongly Confined 2D Disordered Modes
Filippo Pratesi (*University of Florence, Italy*); *Kevin Vynck* (*CNRS-IOGS-University Bordeaux, France*); *Matteo Burresi* (*University of Florence, Italy*); *Diederik S. Wiersma* (*University of Florence, Italy*);

09:25 Anderson Localization of Electromagnetic Waves in Randomly-stratified Metamaterials
Kihong Kim (*Ajou University, South Korea*);

09:40 Random Distributed Feedback Fiber Laser Employing Erbium-doped Fibers
Lulu Wang (*China Jiliang University, China*); *Xinyong Dong* (*China Jiliang University, China*);

10:00 **Coffee Break**

10:20 The Role of Disorder in Plasmonic Hole Arrays (invited)
Ajay Nahata (*University of Utah, USA*); *Z. Valy Vardeny* (*University of Utah, USA*);

10:40 Optical Materials by Design for Enhancing Light Harvesting in Dye Solar Cells (invited)
G. Lozano (*Spanish National Research Research, Spain*); *C. Lopez-Lopez* (*Spanish National Research Research, Spain*); *F. E. Galvez* (*Spanish National Research Research, Spain*); *S. Colodrero* (*Spanish National Research Research, Spain*); *A. Jimenez* (*Spanish National Research Research, Spain*); *M. E. Calvo* (*Spanish National Research Research, Spain*); *Hernan Miguez* (*Spanish National Research Research, Spain*);

11:00 Anderson Localization in Low-dimensional Structures to Enhance Light-matter Interaction (invited)
Peter Lodahl (*University of Copenhagen, Denmark*); *Pedro David Garcia* (*University of Copenhagen, Denmark*);

11:20 Light Propagation in 3D Deterministic Aperiodic Tilings
Georg Von Freymann (*University of Kaiserslautern, Germany*); *Michael Renner* (*The Fraunhofer Institute for Physical Measurement Techniques, Germany*);

11:35 Transmission Matrix Approach to Spatio-temporal Focusing of Light through Complex Media (invited)
Daria Andreoli (*Institut Langevin, ESPCI ParisTech, CNRS UMR 7587, France*); *Giorgio Volpe* (*Institut Langevin, ESPCI ParisTech, CNRS UMR 7587, France*); *Ori Katz* (*Institut Langevin, ESPCI ParisTech, France*); *Sebastien Popoff* (*Institut Langevin, ESPCI ParisTech, CNRS UMR 7587, France*); *Samuel Gresillon* (*Institut Langevin, ESPCI ParisTech, CNRS UMR 7587, France*); *Sylvain Gigan* (*Institut Langevin, ESPCI ParisTech, France*);

11:55 Random Laser with Er/Yb-codoped Fiber Grating
Lulu Wang (*China Jiliang University, China*); *Xinyong Dong* (*China Jiliang University, China*);

Session 2A7
SC3: Optical Resonances and Microresonators

Tuesday AM, August 26, 2014

Room 7

Organized by Andrew Wing On Poon, Ali Serpenguzel

Chaired by Andrew Wing On Poon

08:00 invited Influence of External Optical Injection on Small-signal Modulation Response for AlGaInAs/InP Microring Lasers
Yong-Zhen Huang (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Xiao Meng Lv* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Ling-Xiu Zou* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Bo-Wen Liu* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Yue-De Yang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Heng Long* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Jin-Long Xiao* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Yun Du* (*Institute of Semiconductors, Chinese Academy of Sciences, China*);

08:20 invited The Application of Optical Resonators in Biosensing
Qimin Quan (*Rowland Institute at Harvard University, USA*);

08:40 High-performance Microcavity Optical Sensor Connected with a Waveguide
Shuai Liu (*Harbin Institute of Technology, China*); *Zhiyuan Gu* (*Harbin Institute of Technology, China*); *Nan Zhang* (*Harbin Institute of Technology, China*); *Shumin Xiao* (*Harbin Institute of Technology, China*); *Qinghai Song* (*Harbin Institute of Technology, China*);

09:00 Compact Multi-channel Cascaded-ring Optical Sensor with High Sensitivity
Mao Mao (*Zhejiang University, China*); *Sitao Chen* (*Zhejiang University, China*); *Daoxin Dai* (*Zhejiang University, China*);

09:20 invited Coherent Phase Control in Microresonators and Its Application in Optical Signal Processing
Linjie Zhou (*Shanghai Jiao Tong University, China*); *Liangjun Lu* (*Shanghai Jiao Tong University, China*); *Jingya Xie* (*Shanghai Jiao Tong University, China*); *Jianping Chen* (*Shanghai Jiao Tong University, China*);

09:40 invited Silicon Based Optical Matrix Processor for Parallel Computing
Lin Yang (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Jianfeng Ding* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Lei Zhang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Ruiqiang Ji* (*Institute of Semiconductors, Chinese Academy of Sciences, China*);

10:00 **Coffee Break**

10:20 invited Random Lasing by Chosen Resonances in Disordered Microcavities
Ceferino Lopez Fernandez (*Instituto de Ciencia de Materiales de Madrid (CSIC), Spain*);

10:40 invited Making Microwave Radiation Visible: Phase-matching in Non-linear Crystalline Whispering Gallery Mode Resonators
Harald G. L. Schwefel (*Max Planck Institute for the Science of Light, Germany*);

11:00 Demonstration of a 3-bit Digital-to-analog Convertor Based on Silicon Microring Resonators
Jianfeng Ding (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Fanfan Zhang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Qiaoshan Chen* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Lin Yang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*);

11:20 Laser from Localized Modes on a Conical Surface
Xing Lin (*Zhejiang University, China*); *Yuan Niu* (*Zhejiang University, China*); *Yingxin Xu* (*Zhejiang University, China*); *Wei Fang* (*Zhejiang University, China*);

11:40 Thermally-tuned Silicon Double Ring Resonator for External Cavity Tunable Laser
Lei Ding (*Zhejiang University, China*); *Xianxin Jiang* (*Zhejiang University, China*); *Chang Yang* (*Zhejiang University, China*); *Jian-Jun He* (*Zhejiang University, China*);

Session 2A8
SC2&1: Effective Medium Theories and Homogenization

Tuesday AM, August 26, 2014

Room 8

Organized by Ying Wu

Chaired by Jun Mei, Yun Lai

08:00 From Acoustic Metamaterials to Functional Metasurfaces
Nicholas X. Fang (*Massachusetts Institute of Technology, USA*);

08:20 Generalized Effective Medium Theory for Metamaterials Beyond the Long-wavelength Limit
Baocheng Zhu (*Fudan University, China*); *Shiwei Tang* (*Fudan University, China*); *Shiyi Xiao* (*Fudan University, China*); *Lei Zhou* (*Fudan University, China*);

08:40 Angle Dependent Effective Medium Theory for 2D Photonic Crystals
Meng Xiao (*The Hong Kong University of Science and Technology, China*); *Xueqin Huang* (*The Hong Kong University of Science and Technology, China*); *Anan Fang* (*The Hong Kong University of Science and Technology, China*); *Che Ting Chan* (*The Hong Kong University of Science and Technology, China*);

09:00 Nonlocal Effective Medium Model for Periodic Layered Metamaterials
Ruey-Lin Chern (*National Taiwan University, Taiwan, R.O.C.*);

09:20 A Homogenization Scheme for Acoustic Metamaterial
Min Yang (*Hong Kong University of Science and Technology, China*); *Guancong Ma* (*Hong Kong University of Science and Technology, China*); *Ying Wu* (*King Abdullah University of Science and Technology (KAUST), Saudi Arabia*); *Zhiyu Yang* (*Hong Kong University of Science and Technology, China*); *Ping Sheng* (*Hong Kong University of Science and Technology, China*);

09:40 1D Photonic Crystals as Nonlocal Photonic Media
Zhong Qi Yao (*Soochow University, China*); *Jie Luo* (*Soochow University, China*); *Yun Lai* (*Soochow University, China*);

10:00 **Coffee Break**

10:20 Topological Photonic Band Engineering of Zero-refractive-index Materials
Zhi Hong Hang (*Soochow University, China*); *Y. T. Yang* (*Soochow University, China*); *S. S. Wang* (*Soochow University, China*);

10:40 Retrieving Effective Constitutive Parameters for Bulk Magnetic Metamaterials and Surface Charged Dielectric Nanoparticles
Shiyang Liu (*Zhejiang Normal University, China*); *Neng Wang* (*Fudan University, China*); *Zhifang Lin* (*Fudan University, China*); *Siu-Tat Chui* (*University of Delaware, USA*);

11:00 Double Dirac Cones in Phononic Crystals and Zero Refractive Index Material
Jun Mei (*South China University of Technology, China*); *Yan Li* (*South China University of Technology, China*);

11:20 Homogenizations of Micropolar Elastic Metamaterial Using Field Averaging
Chung-Ning Weng (*National Cheng Kung University, Taiwan*); *Tungyang Chen* (*National Cheng Kung University, Taiwan*);

11:40 Homogenization Model of Aligned Spheres in a Host Sphere
Fabio Mangini (*"La Sapienza" University of Rome, Italy*); *Fabrizio Frezza* (*"La Sapienza" University of Rome, Italy*); *Ari Sihvola* (*Aalto University School of Electrical Engineering, Finland*);

12:00 Dynamic Effective Medium Theory for Anisotropic Photonic Crystals
Xiujuan Zhang (*King Abdullah University of Science and Technology, Saudi Arabia*); *Ying Wu* (*King Abdullah University of Science and Technology, Saudi Arabia*);

Session 2A9
SC3: Optical Fiber Sensing Devices

Tuesday AM, August 26, 2014

Room 9

Organized by Yiping Wang, Tao Zhu

Chaired by Yiping Wang, Changrui Liao

08:00 Micro/Nano Fiber-based Photonic Devices and Sensors
Wei Jin (*The Hong Kong Polytechnic University, China*); *Wa Jin* (*The Hong Kong Polytechnic University, China*); *Chao Wang* (*The Hong Kong Polytechnic University, China*); *Hoi Lut Ho* (*The Hong Kong Polytechnic University, China*);

08:20 Polarimetric Heterodyning Fiber Grating Laser Magnetic Field Sensors
Bai-Ou Guan (*Jinan University, China*); *Linghao Cheng* (*Jinan University, China*); *Long Jin* (*Jinan University, China*);

08:40 Femtosecond-laser-micromachined Optical Fiber Inline Interferometers
Changrui Liao (*Shenzhen University, China*); *Lei Xu* (*The Hong Kong Polytechnic University, China*); *Yiping Wang* (*Shenzhen University, China*); *D. N. Wang* (*The Hong Kong Polytechnic University, China*); *Shen Liu* (*Shenzhen University, China*); *Zhengyong Li* (*Shenzhen University, China*); *Xiaoyong Zhong* (*Shenzhen University, China*); *Jiangtao Zhou* (*Shenzhen University, China*); *Qiao Wang* (*Shenzhen University, China*); *Kaiming Yang* (*Shenzhen University, China*);

09:00 Highly Hygroscopic Polymer Microcavity Fiber Fizeau Interferometer for Humidity Sensing
Yan-Wun You (*National United University, Taiwan, R.O.C.*); *Jia-Heng Dai* (*National United University, Taiwan, R.O.C.*); *Cheng-Ling Lee* (*National United University, Taiwan*);

09:20 Side-polished Fiber Sensing for Determination of Nematic Liquid Crystal Orientation
Yuqi Han (*Jinan University, China*); *Zhe Chen* (*Jinan University, China*); *Jianhui Yu* (*Jinan University, China*); *Haozhi Li* (*Jinan University, China*); *Xiaoli He* (*Jinan University, China*); *Jun Zhang* (*Jinan University, China*); *Yunhan Luo* (*Jinan University, China*); *Huihui Lu* (*Jinan University, China*); *Jieyuan Tang* (*Jinan University, China*);

09:40 Magnetic Field Sensing with Up-taper Fiber-optic Structure
Shengli Pu (*University of Shanghai for Science and Technology, China*); *Shaohua Dong* (*University of Shanghai for Science and Technology, China*);

10:00 **Coffee Break**

10:20 High Sensitivity Micro Fabry-Perot Interferometer with Encapsulated Optical Liquid
Yu-Cheng Li (*National United University, Taiwan*); *Tsai-Chia Lung* (*National United University, Taiwan*); *Nan-Kuang Chen* (*National United University, Taiwan*);

10:40 Optical Fiber Flowmeter Using Silver-coated FBG Cascaded by Waist-enlarged Bitaper
Xinhuai Wang (*China Jiliang University, China*); *Xinyong Dong* (*China Jiliang University, China*); *Yan Zhou* (*China Jiliang University, China*);

11:00 Compact Tunable Multibandpass Filters Based on Liquid-filled Photonic Crystal Fibers
Yingjie Liu (*Shenzhen University, China*); *Yiping Wang* (*Shenzhen University, China*); *Bing Sun* (*Shenzhen University, China*); *Changrui Liao* (*Shenzhen University, China*);

11:20 Reflective Optical Fiber Refractometer Based on Fiber Bragg Grating in Thin-core Fiber
Yebin Zhang (*Zhejiang University, China*); *Chenliang Wang* (*Zhejiang University, China*); *Bin Zhou* (*South China Normal University, China*); *Sailing He* (*Zhejiang University, China*);

11:40 Micro-tapered Fiber Mach-Zehnder Interferometers for Picoliter Index Sensing
Shu-Wei Chuang (*National United University, Taiwan*); *Jian-Wei Zheng* (*National United University, Taiwan*); *Wen-Chuan Lin* (*National United University, Taiwan*); *Nan-Kuang Chen* (*National United University, Taiwan*);

12:00 Temperature-insensitive Refractive Index Sensor Based on In-fiber Michelson Interferometer
Zhengyong Li (*Shenzhen University, China*); *Yiping Wang* (*Shenzhen University, China*); *Changrui Liao* (*Shenzhen University, China*);

Session 2A_10
SC3: Advances in Optical Networking: Parts 2

Tuesday AM, August 26, 2014

Room 10

Organized by Jiajia Chen, David Payne, Lena Wosinska

Chaired by Jiajia Chen, Lena Wosinska

08:10 Optical Performance Monitoring for Flexible Optical Networks (keynote)
Calvin Chun-Kit Chan (*The Chinese University of Hong Kong, China*);

08:40 An Efficient Regenerator and Wavelength Assignment Approach for $\mathbf{1+1:1}$ and $\mathbf{1:1:1}$ Protected Lightpath Services
Gangxiang Shen (*Soochow University, China*); *Chuanjun Wu* (*Huawei Technologies, China*); *Jixiong Dong* (*Huawei Technologies, China*);

09:00 Dark Fiber Monitoring System for Ring-and-Spur Long-Reach Passive Optical Networks
Min Cen (*Université de Mons, Service d'Electromagnétisme et de Télécommunications, Belgium*); *Jiajia Chen* (*KTH Royal Institute of Technology, Sweden*); *Patrice Mégret* (*Université de Mons, Service d'Electromagnétisme et de Télécommunications, Belgium*); *Véronique Moeyaert* (*Université de Mons, Service d'Electromagnétisme et de Télécommunications, Belgium*); *Marc Wuilpart* (*Université de Mons, Service d'Electromagnétisme et de Télécommunications, Belgium*);

09:20 Capacity Constraints for Phase Noise Influenced Coherent Optical DnPSK Systems
invited
Gunnar Jacobsen (*Acreo Swedish ICT, Sweden*); *Sergei Popov* (*Royal Institute of Technology (KTH), Sweden*); *Tianhua Xu* (*KTH Royal Institute of Technology, Sweden*); *Sergey Sergeyev* (*Aston University, UK*);

09:40 Secure Optical Communication System with Orthogonal CSK/DPSK Modulation Scheme
invited
Bo Dai (*Heriot-Watt University, UK*); *Zhensen Gao* (*Alcatel-Lucent Shanghai Bell, China*); *Naoya Wada* (*National Institute of Information and Communications Technology (NICT), Japan*); *Xu Wang* (*Heriot-Watt University, UK*);

10:00 **Coffee Break**

10:20 New Development in Critical Components for 40 Gbit/s Long-reach Passive Optical Networks
invited
Xin Yin (*Ghent University, Belgium*); *Xing-Zhi Qiu* (*Ghent University, Belgium*); *Guy Torfs* (*Ghent University, Belgium*); *Romain Brenot* (*III-V Lab, France*); *Fabrice Blache* (*III-V Lab, France*); *Mohand Achouche* (*III-V Lab, France*); *Johan Bauwelinck* (*Ghent University, Belgium*);

10:40 Towards a Framework for Small-cell Network Planning
invited
Elaine Wong (*The University of Melbourne, Australia*); *Ishita Akhtar* (*The University of Melbourne, Australia*); *Sandu Abeywickrama* (*The University of Melbourne, Australia*); *Chathurika Ranaweera* (*The University of Melbourne, Australia*); *Christina Lim* (*The University of Melbourne, Australia*); *Ampalavanapillai Nirmalathas* (*The University of Melbourne, Australia*);

11:00 Availability Analysis for Elastic Optical Networks with Multi-path Virtual Concatenation Technique
Xiaoling Wang (*Soochow University, China*); *Limei Peng* (*Ajou University, South Korea*); *Gangxiang Shen* (*Soochow University, China*);

11:20 Optimal Time-dependent Spectrum Sharing between Neighboring Channels in Elastic Optical Networks
Xiaowei Zhao (*Soochow University, China*); *Gangxiang Shen* (*Soochow University, China*); *Sanjay K. Bose* (*Indian Institute of Technology, India*);

Session 2A_11a
SC4: Recent Advances in Magneto-impedance Sensors

Tuesday AM, August 26, 2014

Room 11

Organized by Tsuyoshi Uchiyama

Chaired by Tsuyoshi Uchiyama

08:00 Development of Low Noise MI Sensor and Its Applications
Norihiko Hamada (*Aichi Steel Corporation, Japan*); *A. Shimode* (*Aichi Steel Corporation, Japan*); *C. M. Cai* (*Aichi Steel Corporation, Japan*); *M. Yamamoto* (*Aichi Steel Corporation, Japan*);

08:20 Test-production of High Sensitivity Multi-core MI Element and Its Characteristics
Norihiko Hamada (*Aichi Steel Corporation, Japan*); *A. Shimode* (*Aichi Steel Corporation, Japan*); *S. Tatematsu* (*Aichi Steel Corporation, Japan*); *M. Yamamoto* (*Aichi Steel Corporation, Japan*);

08:40 Arousal Effect of ELF Magnetic Stimulus on Car Driver's Spine Evaluated with Occipital Electroencephalogram and Back Magneto-cardiogram
Yoshiyuki Mohri (*Meijo University, Japan*); *Muneo Yamada* (*Meijo University, Japan*); *Wataru Kato* (*Meijo University, Japan*); *Tsuyoshi Uchiyama* (*Nagoya University, Japan*); *Kaneo Mohri* (*Nagoya Industrial Science Research Institute (NISRI), Japan*);

09:00 Detection of Back Magneto-cardiogram for Heart Disease Using Pico-Tesla Resolution Amorphous Wire Magneto-Impedance Sensor
Yoshiyuki Mohri (*Meijo University, Japan*); *Tsuyoshi Uchiyama* (*Nagoya University, Japan*); *Muneo Yamada* (*Meijo University, Japan*); *Kaneo Mohri* (*Nagoya Industrial Science Research Institute (NISRI), Japan*);

09:20 Biomagnetic Field Detection of Cellular Organizations Using Improved Gradio-type MI Magneto Sensor
Shinsuke Nakayama (*Nagoya University, Japan*); *Satoshi Atsuta* (*Fujidenolo Corporation, Japan*); *Tsuyoshi Uchiyama* (*Nagoya University, Japan*);

09:40 Promotion Rate Index in ELF Magneto-protonics
Kaneo Mohri (*Nagoya Industrial Science Research Institute (NISRI), Japan*); *Masanori Fukushima* (*Translational Research Informatics Center, Japan*); *Yoshiyuki Mohri* (*MI Institute, Japan*); *Yuko Mohri* (*MI Institute, Japan*);

10:00 **Coffee Break**

Session 2A_11b
SC4: Advanced Magnetic Materials for Microwave Applications

Tuesday AM, August 26, 2014

Room 11

Organized by Chong Kim Ong, Yungui Ma

Chaired by Chong Kim Ong, Yungui Ma

10:20 Rotatable Anisotropy in Magnetic Thin Films
Guozhi Chai (*Lanzhou University, China*); *Nguyen Nguyen Phuoc* (*National University of Singapore, Singapore*); *Chong Kim Ong* (*National University of Singapore, Singapore*);

10:40 Double Resonance Peaks of FeCo Thin Films with NiFe Underlayer
Xiaoxi Zhong (*National University of Singapore, Singapore*); *Wee Tee Soh* (*National University of Singapore, Singapore*); *Nguyen Nguyen Phuoc* (*National University of Singapore, Singapore*); *Chong Kim Ong* (*National University of Singapore, Singapore*);

11:00 Application of Electromagnetic Waves in Softmaterials
Shengyong Xu (*Peking University, China*);

11:20 Tunable In-plane Uniaxial Magnetic Anisotropy of Nanocrystalline Fe-N Thin Films for High Frequency Application
Xiaoyu Li (*Lanzhou University, China*); *Jianbo Wang* (*Lanzhou University, China*); *Qingfang Liu* (*Lanzhou University, China*);

11:40 Microwave Tunable Ferromagnetic Microwires-filled Polymer under External Stimuli
Faxiang Qin (*National Institute for Materials Science, Japan*); *J. Tang* (*National Institute for Materials Science, Japan*); *Hua-Xin Peng* (*University of Bristol, UK*); *Christian Brosseau* (*Université de Bretagne Occidentale, France*);

12:00 Monte-Carlo Simulation of Magnetic Domain Structures in Nanomagnets
Xingsen Gao (*South China Normal University, China*); *Jipei Chen* (*South China Normal University, China*); *Guo Tian* (*South China Normal University, China*); *Xiao Song* (*South China Normal University, China*); *Junming Liu* (*Nanjing, China*);

Session 2A_12
SC4: Array Antenna for Wireless Communication

Tuesday AM, August 26, 2014

Room 12

Organized by Dau-Chyrh Chang, Wenhua Yu

Chaired by Dau-Chyrh Chang, Lei Zhao

08:20 Dual-band A-sandwich Radome Design for Airborne Applications
Licheng Zhou (*Peking University, China*); *Yongmao Pei* (*Peking University, China*); *Daining Fang* (*Peking University, China*);

08:40 Nonuniform Phase Reversal Antennas with Double-side near Field Focusing Beams
Zi Long Ma (*The University of Hong Kong, China*); *Li Jun Jiang* (*The University of Hong Kong, China*); *S. Gupta* (*The University of Hong Kong, China*);

09:00 A Dual Band Center-fed Sleeve Dipole Array for IEEE 802.11a/b Application
Dau-Chyrh Chang (*Oriental Institute of Technology, Taiwan, R.O.C.*); *Yi-Ci Su* (*Oriental Institute of Technology, Taiwan*); *Chih-Hung Lee* (*Yuan Ze University, Taiwan*);

09:20 Patch Antenna Array for IEEE 802.11a/n MIMO Application
Dau-Chyrh Chang (*Oriental Institute of Technology, Taiwan, R.O.C.*); *Ming-Ching Yen* (*Oriental Institute of Technology, Taiwan, R.O.C.*); *Chih-Hung Lee* (*Yuan Ze University, Taiwan*); *Yau-Jyun Tsai* (*Oriental Institute of Technology, Taiwan, R.O.C.*);

09:40 Rectangular DRA Reflectarray with an Inclined Top-loading Micostrip Patch
Eng Hock Lim (*Universiti Tunku Abdul Rahman, Malaysia*); *Hong Yik Wong* (*Universiti Tunku Abdul Rahman, Malaysia*); *Fook-Loong Lo* (*Universiti Tunku Abdul Rahman, Malaysia*);

10:00 **Coffee Break**

10:20 Decoupled Hepta-band MIMO Antenna with a Neutralization Line for Smartphone Applications
Zhong-Xiang Chen (*University of Electronic Science and Technology of China, China*); *Yong-Ling Ban* (*University of Electronic Science and Technology of China, China*);

10:40 Transmission Line Type Circularly Polarized Series Patch Array for UHF RFID Applications
Menglin Chen (*The University of Hong Kong, China*); *Li Jun Jiang* (*The University of Hong Kong, China*); *J. Xi* (*Hong Kong LSCM, China*); *Terry Ye* (*Hong Kong LSCM, China*);

11:00 A Compact Triple-band MIMO Antenna for Wimax/WLAN Application
Hui-Fen Huang (*South China University of Technology, China*); *Yuanhua Hu* (*South China University of Technology, China*); *Wei Zhao* (*South China University of Technology, China*);

Session 2A_13
SC4: Wireless Power Transfer

Tuesday AM, August 26, 2014

Room 13

Organized by Qiaowei Yuan, Elisenda Bou Balust

Chaired by Qiaowei Yuan, Elisenda Bou Balust

08:00 invited Power Transfer ***k*-*Q*** Product Explored for a Variety of Two-port LCR Circuit Topologies
Naoki Sakai (*Toyohashi University of Technology, Japan*); *Takashi Ohira* (*Toyohashi University of Technology, Japan*);

08:20 Three-phase Symmetrical Inductive Coupled Structure for Wireless EV Charging System
Jia-You Lee (*National Cheng Kung University, Taiwan, R.O.C.*); *Hung-Yu Shen* (*National Cheng Kung University, Taiwan*); *Shan-Jen Chao* (*Lite-On Technology Corporation, Taiwan, R.O.C.*);

08:40 On Frequency Optimization of Assymetric Resonant Inductive Coupling Wireless Power Transfer Links
Nuria Egidos (*UPC BarcelonaTech, Spain*); *Elisenda Bou Balust* (*UPC BarcelonaTech, Spain*); *Raymond J. Sedwick* (*University of Maryland, USA*); *Eduard Alarcon* (*UPC BarcelonaTech, Spain*);

09:00 Input and Output Impedance Matching Conditions and Maximum RF-to-DC Rectification Efficiency in Wireless Power Transfer System
Qiaowei Yuan (*Sendai National College of Technology, Japan*); *Shinji Abe* (*Sendai National College of Technology, Japan*); *Satoshi Suzuki* (*Sendai National College of Technology, Japan*); *Takashi Ohira* (*Toyohashi University of Technology, Japan*);

09:20 invited Development of Gallium Nitride Schottky Barrier Diode for Microwave Rectification
Jin-Ping Ao (*The University of Tokushima, Japan*);

09:40 Design and Implementation of Wireless RF Power Transfer Circuit for Implantable Neurostimulator
Jia-You Lee (*National Cheng Kung University, Taiwan, R.O.C.*); *Hung-Yu Shen* (*National Cheng Kung University, Taiwan*); *Che-Li Lin* (*TSMC Ltd., Taiwan, R.O.C.*);

10:00 **Coffee Break**

10:20 Wireless Power Supply for ICP Devices with Hybrid Supercapacitor and Battery Storage
Aiguo Patrick Hu (*University of Auckland, New Zealand*); *Fu-Yu Beverly Chen* (*University of Auckland, New Zealand*); *Yee Wen You* (*University of Auckland, New Zealand*); *Daniel McCormick* (*University of Auckland, New Zealand*); *David M. Budgett* (*University of Auckland, New Zealand*);

10:40 On-chip CMOS RF Energy Harvesting System Using Parasitic Capacitance Compensation Technique
Junsik Park (*Chonbuk National University, Republic of Korea*); *Jaeyeon Kim* (*Chonbuk National University, Republic of Korea*); *Namsik Ryu* (*Electronics and Telecommunications Research Institute, Republic of Korea*); *Sutae Kim* (*Samsung Electronics, Republic of Korea*); *Yongchae Jeong* (*Chonbuk National University, Republic of Korea*);

11:00 Graphical Interactivity in Power Device and Circuit ***S***-parameter Measurement Exploiting Möbius Transformation
Kyohei Yamada (*Toyohashi University of Technology, Japan*); *Sonshu Sakihara* (*Toyohashi University of Technology, Japan*); *Takashi Ohira* (*Toyohashi University of Technology, Japan*);

Session 2A_14
SC5: Remote Sensing

Tuesday AM, August 26, 2014

Room 14

Organized by Jian-Cheng Shi

Chaired by Jian-Cheng Shi

08:00 Removal of Synthetic Aperture Effect in Stepped Frequency Radar
Yake Li (*Memorial University of Newfoundland, Canada*); *Siu O'Young* (*Memorial University of Newfoundland, Canada*);

08:20 Refinement of the X and Ku Band Dual-polarization Scatterometer Snow Water Equivalent Retrieval Algorithm
Jian-Cheng Shi (*Institute of Remote Sensing Applications, Chinese Academy of Sciences, China*); *Chuan Xiong* (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, China*);

08:40 A Soil Moisture Downscaling Algorithm for the SMAP Mission
Jian-Cheng Shi (*Institute of Remote Sensing Applications, Chinese Academy of Sciences, China*); *Peng Guo* (*State Key Laboratory of Remote Sensing Science, Jointly Sponsored by Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, China*); *Tianjie Zhao* (*State Key Laboratory of Remote Sensing Science, Jointly Sponsored by Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, China*); *Jinyang Du* (*State Key Laboratory of Remote Sensing Science, Jointly Sponsored by Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, China*);

09:00 Application of Backscattering Models in Active-passive Microwave Remote Sensing of Ocean Salinity
Jie Zhu (*Center for Space Science and Applied Research, CAS, China*); *Xiangkun Zhang* (*National Space Science Center, Chinese Academy of Sciences, China*); *H. Liu* (*Center for Space Science and Applied Research, CAS, China*); *Y. J. Cai* (*University of Chinese Academy of Science, China*);

09:20 Coherent and Multiple Scattering in Radar Scattering of Vegetated Surfaces at L band for SMAP Applications
Huanting Huang (*University of Washington, USA*); *Shurun Tan* (*University of Washington, USA*); *Leung Tsang* (*University of Washington, USA*); *Xiaolan Xu* (*California Institute of Technology, USA*); *Seung-Bum Kim* (*California Institute of Technology, USA*); *Simon H. Yueh* (*California Institute of Technology, USA*);

09:40 Development of a Radiative Transfer Model for the Soil Media with Including Vertical Profile Effects and Its Application in AMSR2
Hui Lu (*Tsinghua University, China*); *Toshio Koike* (*The University of Tokyo, Japan*); *Ziwei Xu* (*Beijing Normal University, China*);

10:00 **Coffee Break**

10:20 Active and Passive Remote Sensing of Bare Soil from L-band to Ku-band Using NMM3D
T. H. Liao (*University of Washington, USA*); *Leung Tsang* (*University of Washington, USA*); *S. Tanelli* (*California Institute of Technology, USA*); *N. Niamsuwan* (*California Institute of Technology, USA*); *S. Jaruwatanadilok* (*California Institute of Technology, USA*);

10:40 Polarimetric Properties of Randomly Rough Surfaces at L-band Using Numerical 3D Solutions of Maxwell Equations
Kuan-Liang Chen (*National Central University, Taiwan*); *Kun-Shan Chen* (*National Central University, Taiwan*); *Leung Tsang* (*University of Washington, USA*); *Tien-Hao Liao* (*University of Washington, USA*);

Session 2A_15a
Oral Presentations for Best Student Paper Awards — SC3: Optics and Photonics

Tuesday AM, August 26, 2014
Room 15

08:00 Guided-mode Resonance Enhanced Near-infrared-to-visible Upconversion Fluorescence in a Resonant Waveguide Grating
Hao Yu Liou (*National Chung Cheng University, Taiwan*); *Jian-Hung Lin* (*National Chung Cheng University, Taiwan*); *Zhen-Dao Wang* (*National Chung Cheng University, Taiwan*); *Chun-Yen Tseng* (*National Cheng Kung University, Taiwan*); *Ching-Ting Lee* (*National Cheng Kung University, Taiwan*); *Chu-Chi Ting* (*National Chung Cheng University, Taiwan*); *Hung-Chih Kan* (*National Chung Cheng University, Taiwan*); *Chia Chen Hsu* (*National Chung Cheng University, Taiwan, R.O.C.*);

08:20 Novel Tunable Multi-passband Microwave Photonic Filters Based on Fiber Mach-Zehnder Interferometer and Fiber Delay Lines
Hao Chen (*Xiamen University, China*); *Zuowei Xu* (*Xiamen University, China*); *Hongyan Fu* (*Xiamen University, China*); *Dan Zhang* (*Xiamen University, China*);

08:40 Sub-5 nm Lanthanide Doped ZrO_2 Upconversion Nanoparticle for Protein Targeted Biomaging
Jing Liu (*South China Normal University, China*); *Qiu Qiang Zhan* (*South China Normal University, China*);

09:00 New Scaling of Electron Thermionic Emission from Single-layer Graphene
Shi-Jun Liang (*Singapore University of Technology and Design, Singapore*); *Ricky L. K. Ang* (*Singapore University of Technology and Design, Singapore*); *Gang Chen* (*Massachusetts Institute of Technology, USA*);

09:20 1 Gbps Directed Optical Decoder Based on Two Cascaded Microring Resonators
Qiaoshan Chen (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Fanfan Zhang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Lei Zhang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Yonghui Tian* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Ping Zhou* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Jianfeng Ding* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Lin Yang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*);

09:40 All-optical Wavelength Conversion Using Optical Injection Induced Wavelength Switching in V-cavity Laser
Yingchen Wu (*Zhejiang University, China*); *Xiaohai Xiong* (*Zhejiang University, China*); *Yu Zhu* (*Zhejiang University, China*); *Jianjun Meng* (*Zhejiang University, China*); *Jian-Jun He* (*Zhejiang University, China*);

10:00 **Coffee Break**

10:20 Ultracompact Adiabatic Tapered Coupler for the Si/III-V Heterogeneous Integration
Qiangsheng Huang (*Zhejiang University, China*); *Jianxin Cheng* (*South China Normal University, China*); *Liu Liu* (*South China Normal University, China*); *Yongbo Tang* (*ArtIC Photonics, Inc., Canada*); *Sailing He* (*Zhejiang University, China*);

Session 2A_15b
Oral Presentations for Best Student Paper Awards — SC2: Metamaterials, Plasmonics and Complex Media

Tuesday AM, August 26, 2014

Room 15

10:40 Tunable Rejections of Metamaterial Filter Based on Spoof Surface Plasmon Polaritons
Bai Cao Pan (*Southeast University, China*); *Tie Jun Cui* (*Southeast University, China*);

11:00 A Planar Broadband Metamaterial Absorber with the Polarization Insensitive and Omnidirectional Absorption in the Min-infrared Regime
Nan Zhang (*University of Electronic Science and Technology of China, China*); *Linbo Zhang* (*University of Electronic Science and Technology of China, China*); *Guorui Zhang* (*University of Electronic Since and Technology of China, China*); *Pei-Heng Zhou* (*University of Electronic Since and Technology of China, China*); *Xiao Long Weng* (*University of Electronic Science and Technology of China, China*); *Jianliang Xie* (*University of Electronic Science and Technology of China, China*); *Long-Jiang Deng* (*University of Electronic Science and Technology of China, China*);

11:20 Efficient Generation of Second Harmonic from a Kind of Nonlinear Magnetic Metamaterial Composite
Shang Sun (*Harbin Institute of Technology, China*); *Shumin Xiao* (*Harbin Institute of Technology, China*);

11:40 Design and Fabrication of Acoustic Rotator Based on Extremely-anisotropic Metamaterials
Xue Jiang (*Nanjing University, China*); *Bin Liang* (*Nanjing University, China*); *Jian-Chun Cheng* (*Nanjing University, China*);

Session 2A0
Poster Session 2

Tuesday AM, August 26, 2014

9:00 AM - 12:00 AM

Room FOYER

1 Multi-band Microwave Metamaterial Perfect Absorber Based on Mie Resonance Theory
Jun-Feng Chen (*Huazhong University of Science and Technology, China*); *Guo-Dong Wang* (*Huazhong University of Science and Technology, China*); *Zhao-Quan Chen* (*Anhui University of Science and Technology, China*); *Minghai Liu* (*Huazhong University of Science and Technology, China*); *Xiwei Hu* (*Huazhong University of Science and Technology, China*);

2 A Compact Plasmonic 4-way Wavelength Splitter for Planar Circuits
Yong Jin Zhou (*Shanghai University, China*); *Bao Jia Yang* (*Shanghai University, China*);

3 All-optical Diode Based on a Nonsymmetrical Coupled System of Microcavity Mode and Tamm States
Jian-Xia Hu (*Jiangsu University, China*); *Yun-Tuan Fang* (*Jiangsu University, China*);

4 The Influence of Air-hole Filling Fraction of Photonics Crystal Fibers on Stimulated Brillouin Scattering Slow Light
Shang-Lin Hou (*Lanzhou University of Technology, China*); *Ji Sun* (*Lanzhou University of Technology, China*); *Weiqing Ge* (*Lanzhou University of Technology, China*); *Yan-Jun Liu* (*Lanzhou University of Technology, China*); *Jingli Lei* (*Lanzhou University of Technology, China*); *Xiaoxiao Li* (*Lanzhou University of Technology, China*);

5 Investigation on Slow Light of Nonuniform Photonic Crystal Fiber Bragg Gratings
Shang-Lin Hou (*Lanzhou University of Technology, China*); *Weiqing Ge* (*Lanzhou University of Technology, China*); *Yan-Jun Liu* (*Lanzhou University of Technology, China*); *Daobin Wang* (*Lanzhou University, China*); *Jingli Lei* (*Lanzhou University of Technology, China*); *Xiaoxiao Li* (*Lanzhou University of Technology, China*);

6 Research on the Controllable Frequency Octupling Technology for Generating Optical Millimeter-wave by External Modulator
Jianming Shang (*Lanzhou University of Technology, China*); *Yan-Jun Liu* (*Lanzhou University of Technology, China*); *Daobin Wang* (*Lanzhou University, China*); *Weiqing Ge* (*Lanzhou University of Technology, China*); *Jingli Lei* (*Lanzhou University of Technology, China*); *Xiaoxiao Li* (*Lanzhou University of Technology, China*); *Shang-Lin Hou* (*Lanzhou University of Technology, China*);

7 Temperature Dependence of Liquid Filled Photonic Crystal Fibers
Jingli Lei (*Lanzhou University of Technology, China*); *Shang-Lin Hou* (*Lanzhou University of Technology, China*); *Yanjun Liu* (*Lanzhou University of Technology, China*); *Xiaoxiao Li* (*Lanzhou University of Technology, China*);

8 Dependence of Grating Length of Fiber Gragg Gratings on Slow Light
Chunlian Hu (*Lanzhou University of Science & Technology, China*); *Ynajun Liu* (*Lanzhou University of Technology, China*); *Jingli Lei* (*Lanzhou University of Technology, China*); *Shang-Lin Hou* (*Lanzhou University of Technology, China*);

9 Integrated Optical Chemical Sensor Based on an SOI Ring Resonator Using Phase-interrogation
Xi Zhou (*South China Normal University, China*); *Zhi Qiao* (*South China Normal University, China*); *Chenzhao Zhang* (*South China Normal University, China*); *Jianhao Zhang* (*South China Normal University, China*); *Tuowen Xiang* (*South China Normal University, China*); *Yaocheng Shi* (*Zhejiang University, China*); *Liu Liu* (*South China Normal University, China*);

10 Neural Correlates of Feigned Memory Impairment with Different Motivations: A Functional Near-infrared Spectroscopy (FNIRS) Study
Fang Li (*South China Normal University (SCNU), China*); *Qianqian Gao* (*South China Normal University (SCNU), China*); *Huilin Zhu* (*South China Normal University (SCNU), China*); *Guixiong Xu* (*South China Normal University (SCNU), China*); *Xinge Li* (*South China Normal University (SCNU), China*); *Ziqiang Hu* (*South China Normal University (SCNU), China*); *Sailing He* (*Zhejiang University, China*);

11 A Low-cost CCD-based Imager for Mapping Venous Oxygenation
Jun Li (*South China Normal University, China*); *Xiao Zhang* (*South China Normal University, China*);

12 A Novel Compact Tri-band Bandpass Filter with Good Selectivity
Ding-Hong Jia (*Southwest Jiaotong University, China*); *Quanyuan Feng* (*Southwest Jiaotong University, China*); *Xiao-Guo Huang* (*Southwest Jiaotong University, China*); *Qian-Yin Xiang* (*Southwest Jiaotong University, China*);

13 Dual-band Antenna Using Composite Right/Left-handed Transmission Lines for MICS and ISM Application
Yemin Hein (*Korea Electronics Technology Institute, Korea*); *Se-Hwan Choi* (*Korea Electronics Technology Institute, Republic of Korea*);

14 Dual-band Bandpass Filter with Good Selectivity and Stopband Rejection
Daotong Li (*University of Electronic Science and Technology of China, China*); *Yonghong Zhang* (*University of Electronic Science and Technology of China, China*); *Kaida Xu* (*University of Electronic Science and Technology of China, China*); *Kaijun Song* (*University of Electric Science and Technology of China, China*); *Joshua Le-Wei Li* (*Monash University, Malaysia*);

15 A Multi-layer Inductive Frequency Selective Surface for Use in the Ka and Ku Frequency Bands
Jonathan M. Rigelsford (*The University of Sheffield, United Kingdom*); *Andrea Vallecchi* (*The University of Sheffield, United Kingdom*);

16 New Design of Low Cost and Easy Tuning Compact GPS Microstrip Antenna
Chanjuan Li (*Dalian Maritime University, China*); *Shiqiang Fu* (*Dalian Maritime University, China*); *Te Shao* (*Dalian Maritime University, China*); *Hongmei Liu* (*Dalian Maritime University, China*);

17 Solitary Wave Induced in a Water Surface Wave Field
Shigehisa Nakamura (*Kyoto University, Japan*);

18 Chaotic FM Signals for Circular SAR Imaging
Lingjuan Yu (*Graduate University of the Chinese Academy of Sciences, China*); *Xiao-Chun Xie* (*Gannan Normal University, China*); *Lingling Xiao* (*Jiangxi University of Science and Technology, China*);

19 Improve Compressive Sensing Radar Imaging Performance by Optimizing Measurement Matrix
Xiao-Chun Xie (*Gannan Normal University, China*); *Lingjuan Yu* (*Graduate University of the Chinese Academy of Sciences, China*);

20 Compact Microstrip Diplexer for 4G Wireless Communication
Fangqi Yang (*East China Jiaotong University, China*); *Xuehui Guan* (*East China Jiaotong University, China*); *Lei Zhu* (*University of Macau, China*); *Hai-Wen Liu* (*East China Jiaotong University, China*);

21 A High Gain Slot Antenna Based on Surface Plasmon Polaritons
Hongjuan Han (*Soochow University, China*); *Huiping Guo* (*Soochow University, China*); *Xueguan Liu* (*Soochow University, China*); *Ying Wang* (*Soochow University, China*);

22 A Compact Circular Polarized Tag Antenna in UHF Band for Metallic Object Application
Yusha Liu (*Zhejiang University, China*); *Qi Liu* (*Zhejiang University, China*); *Bo Xu* (*Zhejiang University, China*); *Jun Hu* (*Zhejiang University, China*);

23 A Miniaturized Unidirectional Moxon Antenna for UHF RFID Tags
Qi Liu (*Zhejiang University, China*); *Shuai Zhang* (*KTH Royal Institute of Technology, Sweden*); *Bo Xu* (*Zhejiang University, China*);

24 Optimization of Machine Learning Parameters for Spectrum Survey Analysis
Robert Urban (*Brno University of Technology, Czech Republic*); *Miloslav Steinbauer* (*Brno University of Technology, Czech Republic*);

25 Novel Miniaturized Satellite Navigation Antennas Based on Substrate Integrated Waveguide
Shunyu Fang (*East China Normal University, China*); *Tailei Wang* (*East China Normal University, China*); *Shouzheng Zhu* (*East China Normal University, China*);

26 A Novel Phase Measurement System Based on Six Port Reflectometer and LabVIEW
Tailei Wang (*East China Normal University, China*); *Jiajun Bian* (*East China Normal University, China*); *Shouzheng Zhu* (*East China Normal University, China*);

27 TD-LTE Antenna Array Smart Cover Study
Feng Gao (*China Mobile Group Design Institute, China*); *Runhong Shan* (*Copyright Protection Center of China, China*); *Wentao Zhu* (*China Mobile Group Design Institute, China*); *Kai He* (*China Mobile Group Design Institute, China*); *Zhiyuan Song* (*China Mobile Group Design Institute, China*);

28 Investigation on Electromagnetic Scattering form Dielectric Soil Rough Surface with a PEC Object Embedded in It
Hongmei Miao (*Yanan University, China*); *Peng-Ju Yang* (*Xidian University, China*);

29 Design and Development of a One Layer Planar Slot Antenna for Secondary Surveillance Radar
Maziar Hedayati (*Iran University of Science and Technology, Iran*); *Gholamreza Askari* (*Isfahan University of Technology (IUT), Iran*); *Parisa Moslemi* (*Isfahan University of Technology, Iran*); *Hamid Mirmohammad Sadeghi* (*Isfahan University of Technology (IUT), Iran*);

30 Study on the Characteristics of Long-wave Radiation over China Area
Yuntao Ma (*Shenyang Jianzhu University, China*); *Lishuang Sun* (*Shenyang Jianzhu University, China*); *H. Ding* (*Shenyang Jianzhu University, China*);

31 The Study of the Generalized Stereopair Matching Method
Lishuang Sun (*Shenyang Jianzhu University, China*); *Yuntao Ma* (*Shenyang Jianzhu University, China*); *He Wang* (*Liaoning Water Conservancy Vocational College, China*);

32 Study on Surface Albedo of Different Land Cover Types in Liaoning Province
Jingli Wang (*Shenyang Jianzhu University, China*); *Yuntao Ma* (*Shenyang Jianzhu University, China*); *Lishuang Sun* (*Shenyang Jianzhu University, China*);

33 Study on the Variation of Vegetation in Shenyang City Based on MODIS Data
Yuntao Ma (*Shenyang Jianzhu University, China*); *Jingli Wang* (*Shenyang Jianzhu University, China*); *Lishuang Sun* (*Shenyang Jianzhu University, China*);

34 Oil Spill Detection Based on Characteristic Parameters and HAC
Honglei Zheng (*Ocean University of China, China*); *Yan-Min Zhang* (*Ocean University of China, China*); *Yunhua Wang* (*Ocean University of China, China*);

35 The Damping Model for Sea Waves Covered by Oil Films of Finite Thickness
Yunhua Wang (*Ocean University of China, China*); *Yan-Min Zhang* (*Ocean University of China, China*); *Honglei Zheng* (*Ocean University of China, China*);

36 Optimization of Pickup Coil in Compact Magnetometer with DC/AC Unit Employing High-T_c SQUID
Yuichi Ishihara (*Okayama University, Japan*); *Mohd Mawardi Saari* (*Okayama University, Japan*); *Toki Kusaka* (*Okayama University, Japan*); *Yuya Tsukamoto* (*Okayama University, Japan*); *Kenji Sakai* (*Okayama University, Japan*); *Toshihiko Kiwa* (*Okayama University, Japan*); *Keiji Tsukada* (*Okayama University, Japan*);

37 Microwave Radiation Image Reconstruction Method Based on Adaptive Multi-structural Dictionary Learning
Lu Zhu (*East China Jiaotong University, China*); *Jiangfeng Liu* (*East China Jiaotong University, China*); *Yuanyuan Liu* (*East China Jiaotong University, China*); *Suhua Chen* (*East China Jiaotong University, China*);

38 The EMC Impact due Household Appliances in Smart Grid Networks
Stefania Sousa (*Universidade Federal de Sao Joao Del Rei — UFSJ, Brazil*); *C. E. Capovilla* (*Universidade Federal do ABC — UFABC, Brazil*); *Humberto Xavier De Araujo* (*Universidade Federal de São João Del Rei — UFSJ, Brazil*);

39 Determination of Microwave Conductivity of Electrolyte Solutions from Debye-Drude Model
Shuo Li (*Soochow University, China*); *Sucheng Li* (*Soochow University, China*); *Shahzad Anwar* (*Soochow University, China*); *Fa Tian* (*Soochow University, China*); *Weixin Lu* (*Soochow University, China*); *Bo Hou* (*Soochow University, China*);

40 Numerical Simulations of a Complete GTEM Chamber
Humberto Xavier De Araujo (*Universidade Federal de Sao Joao Del Rei — UFSJ, Brazil*); *C. E. Capovilla* (*Universidade Federal do ABC — UFABC, Brazil*); *L. C. Kretly* (*Universidade Estadual de Campinas — UNICAMP, Brazil*);

41 Stacked Metamaterials Enables Ultranarrow and Directional Thermal Emission
Yongkang Gong (*University of South Wales, UK*); *Kang Li* (*University of South Wales, UK*); *Jungang Huang* (*University of South Wales, UK*); *J. J. Martinez* (*University of South Wales, UK*); *Nigel Copner* (*University of South Wales, UK*);

42 Microwave Coherent Perfect Absorption Based on Ultrathin Conductive Films
Sucheng Li (*Soochow University, China*); *Jie Luo* (*Soochow University, China*); *Shahzad Anwar* (*Soochow University, China*); *Shuo Li* (*Soochow University, China*); *Weixin Lu* (*Soochow University, China*); *Zhi Hong Hang* (*Soochow University, China*); *Yun Lai* (*Soochow University, China*); *Bo Hou* (*Soochow University, China*); *Mingrong Shen* (*Soochow University, China*); *Chinhua Wang* (*Soochow University, China*);

43 A Metamaterial-based Probe for EMC Measurements
M. F. P. Tartaglia (*Universidade Federal de São João Del Rei — UFSJ, Brazil*); *A. V. Cardoso* (*Universidade Federal de São João Del Rei — UFSJ, Brazil*); *C. E. Capovilla* (*Universidade Federal do ABC — UFABC, Brazil*); *Humberto Xavier De Araujo* (*Universidade Federal de São João Del Rei — UFSJ, Brazil*);

44 Design of Base Station Antenna for RF Energy Harvesting
Jung-Ick Moon (*Electronics and Telecommunications Research Institute, South of Korea*); *In-Kui Cho* (*Electronics and Telecommunications Research Institute, South of Korea*); *Seong-Min Kim* (*Electronics and Telecommunications Research Institute, South of Korea*); *Jae-Hun Yun* (*Electronics and Telecommunications Research Institute, South of Korea*); *Woo-Jin Byun* (*Electronics and Telecommunications Research Institute, South Korea*);

45 Design of Compact Passive Tag Antenna for Practical RFID Applications
Zihan Chen (*Zhejiang University, China*); *Sailing He* (*Zhejiang University, China*); *Dongdi Zhu* (*Zhejiang University, China*); *Chengcheng Du* (*Zhejiang University, China*);

46 Statistical Characterization of Multiple Antennas Dynamic Body-to-body Radio Propagation Channel
Hasliza A. Rahim (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Mohd Fareq Bin Abdul Malek* (*University Malaysia Perlis (UniMAP), Malaysia*); *V. Ganesan* (*Universiti Malaysia Perlis, Malaysia*); *K. K. Goh* (*Universiti Malaysia Perlis, Malaysia*); *F. A. A. Fuad* (*Universiti Malaysia Perlis, Malaysia*); *Noor Anida Abu Talib* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Farah Salwani Abdullah* (*Universiti Malaysia Perlis (UniMAP), Malaysia*);

47 A Novel Idea of Evaluating Non-ionizing 2.45 GHz Wireless Body Area Network (WBAN) RF Radiation on Human Cognitive Performance Using Wearable Textile Monopole Antennas
Hasliza A. Rahim (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Mohd Fareq Bin Abdul Malek* (*University Malaysia Perlis (UniMAP), Malaysia*); *Ping Jack Soh* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *F. A. A. Fuad* (*Universiti Malaysia Perlis, Malaysia*); *N. Hisham* (*Universiti Malaysia Perlis, Malaysia*); *Noor Anida Abu Talib* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Farah Salwani Abdullah* (*Universiti Malaysia Perlis (UniMAP), Malaysia*);

48 Fractal Etched Bow-tie Antenna Loading Zero-index Metamaterials
Kai Ma (*Southeast University, China*); *Huifeng Ma* (*Southeast University, China*); *Qiang Cheng* (*Southeast University, China*); *Tie Jun Cui* (*Southeast University, China*);

49 Validating Generalized Nonlocal Optics by First Principles Calculations
Pu Zhang (*Zhejiang University, China*); *Martijn Wubs* (*Technical University of Denmark, Denmark*); *N. Asger Mortensen* (*Technical University of Denmark, Denmark*);

50 An Ultra-dense Optical Comb Based DWDM-OFDM-PON System
Rui Lin (*Huazhong University of Science and Technology, China*); *Ming Tang* (*Huazhong University of Science and Technology (HUST), China*); *Ruoxu Wang* (*Huazhong University of Science and Technology (HUST), China*); *Zhenhua Feng* (*Huazhong University of Science and Technology, China*); *Songnian Fu* (*Huazhong University of Science and Technology, China*); *Deming Liu* (*Hua Zhong University of Science and Technology, China*); *Jiajia Chen* (*KTH Royal Institute of Technology, Sweden*); *Perry Ping Shum* (*Nanyang Technological University, Singapore*);

51 Enhancing Plasmonic Photocatalytic Activity Using Silver Nanobeads
Jia Shiuan Wu (*Chien Hsin University of Science and Technology, Taiwan, R.O.C.*); *Wayne Yang* (*Chien Hsin University of Science and Technology, Taiwan, R.O.C.*); *Yuan-Fong Chau* (*Chien Hsin University of Science and Technology, Taiwan, R.O.C.*);

52 Giant Enhancement of Nonreciprocity Using Hybrid Plasmonic-photonic Crystals
Kexin Liu (*Zhejiang University, China*); *Wei Jiang* (*Zhejiang University, China*); *Sailing He* (*Zhejiang University, China*);

53 Magnetic Tuning Ferrite-dielectric Left-handed Material
Bai Du (*Xi'an Jiaotong University, China*); *Jun Wang* (*Xi'an Jiaotong University, China*); *Zhuo Xu* (*Xi'an Jiaotong University, China*); *Song Xia* (*Xi'an Jiaotong University, China*);

54 Two Dimensional Polarization Independent All-dielectric Left-handed Metamaterial in Free Space
Jun Wang (*Xi'an Jiaotong University, China*); *Shaobo Qu* (*Air Force Engineering University, China*); *Mingde Feng* (*Air Force Engineering University, China*); *Bai Du* (*Xi'an Jiaotong University, China*); *Zhuo Xu* (*Xi'an Jiaotong University, China*);

55 Compact SU8-silica Hybrid Thermo-optic Switch with Low Power Consumption
Wei Peng (*Zhejiang University, China*); *Pengxin Chen* (*Zhejiang University, China*); *Yaocheng Shi* (*Zhejiang University, China*);

56 Controlled Growth of ZnO Nanorods via Coprecipitation Method with Application to Dye-sensitized Solar Cells
Ru Chen (*Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences, China*); *Lei Miao* (*Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences, China*); *Haoliang Cheng* (*Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences, China*); *Chengyan Liu* (*Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences, China*); *Hui Gu* (*Shanghai Institute of Ceramics, Chinese Academy of Sciences, China*);

57 Optical Transmission through Ultrathin Metal Films with Sub-wavelength Hole Arrays: Experiments and Simulations
Shanshan Wu (*Xiamen University, China*); *Jinfeng Zhu* (*Xiamen University, China*); *Jiaye Li* (*Xiamen University, China*); *Yanqiang Bai* (*Xiamen University, China*); *Qinghuo Liu* (*Duke University, USA*);

58 Study of an Agar Medium Using Terahertz Chemical Microscope
Akihiro Nakamura (*Okayama University, Japan*); *Hiroyuki Nino* (*Okayama University, Japan*); *Kenji Sakai* (*Okayama University, Japan*); *Toshihiko Kiwa* (*Okayama University, Japan*); *Keiji Tsukada* (*Okayama University, Japan*);

59 Metallohalide Perovskite-polymer Composite Film for Hybrid Planar Heterojunction Solar Cells
Hin-Lap Yip (*South China University of Technology, China*);

60 Typical Activation but Atypical Connectivity in Prefrontal Cortex of Children with Autism Spectrum Disorder under Rehabilitation during Joint Attention: A fNIRS Study
Jun Li (*South China Normal University (SCNU), China*); *Huilin Zhu* (*South China Normal University (SCNU), China*); *Huan Guo* (*South China Normal University (SCNU), China*); *Heyon Shen* (*South China Normal University (SCNU), China*); *Lan Gao* (*South China Normal University (SCNU), China*); *Ziqiang Hu* (*South China Normal University (SCNU), China*); *Qianqian Gao* (*South China Normal University (SCNU), China*); *Sailing He* (*Zhejiang University, China*);

61 Highly Integrated Microfluidic Chip for Immunoassays Based on Phase-sensitive Surface Plasmon Resonance Biosensing
Li Jiang (*Zhejiang University, China*); *Gaoao Ye* (*Zhejiang University, China*); *Sailing He* (*Zhejiang University, China*);

62 Tungsten Selective Emitter Based on Core-shell Nanospheres
Lei Mo (*Zhejiang University, China*); *Liu Yang* (*Zhejiang University, China*); *Sailing He* (*Zhejiang University, China*);

63 Solution-grown Organic Single-crystalline p-n Junctions with Ambipolar Transport
Congcheng Fan (*Zhejiang University, China*); *Hongzheng Chen* (*Zhejiang University, China*); *Hanying Li* (*Zhejiang University, China*);

64 Study on Accuracy and Efficiency of the Numerical Algorithm for Electromagnetic Scattering from Targets and Rough Surface
Yu Liang (*Yangzhou University, China*); *Li-Xin Guo* (*Xidian University, China*); *Xiang-Hua Zeng* (*Yangzhou University, China*); *Jingguo Hu* (*Yangzhou University, China*); *Zhen-Sen Wu* (*Xidian University, China*);

65 Application of S-UTD-CH Model into Multiple Diffraction Scenarios at 900 MHz
Mehmet Baris Tabakcioglu (*Bayburt University, Turkey*); *Doruk Ayberkin* (*Bayburt University, Turkey*);

66 Analysis of Changing of Building Parameters via S-UTD-CH Model in Multiple Diffractions
Mehmet Baris Tabakcioglu (*Bayburt University, Turkey*); *Doruk Ayberkin* (*Bayburt University, Turkey*);

67 Broadband Analysis and Characterization of Noise for In-door Power-line Communication Channels
Modisa Mosalaosi (*University of KwaZulu-Natal, South Africa*); *Thomas Joachim Odhiambo Afullo* (*University of Kwa-Zulu Natal (UKZN), South Africa*);

68 Design of All-fiber Coupled Electro-optic Sensors for High Power Microwave
Lili Song (*National University of Defense Technology, China*); *Juntao He* (*National University of Defense Technology, China*); *Junpu Ling* (*National University of Defense Technology, China*); *Tao Jiang* (*National University of Defense Technology, China*); *Danni Zhu* (*National University of Defense Technology, China*);

69 Investigation of Novel Waveguide Phase Shifters for High Power Applications
Yiming Yang (*National University of Defense Technology, China*); *Cheng-Wei Yuan* (*National University of Defense Technology, China*); *Qiang Zhang* (*National University of Defense Technology, China*); *Danni Zhu* (*National University of Defense Technology, China*); *Shengren Peng* (*National University of Defense Technology (NUDT), China*); *Longzhou Yu* (*National University of Defense Technology, China*);

70 Compact Microstrip Patch Antenna with Parasitic Loading for X & Ku Band Applications
Mohit Barthwal (*Amity University, India*); *Sohaib Abbas Zaidi* (*Amity University, India*); *Malay Ranjan Tripathy* (*Amity University, India*); *Shyam Sundar Pattnaik* (*National Institute of Technical Teachers Training and Research Chandigarh, India*);

71 Accurate Numerical Solutions for Electromagnetic Scattering by Strongly Anisotropic Structures
G. Z. Yin (*Tongji University, China*); *Y. Q. Zhang* (*Tongji University, China*); *Z. G. Zhou* (*Tongji University, China*); *J. X. Hong* (*Tongji University, China*); *Mei Song Tong* (*Tongji University, China*);

72 Aharonov-Bohm Effect, Poincaré Lemma and Gauge Invariance
Peter A. Meleshenko (*Voronezh State University, Russia*); *Hang T. T. Nguyen* (*Vietnam National University — Ho Chi Minh City, Vietnam*); *Mikhail E. Semenov* (*Zhukovsky-Gagarin Air Force Academy, Russia*); *Alexander F. Klinskikh* (*Voronezh State University, Russia*);

73 Analysis of Arrangement Structure for Metal Fiber in Blended Electromagnetic Shielding Fabric
Zhe Liu (*Zhongyuan University of Technology, China*); *Xing Rong* (*Zhongyuan University of Technology, China*); *Qianxue Zheng* (*Zhongyuan University of Technology, China*); *Ruili Sun* (*Zhongyuan University of Technology, China*); *Yuna Chen* (*Zhongyuan University of Technology, China*); *Xiuchen Wang* (*Zhongyuan University of Technology, China*);

74 Shielding Effectiveness Fitting of Local Electromagnetic Shielding Clothing Based on Human Figure
Xiuchen Wang (*Zhongyuan University of Technology, China*); *Xing Rong* (*Zhongyuan University of Technology, China*); *Qianxue Zheng* (*Zhongyuan University of Technology, China*); *Ruili Sun* (*Zhongyuan University of Technology, China*); *Yuna Chen* (*Zhongyuan University of Technology, China*); *Zhe Liu* (*Zhongyuan University of Technology, China*);

75 On the Treatment of Hypersingularity for Solving Volume Integral Equations
P. C. Wang (*Tongji University, China*); *Z. G. Zhou* (*Tongji University, China*); *J. H. Zhou* (*Tongji University, China*); *Xuefeng Yin* (*Tongji University, China*); *Mei Song Tong* (*Tongji University, China*);

76 Simulation for Flat-plate Bounded Wave EMP Simulator with Distributed Terminator and Plane Source
Xiang-Qin Zhu (*Northwest Institute of Nuclear Technology, China*); *Jianguo Wang* (*State Key Laboratory of Intense Pulsed Radiation Simulation and Effect (Northwest Institute of Nuclear Technology, China*); *Guowei Zhang* (*State Key Laboratory of Intense Pulsed Radiation Simulation and Effect (Northwest Institute of Nuclear Technology), China*); *Weiqing Chen* (*State Key Laboratory of Intense Pulsed Radiation Simulation and Effect (Northwest Institute of Nuclear Technology), China*);

77 ***H***-polarized Plane Wave Diffraction by an Acute-angled Dielectric Wedge: A Time Domain Solution
Marcello Frongillo (*University of Salerno, Italy*); *Gianluca Gennarelli* (*National Research Council, Italy*); *Giovanni Riccio* (*University of Salerno, Italy*);

78 Calculation of the Reflection and Transmission of Finite Sized Beams through Layered Uniaxial Anisotropic Media Accelerated by Plane Wave Spectrum Algorithm
Shihao Ji (*Beihang University, China*); *Ming Bai* (*Beihang University, China*); *Zhao Liu* (*Beihang University, China*); *Yao Ma* (*Beihang University, China*); *Xiuzhu Ye* (*Beihang University, China*);

79 Impact on the Performance of Compact Antenna Test Range due to Surface Deviation of the Reflector
Zhao Liu (*Beihang University, China*); *Ming Bai* (*Beihang University, China*); *Shihao Ji* (*Beihang University, China*); *Xiao Fang* (*Beihang University, China*); *Xiuzhu Ye* (*Beihang University, China*);

80 Electromagnetic Waves Described with the Complex Quaternion
Zi-Hua Weng (*Xiamen University, China*);

81 Methods for the Sensing and Evaluation of Ionosphere Changes and Their Impact on the Human Organism
Michael Hanzelka (*Brno University of Technology, Czech Republic*); *Jiri Dan* (*Masaryk University, Czech Republic*); *Pavel Fiala* (*Brno University of Technology, Czech Republic*); *Martin Friedl* (*Brno University of Technology, Czech Republic*); *Vladan Holcner* (*University of Defence, Czech Republic*);

82 Applications of Noise Spectroscopy in the Analysis of Periodic Material Structures
Zoltan Szabo (*Brno University of Technology, Czech Republic*); *Petr Drexler* (*Brno University of Technology, Czech Republic*); *Jan Seginak* (*Brno University of Technology, Czech Republic*); *Dusan Nespor* (*Brno University of Technology, Czech Republic*); *Martin Friedl* (*Brno University of Technology, Czech Republic*); *Petr Marcon* (*Brno University of Technology, Czech Republic*); *Pavel Fiala* (*Brno University of Technology, Czech Republic*);

83 A Interdigital Slot-loaded Directional Coupler Design Based on Substrate Integrated Waveguide
Jie Cao (*East China Normal University, China*); *Lu Fu* (*East China Normal University, China*); *Shouzheng Zhu* (*East China Normal University, China*);

84 A Tunable Microwave Absorber Based on Active Frequency Selective Surface
Kainan Qi (*Communication University of China, China*); *Xiaofeng Yuan* (*Communication University of China, China*); *Yongfeng Wang* (*Communication University of China, China*);

85 Nonreciprocal Perfect Absorber Consisting of Nonlinear Plasma and Matching Metamaterials
Xiang-Kun Kong (*Nanjing University of Aeronautics and Astronautics, China*); *Shaobin Liu* (*Nanjing University of Aeronautics and Astronautics, China*); *Hai Feng Zhang* (*Nanjing University of Aeronautics and Astronautics, China*); *Bo-Rui Bian* (*Nanjing University of Aeronautics and Astronautics, China*); *Jia-Lin Yuan* (*Nanjing University of Aeronautics and Astronautics, China*);

86 Minimum Variance Variable Constrain DOA Algorithm
Ahmed Khairy Aboul-Seoud (*Alexandria University, Egypt*); *Ahmed Khairy Mahmoud* (*Alexandria University, Egypt*); *Alaa El-Din Sayed Hafez* (*Alexandria University, Egypt*); *Ali Mohammed Ali Gaballa* (*Alexandria University, Egypt*);

Session 2P1
FocusSession.SC1: Advances in Multiscale, Multiphysics Computation

Tuesday PM, August 26, 2014

Room 1

Organized by Qing Huo Liu, Weng Cho Chew

Chaired by Qing Huo Liu, Weng Cho Chew

13:10 invited Some Recent Progress on the Discontinuous Galerkin Time Domain Method for Multiscale Electormagnetics
Qing Huo Liu (*Duke University, USA*); *Qiang Ren* (*Duke University, USA*); *Qingtao Sun* (*Duke University, USA*); *Luis Tobon* (*Duke University, USA*);

13:30 invited Efficient Wide-band Analysis of GPR Antenna Around a Platform Using the Best Uniform Rational Approximation Technique
Ji Ma (*Key Laboratory of Electromagnetic Radiation and Sensing Technology, Chinese Academy of Sciences, China*); *Guangyou Fang* (*Key Laboratory of Electromagnetic Radiation and Sensing Technology, Chinese Academy of Sciences, China*); *Yicai Ji* (*Key Laboratory of Electromagnetic Radiation and Sensing Technology, Chinese Academy of Sciences, China*);

13:50 keynote Simulations of Scattering of Electromagnetic Waves by Bicontinuous Media for Applications in Microwave Remote Sensing of Terrestrial Snow
Leung Tsang (*University of Washington, USA*); *Shurun Tan* (*University of Washington, USA*); *Wenmo Chang* (*University of Washington, USA*); *Xiaolan Xu* (*California Institute of Technology, USA*);

14:20 invited Electromagnetic Characterization of Tunable Bandpass Filters with a PET-controlled Perturber
Guochun Wan (*Tongji University, China*); *J. X. Hong* (*Tongji University, China*); *Z. G. Zhou* (*Tongji University, China*); *X. W. Zhang* (*Tongji University, China*); *Mei Song Tong* (*Tongji University, China*);

14:40 invited A Combined Method for Computing Installed Radiation Patterns of Antennas on Large Conducting Platforms
Huapeng Zhao (*Institute of High Performance Computing, Singapore*); *Siping Gao* (*Institute of High Performance Computing, Singapore*); *Binfang Wang* (*Institute of High Performance Computing, Singapore*); *Weijiang Zhao* (*Institute of High Performance Computing, Singapore*);

15:00 invited Multi-scale Electromagnetic Modeling by Integral Equation Domain Decomposition Method with Hybrid Basis Functions
Ran Zhao (*University of Electronic Science and Technology of China, China*); *Mi Tian* (*University of Electronic Science and Technology of China, China*); *Jun Hu* (*University of Electronic Science and Technology of China, China*); *Zai-Ping Nie* (*University of Electronic Science and Technology of China, China*);

15:20 **Coffee Break**

15:40 keynote Dyadic Green's Function, Spectral Function, Local Density of States, and Fluctuation Dissipation Theorem
Weng Cho Chew (*University of Illinois, USA*); *Wei E. I. Sha* (*The University of Hong Kong, China*);

16:10 keynote ISAR Scattering/Imaging and Reconstruction for a Space Target Observed in Multi-station and Multi-orbit Modes
Ya-Qiu Jin (*Fudan University, China*);

16:40 invited A CAV-DDM Method for Scattering by Cavity with Thin Thickness
Jun Hu (*University of Electronic Science and Technology of China, China*); *Ran Zhao* (*University of Electronic Science and Technology of China, China*); *Ming Jiang* (*University of Electronic Science and Technology of China, China*); *Zai-Ping Nie* (*University of Electronic Science and Technology of China, China*);

17:00 Applying CEM Techniques to Solve Nano-scale Quantum Transport Problems
Jun Z. Huang (*Purdue University, USA*); *Weng Cho Chew* (*University of Illinois, USA*); *Li Jun Jiang* (*The University of Hong Kong, China*);

17:20 Thin Plasmonic Materials to Stop or Filter Waves
invited
Yadong Xu (*Soochow University, China*); *Qiannan Wu* (*Soochow University, China*); *Huanyang Chen* (*Soochow University, China*);

17:40 Giant Circular Dichroism Enhancement and Chiroptical Illusion in Hybrid Molecule-plasmonic Nanostructures
invited
Yineng Liu (*Beijing Institute of Technology, China*); *Xiangdong Zhang* (*Beijing Computational Science Research Center, China*);

18:00 Analysis of New Phenomena Caused by the Interaction between Electromagnetic Fields and Charged Particles
invited
Jianwei You (*Southeast University, China*); *Tie Jun Cui* (*Southeast University, China*);

18:20 Electromagnetic Wave Characterization in the Magnetized Cold Plasma
invited
Ping Li (*The University of Hong Kong, China*); *Li Jun Jiang* (*The University of Hong Kong, China*);

Session 2P2a
SC2: THz Metamaterials and Applications

Tuesday PM, August 26, 2014

Room 2

Organized by Willie J. Padilla

Chaired by Longfang Ye, Mikhail Konstantinovich Khodzitsky

13:00 Performance Enhancement of RMPA Using ESRR Metamaterial at THz
Parul Dawar (*Guru Tegh Bahadur Institute of Technology, India*); *Asok De* (*University of Delhi, India*);

13:20 Supercontinuum Generation in Elliptical Silicon Nanowire Embedded Spiral Photonic Crystal Fiber
Abdosllam M. Abobaker (*Collage of Electronic Technology, Libya*); *E. Gunasundari* (*VIT University, India*); *K. Senthilnathan* (*VIT University, India*); *S. Sivabalan* (*VIT University, India*); *Kaliyaperumal Nakkeeran* (*University of Aberdeen, UK*); *P. Ramesh Babu* (*VIT University, India*);

13:40 Observation and Phenomenological Interpretation of Shifts in Electrical Resonance of Square Shaped Planar THz Split Ring Resonators
Rahul Kumar (*Indian Institute of Technology Madras, India*); *Ankit Arora* (*Indian Institute of Technology Madras, India*); *Shaumik Ray* (*CSIR Campus, India*); *Bala Pesala* (*CSIR Campus, India*); *Enakshi Bhattacharya* (*Indian Institute of Technology Madras, India*); *Ananth Krishnan* (*Indian Institute of Technology Madras, India*);

14:00 Development of 3D Anisotropic Artificial Dielectric Metamaterial for THz Frequency Range
Egor A. Gurvitz (*ITMO University, Russia*); *S. A. Andronaki* (*ITMO University, Russia*); *Svyatoslav Igorevich Gusev* (*ITMO University, Russia*); *V. Y. Soboleva* (*ITMO University, Russia*); *Y. D. Nazarov* (*ITMO University, Russia*); *Mikhail Konstantinovich Khodzitsky* (*ITMO University, Russia*);

14:20 Enhancement of Terahertz Surface Plasmon Polaritons Using Tapered Graphene Waveguide
Longfang Ye (*Xiamen University, China*); *Liang Zhang* (*Xiamen University, China*); *Yanhui Liu* (*Xiamen University, China*); *Qing Huo Liu* (*Duke University, USA*);

14:40 Fabrication and Characterization of Fused Silica-based Metamaterials for High Temperature Resistant Radome Applications
Xigeng Miao (*Kuang-Chi Institute of Advanced Technology, China*); *Qingwen Feng* (*Kuang-Chi Institute of Advanced Technology, China*); *Xiaowei Fang* (*Kuang-Chi Institute of Advanced Technology, China*); *Fabrizia Ghezzo* (*Kuang-Chi Institute of Advanced Technology, China*); *Zhi Ya Zhao* (*Kuang-Chi Research Institute of Advanced Technology, China*); *Ruo Peng Liu* (*Southeast University, China*);

15:00 Multiband and Polarization Insensitive Terahertz Absorption Using a Vertical Nanowire Metamaterial
Yongqiang Pang (*Air Force Engineering University, China*); *Shaobo Qu* (*Air Force Engineering University, China*); *Jiafu Wang* (*Air Force Engineering University, China*); *Hua Ma* (*Air Force Engineering University, China*); *Jieqiu Zhang* (*Air Force Engineering University, China*); *Yongfeng Li* (*Air Force Engineering University, China*); *Mingbao Yan* (*Air Force Engineering University, China*); *Hongya Chen* (*Air Force Engineering University, China*);

15:20 **Coffee Break**

Session 2P2b
SC3: Optical Microcavities in Biosensing

Tuesday PM, August 26, 2014

Room 2

Organized by Qimin Quan, Frank Vollmer

Chaired by Qimin Quan

15:40 Optical Sensing and Particle Manipulation Using Silicon-based Optofluidic Chips
Andrew Wing On Poon (*The Hong Kong University of Science and Technology, China*); *Jiawei Wang* (*The Hong Kong University of Science and Technology, China*); *Zhanshi Yao* (*The Hong Kong University of Science and Technology, China*);

16:00 Photonic Crystal Slabs for Biosensing
Sabrina Jahns (*Christian-Albrechts-Universitat zu Kiel, Germany*); *Florian Von Oertzen* (*Christian-Albrechts-Universitat zu Kiel, Germany*); *Torben Karrock* (*Christian-Albrechts-Universitat zu Kiel, Germany*); *Yousef Nazirizadeh* (*Christian-Albrechts-Universitat zu Kiel, Germany*); *Martina Gerken* (*Christian-Albrechts-Universitat zu Kiel, Germany*);

16:20 Polymer-based Two Dimensional Photonic Crystal for Biosensing Application
Tatsuro Endo (*Osaka Prefecture University, Japan*);

16:40 Refractive Index Sensing Utilizing Photonic Crystal Nanobeam Cavity
Yaocheng Shi (*Zhejiang University, China*);

17:00 Organic Lasers for Biochemical Sensing
Parag B Deotare (*Massachusetts Institute of Technology, USA*); *Tom Mahony* (*Massachusetts Institute of Technology, USA*); *Vladimir Bulovic* (*Massachusetts Institute of Technology, USA*);

17:20 Single Nanoparticle Detection Using Microcavity Mode Broadening
Yun-Feng Xiao (*Peking University, China*);

17:40 Controlling Dynamical Tunneling in a Deformed Microcavity
Domenico Lippolis (*Tsinghua University, China*); *Li Wang* (*Peking University, China*); *Xue Feng Jiang* (*Peking University, China*); *Yun-Feng Xiao* (*Peking University, China*);

18:00 Fabrication and Sensing Capability of Rolled-up Tubular Optical Microcavity
Jiao Wang (*Fudan University, China*); *Gaoshan Huang* (*Fudan University, China*); *Yongfeng Mei* (*Fudan University, China*);

18:20 Optical Detection of Ultrasound Using Polymer Microring Resonators and Applications in High Resolution Photoacoustic Imaging
L. Jay Guo (*The University of Michigan, USA*);

Session 2P3a
MS-1.5: Organic and Hybrid Solar Cells 2

Tuesday PM, August 26, 2014

Room 3

Organized by Wallace C. H. Choy, Hin-Lap Yip

Chaired by Hin-Lap Yip

13:00 invited Control of Molecular Packing via Evaporation Rate of Small Molecule Organic Solar Cell
Po-Sheng Wang (*National Taiwan University, Taiwan*); *Jiun-Haw Lee* (*National Taiwan University, Taiwan, R.O.C.*); *Shun-Wei Liu* (*Ming Chi University of Technology, Taiwan*); *Chin-Ti Chen* (*Institute of Chemistry, Academia Sinica, Taiwan*); *Yung-Chih Cheng* (*National Dong Hwa University, Taiwan*); *Mau-Kuo Wei* (*National Dong Hwa University, Taiwan*); *Chih-Chien Lee* (*National Taiwan University of Science and Technology, Taiwan*); *Wei-Cheng Su* (*National Taiwan University of Science and Technology, Taiwan*); *Tien-Lung Chiu* (*Yuan Ze University, Taiwan*); *Chi-Feng Lin* (*National United University, Taiwan*);

13:20 invited Small-molecule Organic Cathode Interfacial Materials for Organic Photovoltaics
Wan-Yi Tan (*South China University of Technology (SCUT), China*); *Rui Wang* (*National University of Singapore, Singapore*); *Min Li* (*South China University of Technology (SCUT), China*); *Gang Liu* (*South China University of Technology (SCUT), China*); *Ping Chen* (*Jilin University, China*); *Xinchen Li* (*The University of Hong Kong, China*); *Shun-Mian Lu* (*The University of Hong Kong, China*); *Hugh Lu Zhu* (*The University of Hong Kong, China*); *Qi-Ming Peng* (*Jilin University, China*); *Xu-Hui Zhu* (*South China University of Technology (SCUT), China*); *Wei Chen* (*National University of Singapore, Singapore*); *Wallace C. H. Choy* (*The University of Hong Kong, China*); *Feng Li* (*Jilin University, China*); *Junbiao Peng* (*South China University of Technology (SCUT), China*); *Yong Cao* (*South China University of Technology (SCUT), China*);

13:40 Application of Electrode Interlayers for Highly Efficient Polymer Solar Cells (invited)
Youchun Chen (*Jilin University, China*); *Shuheng Sun* (*Jilin University, China*); *Weilong Zhou* (*Jilin University, China*); *Fenghong Li* (*Jilin University, China*); *Yuguang Ma* (*Jilin University, China*);

14:00 Graphene Oxide Derivatives as Hole- and Electron-extraction Layers for Efficient Polymer Solar Cells (invited)
Jun Liu (*Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, China*);

14:20 Ultra-thin Hybrid Photovoltaics with Angle-insensitive Color Appearance, Transparency and High Quantum Efficiency (invited)
Jae Yong Lee (*The University of Michigan, USA*); *Kyu-Tae Lee* (*The University of Michigan, USA*); *Sungyong Seo* (*The University of Michigan, USA*); *L. Jay Guo* (*The University of Michigan, USA*);

14:40 Plasmonic-electrical Effects of Metal Nanoparticles for Highly Efficient Organic Solar Cells (invited)
Wallace C. H. Choy (*The University of Hong Kong, China*); *Fengxian Xie* (*The University of Hong Kong, China*); *Di Zhang* (*The University of Hong Kong, China*); *Wei E. I. Sha* (*The University of Hong Kong, China*); *Xinchen Li* (*The University of Hong Kong, China*); *Baofu Ding* (*The University of Hong Kong, China*);

15:00 Light Manipulation for Organic Optoelectronics Using Bio-inspired Moth's Eye Nanostructures (invited)
Jianxin Tang (*Soochow University, China*); *Lei Zhou* (*Soochow University, China*); *Qing-Dong Ou* (*Soochow University, China*); *Jing-De Chen* (*Soochow University, China*); *Yanqing Li* (*Soochow University, China*);

15:20 **Coffee Break**

15:40 Engineering Nanostructured Materials for Organic/Inorganic Hybrid Solar Cells (invited)
Tao Chen (*The Chinese University of Hong Kong, China*);

16:00 Photovoltage Loss in Excitonic Solar Cells (invited)
Sai-Wing Tsang (*City University of Hong Kong, China*); *Song Chen* (*University of Florida, USA*); *Tzung-Han Lai* (*University of Florida, USA*); *John R. Reynolds* (*Georgia Institute of Technology, USA*); *Franky So* (*University of Florida, USA*);

16:20 High-efficiency All-polymer Solar Cells Enabled by a Low Bandgap Polymer (invited)
He Yan (*The Hong Kong University of Science and Technology, China*);

16:40 Design Rule of Plasmonic Materials for High Performance Organic Solar Cells (invited)
Jung-Yong Lee (*Korea Advanced Institute of Science and Technology (KAIST), Korea*);

Session 2P3b
MS-1.2: Graphene Photovoltaics

Tuesday PM, August 26, 2014

Room 3

Organized by Hongwei Zhu, Dan Xie

Chaired by Xinming Li

17:00 Graphene-Silicon Heterojunction Photovoltaic Device
Xinming Li (*National Center for Nanoscience and Technology, China*);

17:20 Low Temperature Reduction of Free-standing Graphene Oxide Films by Metal Iodide Acidic Aqueous Solutions
Songping Luo (*Tsinghua University, China*); *Chenyang Liu* (*Tsinghua University, China*); *Hong Lin* (*Tsinghua University, China*);

17:40 PEDOT:PSS/planar-Si Hybrid Solar Cells with 12.70% Efficiency
Yuanfan Zhao (*Tsinghua University, China*); *Dan Xie* (*Tsinghua University, China*); *Jianlong Xu* (*Tsinghua University, China*); *Tingting Feng* (*Tsinghua University, China*); *Xiaowen Zhang* (*Tsinghua University, China*); *Tianling Ren* (*Tsinghua University, China*); *Miao Zhu* (*Tsinghua University, China*); *Hongwei Zhu* (*Tsinghua University, China*);

18:00 Reduced Graphene Oxide/n-Si Schottky Junction Photodetector
Miao Zhu (*Tsinghua University, China*); *Hongwei Zhu* (*Tsinghua University, China*);

18:20 Photo-detecting Behaviors of MoS_2 Transistors
Xiaowen Zhang (*Tsinghua University, China*); *Dan Xie* (*Tsinghua University, China*); *Jianlong Xu* (*Tsinghua University, China*); *Tingting Feng* (*Tsinghua University, China*); *Yuanfan Zhao* (*Tsinghua University, China*); *Tianling Ren* (*Tsinghua University, China*); *Miao Zhu* (*Tsinghua University, China*); *Hongwei Zhu* (*Tsinghua University, China*);

Session 2P4
SC2: Wave Manipulations by Metasurfaces

Tuesday PM, August 26, 2014
Room 4
Organized by Shulin Sun, Jiaming Hao
Chaired by Shulin Sun

13:00 Polarization Multiplexer by Plasmonic Metasurface
Tao Li (*Nanjing University, China*); *Lei Wang* (*Nanjing University, China*); *Lin Li* (*Nanjing University, China*); *Shi-Ning Zhu* (*Nanjing University, China*);

13:20 Self-control of Light Polarization by Meta-surface
Hui Liu (*Nanjing University, China*);

13:40 Dynamic Control of Electromagnetic Wave Propagation with Tunable Metasurface
Bo Zhu (*Nanjing University, China*); *Yijun Feng* (*Nanjing University, China*);

14:00 Broadband Unidirectional Propagation Using Gradient Index Metamaterials
Yadong Xu (*Soochow University, China*); *Chendong Gu* (*Soochow University, China*); *Bo Hou* (*Soochow University, China*); *Yun Lai* (*Soochow University, China*); *Jensen Li* (*University of Brimingham, UK*); *Huanyang Chen* (*Soochow University, China*);

14:20 Efficient Coupling of Microwave Surface-Plasmon-Like Mode to Propagating Waves
Jun Jun Xu (*Southeast University, China*); *Hao Chi Zhang* (*Southeast University, China*); *Qian Zhang* (*Southeast University, China*); *Tie Jun Cui* (*Southeast University, China*);

14:40 Three Dimensional Subwavelength Focusing by a Near-field Plate Lens
Wei Jiang (*Zhejiang University, China*); *Lu Lan* (*Zhejiang University, China*); *Yungui Ma* (*Zhejiang University, China*);

15:00 Helicity-switchable Metasurfaces for Controlling Light Propagation
Benfeng Bai (*Tsinghua University, China*);

15:20 **Coffee Break**

15:40 Controlling Electromagnetic Waves with Two-dimensional Gradient Meta-surfaces
Shiwei Tang (*Fudan University, China*); *Meng Qiu* (*Fudan University, China*); *Qiong He* (*Fudan University, China*); *Shulin Sun* (*Fudan University, China*); *Lei Zhou* (*Fudan University, China*);

16:00 Spoof Plasmonic Analogue of 2D Topological Insulator
Fei Gao (*Nanyang Technological University, Singapore*); *Zhen Gao* (*Nanyang Technological University, Singapore*); *Baile Zhang* (*Nanyang Technological University, Singapore*);

16:20 Recycling Radio Waves with Smart Walls
Nadege Kaina (*ESPCI ParisTech, France*); *Matthieu Dupre* (*ESPCI ParisTech & CNRS, France*); *Geoffroy Lerosey* (*ESPCI ParisTech & CNRS, France*); *Mathias Fink* (*ESPCI ParisTech & CNRS, France*);

16:40 High-efficiency SPP Couplers Based on Gradient Meta-surfaces
Wujiong Sun (*Fudan University, China*); *Shulin Sun* (*Fudan University, China*); *Qiong He* (*Fudan University, China*); *Lei Zhou* (*Fudan University, China*);

17:00 Meta-line
Hong Chen Chu (*Soochow University, China*); *Jie Luo* (*Soochow University, China*); *Yun Lai* (*Soochow University, China*);

17:20 Controlling Surface Plasmon Polaritons by Holographic Surfaces
Zhi-Yuan Li (*Institute of Physics, Chinese Academy of Sciences, China*); *Yue-Gang Chen* (*Guizhou University, China*);

17:40 Manipulating Electromagnetic Waves with GEometric MetaSurfaces (GEMS)
Lingling Huang (*University of Birmingham, UK*); *Xianzhong Chen* (*University of Birmingham, UK*); *Holger Muhlenbernd* (*University of Paderborn, Germany*); *Guixin Li* (*Hong Kong Baptist University, China*); *Benfeng Bai* (*Tsinghua University, China*); *Qiaofeng Tan* (*Tsinghua University, China*); *Guofan Jin* (*Tsinghua University, China*); *Thomas Zentgraf* (*University of Paderborn, Germany*); *Shuang Zhang* (*University of Birmingham, UK*);

18:00 Design of the Surface Pseudo-Bessel Lens by Using Artificial Impedance Metasurfaces
Yunbo Li (*Southeast University, China*); *Ben Geng Cai* (*Southeast University, China*); *Tie Jun Cui* (*Southeast University, China*);

18:20 Simultaneously Realize Luneburg Lens and Maxwell Fisheye Lens with a Single Anisotropic Metasurface
Xiang Wan (*Southeast University, China*); *Tie Jun Cui* (*Southeast University, China*);

Session 2P5a
SC2: Thermal and Acoustic Metamaterials

Tuesday PM, August 26, 2014

Room 5

Organized by Baile Zhang, Nicholas X. Fang

Chaired by Baile Zhang, Nicholas X. Fang

13:10 Acoustic Metasurface with Hybrid Resonances
keynote
Ping Sheng (*Hong Kong University of Science and Technology, China*);

13:40 Decorated Membrane Resonators as Acoustic Meta-
invited materials
Guancong Ma (*Hong Kong University of Science and Technology, China*); *Min Yang* (*Hong Kong University of Science and Technology, China*); *Jun Mei* (*South China University of Technology, China*); *Zhiyu Yang* (*Hong Kong University of Science and Technology, China*); *Ping Sheng* (*Hong Kong University of Science and Technology, China*);

14:00 Facile Thermal Metamaterials to Manipulate Heat
invited Signatures
Cheng-Wei Qiu (*National University of Singapore, Singapore*); *Tiancheng Han* (*National University of Singapore, Singapore*); *Xue Bai* (*National University of Singapore, Singapore*); *Dongliang Gao* (*National University of Singapore, Singapore*); *Baowen Li* (*National University of Singapore, Singapore*); *John Thong* (*National University of Singapore, Singapore*);

14:20 A Simple Thermal Cloak with Three Dimensional Re-
invited alization
Baile Zhang (*Nanyang Technological University, Singapore*);

14:40 Total Absorption of Elastic Waves in Ultrathin Layers
invited
Yue Tao Duan (*Soochow University, China*); *Jie Luo* (*Soochow University, China*); *Yun Lai* (*Soochow University, China*);

15:00 Photonic Flat Band for Broad-angle Acousto-optic
invited Bragg Diffraction
Jensen Li (*University of Brimingham, UK*); *Charles Croenne* (*City University of Hong Kong, China*); *Fu Liu* (*City University of Hong Kong, China*); *Shiyi Xiao* (*University of Brimingham, UK*); *Wontaek Seo* (*Samsung Advanced Institute of Technology, South Korea*); *Seunghoon Han* (*Samsung Advanced Institute of Technology, South Korea*); *Hong-Seok Lee* (*Samsung Advanced Institute of Technology, South Korea*); *U-In Chung* (*Samsung Advanced Institute of Technology, South Korea*);

15:20 **Coffee Break**

15:40 Tailoring Specific Heat and Density in the Design of Thermal Transformation Media
Yueh-Lin Tsai (*National Chiao-Tung University, Taiwan, R.O.C.*); *Tungyang Chen* (*National Cheng Kung University, Taiwan*);

16:00 Localization of Flexural Waves in Random Locally Resonant Plate
Marc Dubois (*ESPCI ParisTech, France*); *Gautier Lefebvre* (*ESPCI ParisTech, France*); *Patrick Sebbah* (*ESPCI ParisTech, France*);

Session 2P5b
SC2: Optical Metamaterials and Applications

Tuesday PM, August 26, 2014

Room 5

Organized by Shumin Xiao, Zubin Jacob

Chaired by Shumin Xiao

16:20 Hyperbolic Metamaterials for Super-resolution Imaging and Deep Sub-wavelength Cavities
Junsuk Rho (*Pohang University of Science and Technology (POSTECH), Korea*); *Xiang Zhang* (*University of California, USA*);

16:40 Atomically Thin Transition Radiation of Surface Plasmons
Xiao Lin (*Zhejiang University, China*); *Hongsheng Chen* (*Zhejiang University, China*); *Baile Zhang* (*Nanyang Technological University, Singapore*);

17:00 Nanocavity Enhancement for Ultra-thin Film Photoharvesting
Haomin Song (*The State University of New York at Buffalo, USA*); *Qiaoqiang Gan* (*The State University of New York at Buffalo, USA*);

17:20 Design, Fabrication and Measurement of MRI Enhancement Devices
Chunlai Li (*Kuang-Chi Institute of Advanced Technology, China*); *Jie Guo* (*Kuang-Chi Institute of Advanced Technology, China*); *Zhiya Zhao* (*Kuang-Chi Institute of Advanced Technology, China*); *Lin Luan* (*Shenzhen Kuang-Chi Institute of Advanced Technology, China*);

17:40 Near-field Optical Storage System with a Real Artificial Negative Index Film
Taikei Suyama (*Akashi National College of Technology, Japan*); *Xiaowei Ji* (*Kumamoto University, Japan*); *Akira Matsushima* (*Kumamoto University, Japan*); *Yaoju Zhang* (*Wenzhou University, China*);

18:00 Polarization-independent Metamaterial with Unnaturally High Refractive Index in the Terahertz Region
Zhengxian Liu (*Harbin Institute of Technology, China*); *Shumin Xiao* (*Harbin Institute of Technology, China*);

18:20 Photon Hopping and Nanowire Based Hybrid Plasmonic Ring-resonator
Zhiyuan Gu (*Harbin Institute of Technology, China*); *Shumin Xiao* (*Harbin Institute of Technology, China*); *Shuai Liu* (*Harbin Institute of Technology, China*); *Shang Sun* (*Harbin Institute of Technology, China*); *Kaiyang Wang* (*Harbin Institute of Technology, China*); *Qinghai Song* (*Harbin Institute of Technology, China*);

Session 2P6
FocusSession.SC3: Biophotonics — Clinical and Preclinical Applications

Tuesday PM, August 26, 2014

Room 6

Organized by Katarina Svanberg

Chaired by Katarina Svanberg

13:00 invited Compact Diode Laser-based Systems for Biophotonics Application
Peter E. Andersen (*Technical University of Denmark, Denmark*); *Ole Bjarlin Jensen* (*Technical University of Denmark, Denmark*); *A. Muller* (*Leibniz-Institut für Höchstfrequenztechnik, Germany*); *B. Sumpf* (*Leibniz-Institut für Höchstfrequenztechnik, Germany*); *A. K. Hansen* (*Technical University of Denmark, Denmark*); *P. M. Petersen* (*Technical University of Denmark, Denmark*); *Peter M. Skovgaard* (*Norlase ApS, Denmark*); *Angelika Unterhuber* (*Medical University of Vienna, Austria*); *W. Drexler* (*Medical University of Vienna, Austria*);

13:20 Development of New LED Light Sources for Improved Visualization of Bio-samples
Aikaterini Argyraki (*Technical University of Denmark, Denmark*); *Jakob Munkgaard Andersen* (*Technical University of Denmark, Denmark*); *Soren Stentoft Hansen* (*Technical University of Denmark, Denmark*); *Jorgen Stubager* (*Technical University of Denmark, Denmark*); *Dennis Dan Corell* (*Technical University of Denmark, Denmark*); *Paul Michael Petersen* (*Technical University of Denmark, Denmark*);

13:40 invited Laser-activated Plasmonic Particles for Cancer Theranostics: Novel Targeting Strategies Tested in Vitro and in Vivo
Roberto Pini (*Institute of Applied Physics, National Research Council of Italy, Italy*); *Fulvio Ratto* (*Institute of Applied Physics, National Research Council of Italy, Italy*); *Francesca Tatini* (*Institute of Applied Physics, National Research Council of Italy, Italy*); *Sonia Centi* (*University of Florence, Italy*); *Ida Landini* (*University of Florence, Italy*); *Stefania Nobili* (*University of Florence, Italy*); *Ewa Witort* (*University of Florence, Italy*); *Franco Fusi* (*University of Florence, Italy*); *Sergio Capaccioli* (*University of Florence, Italy*); *Enrico Mini* (*University of Florence, Italy*);

14:00 invited Microcirculation Imaging with Light and Sound
Martin J. Leahy (*National University of Ireland, Ireland*); *Haroon Zafar* (*National University of Ireland, Ireland*); *Sean O'Gorman* (*National University of Ireland, Ireland*); *Aedán Breathnach* (*National University of Ireland, Ireland*); *Hrebesh M. Subhash* (*National University of Ireland, Ireland*);

14:20 invited Transfer of Angular Momentum of Light in Optical Tweezers and Applications
Halina Rubinsztein-Dunlop (*The University of Queensland, Australia*);

14:40 invited Cortical Functional Connectivity Revealed by Optical Brain Imaging
Jun Li (*South China Normal University, China*); *Lina Qiu* (*South China Normal University, China*);

15:00 Atypical Activation Pattern of Children with Autism Spectrum Disorder (ASD) in Language Area During Listening Comprehension: A fNIRS Study
Huilin Zhu (*South China Normal University (SCNU), China*); *Xinge Li* (*South China Normal University (SCNU), China*); *Guixiong Xu* (*South China Normal University (SCNU), China*); *Rongwei Zhang* (*Fujian Polytechnic of Information Technology, China*); *Qianqian Gao* (*South China Normal University (SCNU), China*); *Ziqiang Hu* (*South China Normal University (SCNU), China*); *Sailing He* (*South China Normal University (SCNU), China*);

15:20 **Coffee Break**

15:40 Optical Diagnosis of Middle Ear Infection Using Spectroscopic Techniques — Phantom Experiments
Hao Zhang (*South China Normal University, China*); *Jing Huang* (*South China Normal University, China*); *Tianqi Li* (*South China Normal University, China*); *Sune Svanberg* (*Lund University, Sweden*); *Katarina Svanberg* (*Lunds University, Sweden*);

16:00 Assessment of Human Sinus Cavity Air Volume — Temporal Study
Hao Zhang (*South China Normal University, China*); *Jing Huang* (*South China Normal University, China*); *Tianqi Li* (*South China Normal University, China*); *Katarina Svanberg* (*Lund University, Sweden*); *Sune Svanberg* (*Lund University, Sweden*);

16:20 Studies of Oxygen and Oxygen Exchange in Fruits Using Gas in Scattering Media Absorption Spectroscopy
Jing Huang (*South China Normal University, China*); *Hao Zhang* (*South China Normal University, China*); *Tianqi Li* (*South China Normal University, China*); *Guangyu Zhao* (*South China Normal University, China*); *Sune Svanberg* (*Lund University, Sweden*); *Katarina Svanberg* (*Lund University, Sweden*);

16:40 Modulation of Cellular Signaling and Processes by
invited Femtosecond Laser
Hao He (*Tianjin University, China*);

17:00 Effective Bioimaging by Using Two-photon Absorbing
invited Chromophores and Nanoparticles
Kwang-Sup Lee (*Hannam University, South Korea*);

17:20 Optical Remote Monitoring of Flying Insects
keynote
M. Brydegaard (*Lund University, Sweden*); *Sune Svanberg* (*Lund University, Sweden*);

Session 2P7a
SC3: Advanced Micro-/Nano-fabrication for Optical Sensing and Imaging Applications

Tuesday PM, August 26, 2014

Room 7

Organized by Hyuck Choo, Monika Fleischer

Chaired by Hyuck Choo, Monika Fleischer

13:00 Infinitely Long One-nanometer Gaps for Terahertz Funneling
Dai-Sik Kim (*Seoul National University, Korea*);

13:20 Nanogap-enhanced Raman Scattering (NERS) Controlled by DNA
Yung Doug Suh (*Korea Research Institute of Chemical Technology (KRICT), Korea*);

13:40 Fabrication, Controlling and Application of Nanoscale Light Sources
Yuanpeng Wu (*Zhejiang University, China*); *Pengfei Xu* (*Zhejiang University, China*); *Xiaowei Liu* (*Zhejiang University, China*); *Jiabei Li* (*Zhejiang University, China*); *Haoliang Qian* (*Zhejiang University, China*); *Qing Yang* (*Zhejiang University, China*);

14:00 Electric and Magnetic Apertured NSOM Probes
Dilip Kumar Singh (*CSIR — National Physical Laboratory, India*); *Jae Sung Ahn* (*Seoul National University, Korea*); *Sukmo Koo* (*Seoul National University, Korea*); *Taehee Kang* (*Seoul National University, Korea*); *Joonyeon Kim* (*Seoul National University, Korea*); *Sukho Lee* (*Seoul National University, Korea*); *Namkyoo Park* (*Seoul National University, Korea*); *Dai-Sik Kim* (*Seoul National University, Korea*);

14:20 Recent Progress in Scalable Nanofabrication toward Optical Metamaterials and Metadevices
Junsuk Rho (*Pohang University of Science and Technology (POSTECH), Korea*);

14:40 Ultrahigh-resolution Nano-transfer Printing for Surface-enhanced Raman Spectroscopy (SERS) Analyses
Jae Won Jeong (*Korea Advanced Institute of Science and Technology (KAIST), Korea*); *Yeon Sik Jung* (*Korea Advanced Institute of Science and Technology (KAIST), Korea*);

15:00 Laser-based Photothermal Synthesis of Metal Oxides for Optoelectronic Applications
Kyoungsik Yu (*KAIST, Korea*);

15:20 **Coffee Break**

15:40 Self-aligned Fabrication of Hybrid Nano-antenna/Nano-particle Systems for Optical Sensing and Spectroscopy
Monika Fleischer (*Eberhard Karls University Tuebingen, Germany*); *Julia Fulmes* (*Eberhard Karls University Tuebingen, Germany*); *Christian Schafer* (*Eberhard Karls University Tuebingen, Germany*); *Andreas Horrer* (*Eberhard Karls University Tuebingen, Germany*); *Dieter P. Kern* (*Eberhard Karls University Tuebingen, Germany*);

16:00 Nanoarray-enhanced Implantable Intraocular Pressure Sensor with Remote Optical Readout
Jeong Oen Lee (*California Institute of Technology, USA*); *Trong-Tuong Nguyen* (*Department of Ophthalmology, USA*); *David Sretavan* (*Department of Ophthalmology, USA*); *Hyuck Choo* (*California Institute of Technology, USA*);

Session 2P7b
SC3: Nonlinear Optics: Structured Materials, Functional Devices and Applications 2

Tuesday PM, August 26, 2014

Room 7

Organized by Iam-Choon Khoo, Shiming Gao

Chaired by Iam-Choon Khoo, Shiming Gao

16:20 Third-harmonic Generation in Graphene-clad Microfiber
Yingxin Xu (*Zhejiang University, China*); *Shangliang Yu* (*Zhejiang University, China*); *Bigeng Chen* (*Zhejiang University, China*); *Wei Fang* (*Zhejiang University, China*);

16:40 All-optical Wavelength Conversion for 16-QAM Signal Using FWM in a Silicon Waveguide
Xiaoyan Wang (*Zhejiang University, China*); *Lingchen Huang* (*Zhejiang University, China*); *Ke Yi* (*Zhejiang University, China*); *Qiang Yan* (*Zhejiang University, China*); *Wei Pan* (*Zhejiang University, China*); *Shiming Gao* (*Zhejiang University, China*);

17:00 Influence of an Intense Electromagnetic Wave on Magnetoconductivity and Hall Coefficient in Compositional Semiconductor Superlattices: Optical Phonon Interaction
Bui Dinh Hoi (*Vietnam National University, Vietnam*); *Hoang Van Ngoc* (*Vietnam National University, Vietnam*); *Nguyen Quang Bau* (*Hanoi National University, Vietnam*);

17:20 Quantatitive Mode Pulling Effect Analyses for Broadband Kerr Comb Generation Based on Lugiato-Lefever Model
Chengying Bao (*Tsinghua University, China*); *Changxi Yang* (*Tsinghua University, China*);

17:40 Stable Supercontinuum Pulse on Continuous Wave Background in a Nonlinear Fiber with High-order Effects
Li-Chen Zhao (*Northwest University, China*); *Sheng-Chang Li* (*Xi'an Jiaotong University, China*); *Liming Ling* (*South China University of Technology, China*);

18:00 Calculating the Current Density of the Radio Electrical Effect in Parabolic Quantum Wells
Bui Duc Hung (*Hanoi National University, Vietnam*); *Nguyen Dinh Nam* (*Hanoi National University, Vietnam*); *Dinh Quoc Vuong* (*Hanoi National University, Vietnam*);

Session 2P8
SC2&3: Light Harvesting for Energy and Optoelectronic Applications

Tuesday PM, August 26, 2014

Room 8

Organized by Qin Chen, Xiaofeng Li

Chaired by Qin Chen, Xiaofeng Li

13:00 invited Plasmonic and Nanophotonic Enhanced Organic Photovoltaics: Breaking the Power Conversion Efficiency Barrier
Qiaoqiang Gan (*The State University of New York at Buffalo, USA*); *Kai Liu* (*The State University of New York at Buffalo, USA*); *Haomin Song* (*The State University of New York at Buffalo, USA*);

13:20 invited Metallic Core-dielectric Shell Nanoparticles Boosting the Power Conversion Efficiency of Dye-sensitized Solar Cells
Dangyuan Lei (*The Hong Kong Polytechnic University, China*);

13:40 invited Advanced Light Trapping Designs for High Efficiency Crystalline Silicon Thin Film Solar Cells
Pingqi Gao (*Ningbo Institute of Material Technology and Engineering, Chinese Academy of Sciences, China*); *Jichun Ye* (*Ningbo Institute of Material Technology and Engineering, Chinese Academy of Sciences, China*);

14:00 Transparent Conductor of Aluminum Thin Film and Integrated Organic Solar Cells (invited)
Qing Guo Du (*Institute of High Performance Computing, Singapore*); *Chan Hin Kam* (*Nanyang Technol Univ, Singapore*); *Xiao Wei Sun* (*Nanyang Technological University, Singapore*); *Ching-Eng Jason Png* (*Institute of High Performance Computing (IHPC), Singapore*);

14:20 Extensive Study of Electromagnetic Functionality of Sub-wavelength Metallic Metamaterials (invited)
Yifang Chen (*Fudan University, China*); *Yaqi Ma* (*Fudan University, China*); *Jianpeng Liu* (*Fudan University, China*); *Jinhai Shao* (*Fudan University, China*); *Sichao Zhang* (*Fudan University, China*); *Bingrui Lu* (*Fudan University, China*);

14:40 First Experimental Demonstration of Solar Cell Efficiency Enhancement via External Photon Recycling
Jeffrey Gordon (*Ben-Gurion University of the Negev, Israel*);

15:00 Light-trapping and Electrical Response of GaAs-based Single-nanowire Solar Cells with Multi-shell Design (invited)
Xiaofeng Li (*Soochow University, China*); *Yaohui Zhan* (*Soochow University, China*); *Chinhua Wang* (*Soochow University, China*); *Shaolong Wu* (*Soochow University, China*);

15:20 **Coffee Break**

15:40 Incorporation of Cascaded Metallic Gratings into Thin Film Solar Cells for Broadband Plasmonic Light Trapping (invited)
Long Wen (*Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences, China*); *Fuhe Sun* (*Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences, China*); *Qin Chen* (*Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences, China*);

16:00 Taper Structures to Harvest Light: Effective-medium Description and Optimum Shape
Baocheng Zhu (*Fudan University, China*); *Shiyi Xiao* (*Fudan University, China*); *Lei Zhou* (*Fudan University, China*);

16:20 Antireflection Performance of SiN Nanostructure Textured Si Surface for High Efficient Si Solar Cells
Zhen Zhang (*Suzhou Institute of Nano-tech and Nano-devices, Chinese Academy of Sciences, China*); *Yanyan Wang* (*Suzhou Institute of Nano-tech and Nano-devices, Chinese Academy of Sciences, China*); *Jian Zhu* (*Suzhou Institute of Nano-tech and Nano-devices, Chinese Academy of Sciences, China*); *Xuemei Wu* (*Soochow University, China*); *Ruiying Zhang* (*Suzhou Institute of Nano-tech and Nano-devices, Chinese Academy of Sciences, China*);

16:40 Experimental Realization of Broadband Super Absorber Based on Rainbow Trapping in Hyperbolic Metamaterials
Dengxin Ji (*The State University of New York at Buffalo, USA*); *Haomin Song* (*The State University of New York at Buffalo, USA*); *Xie Zeng* (*The State University of New York at Buffalo, USA*); *Haifeng Hu* (*The State University of New York at Buffalo, USA*); *Kai Liu* (*The State University of New York at Buffalo, USA*); *Nan Zhang* (*The State University of New York at Buffalo, USA*); *Qiaoqiang Gan* (*The State University of New York at Buffalo, USA*);

17:00 A MZI Based Integrated Optical Accelerometer
Wei Hu (*Southeast University, China*); *Guang Qian* (*Southeast University, China*); *Ruo-Zhou Li* (*Southeast University, China*); *Feng-Hua Wan* (*Southeast University, China*); *Jie Tang* (*Southeast University, China*); *Tong Zhang* (*Southeast University, China*);

17:20 Graphene Photodetector Based on Metamaterial Perfect Absorber
Shichao Song (*Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences, China*); *Long Wen* (*Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences, China*); *Qin Chen* (*Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences, China*);

17:40 Photothermal Microbubbles Generation under a Graphene Oxide-microheater
Xiaobo Xing (*South China Normal University, China*); *Debin Zhu* (*South China Normal University, China*); *Liang Lei* (*Guangdong University of Technology, China*); *Jiapeng Zheng* (*South China Normal University, China*); *Fengjia Li* (*South China Normal University, China*); *Xiang Cai* (*Guangdong Polytechnic, China*); *Ting Wu* (*Guangdong Polytechnic, China*);

Session 2P9a
SC3: Fiber Optic Sensing Technologies for Structural Health Monitoring and Applications

Tuesday PM, August 26, 2014

Room 9

Organized by Kazuo Hotate, Zuyuan He

Chaired by Kazuo Hotate, Zuyuan He

13:00 Fiber Optic Nerve Functions Realized by Optical Correlation Domain Techniques
Kazuo Hotate (*University of Tokyo, Japan*);

13:20 Intramodal and Intermodal Stimulated Brillouin Scattering in Few-mode Fibers
Kwang Yong Song (*Chung-Ang University, Korea*);

13:40 Improved Calibration Method for Raman Distributed Temperature Sensor
K. Oishi (*Yokogawa Electric Corporation, Japan*); *T. Umeno* (*Yokogawa Electric Corporation, Japan*); *N. Takeuchi* (*Yokogawa Electric Corporation, Japan*); *Shoji Adachi* (*Yokogawa Electric Corporation, Japan*);

14:00 Structural Health Monitoring Based on Strain Distributions Measured by Fiber-optic Sensors
Hideaki Murayama (*The University of Tokyo, Japan*); *Daichi Wada* (*The University of Tokyo, Japan*); *Hirotaka Igawa* (*Japan Aerospace Exploration Agency, Japan*);

14:20 Optic Fiber Sensors Fabricated by Laser-micromachining
Yun-Jiang Rao (*University of Electronic Science and Technology of China, China*); *Zeng-Ling Ran* (*University of Electronic Science and Technology of China, China*);

14:40 Technical Textiles Based on Fibre Optic Sensors for SHM
Katerina Krebber (*Federal Institute for Materials Research and Testing (BAM), Germany*);

15:00 From Structural Health Monitoring to Earth Crustal Deformation Monitoring
Zuyuan He (*Shanghai Jiao Tong University, China*); *Qingwen Liu* (*Shanghai Jiao Tong University, China*); *Tomochika Tokunaga* (*The University of Tokyo, Japan*);

15:20 **Coffee Break**

Session 2P9b
SC3: Ultrasensitive Optical Sensors

Tuesday PM, August 26, 2014

Room 9

Organized by Gilberto Brambilla, Wei Jin

Chaired by Wei Jin, Yuanhong Yang

15:40 Distributed Measurement of Intense Magnetic Fields by Means of Optical Fibers
Luca Palmieri (*University of Padua, Italy*); *Andrea Galtarossa* (*University of Padua, Italy*);

16:00 Surface Roughness and Plasmon Excitation in Metal Films
John Canning (*The University of Sydney, Australia*);

16:20 Pd/Ag Coated Photonic Crystal Fiber Hydrogen Sensor
Yuanhong Yang (*Beihang University, China*); *Fuling Yang* (*Beihang University, China*); *Huan Wang* (*Beihang University, China*); *Qirong Liu* (*Beihang University, China*); *Xungang Diao* (*Beihang University, China*);

16:40 Microfiber-based Ultra-sensitive Refractive Index Sensors
Bai-Ou Guan (*Jinan University, China*); *Li-Peng Sun* (*Jinan University, China*); *Jie Li* (*Jinan University, China*); *Long Jin* (*Jinan University, China*);

17:00 High Sensitivity Elastic Wave Sensing Using Fabry-Perot Filters Based on Fiber Bragg Gratings
Balaji Srinivasan (*Indian Institute of Technology Madras, India*);

17:20 High-sensitive Optical Sensors Based on In-fiber Air Bubbles
Yiping Wang (*Shenzhen University, China*); *Changrui Liao* (*Shenzhen University, China*); *Shen Liu* (*Shenzhen University, China*);

17:40 A Plasmonic Nano-resonator in Nano-structured Metal-coated Fiber Taper
Ming Ding (*Beihang University, China*); *Wei Quan* (*Beihang University, China*); *Gilberto Brambilla* (*University of Southampton, UK*);

18:00 Optical Spectroscopy for Food Applications: A Photonic Tasting
Anna Grazia Mignani (*CNR Istituto di Fisica Applicata "Nello Carrara", Italy*); *Leonardo Ciaccheri* (*CNR Istituto di Fisica Applicata "Nello Carrara", Italy*); *Andrea Azelio Mencaglia* (*Istituto di Fisica Applicata "Nello Carrara", Italy*);

18:20 Fiber Optical Distributed Vibration Sensing with High Frequency Response and Spatial Resolution
Tao Zhu (*Chongqing University, China*); *Qian He* (*Chongqing University, China*);

Session 2P_10a
SC1&3: Physics and Applications of Photonic Crystals, Materials, and Nanostructures

Tuesday PM, August 26, 2014

Room 10

Organized by Tzong-Jer Yang, Chien-Jang Wu

Chaired by Chien-Jang Wu, Yuan-Fong Chau

13:00 A New Kind of Leaky Wave Antenna Based on Low Frequency Surface Plasmon Polaritons
Jin-Jei Wu (*Chung Hua University, Taiwan, R.O.C.*); *Chien-Jang Wu* (*National Taiwan Normal University, Taiwan*); *Her-Lih Chiueh* (*Lunghwa University of Science and Technology, Taiwan*); *Tzong-Jer Yang* (*Chung-Hua University, Taiwan, R.O.C.*); *Yao-Huang Kao* (*Chung-Hua University, Taiwan, R.O.C.*);

13:20 Phase Modulation and Refraction of Bloch Surface Waves: A Rigorous Theoretical Analysis
Evgeni A. Bezus (*Image Processing Systems Institute of the Russian Academy of Sciences, Russia*); *L. L. Doskolovich* (*Image Processing Systems Institute of the Russian Academy of Sciences, Russia*);

13:40 Analysis of Nanoimprinted TiO_2 Sol-gel Guided-mode Resonance Sensors
Wen-Kai Kuo (*National Formosa University, Taiwan, R.O.C.*); *Ning-Chi Huang* (*National Formosa University, Taiwan, R.O.C.*);

14:00 Study of Tunable Negative Refraction in a Doped and Lossy Semiconductor
Yi Min Zeng (*National Taiwan Normal University, Taiwan, R.O.C.*); *Jin-Jei Wu* (*Chung Hua University, Taiwan, R.O.C.*); *Tzong-Jer Yang* (*Chung-Hua University, Taiwan, R.O.C.*); *Chien-Jang Wu* (*National Taiwan Normal University, Taiwan*);

14:20 Simulation Analysis of a Dielectric Hole Plasmonic Nanoantenna
Gung Jing He (*Chien Hsin University of Science and Technology, Taiwan, R.O.C.*); *Wayne Yang* (*Chien Hsin University of Science and Technology, Taiwan, R.O.C.*); *Yuan-Fong Chau* (*Chien Hsin University of Science and Technology, Taiwan, R.O.C.*);

14:40 Numerical Investigation of a High-birefringence Photonic Crystal Fiber by Asymmetric Defect Structures
Wayne Yang (*Chien Hsin University of Science and Technology, Taiwan, R.O.C.*); *Yuan-Fong Chau* (*Chien Hsin University of Science and Technology, Taiwan, R.O.C.*);

15:00 Guiding Properties of the Wedge Plasmon Polaritons
Tzong-Jer Yang (*Chung-Hua University, Taiwan, R.O.C.*); *Jin-Jei Wu* (*Chung Hua University, Taiwan, R.O.C.*); *Da Jun Hou* (*Chung-Hua University, Taiwan, R.O.C.*); *Linfang Shen* (*Zhejiang University, China*); *Her-Lih Chiueh* (*Lunghwa University of Science and Technology, Taiwan*); *Chien-Jang Wu* (*National Taiwan Normal University, Taiwan*);

15:20 **Coffee Break**

15:40 Supercontinuum Generation at 1.55 µm in a Silicon Nanowire Embedded Photonic Crystal Fiber
E. Gunasundari (*VIT University, India*); *Abdosllam M. Abobaker* (*Collage of Electronic Technology, Libya*); *K. Senthilnathan* (*VIT University, India*); *S. Sivabalan* (*VIT University, India*); *Kaliyaperumal Nakkeeran* (*University of Aberdeen, UK*); *P. Ramesh Babu* (*VIT University, India*);

Session 2P_10b
SC3&2: Photonic Crystals

Tuesday PM, August 26, 2014

Room 10

Organized by Zhi-Yuan Li

Chaired by Zhi-Yuan Li

16:00 invited One-way Slow-light Waveguide by Gyromagnetic Photonic Crystals
Rui-Xin Wu (*Nanjing University, China*); *Yan Yang* (*Nanjing University, China*); *Yin Poo* (*Nanjing University, China*);

16:20 invited From Microfiber Bragg Gratings to Microfiber Photonic Crystal Devices
Wei Ding (*Institute of Physics, Chinese Academy of Sciences, China*); *Yang Yu* (*Institute of Physics, Chinese Academy of Sciences, China*); *Zhi-Yuan Li* (*Institute of Physics, Chinese Academy of Sciences, China*);

16:40 invited Metal-ferroelectric Photonic Crystal All-optical Switching
Xiaoyong Hu (*Peking University, China*);

17:00 Design and Fabrication of Silicon-polymer Hybrid Photonic Crystal Nanobeam Structures for Achieving Integrated Ultrafast All-optical Switching
Zi-Ming Meng (*Guangdong University of Technology, China*); *Zhi-Yuan Li* (*Institute of Physics, Chinese Academy of Sciences, China*);

17:20 Tunable Photonic Band Gaps for Strong 1-D Light-matter Interaction
Rong-Juan Liu (*University of Toronto, Canada*); *Wah Tung Lau* (*University of Toronto, Canada*); *Sajeev John* (*University of Toronto, Canada*); *Zhi-Yuan Li* (*Institute of Physics, Chinese Academy of Sciences, China*);

17:40 invited Interesting Periodic and Quasiperiodic Photonic Band Gap Networks
Xiangbo Yang (*South China Normal University, China*); *Zhenyu Wang* (*South China Normal University, China*); *Jian Lu* (*South China Normal University, China*);

18:00 Negative Optical Scattering Force in Photonic Crystal Background
Weiqiang Ding (*Harbin Institute of Technology, China*); *Tongtong Zhu* (*Harbin Institute of Technology, China*); *Yongyin Cao* (*Harbin Institute of Technology, China*);

Session 2P_11a
SC1: Computational Techniques in Electromagnetics and Applications

Tuesday PM, August 26, 2014

Room 11

Organized by Yoichi Okuno, Tsuneki Yamasaki

Chaired by Tsuneki Yamasaki, Yoichi Okuno

13:00 Energy Distribution of Dielectric Waveguides by Various Circular Cylinder Array with Defect Layers
Ryosuke Ozaki (*Nihon University, Japan*); *Tsuneki Yamasaki* (*Nihon University, Japan*);

13:20 Fractal Labyrinths: Path Matrices and Borders Topology
Vladimir I. Grachev (*Kotel'nikov Institute of Radio Engineering and Electronics, Russian Academy of Sciences, Russia*);

13:40 Radiation Directivity of an Antenna Installed in an Automobile
Zicai Zheng (*Chuo University, Japan*); *Hiroshi Shirai* (*Chuo University, Japan*);

14:00 Kd-tree Based Shooting and Bouncing Ray Method for Fast Computation of Near Field Scattering
Pengcheng Gao (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Zichang Liang* (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Wei Gao* (*Science and Technology on Electromagnetic Scattering Laboratory, China*);

14:20 Analysis of the Fluorescence Imaging of Surface Plasmon-coupled Emission Microscopy
Xiaowei Ji (*Kumamoto University, Japan*); *Taikei Suyama* (*Akashi National College of Technology, Japan*); *Akira Matsushima* (*Kumamoto University, Japan*); *Yaoju Zhang* (*Wenzhou University, China*); *Yoichi Okuno* (*Kumamoto University, Japan*);

14:40 Analysis of Plasmon Resonance in a Multilayer-coated Bigrating
Xun Xu (*Kyushu Sangyo University, Japan*); *Yoichi Okuno* (*Kumamoto University, Japan*); *Taikei Suyama* (*Akashi National College of Technology, Japan*);

15:00 Electromagnetic Behaviour of Carbon Fibre Composite Airfoils
Xuesong Meng (*The University of Nottingham, UK*); *Phillip Donald Sewell* (*The University of Nottingham, UK*); *Ana Vukovic* (*The University of Nottingham, UK*); *Trevor Mark Benson* (*The University of Nottingham, UK*);

15:20 **Coffee Break**

15:40 RCS Computation of 3D-wake Vortex Using Method of Moments
Venkat Prasad Padhy (*Indian Institute of Science, India*); *N. Balakrishnan* (*Indian Institute of Science, India*); *P. Srinivasa Murthy* (*Aeronautical Development Establishment (ADE), India*);

Session 2P_11b
SC2,3&4: Electronics and Optoelectronics Using Two-dimensional Materials and Their Heterostructures

Tuesday PM, August 26, 2014

Room 11

Organized by Han Zhang, Fengnian Xia

Chaired by Han Zhang

16:00 Photonics of Two-dimensional Materials Beyond Graphene
Qiaoliang Bao (*Monash University, Australia*); *Yunzhou Xue* (*Monash University, Australia*); *Shenghuang Lin* (*Monash University, Australia*); *Shaojuan Li* (*Monash University, Australia*);

16:20 Two-dimensional Semiconductors for Versatile Photonic Applications
Jun Wang (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China*);

16:40 Modulating the Optical and Optoelectronic Properties of MoS_2
Haiyan Nan (*Southeast University, China*); *Zheng Liang* (*Taizhou Sunano New Energy Co., Ltd., China*); *Zhenhua Ni* (*Southeast University, China*);

17:00 Chip-integrated Graphene Optoelectronic Devices
Xuetao Gan (*Northwestern Polytechnical University, China*); *Ren-Jye Shiue* (*Massachusetts Institute of Technology, USA*); *Dirk Englund* (*Massachusetts Institute of Technology, USA*);

17:20 Graphene, Topological Insulator and Other 2-dimensional Layered Materials for Ultra-fast Laser Photonics
Han Zhang (*Shenzhen University, China*);

17:40 Coupling Light with Supramolecular Systems
Jialiang Xu (*Radboud University Nijmegen, The Netherlands*); *Sergey Semin* (*Radboud University Nijmegen, The Netherlands*); *Alan E. Rowan* (*Radboud University Nijmegen, The Netherlands*); *Theo Rasing* (*Radboud University Nijmegen, The Netherlands*);

18:00 Phase Noise Performance in the Mode-locked Fiber Lasers with Carbon Nanotubes and Graphene Oxide Thin Films as Mode Locker
Kan Wu (*Shanghai Jiao Tong University, China*); *Xiaohui Li* (*Nanyang Technological University, Singapore*); *Jianping Chen* (*Shanghai Jiao Tong University, China*);

18:20 Passively Q-switched Linear-cavity Erbium-doped Fiber Laser with MoS_2 Saturable Absorber
Yizhong Huang (*Xiamen University, China*); *Zhengqian Luo* (*Xiamen University, China*);

18:40 2 μm Passively Q-switched Double-clad Fiber Laser Based on Few-layer MoS_2 Saturable Absorber
Zhengqian Luo (*Xiamen University, China*); *Jianyu Wu* (*Xiamen University, China*); *Yizhong Huang* (*Xiamen University, China*);

Session 2P_12
SC4: Compact Microwave Filters

Tuesday PM, August 26, 2014

Room 12

Organized by Qing-Xin Chu, Lei Zhu

Chaired by Qing-Xin Chu, Lei Zhu

13:00 Synthesis of Dual-wideband Bandpass Filters with Transversal Structure
Runqi Zhang (*Nanyang Technological University, Singapore*); *Lei Zhu* (*University of Macau, China*);

13:20 Dual-band Planar Microwave Bandpass Filter with $\lambda/4$ Stepped Impedance Resonators
Songbai Zhang (*Nanyang Technological University, Singapore*); *Lei Zhu* (*University of Macau, China*);

13:40 A Compact Diplexer Composed of Quarter-wavelength Resonators for Ultra-wideband (UWB) System
Kai Wang (*South China University of Technology, China*); *Zai-Cheng Guo* (*South China University of Technology, China*); *Yu-Fa Zheng* (*South China University of Technology, China*); *Jing-Yu Lin* (*Southwest Jiaotong University, China*); *Sai Wai Wong* (*South China University of Technology, China*); *Qing-Xin Chu* (*South China University of Technology, China*);

14:00 Synthesis of Phasers for Real-time Signal Processing Using Filter Techniques
Qingfeng Zhang (*South University of Science and Technology of China, China*); *Christophe Caloz* (*Ecole Polytechnique de Montreal, Canada*);

14:20 Design of High Isolation Diplexer with Source-load Coupling
Fu-Chang Chen (*South China University of Technology, China*); *Hao-Tao Hu* (*South China University of Technology, China*); *Fu-Xiang Guo* (*South China University of Technology, China*); *Qing-Xin Chu* (*South China University of Technology, China*);

14:40 A Bandpass Filter Using HMSIW-DGS Cell
Yongmao Huang (*University of Electronics Science and Technology of China, China*); *Z.-S. He* (*University of Electronic Science and Technology of China, China*); *P.-K. Li* (*University of Electronic Science and Technology of China, China*); *Z.-H. Shao* (*University of Electronic Science and Technology of China, China*); *C.-J. You* (*University of Electronic Science and Technology of China, China*); *D. Jiang* (*University of Electronic Science and Technology of China, China*);

15:00 Compact and Sharp-rejection Dual-band Bandstop Filter Based on Transversal Signal-interaction Concept
Lei-Lei Qiu (*South China University of Technology, China*); *Qing-Xin Chu* (*South China University of Technology, China*);

15:20 **Coffee Break**

15:40 Wide-stopband Millimeter-wave Bandpass Filter Based on Discriminating Coupling on GaN MMIC
Jie Kai Lin (*South China University of Technology, China*); *Xiu-Yin Zhang* (*South China University of Technology, China*); *Qing Yi Guo* (*South China University of Technology, China*); *Hsuan-Ling Kao* (*Chang Gung University, Taiwan*);

16:00 Hybrid Microstrip/Slotline Bandpass Filter with Dual-wideband Characteristics
Xuehui Guan (*East China Jiaotong University, China*); *Tao Xiong* (*East China Jiaotong University, China*); *Lei Zhu* (*University of Macau, China*); *Hai-Wen Liu* (*East China Jiaotong University, China*);

16:20 Reconfigurable WIFI Filter with Isolation Enhancement
Yuan Jiang (*University of Electronic Science and Technology of China, China*); *Jia Wei Yu* (*University of Electronic Science and Technology of China, China*); *Xian Qi Lin* (*University of Electronic Science and Technology of China, China*); *Fei Cheng* (*University of Electronic Science and Technology of China, China*); *Yong Fan* (*University of Electronic Science and Technology of China, China*);

16:40 Reconfigurable Substrate Integrated Waveguide
Yue Feng Hou (*University of Electronic Science and Technology of China, China*); *Yuan Jiang* (*University of Electronic Science and Technology of China, China*); *Xian Qi Lin* (*University of Electronic Science and Technology of China, China*); *Fei Cheng* (*University of Electronic Science and Technology of China, China*); *Yong Fan* (*University of Electronic Science and Technology of China, China*);

17:00 A Compact Substrate Integrated Waveguide Diplexer Using Dual-mode Filters
Fei Cheng (*University of Electronic Science and Technology of China, China*); *Xian Qi Lin* (*University of Electronic Science and Technology of China, China*); *Yuan Jiang* (*University of Electronic Science and Technology of China, China*); *Kaijun Song* (*University of Electric Science and Technology of China, China*); *Yong Fan* (*University of Electronic Science and Technology of China, China*);

17:20 Ka-band Wideband Filter with a Reconfigurable Mode of Bandpass-bandstop Switching
Yuan Jiang (*University of Electronic Science and Technology of China, China*); *Jia Wei Yu* (*University of Electronic Science and Technology of China, China*); *Xian Qi Lin* (*University of Electronic Science and Technology of China, China*); *Fei Cheng* (*University of Electronic Science and Technology of China, China*); *Yong Fan* (*University of Electronic Science and Technology of China, China*);

17:40 Microstrip Filters with Adjustable Transmission Zeros Using Inductive-coupled Open Stub-loaded Resonators
Fei Cheng (*University of Electronic Science and Technology of China, China*); *Xian Qi Lin* (*University of Electronic Science and Technology of China, China*); *Yuan Jiang* (*University of Electronic Science and Technology of China, China*); *Kaijun Song* (*University of Electric Science and Technology of China, China*); *Yong Fan* (*University of Electronic Science and Technology of China, China*);

18:00 Design of Wideband Non-equiripple Filtering Response Using Genetic Algorithm Based Neural Network
Shiqing Cui (*The University of Hong Kong, China*); *Sheng Sun* (*The University of Hong Kong, China*); *Shan Shan Gao* (*Chengdu University, China*); *Lei Zhu* (*The University of Macau, China*);

Session 2P_13a
FocusSession.SC4: Recent Progresses in Monolithic and Multilayer/Planar Integrated Circuits and Components

Tuesday PM, August 26, 2014

Room 13

Organized by Kamal Kumar Samanta, Maurizio Bozzi

Chaired by Kamal Kumar Samanta, Maurizio Bozzi

13:00 invited High Performance RF Front-End Devices/Circuits on VLSI-standard Si Substrate
Albert Chin (*National Chiao Tung University, Taiwan*);

13:20 HBT PA MMIC for WCDMA/LTE Applications
invited
Bumman Kim (*Pohang University of Science and Technology (POSTECH), Korea*); *Yunsung Cho* (*Pohang University of Science and Technology, Korea*); *Jooseung Kim* (*Pohang University of Science and Technology, Korea*); *Kyunghoon Moon* (*Pohang University of Science and Technology, Korea*);

13:40 4-way Power Divider Using Common DGS and
invited Stacked-substrate Structure
Jongsik Lim (*Soonchunhyang University, Republic of Korea*); *Junhyung Jeong* (*Chonbuk National University, Republic of Korea*); *Phirun Kim* (*Chonbuk National University, Republic of Korea*); *Yongchae Jeong* (*Chonbuk National University, South Korea*); *Sang-Min Han* (*Soonchunhyang University, Korea*); *Dal Ahn* (*Soonchunhyang University, Korea*);

14:00 Multilayer Thick-film and Next Generation
invited Millimetre-wave Embedded Components and System Integration
Kamal Kumar Samanta (*Milmega/Teseq Ltd., UK*);

14:20 Microwave and Millimeter Wave 2D and 3D Integra-
invited tion
Tauno Vaha-Heikkila (*VTT Technical Research Centre of Finland, Finland*);

14:40 Hybrid and Monolithic Planarization and Integration
keynote of Non-planar Metallo-dielectric Waveguides for High-density Electromagnetic Circuits and Systems
Ke Wu (*Montreal University, Canada*);

15:20 **Coffee Break**

15:40 Multilayered Integration of Microwave Components
invited by Substrate Integrated Waveguide Technology
Maurizio Bozzi (*University of Pavia, Italy*); *Riccardo Moro* (*University of Pavia, Italy*); *Stefano Moscato* (*University of Pavia, Italy*); *Luca Perregrini* (*University of Pavia, Italy*);

16:00 Recent Developments in Microwave and Millimeter-
invited wave Integrated Circuits (MMICs) and Systems
Xin Jiang (*Southeast University, China*); *Wei Hong* (*Southeast University, China*); *Jixin Chen* (*Southeast University, China*); *Debin Hou* (*Southeast University, China*); *Zhe Chen* (*Southeast University, China*);

16:20 CMOS Terahertz Synthesized Left-handed Transmis-
invited sion Lines
Hsien-Shun Wu (*Tianjin University, China*); *Ching-Kuang C. Tzuang* (*National Taiwan University, Taiwan*);

Session 2P_13b
SC4: Reconfigurable Antennas

Tuesday PM, August 26, 2014

Room 13

Organized by Yingjie Jay Guo, Ying Liu

Chaired by Ying Liu

16:40 Magnetically Tunable Dual-polarized Dual-band SIW Slot Antenna
Li-Rong Tan (*Nanjing University, China*); *Rui-Xin Wu* (*Nanjing University, China*);

17:00 Dual-polarized Unit-cell of Continuous Reflective Phase-shift for Reconfigurable Reflectarrays
Ming-Tao Zhang (*Xidian University, China*); *Steven Gao* (*University of Kent, UK*); *Jixiang Wan* (*Xi'an Institute of Space Radio Technology, China*); *Buning Tian* (*Xi'an Institute of Space Radio Technology, China*); *Chunbang Wu* (*Xi'an Institute of Space Radio Technology, China*);

17:20 A Reconfigurable Folded Antenna for Mobile Phone Applications
Liu Hu (*Xidian University, China*); *Ying Liu* (*Xidian University, China*); *Cao Yu* (*Xidian University, China*); *Shuxi Gong* (*Xidian University, China*);

17:40 Pattern Reconfigurable Printed Antennas with High Gain and Broadband
Xue-Xia Yang (*Shanghai University, China*); *Zhongliang Lu* (*Shanghai University, China*); *Guannan Tan* (*Shanghai University, China*); *Yong Jin Zhou* (*Shanghai University, China*);

18:00 A Thin Planar Antenna Based on Gradient Metasurface
Bo Chen (*Xi'an Jiaotong University, China*); *Hongyu Shi* (*Xi'an Jiaotong University, China*); *Anxue Zhang* (*Xi'an Jiaotong University, China*); *Juan Chen* (*Xi'an Jiaotong University, China*);

18:20 Wideband RCS Reduction of Microstrip Antenna by Frequency Reconfigurable Electromagnetic Band Gap
Ying Liu (*Xidian University, China*); *Y.-W. Hao* (*Xidian University, China*); *Yongtao Jia* (*Xidian University, China*); *S.-X. Gong* (*Xidian University, China*);

18:40 Frequency Reconfigurable Narrow-frame Antenna for WWAN/LTE Smartphone Applications
Zhong-Xiang Chen (*University of Electronic Science and Technology of China, China*); *Yong-Ling Ban* (*University of Electronic Science and Technology of China, China*);

Session 2P_14a
SC5: Remote Sensing of the Atmosphere, Ocean, Hydrology and Cryosphere

Tuesday PM, August 26, 2014

Room 14

Organized by Shuanggen Jin

Chaired by Shuanggen Jin

13:20 Numerical Simulation of Scattering from Rough Surface/Subsurface and Inversion Application for Extraplanetary Exploration
Ya-Qiu Jin (*Fudan University, China*);

13:40 Estimation of Wind-direction Using the Bayesian Approach Retrieved from Marine Radar-image Sequences
Ketao Ma (*Wuhan University, China*); *Xiongbin Wu* (*Wuhan University, China*); *Li Wang* (*Wuhan University, China*); *Xiaofeng Chen* (*Wuhan University, China*); *Jianfei Liu* (*Wuhan University, China*);

14:00 Theoretical Analysis and Experimental Verification of Microwave Radiation Features of Fractured Rock
Shanjun Liu (*Northeastern University, China*); *Zhongyin Xu* (*Northeastern University, China*); *Lixin Wu* (*Northeastern University, China*); *Bo Tang* (*Northeastern University, China*);

14:20 Surface Scattering Characteristics and Snow Accumulating-melting Behaviors from GNSS Reflectometry
Shuanggen Jin (*Shanghai Astronomical Observatory, Chinese Academy of Sciences, China*); *Nasser Najibi* (*Shanghai Astronomical Observatory, Chinese Academy of Sciences, China*);

14:40 Study on Microwave Radiation Variation of Typical Ground Features in Yushu
Xiaojing Liu (*Northeastern University, China*); *Shanjun Liu* (*Northeastern University, China*); *Lixin Wu* (*Northeastern University, China*);

15:00 Application of Computational Electromagnetics to Quantitative Interpretation of Observations with a Polarimetric Weather Radar
Djordje Mirkovic (*University of Oklahoma CIMMS, USA*); *Dusan Zrnic* (*NOAA, USA*); *Alexander Ryzhkov* (*University of Oklahoma CIMMS, USA*);

15:20 **Coffee Break**

Session 2P_14b
SC5: Synthetic Aperture Radar Imaging and Advanced Radar Techniques

Tuesday PM, August 26, 2014

Room 14

Organized by Kun-Shan Chen

Chaired by Kun-Shan Chen

15:40 A Novel Keystone Transform Based Algorithm for Moving Target Imaging with Radon Transform and Fractional Fourier Transform Involved
Jiefang Yang (*The Key Laboratory of Microwave Remote Sensing, Chinese Academy of Sciences, China*); *Yunhua Zhang* (*The Key Laboratory of Microwave Remote Sensing, Chinese Academy of Sciences, China*);

16:00 Why Optical Images are Easier to Understand Than Radar Images? — From the Electromagnetic Scattering and Signal Point of View
Yunhua Zhang (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*); *Jingshan Jiang* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*);

16:20 Landslide Displacement Monitoring Using Multi-aperture InSAR and D-InSAR
Liming He (*Northeastern University, China*); *Lixin Wu* (*Northeastern University, China*); *Shanjun Liu* (*Northeastern University, China*); *Chang Su* (*Northeastern University, China*);

16:40 A PolSAR Classification Method Based on Scattering Model and Polarization Correlation Coefficient
Jianbo Wang (*Institute of Remote Sensing and Digital Earth, CAS, China*); *Chao Wang* (*Institute of Remote Sensing and Digital Earth, CAS, China*); *Hong Zhang* (*Institute of Remote Sensing and Digital Earth, CAS, China*); *Fan Wu* (*Institute of Remote Sensing and Digital Earth, CAS,, China*); *Bo Zhang* (*Institute of Remote Sensing and Digital Earth, CAS, China*);

17:00 A Case Study of Precursor Aspects of L'Aquila Earthquake Using Spaceborne InSAR Data
Kamel Hasni (*Beihang University, Hina*); *Jie Chen* (*Beijing University of Aeronautics and Astronautics, China*); *Nabil Hamdadou* (*Beihang University, China*);

17:20 Analysis of Optimal Panel Geometry for Self-illustration Corner Reflector
Chuanrong Li (*Academy of Opto-Electronics, Chinese Academy of Sciences, China*); *Yong-Sheng Zhou* (*Academy of Opto-Electronics, Chinese Academy of Sciences, China*); *Lingling Ma* (*Academy of Opto-Electronics, Chinese Academy of Sciences, China*);

17:40 Remote Detection of Human Vital Sign with SFCW Radar
Sixin Liu (*Jilin University, China*); *Lanbo Liu* (*University of Connecticut, USA*);

18:00 Beam Pattern Reconfiguration Based on Fourier Constrained Rotman Lenses
Yunhua Zhang (*Wuhan University, China*); *Vincent Fusco* (*Queen's University of Belfast, UK*); *Guoqiang Zhu* (*Wuhan University, China*);

Session 2P_15
SC3: High-speed Optical Communications and Advanced Optical Signal Processing

Tuesday PM, August 26, 2014

Room 15

Organized by Zhaohui Li, Xiaogeng Xu, Lianshan Yan

Chaired by Zhaohui Li

13:00 SNR Comparison of Coherent Optical Receivers
Miu Yoong Leong (*Royal Institute of Technology (KTH), Sweden*); *Sergei Popov* (*Royal Institute of Technology (KTH), Sweden*); *Gunnar Jacobsen* (*Acreo Swedish ICT, Sweden*); *Sergey Sergeyev* (*Aston University, UK*);

13:20 Optical Digital-to-analog Converter Based on Microring Resonators and Optical Splitters
Fanfan Zhang (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Ping Zhou* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Qiaoshan Chen* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Lei Zhang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Lin Yang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*);

13:40 Multi-band Superchannel Coherent Optical Orthogo-
invited nal Frequency-division Multiplexing Based on Offset QAM (OFDM/OQAM) System
Qi Yang (*State Key Lab of Optical Communication Technology and Networks, China*);

14:00 Programmable All-fiber Structured Optical Signal
invited Processing for Flexible Optical Networks
Ming Tang (*Huazhong University of Science and Technology (HUST), China*); *Ruoxu Wang* (*Huazhong University of Science and Technology (HUST), China*); *Hailiang Zhang* (*Huazhong University of Science and Technology (HUST), China*); *Zhiyong Zhao* (*Huazhong University of Science and Technology (HUST), China*); *Songnian Fu* (*Huazhong University of Science and Technology (HUST), China*); *Perry Ping Shum* (*Nanyang Technological University, Singapore*);

14:20 Polarization Demultiplexing in Stokes Space for Co-
invited herent Optical Fiber Communications
Xingwen Yi (*University of Electronic Science and Technology of China, China*); *Zhenming Yu* (*University of Electronic Science and Technology of China, China*); *Qi Yang* (*State Key Lab of Optical Communication Technology and Networks, China*); *Kun Qiu* (*University of Electronic Science and Technology of China, China*);

14:40 Coherent Detected Temporal Optical Code Division Multiplexing System with High Spectral Efficiency Using Nyquist Pulse Shaping
Lin Chen (*South China Normal University (SCNU), China*); *Xuezhi Hong* (*South China Normal University, China*);

15:00 Chaos Optical Time-domain Reflectometry
invited
Anbang Wang (*Ministry of Education and Shanxi Province, China*); *Xiangyu Dong* (*Ministry of Education and Shanxi Province, China*); *Yuncai Wang* (*Taiyuan University of Technology, China*);

15:20 **Coffee Break**

15:40 Sub-symbol Based Carrier Phase Recovery in CO-OFDM System with Linear Interpolation
Xiaojian Hong (*South China Normal University (SCNU), China*); *Xuezhi Hong* (*South China Normal University, China*); *Sailing He* (*Zhejiang University, China*);

16:00 Phase-conjugated Twin Waves for Optical OFDM Transmissions
Dengke Zeng (*University of Electronic Science and Technology of China, China*); *Xingwen Yi* (*University of Electronic Science and Technology of China, China*); *Zhenming Yu* (*University of Electronic Science and Technology of China, China*); *Jing Zhang* (*University of Electronic Science and Technology of China, China*); *Kun Qiu* (*University of Electronic Science and Technology of China, China*);

16:20 SSBI Cancellation for DD-OFDM Signal
Xuebing Zhang (*Jinan University, China*); *Jianping Li* (*Jinan University, China*); *Zhaohui Li* (*Jinan University, China*);

16:40 invited Quantum Cascade Lasers for Free Space Communications
Qi Jie Wang (*Nanyang Technological University, Singapore*);

Session 2P0
Poster Session 3

Tuesday PM, August 26, 2014
14:00 PM - 17:00 PM
Room FOYER

1 A Wideband Wide-angle Polarization-insensitive Metamaterial Absorber
Peng Cheng Zhang (*University of Electronic Science and Technology of China, China*); *Xian Qi Lin* (*University of Electronic Science and Technology of China, China*); *Fei Cheng* (*University of Electronic Science and Technology of China, China*); *Rui Shen* (*University of Electronic Science and Technology of China, China*); *Yong Fan* (*University of Electronic Science and Technology of China, China*);

2 Design and Analysis of a Wideband Metamaterial Absorber Applied to Radome
Zhiwen Mao (*Nanjing University of Aeronautics and Astronautics, China*); *Shaobin Liu* (*Nanjing University of Aeronautics and Astronautics, China*); *Xiang-Kun Kong* (*Nanjing University of Aeronautics and Astronautics, China*); *Bo-Rui Bian* (*Nanjing University of Aeronautics and Astronautics, China*); *Beiyin Wang* (*Nanjing University of Aeronautics and Astronautics, China*); *Lin Chen* (*Nanjing University of Aeronautics and Astronautics, China*);

3 Preliminary Experimental Results along a Horizontal Path for Adaptive Rate-controlled FSO
Changqi Yang (*Xi'an Shiyou University, China*); *Juan Zhao* (*Xi'an Shiyou University, China*); *Anqi Liu* (*Hubei University, China*);

4 A Transmission-typed Broadband Absorber
Hai-Ming Li (*Nanjing University of Aeronautics and Astronautics, China*); *Shaobin Liu* (*Nanjing University of Aeronautics and Astronautics, China*); *Hai Feng Zhang* (*Nanjing University of Aeronautics and Astronautics, China*); *Xiang-Kun Kong* (*Nanjing University of Aeronautics and Astronautics, China*);

5 Realization of XOR and OR Logic Gate with One Configuration in the Two-dimensional Photonic Crystals
Yuchi Jiang (*Nanjing University of Aeronautics and Astronautics, China*); *Shaobin Liu* (*Nanjing University of Aeronautics and Astronautics, China*); *Hai Feng Zhang* (*Nanjing University of Aeronautics and Astronautics, China*); *Xiang-Kun Kong* (*Nanjing University of Aeronautics and Astronautics, China*);

6 Efficient Localization of Terahertz Waves within a Gradient Dielectric-filled Metallic Grating
Wenyu Zhao (*Harbin Institute of Technology, China*); *Dongquan Ju* (*Harbin Institute of Technology, China*); *Yongyuan Jiang* (*Harbin Institute of Technology, China*);

7 Nonreciprocal Self-collimation Transmission in Two-dimensional Gyromagnetic Photonic Crystals
Qing-Bo Li (*Huaiyin Normal University, China*); *Zhen Li* (*Nanjing University, China*); *Rui-Xin Wu* (*Nanjing University, China*);

8 The Effect of Structural Parameters on Terahertz Quantum Cascade Lasers
Norihiko Sekine (*National Institute of Information and Communications Technology, Japan*); *Iwao Hosako* (*National Institute of Information and Communications Technology, Japan*);

9 Low Reflectance GaAs Nano-cones Fabricated by Colloidal Lithography for Solar Cells
Nan Liu (*Zhejiang University, China*); *Yu Hu* (*Zhejiang University, China*); *Jian-Jun He* (*Zhejiang University, China*);

10 Experimental Analysis of Thin Graphite Periodic Structures in the THz Band
Margherita Patrizia Maria Colleoni (*Universitat Politecnica de Valencia, Spain*); *Borja Vidal Rodriguez* (*Universitat Politecnica de Valencia, Spain*);

11 Label-free Multiscale Multiview and Multiwavelength Whole Body Photoacoustic Tomography of Small Animals in Vivo
Jeesu Kim (*Pohang University of Science and Technology, Korea*); *Mansik Jeon* (*Pohang University of Science and Technology, Korea*); *Chulhong Kim* (*Pohang University of Science and Technology, Korea*);

12 Analysis, Design and Simulation of a Compact Wide Band VHF High Power Tubular Band Pass Filter
Zohre Pourgholamhossein (*Isfahan University of Technology (IUT), Iran*); *Gholamreza Askari* (*Isfahan University of Technology (IUT), Iran*); *Hamid Mirmohammad Sadeghi* (*Isfahan University of Technology (IUT), Iran*); *Mehdi Fadaei* (*Isfahan University of Technology (IUT), Iran*);

13 Analysis, Design and Implementation of a Broadband Coaxial-to-microstrip Transition for UWB Radars
Gholamreza Askari (*Isfahan University of Technology (IUT), Iran*); *Mahmoud Kamarei* (*University of Tehran, Iran*); *Mahmoud Shahabadi* (*University of Tehran, Iran*); *Hamid Mirmohammad Sadeghi* (*Isfahan University of Technology (IUT), Iran*);

14 A Broadband UHF RFID Tag Antenna with a Novel T-matching Network
Zhibin He (*South China Normal University, China*); *Te Pan* (*South China Normal University, China*); *Hui Liu* (*South China Normal University, China*); *Yuan Zhang* (*South China Normal University, China*); *Sailing He* (*Zhejiang University, China*);

15 Capacitively Coupled-fed Electrically Small Loop Antenna with High Efficiency for WiFi Application
Qingchong Liu (*Zhejiang University, China*); *Yufeng Yu* (*China Jiangnan Electronics Communication Institute, China*); *Qi Liu* (*Zhejiang University, China*);

16 25 G/s Passive Current Board Design of PRBS Generator
Chih-Wei Yu (*National Kaohsiung University of Applied Sciences, Taiwan, R.O.C.*); *Jia-Jin Wu* (*National Kaohsiung University of Applied Sciences, Taiwan, R.O.C.*); *C. L. Chiu* (*National Kaohsiung University of Applied Sciences, Taiwan, R.O.C.*); *Jau-Ji Jou* (*National Kaohsiung University of Applied Sciences, Taiwan, R.O.C.*); *Tien-Tsorng Shih* (*National Kaohsiung University of Applied Sciences, Taiwan*);

17 A Quasi-hexagon Shaped Band-stop FSS in Wideband RCS Reduction
Peng Cheng Zhang (*University of Electronic Science and Technology of China, China*); *Xian Qi Lin* (*University of Electronic Science and Technology of China, China*); *Fei Cheng* (*University of Electronic Science and Technology of China, China*); *Rui Shen* (*University of Electronic Science and Technology of China, China*); *Yong Fan* (*University of Electronic Science and Technology of China, China*);

18 A Spiral Antenna with Integrated Planar Feeding Structure
Hui-Fen Huang (*South China University of Technology, China*); *Zonglin Lv* (*South China University of Technology, China*); *Junfeng Wu* (*South China University of Technology, China*);

19 A Novel Compact UWB Antenna with Triple Band-notched Characteristics
Lin Chen (*Nanjing University of Aeronautics and Astronautics, China*); *Shaobin Liu* (*Nanjing University of Aeronautics and Astronautics, China*); *Xiang-Kun Kong* (*Nanjing University of Aeronautics and Astronautics, China*); *Bo-Rui Bian* (*Nanjing University of Aeronautics and Astronautics, China*); *Zhiwen Mao* (*Nanjing University of Aeronautics and Astronautics, China*);

20 Quasi-coherent Noise Jamming Based on Interrupted-sampling and Pseudo-random Serials Phase-modulation
Ning Tai (*National University of Defense Technology, China*); *Yu-Jian Pan* (*National University of Defense Technology, China*); *Deping Zhang* (*National University of Defense Technology, China*); *Chao Wang* (*National University of Defense Technology, China*); *Naichang Yuan* (*National University of Defense Technology, China*);

21 Validation Analysis and Test of Semiconductor Device Simulator GSRES
Yong Li (*Northwest Institute of Nuclear Technology, China*); *Gong Ding* (*Northwest Institute of Nuclear Technology, China*); *Haiyan Xie* (*Northwest Institute of Nuclear Technology, China*); *Chun Xuan* (*Northwest Institute of Nuclear Technology, China*); *Hongfu Xia* (*Northwest Institute of Nuclear Technology, China*); *Jianguo Wang* (*Northwest Institute of Nuclear Technology, China*);

22 A Triple-band Planar Inverted-F Antenna for WLAN Application
Hui-Fen Huang (*South China University of Technology, China*); *Yuanhua Hu* (*South China University of Technology, China*);

23 Radiation from Microstrip Patch Antennas Located on Elliptical Surfaces
Rafal Lech (*Gdansk University of Technology, Poland*); *Adam Kusiek* (*Gdansk University of Technology, Poland*); *Wojciech Marynowski* (*Gdansk University of Technology, Poland*);

24 Nonuniform Cylindrical Ferrite Coupled Line Junction
Adam Kusiek (*Gdansk University of Technology, Poland*); *Wojciech Marynowski* (*Gdansk University of Technology, Poland*); *J. Mazur* (*Gdansk University of Technology, Poland*);

25 Rigorous Analysis of Multilayered Elliptical Striplines
Adam Kusiek (*Gdansk University of Technology, Poland*); *Rafal Lech* (*Gdansk University of Technology, Poland*); *Wojciech Marynowski* (*Gdansk University of Technology, Poland*);

26 Dual Polarization Circular Slot Antenna Using Microstrip and CPW Feeding Structures
Wojciech Marynowski (*Gdansk University of Technology, Poland*); *Adam Kusiek* (*Gdansk University of Technology, Poland*); *Rafal Lech* (*Gdansk University of Technology, Poland*);

27 The Investigation of the Performance of Crossovers Placed on Curved Surfaces
Wojciech Marynowski (*Gdansk University of Technology, Poland*); *Adam Kusiek* (*Gdansk University of Technology, Poland*); *Rafal Lech* (*Gdansk University of Technology, Poland*);

28 Design and Implementation of a New One Layer Microstrip Antenna Array with CSC2 Pattern for SSR
Mohsen Abdolahi (*Isfahan University of Technology (IUT), Iran*); *Gholamreza Askari* (*Isfahan University of Technology (IUT), Iran*); *Hamid Mirmohammad Sadeghi* (*Isfahan University of Technology (IUT), Iran*);

29 A Simple Minimized Polarization Reconfigurable Slot Antenna
Maziar Hedayati (*Iran University of Science and Technology, Iran*); *Mohsen Abdolahi* (*Isfahan University of Technology (IUT), Iran*); *Gholamreza Askari* (*Isfahan University of Technology (IUT), Iran*); *Hamid Mirmohammad Sadeghi* (*Isfahan University of Technology (IUT), Iran*);

30 Microwave Radiation Interferometry High Resolution Reconstruction Based on Mixed Orthogonal Basis
Chao Song (*East China Jiaotong University, China*); *Lu Zhu* (*East China Jiaotong University, China*); *Yuanyuan Liu* (*East China Jiaotong University, China*); *Suhua Chen* (*East China Jiaotong University, China*);

31 Development of DC Current Distribution Mapping System for Solar Panels Using an HTS-SQUID Gradiometer
Shohei Kasuya (*Okayama University, Japan*); *Kohei Tanaka* (*Okayama University, Japan*); *Mohd Mawardi Saari* (*Okayama University, Japan*); *Kenji Sakai* (*Okayama University, Japan*); *Toshihiko Kiwa* (*Okayama University, Japan*); *Keiji Tsukada* (*Okayama University, Japan*);

32 Highly Sensitive Detection Method for Rotating Sample Magnetometer Using HTS-SQUID
Naohiro Okamoto (*Okayama University, Japan*); *Yuta Watanabe* (*Okayama University, Japan*); *Mohd Mawardi Saari* (*Okayama University, Japan*); *Kenji Sakai* (*Okayama University, Japan*); *Toshihiko Kiwa* (*Okayama University, Japan*); *Keiji Tsukada* (*Okayama University, Japan*);

33 Surface Effect of the Two-dimensional Photonic Crystal on Imaging Property
Yuanwei Tong (*University of Shanghai for Science and Technology, China*); *Peng Fang Liu* (*University of Shanghai for Science and Technology, China*); *Zao Jie Zhu* (*University of Shanghai for Science and Technology, China*);

34 Measurement of Moisture Content Using HTS-SQUID Magnetometer
Toki Kusaka (*Okayama University, Japan*); *Mohd Mawardi Saari* (*Okayama University, Japan*); *Yuichi Ishihara* (*Okayama University, Japan*); *Yuya Tsukamoto* (*Okayama University, Japan*); *Kenji Sakai* (*Okayama University, Japan*); *Toshihiko Kiwa* (*Okayama University, Japan*); *Keiji Tsukada* (*Okayama University, Japan*);

35 Stereo-SAR Technique without Using Control Points to Estimate Terrain Height
Hsi-Tseng Chou (*Yuan Ze University, Taiwan*); *Shih-Chung Tuan* (*Oriental Institute of Technology, Taiwan*); *Kung-Yu Lu* (*National Taiwan University, Taiwan*);

36 Detection of Selected Chemical Substances by Means of Nuclear Quadrupole Resonance
Miloslav Steinbauer (*Brno University of Technology, Czech Republic*); *Bohumil Kral* (*Prototypa, Czech Republic*); *Ivo Fiala* (*Prototypa, Czech Republic*); *Miroslav Stanek* (*Prototypa, Czech Republic*); *Michal Prochazka* (*Brno University of Technology, Czech Republic*); *Pavel Fiala* (*Brno University of Technology, Czech Republic*); *Jan Seginak* (*Brno University of Technology, Czech Republic*); *Petr Drexler* (*Brno University of Technology, Czech Republic*);

37 Subsurface Imaging 3-D Objects in Multilayered Media by Using Electromagnetic Inverse Scattering Series Method (EISSM)
Jinguo Wang (*University of Electronic Science and Technology of China (UESTC), China*); *Zhiqin Zhao* (*University of Electronic Science and Technology of China, China*); *Zai-Ping Nie* (*University of Electronic Science and Technology of China, China*); *Qing Huo Liu* (*Duke University, USA*);

38 Multi-wavelength Thulium-doped Fiber Laser near 2 μm Based on a Sagnac Loop Filter
Yizhen Wei (*Zhejiang University, China*); *Xiong Yang* (*Zhejiang University, China*);

39 Data Acquisition System for Body-to-body Radio Communication Channel
Hasliza A. Rahim (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Mohd Fareq Bin Abdul Malek* (*University Malaysia Perlis (UniMAP), Malaysia*); *K. K. Goh* (*Universiti Malaysia Perlis, Malaysia*); *V. Ganesan* (*Universiti Malaysia Perlis, Malaysia*); *F. A. A. Fuad* (*Universiti Malaysia Perlis, Malaysia*); *Noor Anida Abu Talib* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Farah Salwani Abdullah* (*Universiti Malaysia Perlis (UniMAP), Malaysia*);

40 Beam Switching Antenna
Lim Wai Leong (*University Malaysia Perlis (UniMAP), Malaysia*); *Fwen Hoon Wee* (*University Malaysia Perlis (UniMAP), Malaysia*); *Mohd Fareq Bin Abdul Malek* (*University Malaysia Perlis (UniMAP), Malaysia*); *Kok Yeow You* (*University Teknologi Malaysia, Malaysia*); *Yeng Seng Lee* (*University Malaysia Perlis (UniMAP), Malaysia*); *Hana Abdull Halim* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Farah Salwani Abdullah* (*Universiti Malaysia Perlis (UniMAP), Malaysia*);

41 A Wideband Metamaterial Absorber Based on Multilayer Rings and Lumped Resistors
Yujie Liu (*Huaqiao University, China*); *Wei Tang* (*Huaqiao University, China*); *Yuehe Ge* (*Huaqiao University, China*);

42 Design of Broadband Dual-polarized Antenna with Inverted L-probe Feed
K. S. Phoo (*Universiti Teknikal Malaysia Melaka (UTeM), Malaysia*); *Mohamad Zoinol Abidin Abd Aziz* (*Universiti Teknikal Malaysia Melaka (UTeM), Malaysia*); *Badrul Hisham Ahmad* (*Universiti Teknikal Malaysia Melaka, Malaysia*); *Mohd Azlishah Othman* (*Universiti Teknikal Malaysia Melaka (UTeM), Malaysia*); *Mohd Kadim Suaidi* (*Universiti Teknikal Malaysia Melaka (UTeM), Malaysia*); *Mohd Fareq Bin Abdul Malek* (*University Malaysia Perlis (UniMAP), Malaysia*);

43 Scrambling Study of Modal Power Distribution in Polygonal Fibers for Exoplanet Detection
Jian Han (*Nanjing Institute of Astronomical Optics & Technology, National Astronomical Observatories, CAS, China*); *Dong Xiao* (*Nanjing Institute of Astronomical Optics & Technology, Chinese Academy of Sciences, China*); *Huiqi Ye* (*Nanjing Institute of Astronomical Optics & Technology, Chinese Academy of Sciences, China*);

44 Self-reconstruction and Rectification of Non-diffracting Beams after Focusing
Lan Liu (*Luohe Medical College, China*); *Haitao Zhang* (*Luohe Medical College, China*); *Pengtie Wu* (*Huaqiao University, China*);

45 An Improved Method of Diagnosis of Failed Elements in Arrays Using Genetic Algorithm
Jing Miao (*University of Electronic Science and Technology of China, China*); *Bo Chen* (*University of Electronic Science and Technology of China, China*); *Wuqiong Luo* (*University of Electronic Science and Technology of China, China*);

46 Design of a C-band Coaxial Cavity Band Pass Filter
Xingxing Du (*University of Electronic Science and Technology of China, China*); *Pu Tang* (*University of Electronic Science and Technology of China, China*); *Bo Chen* (*University of Electronic Science and Technology of China, China*);

47 Three-component Decomposition for Polarimetric SAR Images Based on Coherency Matrix
Yongjun Cai (*University of Chinese Academy of Sciences, China*); *Xiangkun Zhang* (*National Space Science Center, Chinese Academy of Sciences, China*); *Jingshan Jiang* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*);

48 An Improved Model-based Polarimetric Decomposition Preserving Dominant Scattering Characteristics
Yongjun Cai (*University of Chinese Academy of Sciences, China*); *Xiangkun Zhang* (*National Space Science Center, Chinese Academy of Sciences, China*); *Jingshan Jiang* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*);

49 A Method for Pose Estimation of Ship Target from SAR ROI Based on Ellipse Fitting
Xiao Qiang Zhang (*National University of Defense Technology, China*); *Boli Xiong* (*National University of Defense Technology, China*); *Gang Gang Dong* (*National University of Defense Technology, China*); *Gangyao Kuang* (*National University of Defense Technology, China*);

50 Design of a Doherty Power Amplifier for Performance Enhancement
Yang Liu (*Communication University of China, China*); *Huaibao Xiao* (*Communication University of China, China*); *Guizhen Lu* (*Communication University of China, China*);

51 Application of the Method of Fresnel Zone Analysis in Base Station Location Survey
Zhiyuan Song (*China Mobile Group Design Institute Co., Ltd., China*); *Feng Gao* (*China Mobile Group Design Institute Co., Ltd., China*); *Kai He* (*China Mobile Group Design Institute Co., Ltd., China*); *Wentao Zhu* (*China Mobile Group Design Institute Co., Ltd., China*);

52 High-performance Ambipolar Organic Field-effect Transistors Based on Solution-grown TIPS-pentacene Single Crystals
Guobiao Xue (*Zhejiang University, China*); *Congcheng Fan* (*Zhejiang University, China*); *Jiake Wu* (*Zhejiang University, China*); *Shuang Liu* (*Zhejiang University, China*); *Hanying Li* (*Zhejiang University, China*);

53 Large-area Fabrication of Organic Single Crystal Field-effect Transistors via Solution Growth
Shuang Liu (*Zhejiang University, China*); *Congcheng Fan* (*Zhejiang University, China*); *Guobiao Xue* (*Zhejiang University, China*); *Jiake Wu* (*Zhejiang University, China*); *Hanying Li* (*Zhejiang University, China*);

54 Multiband Printed Monopole Antenna Loaded with Slot-type Resonator for WLAN/WiMAX Applications
Kai He (*China Mobile Group Design Institute Co., Ltd., China*); *Feng Gao* (*China Mobile Group Design Institute Co., Ltd, China*); *Zhiyuan Song* (*China Mobile Group Design Institute Co., Ltd., China*); *Wentao Zhu* (*China Mobile Group Design Institute Co., Ltd., China*);

55 A Novel Mutual Coupling Matrix Monitoring Method in Two Dimensional Rectangle Antenna Array
Junhe Zhou (*Tongji University, China*); *Jian Zhang* (*Tongji University, China*); *Hui Wang* (*Tongji University, China*); *Xuefeng Yin* (*Tongji University, China*); *Mei Song Tong* (*Tongji University, China*); *Jian Li* (*Huawei Technologies, China*);

56 Research on Subwavelength Metal-based Waveguide Structures
Wen Zhou (*South China Normal University, China*); *Qilong Tan* (*South China Normal University, China*); *Jieer Lao* (*South China Normal University, China*); *Xu Guang Huang* (*South China Normal University, China*);

57 Plasmon Lasing Action in Gain-assisted Gold Nanoparticle-array-on-film Geometry
Li-Na Shi (*Institute of Microelectronics, Chinese Academy of Science, China*); *Changqing Xie* (*Institute of Microelectronics, Chinese Academy of Sciences, China*);

58 Design and Optimization of Millimeter Wave SPP Devices
Qian Zhang (*Southeast University, China*); *Xiaopeng Shen* (*Southeast University, China*); *Hao Chi Zhang* (*Southeast University, China*); *Tie Jun Cui* (*Southeast University, China*);

59 Multiband THz Metamaterial Absorber Based on Snowflake-type Resonators
Jun Chuan Zhu Ge (*Southeast University, China*); *Di Bao* (*Southeast University, China*); *Xiaopeng Shen* (*Southeast University, China*); *Tie Jun Cui* (*Southeast University, China*);

60 Analysis and Design of Multi-band Absorber with Periodic Three-dimensional Square Ring Units
Guorui Zhang (*University of Electronic Since and Technology of China, China*); *Yang Zhou* (*University of Electronic Since and Technology of China, China*); *Nan Zhang* (*University of Electronic Science and Technology of China, China*); *Pei-Heng Zhou* (*University of Electronic Since and Technology of China, China*); *Hai-Yan Chen* (*University of Electronic Science and Technology of China, China*); *Long-Jiang Deng* (*University of Electronic Science and Technology of China, China*);

61 Metamaterial-based Absorption Optimization of Microwave Magnetic Absorbers
Pei-Heng Zhou (*University of Electronic Since and Technology of China, China*); *Linbo Zhang* (*University of Electronic Science and Technology of China, China*); *Huibin Zhang* (*University of Electronic Science and Technology of China, China*); *Yangqiu Xu* (*University of Electronic Science and Technology of China, China*); *Hai-Yan Chen* (*University of Electronic Science and Technology of China, China*); *Long-Jiang Deng* (*University of Electronic Science and Technology of China, China*);

62 High Gain and High Efficient Antenna
Zui Tao (*Southeast University, China*); *Shuo Liu* (*Southeast University, China*); *Mei Qing Qi* (*Southeast University, China*); *Tie Jun Cui* (*Southeast University, China*);

63 Electromagnetic Scattering Controlling for a Rectangular Groove with High Impedance Surfaces Loading
Dong-Jiao Guo (*University of Electronic Science and Technology of China, China*); *Hai-Yan Chen* (*University of Electronic Science and Technology of China, China*); *Pei-Heng Zhou* (*University of Electronic Since and Technology of China, China*); *Xingxing Huang* (*University of Electronic Science and Technology of China, China*); *Jianliang Xie* (*University of Electronic Science and Technology of China, China*); *Long-Jiang Deng* (*University of Electronic Science and Technology of China, China*);

64 Design and Analysis of 81 to 86 GHz 3-Stages Cascode Low Noise Amplifier with $\boldsymbol{\pi}$-type Matching Network Using 65 nm CMOS Process
Hsuan-Der Yen (*National Tsing Hua University, Taiwan, R.O.C.*); *Yi-Chun Lee* (*National Nano Device Laboratories, Taiwan*); *Guo-Wei Huang* (*National Nano Device Laboratories, Taiwan*); *Fon-Shan Huang* (*National Tsing Hua University, Taiwan, R.O.C.*);

65 A Novel Tri-band Patch Antenna Based on Complementary Triangle Split Ring Resonator Pair
Jian-Gang Liang (*Air Force Engineering University, China*); *Zhi Jie Song* (*Air Force Engineering University, China*); *L. J. Yu* (*Shandong University, China*); *X. F. Zhang* (*Air Force Engineering University, China*);

66 Plasmon Enhanced F-P Lasing from Flower-like ZnO Microsphere
Jitao Li (*Southeast University, China*); *Yi Lin* (*Southeast University, China*); *Chunxiang Xu* (*Southeast University, China*); *Yueyue Wang* (*Southeast University, China*); *Junfeng Lu* (*Southeast University, China*);

67 Electron-Hole Plasma Induced Band Gap Renormalization in ZnO Microlaser Cavities
Jun Dai (*Southeast University, China*); *Chunxiang Xu* (*Southeast University, China*); *Yueyue Wang* (*Southeast University, China*); *Jitao Li* (*Southeast University, China*); *Yi Lin* (*Southeast University, China*);

68 Electromagnetic Force in the Complex Quaternion Space
Zi-Hua Weng (*Xiamen University, China*);

69 Computing Illuminated Area and Scattering for Double-bounce for SAR Manmade Target's Characteristic Modeling
Kai Yang (*National University of Defense Technology, China*); *Kefeng Ji* (*National University of Defense Technology, China*); *Huanxin Zou* (*National University of Defense Technology, China*);

70 Target Angular Scintillation Measurement of Wideband Range Comparison Monopulse Radar in Anechoic Chamber
Yang Bai (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Chao Ning* (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Ming Jin* (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Chao Gao* (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Yanjie Cui* (*Science and Technology on Electromagnetic Scattering Laboratory, China*);

71 Effective Implementation of the CFS-PML Using DSP Techniques for Truncating Dispersive Medium FDTD Domains
Naixing Feng (*Xiamen University, China*); *Yongqing Yue* (*Xiamen University, China*); *Chunhui Zhu* (*Xiamen University, China*); *Qinghuo Liu* (*Duke University, USA*);

72 Continuously Moving Target Simulator Design
Deping Zhang (*National University of Defense Technology, China*); *Chao Wang* (*National University of Defense Technology, China*); *Chang Zhu* (*National University of Defense Technology, China*); *Naichang Yuan* (*National University of Defense Technology, China*);

73 Accurate Statistical Modeling Method for Dynamic RCS
Ya-Qiang Zhuang (*Air Force Engineering University, China*); *Chen-Xin Zhang* (*Air Force Engineering University, China*); *Xiao-Kuan Zhang* (*Air Force Engineering University, China*);

74 A Method for Predicting Far Field Radar Cross-section from Near Field Measurements on Cylindrical Scanning Mode
Chao Gao (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *J. W. Chen* (*Communication University of China, China*); *Yang Bai* (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Ming Jin* (*Science and Technology on Electromagnetic Scattering Laboratory, China*);

75 Relationships between Surface Wave Attenuation and the Reflection Properties of Thin Surface Wave Absorbing Layer
Hai-Yan Chen (*University of Electronic Science and Technology of China, China*); *Li-Juan Lu* (*University of Electronic Science and Technology of China, China*); *Dong-Jiao Guo* (*University of Electronic Science and Technology of China, China*); *Haipeng Lu* (*University of Electronic Science and Technology of China, China*); *Pei-Heng Zhou* (*University of Electronic Since and Technology of China, China*); *Jianliang Xie* (*University of Electronic Science and Technology of China, China*); *Long-Jiang Deng* (*University of Electronic Science and Technology of China, China*);

76 The RF Immunity Characteristics Analysis of SSD Performance due to Wireless Communications Emission in Proximity
Han-Nien Lin (*Feng-Chia University, Taiwan, R.O.C.*); *Po-Yan Wang* (*Feng-Chia University, Taiwan, R.O.C.*); *Hung-Yun Tsai* (*Feng-Chia University, Taiwan, R.O.C.*); *Yung-Chi Tang* (*M.O.E.A, Taiwan, R.O.C.*);

77 Modified 2D-Luneburg Lens Using Metamaterials
Haibing Chen (*Southeast University, China*); *Qiang Cheng* (*Southeast University, China*); *Aihua Huang* (*Southeast University, China*); *Junyan Dai* (*Southeast University, China*); *Huiying Lu* (*Southeast University, China*);

78 A Simple High-resolution Imaging System Made of Metamaterials
Shuo Ge (*Southeast University, China*); *Wei Xiang Jiang* (*Southeast University, China*);

79 A Metasurface for RCS Reduction in X Band
Di Sha Dong (*Southeast University, China*); *Qiang Cheng* (*Southeast University, China*); *Jie Chen* (*Southeast University, China*); *Jie Zhao* (*Southeast University, China*); *Li Hua Gao* (*Southeast University, China*);

80 Polarization Conversion and Splitting by Using Thin Reflective Anisotropic Metasurface
Gui Zhen Wang (*Southeast University, China*); *Huifeng Ma* (*Southeast University, China*); *Gu Sheng Kong* (*Southeast University, China*);

81 Variable Gravitational Mass in the Electromagnetic Field Described with the Complex Quaternion
Zi-Hua Weng (*Xiamen University, China*);

82 Study on Barium Strontium Titanium (BST)-based Metamaterial
Jun Yuan (*Zhejiang University, China*); *Ge Yin* (*Zhejiang University, China*); *Guan-Bo Yin* (*Zhejiang University, China*); *Y. G. Ma* (*Zhejiang University, China*);

83 Near-infrared Virtual Intraoperative Surgical Photoacoustic Microscopy for Needle Image Guiding Surgery
Changho Lee (*Pohang University of Science and Technology, Korea*); *Mansik Jeon* (*Pohang University of Science and Technology, Korea*); *Jihoon Kim* (*Kyungpook National University, South Korea*); *Chulhong Kim* (*Pohang University of Science and Technology, Korea*);

84 Propagation of Surface Plasmons at Semiconductor/Dielectric Interfaces
Dalibor Blažek (*VŠB — Technical University of Ostrava, Czech Republic*); *Michael Cada* (*Dalhousie University, Canada*); *Jaromír Pištora* (*VŠB — Technical University of Ostrava, Czech Republic*);

85 The Roles of Different NiO Compact Blocking Layers in P-type Sensitized Solar Cells
Huan Wang (*Huazhong University of Science and Technology, China*); *Xianwei Zeng* (*Huazhong University of Science and Technology, China*); *Wenjun Zhang* (*Huazhong University of Science and Technology, China*); *Wei Chen* (*Huazhong University of Science and Technology, China*);

86 Performance Analysis of Photonic Phase Shift Network for OAM-beam Antenna Array Receiver
Jian Jian (*Sun Yat-sen University, China*); *Hui Chen* (*Sun Yat-sen University, China*); *Yujie Chen* (*Sun Yat-sen University, China*); *Yanfeng Zhang* (*Sun Yat-sen University, China*); *Siyuan Yu* (*Sun Yat-sen University, China*);

Session 3A1
FocusSession: Sesquicentennial Commemoration Session for Maxwell's Equations 1

Wednesday AM, August 27, 2014

Room 1

Organized by Weng Cho Chew

Chaired by Weng Cho Chew

08:00 keynote Transformation Optics — Part of Maxwell's Enduring Legacy
John B. Pendry (*Imperial College London, UK*);

08:40 Representing Maxwell's Equations in Vector Diagram Form
keynote
Donald R. Wilton (*University of Houston, USA*); *Robert Dudley Nevels* (*Texas A&M University, USA*); *Kuo-Ho Yang* (*St. Ambrose University, USA*);

09:20 Maxwell's Equations in the Daily Practice of Near-field Techniques
keynote
Jean-Charles Bolomey (*University Paris-Sud and Supelec, France*);

10:00 **Coffee Break**

10:20 Casimir-Lifshitz Forces: Designer Quantum Fluctuations, Quantum Levitation and the Future of Nanomachines
keynote
Federico Capasso (*Harvard University, USA*);

11:00 Reflections on Maxwell's Treatise
keynote
Arthur D. Yaghjian (*Electromagnetics Research Consultant, USA*);

11:40 The 150th Birthday of Maxwell Equations
keynote
Giorgio Franceschetti (*University of Naples "Federico II", Italy*);

Session 3A2
MS-2.1: Focus Session on Microwave Photonics Components and Systems

Wednesday AM, August 27, 2014

Room 2

Organized by Cyril C. Renaud, Chao Wang

Chaired by Chao Wang, Atsushi Kanno

08:00 Ultra-high-speed Fiber-wireless Transport Technology
invited
Atsushi Kanno (*National Institute of Information and Communications Technology, Japan*); *Tetsuya Kawanishi* (*National Institute of Information and Communications Technology, Japan*);

08:20 Delay-stabilized Optical Fiber Link for Frequency and Signal Transfer
invited
Yitang Dai (*Beijing University of Posts and Telecommunications, China*); *Anxu Zhang* (*Beijing University of Posts and Telecommunications, China*); *Zhongze Jiang* (*Beijing University of Posts and Telecommunications, China*); *Zhongle Wu* (*Beijing University of Posts and Telecommunications, China*); *Feifei Yin* (*Beijing University of Posts and Telecommunications, China*); *Jianqiang Li* (*Beijing University of Posts and Telecommunications, China*); *Kun Xu* (*Beijing University of Posts and Telecommunications, China*);

08:40 Fully Monolithic Photonic Integrated Circuits for Microwave and Millimeter Wave Signal Generation
invited
Guillermo Carpintero (*Universidad Carlos III de Madrid, Spain*); *K. Balakier* (*University College London, UK*); *C. Gordon* (*Universidad Carlos III de Madrid, Spain*); *G. Kervella* (*III-V Lab, France*); *R. Guzman* (*Universidad Carlos III de Madrid, Spain*); *A. Jimenez* (*Universidad Carlos III de Madrid, Spain*); *Martyn J. Fice* (*University College London, UK*); *M. Chitoui* (*III-V Lab, France*); *Frederic Van Dijk* (*III-V Lab, France*); *Xaveer J. M. Leijtens* (*Eindhoven University of Technology, The Netherlands*);

09:00 Dual-wavelength Semiconductor Laser with Two Asymmetric Phase-shifts
invited
Xiangfei Chen (*Nanjing University, China*);

09:20 Microwave Photonic Frequency Mixer for Distributed Antenna System
invited
Shilong Pan (*Nanjing University of Aeronautics and Astronautics, China*); *Zhenzhou Tang* (*Nanjing University of Aeronautics and Astronautics, China*);

09:40 Advances in Photonic-assisted Microwave Signals Measurement, Detection, and Analysis
invited
Xihua Zou (*Southwest Jiaotong University, China*);

10:00 **Coffee Break**

10:20 Linear Optical Filtering Techniques for Optical Signal Processing
invited
Ming Li (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Reza Ashrafi* (*Institut National de la Recherche Scientifique-Énergie, Matériaux et Télécommunications (INRS-EMT), Canada*); *Ninghua Zhu* (*Institut National de la Recherche Scientifique-Énergie, Matériaux et Télécommunications (INRS-EMT), Canada*); *Tae-Jung Ahn* (*Chosun University, Korea*); *Sophie Larochelle* (*Universite Laval, Canada*); *Jose Azana* (*Institut National de la Recherche Scientifique-Énergie, Matériaux et Télécommunications (INRS-EMT), Canada*);

10:40 Novel High Performance Microwave Photonic Phase Shifters Based on Stimulated Brillouin Scattering
invited
Mattia Pagani (*University of Sydney, Australia*); *Benjamin J. Eggleton* (*University of Sydney, Australia*); *David Marpaung* (*University of Sydney, Australia*);

11:00 Terahertz Communications Based on Coherent Photonics
keynote
Tadao Nagatsuma (*Osaka University, Japan*); *Yasuyuki Yoshimizu* (*Osaka University, Japan*); *Yu Yasuda* (*Osaka University, Japan*); *Kazuki Oogimoto* (*Osaka University, Japan*); *Shogo Horiguchi* (*Osaka University, Japan*); *Yusuke Minamikata* (*Osaka University, Japan*); *Shintaro Hisatake* (*Osaka University, Japan*); *Kazutoshi Kato* (*Kyushu University, Japan*);

11:30 Using Single Dual-drive Modulator Generating Arbitrary Waveforms and UWB Signal
invited
Bo Dai (*Heriot-Watt University, UK*); *Zhensen Gao* (*Alcatel-Lucent Shanghai Bell, China*); *Satoshi Shimizu* (*National Institute of Information and Communications Technology (NICT), Japan*); *Naoya Wada* (*National Institute of Information and Communications Technology (NICT), Japan*); *Xu Wang* (*Heriot-Watt University, UK*);

11:50 Photonic Time Stretch Channelizer for Broadband Microwave Spectrum Sensing
invited
Chao Wang (*University of Kent, UK*);

12:10 Time-frequency Manipulation in Real-time Instruments
invited
Mohammad H. Asghari (*University of California, Los Angeles, USA*); *Jacky Chan* (*University of California, Los Angeles, USA*); *Bahram Jalali* (*University of California at Los Angeles, USA*);

Session 3A3a
MS-1.7: Light Emtting Diodes

Wednesday AM, August 27, 2014

Room 3

Organized by Mario Dagenais, Nelson Tansu, Haiyan Ou

Chaired by Haiyan Ou, Mario Dagenais

08:00 Fluorescent SiC for White Light-emitting Diodes
invited
Mikael Syvajarvi (*Linkoping University, Sweden*);

08:20 Plasmon Enhanced Green GaN Light-emitting Diodes
invited
Haiyan Ou (*Technical University Denmark, Denmark*); *Ahmed Fadil* (*Technical University Denmark, Denmark*); *Daisuke Iida* (*Technical University Denmark, Denmark*); *Yuntian Chen* (*Huazhong University of Science and Technology, China*); *Motoaki Iwaya* (*Meijo University, Japan*); *Tetsuya Takeuchi* (*Meijo University, Japan*); *Satoshi Kamiyama* (*Meijo University, Japan*); *Isamu Akasaki* (*Meijo University, Japan*);

08:40 Future Solid State Lighting Based on Light Emitting Laser Diodes
invited
Paul Michael Petersen (*Technical University of Denmark, Denmark*); *Ole Bjarlin Jensen* (*Technical University of Denmark, Denmark*);

09:00 Plasmonic Control of Quantum-well Luminescence for Enhanced Efficiency and Beam Shaping
invited
Roberto Paiella (*Boston University, USA*);

09:20 Physics of High Efficiency and Efficiency-droop in III-Nitride Light-emitting Diodes
invited
Nelson Tansu (*Lehigh University, USA*); *Chee-Keong Tan* (*Lehigh University, USA*); *Peifen Zhu* (*Lehigh University, USA*); *Wei Sun* (*Lehigh University, USA*);

09:40 Analysis of Light Extraction Efficiency Enhancement in GaN-based LEDs with Self-assembly Approach
Peifen Zhu (*Lehigh University, USA*); *Wei Sun* (*Lehigh University, USA*); *Chee-Keong Tan* (*Lehigh University, USA*); *Nelson Tansu* (*Lehigh University, USA*);

10:00 **Coffee Break**

10:20 Ion Implantation Technology for the Fabrication of GaN-based LEDs
invited
Shoou-Jinn Chang (*National Cheng Kung University, Taiwan, R.O.C.*); *J. K. Sheu* (*National Cheng Kung University, Taiwan*); *W. C. Lai* (*National Cheng Kung University, Taiwan*);

10:40 Study of Defects in InGaN
Nazir A. Naz (*Federal Urdu University of Arts, Science and Technology Islamabad, Pakistan*); *M. Imran* (*Federal Urdu University of Arts, Science and Technology Islamabad, Pakistan*); *Akbar Ali* (*Quaid-i-Azam University, Pakistan*);

Session 3A3b
MS-1.6: Organic Light Emitting Diodes 1

Wednesday AM, August 27, 2014

Room 3

Organized by Jwo-Huei Jou, Jiun-Haw Lee

Chaired by Jiun-Haw Lee

11:00 Universal Bipolar Host Materials and Exciplex for White OLEDs
Ken-Tsung Wong (*National Taiwan University, Taiwan*);

11:20 High Performance, Single Phosphorescence Dopant, Hybrid White or Multi-color OLEDs Based on Platinum Complexes and a New Host Material
Anurach Poloek (*TIGP, Academia Sinica, Taiwan*); *Chieh Wang* (*Institute of Chemistry, Academia Sinica, Taiwan*); *Chao-Tsen Chen* (*National Taiwan University, Taiwan*); *Chin-Ti Chen* (*Institute of Chemistry, Academia Sinica, Taiwan*);

11:40 Device Engineering for High Efficiency Blue Phosphorescence Organic Light-emitting Diode
Tien-Lung Chiu (*Yuan Ze University, Taiwan*); *Hsin-Jen Chen* (*Yuan Ze University, Taiwan, R.O.C.*); *Man-Kit Leung* (*National Taiwan University, Taiwan*); *Yu-Hsuan Hsieh* (*National Taiwan University, Taiwan*);

Session 3A4
FocusSession.SC2: Tunable and Reconfigurable Metamaterials and Plasmonics 2

Wednesday AM, August 27, 2014

Room 4

Organized by Yongmin Liu, Ranjan Singh

Chaired by Ranjan Singh

08:00 invited Probing Local Conductivity at Atomic-scale Graphene Defects by Near-field Plasmon Interferometry
Jianing Chen (*Institute of Physics, Chinese Academy of Science, China*); *M. L. Nesterov* (*CSIC-Universidad de Zaragoza, Spain*); *A. Yu. Nikitin* (*CIC nanoGUNE Consolider, Spain*); *S. Thongrattanasiri* (*IQFR-CSIC, Spain*); *P. Alonso-Gonzalez* (*CIC nanoGUNE Consolider, Spain*); *T. M. Slipchenko* (*CSIC-Universidad de Zaragoza, Spain*); *M. Ostler* (*Universität Erlangen-Nürnberg, Germany*); *Th. Seyller* (*Universität Erlangen-Nürnberg, Germany*); *I. Crassee* (*Université de Geneve, Switzerland*); *F. Koppens* (*Mediterranean Technology Park, Spain*); *L. Martin-Moreno* (*CSIC-Universidad de Zaragoza, Spain*); *J. G. Abajo* (*IQFR-CSIC, Spain*); *A. B. Kuzmenko* (*Université de Geneve, Switzerland*); *R. Hillenbrand* (*CIC nanoGUNE Consolider, Spain*);

08:20 Strong Confinement of Flexible Graphene Plasmons and Its Application
Jian Wang (*Southeast University, China*); *Wei Bing Lu* (*Southeast University, China*); *Xiaobing Li* (*Southeast University, China*); *J. Hu* (*Southeast University, China*); *Xiaofeng Gu* (*Southeast University, China*);

08:40 invited Enhancing Spontaneous Emission Rates of Molecules Using Nanopatterned Multilayer Hyperbolic Metamaterials
Dylan Lu (*University of California, USA*); *Jimmy J. Kan* (*University of California, USA*); *Eric E. Fullerton* (*University of California, USA*); *Zhaowei Liu* (*University of California, USA*);

09:00 invited Nonlinear Terahertz Transmission Change with Controllable Graphene Devices
Bumki Min (*KAIST, South Korea*);

09:20 invited Graphene Metamaterials and Couplers
Ilya V. Shadrivov (*Australian National University, Australia*); *Daria A. Smirnova* (*Australian National University, Australia*); *Ivan V. Iorsh* (*National Research University for Information Technology, Mechanics and Optics, Russia*); *Andrey V. Gorbach* (*University of Bath, UK*); *Ivan S. Mukhin* (*National Research University for Information Technology, Mechanics and Optics, Russia*); *Pavel A. Belov* (*National Research University for Information Technology, Mechanics and Optics, Russia*); *Yuri S. Kivshar* (*Australian National University, Australia*);

09:40 Single Nanoparticle Couplers for Plasmonic Nanocircuits
Shunping Zhang (*Wuhan University, China*); *Hongxing Xu* (*Institute of Physics, Chinese Academy of Sciences, China*);

10:00 **Coffee Break**

10:20 invited Active THz Plasmonic Metamaterials: From Metals to Superconductors
Ranjan Singh (*Nanyang Technological University, Singapore*);

10:40 invited Excitation of Surface Plasmon Polaritons at Terahertz Superconducting Hole Array
J. B. Wu (*Nanjing University, China*); *X. Zhang* (*Nankai University, China*); *Biaobing Jin* (*Nanjing University, China*); *H. Liu* (*Nankai University, China*); *Y. H. Chen* (*Institute of Physics, Chinese Academy of Science, China*); *Z. Y. Li* (*Institute of Physics, Chinese Academy of Science, China*); *L. Kang* (*Nanjing University, China*); *W. W. Xu* (*Nanjing University, China*); *J. Chen* (*Nanjing University, China*); *P. H. Wu* (*Nanjing University, China*);

11:00 Modular Assembly of Optical Nanocircuits
Jinwei Shi (*Beijing Normal University, China*);

Session 3A5
FocusSession.SC2: Microwave Metamaterials 1

Wednesday AM, August 27, 2014

Room 5

Organized by Tie Jun Cui, Yang Hao

Chaired by Tie Jun Cui, Baile Zhang

08:00 invited Microwave Metamaterials: Promises, Realities and Future Challenges
Raj Mittra (*The Pennsylvania State University, USA*);

08:20 invited Lightweight Broadband Microwave Absorber Designed with Multilayer Metamaterial Sheets
Zuo Jia Wang (*Zhejiang University, China*); *Hongsheng Chen* (*Zhejiang University, China*);

08:40 invited Arbitrary Control of Electromagnetic Flux in Inhomogeneous Anisotropic Zero-index Media
Jie Luo (*Soochow University, China*); *Yun Lai* (*Soochow University, China*); *C. T. Chan* (*The Hong Kong University of Science and Technology, China*);

09:00 invited A New Type of Spoof Plasmonic Waveguide
Zhen Gao (*Nanyang Technological University, Singapore*); *Fei Gao* (*Nanyang Technological University, Singapore*); *Baile Zhang* (*Nanyang Technological University, Singapore*);

09:20 invited Electromagnetic Cloaks Made of Isotropic Materials
Yichao Liu (*Zhejiang University, China*); *Yungui Ma* (*Zhejiang University, China*);

09:40 invited Electric and Magnetic Localized Surface Plasmons on Textured Metallic Particles
Xiaopeng Shen (*Southeast University, China*); *Tie Jun Cui* (*Southeast University, China*); *Paloma A. Huidobro* (*Universidad Autonoma de Madrid, Spain*); *Francisco J. Garcia-Vidal* (*Universidad Autonoma de Madrid, Spain*);

10:00 **Coffee Break**

10:20 invited Frequency Dependant Microwave Properties of Aramid Paper Based Honeycomb Substrate Impregnated with Carbonaceous Solution
Lie Liu (*National University of Singapore, Singapore*); *C. Z. Fan* (*Kuang-Chi Institute of Advanced Technology, China*); *Z. Y. Zhao* (*Kuang-Chi Institute of Advanced Technology, China*); *G. X. Xu* (*Kuang-Chi Institute of Advanced Technology, China*); *R. P. Liu* (*Kuang-Chi Institute of Advanced Technology, China*);

10:40 invited Slowing Microwaves with Deeply Subwavelength Metamaterial Waveguides
Nadege Kaina (*ESPCI ParisTech, France*); *Mathias Fink* (*ESPCI ParisTech & CNRS, France*); *Geoffroy Lerosey* (*ESPCI ParisTech & CNRS, France*);

11:00 invited Dual-band Hybrid Metacomposites Containing Ferromagnetic Microwire Arrays
Y. Luo (*University of Bristol, UK*); *Hua-Xin Peng* (*University of Bristol, UK*); *Faxiang Qin* (*National Institute for Materials Science, Japan*); *Mihail Ipatov* (*Universidad del Pais Vasco, Spain*); *Valentina Zhukova* (*Universidad del Pais Vasco, Spain*); *Arkady P. Zhukov* (*Universidad del Pais Vasco, Spain*); *Julian Gonzalez* (*Universidad del Pais Vasco, Spain*);

11:20 invited Integrated Circuits Based on Spoof Surface Plasmon Polaritons
Hao Chi Zhang (*Southeast University, China*); *Xiaopeng Shen* (*Southeast University, China*); *Shuo Liu* (*Southeast University, China*); *Tie Jun Cui* (*Southeast University, China*);

11:40 Measurement of Enhanced Radiation Force on a Parallel Metallic-plate System in the Microwave Regime
invited
Zhi Hong Hang (*Soochow University, China*); *Z. Marcet* (*The Hong Kong University of Science and Technology, China*); *S. B. Wang* (*The Hong Kong University of Science and Technology, China*); *C. T. Chan* (*The Hong Kong University of Science and Technology, China*); *H. B. Chan* (*The Hong Kong University of Science and Technology, China*);

Session 3A6
FocusSession.SC3: Laser Spectroscopy for Sensing and Environmental Monitoring 1

Wednesday AM, August 27, 2014

Room 6

Organized by Sune Svanberg, Heping Zeng

Chaired by Sune Svanberg

08:00 Spectroscopic Techniques for Air Quality Monitoring in China
keynote
Wenqing Liu (*Anhui Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China*); *Pinhua Xie* (*Anhui Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China*); *Jianguo Liu* (*Anhui Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China*);

08:30 Laser Remote Sensing for Environmental Monitoring — From Scandinavia to China
invited
Zuguang Guan (*Sailhero Environmental Technology Co., Ltd., China*);

08:50 LED Mini-lidar and Its Applications
invited
Tatsuo Shiina (*Chiba Unibersity, Japan*);

09:10 Lidar Monitoring of Atmospheric Atomic Mercury and Sulfur Dioxide in Guangzhou City, China
Guangyu Zhao (*South China Normal University, China*); *Xiuxiang Wu* (*South China Normal University, China*); *Ming Lian* (*South China Normal University, China*); *Sune Svanberg* (*Lund University, Sweden*);

09:25 Ultraviolet Plasma Grating Triggered Enhancement of Filament-induced Remotely Nonlinear Spectroscopy
invited
Heping Zeng (*East China Normal University, China*);

09:45 Femtosecond Laser Filamentation for Remote Sensing
invited
Huailiang Xu (*Jilin University, China*);

10:00 **Coffee Break**

10:20 Mid-IR Laser-spectroscopic Sensing of Gases
invited
Markus W. Sigrist (*ETH Zürich, Switzerland*);

10:40 Photonic Monitoring of NO_3, N_2O_5 and NO_2 in VOC Oxidation Process by Long Optical Pathlength Absorption Spectroscopy
Hongming Yi (*Universite du Littoral Cote d'Opale, France*); *Tao Wu* (*Nanchang Hangkong University, China*); *Amelie Lauraguais* (*Universite du Littoral Cote d'Opale, France*); *Vladimir Semenov* (*General Physics Institute, Russia*); *Cecile Coeur-Tourneur* (*Universite du Littoral Cote d'Opale, France*); *E. Fertein* (*University of the Littoral Opal Coast, France*); *Xiaoming Gao* (*Anhui Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China*); *Wei Dong Chen* (*University of the Littoral Opal Coast, France*);

10:55 Spectral Reference Data for Environmental Monitoring
invited
Markku Vainio (*Centre for Metrology and Accreditation, Finland*); *J. Peltola* (*Centre for Metrology and Accreditation, Finland*); *T Fordell* (*Centre for Metrology and Accreditation, Finland*); *T. Hieta* (*Centre for Metrology and Accreditation, Finland*); *Mikko Merimaa* (*Centre for Metrology and Accreditation, Finland*); *Lauri Halonen* (*University of Helsinki, Finland*);

11:15 Pathlength Evaluation and Gas Concentration Measurements in Porous Scattering Media
invited
Liang Mei (*Zhejiang University, China*); *Gabriel Somesfalean* (*Lund University, Sweden*); *Sune Svanberg* (*Lund University, Sweden*);

11:35 Development of Advanced Laser-based Concepts for Diagnostic Challenges in Combustion Research
invited
Joakim Bood (*Lund University, Sweden*);

11:55 Multimode Diode Laser Correlation Spectroscopy Using Off-axis Cavity Enhancement Techniques
Xiutao Lou (*Harbin Institute of Technology, China*); *Dongcheng Wu* (*Harbin Institute of Technology, China*);

Session 3A7
SC3: Optical Signal Processing

Wednesday AM, August 27, 2014
Room 7
Organized by Xinliang Zhang, Yikai Su
Chaired by Xinliang Zhang

08:00 Parametric Phase-sensitive and Phase-insensitive All-optical Signal Processing on Multiple Nonlinear Platforms
Christophe Peucheret (*University of Rennes 1, France*); *F. Da Ros* (*Technical University of Denmark, Denmark*); *D. Vukovic* (*Technical University of Denmark, Denmark*); *Yunhong Ding* (*Technical University of Denmark, Denmark*); *K. Dalgaard* (*Technical University of Denmark, Denmark*); *M. Galili* (*Technical University of Denmark, Denmark*); *A. Gajda* (*Technische Universität Berlin, Germany*); *J. Xu* (*Huazhong University of Science and Technology, China*); *Y. Fukuchi* (*Tokyo University of Science, Japan*); *H. Hu* (*Technical University of Denmark, Denmark*); *L. Lei* (*Huazhong University of Science and Technology, China*); *Haiyan Ou* (*Technical University of Denmark, Denmark*); *L. Zimmermann* (*IHP, Germany*); *Leif Katsuo Oxenlowe* (*Technical University of Denmark, Denmark*); *B. Tillack* (*IHP, Germany*); *K. Petermann* (*Technische Universität Berlin, Germany*);

08:20 High-speed Silicon Photonic Devices for Photonic Signal Processing
Xi Xiao (*Wuhan Research Institute of Posts and Telecommunications, China*); *Zhiyong Li* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Yu Yu* (*Huazhong University of Science and Technology, China*); *Lei Wang* (*Wuhan Research Institute of Posts and Telecommunications, China*); *Anastasia Nemkova* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Hao Xu* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Xianyao Li* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Miaofeng Li* (*Wuhan Research Institute of Posts and Telecommunications, China*); *Ying Qiu* (*Wuhan Research Institute of Posts and Telecommunications, China*); *Qi Yang* (*Wuhan Research Institute of Posts and Telecommunications, China*); *Shaohua Yu* (*Wuhan Research Institute of Posts and Telecommunications, China*); *Yude Yu* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Jinzhong Yu* (*Institute of Semiconductors, Chinese Academy of Sciences, China*);

08:40 Transmission Analysis of a Ternary Diversity Reception Based on OFDM FSO System over Correlated Log-normal Fading Channel
Yuwei Su (*Waseda University, Japan*); *Fan Bai* (*Waseda University, Japan*); *Mitsuji Matsumoto* (*Waseda University, Japan*);

09:00 The Principle of the Technology and Design of the Parabolic Strip Telescope
Jaroslav Cerveny (*Czech Technical University in Prague, Czech Republic*); *Vladislav Kosejk* (*Czech Technical University in Prague, Czech Republic*); *Goce Chadzitaskos* (*Czech Technical University in Prague, Czech Republic*);

09:20 Electro-optic OR/NOR Logic Gate at 10 Gbps Using Cascaded Micro-ring Resonators
Ping Zhou (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Lei Zhang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Jianfeng Ding* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Lin Yang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*);

09:40 Advances of Ultra-narrow Photonic Filters and Their Applications in Optical/Microwave Signal Processing
Xihua Zou (*Southwest Jiaotong University, China*);

10:00 **Coffee Break**

10:20 Spectrally Efficient FDM for Optical Communication System
Tao Gui (*Jinan University, China*); *Yuan Bao* (*Jinan University, China*); *Zhaohui Li* (*Jinan University, China*);

10:40 Research Progress of On-chip OFDM m-QAM Transmissions for Photonic Interconnections
Jian Wang (*Huazhong University of Science and Technology, China*);

11:00 Spatial Transformation of Optical Beams Using Phase-shifted Bragg Grating
Leonid Leonidovich Doskolovich (*Image Processing Systems Institute of the Russian Academy of Sciences, Russia*); *Dmitry Alexandrovich Bykov* (*Image Processing Systems Institute of RAS and Samara State Aerospace University, Russia*); *N. V. Golovastikov* (*Image Processing Systems Institute of the Russian Academy of Sciences, Russia*);

11:20 Microwave Optical Signal Fading for Chromatic Dispersion Measurement of Fibers
Shangjian Zhang (*University of Electronic Science and Technology of China (UESTC), China*); *Xinghai Zhou* (*University of Electronic Science and Technology of China (UESTC), China*); *Heng Wang* (*University of Electronic Science and Technology of China (UESTC), China*); *Yali Zhang* (*University of Electronic Science and Technology of China (UESTC), China*); *Rongguo Lu* (*University of Electronic Science and Technology of China (UESTC), China*); *Yong Liu* (*University of Electronic Science and Technology of China (UESTC), China*);

11:40 Optical Serial Coherent Analyzer of Radio-frequency (OSCAR)
Cheng Lei (*Tsinghua University, China*); *Hongwei Chen* (*Tsinghua University, China*); *Ruiyue Li* (*Tsinghua University, China*); *Minghua Chen* (*Tsinghua University, China*); *Sigang Yang* (*Tsinghua University, China*); *Shizhong Xie* (*Tsinghua University, China*);

Session 3A8
SC3: Luminescent Materials, Devices and Application

Wednesday AM, August 27, 2014

Room 8

Organized by Chunxiang Xu, Cees Ronda

Chaired by Jun Gao, Chunxiang Xu

08:00 invited Interface Engineering and Hybrid Structure for Graphene Transistors and Photodetectors in the Vicinity of Substrates
Jianbin Xu (*The Chinese University of Hong Kong, China*); *Xi Wan* (*The Chinese University of Hong Kong, China*); *Kun Chen* (*The Chinese University of Hong Kong, China*); *Xiao-Mu Wang* (*The Chinese University of Hong Kong, China*); *Zhenzhou Cheng* (*The Chinese University of Hong Kong, China*); *Hon Kin Tsang* (*The Chinese University of Hong Kong, China*);

08:20 invited Electrically Pumped Homojunction ZnO Nanowire Lasers
Jianlin Liu (*University of California Riverside, USA*);

08:40 invited The Right Way to Dope ZnO p-type, for Lasing
Lei Liu (*State Key Laboratory of Luminescence and Applications, China*); *De Zhen Shen* (*State Key Laboratory of Luminescence and Applications, China*);

09:00 Plasmon Enhanced Whispering-gallery Mode Lasing from ZnO Microrod
Chunxiang Xu (*Southeast University, China*); *Junfeng Lu* (*Southeast University, China*); *Yi Lin* (*Southeast University, China*); *Jitao Li* (*Southeast University, China*); *Yueyue Wang* (*Southeast University, China*);

09:20 Rational Tuning the Optical Properties of Colloidal II-VI Semiconductor Nanowires
Gaoling Yang (*Beijing Institute of Technology, China*); *Ruibin Liu* (*Beijing Institute of Technology, China*); *Bingsuo Zou* (*Beijing Institute of Technology, China*); *Haizheng Zhong* (*Beijing Institute of Technology, China*);

09:40 Large Scale Carbon Nanodots Based Remote Phosphor for White-light Light-emitting Diodes
Wenfei Zhang (*The Hong Kong Polytechnic University Shenzhen Research Institute, China*); *Siu Fung Yu* (*The Hong Kong Polytechnic University, China*);

10:00 **Coffee Break**

10:20 invited Electrical and Optical Probing of Extremely Large Planar Polymer Light-emitting Electrochemical Cells
Yufeng Hu (*Beijing Jiaotong University, China*); *Jun Gao* (*Queen's University, Canada*); *Yanbing Hou* (*Beijing Jiaotong University, China*); *Zhidong Lou* (*Beijing Jiaotong University, China*); *Zhenbo Deng* (*Beijing Jiaotong University, China*); *Feng Teng* (*Beijing Jiaotong University, China*);

10:40 invited Luminescence and Doping of Lanthanides in Quantum Dots
Rosa Martin Rodriguez (*Utrecht University, The Netherlands*); *Robin Geitenbeek* (*Utrecht University, The Netherlands*); *Yiming Zhao* (*Utrecht University, The Netherlands*); *Freddy Rabouw* (*Utrecht University, The Netherlands*); *Cees Van Walree* (*Utrecht University, The Netherlands*); *Celso De Mello Donega* (*Utrecht University, The Netherlands*); *Andries Meijerink* (*Utrecht University, The Netherlands*);

11:00 invited Polymer Light-emitting Electrochemical Cells: Operating and Degradation Mechanisms
Jun Gao (*Queen's University, Canada*); *Yufeng Hu* (*Queen's University, Canada*); *Faleh AlTal* (*Queen's University, Canada*); *Xiaoyu Li* (*Queen's University, Canada*); *Guojun Liu* (*Queen's University, Canada*);

11:20 Effect of Tm_2O_3 Addition on the Spectral Properties of Bismuth Containing Alumino-borosilicate Glasses
Dong Hoon Son (*Gwangju Institute of Science and Technology, South Korea*); *Bok Hyeon Kim* (*Gwangju Institute of Science and Technology, South Korea*); *Seung Ho Lee* (*Gwangju Institute of Science and Technology, South Korea*); *Won-Taek Han* (*Gwangju Institute of Science and Technology, South Korea*);

11:40 Upconverting Fluorescent Nanoparticles with NIR Excitation for Bioimaging and Photoactivation
Yong Zhang (*National University of Singapore, Singapore*); *Kai Huang* (*National University of Singapore, Singapore*);

Session 3A9
SC3: Quantum Optics

Wednesday AM, August 27, 2014
Room 9
Organized by Byoung S. Ham, Shengwang Du
Chaired by Byoung S. Ham, Shengwang Du

08:00 Quantum Plasmonics: Surface-plasmon-induced Quantum Interferences
Ying Gu (*Peking University, China*); *Luojia Wang* (*Peking University, China*); *Dongxing Zhao* (*Peking University, China*); *Hongyi Chen* (*Peking University, China*); *Juanjuan Ren* (*Peking University, China*); *Qihuang Gong* (*Peking University, China*);

08:20 Analysis of Hong-Ou-Mandel Interference Behavior of Photons Carrying Orbital Angular Momentum
Xiaoyan Chen (*Sun Yat-sen University, China*); *Guoxuan Zhu* (*Sun Yat-sen University, China*); *Yanfeng Zhang* (*Sun Yat-sen University, China*); *Hui Chen* (*Sun Yat-sen University, China*); *Yujie Chen* (*Sun Yat-sen University, China*); *Siyuan Yu* (*Sun Yat-sen University, China*);

08:40 Photon Echo Quantum Memories in a Single Mode Resonator
E. S. Moiseev (*University of Calgary, Canada*); *Sergey A. Moiseev* (*Kazan National Research Technical University, Russia*);

09:00 Quantum Computing with Multi-photon Entanglement
Chao-Yang Lu (*University of Science and Technology of China, China*);

09:20 Raman Quantum Memory for Light Based on Control Field Frequency Modulation
Alexey A. Kalachev (*Texas A&M University, USA*); *Xiwen Zhang* (*Texas A&M University, USA*); *Olga Kocharovskaya* (*Texas A&M University, USA*);

09:40 Generation of Subnatural-linewidth Polarization-entangled Paired Photons
Hui Yan (*South China Normal University, China*);

10:00 **Coffee Break**

10:20 Compressive Quantum Sensing
John C. Howell (*University of Rochester, USA*);

10:40 Detection Loophole-free Entanglement Verification
Xiao Yuan (*Tsinghua University, China*); *Ping Xu* (*University of Science and Technology of China, China*); *Luo-Kan Chen* (*University of Science and Technology of China, China*); *He Lu* (*University of Science and Technology of China, China*); *Xing-Can Yao* (*University of Science and Technology of China, China*); *Xiongfeng Ma* (*Tsinghua University, China*); *Yu-Ao Chen* (*University of Science and Technology of China, China*); *Jian-Wei Pan* (*University of Science and Technology of China, China*);

11:00 Efficient Raman Conversion Based on the Atomic Coherence
Liqing Chen (*East China Normal University, China*); *Z. Y. Ou* (*Indiana University-Purdue University Indianapolis, USA*); *Weiping Zhang* (*East China Normal University, China*);

11:20 Exploring a New Scheme for Ramsey-CPT Atomic Frequency Standard
Jing Yang (*Wuhan Institute of Physics and Mathematics, Chinese Academy of Sciences, China*); *Yuan Tian* (*Huazhong University of Science and Technology, China*); *Bozhong Tan* (*Huazhong University of Science and Technology, China*); *Sihong Gu* (*Huazhong University of Science and Technology, China*);

11:40 Sub-MHz Narrow-band Biphoton Generation
Luwei Zhao (*Hongkong University of Science and Technology, China*); *Xianxin Guo* (*The Hong Kong University of Science and Technology, China*); *Chang Liu* (*The Hong Kong University of Science and Technology, China*); *Yuan Sun* (*The Hong Kong University of Science and Technology, China*); *Michael M. T. Loy* (*Hong Kong University of Science and Technology, China*); *Shengwang Du* (*The Hong Kong University of Science and Technology, China*);

12:00 Holographic Microscopy at Quantum Limits
Saijun Wu (*Fudan University, China*);

Session 3A_10a
SC3: Nanoimprint and Applications

Wednesday AM, August 27, 2014

Room 10

Organized by Wei Wu, L. Jay Guo

Chaired by Wei Wu, L. Jay Guo

08:00 Nanoimprint on a Curved Surface
Xin Hu (*Nanjing University, China*); *Yushang Cui* (*Nanjing University, China*); *Changsheng Yuan* (*Nanjing University, China*); *Haixiong Ge* (*Nanjing University, China*);

08:20 High Contrast Gratings Fabricated Using Nanoimprint Lithography for Full Color Reflective Display
He Liu (*University of Southern California, USA*); *Yuhan Yao* (*University of Southern California, USA*); *Shujin Huang* (*University of Southern California, USA*); *Yifei Wang* (*University of Southern California, USA*); *Wei Wu* (*University of Southern California, USA*);

08:40 Strategy of High Aspect Ratio Structure Fabrication by Nanoimprint for Sub-wavelength Optical Elements
Yoshihiko Hirai (*Osaka Prefecture University, Japan*);

09:00 Nanoimprint Lithography Using Hydrogen Silsesquioxane Templates Fabricated by Helium Ion Beam Lithography
Wen-Di Li (*The University of Hong Kong, China*); *Jingxuan Cai* (*The University of Hong Kong, China*); *Wei Wu* (*University of Southern California, USA*); *Paul Alkemade* (*Delft University of Technology, Netherlands*); *Emile Van Veldhoven* (*TNO, Netherlands*);

09:20 Fabrication and Integration of Memristive Nanodevices with Nanoimprint Lithography
Qiangfei Xia (*University of Massachusetts, USA*);

09:40 Continuous Fabrication of Bio-inspired Dry Adhesives via Roll-to-roll Imprint Lithography
Hoon Eui Jeong (*Ulsan National Instititue of Science and Technology, South Korea*); *Moon Kyu Kwak* (*Kyungpook National University, South Korea*);

10:00 **Coffee Break**

Session 3A_10b
SC3: Heterogeneous Photonic Integration Technologies and Devices on Silicon

Wednesday AM, August 27, 2014

Room 10

Organized by Liu Liu, Daoshe Cao

Chaired by Liu Liu

10:20 Selective Epitaxial Growth of III-Vs on Patterned 300 mm Si Substrate
Zhechao Wang (*Ghent University-IMEC, Belgium*); *Clement Merckling* (*IMEC, Belgium*); *Bin Tian* (*Ghent University-IMEC, Belgium*); *Weiming Guo* (*IMEC, Belgium*); *Marianna Pantouvaki* (*IMEC, Belgium*); *Joris Van Campenhout* (*IMEC, Belgium*); *Dries Van Thourhout* (*Ghent University-IMEC, Belgium*);

10:40 Hybrid InGaAsP-Si Distributed Feedback Laser Based on Selective-area Metal Bonding
Li Tao (*Peking University, China*); *Lijun Yuan* (*Institute of Semiconductor, Chinese Academy of Science, China*); *Yanping Li* (*Peking University, China*); *Hongyan Yu* (*Institute of Semiconductor, Chinese Academy of Science, China*); *Weixi Chen* (*Peking University, China*); *Jiaoqing Pan* (*Institute of Semiconductors, Chinese Academy of Science, China*); *Guangzhao Ran* (*Peking University, China*);

11:00 Graphene-based Transparent Nano-heater for Thermally-tuning Silicon Nanophotonic Integrated Devices
Longhai Yu (*Zhejiang University, China*); *Sailing He* (*Zhejiang University, China*); *Jiajiu Zheng* (*Zhejiang University, China*); *Daoxin Dai* (*Zhejiang University, China*);

11:20 Nanoscale Integrated Photonic Devices Based on Plasmonic Microstructures
Xiaoyong Hu (*Peking University, China*);

Session 3A_11
SC1: Advanced Mathematical and Computational Methods in Electromagnetic Theory and Their Applications

Wednesday AM, August 27, 2014

Room 11

Organized by Georgi Nikolov Georgiev, Mariana Nikolova Georgieva-Grosse

Chaired by Mariana Nikolova Georgieva-Grosse

08:20 On an Application of the Hypothesis for the Identity of the $\boldsymbol{L_2(c, \rho, n)}$ and $\boldsymbol{\hat{L}_2(\hat{c}, \hat{\rho}, \hat{n})}$ Numbers
Mariana Nikolova Georgieva-Grosse (*Consulting and Researcher in Physics and Computer Sciences, Germany*); *Georgi Nikolov Georgiev* (*University of Veliko Tirnovo "St. St. Cyril and Methodius", Bulgaria*);

08:40 Solving Nonlinear Helmholtz Equation via Fourier Series
Merey S. Sautbekova (*Eurasian National University, Kazakhstan*); *Seil S. Sautbekov* (*Eurasian National University, Kazakhstan*);

09:00 Modeling of Electrical Contact with Dissimilar Materials
Y. Y. Lau (*University of Michigan, USA*); *Peng Zhang* (*University of Michigan, USA*); *Ronald M. Gilgenbach* (*University of Michigan, USA*);

09:20 Numerical Analysis of the Plane Wave Scattering by the End-face of a Waveguide System
Akira Komiyama (*Osaka Electro-Communication University, Japan*);

09:40 Numerical Solution of the Helmholtz Equation with Nonlinearity
Oleg V. Kravchenko (*Bauman Moscow State Technical University, Russian Federation*); *Yaroslav Yu. Konovalov* (*Bauman Moscow State Technical University, Russia*);

10:00 **Coffee Break**

10:20 Synthesis of the Sparse Conformal Arrays with Convex Optimal Method
Xiaowen Zhao (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*); *Qingshan Yang* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*); *Yunhua Zhang* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*);

10:40 Airy Beams and an Analysis of Ray Superposition
Yuanhui Wen (*Sun Yat-sen University, China*); *Jiangbo Zhu* (*Sun Yat-sen University, China*); *Yujie Chen* (*Sun Yat-sen University, China*); *Yanfeng Zhang* (*Sun Yat-sen University, China*); *Hui Chen* (*Sun Yat-sen University, China*); *Siyuan Yu* (*Sun Yat-sen University, China*);

11:00 EM Scattering Computation of Electric-large Lossy Dielectric Target Based on Ray Tracing
Hao Zheng (*Fudan University, China*); *Hongxia Ye* (*Fudan University, China*);

11:20 Effect of a Linear Frequency Modulation on the Nonlinear Dynamics of an Electromagnetic Pulse in a Graded-index Waveguide
Ivan M. Oreshnikov (*Saint-Petersburg University, Russia*); *Michael A. Bisyarin* (*Saint-Petersburg University, Russia*);

Session 3A_12
SC4: Novel Frequency Selective Structures

Wednesday AM, August 27, 2014

Room 12

Organized by Zhongxiang Shen, Nader Behdad

Chaired by Zhongxiang Shen

08:00 invited Challenges in Designing Frequency Selective Surfaces to Yield Wide-angle Response over a Wide Frequency Band
Raj Mittra (*The Pennsylvania State University, USA*); *Chiara Pelletti* (*The Pennsylvania State University, USA*);

08:20 invited Design and Optimization of a Wideband Circular Polarization Selective Structure
Andreas Ericsson (*Lund University, Sweden*); *Daniel Sjoberg* (*Lund University, Sweden*);

08:40 invited Three-dimensional Loaded Dipoles for Applications in Frequency Selective Structures
Amir Khurrum Rashid (*Namal College Mianwali, and National University of Computer and Emerging Sciences (NUCES-FAST), Pakistan*); *Shan Ullah* (*National University of Sciences and Technology (NUST), Pakistan*); *S. Abdullah Nauroze* (*National University of Computer and Emerging Sciences, Pakistan*);

09:00 Split Ring Resonator Based Bandstop Frequency Selective Surface for Antenna RCS Reduction
Jia Wei Yu (*University of Electronic Science and Technology of China, China*); *Jin Zhang* (*University of Electronic Science and Technology of China, China*); *Yuan Jiang* (*University of Electronic Science and Technology of China, China*); *Fei Cheng* (*University of Electronic Science and Technology of China, China*); *Xian Qi Lin* (*University of Electronic Science and Technology of China, China*);

09:20 A Printed Collinear Antenna with a Controllable Main Beam
Radhwan J. Mahmoud (*The University of Sheffield, United Kingdom*); *Jonathan M. Rigelsford* (*The University of Sheffield, United Kingdom*);

09:40 3D Frequency Selective Absorbers: Concept, Design and Application (invited)
Bo Li (*Nanyang Technological University, Singapore*); *Zhongxiang Shen* (*Nanyang Technological University, Singapore*); *Yuping Shang* (*Nanyang Technological University, Singapore*);

10:00 **Coffee Break**

10:20 Semi Analytical Model for Non-Resonant Layered Frequency Selective Surfaces (FSS)
Poojali Jayaprakash (*IIT Madras, India*); *Kavitha Arunachalam* (*ITT Madras, India*);

10:40 Ultra-wide Tuning Frequency Range Active Frequency Selective Surface Based on Enhanced Magnetic Coupling
Liang Zhang (*Xiamen University, China*); *Yanhui Liu* (*Xiamen University, China*); *Longfang Ye* (*Xiamen University, China*); *Qing Huo Liu* (*Duke University, USA*);

11:00 Slanted-comb Frequency Selective Surfaces for Passive Reduction in Specular Scatter
Christopher J. Davenport (*The University of Sheffield, United Kingdom*); *Jonathan M. Rigelsford* (*The University of Sheffield, United Kingdom*);

11:20 A Novel Miniaturized and Multiband Frequency Selective Surface
Mingbao Yan (*Air Force Engineering University, China*); *Shaobo Qu* (*Air Force Engineering University, China*); *Jiafu Wang* (*Air Force Engineering University, China*); *Hongya Chen* (*Air Force Engineering University, China*); *Yongqiang Pang* (*Air Force Engineering University, China*); *Yongfeng Li* (*Air Force Engineering University, China*); *Lin Zheng* (*Air Force Engineering University, China*); *Wenjie Wang* (*Air Force Engineering University, China*);

Session 3A_13a
SC4&2: Graded Index Structures and Metamaterials for Antenna Applications

Wednesday AM, August 27, 2014

Room 13

Organized by Oscar Quevedo-Teruel, Qiang Cheng

Chaired by Oscar Quevedo-Teruel, Qiang Cheng

08:00 Index Profiles with Zero Reflection over a Wide Range of Angles
Simon A. R. Horsley (*University of Exeter, UK*);

08:20 Anisotropic Metamaterials for Polarization-controlled Devices
Huifeng Ma (*Southeast University, China*); *Wen Xuan Tang* (*Southeast University, China*); *Di Bao* (*Southeast University, China*); *Tie Jun Cui* (*Southeast University, China*);

08:40 Conformal Surface Wave Luneburg Lenses
Rhiannon C. Mitchell-Thomas (*University of Exeter, UK*); *Oscar Quevedo-Teruel* (*KTH Royal Institute of Technology, Sweden*);

09:00 GRIN Fractal Metamaterial and Its Applications in Novel Broadband Highly-directive Emission System
He-Xiu Xu (*Air Force Engineering University, China*); *Guangming Wang* (*Air Defence and Anti Missile Institution, China*);

09:20 Making Geometrical Optics Exact
Thomas G. Philbin (*University of Exeter, UK*);

09:40 Removing Singular Refractive Indices with Sculpted Surfaces
Simon A. R. Horsley (*University of Exeter, UK*); *Ian R. Hooper* (*University of Exeter, UK*); *Rhiannon C. Mitchell-Thomas* (*University of Exeter, UK*); *Oscar Quevedo-Teruel* (*KTH Royal Institute of Technology, Sweden*);

10:00 **Coffee Break**

Session 3A_13b
Antenna and Array 1

Wednesday AM, August 27, 2014

Room 13

Chaired by Ronald J. Spiegel, Michael James Underhill

10:20 Patch Antenna with Electrically Tunable Ferrite-ferroelectric Bilayer
Kaida Xu (*University of Electronic Science and Technology of China, China*); *Ronald J. Spiegel* (*Duke University, USA*); *Yonghong Zhang* (*University of Electronic Science and Technology of China, China*); *William Thomas Joines* (*Duke University, USA*); *Qing Huo Liu* (*Duke University, USA*);

10:40 Compact Triple-band Planar Monopole Antenna with Single Metamaterial Unit
Jian Li (*University of Electronic Science and Technology of China, China*); *Guangjun Wen* (*University of Electronic Science and Technology of China, China*); *Yongjun Huang* (*University of Electronic Science and Technology of China, China*); *Kaimin Wu* (*University of Electronic Science and Technology of China, China*); *Weijian Chen* (*University of Electronic Science and Technology of China, China*);

11:00 High Gain Antenna Using Double Side Paired S-shaped Split Ring Resonator as Metamaterial Superstrate for ku-band Applications
Abdulkareem S. Abdullah (*University of Basrah, Iraq*); *Ali A. Saleh* (*University of Basrah, Iraq*);

11:20 Antenna Pattern Reconstruction Using Deconvolution Based Method from Non-anechoic Measurements
Jinhwan Koh (*Gyeongsang National University, South Korea*);

11:40 Discovery and Theory of Small Antenna Near-field Dissipation and Frequency Conversion with Implications for Antenna Efficiency, Beverage Antenna Noise Reduction, Maxwell's Equations and the Chu Criterion
Michael James Underhill (*Underhill Research Ltd., UK*);

Session 3A_14
SC5: Inverse Problems, Diagnostics, and Estimation

Wednesday AM, August 27, 2014

Room 14

Organized by Mats Gustafsson, Sven Nordebo

Chaired by Mats Gustafsson, Sven Nordebo

08:00 Image Reconstruction from Total Electric Field Data with No Knowledge of Incident Field
Takashi Takenaka (*Nagasaki University, Japan*); *Toshifumi Moriyama* (*Nagasaki University, Japan*);

08:20 Reconstruction of Continuous Deformations in a Coaxial Cylindrical Waveguide Using Effects of the Higher Order Modes
Mariana Dalarsson (*Royal Institute of Technology, Sweden*); *Seyed Mohamad Hadi Emadi* (*Royal Institute of Technology, Sweden*); *Martin Karl Norgren* (*KTH Royal Institute of Technology, Sweden*);

08:40 Analysis of Probability Distribution of Inverse Problem of Nonlinear Model
Xiaolin Tong (*Huazhong University of Science and Technology, China*); *Zhenzhan Wang* (*National Space Science Center/Center for Space Science and Applied Research, Chinese Academy of Sciences, China*); *Qingxia Li* (*Huazhong University of Science and Technology, China*);

09:00 Source Reconstruction from Near- and Far-field Data
Mats Gustafsson (*Lund University, Sweden*);

09:20 Determination of Quantum Initial States in Optical Fibres
Borje Nilsson (*Linnaeus University, Sweden*); *Sven Nordebo* (*Linnaeus University, Sweden*); *Andrei Khrennikov* (*Linnaeus University, Sweden*);

09:40 Complex Permittivity Extraction Using a Leaky-lens Antenna System
Iman Vakili (*Lund University, Sweden*); *Lars Ohlsson* (*Lund University, Sweden*); *Lars-Erik Wernersson* (*Lund University, Sweden*); *Mats Gustafsson* (*Lund University, Sweden*);

10:00 **Coffee Break**

10:20 A 3D Electromagnetic Data Inversion Algorithm in Wavelet Domain
Maokun Li (*Schlumberger-Doll Research, USA*); *Yun Lin* (*Schlumberger-Doll Research, USA*); *Aria Abubakar* (*Schlumberger-Doll Research, USA*); *Tarek M. Habashy* (*Schlumberger-Doll Research, USA*);

10:40 RCS Diagnostics Using ISAR
Christer Larsson (*Lund University, Sweden*);

11:00 Inverse Scattering in Inhomogeneously Filled Rectangular Waveguides
Daniel Sjoberg (*Lund University, Sweden*); *Christer Larsson* (*Lund University, Sweden*);

11:20 Reconstruction of Line Currents from Magnetic Field Data: Strategies to Handle the External Disturbance Field
Fatemeh Ghasemifard (*KTH Royal Institute of Technology, Sweden*); *Markus Johansson* (*KTH Royal Institute of Technology, Sweden*); *Martin Karl Norgren* (*KTH Royal Institute of Technology, Sweden*);

11:40 Inverse Source Problem for Cable Measurements with Finitely Supported Excitation
Sven Nordebo (*Linnæus University, Sweden*); *Mats Gustafsson* (*Lund University, Sweden*); *Borje Nilsson* (*Linnæus University, Sweden*);

Session 3A_15
SCNU Special Session on Biophotonics — Analytical Biophotonics

Wednesday AM, August 27, 2014

Room 15

Organized by Da Xing

Chaired by Da Xing, Chun-Yang Zhang

08:00 Single-molecule Detection and Its Biomedical Application
Chun-Yang Zhang (*Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China*);

08:20 Quantitative FRET Measurement Using Emission-spectral Unmixing with Independent Excitation Crosstalk Correction
Tongsheng Chen (*South China Normal University, China*); *Jianwei Zhang* (*South China Normal University, China*);

08:40 Long-lived NIR Emissive Probe for Cell Imaging, Biomolecular Detection and Photodynamic Therapy
Tao Zhang (*South China Normal University, China*); *Da Xing* (*South China Normal University, China*);

09:00 Binomial Distribution-based Quantitative Measurement of Multiple-acceptors Fluorescence Resonance Energy Transfer by Partially Photobleaching Acceptor
Lili Zhang (*South China Normal University, China*); *Tongsheng Chen* (*South China Normal University, China*);

09:20 A Novel miRNA Assay Based Optical Probe and Enzyme-free Nucleic Acids Circuits
Yuhui Liao (*South China Normal University, China*); *Xiaoming Zhou* (*South China Normal University, China*); *Da Xing* (*South China Normal University, China*);

09:40 Applications of Laser Spectroscopy to Meet Challenges in Medicine
Katarina Svanberg (*Lund University, Sweden*);

10:00 **Coffee Break**

10:20 Photoionization-dissociation Mechanisms of Small Organic Molecules and Clusters in the Gas Phase
Yongjun Hu (*South China Normal University, China*); *Weixin Li* (*South China Normal University, China*); *Weizhan Xiao* (*South China Normal University, China*); *Fuyi Liu* (*University of Science and Technology of China, China*); *Liusi Sheng* (*University of Science and Technology of China, China*);

10:40 Low-level Laser Therapy Promotes Dendrite Growth via Upregulating Brain-derived Neurotrophic Factor Expression
Chengbo Meng (*South China Normal University, China*); *Zhiyong He* (*South China Normal University, China*); *Da Xing* (*South China Normal University, China*);

11:00 High-throughput and Rapid Foodborne Pathogen Detection Using Segmented Continuous-flow Multiplex Polymerase Chain Reaction Microfluidics
Bowen Shu (*South China Normal University, China*); *Da Xing* (*South China Normal University, China*);

11:20 The Interplay of Light Capture, Thermal Dissipation and Plant Disease Responses
Jun Zhou (*South China Normal University, China*); *Lizhang Zeng* (*South China Normal University, China*); *Da Xing* (*South China Normal University, China*);

Session 3A0
Poster Session 4

Wednesday AM, August 27, 2014

9:00 AM - 12:00 AM

Room FOYER

1 Perovskite Sensitized Mesoporous NiO Based P-type Solar Cells
Xianwei Zeng (*Huazhong University of Science and Technology, China*); *Huan Wang* (*Huazhong University of Science and Technology, China*); *Wenjun Zhang* (*Huazhong University of Science and Technology, China*); *Wei Chen* (*Huazhong University of Science and Technology, China*);

2 **30 × 100** GHz Digitally Wavelength Switchable V-coupled-cavity Laser with Cleaved Facets
Yuan Zhuang (*Zhejiang University, China*); *Xin Zhang* (*Zhejiang University, China*); *Jian-Jun He* (*Zhejiang University, China*);

3 Experimental Characterization of the Distortion of Signal Propagating with Negative Group Velocity
Dexin Ye (*Zhejiang University, China*); *Yannick Salamin* (*Zhejiang University, China*); *Qinyi Lv* (*Zhejiang University, China*); *Qingyang Meng* (*Zhejiang University, China*); *Shan Qiao* (*Zhejiang University City College, China*); *Lixin Ran* (*Zhejiang University, China*);

4 Influences of Embedded Plasmonic Metallic Nanostrips on Absorption by the Activen Layer in Organic Solar Cells
Yanxia Cui (*Taiyuan University of Technology, China*); *Shou Zhang* (*Taiyuan University of Technology, China*); *Yuying Hao* (*Taiyuan University of Technology, China*); *Furong Zhu,* (*Hong Kong Baptist University, China*);

5 Attaining Higher Mobility IGZO-TFT by Annealing Than by Quenching
Peng Xiao (*South China University of Technology, China*); *Linfeng Lan* (*South China University of Technology, China*); *Zhenguo Lin* (*South China University of Technology, China*); *Junbiao Peng* (*South China University of Technology, China*);

6 Radiation of Inverted Pendulum with Hysteretic Nonlinearity
Mikhail E. Semenov (*Zhukovsky-Gagarin Air Force Academy, Russia*); *Peter A. Meleshenko* (*Voronezh State University, Russia*); *Hang T. T. Nguyen* (*Vietnam National University — Ho Chi Minh City, Vietnam*); *Alexander F. Klinskikh* (*Voronezh State University, Russia*); *Anton G. Rukavitcyn* (*Voronezh State University, Russia*);

7 Aharonov-Bohm Control of Optical Properties in System of Parallel Coupled Quantum Wells
Peter A. Meleshenko (*Voronezh State University, Russia*); *Hang T. T. Nguyen* (*Vietnam National University — Ho Chi Minh City, Vietnam*); *Alexander F. Klinskikh* (*Voronezh State University, Russia*);

8 Broadband Coaxial Spatial Power Combiner Formed by Tapered Slot Antenna
Mohsen Abdolahi (*Isfahan University of Technology (IUT), Iran*); *Gholamreza Askari* (*Isfahan University of Technology (IUT), Iran*); *Hamid Mirmohammad Sadeghi* (*Isfahan University of Technology (IUT), Iran*); *Mehdi Fadaei* (*Isfahan University of Technology (IUT), Iran*);

9 S-band Circular Polarization Patch Antenna Design for the Large Curvature Conformal Structure
Yuan Yuan (*Radar and Avionics institute of AVIC, China*); *Zhi Xu* (*Radar and Avionics Institute of AVIC, China*);

10 Application of Artificial Magnetic Conductor in Aperture-coupled Microstrip Antenna
Chao Fang (*Communication University of China, China*); *Guizhen Lu* (*Communication University of China, China*);

11 Design of Broadband Vector Modulator Based on HMC500LP3 Chip
Qian Xu (*Beihang University, China*); *Jungang Miao* (*Beihang University, China*); *Chen Chen* (*Beihang University, China*);

12 A Novel Substrate Integrated Waveguide Back-cavity Antenna with Bow-tie Shaped Slot
Chuang-Ming Tong (*Air Force Engineering University, China*); *Weijian Pang* (*Air Force Engineering University, China*); *Xiong Zou* (*Air Force Engineering University, China*); *Tong Wang* (*Air Force Engineering University, China*);

13 A Novel UWB Antenna with Dual-band Notched Characteristics
Yongfan Lin (*Air Force Engineering University, China*); *Jian-Gang Liang* (*Air Force Engineering University, China*); *Zi-Mu Yang* (*Air Force Engineering University, China*); *Zhiyong Xu* (*Air Force Engineering University, China*); *Rui Wu* (*Air Force Engineering University, China*);

14 Spurious Modes Reduction in a Patch Antenna Using a Novel DP-EBG Structure
Zhiyong Xu (*Air Force Engineering University, China*); *Hou Zhang* (*Air Force Engineering University, China*); *Rui Wu* (*Air Force Engineering University, China*); *Yongfan Lin* (*Air Force Engineering University, China*);

15 A Novel DP-EBG Structure for Low-pass Filter of Wide Stopband
Hou Zhang (*Air Force Engineering University, China*); *Zhiyong Xu* (*Air Force Engineering University, China*); *Yongfan Lin* (*Air Force Engineering University, China*); *Rui Wu* (*Air Force Engineering University, China*);

16 A Novel Method for Sparse Array Antenna Through-the-wall Imaging Radar Wall Clutter Elimination Using Independent Component Analysis
Chi Zhang (*National University of Defense Technology, China*); *Yueli Li* (*National University of Defense Technology, China*); *Zhi-Min Zhou* (*National University of Defense Technology, China*);

17 A Dual Band U-shaped Slot Antenna for WLAN and WiMAX Applications
Zi-Mu Yang (*Air Force Engineering University, China*); *Hou Zhang* (*Air Force Engineering University, China*); *Ning Zhou* (*Electronic Systems Engineering Corporation of China (ESECC), China*); *Biao Wu* (*Electronic Systems Engineering Corporation of China (ESECC), China*);

18 Two Miniaturized Microstrip Patch Antenna for Chinese Compass Navigation Satellite System Based on High-permittivity Substrate
Hangying Yuan (*Air Force Engineering University, China*); *Shaobo Qu* (*Air Force Engineering University, China*); *Jieqiu Zhang* (*Air Force Engineering University, China*); *Jiafu Wang* (*Air Force Engineering University, China*); *Hua Ma* (*Air Force Engineering University, China*); *Lin Zheng* (*Air Force Engineering University, China*); *Mingbao Yan* (*Air Force Engineering University, China*);

19 Investigating the Dual-passbands Frequency Selective Surface with Complementary Structure
Lin Zheng (*Air Force Engineering University, China*); *Shaobo Qu* (*Air Force Engineering University, China*); *Jieqiu Zhang* (*Air Force Engineering University, China*); *Jiafu Wang* (*Air Force Engineering University, China*); *Hang Zhou* (*Air Force Engineering University, China*); *Mingbao Yan* (*Air Force Engineering University, China*); *Zhiyuan Zhang* (*Air Force Engineering University, China*); *Hangying Yuan* (*Air Force Engineering University, China*); *Yongfeng Li* (*Air Force Engineering University, China*); *Yongqiang Pang* (*National University of Defense Technology, China*);

20 An Ultra Wideband Printed Helical Antenna with Low Profile
Xihui Tang (*Shenzhen University, China*); *Ruirui Li* (*Shenzhen University, China*); *Jihong Pei* (*Shenzhen University, China*); *Yunliang Long* (*Sun Yat-Sen University, China*);

21 Discussions on the FSS Transmitted Beam Shift in Quasi-optic Instruments
Ming Jin (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Yang Bai* (*Science and Technology of Electromagnetic Scattering Laboratory, China*); *Chao Gao* (*Science and Technology of Electromagnetic Scattering Laboratory, China*);

22 Retrieval of Bare-surface Soil Moisture from Simulated Brightness Temperature Using Least Squares Support Vector Machines Technique
Fei Xu (*Three Gorges University, China*); *Qinghe Zhang* (*Three Gorges University, China*); *Qiyuan Zou* (*Three Gorges University, China*);

23 A Method of Two-dimensional MIMO Planar Array Design Based on Sub-array Segmentation for Through-wall Imaging
Pengfei Liu (*National University of Defense Technology, China*); *Bi Ying Lu* (*National University of Defense Technology, China*); *Xin Sun* (*National University of Defense Technology, China*);

24 Analysis of the Low Intensity Terahertz Radiation Influence on Lymphocyte Early Activation Markers
Maria V. Duka (Tsurkan) (*National Research University of Information Technologies, Mechanics and Optics, Russia*); *M. K. Serebryakova* (*Saint-Petersburg State University, Russia*); *I. V. Kudryavtsev* (*Saint-Petersburg State University, Russia*); *A. S. Trulioff* (*Far Eastern Federal University, Russia*); *O. A. Smolyanskaya* (*National Research University of Information Technologies, Mechanics and Optics, Russia*);

25 Influence of Terahertz Radiation with a Frequency $0.05 \div 1.7$ THz on Mitochondrial Membrane Potential of Tumor Cells
Maria V. Duka (Tsurkan) (*National Research University of Information Technologies, Mechanics and Optics, Russia*); *M. K. Serebryakova* (*Saint-Petersburg State University, Russia*); *I. V. Kudryavtsev* (*Saint-Petersburg State University, Russia*); *A. S. Trulioff* (*Far Eastern Federal University, Russia*); *A. S. Nazarova* (*Institute of Experimental Medicine of the North-West Branch of the Russian Academy of Medical Sciences, Russia*); *O. A. Smolyanskaya* (*National Research University of Information Technologies, Mechanics and Optics, Russia*);

26 The Baroque Music's Influence on Learning Efficiency Based on the Research of Brain Cognition
Rong Gu (*Tongji University, China*); *Jie Zhang* (*Tongji University, China*); *Junhe Zhou* (*Tongji University, China*); *Mei Song Tong* (*Tongji University, China*);

27 Analysis of Spectral Characteristics of the Human Cornea Obtained in the Terahertz Frequency Range
Max I. Sulatsky (*ITMO University, Russia*); *Evgenii A. Strepitov* (*National Research University of Information Technologies, Mechanics and Optics, Russia*); *O. A. Smolyanskaya* (*National Research University of Information Technologies, Mechanics and Optics, Russia*); *Mikhail Konstantinovich Khodzitsky* (*ITMO University, Russia*); *Igor V. Prozheev* (*ITMO University, Russia*); *E. L. Odlyanitskiy* (*ITMO University, Russia*); *A. G. Zabolotniy* (*IRTC "Eye Microsurgery" of The Russian Ministry of Health Krasnodar Branch, Russia*); *I. A. Geyko* (*IRTC "Eye Microsurgery" of The Russian Ministry of Health Krasnodar Branch, Russia*);

28 Study of Penetration Depth Dispersion of THz Radiation in Human Pathological Tissues
Igor V. Prozheev (*ITMO University, Russia*); *O. A. Smolyanskaya* (*National Research University of Information Technologies, Mechanics and Optics, Russia*); *M. V. Duka* (*ITMO University, Russia*); *Anna A. Ezerskaya* (*National Research University of Information Technologies, Mechanics and Optics, Russia*); *V. V. Orlov* (*Saint Petersburg, Russia*); *Evgenii A. Strepitov* (*National Research University of Information Technologies, Mechanics and Optics, Russia*); *N. S. Balbekin* (*National Research University of Information Technologies, Mechanics and Optics, Russia*); *M. K. Khodzitsky* (*ITMO University, Russia*);

29 A Comparative Study of Analytical and Numerical Analysis for Coaxial Probe Aperture in a Dissipative Media
Kok Yeow You (*University Teknologi Malaysia, Malaysia*); *Chia Yew Lee* (*Universiti Teknologi Malaysia, Malaysia*); *Chia Wui Lee* (*Universiti Teknologi Malaysia, Malaysia*);

30 Time-frequency Spectrum and Path Loss by Wind Turbine Forward Scattering
Muhammad Bilal Raza (*Helmut Schmidt University/University of the Federal Armed Forces, Germany*); *Thomas Heinrich Fickenscher* (*Helmut Schmidt University/University of the Federal Armed Forces, Germany*);

31 Experimental the Microwave Absorption of Rice Husk/Ash Mixture
Yeng Seng Lee (*University Malaysia Perlis (UniMAP), Malaysia*); *Mohd Fareq Bin Abdul Malek* (*University Malaysia Perlis (UniMAP), Malaysia*); *Ee Meng Cheng* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Wei Wen Liu* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Noor Azlianti Binti Che Ali* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *F. H. Wee* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Muhammad Nadeem Iqbal* (*University Malaysia Perlis (UniMAP), Malaysia*); *Liyana Binti Zahid* (*Universiti Malaysia Perlis, Malaysia*); *Farah Salwani Abdullah* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Mardianaliza Othman* (*Universiti Malaysia Perlis (UniMAP), Malaysia*);

32 Design of a Dual and Wideband Monopole Antenna with Flattened Ground Plane
T. K. Ong (*Universiti Teknikal Malaysia Melaka (UTeM), Malaysia*); *Badrul Hisham Ahmad* (*Universiti Teknikal Malaysia Melaka (UTeM), Malaysia*); *Mohamad Zoinol Abidin Abd Aziz* (*Universiti Teknikal Malaysia Melaka (UTeM), Malaysia*); *M. A. Othman* (*Universiti Teknikal Malaysia Melaka (UTeM), Malaysia*); *Mohd Kadim Suaidi* (*Universiti Teknikal Malaysia Melaka (UTeM), Malaysia*); *Mohd Fareq Bin Abdul Malek* (*University Malaysia Perlis (UniMAP), Malaysia*);

33 The Performances of Sugarcane Bagasse (SCB) — Rubber Tire Dust Composite as Microwave Absorber in X-Band Frequency
Liyana Binti Zahid (*Universiti Malaysia Perlis, Malaysia*); *Mohd Fareq Bin Abdul Malek* (*University Malaysia Perlis (UniMAP), Malaysia*); *Ee Meng Cheng* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Wei Wen Liu* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Yeng Seng Lee* (*University Malaysia Perlis (UniMAP), Malaysia*); *Muhammad Nadeem Iqbal* (*University Malaysia Perlis (UniMAP), Malaysia*); *Supri A. Ghani* (*Universiti Malaysia Perlis (UniMAP), Malaysia*);

34 Investigation of Combination Circle Loop for Frequency Selective Surface at 5.2 GHz
N. A. Md Fauzi (*Universiti Teknikal Malaysia Melaka, Malaysia*); *Mohamad Zoinol Abidin Abd Aziz* (*Universiti Teknikal Malaysia Melaka (UTeM), Malaysia*); *Maizatul Alice Meor Said* (*Universiti Teknikal Malaysia Melaka, Malaysia*); *Mohd Azlishah Othman* (*Universiti Teknikal Malaysia Melaka (UTeM), Malaysia*); *Mohd Fareq Bin Abdul Malek* (*University Malaysia Perlis (UniMAP), Malaysia*);

35 Study on the Relationship between the Size of Resin Sprue on GIS and Intensity of UHF Electromagnetic Waves Radiated from Partial Discharge
Xingwang Li (*Electric Power Research Institute of Guangdong Power Grid Corporation, China*); *Siyang Wu* (*Huazhong University of Science and Technology, China*); *Qizheng Ye* (*Huazhong University of Science and Technology, China*); *Chu Yang* (*Huazhong University of Science and Technology, China*);

36 HALT Test of Tower Mounted Amplifier (TAM) Module Used in 4G Communication
Soon-Mi Hwang (*Korea Electronics Technology Institute (KETI), Korea*); *Chul-Hee Kim* (*Korea Electronics Technology Institute (KETI), Korea*); *Kwan-Hun Lee* (*Korea Electronics Technology Institute (KETI), Korea*);

37 Failure Mechanisms Analysis of Metal-tag Used in 900 MHz
Soon-Mi Hwang (*Korea Electronics Technology Institute (KETI), Korea*); *Kwan-Hun Lee* (*Korea Electronics Technology Institute (KETI), Korea*);

38 Printed Inverted-F MIMO Antenna for TD-LTE Mobile Terminal
Hui Liu (*South China Normal University, China*); *Youhuan Guo* (*Guangdong Peizheng College, China*); *Te Pan* (*South China Normal University, China*); *Zhibin He* (*South China Normal University, China*); *Sailing He* (*Zhejiang University, China*);

39 Compact Circularly Polarized RFID Tag Antenna with an Embedded U-shaped Feedline for Metallic Surfaces
Te Pan (*South China Normal University, China*); *Shuai Zhang* (*KTH Royal Institute of Technology, Sweden*); *Zhibin He* (*South China Normal University, China*); *Lui Hui* (*South China Normal University, China*); *Sailing He* (*Zhejiang University, China*);

40 The Research and Application of Array Antenna Element Detecting System
Wentao Zhu (*China Mobile Group Design Institute, China*); *Feng Gao* (*China Mobile Group Design Institute, China*); *Zhiyuan Song* (*China Mobile Group Design Institute, China*); *Kai He* (*China Mobile Group Design Institute, China*);

41 Theoretical Analysis and Test of EMF in TDFI Bus
Wentao Zhu (*China Mobile Group Design Institute, China*); *Feng Gao* (*China Mobile Group Design Institute, China*); *Zhiyuan Song* (*China Mobile Group Design Institute, China*); *Kai He* (*China Mobile Group Design Institute, China*);

42 Body Channel Study for Wearable Devices at 2.4 GHz
Kun Zhao (*KTH-Royal Institute of Technology, Sweden*); *Zhinong Ying* (*Sony Mobile Communication AB, Sweden*); *Sailing He* (*Zhejiang University, China*);

43 Conical Beam Leaky-wave Antenna Using Subwavelength Grooved Metal Structure
Ben Geng Cai (*Southeast University, China*); *Yunbo Li* (*Southeast University, China*); *Tie Jun Cui* (*Southeast University, China*);

44 Optimal Waveform Design in Through-the-wall Application Based on the Information Theory
Xin Sun (*National University of Defense Technology, China*); *Bi Ying Lu* (*National University of Defense Technology, China*); *Pengfei Liu* (*National University of Defense Technology, China*); *Zhi-Min Zhou* (*National University of Defense Technology, China*);

45 Analysis of EMF and Interference in the Wireless Charging Robot System
Jung-Ick Moon (*Electronics and Telecommunications Research Institute, South of Korea*); *In-Kui Cho* (*Electronics and Telecommunications Research Institute, South of Korea*); *Seong-Min Kim* (*Electronics and Telecommunications Research Institute, South of Korea*); *Jae-Hun Yun* (*Electronics and Telecommunications Research Institute, South of Korea*); *Woo-Jin Byun* (*Electronics and Telecommunications Research Institute, South Korea*);

46 Design of Wireless Power Charging Using Coupled Magnetic Resonance to 12 V, 20 Ah LiFePO4 Battery
Seong-Min Kim (*Electronics and Telecommunications Research Institute, South of Korea*); *Jung-Ick Moon* (*Electronics and Telecommunications Research Institute, South of Korea*); *In-Kui Cho* (*Electronics and Telecommunications Research Institute, South of Korea*); *Jae-Hun Yun* (*Electronics and Telecommunications Research Institute, South of Korea*); *Woo-Jin Byun* (*Electronics and Telecommunications Research Institute, South Korea*);

47 Solar Thermoelectric Co-generators Comprising Parabola trough Collectors and Thermoelectric Modules
Lei Miao (*Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences, China*); *Chao Li* (*Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences, China*); *Yi Pu Kang* (*Nagoya Institute of Technology, Japan*); *Ming Zhang* (*Yokohama National University, Japan*); *Jianhua Zhou* (*Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences, China*);

48 Investigations into Practical Resolution Limits in Microwave Holography Produced with the Bi-polar near-field Measuring Method in X- and K-bands
Pawel Kabacik (*Wroclaw University of Technology, Poland*); *Arkadiusz Byndas* (*Wroclaw University of Technology, Poland*);

49 Effect of the Air Wave on Marine Controlled Source Electromagnetic Exploration and Its Mitigation Methods
Jinsong Shen (*China Petroleum University, China*); *Xuan Wang* (*China Petroleum University (Beijing), China*); *Shuaishuai Wei* (*China Petroleum University (Beijing), China*); *Man Li* (*China Petroleum University (Beijing), China*);

50 Design of TFOSC Compatible Polarimeter for Polarimetric Observations
Selcuk Helhel (*Akdeniz University, Turkey*); *Gizem Kahya* (*Akdeniz University Campus, Turkey*); *I. Khamitov* (*Akdeniz University Campus, Turkey*); *Cevdet Bayar* (*Akdeniz University Campus, Turkey*);

51 Numerical Investigation of a Novel Two-stage Spectral Compression Structure Employing a Logarithmic DIF Cascading with a HNLF-NOLM
Fan Yang (*University of Electronic Science and Technology of China, China*); *Ying Chen* (*University of Electronic Science and Technology of China, China*); *Xiao-Jun Zhou* (*University of Electronic Science and Technology of China, China*); *Zhiyao Zhang* (*University of Electronics Science and Technology of China, China*); *Xiangning Chen* (*University of Electronic Science and Technology of China, China*); *Yong Liu* (*University of Electronic Science and Technology of China (UESTC), China*);

52 Design and Performance Evaluation of Single Antenna SSD (Simultaneous Single Band Duplex) System Using Turbo Equalizer
Changyoung An (*Chungbuk National University, South Korea*); *Hongsik Keum* (*Electromagnetic Wave Technology Institute, Korea*); *Heung-Gyoon Ryu* (*Chungbuk National University, Korea*);

53 Preparation Technique of AlN Piezoelectric Thin Film
Guan-Bo Yin (*Zhejiang University, China*); *S. Imran* (*South China Normal University, China*); *Yungui Ma* (*Zhejiang University, China*);

54 Statistical Modelling of Variations of Medical Characteristics in Time of Near Earth Electromagnetic Indignations
A. V. Sazanov (*Pushkov Institute of Terrestrial Magnetism, Ionosphere and Radiowave Propagation RAS, Russia*); *Elena A. Sazanova* (*Pushkov Institute of Terrestrial Magnetism, Ionosphere and Radiowave Propagation RAS, Russia*); *Nadezda P. Sergeenko* (*Pushkov Institute of Terrestrial Magnetism, Ionosphere and Radiowave Propagation, Russian Academy of Sciences, Russia*); *V. G. Ionova* (*Scientific Center of Neurology RAMS, Russia*); *Yu. Ya. Varakin* (*Scientific Center of Neurology RAMS, Russia*);

55 Research on the Magnetic Field Space-time Distribution in the Air-core Pulse Transformer
Xiao Yang (*National University of Defence Technology, China*); *Jianhua Yang* (*National University of Defence Technology, China*); *Xin-Bing Cheng* (*National University of Defense Technology, China*); *Jiajin Lin* (*National University of Defence Technology, China*); *Lin Lian* (*National University of Defence Technology, China*);

56 A Compact Relativistic Magnetron with a TE_{10} Output Mode
Di-Fu Shi (*National University of Defense Technology, China*); *Bao-Liang Qian* (*National University of Defense Technology, China*); *Wei Li* (*National University of Defense Technology, China*); *Hong-Gang Wang* (*National University of Defense Technology, China*); *Lin Lian* (*National University of Defence Technology, China*);

57 Kind of Dual-band Horn Antenna with Coaxial Feed Structure for High Power Microwave Applications
Qiang Zhang (*National University of Defense Technology, China*); *Shengren Peng* (*National University of Defense Technology (NUDT), China*); *Cheng-Wei Yuan* (*National University of Defense Technology, China*); *Yiming Yang* (*National University of Defense Technology, China*); *Jing Liu* (*National University of Defense Technology, China*);

58 Highly Luminescent Carbon Dots: Multi-color Composites Andion Sensors
Xiaoming Li (*Nanjing University of Science and Technology, China*); *Haibo Zeng* (*Nanjing University of Science and Technology, China*);

59 Comparison of $\boldsymbol{B}_1^+$ Field and Specific Absorption Rate (SAR) between Birdcage, Transverse Electromagnetic and Microstrip Coil for Ultra High Field MRI at 9.4 Tesla
Jamal Slim (*RWTH Aachen University, Germany*); *Belal Abu Suheil* (*RWTH Aachen University, Germany*); *Dominik Hoelscher* (*RWTH Aachen University, Germany*); *D. Heberling* (*RWTH Aachen University, Germany*);

60 A Scaled Simulated Method of Sea Clutter Based on Non-metal Materials
Yajun Wu (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Zichang Liang* (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Li Li* (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Xiaobing Wang* (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Jun Gu* (*Science and Technology on Electromagnetic Scattering Laboratory, China*);

61 RCS Measurement of Large Target in Non-cooperative Near Field Environments
Xiuli Xu (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Guangde Tong* (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Li Li* (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Kun Cai* (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Xiaobing Wang* (*Science and Technology on Electromagnetic Scattering Laboratory, China*);

62 Scattering Analysis of Reflectarray Antennas Illuminated by a Point Source for Near Field Focus Applications
Shih-Chung Tuan (*Oriental Institute of Technology, Taiwan*); *Hsi-Tseng Chou* (*Yuan Ze University, Taiwan*);

63 Nonlocal Theory for Charged Metallic Nanoparticle
Hung-Yi Chung (*Research Center for Applied Sciences, Academia Sinica, Taiwan*); *P. T. Leung* (*Research Center for Applied Sciences, Academia Sinica, Taiwan*); *D. P. Tsai* (*Research Center for Applied Sciences, Academia Sinica, Taiwan*);

64 Non Destructive Method for Detection Wood-destroying Insects
Pavel Fiala (*Brno University of Technology, Czech Republic*); *Martin Friedl* (*Brno University of Technology, Czech Republic*); *Martin Cap* (*Brno University of Technology, Czech Republic*); *Petr Konas* (*Brno University of Technology, Czech Republic*); *Pavel Smira* (*Thermo Sanace s.r.o., Czech Republic*); *Andrea Nasswettrova* (*Thermo Sanace s.r.o., Czech Republic*);

65 A Novel Miniaturized Frequency Selective Surface with Stable Performances
Rui Wu (*Air Force Engineering University, China*); *Hou Zhang* (*Air Force Engineering University, China*); *Zhiyong Xu* (*Air Force Engineering University, China*); *Zimu Yang* (*Air Force Engineering University, China*); *Yongfan Lin* (*Air Force Engineering University, China*);

66 Metamaterials-based High-gain Antenna with Wide Viewing Angle
Yang Cao (*Shanghai Radio Equipment Institute, China*); *Xiaobing Wang* (*Shanghai Radio Equipment Institute, China*);

67 Surface Electromagnetic Waves Excitation Using a Reflective Phase Gradient Metasurface
Yongfeng Li (*Air Force University of Engineering, China*); *Shaobo Qu* (*Air Force Engineering University, China*); *Jieqiu Zhang* (*Air Force Engineering University, China*); *Jiafu Wang* (*Air Force Engineering University, China*); *Hongya Chen* (*Air Force Engineering University, China*); *Mingbao Yan* (*Air Force Engineering University, China*); *Hang Zhou* (*Air Force Engineering University, China*); *Hangying Yuan* (*Air Force Engineering University, China*); *Lin Zheng* (*Air Force Engineering University, China*); *Yongqiang Pang* (*Air Force Engineering University, China*);

68 Dipolar Metastability Progression
Karl F. Kaspareck (*Consulenze Tecniche Energia, Italy*);

69 Design of 90°-switched-line Phase Shifter with Constant Phase Shift Using CRLH TL
Jun Zhang (*Tongyu Communication Inc., China*); *Sing Wai Cheung* (*The University of Hong Kong, China*);

70 Design of Oscillator Using Zeroth-order Resonator Based on Composite Right/left-handed Transmission Line
Gao Juanjuan (*Communication University of China, China*); *Guizhen Lu* (*Communication University of China, China*);

71 Transponder Impact on Power and Spectral Efficiencies in WDM Links Based on 10–40–100 Gbps Mixed-line Rates
Vjaceslavs Bobrovs (*Riga Technical University, Latvia*); *Peteris Gavars* (*Riga Technical University, Latvia*); *Girts Ivanovs* (*Riga Technical University, Latvia*); *Ilja Trifonovs* (*Riga Technical University, Latvia*); *Aleksejs Udalcovs* (*Riga Technical University, Latvia*);

72 Temperature Dependence of Amplified Spontaneous Emission (ASE) Peak Position Shift of MEH-PPV
Liang Qin (*Beijing Jiaotong University, China*); *Yufeng Hu* (*Beijing Jiaotong University, China*); *Zhidong Lou* (*Beijing Jiaotong University, China*); *Yanbing Hou* (*Beijing Jiaotong University, China*); *Feng Teng* (*Beijing Jiaotong University, China*);

73 Organic Bistable Devices Based on Poly- (N-vinylcarbazole)/zinc Sulfide Nanocomposites
Yapeng Cao (*Beijing Jiaotong University, China*); *Jiantao Li* (*Beijing Jiaotong University, China*); *Haihang Ye* (*Beijing Jiaotong University, China*); *Xu Li* (*Beijing Jiaotong University, China*); *Yufeng Hu* (*Beijing Jiaotong University, China*); *Aiwei Tang* (*Beijing Jiaotong University, China*); *Feng Teng* (*Beijing Jiaotong University, China*);

74 Light Emission from Pentacene/Tris-(8-hydroxyquinolinato) Bilayer Transistors
Shaobo Cui (*Beijing Jiaotong University, China*); *Yufeng Hu* (*Beijing Jiaotong University, China*); *Zhidong Lou* (*Beijing Jiaotong University, China*); *Yanbing Hou* (*Beijing Jiaotong University, China*); *Feng Teng* (*Beijing Jiaotong University, China*);

75 EMI Study of Transformerless Photovoltaic Array System
Wenjie Chen (*Xi'an Jiaotong University, China*); *Xiaomei Song* (*Xi'an Jiaotong University, China*); *Hao Huang* (*Xi'an Jiaotong University, China*); *Xu Yang* (*Xi'an Jiaotong University, China*);

76 Demonstration of Polarization Muiltiplexed Signals Division Using a Fiber Optical Parametric Amplifier
Sergejs Olonkins (*Riga Technical University, Latvia*); *Ilja Lyashuk* (*Riga Technical University, Latvia*); *Jurgis Porins* (*Riga Technical University, Latvia*);

77 Photoelectrochemical Water Splitting Enhanced by Plasmon Resonance under Visible Light Illumination
Yuqing Zhong (*Hokkaido University, Japan*); *Yuko Mori* (*Hokkaido University, Japan*); *Kosei Ueno* (*Hokkaido University, Japan*); *Tomoya Oshikiri* (*Hokkaido University, Japan*); *Hiroaki Misawa* (*Hokkaido University, Japan*);

78 Cooperative Opto-electrical Operation of Parallel Photonic Devices for Broadening Optical Transport Capacity
Naoukatu Yamamoto (*National Institute of Information and Communications Technology, Japan*); *Toshimasa Umezawa* (*National Institute of Information and Communications Technology, Japan*); *Atsushi Kanno* (*National Institute of Information and Communications Technology, Japan*); *Tetsuya Kawanishi* (*National Institute of Information and Communications Technology, Japan*);

79 Efficiency Measurement of Antenna with Lumped Elements Based on Improved Wheeler Cap Method
Alexander S. Rusakov (*LG Electronics, Russia R&D Lab, Russia*); *Roman V. Salimov* (*LG Electronics, Russia R&D Lab, Russia*); *D. V. Vasilyev* (*LG Electronics, Russia R&D Lab, Russia*); *R. I. Tikhonov* (*LG Electronics, Russia R&D Lab, Russia*);

80 The Analysis of Receiving Sensitivity Degradation of WLAN Performance due to EMI Noise from SSD Module
Han-Nien Lin (*Feng-Chia University, Taiwan, R.O.C.*); *Po-Yu Chiang* (*Feng-Chia University, Taiwan, R.O.C.*); *Wang-Chwen Tsai* (*Feng-Chia University, Taiwan, R.O.C.*); *Cheng-Chang Chen* (*MOEA, Taiwan, R.O.C.*);

81 Research in Modeling and Dynamic Simulation of Linear Eddy Current Braking Force of High-speed Train
Xiurong Zhang (*Tongji University, China*); *Qiyi Guo* (*Tongji University, China*); *Jie Zhang* (*Tongji University, China*); *Meisong Tong* (*Tongji University, China*);

82 Enhance the Magnetic Properties of Fe-Si-Al-Cr Flaky Particles by Annealing
Nan Zhang (*University of Electronic Science and Technology of China, China*); *Xin Wang* (*University of Electronic Science and Technology of China, China*); *Pei-Heng Zhou* (*University of Electronic Since and Technology of China, China*); *Jianliang Xie* (*University of Electronic Science and Technology of China, China*); *Long-Jiang Deng* (*University of Electronic Science and Technology of China, China*);

83 Design of Controlling Edge Scattering Based on Tapered Periodic Surfaces Loading
Lijuan Lu (*University of Electronic Science and Technology of China, China*); *Hai-Yan Chen* (*University of Electronic Science and Technology of China, China*); *Pei-Heng Zhou* (*University of Electronic Since and Technology of China, China*); *Difei Liang* (*University of Electronic Science and Technology of China, China*); *Long-Jiang Deng* (*University of Electronic Science and Technology of China, China*);

84 Shock Wave Dynamics in the Cleaning of Container Surfaces
Miroslav Janicek (*Brno University of Technology, Czech Republic*); *Radim Kadlec* (*Brno University of Technology, Czech Republic*); *Pavel Fiala* (*Brno University of Technology, Czech Republic*);

85 Elimination of a Fire through Shock Wave Interference: The Numerical Model and Application Scenarios
Miroslav Janicek (*Brno University of Technology, Czech Republic*); *Pavel Fiala* (*Brno University of Technology, Czech Republic*); *Radim Kadlec* (*Brno University of Technology, Czech Republic*);

86 High Gain Electromagnetically Coupled Stacked Circular Disk Patch Antenna for Wideband Application
Nagendra Prasad Yadav (*Nanjing University of Science and Technology, China*); *Wen Wu* (*Nanjing University of Science and Technology, China*); *Dagang Fang* (*Nanjing University of Science and Technology, China*);

87 Analysis of Spectral Characteristics of Normal Fibroblasts and Fibroblasts Cultured with Cancer Cells in Terahertz Frequency Range
Evgenii A. Strepitov (*National Research University of Information Technologies, Mechanics and Optics, Russia*); *Igor V. Prozheev* (*ITMO University, Russia*); *Nikolay Sergeevich Balbekin* (*ITMO University, Russia*); *Max I. Sulatsky* (*ITMO University, Russia*); *Mikhail Konstantinovich Khodzitsky* (*ITMO University, Russia*); *O. A. Smolyanskaya* (*National Research University of Information Technologies, Mechanics and Optics, Russia*); *A. S. Trulioff* (*Saint-Petersburg State University, Russia*); *M. K. Serebryakova* (*Saint-Petersburg State University, Russia*);

Session 3P1a
FocusSession: Sesquicentennial Commemoration Session for Maxwell's Equations 2

Wednesday PM, August 27, 2014

Room 1

Organized by Weng Cho Chew

Chaired by Weng Cho Chew

13:20 keynote Maxwell-like Equations for Gravitational Fields from the Linearized Theory of General Relativity: Are There Experimental Tests of These Equations?
Raymond W. Chiao (*University of California, Merced, USA*); *Nader Inan* (*University of California, Merced, USA*); *Gerardo Munoz* (*California State University, Fresno, USA*); *Douglas Singleton* (*California State University, Fresno, USA*); *Xiuhao Deng* (*University of California, Merced, USA*); *Luis Martinez* (*University of California, Merced, USA*); *Bong Soo Kang* (*University of California, Merced, USA*); *Alessandro Castelli* (*University of California, Merced, USA*); *Jay E. Sharping* (*University of California, Merced, USA*);

14:00 keynote Complete Construction of EM Green's Dyadics from Maxwell's Equations and Their Subsequent Asymptotic HF Approximations
Prabhakar H. Pathak (*Ohio State University, USA*);

14:40 keynote Generalized Gauge for Multi-scale Inhomogeneous Media
Weng Cho Chew (*University of Illinois, USA*); *Q. I. Dai* (*University of Illinois, USA*); *Sheng Sun* (*The University of Hong Kong, China*); *Ai Yin Liu* (*University of Illinois, USA*); *Christopher Jayun Ryu* (*University of Illinois, USA*); *Shu Chen* (*University of Illinois, USA*); *Yan Lin Li* (*The University of Hong Kong, China*); *Wei E. I. Sha* (*The University of Hong Kong, China*);

15:20 **Coffee Break**

Session 3P1b
SC2: Plasmonics: Beyond Local-response Dynamics

Wednesday PM, August 27, 2014

Room 1

Organized by Nicholas X. Fang, N. Asger Mortensen

Chaired by Nicholas X. Fang, Yu Luo

15:40 Electronic Tunneling Effects in Nanoplasmonic Structures
Joseph W. Haus (*University of Dayton, USA*); *Domenico De Ceglia* (*Charles M. Bowden Research Center, USA*); *Maria Antonietta Vincenti* (*Charles M. Bowden Research Center, USA*); *Michael Scalora* (*Charles M. Bowden Research Center, AMRDEC, RDECOM, USA*);

16:00 Nonlocal and Quantum Effects in Nanoplasmonics
Yu Luo (*Imperial College London, UK*);

16:20 Surface Effects in the Hydrodynamic Model
Giuseppe Toscano (*Karlsruhe Institute of Technology, Germany*); *Carsten Rockstuhl* (*Karlsruhe Institute of Technology, Germany*); *Martijn Wubs* (*Technical University of Denmark, Denmark*); *N. Asger Mortensen* (*Technical University of Denmark, Denmark*);

16:40 Generalized Nonlocal Optical Response
Soren Raza (*Technical University of Denmark, Denmark*); *Thomas Sondergaard* (*Aalborg University, Denmark*); *Martijn Wubs* (*Technical University of Denmark, Denmark*); *Sergey I. Bozhevolnyi* (*University of Southern Denmark, Denmark*); *N. Asger Mortensen* (*Technical University of Denmark, Denmark*);

17:00 The Impact of Nonlocality on Gap-plasmon Resonators and Multilayered Structures
Antoine Moreau (*Clermont University, France*); *Cristian Ciraci* (*Duke University, USA*); *Jessica Benedicto* (*University Clermont Ferrand, France*); *M. Dchaux* (*Clermont University, France*); *Emmanuel Centeno* (*Universite Blaise Pascal, France*); *David R. Smith* (*Duke University, USA*);

Session 3P2
FocusSession.SC3: Photonics and Optoelectronics in Industry

Wednesday PM, August 27, 2014

Room 2

Organized by Cees Ronda, Anhui Liang

Chaired by Cees Ronda, Anhui Liang

13:00 Optimization of Nonlinear Coefficient Map in Backpropagation
Yanru Cao (*Tongji University, China*); *Junhe Zhou* (*Tongji University, China*);

13:20 invited Generic InP-based Integration Technology: RF Crosstalk in High-capacity Optical Transmitter PICs
Weiming Yao (*Technical University Eindhoven, The Netherlands*); *Giovanni Gilardi* (*Technical University of Eindhoven, The Netherlands*); *Meint K. Smit* (*Technical University of Eindhoven, The Netherlands*); *Michael J. Wale* (*Oclaro Technology Ltd., UK*);

13:40 Design of an Efficient and a Compact Optical Pulse Compressor Using a Tapered Photonic Crystal Fiber
A. Manimegalai (*VIT University, India*); *D. R. Divya* (*Ganadipathy Tulsi's Jain Engineering College, India*); *Abdosllam M. Abobaker* (*Collage of Electronic Technology, Libya*); *K. Senthilnathan* (*VIT University, India*); *S. Sivabalan* (*VIT University, India*); *Kaliyaperumal Nakkeeran* (*University of Aberdeen, UK*); *P. Ramesh Babu* (*VIT University, India*);

14:00 History, Present and Future of High Speed Transponders and Systems
Anhui Liang (*Nanjing University of Posts and Telecommunications, China*);

14:20 invited Applications of High Pulse Energy Femtosecond Fiber Lasers
Xiangdong Cao (*Huazhong University of Science and Technology, China*);

15:20 **Coffee Break**

Session 3P3
MS-1.6: Organic Light Emitting Diodes 2

Wednesday PM, August 27, 2014

Room 3

Organized by Jwo-Huei Jou, Jiun-Haw Lee

Chaired by Jiun-Haw Lee

13:00 Highly Efficient Flexible and Stretchable Polymer Light Emitting Diodes
Lu Li (*University of California, USA*); *Jiajie Liang* (*University of California, USA*); *Shu-Yu Chou* (*University of California, USA*); *Xiaodan Zhu* (*University of California, USA*); *Xiaofan Niu* (*University of California, USA*); *Zhibin Yu* (*University of California, USA*); *Qibing Pei* (*University of California, USA*);

13:20 Room-temperature Solution-processed Transition Metal Oxides as Efficient Carrier Extraction Layer for High Performance Organic Optoelectronics
Wallace C. H. Choy (*The University of Hong Kong, China*); *Fengxian Xie* (*The University of Hong Kong, China*); *Xinchen Li* (*The University of Hong Kong, China*); *Chuandao Wang* (*The University of Hong Kong, China*);

13:40 High Performance Inverted Organic Light-emitting Diodes with WO_3/Ag/MoO_2 Multilayer as Transparent Cathode
Shun-Wei Liu (*Ming Chi University of Technology, Taiwan*);

14:00 Sophisticated Architecture Designs for Blue, Green, and Red Inverted Organic Light-emitting Diodes
Chih-Hao Chang (*Yuan Ze University, Taiwan*); *Yu-De Su* (*Yuan Ze University, Taiwan*); *Hao-Xiang Huang* (*Yuan Ze University, Taiwan*); *Ming-Kuan Hsu* (*Yuan Ze University, Taiwan*); *Ying-Chieh Wu* (*Yuan Ze University, Taiwan*);

14:20 Enhancing the Performance of Organic Light Emitting Diodes by Varying Device Structure
Shui-Hsiang Su (*I-Shou University, Taiwan*); *Meiso Yokoyama* (*I-Shou University, Taiwan*);

14:40 Regulating Carriers and Excitons in Simplified Hybrid WOLEDs by Using a Bipolar Interlayer Switch
Baiquan Liu (*South China University of Technology, China*); *Jianhua Zou* (*South China University of Technology, China*); *Miao Xu* (*South China University of Technology, China*); *Lei Wang* (*South China University of Technology, China*); *Hong Tao* (*South China University of Technology, China*); *Yueju Su* (*New Vision Opto-Electronic Technology Co. Ltd., China*); *Dongyu Gao* (*New Vision Opto-Electronic Technology Co. Ltd., China*); *Linfeng Lan* (*South China University of Technology, China*); *Junbiao Peng* (*South China University of Technology, China*);

15:00 Efficiency and Color-tunability of Fluorescent-phosphorescent Organic Light-emitting Diodes with Regular, Inverted, and Symmetrical Structures
Su-Hua Yang (*National Kaohsiung University of Applied Sciences, Taiwan, R.O.C.*); *Po-Jen Shih* (*National Kaohsiung University of Applied Sciences, Taiwan, R.O.C.*);

15:20 **Coffee Break**

15:40 New AMOLED Pixel Circuits Based on a-IGZO TFTs Compensating for TFT V_{TH} Shift and OLED Degradation
Chih-Lung Lin (*National Cheng Kung University, Taiwan, R.O.C.*); *Chia-Che Hung* (*National Cheng Kung University, Taiwan, R.O.C.*); *Po-Chun Lai* (*National Cheng Kung University, Taiwan, R.O.C.*); *Po-Syun Chen* (*National Cheng Kung University, Taiwan, R.O.C.*);

16:00 Optical Modeling in OLED Structures
Yih-Peng Chiou (*National Taiwan University, Taiwan*); *Wen-Lan Yeh* (*National Taiwan University, Taiwan*);

16:20 Efficient Light-extraction Microlens Arrays for Organic Light-emitting Devices
Mao-Kuo Wei (*National Dong Hwa University, Taiwan, R.O.C.*); *Di-Hong Lin* (*National Dong Hwa University, Taiwan, R.O.C.*); *Yu-Lin Liou* (*National Dong Hwa University, Taiwan, R.O.C.*); *Jiun-Haw Lee* (*National Taiwan University, Taiwan, R.O.C.*); *Hoang-Yan Lin* (*National Taiwan University, Taiwan, R.O.C.*);

16:40 Formation of Internal Micro-lens-like Structure for Organic Light-emitting Diodes
Ching-Ming Hsu (*Southern Taiwan University of Science and Technology, Taiwan, R.O.C.*); *Ying-Xun Zeng* (*Southern Taiwan University of Science and Technology, Taiwan, R.O.C.*); *Bo-Ting Lin* (*Southern Taiwan University of Science and Technology, Taiwan, R.O.C.*); *Wei-Ming Lin* (*Southern Taiwan University of Science and Technology, Taiwan, R.O.C.*); *Wen-Tuan Wu* (*Southern Taiwan University of Science and Technology, Taiwan, R.O.C.*);

17:00 Balanced Charge Transport Organic Semiconductors for Highly Efficient Organic Light-emitting Diode
Li-Yin Chen (*National Sun Yat-sen University, Taiwan, R.O.C.*); *Jin-Kai Chang* (*National Sun Yat-sen University, Taiwan, R.O.C.*); *Yi-Ru Wu* (*National Sun Yat-sen University, Taiwan, R.O.C.*); *Li-Zhong Cai* (*National Sun Yat-sen University, Taiwan, R.O.C.*);

17:20 The Impurity Effect on OLED Via Transient Electroluminescence Analysis
Chi-Feng Lin (*National United University, Taiwan*); *Chia-Cheng Jian* (*National United University, Taiwan*); *Tien-Lung Chiu* (*Yuan Ze University, Taiwan*); *Jiun-Haw Lee* (*National Taiwan University, Taiwan, R.O.C.*);

17:40 Blue Phosphorescent Organic Light-emitting Diode with Carbozole-triazole Host
Po-Sheng Wang (*National Taiwan University, Taiwan*); *Bo-Yen Lin* (*National Taiwan University, Taiwan*); *Jiun-Haw Lee* (*National Taiwan University, Taiwan, R.O.C.*); *Yu-Hsuan Hsieh* (*National Taiwan University, Taiwan*); *Man-Kit Leung* (*National Taiwan University, Taiwan*); *Tien-Lung Chiu* (*Yuan Ze University, Taiwan*); *Chi-Feng Lin* (*National United University, Taiwan*);

18:00 Voltage Reduction of Blue Phosphorescent Organic Light-emitting Diode with Mixed Host
Chuan-En Lin (*National Taiwan University, Taiwan*); *Bo-Yen Lin* (*National Taiwan University, Taiwan*); *Jiun-Haw Lee* (*National Taiwan University, Taiwan, R.O.C.*); *Tien-Lung Chiu* (*Yuan Ze University, Taiwan*); *Chi-Feng Lin* (*National United University, Taiwan*);

Session 3P4
SC2: Graphene for Plasmonics and Sensing

Wednesday PM, August 27, 2014
Room 4
Organized by Sanshui Xiao, Weihua Wang
Chaired by Sanshui Xiao, Weihua Wang

13:00 Graphene Metamaterials and Plasmonics from Terahertz to Optical Frequencies (invited)
Philippe Tassin (*Chalmers University, Sweden*);

13:20 Design and Analysis of Tunable/Broadband Terahertz Absorbers Based on Graphene Metasurface
Xianjun Huang (*University of Manchester, UK*); *Xiao Zhang* (*University of Manchester, UK*); *Zhirun Hu* (*University of Manchester, UK*); *Mohammed Aqeeli* (*University of Manchester, UK*); *Abdullah Alburaikan* (*University of Manchester, UK*);

13:40 Strong Light-matter Interaction in Graphene (invited)
Sanshui Xiao (*Technical University of Denmark, Denmark*);

14:00 Optical Properties of Graphene on Quartz and Polyethylene Substrates in Terahertz Frequency Range
Alaudi Khozbaudievich Denisultanov (*ITMO University, Russia*); *Solveyga Edvardo Azbite* (*ITMO University, Russia*); *Nikolay Sergeevich Balbekin* (*ITMO University, Russia*); *Svyatoslav Igorevich Gusev* (*ITMO University, Russia*); *Mikhail Konstantinovich Khodzitsky* (*ITMO University, Russia*);

14:20 Recent Developments in Graphene-based Optical Modulators (invited)
Ran Hao (*Zhejiang University, China*); *Jia-Min Jin* (*Zhejiang University, China*); *Erping Li* (*Zhejiang University, China*);

14:40 Broadband Impedance Matching with Graphene Layers in Terahertz Region
Xinlong Xu (*Northwest University, China*);

15:00 Plasmonic Antenna Graphene Photodetector (invited)
Zheyu Fang (*Peking University, China*);

15:20 **Coffee Break**

15:40 Graphene-ferroelectric Nonvolatile Memory and Reconfigurable Logic Metadevices (invited)
Bumki Min (*KAIST, South Korea*);

16:00 Graphene-based THz Broadband Copolanar Waveguide (CPW) Fed Monopole Antenna
Xiao Zhang (*University of Manchester, UK*); *Gregory Auton* (*University of Manchester, UK*); *Xianjun Huang* (*University of Manchester, UK*); *Zhirun Hu* (*University of Manchester, UK*); *Zeyu Long* (*University of Manchester, UK*);

16:20 Controlling the Propagation of Graphene Plasmons with Nanoantennas (invited)
Pablo Alonso-Gonzalez (*CIC nanoGUNE, Spain*); *Alexey Yu. Nikitin* (*CIC nanoGUNE Consolider, Spain*); *F. Golmar* (*CIC nanoGUNE, Spain*); *A. Centeno* (*Graphenea SA, Spain*); *A. Pesquera* (*Graphenea SA, Spain*); *S. Velez* (*CIC nanoGUNE, Spain*); *J. Chen* (*CIC nanoGUNE, Spain*); *F. Koppens* (*Mediterranean Technology Park, Spain*); *A. Zurutuza* (*Graphenea SA, Spain*); *F. Casanova* (*CIC nanoGUNE, Spain*); *L. E. Hueso* (*CIC nanoGUNE, Spain*); *R. Hillenbrand* (*CIC nanoGUNE Consolider, Spain*);

16:40 Novel Tunable Mid-infrared Graphene Plasmonic Waveguide with a Trenched Structure
Jiajiu Zheng (*Zhejiang University, China*); *Longhai Yu* (*Zhejiang University, China*); *Daoxin Dai* (*Zhejiang University, China*);

17:00 Comparisons of Classical, Semiclassical, and Quantum Plasmonics in Graphene Nanodisks (invited)
Weihua Wang (*Technical University of Denmark, Denmark*); *Thomas Christensen* (*Technical University of Denmark (DTU), Denmark*); *Martijn Wubs* (*Technical University of Denmark, Denmark*); *Antti-Pekka Jauho* (*Technical University of Denmark, Denmark*); *N. Asger Mortensen* (*Technical University of Denmark, Denmark*);

17:20 Boosting Tunable Terahertz Absorption in a Monolayer Graphene
Yuancheng Fan (*Northwestern Polytechnical University, China*); *Hongqiang Li* (*Tongji University, China*);

17:40 Plasmon-phonon Hybridization in Graphene Nanostructures on Hexagonal Boron Nitride
Xiaoxia Yang (*National Center for Nanoscience and Technology, China*); *Mingju Liu* (*National Center for Nanoscience and Technology, China*); *Qing Dai* (*National Center for Nanoscience and Technology, China*);

Session 3P5a
SC2&3: Functional Chiral Metamaterials

Wednesday PM, August 27, 2014

Room 5

Organized by Dragomir N. Neshev, Ilya V. Shadrivov

Chaired by Ilya V. Shadrivov

13:00 Eight-fold Intergrowth of Gyroid Nets: A Chiral Dielectric Material with Optical Activity Comparable to That of Meta-materials
Gerd E. Schroder-Turk (*Friedrich-Alexander-Universitat Erlangen-Nurnberg, Germany*); *M. Saba* (*Friedrich-Alexander-Universitat Erlangen-Nurnberg, Germany*); *M. D. Turner* (*Swinburne University of Technology, Australia*); *K. Mecke* (*Friedrich-Alexander-Universitat Erlangen-Nurnberg, Germany*); *Min Gu* (*Swinburne University of Technology, Australia*);

13:20 Pushing and Pulling Chiral Particles with Light
K. Ding (*The Hong Kong University of Science and Technology, China*); *S. B. Wang* (*The Hong Kong University of Science and Technology, China*); *J. Ng* (*Hong Kong Baptist University, China*); *L. Zhou* (*Fudan University, China*); *Che Ting Chan* (*The Hong Kong University of Science and Technology, China*);

13:40 Chiral-light Generation with Helical and Multipolar Metamaterials
Manuel Decker (*Australian National University, Australia*); *Isabelle Staude* (*Australian National University, Australia*); *Sergey S. Kruk* (*Australian National University, Australia*); *Dragomir N. Neshev* (*Australian National University, Australia*); *Yuri S. Kivshar* (*Australian National University, Australia*);

14:00 Nonlinear Chiroptical Effects in Plasmonic Metasurfaces
Ventsislav K. Valev (*University of Cambridge, UK*); *Jeremy J. Baumberg* (*University of Cambridge, UK*); *Nuno Braz* (*University College London, UK*); *Jan Mertens* (*University of Cambridge, UK*); *Claire Blejean* (*University of Cambridge, UK*); *Paul A. Warburton* (*University College London, United Kingdom*); *Victor V. Moshchalkov* (*Nanoscale Superconductivity and Magnetism & Pulsed Fields Group, Belgium*); *Nicolae-Coriolan Panoiu* (*University College London, United Kingdom*); *Thierry Verbiest* (*Superconductivity and Magnetism & Pulsed Fields Group, Belgium*);

14:20 Anisotropy and Non-reciprocity in Boundary Conditions: Generalized PEMC Surface
Ari Sihvola (*Aalto University School of Electrical Engineering, Finland*); *Henrik Wallen* (*Aalto University School of Electrical Engineering, Finland*); *Pasi Yla-Oijala* (*Aalto University School of Electrical Engineering, Finland*); *Sami P. Kiminki* (*Aalto University School of Electrical Engineering, Finland*);

14:40 Radiation of Chiral Molecules in Chiral Meta-enviroment
Vasily V. Klimov (*Lebedev Physical Institute, Russian Academy of Sciences, Russia*);

15:00 A Modal Approach to Metamaterials and Nanophotonics
David A. Powell (*Australian National University, Australia*);

15:20 **Coffee Break**

15:40 Planar Chiral Metamaterials: From Twisted to Conjugated Designs
Rongkuo Zhao (*Imperial College London, UK*);

Session 3P5b
SC3: Structured Light

Wednesday PM, August 27, 2014

Room 5

Organized by Zhimin Shi

Chaired by Zhimin Shi

16:00 Experimental Observation of "Pseudospin" and Edge States in Structured "Photonic Graphene"
Daohong Song (*Nankai University, China*); *Liqin Tang* (*Nankai University, China*); *Jingjun Xu* (*Nankai University, China*); *Zhigang Chen* (*San Francisco State University, USA*);

16:20 Structured Light in the Meta-world
Jingbo Sun (*University at Buffalo, The State University of New York, USA*); *Mikhail I. Shalaev* (*University at Buffalo, The State University of New York, USA*); *Jinwei Zeng* (*University at Buffalo, The State University of New York, USA*); *Natalia M. Litchinitser* (*University at Buffalo, The State University of New York, USA*);

16:40 Separating and Transforming Arbitrary Orthogonal Beams Automatically — An Adaptive Universal Linear Optical Component
David A. B. Miller (*Stanford University, USA*);

17:00 Efficient Detection of Information Encoded in Orbital Angular Momentum of Light
Zhimin Shi (*University of South Florida, USA*); *Mohammad Mirhosseini* (*University of Rochester, USA*); *Mehul Malik* (*University of Rochester, USA*); *Robert W. Boyd* (*University of Rochester, USA*);

17:20 Propagation and Modulation of 1D Airy Beams
Fei Zhuang (*Hangzhou Normal University, China*); *Yuanyuan Pan* (*Hangzhou Normal University, China*); *Yuqian Ye* (*Hangzhou Normal University, China*); *Xinyue Du* (*Zhejiang University, China*); *Xuan Li* (*Hangzhou Normal University, China*); *Zhimin Shi* (*University of South Florida, USA*);

17:40 Structured Light Meets Structured Material: Concepts and Applications
Ebrahim Karimi (*University of Ottawa, Canada*);

18:00 Vectorial Modes in Continuous Variable Quantum Optics
Christoph Marquardt (*Max Planck Institute for the Science of Light, Germany*); *I. Rigas* (*Max Planck Institute for the Science of Light, Germany*); *C. Gabriel* (*Max Planck Institute for the Science of Light, Germany*); *S. Berg-Johansen* (*Max Planck Institute for the Science of Light, Germany*); *Andrea Aiello* (*Max Planck Institute for the Science of Light, Germany*); *Peter van Loock* (*University of Mainz, Germany*); *U. L. Andersen* (*Max Planck Institute for the Science of Light, Germany*); *G. Leuchs* (*Max Planck Inst Phys Lichts, Germany*);

18:20 Measuring a 27-dimensional Orbital Angular Momentum State with Quantum Weak Values
Mehul Malik (*University of Rochester, USA*); *Mohammad Mirhosseini* (*University of Rochester, USA*); *Martin P. J. Lavery* (*University of Glasgow, UK*); *Jonathan Leach* (*University of Glasgow, UK*); *Miles J. Padgett* (*University of Glasgow, UK*); *Robert W. Boyd* (*University of Rochester, USA*);

Session 3P6a
FocusSession.SC2: Novel Techniques for Subwavelength-focusing and Super Resolution Imaging 1

Wednesday PM, August 27, 2014

Room 6

Organized by Zhaowei Liu, Geoffroy Lerosey

Chaired by Zhaowei Liu, Geoffroy Lerosey

13:00 Negative Refraction of Sub-wavelength Imaging
keynote
John B. Pendry (*Imperial College London, UK*);

13:30 Electron Induced Near Field Optical Microscopy for
invited Plasmonic Nanostructures
Nicholas X. Fang (*Massachusetts Institute of Technology, USA*);

13:50 Beating the Diffraction Limit with Resonant Metal-
invited enses: Microwaves, Acoustics and Optics Demonstrations
Fabrice Lemoult (*ESPCI ParisTech & CNRS, France*); *Mathias Fink* (*ESPCI ParisTech and CNRS, France*); *Geoffroy Lerosey* (*ESPCI ParisTech & CNRS, France*);

14:10 Super Focusing with Electromagnetic Cavities and Subwavelength Gratings
Matthieu Dupre (*ESPCI ParisTech & CNRS, France*); *Mathias Fink* (*ESPCI ParisTech & CNRS, France*); *Geoffroy Lerosey* (*ESPCI ParisTech & CNRS, France*);

14:25 Subwavelength Light Focusing and Imaging via Wave-
invited front Shaping in Complex Media
Yong Keun Park (*Korea Advanced Technology of Science and Technology (KAIST), South Korea*);

14:45 Non-invasive Real-time Imaging through Scattering Layers and around Corners via Speckle Correlations
Ori Katz (*ESPCI ParisTech and CNRS, France*); *Pierre Heidmann* (*ESPCI ParisTech and CNRS, France*); *Mathias Fink* (*ESPCI ParisTech and CNRS, France*); *Sylvain Gigan* (*ESPCI ParisTech and CNRS, France*);

15:00 Sparsity-based Sub-wavelength Imaging and Super-
invited resolution in Time-resolved and Spectroscopic Instruments
Pavel Sidorenko (*Technion Israel Institute of Technology, Israel*); *Yoav Shechtman* (*Technion Israel Institute of Technology, Israel*); *Yonina C. Eldar* (*Technion Israel Institute of Technology, Israel*); *O. Cohen* (*Technion Israel Institute of Technology, Israel*); *M. Segev* (*Technion Israel Institute of Technology, Israel*);

15:20 **Coffee Break**

Session 3P6b
FocusSession.SC1&2: Nonreciprocal Electromagnetics and Photonics

Wednesday PM, August 27, 2014

Room 6

Organized by Lei Bi, Zheng Wang

Chaired by Lei Bi, Zheng Wang

15:40 Optical Nonreciprocal Devices Based on Magneto-optical Phase Shift in Silicon Photonics (keynote)
Tetsuya Mizumoto (*Tokyo Institute of Technology, Japan*); *Yuya Shoji* (*Tokyo Institute of Technology, Japan*);

16:10 The Growth and Magneto-optical Properties of Large Size Single-crystal Thick TmBiIG Films from Lead-free Flux by LPE Technology (invited)
Bing Mei (*University of Electronic Science and Technology, China*); *Huai-Wu Zhang* (*University of Electronic Science and Technology of China, China*); *Qing-Hui Yang* (*University of Electronic Science and Technology of China, China*); *Shu-Chen Jin* (*University of Electronic Science and Technology, China*); *Xiao-Jie Tian* (*University of Electronic Science and Technology, China*); *Ying-Heng Rao* (*University of Electronic Science and Technology, China*);

16:30 Experimental Observation of Photonic Topological State in a Uniaxial Metacrystal Waveguide (invited)
Wen-Jie Chen (*The Hong Kong University of Science and Technology, China*); *Shao-Ji Jiang* (*Sun Yat-Sen University, China*); *Xiao-Dong Chen* (*Sun Yat-Sen University, China*); *Jian-Wen Dong* (*Sun Yat-Sen (Zhongshan) University, China*); *Che Ting Chan* (*The Hong Kong University of Science and Technology, China*);

16:50 Photonic Networks Realizations of Floquet Topological Insulators (invited)
Yidong Chong (*College of Science, Singapore*);

17:10 Faraday Polarisation Rotation in Semiconductor Waveguides Incorporating Periodic Garnet Claddings (invited)
David C. Hutchings (*University of Glasgow, UK*); *C. Zhang* (*University of Glasgow, UK*); *B. M. Holmes* (*University of Glasgow, UK*); *P. Dulal* (*University of Minnesota, USA*); *A. D. Block* (*University of Minnesota, USA*); *Bethanie J. H. Stadler* (*University of Minnesota, USA*);

17:30 Feasibility of Fabrication of Plasmonic Optical Isolator for Photonic Integrated Circuits (invited)
Vadym Zayets (*AIST, Japan*); *A. Baryshev* (*All-Russia Research Institute of Automatics, Russia*); *H. Saito* (*AIST, Japan*); *K. Ando* (*AIST, Japan*); *S. Yuasa* (*AIST, Japan*);

17:50 Optical Forces in Photonic One-way Waveguides (invited)
Zheng Wang (*The University of Texas at Austin, USA*);

18:10 Tunable Nonreciprocity Based on Nonlinear Fano Resonance
Yi Xu (*Australian National University, Australia*); *Andrey E. Miroshnichenko* (*Australian National University, Australia*);

18:25 Theoretical Study on the Optical Properties of $Y_3Fe_5O_{12}$ and $Ce_xY_{3-x}Fe_5O_{12}$
Xiao Liang (*University of Electronic Science and Technology of China, China*); *Long-Jiang Deng* (*University of Electronic Science and Technology of China, China*); *Jianliang Xie* (*University of Electronic Science and Technology of China, China*); *Lei Bi* (*University of Electronic Science and Engineering of China, China*);

Session 3P7a
SC3&4: Liquid Crystals

Wednesday PM, August 27, 2014

Room 7

Organized by Yikai Su, Iam-Choon Khoo

Chaired by Iam-Choon Khoo

13:00 Liquid-crystal Displays Fabricated from AIE-active Luminogens
Ben Zhong Tang (*The Hong Kong University of Science & Technology, China*);

13:20 Liquid-crystals as a Versatile Tuning Mechanism for Metamaterials
David A. Powell (*Australian National University, Australia*);

13:40 Photonic Band Gap and Nanostructure Tailored Photorefractive and Third Nonlinear Optical Properties Based on Polymer Dispersed Liquid Crystals
Shulei Li (*Beijing Jiaotong University, China*); *Ming Fu* (*Beijing Jiaotong University, China*);

14:00 Optical Field Processing behind Diffusive Screen Using Spatial Light Modulator
H. X. He (*Sun Yat-sen University, China*); *F. J. Wang* (*Sun Yat-sen University, China*); *Kam Sing Wong* (*Hong Kong University of Science and Technology, China*); *Iam-Choon Khoo* (*The Pennsylvania State University, USA*); *Jianying Zhou* (*Sun Yat-sen University, China*);

14:20 Self-assembly of Gold Nanorods in Liquid Crystals Confined in a Curved Space and Electric Field for the Application of Optical Cloaking
Nan Wang (*Zhejiang University, China*); *Qingkun Liu* (*University of Colorado at Boulder, USA*); *Shaowei Wang* (*Zhejiang University, China*); *Iam-Choon Khoo* (*The Pennsylvania State University, USA*); *Sailing He* (*Zhejiang University, China*);

14:40 Blue-phase Liquid-crystal Devices for 3D Applications
Yan Li (*Shanghai Jiao Tong University, China*); *Yikai Su* (*Shanghai Jiao Tong University, China*); *Shin-Tson Wu* (*University of Central Florida, USA*);

15:00 Multi-stable Optical Devices Based on Cholesteric Liquid Crystal
Tsung-Hsien Lin (*National Sun Yat-Sen University, Taiwan*);

15:20 **Coffee Break**

15:40 Some Tunable THz Devices Based on Liquid Crystals
Yan-Qing Lu (*Nanjing University, China*); *Wei Hu* (*Nanjing University, China*);

16:00 Finite Airy Beam Based on Polymer-stabilized Blue Phase Liquid Crystal
Dan Luo (*South University of Science and Technology of China, China*); *X. W. Sun* (*South University of Science and Technology of China, China*);

Session 3P7b
SC3: Advanced Display Technologies

Wednesday PM, August 27, 2014

Room 7

Organized by Guofu Zhou

Chaired by Guofu Zhou

16:20 Electronic Paper Displays: Status and the Trend
Guofu Zhou (*South China Normal University, China*); *Robert A. Hayes* (*South China Normal University, China*);

16:40 Nanofluidics and Optics: Some Experiments
Jan Eijkel (*Twente University, The Netherlands*);

17:00 Industrialisation of Electrofluidic Display Technology in China
Robert A. Hayes (*South China Normal University, China*); *Guofu Zhou* (*South China Normal University, China*); *Biao Tang* (*South China Normal University, China*); *Yuanyuan Guo* (*South China Normal University, China*); *Hao Wu* (*South China Normal University, China*); *Yingying Dou* (*South China Normal University, China*); *Lingling Shui* (*South China Normal University, China*); *Mingliang Jin* (*South China Normal University, China*); *Xiao Zhang* (*South China Normal University, China*); *Yuan Dong* (*South China Normal University, China*);

17:20 Microfluidic Behavior in Micro-pixels of Electrowetting-based Displays
Lingling Shui (*South China Normal University, China*); *Tao He* (*South China Normal University, China*);

17:40 Simple Dynamic Model to Describe the Optical Response in an Electrofluidic Based Display Pixel
Jan Groenewold (*South China Normal University, China*); *Biao Tang* (*South China Normal University, China*); *Robert A. Hayes* (*South China Normal University, China*); *Guofu Zhou* (*South China Normal University, China*);

18:00 Microfluidics for Electrophoretic Display Technology
Yunfei Zhu (*South China Normal University, China*); *Mingliang Jin* (*South China Normal University, China*); *Lingling Shui* (*South China Normal University, China*);

18:20 Use of Electro-osmotic Flow in Electrophoretic Displays
Alex Henzen (*IRX Innovations B. V., The Netherlands*);

Session 3P8
SC2: Zero-index Media, Extremely Anisotropic Media, and Nonlocal Photonic Media

Wednesday PM, August 27, 2014

Room 8

Organized by Yun Lai, Lei Gao

Chaired by Yun Lai

13:00 Mircowave Devices and Antennas Based on Zero-index Metamaterials
Qiang Cheng (*Southeast University, China*); *Huifeng Ma* (*Southeast University, China*); *Wen Xuan Tang* (*Southeast University, China*); *Nan Xiang* (*Southeast University, China*); *Bin Zhou* (*Southeast University, China*); *Li Hua Yuan* (*Southeast University, China*); *Tie Jun Cui* (*Southeast University, China*);

13:20 Optic-Null Transformation Optical Media: Realizations and Applications
Qiong He (*Fudan University, China*); *Shiyi Xiao* (*Fudan University, China*); *Xin Li* (*Fudan University, China*); *Lei Zhou* (*Fudan University, China*);

13:40 Plasmonic Multilayers Realizing Zero-index Metamaterials
Alexey A. Orlov (*St. Petersburg State University of Information Technologies, Mechanics and Optics, Russia*); *S. V. Zhukovsky* (*ITMO University, Russia*); *Ivan V. Iorsh* (*National Research University for Information Technology, Mechanics and Optics, Russia*); *Pavel A. Belov* (*National Research University for Information Technology, Mechanics and Optics, Russia*);

14:00 Semi-Dirac Point in Anisotropic Photonic Crystals
Ying Wu (*King Abdullah University of Science and Technology, Saudi Arabia*);

14:20 Acoustic One-way Manipulation with Near-zero Index Metamaterials
Yong Li (*Nanjing University, China*); *Bin Liang* (*Nanjing University, China*); *Jian-Chun Cheng* (*Nanjing University, China*);

14:40 Broadband, Strong Diamagnetic Response of Structured Metallic Plates with Fractal Slits at Microwave Frequencies
Shahzad Anwar (*Soochow University, China*); *Sucheng Li* (*Soochow University, China*); *Ruirui Chen* (*Soochow University, China*); *Shuo Li* (*Soochow University, China*); *Bo Hou* (*Soochow University, China*);

15:00 The First Field Concentrator Using Fabry-Pérot Resonances
M. M. Sadeghi (*Soochow University, China*); *Sucheng Li* (*Soochow University, China*); *Lin Xu* (*Soochow University, China*); *Bo Hou* (*Soochow University, China*); *Huanyang Chen* (*Soochow University, China*);

15:20 **Coffee Break**

15:40 Resonant Properties of Subwavelength Voids in Anisotropic Metamaterials
Ganna V. Vozianova (*ITMO University, Russia*); *Pavel Ginzburg* (*King's College London, UK*); *Alexander N. Poddubny* (*National Research University for Information Technology, Mechanics and Optics, Russia*);

16:00 Realization of Photonic Functionality in Near-zero Photonic Crystals
Xin-Tao He (*Sun Yat-Sen University, China*); *Jian-Wen Dong* (*Sun Yat-Sen University, China*);

16:20 Surface Mode Formation and Coupling in Honeycomb Lattice Photonic Crystals
Zhi Hong Hang (*Soochow University, China*); *Jun Wang* (*Soochow University, China*); *Y. Shao* (*Soochow University, China*);

16:40 Nontrivial Flat Bands in Photonic Crystals
Chang Qing Xu (*Soochow University, China*); *Zhi Hong Hang* (*Soochow University, China*); *Yun Lai* (*Soochow University, China*);

17:00 Some Comments and Applications for Zero-index Metamaterials
Yangyang Fu (*Soochow University, China*); *Lin Xu* (*Soochow University, China*); *Zhihong Hang* (*Soochow University, China*); *Huanyang Chen* (*Soochow University, China*);

Session 3P9a
SC3: Photonic Crystal and Multi-material Fibers

Wednesday PM, August 27, 2014

Room 9

Organized by Alexander Argyros, Fabien Sorin

Chaired by Alexander Argyros

13:00 Dynamics of Synchronously Pumped Photonic Crystal Fiber Ring Cavities
Nicolas Y. Joly (*University of Erlangen-Nuremberg, Germany*); *M. J. Schmidberger* (*Max-Planck Institute for the Science of Light, Germany*); *David Novoa* (*Max-Planck Institute for the Science of Light, Germany*); *Fabio Biancalanaand* (*Max-Planck Institute for the Science of Light, Germany*); *P. St. J. Russell* (*Max Planck Institute for the Science of Light, Germany*);

13:20 THz Waveguides, Devices and Hybrid Polymer-chalcogenide Photonic Crystal Fibers
Hualong Bao (*Technical University of Denmark, Denmark*); *Christos Markos* (*Technical University of Denmark, Denmark*); *Kristian Nielsen* (*Technical University of Denmark, Denmark*); *Henrik K. Rasmussen* (*Technical University of Denmark, Denmark*); *Peter Uhd Jepsen* (*Technical University of Denmark, Denmark*); *Ole Bang* (*Technical University of Denmark, Denmark*);

13:40 Hybrid Fibers: A Base for Nanophotonic Devices in Fiber Form
Markus A. Schmidt (*Max Planck Institute for the Science of Light, Germany*);

14:00 Recent Progress in Multimaterial Fibers: From Nanofabrication to Novel Device Architectures
Lei Wei (*Massachusetts Institute of Technology, USA*); *A. M. Stolyarov* (*Massachusetts Institute of Technology, USA*); *A. Gumennik* (*Massachusetts Institute of Technology, USA*); *C. Hou* (*Massachusetts Institute of Technology, USA*); *G. Lestoquoy* (*Massachusetts Institute of Technology, USA*); *X. Jia* (*Massachusetts Institute of Technology, USA*); *B. Grena* (*Massachusetts Institute of Technology, USA*); *A. F. Abouraddy* (*Massachusetts Institute of Technology, USA*); *John D. Joannopoulos* (*Massachusetts Institute of Technology, USA*); *Yoel Fink* (*MIT, USA*);

14:20 Recent Development and Opportunities of Multimaterial Optoelectronic Fibres
Dang Tung Nguyen (*Ecole Polytechnique Federale de Lausanne, Switzerland*); *Wei Yan* (*Ecole Polytechnique Federale de Lausanne, Switzerland*); *Fabien Sorin* (*Ecole Polytechnique Federale de Lausanne, Switzerland*);

14:40 Fiber Metamaterials for Subwavelength Imaging at Terahertz Frequencies and Beyond
Alessandro Tuniz (*University of Sydney, Australia*); *Alexander Argyros* (*The University of Sydney, Australia*); *Simon C. Fleming* (*University of Sydney, Australia*); *Boris T. Kuhlmey* (*University of Sydney, Australia*);

15:00 Broadband Electrical Interconnects with Multi-electrode Composite Fibers
Zheng Wang (*The University of Texas at Austin, USA*);

15:20 **Coffee Break**

15:40 The Study on Equivalent Models of Finite-size Carbon Fiber Composite Materials
Yi Liao (*Shanghai Key Laboratory of Electromagnetic Environmental Effects for Aerospace Vehicle, China*); *Yuan Zhang* (*Shanghai Key Laboratory of Electromagnetic Environmental Effects for Aerospace Vehicle, China*); *Kun Cai* (*Shanghai Key Laboratory of Electromagnetic Environmental Effects for Aerospace Vehicle, China*);

Session 3P9b
SC3: Fibers and Fiber Devices for Optical Communications

Wednesday PM, August 27, 2014

Room 9

Organized by Xuewen Shu

Chaired by Xuewen Shu

16:00 Optical Switching in Nanomechanical Optical Fibers
Peter Horak (*University of Southampton, UK*); *Zhenggang Lian* (*University of Southampton, UK*); *M. Segura* (*University of Southampton, United Kingdom*); *N. Podoliak* (*University of Southampton, United Kingdom*); *N. White* (*University of Southampton, United Kingdom*); *Xian Feng* (*University of Southampton, UK*); *Francesco Poletti* (*University of Southampton, UK*);

16:20 Wavelength-tunable Dual-concentric-core Photonic Crystal Fibers
Che-Wei Yao (*National United University, Taiwan, R.O.C.*); *Wei-Hsiang Chuang* (*National United University, Taiwan, R.O.C.*); *Jui-Ming Hsu* (*National United University, Taiwan, R.O.C.*);

16:40 Multi-channel RZ to NRZ Format Conversion Based on a Single Fiber Bragg Grating
Hui Cao (*Foshan University, China*); *Javid Atai* (*The University of Sydney, Australia*); *Yu Yu* (*Huazhong University of Science and Technology, China*); *Qian Dong* (*Foshan University, China*); *Jun Zuo* (*Foshan University, China*); *GuoJie Chen* (*Foshan University, China*); *Xuewen Shu* (*Huazhong University of Science and Technology, China*);

17:00 Recent Advances in Tilted Fibre Gratings and Their Application in Mode-locking Fibre Laser Systems
Lin Zhang (*Aston University, UK*); *Zhijun Yan* (*Aston University, UK*); *Chengbo Mou* (*Aston University, UK*); *Kaiming Zhou* (*Aston University, UK*); *Zuxing Zhang* (*Aston University, UK*);

17:20 All-fiber Tunable Notch Filter Based on Longitudinal Acoustic Wave
Fangcheng Shen (*Huazhong University of Science and Technology, China*); *Xuewen Shu* (*Huazhong University of Science and Technology, China*);

17:40 Hybrid Fiber-based Distributed Lighting System with Wireless Data Communications
Jau-Jr Lin (*National Changhua University of Education, Taiwan, R.O.C*);

18:00 Numerical Study on Ring-fiber Lenses Supporting Optical Vortices
Chenxuan Yin (*Sun Yat-sen University, China*); *Zhengqian Zhong* (*Sun Yat-sen University, China*); *Yanfeng Zhang* (*Sun Yat-sen University, China*); *Yujie Chen* (*Sun Yat-sen University, China*); *Hui Chen* (*Sun Yat-sen University, China*); *Siyuan Yu* (*Sun Yat-sen University, China*);

Session 3P_10a
SC3: Chaotic/Random Lasers and Their Applications

Wednesday PM, August 27, 2014

Room 10

Organized by Yuncai Wang

Chaired by Yuncai Wang

13:00 Dynamical Characteristics and Their Applications of Semiconductor Lasers Subject to Both Optical Injection and Optical Feedback
Yi-Huan Liao (*National Tsing Hua University, Taiwan*); *Fan-Yi Lin* (*National Tsing Hua University, Taiwan*);

13:20 Classification of Chaotic Codes Using Discriminant Analysis Classifiers and Higher Order Statistical Features
Hend A. Elsayed (*Delta University for Science and Technology, Egypt*); *Said Esmail El-Khamy* (*Alexandria University, Egypt*);

13:40 Novel Optical Fast Random Number Generators Based on Integer Domain Chaotic Iterations
Qian Xue Wang (*Guangdong University of Technology, China*); *Simin Yu* (*Guangdong University of Technology, China*); *Xiaole Fang* (*Land and Resources Technology Center of Guangdong Province, China*);

14:00 Temperature Sensing by Adopting the Optical Wideband Chaos
Di Huang (*Huazhong University of Science and Technology, China*); *Li Xia* (*Huazhong University of Science and Technology, China*);

14:20 Low Cost Chaos-OTDR Using Laser Diode Modulated by Colpitts Oscillator
Bingjie Wang (*Ministry of Education and Shanxi Province, China*); *Hang Xu* (*Ministry of Education and Shanxi Province, China*); *Pengcheng Su* (*Ministry of Education and Shanxi Province, China*); *Li Liu* (*Ministry of Education and Shanxi Province, China*); *Anbang Wang* (*Ministry of Education and Shanxi Province, China*); *Yuncai Wang* (*Taiyuan University of Technology, China*);

14:40 From Chaotic to Random Lasers
Wei Li Zhang (*University of Electronic Science & Technology of China, China*); *Shi Wei Li* (*University of Electronic Science & Technology of China, China*); *Rui Ma* (*University of Electronic Science & Technology of China, China*); *Yun Jiang Rao* (*University of Electronic Science & Technology of China, China*);

15:00 Chaotic Brillouin Optical Coherent Domain Reflectometry
Zhe Ma (*Taiyuan University of Technology, China*); *Mingjiang Zhang* (*Taiyuan University of Technology, China*);

15:20 **Coffee Break**

15:40 Random Fiber Laser with the Polarized Pump
Mengqiu Fan (*University of Electronic Science & Technology of China, China*); *Han Wu* (*University of Electronic Science & Technology of China, China*); *Zinan Wang* (*University of Electronic Science & Technology of China, China*); *Yun-Jiang Rao* (*University of Electronic Science and Technology of China, China*);

16:00 Performance Analysis of a Yb^{3+}-doped Chaotic Fiber Ring Laser
Lingzhen Yang (*Taiyuan University of Technology, China*); *Li Zhang* (*Taiyuan University of Technology, China*); *Feifei Wang* (*Taiyuan University of Technology, China*); *Naijun Xu* (*Taiyuan University of Technology, China*); *Jun Zhang* (*Taiyuan University of Technology, China*);

Session 3P_10b
SC3: Spectroscopy and Nanoscopy for Sensing and Imaging

Wednesday PM, August 27, 2014

Room 10

Organized by Yihui Wu

Chaired by Yihui Wu

16:20 Modification of Simplified Modal Method for Subwavelength Triangular Grating with Very High Efficiency
Bin Wang (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, China*); *Yihui Wu* (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, China*); *Peng Hao* (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, China*); *Wenchao Zhou* (*Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, China*);

16:40 Optical Third-harmonic Generation in Au-CdTe
Liwei Liu (*ChangChun University of Science and Technology, China*); *Yue Wang* (*ChangChun University of Science and Technology, China*); *Yueshu Feng* (*ChangChun University of Science and Technology, China*); *Jiaqi Zhang* (*ChangChun University of Science and Technology, China*);

17:00 Femtosecond Laser Nanofabrication: An Enabler for Multifunctional Microfluidic Devices
Hong-Bo Sun (*Jilin University, China*);

17:20 Raman Microscopy beyond the Diffraction Limit
Satoshi Kawata (*Osaka University, Japan*);

17:40 Nanopatterning beyond the Far-field Diffraction Limit Using Photochromism
Rajesh Menon (*The University of Utah, USA*);

Session 3P_11a
SC4: Microwave and Millimeter-wave Measurements and Sensing

Wednesday PM, August 27, 2014

Room 11

Organized by Masahiro Horibe

Chaired by Masahiro Horibe

13:00 Broadband Measurement of Complex Permittivity for Liquids Using the Open-ended Cut-off Circular Waveguide Reflection Method
Kouji Shibata (*Hachinohe Institute of Technology, Japan*);

13:20 Electromagnetic Surface Wave Scattering with Microwaves
Maha Chamtouri (*Université de Lyon, France*); *Olivier Merchiers* (*CETHIL — Centre de Thermique de Lyon, France*); *Mathieu Francoeur* (*University of Utah, USA*); *Herve Tortel* (*Aix-Marseille Universite, France*); *Jean-Michel Geffrin* (*Universite Paul Cezanne Aix-Marseille III, France*); *Rodolphe Vaillon* (*Universite de Lyon, France*);

13:40 On Capacity Performance of $\mathbf{2 \times 2}$ Satellite-earth Link at 30 GHz in Rain Environment
Jing Yang (*Xi'dian University, China*); *Xiaowei Xue* (*Xi'dian University, China*); *Shuhong Gong* (*Xi'dian University, China*);

14:00 Error in Phase Verification Results for Vector Network Analyzer Measurements in Coaxial Line System
Masahiro Horibe (*National Institute of Advanced Industrial Science and Technology (AIST), Japan*); *Ryoko Kishikwa* (*National Institute of Advanced Industrial Science and Technology (AIST), Japan*);

14:20 Dielectric Loss at Millimeter Range and Temperatures 300–950 K, and Electrophysical Properties in Diamonds Grown by the Arc Plasma Jet Technology
Boris Mikhailovich Garin (*Kotel'nikov Institute of Radio Engineering and Electronics of Russian Academy of Sciences, Russia*); *V. I. Polyakov* (*Institute of Radio Engineering and Electronics of Russian Academy of Sciences, Russia*); *A. I. Rukovishnikov* (*Kotel'nikov Institute of Radio Engineering and Electronics of Russian Academy of Sciences, Russia*); *A. V. Khomich* (*Kotel'nikov Institute of Radio Engineering and Electronics of Russian Academy of Sciences, Russia*); *V. V. Parshin* (*Institute of Applied Physics of Russian Academy of Sciences, Russia*); *E. A. Serov* (*Institute of Applied Physics of Russian Academy of Sciences, Russia*); *Ch. Ch. Jia* (*Beijing University of Science and Technology, China*); *F. X. Lu* (*Beijing University of Science and Technology, China*); *W. Z. Tang* (*Beijing University of Science and Technology, China*);

14:40 Chaos Time Domain Reflectometry for Locating Faults on Live Wires
Hang Xu (*Ministry of Education and Shanxi Province, China*); *Bingjie Wang* (*Ministry of Education and Shanxi Province, China*); *Jianguo Zhang* (*Ministry of Education and Shanxi Province, China*); *Li Liu* (*Ministry of Education and Shanxi Province, China*); *Jingxia Li* (*Ministry of Education and Shanxi Province, China*); *Yuncai Wang* (*Taiyuan University of Technology, China*);

15:00 Chaotic Radar Based on Microwave Nonlinear Circuit
Jingxia Li (*Ministry of Education and Shanxi Province, China*); *Hang Xu* (*Ministry of Education and Shanxi Province, China*); *Jianguo Zhang* (*Ministry of Education and Shanxi Province, China*); *Bingjie Wang* (*Ministry of Education and Shanxi Province, China*); *Yuncai Wang* (*Taiyuan University of Technology, China*);

15:20 **Coffee Break**

Session 3P_11b
SC4: Novel Materials and Technologies for Microwave Components

Wednesday PM, August 27, 2014

Room 11

Organized by Maurizio Bozzi, Hendrik Rogier

Chaired by Maurizio Bozzi, Sam Agneessens

15:40 Coupled Line 180° Hybrids with Modified Transdirectional Couplers
Hongmei Liu (*Dalian Maritime University, China*); *Shao-Jun Fang* (*Dalian Maritime University, China*); *Zhongbao Wang* (*Dalian Maritime University, China*);

16:00 Brush-painted Silver Nanoparticle UHF RFID Tags on Fabric Substrates
Johanna Virkki (*Tampere University of Technology, Finland*); *Toni Bjorninen* (*Tampere University of Technology, Finland*); *Lauri Sydanheimo* (*Tampere University of Technology, Finland*); *Leena Ukkonen* (*Tampere University of Technology, Finland*);

16:20 Combining SIW Techniques and Textile Materials for High Performance Wearable Antennas
Sam Agneessens (*Ghent University, Belgium*); *Sam Lemey* (*Ghent University, Belgium*); *Hendrik Rogier* (*Ghent University, Belgium*);

16:40 Paper-based Substrate Integrated Waveguide Technology for the Future Generation of Eco-friendly Microwave Components
Stefano Moscato (*University of Pavia, Italy*); *Riccardo Moro* (*University of Pavia, Italy*); *Maurizio Bozzi* (*University of Pavia, Italy*); *Luca Perregrini* (*University of Pavia, Italy*);

17:00 Using Subwavelength Diffraction Gratings to Design Open Electromagnetic Cavities
Matthieu Dupre (*ESPCI ParisTech & CNRS, France*); *Mathias Fink* (*ESPCI ParisTech and CNRS, France*); *Geoffroy Lerosey* (*ESPCI ParisTech & CNRS, France*);

Session 3P_12a
SC4: MIMO Systems and Applications

Wednesday PM, August 27, 2014

Room 12

Organized by Mario Marques da Silva, Elvino Sousa

Chaired by Mario Marques da Silva

13:00 On Coordinated Multi-Point Transmission for Cellular Environments
Mario Marques da Silva (*Instituto de Telecomunicacoes, Portugal*); *Americo Correia* (*Instituto de Telecomunicacoes, Portugal*); *Rui Dinis* (*ISCTE/Instituto de Telecomunicacoes, Portugal*); *Paulo Montezuma* (*Instituto de Telecomunicações, Portugal*);

13:20 Path Loss Model with Multiple-antenna
Hae-Gyu Park (*Chungbuk National University, South Korea*); *Hongsik Keum* (*Electromagnetic Wave Technology Institute, Korea*); *Heung-Gyoon Ryu* (*Chungbuk National University, Korea*);

13:40 Coordinated Multi-Point MIMO Processing for 4G
Carlos Reis (*Instituto de Telecomunicações, Portugal*); *Americo Correia* (*Instituto de Telecomunicacoes, Portugal*); *Nuno Souto* (*ISCTE, Portugal*); *Mario Marques da Silva* (*Instituto de Telecomunicacoes, Portugal*);

14:00 Multiple Input Multiple Output System with Multi User Support Based on Directive Information Transmission
Paulo Montezuma Carvalho (*Universidade Nova de Lisboa, Portugal*); *Mario Marques da Silva* (*Instituto de Telecomunicacoes, Portugal*); *Rui Dinis* (*Universidade Nova de Lisboa, Portugal*);

14:20 Efficiency of MIMO and Receive Diversity in Semi-arched Tunnels
Martine Lienard (*University of Lille, France*); *Jose-Maria Molina-Garcia-Pardo* (*Technical University of Cartagena (UPCT), Spain*); *Concepcion Sanchis-Borras* (*University of Catolica San Antonio of Murcia, Spain*); *Pierre Degauque* (*University of Lille, France*);

14:40 Channel Capacity Experiment of a Polarization Controlled MIMO Antenna for Wearable Applications
Kun Li (*Toyama University, Japan*); *Kazuhiro Honda* (*Toyama University, Japan*); *Koichi Ogawa* (*Toyama University, Japan*);

15:00 Model Analysis and Isolation Enhancement of Multiple Antennas
Zhi Li (*Beihang University, China*); *Qi Wu* (*Beihang University, China*); *Donglin Su* (*Beihang University, China*);

15:20 **Coffee Break**

Session 3P_12b
SC4: Antenna-channel Interactions and Multipath Wireless Channels

Wednesday PM, August 27, 2014

Room 12

Organized by Andres Alayon Glazunov

Chaired by Hassan El-Sallabi, Selcuk Helhel

15:40 Non-stationarity Characterization for Vehicle-to-vehicle Channels Using Correlation Matrix Distance and Shadow Fading Correlation
Ruisi He (*Beijing Jiaotong University, China*); *Olivier Renaudin* (*Universite Catholique de Louvain, Belgium*); *Veli-Matti Kolmonen* (*Aalto University, Finland*); *Katsuyuki Haneda* (*Aalto University, Finland*); *Zhangdui Zhong* (*Beijing Jiaotong Univeristy, China*); *Bo Ai* (*Beijing Jiaotong Univeristy, China*); *Claude Oestges* (*Université Catholique de Louvain (UCL), Belgium*);

16:00 On Effective Gain Variability with Antenna Orientation
Hassan El-Sallabi (*Texas A&M University at Qatar, Qatar*); *Mohamed Abdallah* (*Texas A&M University, Qatar*); *Khalid Qaraqe* (*Texas A&M University at Qatar, Qatar*);

16:20 Broadband Channel Measurements inside Metro Station
Ke Guan (*Beijing Jiaotong University, China*); *Zhangdui Zhong* (*Beijing Jiaotong University, China*); *Cesar Briso-Rodriguez* (*Universidad Politecnica de Madrid, Spain*); *Carlos Rodriguez-Sanchez* (*Metro de Madrid, Spain*); *Juan Moreno* (*Metro de Madrid, Spain*); *Sergio Perez* (*Universidad Politecnica de Madrid, Spain*); *Bi Ai* (*Beijing Jiaotong University, China*);

16:40 Impact of Shadowing Correlation on Microdiversity and Marcodiversity of Cellular System in High-speed Railway Environments
Bei Zhang (*Beijing Jiaotong University, China*); *Zhangdui Zhong* (*Beijing Jiaotong University, China*); *Bo Ai* (*Beijing Jiaotong University, China*); *Ruisi He* (*Beijing Jiaotong University, China*);

17:00 A Novel 3D Ray-tracing Acceleration Technique Based on Kd-tree Algorithm for Radio Propagation Prediction in Complex Indoor Environment
Xiaowei Mei (*Zhejiang University, China*); *Yong Zhang* (*Zhejiang University, China*); *Hai Lin* (*Zhejiang University, China*);

17:20 Similarity Measure of Fading Profiles of Different Antenna States of Reconfigurable Antennas
Hassan El-Sallabi (*Texas A&M University at Qatar, Qatar*); *Mohamed Abdallah* (*Texas A&M University, Qatar*); *Khalid Qaraqe* (*Texas A&M University at Qatar, Qatar*);

17:40 Algorithms for Indoor Localization on WLAN Networks Applications
Selcuk Helhel (*Akdeniz University, Turkey*); *Atalay Kocakusak* (*Akdeniz University, Turkey*);

18:00 Three Dimensional (3D) Electromagnetic Field Distributions in the Air and Relative Diversity Gain
Selcuk Helhel (*Akdeniz University, Turkey*); *Sukru Ozen* (*Akdeniz University, Turkey*); *Yalcin Albayrak* (*Akdeniz University, Turkey*); *Ibrahim Bahadir Basyigit* (*Akdeniz University, Turkey*);

Session 3P_13a
Advanced Antenna Theory and Techniques

Wednesday PM, August 27, 2014

Room 13

Organized by Wenxing Li

Chaired by Wenxing Li

13:20 Analysis and Design of Beam-scanning Reflectarray with Circular Polarization
Zuoxing Dai (*Shanghai Radio Equipment Research Institute, China*); *Yuanbo Shang* (*Shanghai Radio Equipment Research Institute, China*); *Fengwei Yao* (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Xiaobo Xuan* (*Shanghai Radio Equipment Research Institute, China*);

13:40 A Novel Hybrid Reconfigurable Antenna for Portable Wireless Terminal Applications
Wenxing Li (*Harbin Engineering University, China*); *Lei Bao* (*Harbin Engineering University, China*); *Si Li* (*Harbin Engineering University, China*); *Yingsong Li* (*Harbin Engineering University, China*);

14:00 Novel Hepta-band Coupled-fed Antenna for WWAN/LTE Metal-ring-frame Smartphone Applications
Li-Wan Zhang (*University of Electronic Science and Technology of China, China*); *Yong-Ling Ban* (*University of Electronic Science and Technology of China, China*);

14:20 A Hepta-band WWAN/LTE Antenna Design for Metal-rimmed Smartphone Applications
Yun Fei Qiang (*University of Electronic Science and Technology of China, China*); *Yong-Ling Ban* (*University of Electronic Science and Technology of China, China*);

14:40 Printed Multi-band Slot Antenna Surrounded by a Metal Ring for WWAN Smartphone Applications
Peng-Peng Li (*University of Electronic Science and Technology of China, China*); *Yong-Ling Ban* (*University of Electronic Science and Technology of China, China*);

15:00 Tunable Antenna Introductions, Challenges and Opportunities
Guangli Yang (*Shanghai University, China*); *Hao Wang* (*Shanghai University, China*); *Li Yang* (*Northeastern University, China*);

15:20 **Coffee Break**

Session 3P_13b
SC4: RFID Antennas

Wednesday PM, August 27, 2014
Room 13
Organized by Yuan Yao, Chaowei Wang
Chaired by Yuan Yao

15:40 Cross-dipole Tag Antenna with AMC for UHF RFID On-body Applications
Chien-Wen Chiu (*National Ilan University, Taiwan*); *Chen-An Ou* (*National Ilan University, Taiwan*); *Xun-Ping Guo* (*National Ilan University, Taiwan, R.O.C.*);

16:00 A Novel Method to Measure the Two States RFID Chip Impedance
Hongbin Ge (*Beijing University of Posts and Telecommunications, China*); *Yuan Yao* (*Beijing University of Posts and Telecommunications, China*); *Junsheng Yu* (*Beijing University of Posts and Telecommunications, China*); *Xiaodong Chen* (*Queen Mary, University of London, UK*);

16:20 A RFID Tag Based on MIT Technology
Yue Feng Hou (*University of Electronic Science and Technology of China, China*); *Jia Wei Yu* (*University of Electronic Science and Technology of China, China*); *Jin Zhang* (*University of Electronic Science and Technology of China, China*); *Fei Cheng* (*University of Electronic Science and Technology of China, China*); *Xian Qi Lin* (*University of Electronic Science and Technology of China, China*);

16:40 Design of Robust UHF RFID Tag Antenna for Freespace and Metal Surface
Ye Qi (*Beijing University of Posts and Telecommunications, China*); *Yuan Yao* (*Beijing University of Posts and Telecommunications, China*); *Hongbin Ge* (*Beijing University of Posts and Telecommunications, China*); *Junsheng Yu* (*Beijing University of Posts and Telecommunications, China*); *Xiaodong Chen* (*Queen Mary University of London, UK*);

17:00 Modified Miniature Tri-band CPW-fed Antenna for RFID Applications
Huihui Li (*Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China*); *Yongjin Zhou* (*Shenzhen University, China*); *Lei Wang* (*Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China*);

17:20 Study of CO_2Z Hexaferrite Magnetodielectric Material as Substrate for RFID Reader Antenna
Haiyang Yu (*Beijing University of Posts and Telecommunications, China*); *Yuan Yao* (*Beijing University of Posts and Telecommunications, China*); *Junsheng Yu* (*Beijing University of Posts and Telecommunications, China*); *Xiaodong Chen* (*Queen Mary University of London, UK*); *Xiaoming Liu* (*Beijing University of Posts and Telecommunications, China*);

17:40 A Novel Fully Printed 28-bits Capacity Chipless RFID Tag Based on Open Conical Resonators
Raji Nair (*TU Dresden, Germany*); *Marvin Renan Barahona Medina* (*TU Dresden, Germany*); *Diego Betancourt* (*TU Dresden, Germany*); *Georg C. Schmidt* (*TU Chemnitz, Germany*); *Maxi Bellmann* (*TU Chemnitz, Germany*); *Daniel Hoft* (*TU Chemnitz, Germany*); *Dirk Plettemeier* (*TU Dresden, Germany*); *Arbed C. Hubler* (*TU Chemnitz, Germany*); *Frank Ellinger* (*TU Dresden, Germany*);

18:00 Design of a Material-in-container Level Detecting RFID Sensor Antenna
Yilong Huang (*Beijing University of Posts and Telecommunications, China*); *Yuan Yao* (*Beijing University of Posts and Telecommunications, China*); *Junsheng Yu* (*Beijing University of Posts and Telecommunications, China*); *Xiaodong Chen* (*Queen Mary University of London, UK*);

Session 3P_14
Application/Effects of EM Field/Radiation in Medicine/Bio and in Ecological Industrial Technologies

Wednesday PM, August 27, 2014

Room 14

Organized by Jan Vrba, Lama Sakhnini

Chaired by Jan Vrba

13:00 Classification of Acrylonitrile-butadiene-styrene and Polypropylene with Use of Microwave Resonance
Yuya Mori (*Tokyo Denki University, Japan*); *Ken Tahara* (*Kanto Electronic Application and Development Corporation, Japan*); *Takehiko Kobayashi* (*Tokyo Denki University, Japan*);

13:20 Measurement of Temperature Increase of Metal Hip Replacements During Magnetic Resonance Imaging
Miroslav Wiewegh (*Czech Technical University in Prague, Czech Republic*); *Jan Vrba* (*Czech Technical University in Prague, Czech Republic*);

13:40 Electric Fields inside an Ambulance from a Roof Antenna
Hsing-Yi Chen (*Yuan Ze University, Taiwan*); *Chun-Kai Wang* (*Yuan Ze University, Taiwan*);

14:00 The Effect of Hypomagnetic Field on the Behavior of Adult Male Mice
Weichuan Mo (*Institute of Biophysics, Chinese Academy of Sciences, China*); *Jingpeng Fu* (*Institute of Biophysics, Chinese Academy of Sciences, China*); *Haimin Ding* (*Beijing University of Chinese Medicine, China*); *Ying Liu* (*Institute of Biophysics, Chinese Academy of Sciences, China*); *Qian Hua* (*Beijing University of Chinese Medicine, China*); *Rongqiao He* (*Institute of Biophysics, Chinese Academy of Sciences, China*);

14:20 A Multi-purpose Flexible Antenna for Musculoskeletal MR Imaging at 3T
Rui Zhang (*Peking University, China*); *Qunzhi Chen* (*Peking University, China*); *Hongyang Yuan* (*The University of North Carolina at Chapel Hill, USA*); *Fan Jia* (*Peking University, China*); *Wenchao Cai* (*Peking University First Hospital, China*); *Kai Zhao* (*Peking University First Hospital, China*); *Jue Zhang* (*Peking University, China*); *Xiaoying Wang* (*Peking University First Hospital, China*); *Jing Fang* (*Peking University, China*);

14:40 System for Animal EM Exposure with Well Defined Dosimetry and First Results of Biological Experiments
Jan Vrba (*Czech Technical University in Prague, Czech Republic*); *David Vrba* (*Czech Technical University in Prague, Czech Republic*); *Jan Vrba, Jr.* (*Czech Technical University in Prague, Czech Republic*); *Frantisek Vozeh* (*Charles University, Czech Republic*); *Jan Barcal* (*Charles University in Prague, Czech Republic*); *Luca Vannucci* (*Institute of Microbiology, Czech Academy of Sciences, Czech Republic*);

15:00 FEM Analysis of Conical Type Coaxial Open-ended Probe for Dielectric Measurement
Homa Arab Salmanabadi (*Ecole Polytechnique of Montreal, Canada*); *Cevdet Akyel* (*École Polytechnique de Montréal, Canada*);

15:20 **Coffee Break**

15:40 Zeroth-Order Mode Resonator Metamaterial Applicators for Superficial and Deep Local Microwave Hyperthermia
David Vrba (*Czech Technical University in Prague, Czech Republic*); *Jan Vrba, Jr.* (*Czech Technical University in Prague, Czech Republic*); *Jan Vrba* (*Czech Technical University in Prague, Czech Republic*); *Miroslav Wiewegh* (*Czech Technical University in Prague, Czech Republic*);

16:00 Anisotropic Dielectric Material in Design of Applicator for Superficial Microwave Hyperthermia
Jan Vrba, Jr. (*Czech Technical University in Prague, Czech Republic*); *David Vrba* (*Czech Technical University in Prague, Czech Republic*); *Jan Vrba* (*Czech Technical University in Prague, Czech Republic*); *Miroslav Wiewegh* (*Czech Technical University in Prague, Czech Republic*);

16:20 FDTD Analysis of Digitally-modulated Electromagnetic Wave Propagation in Human Head
Tuya Wuren (*Kurume National College of Technology, Japan*); *Y. Tanaka* (*Kurume National College of Technology, Japan*); *Masafumi Fujii* (*University of Toyama, Japan*); *K. Kamiyama* (*University of Toyama, Japan*); *A. Ando* (*University of Toyama, Japan*); *F. Costen* (*The University of Manchester, UK*);

16:40 Microwave Technology Based Medical Imaging and Diagnostics
Jan Vrba, Jr. (*Czech Technical University in Prague, Czech Republic*); *David Vrba* (*Czech Technical University in Prague, Czech Republic*);

17:00 Technical Background for Use of Light in Medicine
Jan Vrba (*Czech Technical University in Prague, Czech Republic*);

17:20 Bio-fate of Bone-marrow MSCs after Microwave Exposure in Vitro
Changzhen Wang (*Institute of Radiation Medicine AMMS, China*); *Xiaoyan Wang* (*Beijing Institute of Basic Medical Sciences, China*); *Hongmei Zhou* (*Institute of Radiation Medicine AMMS, China*); *Shaoxia Wang* (*Beijing Institute of Radiation Medicine, China*); *Lifeng Wang* (*Beijing Institute of Radiation Medicine, China*); *Xinping Xu* (*Beijing Institute of Radiation Medicine, China*); *Ruiyun Peng* (*Beijing Institute of Radiation Medicine, China*); *Xiangjun Hu* (*Beijing Institute of Radiation Medicine, China*);

Session 3P_15a
SCNU Special Session on Biophotonics — Biophotonics Imaging

Wednesday PM, August 27, 2014

Room 15

Organized by Da Xing

Chaired by Tongsheng Chen, Zhilie Tang

13:00 In Vivo Photoacoustic Microscopy and Clinical Applications
Sihua Yang (*South China Normal University, China*);

13:20 Multi-dimensional Common Mode Imaging Based on Photoacoustic Microscopy
Zhilie Tang (*South China Normal University, China*);

13:40 Ultrashort Microwave Pumped Three Dimensional Thermoacoustic Imaging for Depth Tumor Localization: A Phantom Study
Cunguang Lou (*South China Normal University, China*); *Zhong Ji* (*South China Normal University, China*); *Yong Fu* (*South China Normal University, China*); *Da Xing* (*South China Normal University, China*);

14:00 Label-free and Weakly Absorbing Cellular Differential Photoacoustic Imaging by Combining the Front Scattered Light
Minfang Huang (*South China Normal University, China*); *Zhilie Tang* (*South China Normal University, China*);

14:20 Using Functional Near-infrared Spectroscopy to Investigate Frontal Cortical Response to Joint/non-joint Attention in Children
Jun Li (*South China Normal University, China*); *Zhifang Zhu* (*South China Normal University, China*); *Huilin Zhu* (*South China Normal University (SCNU), China*);

14:40 Two-photon Photoacoustic Microscopy for Label-free Bio-maging Based on Microcavity Transducer
Yongbo Wu (*South China Normal University, China*); *Zhilie Tang* (*South China Normal University, China*); *Yan Chi* (*South China Normal University, China*); *Liru Wu* (*South China Normal University, China*); *Minfang Huang* (*South China Normal University, China*);

15:00 Study on the Mechanisms of Low-power Laser Irradiation-induced Vascular Endothelial Cell Proliferation
Jie Feng (*South China Normal University, China*); *Yingjie Zhang* (*South China Normal University, China*); *Da Xing* (*South China Normal University, China*);

15:20 **Coffee Break**

Session 3P_15b
SC4: Antennas and RF Devices Based on Superconductors and Other Advanced Materials

Wednesday PM, August 27, 2014

Room 15

Organized by Malay Ranjan Tripathy

Chaired by Malay Ranjan Tripathy

15:40 Pentagonal Shape Antenna with Fractal Slots for Wireless Communication Applications
Sohaib Abbas Zaidi (*Amity University Noida, India*); *Mohit Barthwal* (*Amity University Noida, India*); *Malay Ranjan Tripathy* (*Amity University, India*); *Shyam Sundar Pattnaik* (*NITTTR, India*);

16:00 Design and Implementation of an UWB Printed Monopole Antenna for Portable Devices
Jamal Nasir (*CIIT, Pakistan*); *Mohd Haizal Jamaluddin* (*Universiti Teknologi Malaysia, Malaysia*); *Imdad Khan* (*Institute of Information Technology, Pakistan*); *Muhammad Ramlee Kamarudin* (*Universiti Teknologi Malaysia, Malaysia*); *Muzammil Hussain* (*Institute of Information Technology, Pakistan*);

16:20 Tunable S-band RF Front End Receiver for LEO Mission
Geetanjali Sharma (*Amity University, India*); *Viral Degarwala* (*Amity University, India*); *Malay Ranjan Tripathy* (*Amity University, India*);

16:40 Dual Band Rectangular Dielectric Resonator Antenna Design
Raghuraman Selvaraju (*Universiti Teknologi Malaysia, Malaysia*); *Mohsen Khalily* (*Universiti Teknologi Malaysia, Malaysia*); *Muhammad Ramlee Kamarudin* (*Universiti Teknologi Malaysia, Malaysia*); *Mohd Haizal Jamaluddin* (*Universiti Teknologi Malaysia, Malaysia*); *Jamal Nasir* (*CIIT, Pakistan*);

17:00 Gain Enhanced UWB Dielectric Resonator Antenna
Mohsen Khalily (*Universiti Teknologi Malaysia, Malaysia*); *Jamal Nasir* (*CIIT, Pakistan*); *Muhammad Ramlee Kamarudin* (*Universiti Teknologi Malaysia, Malaysia*); *Raghuraman Selvaraju* (*Universiti Teknologi Malaysia, Malaysia*); *Mohd Haizal Jamaluddin* (*Universiti Teknologi Malaysia, Malaysia*);

Session 3P0
Poster Session 5

Wednesday PM, August 27, 2014
14:00 PM - 17:00 PM
Room FOYER

1 Calculation of RFID Antenna Characteristic Parameters under the Condition of Near-field Coupling
Guochun Wan (*Tongji University, China*); *Dongjie Lu* (*Tongji University, China*); *Jie Zhang* (*Tongji University, China*); *Mei Song Tong* (*Tongji University, China*);

2 An Electrically Small Circular Polarization Radiator with Coupling Feed
Lidong Huang (*University of Electronic Science and Technology of China, China*); *Jiang Xiong* (*University of Electronic Science and Technology of China, China*); *Yufeng Yu* (*China Jiangnan Electronics Communication Institute, China*);

3 A More Practical Patch Used in Microstrip Antenna at Ku-band
Chuanqi Wei (*Beihang University, China*); *Dawei Liu* (*Beihang University, China*); *Chen Zhu* (*Beihang University, China*); *Jindong Yu* (*Beihang University, China*); *Jungang Miao* (*Beihang University, China*);

4 High-$\boldsymbol{Q}$ Weakly Modulated Nanobeam Cavity Based on a Suspended Silicon Dioxide Waveguide
Senlin Zhang (*Zhejiang University, China*); *Sailing He* (*Zhejiang University, China*);

5 Design and Analysis of Miniature Fractal Antenna
Ying Suo (*Harbin Institute of Technology, China*); *Jingyu Han* (*Harbin Institute of Technology, China*); *Wei Li* (*Harbin Institute of Technology, China*); *Weibo Deng* (*Harbin Institute of Technology, China*);

6 An X-band Substrate Integrated Waveguide Vivaldi Array Antenna
Wei Li (*Harbin Institute of Technology, China*); *Ying Suo* (*Harbin Institute of Technology, China*); *Jingyu Han* (*Harbin Institute of Technology, China*); *Xiaowei Liu* (*Harbin Institute of Technology, China*);

7 An Omni-directional Circularly Polarized Helical Antenna with an Inductive Feed
Yufeng Yu (*China Jiangnan Electronics Communication Institute, China*); *Xiaoyi He* (*China Jiangnan Electronics Communication Institute, China*); *Qi Liu* (*Zhejiang University, China*); *Yufeng Wang* (*China Jiangnan Electronics Communication Institute, China*);

8 A Shared Aperture Millimeter Wave Antenna Using 3D SIW Technology
Zeyang Tian (*University of Electronic Science and Technology of China, China*); *Jun Ouyang* (*University of Electronic Science and Technology of China, China*); *Yu Long* (*University of Electronic Science and Technology of China, China*);

9 Target Detection Algorithm for SAR Image Based on Visual Saliency
Huijie Xie (*National University of Defense Technology, China*); *Tao Tang* (*National University of Defense Technology, China*); *Deliang Xiang* (*National University of Defense Technology, China*); *Yi Su* (*National University of Defense Technology, China*);

10 A Wide Tuning-range CMOS VCO with a Tunable Active Inductor
Hsuan-Ling Kao (*Chang Gung University, Taiwan*); *Ping-Che Lee* (*Chang Gung University, Taiwan*);

11 A New Local Feature Descriptor for SAR Image Matching
Tao Tang (*National University of Defense Technology, China*); *Deliang Xiang* (*National University of Defense Technology, China*); *Yi Su* (*National University of Defense Technology, China*);

12 A Dual-band Dual-polarized Antenna and a Switchable Multi-beam Antenna Array
Yu Long (*University of Electronic Science and Technology of China, China*); *Jun Ouyang* (*University of Electronic Science and Technology of China, China*); *Zeyang Tian* (*University of Electronic Science and Technology of China, China*); *Yuan Zhang* (*University of Electronic Science and Technology of China, China*);

13 Design and Analysis of Planar Phased MIMO Antenna for Radar Applications
Nour El-Din Ismail (*Alexandria University, Egypt*); *Sherif Hanafy Mahmoud* (*Alexandria University, Egypt*); *Ahmed Hamed* (*Alexandria University, Egypt*); *Alaa El-Din Sayed Hafez* (*Alexandria University, Egypt*);

14 Non Simultaneous-conjugate-match Technique for S-band Low Noise Amplifier Design
Achmad Munir (*Institut Teknologi Bandung, Indonesia*); *Yana Taryana* (*Indonesian Institute of Sciences, Indonesia*);

15 Characterization of Narrowband Hairpin Bandpass Filter Composed of Fractal Koch Geometry
Achmad Munir (*Institut Teknologi Bandung, Indonesia*); *Teguh Praludi* (*Indonesian Institute of Sciences, Indonesia*); *Mohammad Ridwan Effendi* (*Institut Teknologi Bandung, Indonesia*);

16 The Human Body Can Be Mounted Wearable Antenna
Ho-Jun Lee (*Korea Electronics Technology Institute, Korea*);

17 Memristor-based UWB Antenna with Reconfigurable Notched Band
Kaida Xu (*University of Electronic Science and Technology of China, China*); *Yonghong Zhang* (*University of Electronic Science and Technology of China, China*); *Ronald J. Spiegel* (*Duke University, USA*); *William Thomas Joines* (*Duke University, USA*); *Qing Huo Liu* (*Duke University, USA*);

18 Biodegradable Passive RFID Tag for Subcutaneous Implant
Christopher J. Davenport (*The University of Sheffield, United Kingdom*); *Baraa F. Al-Azzawi* (*The University of Sheffield, United Kingdom*); *Peter Novodvorsky* (*Royal Hallamshire Hospital, United Kingdom*); *Jonathan M. Rigelsford* (*The University of Sheffield, United Kingdom*);

19 The Influence of a Magnetic Field on the Behaviour of the Quantum Mechanical Model of Matter
Eliska Vlachova Hutova (*Brno University of Technology, Czech Republic*); *Karel Bartusek* (*Institute of Scientific Instruments of the ASCR, Czech Republic*); *Pavel Fiala* (*Brno University of Technology, Czech Republic*);

20 Optimized Theoretical Analysis of Antimony Selenide (Sb_2Se_3) Chalcogenide Thin Film
Emmanuel Ifeanyi Ugwu (*Ebonyi State University, Nigeria*);

21 Matlab Extension for 3DSlicer: A Robust MR Image Processing Tool
Jan Mikulka (*Brno University of Technology, Czech Republic*);

22 Multiparametric Biological Tissue Analysis: A Survey of Image Processing Tools
Jan Mikulka (*Brno University of Technology, Czech Republic*);

23 Automatic Segmentation of Multi-contrast MRI Using Statistical Region Merging
Pavel Dvorak (*Institute of Scientific Instruments of the ASCR, Czech Republic*); *Karel Bartusek* (*Institute of Scientific Instruments of the ASCR, Czech Republic*); *Eva Gescheidtova* (*Brno University of Technology, Czech Republic*);

24 The Optical Angular Momentum in a Vector Vortex Optical Field
Rui Pin Chen (*Zhejiang A & F University, China*);

25 Improvement on Optical Microfiber Fabrication Control Technique by Monitoring Mode Cutoff Position
Yang Yu (*National University of Defense Technology, China*); *Xueliang Zhang* (*National University of Defense Technology, China*); *Zhangqi Song* (*National University of Defense Technology, China*); *Jianfei Wang* (*National University of Defense Technology, China*); *Zhou Meng* (*National University of Defense Technology, China*);

26 Path Loss of Radio Propagation in an Aircraft Cabin
Wen-Chung Liu (*National Formosa University, Taiwan*); *Kuang-Yang Chou* (*National Formosa University, Taiwan, R.O.C.*); *Chao-Ming Wu* (*National Formosa University, Taiwan, R.O.C.*);

27 The Design of Band-pass Frequency Selective Surface with All Dielectric Metamaterial
Fei Yu (*Air Force Engineering University, China*); *Shaobo Qu* (*Air Force Engineering University, China*); *Jiafu Wang* (*Air Force Engineering University, China*); *Hao Huang* (*Air Force Engineering University, China*); *Jun Wang* (*Air Force Engineering University, China*);

28 The Design of Band-pass Frequency Selective Surface with the Grid Dielectric Metamaterial
Fei Yu (*Air Force Engineering University, China*); *Shaobo Qu* (*Air Force Engineering University, China*); *Jiafu Wang* (*Air Force Engineering University, China*); *Hao Huang* (*Air Force Engineering University, China*); *Jun Wang* (*Air Force Engineering University, China*);

29 Automatic Extraction of Pathological Area in 2D MR Brain Scan
Pavel Dvorak (*Institute of Scientific Instruments of the ASCR, Czech Republic*); *Karel Bartusek* (*Institute of Scientific Instruments of the ASCR, Czech Republic*); *Eva Gescheidtova* (*Brno University of Technology, Czech Republic*);

30 Numerical Modeling of Electromagnetic Field in the Biological Cell
Eliska Vlachova Hutova (*Brno University of Technology, Czech Republic*); *Tomas Kriz* (*Brno University of Technology, Czech Republic*); *Eva Gescheidtova* (*Brno University of Technology, Czech Republic*); *Karel Bartusek* (*Institute of Scientific Instruments of the ASCR, Czech Republic*);

31 Study of Electrical Effects of Charged Nanoparticles on a Small Vesicle Using Coarse-grained Molecular Dynamics Simulations
Linying Liu (*Xiamen University, China*); *Jianhua Zhang* (*Xiamen University, China*); *Xiaowei Zhao* (*Xiamen University, China*); *Qing Huo Liu* (*Xiamen University, China*);

32 The Connection of a Micro-hydropower Plant to an Experimental Electrical Network
Petr Marcon (*Brno University of Technology, Czech Republic*); *Zoltan Szabo* (*Brno University of Technology, Czech Republic*); *Zdenek Roubal* (*Brno University of Technology, Czech Republic*); *Frantisek Zezulka* (*Brno University of Technology, Czech Republic*);

33 The Statistical Evaluation of Data Obtained via the Manual Segmentation of MRI Images of a Pathological Tissue
Petr Marcon (*Brno University of Technology, Czech Republic*); *Jan Mikulka* (*Brno University of Technology, Czech Republic*); *Eva Gescheidtova* (*Brno University of Technology, Czech Republic*); *Karel Bartusek* (*Institute of Scientific Instruments of the ASCR, Czech Republic*); *Andrea Sprlakova* (*Masaryk University, Czech Republic*);

34 Uncertainty Determination in Measurements Using a Gerdien Tube
Zdenek Roubal (*Brno University of Technology, Czech Republic*); *Zoltan Szabo* (*Brno University of Technology, Czech Republic*); *Miloslav Steinbauer* (*Brno University of Technology, Czech Republic*);

35 SAR Study on MIMO Wi-Fi Antennas in LTE Mobile Terminals
Kun Zhao (*KTH-Royal Institute of Technology, Sweden*); *Shuai Zhang* (*KTH Royal Institute of Technology, Sweden*); *Zhinong Ying* (*Sony Mobile Communication AB, Sweden*); *Sailing He* (*Zhejiang University, China*);

36 Detector for Nuclear Quadrupole Resonance Spectroscopy
Jiri Chytil (*Brno University of Technology, Czech Republic*); *Radek Kubasek* (*Brno University of Technology, Czech Republic*);

37 Design of Dual Cross Dipole Antennas with Dual Frequencies and Dual Circularly-polarized
Yu-Feng Wang (*No. 36 Research Institute of CETC, China*); *Lei Chang* (*No. 36 Research Institute of CETC, China*); *Yufeng Yu* (*China Jiangnan Electronics Communication Institute, China*);

38 Design and Study of Multiband Microstrip Antenna
Lei Chang (*No. 36 Research Institute of CETC, China*); *Jian-Qiang Zhang* (*No. 36 Research Institute of CETC, China*); *Yu-Feng Wang* (*No. 36 Research Institute of CETC, China*); *Yufeng Yu* (*China Jiangnan Electronics Communication Institute, China*);

39 A Polarization Insensitive and High Efficiency Schottky Photodetector Based on Si Ridge Waveguide
Liu Yang (*Zhejiang University, China*); *Pengfei Kou* (*Zhejiang University, China*);

40 Narrow-band Tunable Fiber Fabry-Perot Filter Based on Laser Heated Fiber Bragg Gratings
Ying Li (*Zhejiang University, China*); *Liang Zhang* (*Zhejiang University, China*); *Yebin Zhang* (*Zhejiang University, China*); *Shaorui Gao* (*Zhejiang University, China*); *Guofeng Yan* (*Zhejiang University, China*); *Bin Zhou* (*South China Normal University, China*);

41 5d-4f Luminescence of Rare Earth Ions in New Oxide Hosts
Mattia Trevisani (*Department of Biotechnology, Italy*); *Konstantin V. Ivanovskikh* (*Ural Federal University, Russia*); *Fabio Piccinelli* (*Department of Biotechnology, Italy*); *Irene Carrasco* (*Department of Biotechnology, Italy*); *Marco Bettinelli* (*Department of Biotechnology, Italy*);

42 A Compact Dual Band Band-pass Filter Using a New Topology of Transmission Line Metamaterial
Akram Boubakri (*Innov'Com Laboratory, Tunisia*); *Fethi Choubani* (*University 7th November at Carthage, Tunisia*); *Tan Hoa Vuong* (*University of Toulouse, France*); *Jacques David* (*National Polytechnic Institute of Toulouse, France*);

43 A Novel Wideband Wide-angle Frequency Selective Surface Composite Structure
Zhan-Bo Lu (*AVIC LeiHua Electronic Technology Research Institute, China*); *Xuequan Yan* (*Radar and Avionics Institute of AVIC, China*); *Jian-Jian She* (*AVIC LeiHua Electronic Technology Research Institute, China*);

44 Highly Birefringent Photonic Crystal Fibers with a High-index Doped Rod
Wei-Hsiang Chuang (*National United University, Taiwan, R.O.C.*); *Che-Wei Yao* (*National United University, Taiwan, R.O.C.*); *Jui-Ming Hsu* (*National United University, Taiwan, R.O.C.*);

45 Electromagnetic Field Fluctuations Near a Point-like and an Extended Field Source
Roberto Passante (*Universita degli Studi di Palermo, Italy*); *Lucia Rizzuto* (*Universita degli Studi di Palermo, Italy*); *Salvatore Spagnolo* (*Universita degli Studi di Palermo, Italy*);

46 Solar Cells Efficiency Improvement by Forming a Periodic Structure on the Surface
Masaji Tomita (*University of Electro-Communications, Japan*); *Yoichi Okuno* (*Kumamoto University, Japan*); *Taikei Suyama* (*Akashi National College of Technology, Japan*); *M. Tanigawa* (*The Kansai Electric Power Co., Inc., Japan*); *Xun Xu* (*Kyushu Sangyo University, Japan*);

47 Research on OpenMP Model of the Parallel Programming Technology for Homogeneous Multicore DSP
Minjie Wu (*National University of Defense Technology, China*); *Weiwei Wu* (*National University of Defense Technology, China*); *Deping Zhang* (*National University of Defense Technology, China*); *Hongyu Zhao* (*National University of Defense Technology, China*); *Nai-Chang Yuan* (*National University of Defense Technology, China*);

48 Optical Magnetic Sensor Based on Magnetic Fluid Embedded Fiber Coupler
Guofeng Yan (*Zhejiang University, China*); *Liang Zhang* (*Zhejiang University, China*); *Yebin Zhang* (*ZhejiangUniversity, China*); *Sailing He* (*Zhejiang University, China*);

49 Atypical Functional Connectivity Development of Children with Autism Spectrum Disorder (ASD) in Prefrontal Cortex of the Brain: A fNIRS Study
Shijing Wu (*South China Normal University (SCNU), China*); *Huilin Zhu* (*South China Normal University (SCNU), China*); *Huan Guo* (*South China Normal University (SCNU), China*); *Xinge Li* (*South China Normal University (SCNU), China*); *Qianqian Gao* (*South China Normal University (SCNU), China*); *Sailing He* (*Zhejiang University, China*);

50 Nonlinear Optical Loop Mirror-based Linear Cavity Tunable Multi-wavelength Fiber Laser
Ben Huang (*South China Normal University, China*); *Hongyun Meng* (*South China Normal University, China*); *Rui Xiong* (*South China Normal University, China*); *Qiqi Yao* (*South China Normal University, China*); *Huihao Wang* (*South China Normal University, China*); *Qinghao Wang* (*South China Normal University, China*); *Chunhua Tan* (*South China Normal University, China*); *Xu Guang Huang* (*South China Normal University, China*);

51 Bending-insensitive Microstructured Polymer Terahertz Fiber with Vortex Cladding Structure
Hongzhi Chen (*Zhejiang University, China*); *Guofeng Yan* (*Zhejiang University, China*); *Xiaochen Ge* (*Zhejiang University, China*); *Sailing He* (*Zhejiang University, China*);

52 A New Uniplanar Compact Photonic-bandgap (UC-PBG) Structure in Transmission Line
Wuqiong Luo (*University of Electronic Science and Technology of China, China*); *Bo Chen* (*University of Electronic Science and Technology of China, China*);

53 A Microstrip-fed Monopole Antenna Design for Ultra Wideband Application
Zuhura J. Ali (*Tianjin University of Technology and Education, China*); *Hong-Xing Zheng* (*Tianjin University of Technology and Education, China*);

54 Compact UWB Coplanar Waveguide Antenna with Double Band-notches Using Novel Common Direction Triangle Complementary Split Ring Resonators
Quan Wang (*University of Electronics Science and Technology of China, China*); *Tao Huang* (*University of Electronic Science and Technology of China, China*); *Di Jiang* (*University of Electronic Science and Technology of China, China*); *Zhenhai Shao* (*University of Electronics Science and Technology of China, China*);

55 Planar Monopole Antenna for WBAN
Ebrahim Sailan Alabidi (*Universiti Teknologi Malaysia, Malaysia*); *Muhammad Ramlee Kamarudin* (*Universiti Teknologi Malaysia, Malaysia*); *Tharek Bin Abdul Rahman* (*University Technology Malaysia (UTM), Malaysia*); *Mohsen Khalily* (*Universiti Teknologi Malaysia, Malaysia*);

56 Electrical Engineering Aspects of Radiotherapy Accelerators
Ruzbeh Hematalizadeh (*Islamic Azad University, Iran*); *Dariush Sardari* (*Islamic Azad University, Iran*); *Nushafarin Razi* (*Astara Azad University, Iran*);

57 Design of Multi-band Sector Antenna for Mobile Communication Systems
Shiyo Ibrahim Kitutu (*Tianjin University of Technology and Education, China*); *Hong-Xing Zheng* (*Tianjin University of Technology and Education, China*);

58 Diagnosis of Faulty Elements in Array Antenna Using Nature Inspired Cuckoo Search Algorithm
Shafqat Ullah Khan (*ISRA University, Pakistan*); *Ijaz Mansoor Qureshi* (*Air University, Pakistan*); *Bilal Shoaib Khan* (*International Islamic University, Pakistan*); *Fawad Zaman* (*International Islamic University, Pakistan*);

59 Electromagnetic Modeling of Microwave Components
Malika Ourabia (*University of Sciences and Technologies Houari Boumediene, Algeria*);

60 Stability of Many-soliton Molecules in Dispersion-managed Optical Fiber
Abdelaali Boudjemaa (*Hassiba Benbouali University of Chlef, Algeria*);

61 Analysis and Modeling of Effective Dielectric Constant of Multilayer Coplanar Waveguide (CPW) and Asymmetric Coplanar Waveguide (ACPW) Using Neuro-Fuzzy Models
Abdelaziz Aouiche (*University Hadj Lakhdar of Batna, Algeria*); *Farid Bouttout* (*University of M'sila, Algeria*);

62 Fibonacci Grating for Far-field Super-resolution Imaging
Kedi Wu (*Wuhan University, China*); *Guo Ping Wang* (*Wuhan University, China*);

63 High-order Localized Spoof Surface Plasmonic Resonances
Zhen Liao (*Southeast University, China*); *Xiaopeng Shen* (*Southeast University, China*); *Tie Jun Cui* (*Southeast University, China*);

64 A Single Anisotropic Metasurface to Realize Luneburg Lens and Maxwell Fisheye Lens Simultaneously
Xiang Wan (*Southeast University, China*); *Tie Jun Cui* (*Southeast University, China*);

65 Suppression of Scattering Based on an Ultrathin Metasurface
Jie Zhao (*Southeast University, China*); *Qiang Cheng* (*Southeast University, China*); *Li Hua Gao* (*Southeast University, China*); *Mei-Qing Qi* (*Southeast University, China*); *Tie Jun Cui* (*Southeast University, China*);

66 Photostimulated Quantum Effects in Quantum Wire with a Parabolic Potential
Hoang Van Ngoc (*Vietnam National University, Vietnam*); *Nguyen Vu Nhan* (*Academy of Defence Force-Air force, Vietnam*); *Nguyen Quang Bau* (*Hanoi National University, Vietnam*);

67 The Influence of the Electromagnetic Wave on the Quantum Acoustomagnetoelectric Field in a Quantum Well with a Parabolic Potential
Nguyen Quang Bau (*Hanoi National University, Vietnam*); *Nguyen Van Hieu* (*Danang University, Vietnam*);

68 Small Design for Wireless Antenna Used by Ultra-wideband Systems
Rashid Ali Fayadh (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Mohd Fareq Bin Abdul Malek* (*University Malaysia Perlis (UniMAP), Malaysia*); *Hilal Adnan Fadhil* (*University Malaysia Perlis (UniMAP), Malaysia*); *Farah Salwani Abdullah* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Sameer Akram Dawood* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Ihsan Jabar Hasan* (*Universiti Teknikal Malaysia (UTeM), Malaysia*);

69 Improve the Performance of Multi-users MC-CDMA Based on Critically Sampling Multi-wavelet Transform over Wireless Propagation Channel
Sameer Akram Dawood (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Mohd Fareq Bin Abdul Malek* (*University Malaysia Perlis (UniMAP), Malaysia*); *M. S. Anuar* (*Universiti Malaysia Perlis, Malaysia*); *Rashid Ali Fayadh* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Farah Salwani Abdullah* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *M. H. F. Mohd Fakri* (*Universiti Malaysia Perlis (UniMAP), Malaysia*);

70 Study on the Propagation Characteristics of Ultra-wideband Signal Waveform Distortion
Yuan-Jian Liu (*Nanjing University of Posts and Telecommunications, China*); *Feng Chen* (*Nanjing University of Posts & Telecommunications, China*); *Fu-Rong Yin* (*Nanjing University of Posts & Telecommunications, China*);

71 Novel Design of $\boldsymbol{H}$-plane Bandpass Waveguide Filters Using Complementary Split Ring Resonators
S. Stefanovski (*University of Belgrade, Serbia*); *Djordje Mirkovic* (*University of Oklahoma, USA*); *Milka M. Potrebic* (*University of Belgrade, Serbia*); *D. Tosic* (*University of Belgrade, Serbia*);

72 A Robust Technique for Conductivity-depth Imaging of Large Loop TEM Sounding Data
Ashish Kumar Tiwari (*Banaras Hindu University, India*); *N. P. Singh* (*Banaras Hindu University, India*);

73 Wide Band Uniform Gain Low Power Amplifier for Radio Over Fiber Based Networks
Niaz Muhammad (*The Military College of Signals, Pakistan*); *Zar Khitab* (*The Military College of Signals, Pakistan*); *Farooq Ahmad Bhatti* (*National University of Sciences and Technology (NUST), Pakistan*);

74 Theoretical Investigation on Metallic Nanowire Network as Transparent Conductive Electrodes for Optoelectronic Devices
Han Bing (*South China Normal University, China*); *Ke Pei* (*South China Normal University, China*); *Qiang Peng* (*South China Normal University, China*); *Ruopeng Li* (*South China Normal University, China*); *Krzysztof Kempa* (*Boston College, USA*); *Jinwei Gao* (*South China Normal University, China*);

75 Optical Remote Sensing of Insects Using Passive Dark-field Techniques
Shiming Zhu (*South China Normal University, China*); *G. Y. Zhao* (*South China Normal University, China*); *T. Q. Li* (*South China Normal University, China*); *M. Lian* (*South China Normal University, China*); *H. Zhang* (*South China Normal University, China*); *K. Svanberg* (*South China Normal University, China*); *S. Svanberg* (*South China Normal University, China*);

76 Energy Comparison of Different MPP Tracking Techniques for PV System
Khalid Mater (*IUG, Palestine*); *Hala Jarallah El-Khozondar* (*Islamic University of Gaza, Palestine*); *Teuvo Suntio* (*Tampere University of Technology, Finland*);

77 Indoor Transparent Antenna for Television Reception
Siti Nor Hafizah Sa'don (*Universiti Teknologi Malaysia, Malaysia*); *Muhammad Ramlee Kamarudin* (*Universiti Teknologi Malaysia, Malaysia*); *Mohsen Khalily* (*Universiti Teknologi Malaysia, Malaysia*);

78 Electrical Characterization of GaN
Nazir A. Naz (*Federal Urdu University of Arts, Science and Technology Islamabad, Pakistan*); *M. Suleman* (*Riphah International University, Pakistan*); *Akbar Ali* (*Quaid-i-Azam University, Pakistan*);

79 Study of p-type Porous Silicon
Nazir A. Naz (*Federal Urdu University of Arts, Science and Technology Islamabad, Pakistan*); *M. Jamil* (*Federal Urdu University of Arts, Science and Technology, Pakistan*); *Akbar Ali* (*Quaid-i-Azam University, Pakistan*);

80 Solar Heating Rate Can Be Used as an Index for Evaluating Coral Heat Stress in Sanya Bay, Hainan, China
Dingtian Yang (*South China Sea Institute of Oceanology, Chinese Academy of Sciences, China*); *Xiujuan Shan* (*Yellow Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences, China*); *Sumin Liu* (*South China Sea Institute of Oceanology, Chinese Academy of Sciences, China*);

81 Suspended Stripline Bandpass Filter with Very Wide Stop-band
Atallah Balalem (*Palestine Technical University, Palestine*); *Moayyad M. Abu Khmish* (*Palestine Technical University, Palestine*); *Zekrayat Baidas* (*Palestine Technical University, Palestine*); *Oday H. Sabi* (*Palestine Technical University, Palestine*);

82 Wideband Antenna for Microwave Imaging
Roshayati Yahya (*Universiti Tun Hussein Onn Malaysia (UTHM), Malaysia*); *Muhammad Ramlee Kamarudin* (*Universiti Teknologi Malaysia, Malaysia*); *Norhudah Seman* (*Universiti Teknologi Malaysia, Malaysia*);

83 Change of Electromagnetic Response in the Distortion of Metasurface
Tian Zhou (*Kuang-Chi Research Institute of Advanced Technology, China*); *Wan Lung Lee* (*Kuang-Chi Research Institute of Advanced Technology, China*); *Zhong Jie Li* (*Kuang-Chi Research Institute of Advanced Technology, China*); *Chunlin Ji* (*Shenzhen Kuang-Chi Institute of Advanced Technology, China*); *Zhi Ya Zhao* (*Kuang-Chi Research Institute of Advanced Technology, China*); *Ruo Peng Liu* (*Southeast University, China*);

84 Control of Preferential Orientation (***c***-axis) of Piezoelectric ALN Film for NEMS Applications
Shahid Imran (*South China Normal University, China*); *Guan-Bo Yin* (*Zhejiang University, China*); *Yungui Ma* (*Zhejiang University, China*); *Sailing He* (*Zhejiang University, China*);

85 Polarization-dependent Enhanced Photoluminescence and Polarization-independent Emission Rate of Quantum Dots on Gold Elliptical Nanodisc Arrays
Qiangzhong Zhu (*Sun Yat-sen University, China*); *Shupei Zheng* (*Sun Yat-sen University, China*); *Shijie Lin* (*Sun Yat-sen University, China*); *Tianran Liu* (*Sun Yat-sen University, China*); *Chongjun Jin* (*Sun Yat-Sen University, China*);

86 Projection Method for Solving Scalar Problem of Diffraction of a Plane Wave on a System of Two- and Three-dimensional Obstacles
Mikhail Yu. Medvedik (*Penza State University, Russia*); *Yury G. Smirnov* (*Penza State University, Russia*); *Alexey Tsupak* (*Penza State University, Russia*); *Dmitry V. Valovik* (*Penza State University, Russia*);

87 Propagation of Electromagnetic Waves along a Nonlinear Inhomogeneous Cylindrical Waveguide
Yury G. Smirnov (*Penza State University, Russia*); *Dmitry V. Valovik* (*Penza State University, Russia*);

Session 4A1
FocusSession.SC3: Real-time High-speed Measurements for Communication, Biomedical & Industrial Appl.

Thursday AM, August 28, 2014

Room 1

Organized by Bahram Jalali, Chao Wang, Mohammad H. Asghari

Chaired by Chao Wang, Xu Wang

08:00 invited Dispersive Fourier Transformation for Fast Real-time Imaging and Spectroscopy
Keisuke Goda (*University of California, Los Angeles, USA*); *Bahram Jalali* (*University of California at Los Angeles, USA*); *Takuro Ideguchi* (*University of Tokyo, Japan*);

08:20 invited High-quality Optical Time Stretch: From Real-time Supercontinuum Analysis to Ultrafast Bioimaging
Kevin K. Tsia (*The University of Hong Kong, China*); *Kenneth K. Y. Wong* (*The University of Hong Kong, China*);

08:40 invited Fast Surface Imaging by Time-stretch Technique
Hongwei Chen (*Tsinghua University, China*); *Fangjian Xing* (*Tsinghua University, China*); *Cheng Lei* (*Tsinghua University, China*); *Minghua Chen* (*Tsinghua University, China*); *Sigang Yang* (*Tsinghua University, China*); *Shizhong Xie* (*Tsinghua University, China*);

09:00 invited Ultrafast Web-inspecting Laser Scanner
Akio Yazaki (*University of California, Los Angeles, USA*); *Ata Mahjoubfar* (*University of California, Los Angeles, USA*); *Chanju Kim* (*University of California, Los Angeles, USA*); *Jacky Chan* (*University of California, Los Angeles, USA*); *Keisuke Goda* (*University of California, Los Angeles, USA*); *Masahiro Watanabe* (*Hitachi, Ltd., Japan*); *Bahram Jalali* (*University of California at Los Angeles, USA*);

09:20 invited Optical Coding for Ultra-fast Imaging Application
Xu Wang (*Heriot-Watt University, UK*);

09:40 Time-encoded Amplified Microscopy for Ultrafast
invited Imaging Using a Multiwavelength Laser Source
Ming Li (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Ye Deng* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Ningbo Huang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Jose Azana* (*Institut National de la Recherche Scientifique-Énergie, Matériaux et Télécommunications (INRS-EMT), Canada*); *Ninghua Zhu* (*Institute of Semiconductors, Chinese Academy of Sciences, China*);

10:00 **Coffee Break**

10:20 Serial and Parallel Optical Coherence Tomography for
invited Fast Orthogonal Image Slicing
Adrian Gh. Podoleanu (*University of Kent, United Kingdom*);

10:40 Coherent Raman Dual Frequency Comb Spectroscopy
invited
Takuro Ideguchi (*The University of Tokyo, Japan*); *Simon Holzner* (*Max-Planck-Institut fur Quantenoptik, Germany*); *Birgitta Bernhardt* (*Max-Planck-Institut fur Quantenoptik, Germany*); *Guy Guelachvili* (*Institut des Sciences Moleculaires d'Orsay, France*); *Nathalie Picque* (*Max-Planck-Institut fur Quantenoptik, Germany*); *Theodor W. Hansch* (*Max-Planck-Institut fur Quantenoptik, Germany*);

11:00 A Channelized Wideband Analog to Digital Conver-
invited sion Based on Coherent Optical Frequency Combs
Yitang Dai (*Beijing University of Posts and Telecommunications, China*); *Haijie Yu* (*Beijing University of Posts and Telecommunications, China*); *Feifei Yin* (*Beijing University of Posts and Telecommunications, China*); *Jianqiang Li* (*Beijing University of Posts and Telecommunications, China*); *Kun Xu* (*Beijing University of Posts and Telecommunications, China*); *Jintong Lin* (*Beijing University of Posts and Telecommunications, China*);

11:20 Characterizing Microwave Modulation Efficiency of
invited an Optical Phase Modulator by Using Dispersion Induced Phase Modulation to Intensity Modulation Conversion
Yong Liu (*University of Electronic Science and Technology of China (UESTC), China*); *Shangjian Zhang* (*University of Electronic Science and Technology of China (UESTC), China*); *Xinghai Zhou* (*University of Electronic Science and Technology of China (UESTC), China*); *Yali Zhang* (*University of Electronic Science and Technology of China (UESTC), China*); *Rongguo Lu* (*University of Electronic Science and Technology of China (UESTC), China*);

11:40 Long-range and Biomedical Measurements Based on
invited Optical Fiber Strain Senor
Changyuan Yu (*A*STAR Institute for Infocomm Research, Singapore*); *Zhihao Chen* (*A*STAR Institute for Infocomm Research, Singapore*); *Junhao Hu* (*AnSing Technology PTE LTD, Singapore*);

12:00 Femto-second Arbitral Optical Waveform Synthesis
invited Based on Optical Frequency Comb Synthesizer and Analyzer
Tatsutoshi Shioda (*Saitama University, Japan*);

Session 4A2
SC1&3: Design and Simulation of Electromagnetic and Optical Devices 1

Thursday AM, August 28, 2014
Room 2
Organized by Shinichiro Ohnuki, Jun Shibayama
Chaired by Shinichiro Ohnuki, Jun Shibayama

08:00 Analysis of Post-wall Waveguide Based Bandpass Filters Using a Model of Photonic Crystal Waveguides
Kiyotoshi Yasumoto (*Fukuoka Institute of Technology, Japan*); *Hiroshi Maeda* (*Fukuoka Institute of Technology, Japan*); *Vakhtang Jandieri* (*Free University of Tbilisi, Republic of Georgia*);

08:20 Electromagnetic Modeling and Simulation for Packaging Structures with Lossy Conductors
Y. Q. Zhang (*Tongji University, China*); *G. Z. Yin* (*Tongji University, China*); *X. W. Zhang* (*Tongji University, China*); *Jie Zhang* (*Tongji University, China*); *Mei Song Tong* (*Tongji University, China*);

08:40 Error Analysis of Superposition Solution Combined with Method of Moments for Electromagnetic Scattering
Masahiro Tanaka (*Gifu University, Japan*);

09:00 A Numerical Study on 2D Photonic Crystal Devices for Millimeter and Terahertz Wave Applications
T. Kato (*Kanagawa University, Japan*); *K. Kamata* (*Kanagawa University, Japan*); *C. P. Chen* (*Kanagawa University, Japan*); *Tetsuo Anada* (*Kanagawa University, Japan*); *Steve Greedy* (*The University of Nottingham, UK*); *Trevor Mark Benson* (*The University of Nottingham, UK*);

09:20 Advance of Research on Coaxial Relativistic Backward Wave Oscillator
Yan Teng (*Northwest Institute of Nuclear Technology, China*); *Jun Sun* (*Northwest Institute of Nuclear Technology, China*); *Zhimin Song* (*Northwest Institute of Nuclear Technology, China*); *Changhua Chen* (*Northwest Institute of Nuclear Technology, China*); *Zhaoyu Du* (*Northwest Institute of Nuclear Technology, China*);

09:40 An Intra-cavity Spatial Light Modulator Laser for Desired Planar Laser Modes
Pengfei Xu (*Sun Yat-sen University, China*); *Guoxuan Zhu* (*Sun Yat-sen University, China*); *Yanfeng Zhang* (*Sun Yat-sen University, China*); *Hui Chen* (*Sun Yat-sen University, China*); *Yujie Chen* (*Sun Yat-sen University, China*); *Siyuan Yu* (*Sun Yat-sen University, China*);

10:00 **Coffee Break**

10:20 A Study on Crosstalk-free Polarization Splitter Based on Single-polarized Photonic Crystal Fibers
Zejun Zhang (*Muroran Institute of Technology, Japan*); *Yasuhide Tsuji* (*Muroran Institute of Technology, Japan*); *Masashi Eguchi* (*Chitose Institute of Science and Technology, Japan*);

10:40 Reduction of Bend Losses at Sharp Bend in Post Wall Waveguide
Kenichiro Yashiro (*Chiba University, Japan*); *Ning Guan* (*Fujikura Ltd., Japan*);

11:00 The Squarax Amplifier: An Electromagnetic and Thermo-mechanical Innovation
Alberto Leggieri (*Università degli Studi di Roma "Tor Vergata", Italy*); *Davide Passi* (*Università degli Studi di Roma "Tor Vergata", Italy*); *Franco Di Paolo* (*Università degli Studi di Roma "Tor Vergata", Italy*);

11:20 Injection Phase-locking of a High-power Transit-time Oscillator
Lin Lian (*National University of Defence Technology, China*); *Juntao He* (*National University of Defense Technology, China*); *Junpu Ling* (*National University of Defense Technology, China*); *Zumin Qi* (*National University of Defense Technology, China*); *Yi Hu* (*National University of Defence Technology, China*);

11:40 Numerical Modeling of Novel Optical Vortex Multiplexer
Qingsheng Xiao (*Sun Yat-sen University, China*); *Shimao Li* (*Sun Yat-sen University, China*); *Jiangbo Zhu* (*Sun Yat-sen University, China*); *Hui Chen* (*Sun Yat-sen University, China*); *Yanfeng Zhang* (*Sun Yat-sen University, China*); *Yujie Chen* (*Sun Yat-sen University, China*); *Siyuan Yu* (*Sun Yat-sen University, China*);

Session 4A3
MS-1.3-1.4: Organic Transistors/Integrated Circuits and Dye-sensitized Solar Cells

Thursday AM, August 28, 2014

Room 3

Organized by Shien-Ping Feng, Paddy Kwok Leung Chan

Chaired by Paddy Kwok Leung Chan, Shien-Ping Feng

08:00 Low Voltage Flexible Organic Thermistor for Temperature Sensing
X. C. Ren (*The University of Hong Kong, China*); *Paddy Kwok Leung Chan* (*The University of Hong Kong, China*);

08:20 Active-matrix Organic Transistor and LED Array on Commercial Printer Paper
Boyu Peng (*The University of Hong Kong, China*); *Paddy Kwok Leung Chan* (*The University of Hong Kong, China*);

08:40 Piezoresistive Wearable Pressure Sensor with Cotton Cloth as Substrate and Spacer
Zongrong Wang (*The University of Hong Kong, China*); *Paddy Kwok Leung Chan* (*The University of Hong Kong, China*);

09:00 Fiber-shaped Dye-sensitized Solar Cells
Yong Zhou (*Nanjing University, China*);

09:20 Highly Transparent, Superhydrophobic and Optically Patternable Nanoporous Nickel Hydroxide
Ya-Huei Chang (*The University of Hong Kong, China*); *Shien-Ping Feng* (*The University of Hong Kong, China*);

09:40 Metallization and Nucleation Investigation of Silver Deposition on SAM Pre-treated Flexible Substrate
Shien-Ping Feng (*The University of Hong Kong, China*); *Hau Nga Yu* (*The University of Hong Kong, China*);

10:00 **Coffee Break**

10:20 Metal-free Nitrogen Doped Microwave-exfoliated Graphene Nanosheets (N-MEG) as High-electrocatalytic Counter Electrode for Dye Sensitized Solar Cells
Shien-Ping Feng (*The University of Hong Kong, China*);

10:40 Efficiency Enhancement of Full-plastic Dye-sensitized Solar Cells by Means of Thin TiO_x Underlayer
Yu Ting Huang (*The University of Hong Kong, China*); *Masashi Ikegami* (*Toin University of Yokohama, Japan*); *Tsutomu Miyasaka* (*Toin University of Yokohama, Japan*); *Shien-Ping Feng* (*The University of Hong Kong, China*);

11:00 Highly Conductive Flexible Ni-PET Substrate as Counter Electrode for Efficient Dye-sensitized Solar Cells
Shien-Ping Feng (*The University of Hong Kong, China*); *Chang Liu* (*The University of Hong Kong, China*);

11:20 High Electrocatalytic and Wettable Nitrogen-doped Microwave-exfoliated Graphene Nanosheets as Counter Electrode for Dye-sensitized Solar Cells
Shien-Ping Feng (*The University of Hong Kong, China*); *Peng Zhai* (*The University of Hong Kong, China*);

11:40 Organic Dye-sensitized Solar Cells
Peng Wang (*Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, China*);

Session 4A4
SC2&3: Plasmonics for Sensing Applications

Thursday AM, August 28, 2014

Room 4

Organized by Aaron Ho-Pui Ho, Dangyuan Lei

Chaired by Aaron Ho-Pui Ho, Dangyuan Lei

08:00 invited Evanescent Wave Microscopy for Cellular and Biomolecular Characterisation
Mike Somekh (*University of Nottingham, UK*); *Suejit Pechprasarn* (*Hong Kong Polytechnic University, China*); *Jing Zhang* (*University of Nottingham, UK*); *Melissa Mather* (*University of Nottingham, UK*);

08:20 invited Plasmonic Near-field Localization for Sensing and Imaging of Biomolecular Interactions
Donghyun Kim (*Yonsei University, South Korea*);

08:40 invited Vector Beams Assisted Microscopic Phase-sensitive Surface Plasmon Resonance Biosensor
Changjun Min (*Nankai University, China*); *Chonglei Zhang* (*Nankai University, China*); *X.-C. Yuan* (*Shenzhen University, China*);

09:00 invited Evolution of Light-induced Vapor Generation at a Liquid-immersed Metallic Nanoparticle
Zheyu Fang (*Peking University, China*);

09:20 invited Surface-enhanced Raman Scattering of Nanostuctures
Zhipeng Li (*Capital Normal University, China*); *Hongxing Xu* (*Institute of Physics, Chinese Academy of Sciences, China*);

09:40 Gain-assisted Plasmonic Nanoshells for Biosensing Applications
Shan Yi (*City University of Hong Kong, China*); *Siu Pang Ng* (*City University of Hong Kong, China*); *Chi Man Lawrence Wu* (*City University of Hong Kong, China*);

10:00 **Coffee Break**

10:20 Bifunctional Au@Pt Core-shell Nanostructures for In-situ Monitoring of Catalytic Reactions by Surface-enhanced Raman Scattering Spectroscopy
Zhi Yong Bao (*The Hong Kong Polytechnic University, China*); *Ruibin Jiang* (*The Chinese University of Hong Kong, China*); *Xin Liu* (*The Hong Kong Polytechnic University, China*); *Jiyan Dai* (*The Hong Kong Polytechnic University, China*); *Bin Ren* (*Xiamen University, China*); *Jianfang Wang* (*The Chinese University of Hong Kong, China*); *Yuen Hong Tsang* (*The Hong Kong Polytechnic University, China*); *Dangyuan Lei* (*The Hong Kong Polytechnic University, China*);

10:40 Micro-analysis of Self-assembly Gold Nanoislands LSPR Biosensor Based on Atomic Force Microscopy
Guangyu Qiu (*City University of Hong Kong, China*); *Siu Pang Ng* (*City University of Hong Kong, China*); *Chi Man Lawrence Wu* (*City University of Hong Kong, China*);

11:00 Dressing Plasmon Resonance with Particle-microcavity Architecture for Efficient Nano-optical Trapping and Sensing
Haixi Zhang (*The Chinese University of Hong Kong, China*); *Yanyan Zhou* (*Nanyang Technological University, Singapore*); *Xia Yu* (*Singapore Institute of Manufacturing Technology, Singapore*); *Feng Luan* (*Nanyang Technological University, Singapore*); *Jianbin Xu* (*The Chinese University of Hong Kong, China*); *Hock Chun Ong* (*The Chinese University of Hong Kong, China*); *Aaron Ho-Pui Ho* (*The Chinese University of Hong Kong, China*);

11:20 Tunable Plasmonic Absorption in Random Metallic Nano-islands for Optofluidic Applications
Jiajie Chen (*The Chinese University of Hong Kong, China*); *Zhiwen Kang* (*The Chinese University of Hong Kong, China*); *Guanghui Wang* (*The Chinese University of Hong Kong, China*); *Aaron Ho-Pui Ho* (*The Chinese University of Hong Kong, China*);

11:40 Sensing with Localized Surface Plasmon Resonance of Nanoparticles
Fang Xu (*The Chinese University of Hong Kong, China*); *Haifei Lu* (*The Chinese University of Hong Kong, China*); *Zhiwen Kang* (*The Chinese University of Hong Kong, China*); *Jiajie Chen* (*The Chinese University of Hong Kong, China*); *Aaron Ho-Pui Ho* (*The Chinese University of Hong Kong, China*);

12:00 Double-layer Gold Gratings and Their Applications
Yang Shen (*Sun Yat-Sen University, China*); *Tianran Liu* (*Sun Yat-Sen University, China*); *Chongjun Jin* (*Sun Yat-Sen University, China*);

Session 4A5
FocusSession.SC2: Transfromation Optics 2

Thursday AM, August 28, 2014
Room 5
Organized by Hongsheng Chen, Hui Liu, Jensen Li
Chaired by Hongsheng Chen, Jensen Li

08:00 Transformation Optics with Nonlocal Photonic Media
invited
Jie Luo (*Soochow University, China*); *Yu Ting Yang* (*Soochow University, China*); *Zhi Hong Hang* (*Soochow University, China*); *Yun Lai* (*Soochow University, China*);

08:20 Controlling Spontaneous Emission Using Coordinate
invited Transformations
Jingjing Zhang (*Technical University of Denmark, Denmark*); *Anatoly V. Zayats* (*King's College London, UK*);

08:40 One-dimensional Full-parameter Cloak for TM Wave
invited
Yi Hao Yang (*Zhejiang University, China*); *Hongsheng Chen* (*Zhejiang University, China*);

09:00 Transformation Optics Manipulating the Momentum
invited of Light
Vincent Ginis (*Vrije Univesiteit Brussel, Belgium*); *J. Danckaert* (*Vrije Univesiteit Brussel, Belgium*); *Irina Veretennicoff* (*Vrije Universiteit Brussel, Belgium*); *Costas M. Soukoulis* (*Iowa State University, USA*); *Philippe Tassin* (*Chalmers University, Sweden*);

09:20 Transformation Optics: A Universal Design Tool
keynote
John B. Pendry (*Imperial College London, UK*);

10:00 **Coffee Break**

10:20 Conformal Transformation Optics
invited
Huanyang Chen (*Soochow University, China*);

10:40 Three Dimensional Carpet Cloak with Rigorous
invited Transformation Optics
Runren Zhang (*Zhejiang University, China*); *Hongsheng Chen* (*Zhejiang University, China*);

11:00 Transformation Thermodynamics: Heat Flux Control
invited and Device Applications
Yungui Ma (*Zhejiang University, China*); *Yichao Liu* (*Zhejiang University, China*);

11:20 Optimization of Nanostructured Lüneburg Lens
invited Based on the Transformation Optics Method
Yinghui Cao (*Changchun Institute of Optics, Fine Mechanics and Physics, China*); *Yongmin Liu* (*Northeastern University, USA*); *Zhenyu Liu* (*Changchun Institute of Optics, Fine Mechanics and Physics, China*);

11:40 Geometry, Topology and Transformation Optics
Yongliang Zhang (*Technical Institute of Physics and Chemistry, Chinese Academy of Science, China*); *Li-Na Shi* (*Institute of Microelectronics, Chinese Academy of Science, China*); *Xian-Zi Dong* (*Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, China*); *Zhen-Sheng Zhao* (*Technical Institute of Physics and Chemistry, Chinese Academy of Science, China*); *Xuan-Ming Duan* (*Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, China*);

Session 4A6
FocusSession.SC2: Novel Techniques for Subwavelength-focusing and Super Resolution Imaging 2

Thursday AM, August 28, 2014
Room 6
Organized by Zhaowei Liu, Geoffroy Lerosey
Chaired by Zhaowei Liu, Geoffroy Lerosey

08:00 Plasmonic Super-resolution Imaging beyond the Plas-
keynote monic Limit
Satoshi Kawata (*Osaka University, Japan*);

08:30 Plasmonic Structures for Generic Surface Plasmon
invited Generation and Focusing
Shiyi Xiao (*University of Brimingham, UK*); *Oscar Byrne* (*University of Birmingham, UK*); *Jensen Li* (*University of Brimingham, UK*);

08:50 Experimental Demonstration of Plasmonic Structured Illumination Microscopy
Feifei Wei (*University of California, USA*); *Dylan Lu* (*University of California, USA*); *Hao Shen* (*University of California, USA*); *Weiwei Wan* (*University of California, USA*); *Joseph Ponsetto* (*University of California, USA*); *Eric Huang* (*University of California, USA*); *Zhaowei Liu* (*University of California, USA*);

09:05 Deep Subwavelength Imaging by Metal-insulator-metal Plasmonic Lens
Xiangang Luo (*Institute of Optics and Electronics, Chinese Academy of Sciences, China*); *Changtao Wang* (*Institute of Optics and Electronics, Chinese Academy of Sciences, China*); *Zeyu Zhao* (*Institute of Optics and Electronics, Chinese Academy of Sciences, China*); *Ping Gao* (*Institute of Optics and Electronics, Chinese Academy of Sciences, China*); *Na Yao* (*Institute of Optics and Electronics, Chinese Academy of Sciences, China*);

09:20 invited Application of Wire Metamaterial for Magnetic Resonance Imaging
A. P. Slobozhanyuk (*ITMO University, Russia*); *P. A. Belov* (*ITMO University, Russia*);

09:40 invited Super-resolution Focusing with Phononic Crystals
Fabrice Lemoult (*Institut Lagevin, France*); *John H. Page* (*University of Manitoba, Canada*);

10:00 **Coffee Break**

10:20 Flat Lens for Bending Waves Focusing in Time Domain
Marc Dubois (*ESPCI ParisTech, France*); *Emmanuel Bossy* (*ESPCI ParisTech, France*); *Stefan Enoch* (*Institut Fresnel, France*); *Sebastien Guenneau* (*Aix Marseille University, France*); *Geoffroy Lerosey* (*ESPCI ParisTech & CNRS, France*); *Patrick Sebbah* (*ESPCI ParisTech, France*);

10:35 invited Super-focusing by Phase-modulated and Amplitude-modulated Metalens
Cheng-Wei Qiu (*National University of Singapore, Singapore*); *Kun Huang* (*National University of Singapore, Singapore*); *Hong Liu* (*Institute of Materials Research and Engineering, Singapore*); *Jinghua Teng* (*Institute of Materials Research and Engineering, Singapore*);

10:55 STED Optical Nanoscopy with Inorganic Fluorescent Labels
Xusan Yang (*Peking University, China*); *Zhiping Zeng* (*Peking University, China*); *Hao Xie* (*Peking University, China*); *Xuanze Chen* (*Peking University, China*); *Yujia Liu* (*Peking University, China*); *Dayong Jin* (*Macquarie University, Australia*); *Peng Xi* (*Peking University, China*);

11:10 invited Compressing Acoustic Waves with Rainbow Trapping Metamaterial
Jie Zhu (*University of California, USA*); *Xuefeng Zhu* (*Huazhong University of Science and Technology, China*); *Xiang Zhang* (*University of California, USA*);

Session 4A7
SC3: High Power Fiber Lasers 1

Thursday AM, August 28, 2014

Room 7

Organized by Darren D. Hudson, Jianfeng Li

Chaired by Darren D. Hudson, Jianfeng Li

08:00 invited 41 W All-fiber kHz-linewidth Single-frequency Linearly-polarized MOPA Laser
Shanhui Xu (*South China University of Technology, China*); *Can Li* (*South China University of Technology, China*); *Changsheng Yang* (*South China University of Technology, China*); *Zhongmin Yang* (*South China University of Technology, China*);

08:20 670 W Single-frequency Retrievable Multi-tone All-fiber MOPA
Xiaolin Wang (*National University of Defense Technology, China*); *P. Zhou* (*National University of Defense Technology (NUDT), China*); *Rumao Tao* (*National University of Defense Technology, China*); *R. T. Su* (*National University of Defense Technology (NUDT), China*); *X. J. Xu* (*National University of Defense Technology (NUDT), China*);

08:40 invited High Power and Widely Tunable Raman Fiber Lasers at $\sim$**1.6 μ**m Based on Volume Bragg Gratings
Deyuan Shen (*Fudan University, China*); *Jun Liu* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China*); *Dianyuan Fan* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China*);

09:00 Towards High Power Long-wavelength Ytterbium-doped Fiber Lasers
invited
Pu Zhou (*National University of Defense Technology, China*); *Hanwei Zhang* (*National University of Defense Technology, China*); *Hu Xiao* (*National University of Defense Technology, China*); *Yu Miao* (*National University of Defense Technology, China*); *Xiaolin Wang* (*National University of Defense Technology, China*);

09:20 Dual Wavelength Passively Switched Cascade Ho-doped Fluoride Fiber Laser at 3 µm and 2 µm
invited
Jianfeng Li (*University of Electronic Science and Technology of China (UESTC), China*); *Hongyu Luo* (*University of Electronic Science and Technology of China (UESTC), China*); *Yulian He* (*University of Electronic Science and Technology of China (UESTC), China*); *Lin Zhang* (*Aston University, UK*); *Sergei K. Turistyn* (*Aston University, UK*); *Yong Liu* (*University of Electronic Science and Technology of China (UESTC), China*);

09:40 Mode-locked Ho-Pr Fiber Laser Operating at 2.86 µm
invited
Darren D. Hudson (*University of Sydney, Australia*);

10:00 **Coffee Break**

10:20 Passively Solitary and Noisy-like Mode-locked Tm-doped Fiber Laser Based on NALM
Hongyu Luo (*University of Electronic Science and Technology of China (UESTC), China*); *Yulian He* (*University of Electronic Science and Technology of China (UESTC), China*); *Zhuo Li* (*University of Electronic Science and Technology of China (UESTC), China*); *Lin Zhang* (*Aston University, UK*); *Sergei K. Turistyn* (*Aston University, UK*); *Yong Liu* (*University of Electronic Science and Technology of China (UESTC), China*); *Jianfeng Li* (*University of Electronic Science and Technology of China (UESTC), China*);

10:40 Mid-infrared Supercontinuum Generation in Specialty Optical Fibers
invited
Guanshi Qin (*Jilin University, China*);

11:00 Theoretical Study on Random Laser Based on Active Lasers
Wei Li Zhang (*University of Electronic Science & Technology of China, China*); *Shi Wei Li* (*University of Electronic Science & Technology of China, China*); *Rui Ma* (*University of Electronic Science & Technology of China, China*); *Yun Jiang Rao* (*University of Electronic Science & Technology of China, China*);

11:20 High Power MOPA Structured Repetition Rates Tunable Tm-doped Fiber Laser
Deqin Ouyang (*Shenzhen University, China*); *Junqing Zhao* (*Shenzhen University, China*); *Shuang-Chen Ruan* (*Shenzhen University, China*);

11:40 The Frequency Gap and SNR Improvement for Self-seeded Multi-wavelength Brillouin-Erbium Fiber Laser
Pinghe Wang (*University of Electronic Science and Technology of China, China*); *Feng Gao* (*University of Electronic Science and Technology of China, China*);

Session 4A8a
SC2: Plasmon Enhanced Light-matter Interactions

Thursday AM, August 28, 2014

Room 8

Organized by Huigao Duan, Joel K.W. Yang

Chaired by Huigao Duan, Jixiang Fang

08:00 Giant Chiroptical Properties of Molecules in Hot Spots
Xiangdong Zhang (*Beijing Computational Science Research Center, China*); *Rong-Yao Wang* (*Beijing Institute of Technology, China*); *Yineng Liu* (*Beijing Institute of Technology, China*); *Tong Wu* (*Beijing Institute of Technology, China*); *Jun Ren* (*Beijing Institute of Technology, China*);

08:20 Emission of a Point Dipole Mediated by Multiple Fano Resonances in Plasmonic Nanostructures
Xiao Ming Zhang (*Harbin Institute of Technology, China*); *Qiang Zhang* (*Harbin Institute of Technology, China*); *Fei Fei Qin* (*Harbin Institute of Technology, China*); *Jun Jun Xiao* (*Harbin Institute of Technology, China*);

08:40 Absorption and Polarization Manipulation with Stereostructured Metamaterials
Xiang Xiong (*Nanjing University, China*); *S. C. Jiang* (*Nanjing University, China*); *Y. S. Hu* (*Nanjing University, China*); *Ru-Wen Peng* (*Nanjing University, China*); *Mu Wang* (*Nanjing University, China*);

09:00 Light-trapping in Single Nanowire Photodetectors by Using Metallic Slits
Yaohui Zhan (*Soochow University, China*); *Xiaofeng Li* (*Soochow University, China*); *Shaolong Wu* (*Soochow University, China*);

09:20 Silver Plasmonic Supercrystals Synthesized via Bottom-up Strategy for Enhanced Light-matter Interactions
Cuifeng Tian (*Xi'an Jiaotong University, China*); *Jixiang Fang* (*Xi'an Jiaotong University, China*);

09:40 Threading Plasmonic Nanoparticle Strings with Light
Ventsislav K. Valev (*University of Cambridge, UK*); *Lars O. Herrmann* (*University of Cambridge, UK*); *Christos Tserkezis* (*Donostia International Physics Center and CFM CSIC-UPV/EHU, Spain*); *Jon S. Barnard* (*University of Cambridge, UK*); *Oren A. Scherman* (*University of Cambridge, UK*); *Javier Aizpurua* (*Donostia International Physics Center (DIPC) and Centro Mixto de Física de Materiales (CSIC-UPV/EHU), Spain*); *Jeremy J. Baumberg* (*University of Cambridge, UK*);

10:00 **Coffee Break**

10:20 Resonance Enhanced Luminescence of Single Upconversion Nanoparticle Using Plasmonic Gold Nanorods
Xin Zhang (*South China Normal University, China*); *Jing Liu* (*South China Normal University, China*); *Qiu Qiang Zhan* (*Zhejiang University, China*);

Session 4A8b
SC1,3&4: Photonics-applied Electromagnetic Measurement: Fundamental Study, Applications, and Standards

Thursday AM, August 28, 2014

Room 8

Organized by Satoru Kurokawa, Hiroshi Murata

Chaired by Satoru Kurokawa, Hiroshi Murata

10:40 Far-field Antenna Factor Measurement for Broadband Antennas Using a Compact Radio on Fiber Modules
Satoru Kurokawa (*NMIJ/AIST, Japan*);

11:00 Comparison of Photonic Sensor and OEWG as the Probe for Near-field Antenna Measurements
Masanobu Hirose (*National Institute of Advanced Industrial Science and Technology, Japan*); *Satoru Kurokawa* (*AIST Electromagnetic Fields Section Electromagnetic Waves Division NMIJ, Japan*);

11:20 Product Trends of Optical ***E***-field Sensor
Yoshikazu Toba (*Seikoh Giken Co., Ltd., Japan*); *Jun Ichijoh* (*Seikoh Giken Co., Ltd., Japan*); *Takehiro Morioka* (*National Institute of Advanced Industrial Science and Technology, Japan*); *Masanobu Hirose* (*National Institute of Advanced Industrial Science and Technology, Japan*); *Satoru Kurokawa* (*National Institute of Advanced Industrial Science and Technology, Japan*);

11:40 Antennas Design for Electric/Optical Sensors of High Sensitivity
Qiang Chen (*Tohoku University, Japan*); *Hiroto Abe* (*Tohoku University, Japan*);

12:00 Wireless Microwave to Lightwave Signal Converter Using Electro-optic Modulator with Antenna-coupled Electrode
Hiroshi Murata (*Osaka University, Japan*); *Takahiro Kohmu* (*Osaka University, Japan*); *Takashi Ikeda* (*Osaka University, Japan*); *Yasuyuki Okamura* (*Osaka University, Japan*);

Session 4A9
FocusSession.SC3: Ultrafast Optics

Thursday AM, August 28, 2014

Room 9

Organized by Zhiyi Wei, Oliver D. Mücke

Chaired by Zhiyi Wei

08:00 keynote Ultrafast Lasers for Material Processing and Imaging at Miro/Nanoscales
Yongfeng Lu (*University of Nebraska-Lincoln, USA*); *Yun Shen Zhou* (*University of Nebraska-Lincoln, USA*); *Wei Xiong* (*University of Nebraska-Lincoln, USA*); *Li Jia Jiang* (*University of Nebraska-Lincoln, USA*); *Xi Huang* (*University of Nebraska-Lincoln, USA*); *Jean-Francois Silvain* (*University of Nebraska-Lincoln, USA*); *Lan Jiang* (*Beijing Institute of Technology, China*);

08:30 invited Ultrabroadband Infrared Spectroscopy by Chirped Pulse Upconversion
Takao Fuji (*Institute for Molecular Science, Japan*); *Yutaka Nomura* (*Institute for Molecular Science, Japan*); *Hideto Shirai* (*Institute for Molecular Science, Japan*);

08:50 invited Multicore Large-mode Area Photonic-crystal-fiber Platform for High-power Ultrashort-pulse Sources
Ming-Lie Hu (*Tianjin University, China*);

09:10 invited Attosecond-Jitter Fiber Lasers and Their Microwave Photonic Applications
Jungwon Kim (*MIT, USA*);

09:30 Passively Mode-locked Lasers at Around 2 μm with Optical Superlattice
Xiao Peng Hu (*Nanjing University, China*); *Huan Cheng* (*Nanjing University, China*); *Jiong Zou* (*Nanjing University, China*); *Shi-Ning Zhu* (*Nanjing University, China*);

09:45 All-optical Ultrafast Control of SOI Waveguide Elements Employing Localized Absorption
Roman Bruck (*University of Southampton, UK*); *Otto L. Muskens* (*University of Southampton, UK*);

10:00 **Coffee Break**

10:20 invited Development of 10 PW Ultra-high Power Laser Facility at SIOM
Ruxin Li (*Shanghai Institute of Optics and Fine Mechanics, China*); *Xiaoyan Liang* (*Shanghai Institute of Optics and Fine Mechanics (SIOM), Chinese Academy of Sciences, China*); *Yuxin Leng* (*Shanghai Institute of Optics and Fine Mechanics (SIOM), Chinese Academy of Sciences, China*); *Zhizhan Xu* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China*);

10:40 invited Present Status and Prospects of the High-spatiotemporal-quality Petawatt-class J-KAREN Laser Facility
Hiromitsu Kiriyama (*Kansai Photon Science Institute, Japan*); *M. Mori* (*Kansai Photon Science Institute, Japan*); *A. Kon* (*Kansai Photon Science Institute, Japan*); *M. Nishiuchi* (*Kansai Photon Science Institute, Japan*); *H. Sakaki* (*Kansai Photon Science Institute, Japan*); *K. Ogura* (*Kansai Photon Science Institute, Japan*); *Y. Fukuda* (*Kansai Photon Science Institute, Japan*); *A. S. Pirozhkov* (*Kansai Photon Science Institute, Japan*); *A. Sagisaka* (*Kansai Photon Science Institute, Japan*); *T. Zh. Esirkepov* (*Kansai Photon Science Institute, Japan*); *James K. Koga* (*Kansai Photon Science Institute, Japan*); *Yukio Hayashi* (*Kansai Photon Science Institute, Japan*); *H. Kotaki* (*Kansai Photon Science Institute, Japan*); *M. Kanasaki* (*Kansai Photon Science Institute, Japan*); *Y. Mashiba* (*Kansai Photon Science Institute, Japan*); *M. Kando* (*Kansai Photon Science Institute, Japan*); *Sergei V. Bulanov* (*Kansai Photon Science Institute, Japan*); *K. Kondo* (*Kansai Photon Science Institute, Japan*); *P. R. Bolton* (*Kansai Photon Science Institute,, Japan*); *M. R. Asakawa* (*Kansai University, Japan*); *O. Slezak* (*Institute of Physics ASCR, Czech Republic*); *D. Vojna* (*Institute of Physics ASCR, Czech Republic*); *M. Sawicka-Chyla* (*Institute of Physics ASCR, Czech Republic*); *V. Jambunathan* (*Institute of Physics ASCR, Czech Republic*); *A. Lucianetti* (*Institute of Physics ASCR, Czech Republic*); *T. Mocek* (*Institute of Physics ASCR, Czech Republic*);

11:00 invited Attosecond Control of Electronic Dynamics with Intense Laser Fields
Yong Ju Chen (*Wuhan Institute of Physics and Mathematics, Chinese Academy of Sciences, China*); *Chuan Liang Wang* (*Wuhan Institute of Physics and Mathematics, Chinese Academy of Sciences, China*); *Song Bo Xu* (*Wuhan Institute of Physics and Mathematics, Chinese Academy of Sciences, China*); *Xuan Yang Lai* (*Wuhan Institute of Physics and Mathematics, Chinese Academy of Sciences, China*); *Wei Quan* (*Wuhan Institute of Physics and Mathematics, Chinese Academy of Sciences, China*); *Xiao Jun Liu* (*Wuhan Institute of Physics and Mathematics, Chinese Academy of Sciences, China*);

11:20 High-order Harmonic Generation from Carrier-envelope Phase Stabled Few-cycle Intense Laser Pulse (invited)
Xinkui He (*Institute of Physics, Chinese Academy of Sciences (CAS), China*); *Hao Teng* (*Institute of Physics, Chinese Academy of Sciences, China*); *Peng Ye* (*Institute of Physics, Chinese Academy of Sciences (CAS), China*); *Shiyang Zhong* (*Institute of Physics, Chinese Academy of Sciences (CAS), China*); *Minjie Zhan* (*Institute of Physics, Chinese Academy of Science (CAS), China*); *Lifeng Wang* (*Institute of Physics, Chinese Academy of Sciences (CAS), China*); *Zhiyi Wei* (*Institute of Physics, Chinese Academy of Sciences, China*);

11:40 Pulse Slice Elongating and Pulse Broadening in a Homogeneous Medium with Only Third Order Susceptibility
Lizhong Wang (*Hebei University of Technology, China*); *Jing Zhang* (*Hebei University of Technology, China*); *Wenxia Bao* (*Nankai University, China*); *Yong Zhang* (*Hebei University of Technology, China*); *Zhengji Fang* (*Hebei University of Technology, China*); *Peide Zhao* (*Hebei University of Technology, China*); *Xiaonong Zhu* (*Nankai University, China*);

Session 4A_10
SC2: Nanoantennas

Thursday AM, August 28, 2014

Room 10

Organized by Zheyu Fang, Kuo-Ping Chen

Chaired by Zheyu Fang, Kuo-Ping Chen

08:00 Analysis and Design of the Dielectric Yagi-Uda Nanoantenna with a Double Driven Element
Thanatcha Satitchantrakul (*King Mongkut's University of Technology Thonburi, Thailand*); *Rardchawadee Silapunt* (*King Mongkut's University of Technology Thonburi, Thailand*);

08:20 3D Triple-layer Slot Nanoantenna Array
Yu-Bo Wang (*University of Electronic Science and Technology of China, China*); *Joshua Le-Wei Li* (*Monash University, Malaysia*);

08:40 Surface Plasmon Polaritons Focusing by the Plasmonic Chains Illuminated with Linearly Polarized Light
Jiaming Li (*Peking University, China*); *Tao Huang* (*Peking University, China*); *Feng Lin* (*Peking University, China*); *Zheyu Fang* (*Peking University, China*); *Xing Zhu* (*Peking University, China*);

09:00 Paired-strips Gold Nanoantennas for Absorption Enhancement in P3HT Organic Thin-film
Zih-Ying Yang (*National Chiao Tung University, Taiwan*); *Kuo-Ping Chen* (*National Chiao-Tung University, Taiwan*);

09:20 Orthogonal Redirector and Wavelength Selector of SPPs Realized by Using Nano-optical Yagi-Uda Antenna
Xuewei Zhang (*Peking University, China*); *Mingcheng Liang* (*Peking University, China*); *Zheyu Fang* (*Peking University, China*);

09:40 Plamsonic Beaming by Well Designed Nanoscatterers
Tao Li (*Nanjing University, China*); *Lin Li* (*Nanjing University, China*); *Xia-Mei Tang* (*Nanjing University, China*); *Shi-Ning Zhu* (*Nanjing University, China*);

10:00 **Coffee Break**

10:20 Plasmonic Photocoupler for Infrared Optoelectronics and Optospintronics
Jie Xu (*Fudan University, China*); *Fuchun Xi* (*Fudan University, China*); *Lijian Zhang* (*Fudan University, China*); *Qinbai Qian* (*Fudan University, China*); *Peng Gou* (*Fudan University, China*); *Lei Zhou* (*Fudan University, China*); *Zhenghua An* (*Fudan University, China*);

10:40 High-sensitivity Plasmonic Dipolar Anitbonding Mode of Gold Nanoantennas in Evanescent Waves
Yi-Hsun Chen (*National Chiao Tung University, Taiwan*); *Che-Yuan Chang* (*National Chiao Tung University, Taiwan*); *Zih-Ying Yang* (*National Chiao Tung University, Taiwan*); *Kuo-Ping Chen* (*National Chiao-Tung University, Taiwan*);

11:00 Substrate-mediated Charge Transfer Plasmons in Simple and Complex Nanoparticle Clusters
Ziwei Li (*Peking University, China*); *Zheyu Fang* (*Peking University, China*);

11:20 Plasmonic Hot Electron Induced Structural Phase Transition in Monolayer MoS_2
Yimin Kang (*Peking University, China*); *Zheyu Fang* (*Peking University, China*);

11:40 Magnetic Plasmon Induced Fano Resonance at Optical Frequency
Yanjun Bao (*Peking University, China*); *Zheyu Fang* (*Peking University, China*);

Session 4A_11
SC1: Advanced Numerical Techniques in Computational Electromagnetics

Thursday AM, August 28, 2014

Room 11

Organized by Mei Song Tong, Li Jun Jiang

Chaired by Mei Song Tong, Li Jun Jiang

08:00 Using Multiple-precision Arithmetic to Prevent Low-frequency Breakdowns in the Diagonalization of the Green's Function
Ozgur Ergul (*Middle East Technical University, Turkey*); *B. Karaosmanoglu* (*Middle East Technical University, Turkey*);

08:20 Properties of the Gram Matrices Associated with Loop-flower Basis Functions
Yibei Hou (*Shanghai Jiao Tong University, China*); *Gaobiao Xiao* (*Shanghai Jiao Tong University, China*);

08:40 An Efficient Magnetic Field Integral Equation Based Iterative Solver
Robert Brem (*Technische Universität München, Germany*); *Thomas F. Eibert* (*Technische Univerität München, Germany*);

09:00 Mixed Spectral Element Method for Maxwell Eigenvalue Problem with Anisotropic and Lossy Media
Na Liu (*Xiamen University, China*); *Z. Mao* (*Xiamen University, China*); *Q. H. Liu* (*Duke University, USA*);

09:20 Time-domain Analytical Solutions at Each Point of Two-wire Transmission Line Excited by Plane-wave Fields
Mengshi Zhang (*National University of Defense Technology, China*); *Guyan Ni* (*National University of Defense Technology, NUDT, China*); *Min Zhou* (*National University of Defence Technology, China*);

09:40 An Analysis of Energy Conserved Splitting FDTD Method for 3D Maxwell's Equations
Wen Li (*Jiangsu Normal University, China*); *Huadong Zhao* (*Jiangsu Normal University, China*); *Lei Zhao* (*Jiangsu Normal University, China*); *Wenhua Yu* (*State College, USA*);

10:00 **Coffee Break**

10:20 Fast Calculation of Response of Scatterers in Uniaxial Laminates
Yu Zhong (*Institution of High Performance Computing, Singapore*); *Xudong Chen* (*National University of Singapore, Singapore*); *Ping-Ping Ding* (*UMR8506 (CNRS, Supélec, University Paris-Sud), France*); *Marc Lambert* (*UMR8506 (CNRS, Supélec, University Paris-Sud), France*); *Dominique Lesselier* (*UMR8506 (CNRS, Supélec, University Paris-Sud), France*);

10:40 A Derivative-free Broadband Source Reconstruction Method
Ping Li (*The University of Hong Kong, China*); *Li Jun Jiang* (*The University of Hong Kong, China*);

11:00 Numerical Verification of Nanoscale Antenna Performance for Ultra-fast Magnetic Recording
Shinichiro Ohnuki (*Nihon University, Japan*); *T. Okuda* (*Nihon University, Japan*); *Y. Ashizawa* (*Nihon University, Japan*); *K. Nakagawa* (*Nihon University, Japan*); *A. Tsukamoto* (*Nihon University, Japan*);

Session 4A_12
SC1: Extended/Unconventional Electromagnetic Theory, EHD(Electro-hydrodynamics)/EMHD(Electro-magneto-hydrodynamics), and Electro-biology

Thursday AM, August 28, 2014

Room 12

Organized by Eva Gescheidtova

Chaired by Jan Mikulka

08:00 Intelligent Channel Assignment for WI-FI System Based on Reinforcement Learning
Robert Urban (*Brno University of Technology, Czech Republic*); *Petr Drexler* (*Brno University of Technology, Czech Republic*);

08:20 Analysis of Conditions on the Boundary between Layers
Radim Kadlec (*Brno University of Technology, Czech Republic*); *Pavel Fiala* (*Brno University of Technology, Czech Republic*);

08:40 Fast Calculation of $\boldsymbol{T_2}$ Relaxation Time in Magnetic Resonance Imaging
Jan Mikulka (*Brno University of Technology, Czech Republic*); *Pavel Dvorak* (*Institute of Scientific Instruments of the ASCR, Czech Republic*);

09:00 Measuring and Application of NIR Light Absorption Coefficient of Bacteria
Pavel Krepelka (*Brno University of Technology, Czech Republic*); *Fernando Camara Martos* (*Universidad de Cordoba, Spain*); *Guiomar Denisse Posada-Izquierdo* (*Universidad de Cordoba, Spain*); *Fernando Perez-Rodriguez* (*Universidad de Cordoba, Spain*);

09:20 Using Diffusion-weighted Images to Identify Brain Tumors
Petr Marcon (*Brno University of Technology, Czech Republic*); *Karel Bartusek* (*Institute of Scientific Instruments of the ASCR, Czech Republic*); *Andrea Sprlakova* (*Masaryk University, Czech Republic*);

09:40 Partial Discharge Detection and Localization System
Martin Cap (*Brno University of Technology, Czech Republic*); *Petr Drexler* (*Brno University of Technology, Czech Republic*); *Pavel Fiala* (*Brno University of Technology, Czech Republic*);

10:00 **Coffee Break**

10:20 Numerical Model of a Large Periodic Structure
Robert Urban (*Brno University of Technology, Czech Republic*); *Petr Drexler* (*Brno University of Technology, Czech Republic*); *Pavel Fiala* (*Brno University of Technology, Czech Republic*); *Dusan Nespor* (*Brno University of Technology, Czech Republic*);

10:40 Optimization of the Particle Swarm Algorithm
Jiri Chytil (*Brno University of Technology, Czech Republic*);

11:00 Sensitivity Improvement in NQR Based Detection Methods
Miloslav Steinbauer (*Brno University of Technology, Czech Republic*); *Jan Seginak* (*Brno University of Technology, Czech Republic*); *Premysl Dohnal* (*Brno University of Technology, Czech Republic*);

11:20 A Dark Matter Model to Unify Gravity and Electromagnetism
Michael James Underhill (*Underhill Research Ltd, UK*);

11:40 Interactive Segmentation of Hip Joint Cartilage
Pavel Dvorak (*Institute of Scientific Instruments of the ASCR, Czech Republic*); *Vladimir Juras* (*Medical University of Vienna, Austria*); *Wolf-Dieter Vogl* (*Medical University of Vienna, Austria*); *Jiri Chytil* (*Brno University of Technology, Czech Republic*);

12:00 PIERS: Progress In Electromagnetism — Relativity Superseded
Piers Hutchinson (*MA Oxon, Canada*);

Session 4A_13a
Remote Sensing of the Earth, Ocean, and Atmosphere

Thursday AM, August 28, 2014

Room 13

Chaired by Rachid Talhi, Kazuo Ouchi

08:00 PO-GO/ECM for Bistatic RCS Modeling of Complex Objects over Rough Sea Surface
Y. Bennani (*University of Tours, France*); *Rachid Talhi* (*University of Tours, France*);

08:20 Space-borne Observations and Analysis of Human-generated Electromagnetic Radiations
Rachid Talhi (*University of Tours, France*); *P. Sebire* (*CNRS/LPC2E, France*); *Y. Bennani* (*University of Tours, France*);

08:40 Study on the Variation Characteristics of Land Desertification in Ebinur Lake Basin
Lishuang Sun (*Shenyang Jianzhu University, China*); *Yuntao Ma* (*Shenyang Jianzhu University, China*); *H. Ding* (*Shenyang Jianzhu University, China*);

09:00 Analysis of EVI and NDVI Characteristics in Different Land Cover Types in Liaoning Province
Jingli Wang (*Shenyang Jianzhu University, China*); *Yuntao Ma* (*Shenyang Jianzhu University, China*); *Lishuang Sun* (*Shenyang Jianzhu University, China*);

09:20 On a New Ship Detection Parameter Using Multi-polarization SAR Data
Chan-Su Yang (*Korea Ocean Research and Development Institute, Korea*); *Kazuo Ouchi* (*Korea Ocean Institute of Science & Technology, Korea*);

09:40 Experimental Ship Monitoring Using SAR, FMCW Radar and AIS on the Ieodo Ocean Research Station, South Korea
Chan-Su Yang (*Korea Ocean Research and Development Institute, Korea*); *Kazuo Ouchi* (*Korea Ocean Institute of Science & Technology, Korea*);

10:00 **Coffee Break**

Session 4A_13b
SC4&3: Metamaterials for Antenna Applications: Practical Solutions

Thursday AM, August 28, 2014

Room 13

Organized by John Yiannis C. Vardaxoglou

Chaired by John Yiannis C. Vardaxoglou

10:20 Minkowski Fractal Antenna Design with DMS-SRR and DGS-SRR Structure for WLAN Application
Mohd Fareq Bin Abdul Malek (*University Malaysia Perlis (UniMAP), Malaysia*); *Hassan Nornikman* (*Universiti Malaysia Perlis, Malaysia*); *M. H. F. Mohd Fakri* (*Universiti Malaysia Perlis (UniMAP), Malaysia*); *Mohamad Zoinol Abidin Abd Aziz* (*Universiti Teknikal Malaysia Melaka (UTeM), Malaysia*); *Badrul Hisham Ahmad* (*Universiti Teknikal Malaysia Melaka (UTeM), Malaysia*);

10:40 Equivalent Circuit Model of Different Configurations of Loop Elements Using Vector-fitting
Payal Majumdar (*Kuang-Chi Institute of Advanced Technology, China*); *Zhiya Zhao* (*Kuang-Chi Institute of Advanced Technology, China*); *Yutao Yue* (*Kuang-Chi Institute of Advanced Technology, China*); *Chunlin Ji* (*Kuang-Chi Institute of Advanced Technology, China*); *Ruopeng Liu* (*Kuang-Chi Institute of Advanced Technology, China*);

11:00 Antenna Reconfiguration Using Metasurfaces
Hailiang Zhu (*The University of Hong Kong, China*); *William Sing Wai Cheung* (*The University of Hong Kong, China*); *Tung Ip Yuk* (*The University of Hong Kong, China*);

11:20 A Systematic Approach to Synthesizing Artificial Dielctrics (Metamaterials) and Its Application to Antenna Design
Raj Mittra (*The Pennsylvania State University, USA*); *J. C. Vardaxoglou* (*Pennsylvania State University, USA*);

11:40 Metamaterial Surfaces for Integrated Multiband Horn Applications
John Yiannis C. Vardaxoglou (*Loughborough University, UK*);

Session 4P1
SC3: Nanoparticle-assisted Bioimaging and Sensing

Thursday PM, August 28, 2014

Room 1

Organized by Jun Qian, Renato E. De Araujo

Chaired by Jun Qian

13:00 A Double-amplification Strategy for Quantitative DNA Fluorescent Detection
Xia Liu (*South China Normal University, China*); *Guofu Zhou* (*South China Normal University, China*); *Mingliang Jin* (*South China Normal University, China*);

13:20 A Quantum-dots-assisted Positioning System for Location Sensing of Nanobots
Lujiang Qian (*South University of Science and Technology of China (SUSTC), China*); *Yu Zhou* (*South University of Science and Technology of China, China*); *Changyu Wang* (*South University of Science and Technology of China, China*); *Yifan Chen* (*South University of Science and Technology of China, China*); *Rui Wang* (*South University of Science and Technology of China, China*); *Qingfeng Zhang* (*South University of Science and Technology of China, China*);

13:40 AIE-active Biomaterials Based on 9, 10-bis (4-hydroxystyryl) Anthracene Derivatives
Wenjing Tian (*Jilin University, China*); *Bin Xu* (*Jilin University, China*); *Xing Li* (*Jilin University, China*); *Hongguang Lv* (*Jilin University, China*); *Zilong Wang* (*Jilin University, China*); *Yan Zang* (*Jilin University, China*); *Ke Ma* (*Jilin University, China*);

14:00 Luminogenic Polymers with Aggregation-induced Emission Characteristics for High-performance Sensing Applications
Anjun Qin (*South China University of Technology, China*); *Ben Zhong Tang* (*The Hong Kong University of Science & Technology, China*);

14:20 Joint SERS-fluorescence Spectrum and Its Applications in Biosensing & Imaging
Zhuyuan Wang (*Southeast University, China*); *Yiping Cui* (*Southeast University, China*); *Shenfei Zhong* (*Southeast University, China*);

14:40 Nonlinear Optical Properties of Gold Nanorods (GNRs) under FS Laser Excitation near the Third Optical Tissue Window and Application for Multichannel Cellular Imaging
Yalun Wang (*Zhejiang University, China*); *Kanghui Li* (*Zhejiang University, China*); *Zhen Feng Zhu* (*Zhejiang University, China*); *Jun Qian* (*Zhejiang University, China*);

15:00 Three-photon Luminescence of High Aspect Ratio Gold Nanorods and Its Applications for High Contrast Tissue and *in Vivo* Imaging
Shaowei Wang (*Zhejiang University, China*); *Jun Qian* (*Zhejiang University, China*);

15:20 **Coffee Break**

15:40 Near-infrared Fluorophore-doped Nanoparticles for *in vitro* and *in vivo* Bioimaging
Liliang Chu (*Zhejiang University, China*); *Shaowei Wang* (*Zhejiang University, China*); *Kanghui Li* (*Zhejiang University, China*); *Wang Xi* (*Zhejiang University, China*); *Jun Qian* (*Zhejiang University, China*);

16:00 Conjugated Polymer Nanoparticles for Cellular Imaging and Sensing Applications
Changfeng Wu (*Jilin University, China*); *Gaixia Xu* (*Shenzhen University, China*); *Danni Chen* (*Shenzhen University, China*);

16:20 A Photostable AIE Luminogen for Multifunctional Three-photon Bioimaging
Zhen Feng Zhu (*Zhejiang University, China*); *Chris Wai Tung Leung* (*The Hong Kong University of Science and Technology, China*); *Xinyuan Zhao* (*Zhejiang University, China*);

Session 4P2a
SC1&3: Design and Simulation of Electromagnetic and Optical Devices 2

Thursday PM, August 28, 2014

Room 2

Organized by Shinichiro Ohnuki, Jun Shibayama

Chaired by Shinichiro Ohnuki, Jun Shibayama

13:00 New Application Field for Surface Plasmon in Magnetic Recording and Sensing
Katsuji Nakagawa (*Nihon University, Japan*); *Yoshito Ashizawa* (*Nihon University, Japan*); *A. Tsukamoto* (*Nihon University, Japan*); *Shinichiro Ohnuki* (*Nihon University, Japan*);

13:20 An Ambient Sensitive Grating Reflector Based on Generalized Guided-mode Resonance
F.-C. Huang (*National Taiwan University, Taiwan*); *L. K. Liao* (*National Taiwan University, Taiwan*); *Yih-Peng Chiou* (*National Taiwan University, Taiwan*);

13:40 Application of the Explicit and Implicit FDTD Methods to the Analysis of a Terahertz Plasmonic Grating
Jun Shibayama (*Hosei University, Japan*); *Y. Wada* (*Hosei University Tokyo, Japan*); *Junji Yamauchi* (*Hosei University, Japan*); *Hisamatsu Nakano* (*Hosei University, Japan*);

14:00 Electronic State Control Based on Hybrid Simulation Consisted of Maxwell and Schrödinger Equations — A Singled Electron Constrained in Thin Tube
Takashi Takeuchi (*Nihon University, Japan*); *S. Ohnuki* (*Nihon University, Japan*); *T. Sako* (*Nihon University, Japan*); *Yoshito Ashizawa* (*Nihon University, Japan*); *Katsuji Nakagawa* (*Nihon University, Japan*); *Masahiro Tanaka* (*Gifu University, Japan*);

14:20 Scattering Characteristics of Electrically Large IR-reflective/MW-transmissive Beam Combiner
Hui Yan (*Beijing Institute of Technology, China*); *Yi Tian* (*Beijing Institute of Technology, China*); *Zhiwei Bai* (*Beijing Institute of Technology, China*); *Xin Wang* (*Beijing Institute of Technology, China*); *Zhuo Li* (*Beijing Institute of Technology, China*);

14:40 Tuned Window for Standing Wave Linear Accelerators
Alberto Leggieri (*Università degli Studi di Roma "Tor Vergata", Italy*); *Alessia Ciccotelli* (*S.I.T. — Sordina IORT Technologies, Italy*); *Giuseppe Felici* (*S.I.T. — Sordina IORT Technologies, Italy*); *Leonardo Zappelli* (*Universita Politecnica delle Marche, Italy*); *Davide Passi* (*Università degli Studi di Roma "Tor Vergata", Italy*); *Franco Di Paolo* (*Università degli Studi di Roma "Tor Vergata", Italy*);

15:00 Application of Optical Frequency Comb Synthesizer/Analyzer to 22.4 Tbit/s Composite Amplitude and Phase Shift Keying
Takayuki Miyamoto (*Saitama University, Japan*); *Mitsutaka Ito* (*Saitama University, Japan*); *Toshiaki Yamazaki* (*Nagaoka University of Technology, Japan*); *Tatsutoshi Shioda* (*Saitama University, Japan*);

15:20 **Coffee Break**

Session 4P2b
Optoelectronic and Photonics Devices

Thursday PM, August 28, 2014

Room 2

Chaired by Yong-Zhen Huang, Nai-Hsiang Sun

15:40 Simulation and Design of Monolithically Integrated Tunable Wavelength Converter Based on V-cavity Laser and Delayed Mach-Zehnder Interferometer
Yingchen Wu (*Zhejiang University, China*); *Jian-Jun He* (*Zhejiang University, China*);

16:00 Simulated Optimization of the Colorless Laser Transmitter under 10-Gbit/s Direct Encoding and Optical Injection-locking
Yu-Chieh Chi (*National Taiwan University, Taiwan, R.O.C.*); *Gong-Ru Lin* (*National Taiwan University, Taiwan, R.O.C.*);

16:20 Power Conservation in Dual Periodic Dielectric Waveguides
Nai-Hsiang Sun (*I-Shou University, Taiwan*); *Tsum-Yen He* (*I-Shou University, Taiwan*); *Shih-Cing Lei* (*I-Shou University, Taiwan*); *Yu-Wei Liu* (*I-Shou University, Taiwan*); *Jung-Sheng Chiang* (*I-Shou University, Taiwan*);

16:40 Bandgap Engineering of InGaAsP/InP Multiple Quantum Well Structure by Dielectric Sputtering
Hongli Zhu (*Zhejiang University, China*); *Yuan Zhuang* (*Zhejiang University, China*); *Xin Zhang* (*Zhejiang University, China*); *Jian-Jun He* (*Zhejiang University, China*);

17:00 High Stable Exciton Emission from SnO_2 Quantum Dots Grown via a Facile "Top-down" Strategy
Shu Sheng Pan (*Institute of Solid State Physics, Chinese Academy of Sciences, China*); *Wei Lu* (*The Hong Kong Polytechnic University, China*); *Zhao Qin Chu* (*Institute of Solid State Physics, Chinese Academy of Sciences, China*); *Si Chao Xu* (*Institute of Solid State Physics, Chinese Academy of Sciences, China*); *Yun Xia Zhang* (*Institute of Solid State Physics, Chinese Academy of Sciences, China*); *Yuan Yuan Luo* (*Institute of Solid State Physics, Chinese Academy of Sciences, China*); *Guanghai Li* (*Institute of Solid State Physics, Chinese Academy of Sciences, China*);

17:20 Design and Simulation of 450 nm GaN-based Multiple-quantum-well Tunable V-cavity Laser
Zhipeng Hu (*Zhejiang University, China*); *Jianjun Meng* (*Zhejiang University, China*); *Lin Wu* (*Zhejiang University, China*); *Jian-Jun He* (*Zhejiang University, China*);

Session 4P3a
SC3: Fano Resonance in Nanoscale Structures

Thursday PM, August 28, 2014

Room 3

Organized by Andrey E. Miroshnichenko, Yuri S. Kivshar

Chaired by Andrey E. Miroshnichenko

13:00 Self-Fano Resonance in a Symmetry Broken Ag Nanodisk
Zheyu Fang (*Peking University, China*);

13:20 Fano Resonances in Magneto-dielectric Core-shell Nanoparticles
Wei Liu (*Australian National University, Australia*);

13:40 Negative Optical Binding Force Induced by Fano Resonances in Plasmonic Heterodimers
Jun Jun Xiao (*Harbin Institute of Technology, China*); *Qiang Zhang* (*Harbin Institute of Technology, China*); *Xiao Ming Zhang* (*Harbin Institute of Technology, China*); *F. F. Qin* (*Harbin Institute of Technology, China*);

14:00 Subgroup Decomposition of Plasmonic Resonances in Hybrid Oligomers for Ultrasensitive Biochemical Sensing
Dangyuan Lei (*The Hong Kong Polytechnic University, China*);

14:20 Reworking the Understanding of Fano Resonances in Nanoparticle Oligomers
Ben Hopkins (*Australian National University, Australia*); *Alexander N. Poddubny* (*National Research University for Information Technology, Mechanics and Optics, Russia*); *Andrey E. Miroshnichenko* (*Australian National University, Australia*); *Yuri S. Kivshar* (*Australian National University, Australia*);

14:40 Equivalent Permittivity and Permeability and Multiple Fano Resonances for Nonlocal Metallic Nanowires
Yang Huang (*Soochow University, China*); *Lei Gao* (*Soochow University, China*);

15:00 Nonlinear Fano Resonance in Photonic Crystal Waveguide and Cavity System: Physical Properties and Applications
Yi Xu (*Australian National University, Australia*); *Andrey E. Miroshnichenko* (*Australian National University, Australia*);

15:20 **Coffee Break**

Session 4P3b
SC2&3: Active Nanophotonics: Design of Nano-devices/Structures and Their Interaction with Molecules

Thursday PM, August 28, 2014

Room 3

Organized by Shiuan-Yeh Chen, Qing Huo Liu

Chaired by Shiuan-Yeh Chen, Qing Huo Liu

15:40 1.7-nanometer Resolution Structural Analysis of Carbon Nanotube by Tip Enhanced Raman Imaging
Chi Chen (*The Institute of Physical and Chemical Research (RIKEN), Japan*); *Norihiko Hayazawa* (*The Institute of Physical and Chemical Research (RIKEN), Japan*); *Satoshi Kawata* (*The Institute of Physical and Chemical Research (RIKEN), Japan*);

16:00 Large Kerr Nonlinearity Induced by Anisotropic Purcell Factors
Juanjuan Ren (*Peking University, China*); *Ying Gu* (*Peking University, China*); *Hongyi Chen* (*Peking University, China*); *Dongxing Zhao* (*Peking University, China*); *Qihuang Gong* (*Peking University, China*);

16:20 Hiding the Interior Region of Core-shell Nanoparticles Based on Scattering Cancellation
Jeng Yi Lee (*National Tsing Hua University, Taiwan*); *Ray-Kuang Lee* (*National Tsing-Hua University, Taiwan*);

16:40 Vortex Energy Flows Generated by the Periodic Nanostructures
Shih-Wen Chen (*National Taiwan University, Taiwan*); *Jia-Han Li* (*National Taiwan University, Taiwan*);

17:00 Shaping the CPML Absorbing Boundary Condition to Eliminate Impinging Light at a Specific Position inside Electromagnetic Simulations
Sergio Cantero Clares (*National Taiwan University, Taiwan*); *Shuai-Hsun Lee* (*National Taiwan University, Taiwan*); *Snow H. Tseng* (*National Taiwan University, Taiwan*);

Session 4P4a
SC3&1: Science and Applications of Electromagnetic Vortices and Orbital Angular Momentum (OAM)

Thursday PM, August 28, 2014

Room 4

Organized by Larry Xiaocong Yuan, Gunnar G. E. Bjork

Chaired by Fangwei Ye, Sergei Popov

13:00 Helically Corrugated Metallic Nanowires as Nanovortices Sources
Changming Huang (*Shanghai Jiao Tong University, China*); *Fangwei Ye* (*Shanghai Jiao Tong University, China*); *Abiola O. Oladipo* (*University College London, United Kingdom*); *Nicolae C. Panoiu* (*University College London, UK*); *Xianfeng Chen* (*Shanghai Jiao Tong University, China*);

13:20 Generation of a Partially Coherent Laguerre-Gaussian Beam and Determination of Its Topological Charge
Yuan Dong (*Soochow University, China*); *Chengliang Zhao* (*Soochow University, China*); *Yangjian Cai* (*Soochow University, China*);

13:40 Interference of Laser Beams with Different OAMs
Maxime Favier (*Institut d'Optique, France*); *Sergei Popov* (*Royal Institute of Technology (KTH), Sweden*);

14:00 Breakdown of Optical Vortices at a Dielectric Plane Surface
Yi Wang (*Sun Yat-sen University, China*); *Huazhou Chen* (*Sun Yat-sen University, China*); *Guoxuan Zhu* (*Sun Yat-sen University, China*); *Shimao Li* (*Sun Yat-sen University, China*); *Yanfeng Zhang* (*Sun Yat-sen University, China*); *Hui Chen* (*Sun Yat-sen University, China*); *Yujie Chen* (*Sun Yat-sen University, China*); *Siyuan Yu* (*Sun Yat-sen University, China*);

14:20 Self-imaging of Orbital Angular Momentum (OAM) Modes in Square Multimode Interference Waveguide
Zelin Ma (*Sun Yat-sen University, China*); *Hui Chen* (*Sun Yat-sen University, China*); *Yanfeng Zhang* (*Sun Yat-sen University, China*); *Yujie Chen* (*Sun Yat-sen University, China*); *Siyuan Yu* (*Sun Yat-sen University, China*);

Session 4P4b
Novel Optical Imaging Methods for Biomedical Applications, Spectroscopic and THz Bioelectromagnetics

Thursday PM, August 28, 2014

Room 4

Organized by Nanguang Chen

Chaired by Nanguang Chen

14:40 Schlieren Confocal Microscopy Enables Confocal Phase-relief Imaging
Hao Xie (*Peking University, China*); *Dayong Jin* (*Macquarie University, Australia*); *Peng Xi* (*Peking University, China*);

15:00 Dark-field Optical Coherence Tomography for Sidelobe Suppression
Xiaojun Yu (*Nanyang Technological University, Singapore*); *Xinyu Liu* (*Nanyang Technological University, Singapore*); *Dongyao Cui* (*Nanyang Technological University, Singapore*); *Linbo Liu* (*Nanyang Technological University, Singapore*);

15:20 **Coffee Break**

15:40 A High Speed FPGA-based Pseudo-random Bit Sequence Generator
Qiang Zhang (*Peking University, China*); *Wei Wang* (*Peking University, China*); *Ling Chen* (*Peking University, China*); *Tian Dong* (*Peking University, China*); *Nanguang Chen* (*National University of Singapore, Singapore*);

16:00 The Influence of Tissue-mimic Outer Layer on Diffuse Optical Imaging of Hemisphere
Ling Chen (*Peking University, China*); *Tian Dong* (*Peking University, China*); *Qiang Zhang* (*Peking University, China*); *Wei Wang* (*Peking University, China*); *Nanguang Chen* (*National University of Singapore, Singapore*);

16:20 Optical Investigation of Nd^{3+}-sensitized Upconversion Nanoparticles for Damage-free *in vivo* Deep Imaging and *in vitro* Microscopy
Yuxiang Zhao (*South China Normal University, China*); *Qiu Qiang Zhan* (*South China Normal University, China*);

16:40 Tradeoff Study of Microwave Imaging Based on Frequency Considerations
Dau-Chyrh Chang (*Oriental Institute of Technology, Taiwan, R.O.C.*); *Yau-Jyun Tsai* (*Oriental Institute of Technology, Taiwan, R.O.C.*); *Chih-Hung Lee* (*Yuan Ze University, Taiwan*); *Chang-Hsuan Kao* (*Oriental Institute of Technology, Taiwan*);

17:00 Plasmonics Based Localization Microscopy: Axially Super-resolved Intracellular Imaging Based on Extraordinary Light Transmission
Wonju Lee (*Yonsei University, Republic of Korea*); *Taehwang Son* (*Yonsei University, Republic of Korea*); *Jong-Ryul Choi* (*Daegu-Gyeongbuk Medical Innovation Foundation, Republic of Korea*); *Kyujung Kim* (*Pusan National University, Republic of Korea*); *Youngjin Oh* (*Yonsei University, Republic of Korea*); *Donghyun Kim* (*Yonsei University, South Korea*);

17:20 Terahertz Spectroscopic Investigation of Substrate Materials for Biological Application in the Frequency Range of 1–15 THz
Rui Zhang (*Peking University, China*); *Ruixue Wang* (*Peking University, China*); *Liangliang Zhang* (*Capital Normal University, China*); *Jue Zhang* (*Peking University, China*); *Cunlin Zhang* (*Capital Normal University, China*); *Jing Fang* (*Peking University, China*);

17:40 Development of Ion Measurement Method by a Terahertz Chemical Microscopy
Yuki Okawa (*Okayama University, Japan*); *K. Akimune* (*Okayama University, Japan*); *K. Sakai* (*Okayama University, Japan*); *T. Kiwa* (*Okayama University, Japan*); *Keiji Tsukada* (*Okayama University, Japan*);

Session 4P5
SC2: Microwave Metamaterials 2

Thursday PM, August 28, 2014

Room 5

Organized by Tie Jun Cui, Yang Hao

Chaired by Tie Jun Cui, Yun Lai

13:00 invited Dual-band Slot-FSS for Improving the Transmission of Wireless Communication Signals through Energy-saving Glass
Hsing-Yi Chen (*Yuan Ze University, Taiwan*); *Tsung-Han Lin* (*Yuan Ze University, Taiwan*);

13:20 invited Minifying and Magnifying Scattering Coefficients by a Metasurface
Fan Yang (*Lanzhou University, China*); *Zhong-Lei Mei* (*Lanzhou University, China*); *Tie Jun Cui* (*Southeast University, China*);

13:40 invited Study on the Scattering Properties of an Artificial Electromagnetic Hard Surface
Xingxing Huang (*University of Electronic Science and Technology of China, China*); *Pei-Heng Zhou* (*University of Electronic Since and Technology of China, China*); *Hai-Yan Chen* (*University of Electronic Science and Technology of China, China*); *Mangui Han* (*University of Electronic Science and Technology of China, China*); *Long-Jiang Deng* (*University of Electronic Science and Technology of China, China*);

14:00 A Realization Compact Pseudo Chebyshev Low Pass Filters for UHF Band Using RF MEMS Technology
Hui Fang Liew (*University Malaysia Perlis, Malaysia*); *Syed Idris Syed Hassan* (*Universiti Malaysia Perlis, Malaysia*); *Mohd Fareq Bin Abdul Malek* (*University Malaysia Perlis (UniMAP), Malaysia*); *Yufridin Wahab* (*University Malaysia Perlis, Malaysia*); *M. M. Nurhakimah* (*University Malaysia Perlis, Malaysia*); *Hassan Nornikman* (*Universiti Malaysia Perlis, Malaysia*); *M. Mazlee* (*University Malaysia Perlis, Malaysia*); *Mohd Ghauth Sazali* (*University Malaysia Perlis, Malaysia*); *Safwanah Safari Nadia* (*University Malaysia Perlis, Malaysia*);

14:20 A Novel Plasmonic Waveguide Compatible with Conventional Transmision Line
Shuo Liu (*Southeast University, China*); *Hao Chi Zhang* (*Southeast University, China*); *Tie Jun Cui* (*Southeast University, China*);

14:40 Macroscopic Model for Metamaterials
Kirti Inamdar (*ECED, India*); *Yogesh P. Kosta* (*Marwadi Education Foundation's Group of Institutions, India*); *Suprava Patnaik* (*St. Xavier's Institute of Engineering, India*);

15:00 Miniaturized Microscript Bandpass Filter Based on the Twist Split Ring Resonators
Jian Li (*University of Electronic Science and Technology of China, China*); *Guangjun Wen* (*University of Electronic Science and Technology of China, China*); *Yongjun Huang* (*University of Electronic Science and Technology of China, China*); *Kaimin Wu* (*University of Electronic Science and Technology of China, China*); *Weijian Chen* (*University of Electronic Science and Technology of China, China*);

15:20 **Coffee Break**

15:40 Improvement of Oblique Incidence Performance for a Microwave Absorber Based on Magnetic Polymer Composites
Linbo Zhang (*University of Electronic Science and Technology of China, China*); *Nan Zhang* (*University of Electronic Science and Technology of China, China*); *Pei-Heng Zhou* (*University of Electronic Since and Technology of China, China*); *Yangqiu Xu* (*University of Electronic Science and Technology of China, China*); *Hai-Yan Chen* (*University of Electronic Science and Technology of China, China*); *Jianliang Xie* (*University of Electronic Science and Technology of China, China*); *Long-Jiang Deng* (*University of Electronic Science and Technology of China, China*);

16:00 invited A Novel Absorptive Frequency Selective Surface with Miniaturized Element
Qiang Chen (*National University of Defense Technology, China*); *Chen Liang* (*National University of Defense Technology, China*); *Yunqi Fu* (*National University of Defense Techonology, China*);

16:20 Metamaterial Based Patch Antenna with Broad Bandwidth and Simple Structures
Xueshi Li (*Guangdong University of Technology, China*); *Fu Min Lin* (*Guangdong University of Technology, China*); *D. L. Wu* (*Guangdong University of Technology, China*);

Session 4P6a
FocusSession.SC3: Laser Spectroscopy for Sensing and Environmental Monitoring 2

Thursday PM, August 28, 2014

Room 6

Organized by Sune Svanberg, Heping Zeng

Chaired by Sune Svanberg

13:00 invited Dual Frequency Comb Spectroscopy for Accurate and Precise Carbon Monitoring over Multi-kilometer Paths
Ian Coddington (*NIST, USA*);

13:20 invited Generation of Impulsive Raman Scattering with an Intense Free-space Air Laser
J. Ni (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China*); *W. Chu* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China*); *B. Zeng* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China*); *J. Yao* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China*); *Huailiang Xu* (*Jilin University, China*); *Ya Cheng* (*Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China*);

13:40 invited High-resolution Spectroscopy with Single-sideband Optical Modulator and Optical Frequency Comb
Tatsutoshi Shioda (*Saitama University, Japan*); *Takashi Kurokawa* (*Tokyo University of Agriculture and Technology, Japan*);

14:00 Amplitude-to-phase Noise Suppression in 100-W Infrared Optical Frequency Combs (invited)
Kangwen Yang (*East China Normal University, China*); *Wenxue Li* (*East China Normal University, China*); *Xuling Shen* (*East China Normal University, China*); *Jian Zhao* (*East China Normal University, China*); *Dongbi Bai* (*East China Normal University, China*); *Heping Zeng* (*East China Normal University, China*);

14:20 Sub-harmonic Generation of Broadband Mid-infrared Frequency Combs for Molecular Spectroscopy (invited)
Alireza Marandi (*Stanford University, USA*); *Nick C. Leindecker* (*Stanford University, USA*); *Magnus W. Haakestad* (*Stanford University, USA*); *Tobias P. Lamour* (*Stanford University, USA*); *Kirk A. Ingold* (*Stanford University, USA*); *Konstantin L. Vodopyanov* (*Stanford University, USA*); *Robert L. Byer* (*Stanford University, USA*);

14:40 Surface Plasmon Amplification for High-performance Sensing (invited)
Jiafang Li (*Institute of Physics, Chinese Academy of Sciences, China*); *Zhi-Yuan Li* (*Institute of Physics, Chinese Academy of Sciences, China*);

15:00 Efficient Octave-spanning Supercontinuum Generation Driven by a Compact Yb-fiber Oscillator and All-fiber Amplifier (invited)
Qiang Hao (*University of Shanghai for Science and Technology, China*); *Zhengru Guo* (*University of Shanghai for Science and Technology, China*); *Qingshan Zhang* (*University of Shanghai for Science and Technology, China*); *Heping Zeng* (*East China Normal University, China*);

15:20 **Coffee Break**

15:40 InGaAs/GaAs Quantum Well Laser with 40 nm Broad Spectrum of Emission
Huolei Wang (*Institute of Semiconductors, Chinese Academy of Science, China*); *Junping Mi* (*Institute of Semiconductors, Chinese Academy of Science, China*); *Jiaqi Wang* (*Institute of Semiconductors, Chinese Academy of Science, China*); *Weixi Chen* (*Peking University, China*); *Jiaoqing Pan* (*Institute of Semiconductors, Chinese Academy of Science, China*); *Ying Ding* (*University of Glasgow, UK*);

16:00 Tunable and Multi-color Optical Frequency Combs Spanning from Deep UV to Mid-IR for Spectroscopy (invited)
Jinghua Sun (*Huazhong University of Science and Technology, China*); *Teresa I. Ferreiro* (*Heriot-Watt University, UK*); *Richard A. McCracken* (*Heriot-Watt University, UK*); *Zhaowei Zhang* (*Heriot-Watt University, UK*); *Derryck T. Reid* (*Hariot Watt University, UK*);

Session 4P6b
SC3: Optical Polarization and Coherence in the Near-field Range

Thursday PM, August 28, 2014

Room 6

Organized by Sergei Popov

Chaired by Sergei Popov

16:20 Control of Radiative and Non-radiative Channels of Molecule Fluorescence near Hyperbolic Metamaterials
Vasily V. Klimov (*Lebedev Physical Institute, Russian Academy of Sciences, Russia*);

16:40 Purity of Random Electromagnetic Fields
Timo Hassinen (*Royal Institute of Technology (KTH), Sweden*); *Jani Tervo* (*University of Eastern Finland, Finland*); *Ari T. Friberg* (*University of Eastern Finland, Finland*);

17:00 Nanograting with Greatly Enhanced Near Field: A Highly-active Plasmonic Sers Substrate
Benfeng Bai (*Tsinghua University, China*);

17:20 Fluorescence Resonance Energy Transfer Scanning Near-field Optical Microscopy: From Spatial Superresolution to Quantum Computing
Sergey K. Sekatskii (*Ecole Polytechnique Fédérale de Lausanne, Switzerland*); *Giovanni Dietler* (*Ecole Polytechnique Fédérale de Lausanne, Switzerland*);

17:40 Bloch Surface Waves; a Novel Method for 2D Optical Integration
Elsie Barakat (*Swiss Federal Institute of Technology in Lausanne (EPFL), Switzerland*); *Hans Peter Herzig* (*Swiss Federal Institute of Technology in Lausanne (EPFL), Switzerland*);

18:00 Photon Crystal Surface EM and Their Use for Ultrasensitive Label-free Biosensing and Generation of Ultralong Propagating Blue and Violet Plasmons
Sergey K. Sekatskii (*Ecole Polytechnique Fédérale de Lausanne, Switzerland*); *Giovanni Dietler* (*Ecole Polytechnique Fédérale de Lausanne, Switzerland*);

Session 4P7a
SC3: High Power Fiber Lasers 2

Thursday PM, August 28, 2014

Room 7

Organized by Darren D. Hudson, Jianfeng Li

Chaired by Darren D. Hudson, Jianfeng Li

13:00 Ultrafast Laser Generation from a Topological Insulator Mode-locked Fiber Laser (invited)
Chujun Zhao (*Shenzhen University, China*); *Han Zhang* (*Shenzhen University, China*);

13:20 Numerical Study on High Power and Highly Efficient Random Fiber Laser Operating at 1455 nm (invited)
Mengqiu Fan (*University of Electronic Science & Technology of China, China*); *Han Wu* (*University of Electronic Science & Technology of China, China*); *Zinan Wang* (*University of Electronic Science & Technology of China, China*); *Yun-Jiang Rao* (*University of Electronic Science and Technology of China, China*);

13:40 Coherent Beam Combining of Two Tm-doped Fiber MOPAs with Output Power of 50 W
Xiaoxi Jin (*National University of Defense Technology, China*); *Xiong Wang* (*National University of Defense Technology, China*); *Xiaolin Wang* (*National University of Defense Technology, China*); *Yanxing Ma* (*National University of Defense Technology, China*); *Pu Zhou* (*National University of Defense Technology, China*);

14:00 Numerical Investigation of a Novel Two-stage Structure to Compress Spectrum and Suppress Pedestal Employing a DIF Interconnected with a HNLF-NOLM
Ying Chen (*University of Electronic Science and Technology of China, China*); *Yu Guo* (*Air Force 95806 Unit, China*); *Bing Liu* (*Academy of Equipment, China*); *Fan Yang* (*University of Electronic Science and Technology of China, China*); *Xiaojun Zhou* (*University of Electronic Science and Technology of China, China*); *Yong Liu* (*University of Electronic Science and Technology of China (UESTC), China*); *Xiangning Chen* (*Academy of Equipment, China*);

14:20 Cr^{2+}: ZnSe Crystal Based High Power Passively Q-switched Tm-doped Fiber Laser
Yulian He (*University of Electronic Science and Technology of China (UESTC), China*); *Zhuo Li* (*University of Electronic Science and Technology of China (UESTC), China*); *Hongyu Luo* (*University of Electronic Science and Technology of China (UESTC), China*); *Lele Wang* (*University of Electronic Science and Technology of China (UESTC), China*); *Lian Han* (*University of Electronic Science and Technology of China (UESTC), China*); *Jianfeng Li* (*University of Electronic Science and Technology of China (UESTC), China*);

Session 4P7b
SC3: High Speed Interconnects for High Performance Computing

Thursday PM, August 28, 2014

Room 7

Organized by Boping Wu, Zhen Zhou

Chaired by Boping Wu, Zhen Zhou

14:40 Through-Silicon-Via Pairs Modelling via Compressed Sensing
Tao Wang (*Missouri University of Science and Technology, USA*); *Jun Fan* (*Missouri University of Science and Technology, USA*); *Yiyu Shi* (*Missouri University of Science and Technology, USA*); *Boping Wu* (*Missouri University of Science and Technology, USA*);

15:00 Comprehensive Study of Through Silicon Via (TSV) Modeling and Analysis in High Speed Three Dimensional Integrated Circuits (3D IC)
M. Amimul Ehsan (*University of Missouri-Kansas City, USA*); *Zhen Zhou* (*Intel Corp., USA*); *Xin Fu* (*University of Kansas, USA*); *Yang Yi* (*University of Missouri-Kansas City, USA*);

15:20 **Coffee Break**

15:40 Ultra-wideband THz Interconnect Using Micromachined Silicon Dielectric Waveguide
Bo Yu (*University of California, USA*); *Yuhao Liu* (*University of California, USA*); *Jane Gu* (*University of California, USA*); *Xiaoguang Liu* (*University of California, USA*);

16:00 Method to Reduce Coupon Lengths for Transmission Line $\boldsymbol{S}$-parameter Measurements through Elimination of Guided-wave Multiple Reflections
Shaowu Huang (*Intel Corporation, USA*); *Jeff Loyer* (*Intel Corporation, USA*); *Richard Kunze* (*Intel Corporation, USA*); *Boping Wu* (*Intel Corporation, USA*);

16:20 High-speed Silicon Mach-Zehnder Optical Modulator with Large Optical Bandwidth
Jianfeng Ding (*Institute of Semiconductors, Chinese Academy of Sciences, China*); *Lin Yang* (*Institute of Semiconductors, Chinese Academy of Sciences, China*);

16:40 A Simple Equivalent Circuit Model of Finite Ground Coplanar Waveguide (FGCPW) on MIS for Ultra-fast Monolithic Photodiode Application
M. Amimul Ehsan (*University of Missouri-Kansas City, USA*); *Zhen Zhou* (*Intel Corp., USA*); *Yang Yi* (*University of Missouri-Kansas City, USA*);

17:00 Performance Evaluation of an OFDM-based BPSK PLC System in an Impulsive Noise Environment
Abraham M. Nyete (*University of Kwa-Zulu Natal, South Africa*); *Thomas Joachim Odhiambo Afullo* (*University of Kwa-Zulu Natal (UKZN), South Africa*); *Innocent Davidson* (*University of KwaZulu-Natal, South Africa*);

17:20 Glass Weave and Rough Surface Effect for High Speed Channel Signal Integrity
Ruihua Ding (*Intel Corporation, USA*); *Boping Wu* (*Intel Corporation, USA*);

17:40 Comprehensive Ultra-broadband Design and Mode Suppression Techniques for Bends in a Differential Pair
Chenyuan Zhao (*University of Missouri-Kansas City, USA*); *Zhen Zhou* (*Intel Corp., USA*); *Yi-Che Lee* (*Georgia Institute of Technology, USA*); *Yang Yi* (*University of Missouri-Kansas City, USA*);

Session 4P8
SC1: Characterization, Propagation and Application of Beams with Controlled Polarization, Coherence and Phase

Thursday PM, August 28, 2014

Room 8

Organized by Yangjian Cai, Fei Wang

Chaired by Yangjian Cai

13:00 Effects of Focusing on Scintillations of Higher Order Laser Modes in Non-Kolmogorov Turbulence
Yahya Kemal Baykal (*Cankaya University, Turkey*);

13:20 Dependence of the Beam Wander of an Airy Beam on Its Kurtosis Parameter in Turbulent Atmosphere
Wen Wei (*Soochow University, China*); *Xiuxiang Chu* (*Zhejiang Forestry University, China*); *Yangjian Cai* (*Soochow University, China*);

13:40 Nonparaxial Propagation of Complex Variable Function Cosh-Gaussian Beams
Dongmei Deng (*South China Normal University, China*); *Chidao Chen* (*South China Normal University, China*); *Yushan Zheng* (*Shenzhen Entry-exit Inspection and Quarantine Bureau, China*); *Xi Peng* (*South China Normal University, China*); *Bo Chen* (*South China Normal University, China*); *Yulian Peng* (*South China Normal University, China*); *Meiling Zhou* (*South China Normal University, China*);

14:00 Experimental Study of the Scintillation Properties of Partially Coherent Beams in Turbulent Atmosphere
Xianlong Liu (*Soochow University, China*); *Fei Wang* (*Soochow University, China*); *Yangjian Cai* (*Soochow University, China*);

14:20 Coherent forward Scattering through a Cold Sr^{88} Atomic Cloud
C. C. Kwong (*Nanyang Technological University, Singapore*); *Tao Yang* (*National University of Singapore, Singapore*); *P. Symore* (*National University of Singapore, Singapore*); *K. Panday* (*National University of Singapore, Singapore*); *D. Delande* (*Laboratoire Kastler Brossel, UPMC-Paris 6, ENS, CNRS, France*); *R. Pierrat* (*ESPCI ParisTech, France*); *D. Wilkowski* (*Nanyang Technological University, Singapore*);

14:40 Radiation Force Produced by Tightly Focused Cylindrical Vector Pulse Beam by High Numerical Aperture Lens on Rayleigh Particles
Yiming Dong (*Soochow University, China*); *Fei Wang* (*Soochow University, China*); *Yangjian Cai* (*Soochow University, China*);

15:00 Cosine-Gaussian-correlated Schell-model Beams with Rectangular Symmetry
Chunhao Liang (*Soochow University, China*); *Fei Wang* (*Soochow University, China*); *Xianlong Liu* (*Soochow University, China*); *Yangjian Cai* (*Soochow University, China*);

15:20 **Coffee Break**

15:40 Cosine-Gaussian Correlated Schell-model Pulses in Dispersive Media
Chaoliang Ding (*Luoyang Normal University, China*); *Liuzhan Pan* (*Luoyang Normal University, China*);

16:00 An Optimal Match between the Ground-based Laser and a Relay Mirror System
Lipeng Luo (*Zhejiang Forestry University, China*); *Yongte Jiang* (*Zhejiang Forestry University, China*); *Haiqiang Tong* (*Zhejiang Forestry University, China*); *Chunmei Chai* (*Zhejiang Forestry University, China*); *Chunnan Zhang* (*Zhejiang Forestry University, China*); *Xiuxiang Chu* (*Zhejiang Forestry University, China*);

16:20 Partially Coherent Vector Beam with Special Correlation Functions
Yahong Chen (*Soochow University, China*); *Fei Wang* (*Soochow University, China*); *Chengliang Zhao* (*Soochow University, China*); *Yangjian Cai* (*Soochow University, China*);

16:40 Spatial Correlation Properties of Partially and Fully Coherent Fields
Yuanjie Yang (*University of Electronic Science and Technology of China, China*); *Yi-Dong Liu* (*University of Electronic Science and Technology of China, China*);

17:00 Analysis of a Vortex Beam in a Non-coaxial Optical Focusing System
Guoxuan Zhu (*Sun Yat-sen University, China*); *Yanfeng Zhang* (*Sun Yat-sen University, China*); *Hui Chen* (*Sun Yat-sen University, China*); *Yujie Chen* (*Sun Yat-sen University, China*); *Siyuan Yu* (*Sun Yat-sen University, China*);

17:20 $\boldsymbol{M^2}$-factor for the Partially Coherent Elegant Laguerre-Gaussian Beam Propagating through the Turbulent Ocean
B. Wang (*Anhui Normal University, China*); *Y. S. Yuan* (*Anhui Normal University, China*); *Zhifeng Cui* (*Anhui Normal University, China*); *Jun Qu* (*Anhui Normal University, China*);

17:40 Propagation Properties of an Anomalous Hollow Beam with Orbital Angular Momentum through a Paraxial ABCD Optical System
Chenchen Zhao (*Soochow University, China*); *Chengliang Zhao* (*Soochow University, China*); *Yangjian Cai* (*Soochow University, China*);

18:00 Propagation Properties of Partially Coherent Anomalous Hollow Beams in Uniaxial Crystals
Xingyuan Lu (*Soochow University, China*); *Chengliang Zhao* (*Soochow University, China*); *Yangjian Cai* (*Soochow University, China*);

Session 4P9
Microwave and Millimeter Wave Circuits and Devices, CAD

Thursday PM, August 28, 2014

Room 9

Chaired by Jongsik Lim, Joan Jose Garcia-Garcia

13:00 Microstrip Diplexer Design Using Three EBG
Ursula Martinez-Iranzo (*Universitat Autonoma de Barcelona, Spain*); *Bahareh Moradi* (*Universitat Autònoma de Barcelona, Spain*); *Eva Arasa* (*Universitat Autonoma de Barcelona, Spain*); *Julian Alonso* (*Universitat Autònoma de Barcelona, Spain*); *Joan Jose Garcia-Garcia* (*Universitat Autonoma de Barcelona, Spain*);

13:20 Wide-stopband Millimeter-wave BPF on GaN MMIC Using Asymmetric Feeding Structure
Jin Xu Xu (*South China University of Technology, China*); *Xiu-Yin Zhang* (*City University of Hong Kong, China*); *Xiao Feng Liu* (*South China University of Technology, China*);

13:40 Substrate Integrated Waveguide Frequency Reconfigurable Filter Controlled by Magnetic Field
Qiu Dong Huang (*University of Electronic Science and Technology of China, China*); *Xiao Liang Liu* (*University of Electronic Science and Technology of China, China*); *Yu Jian Cheng* (*University of Electronic Science and Technology of China, China*);

14:00 A Dual-mode Circle Ring Resonator Bandpass Filter
Rong Sheng Li (*Beijing University of Posts and Telecommunications, China*); *Ying-Hua Lu* (*Beijing University of Posts and Telecommunications, China*);

14:20 Additional Cross Coupling Coefficient Used as Matching Ladder Network in Coupled Based Band Pass Filters
Bahareh Moradi (*Universitat Autònoma de Barcelona, Spain*); *Ursula Martinez-Iranzo* (*Universitat Autonoma de Barcelona, Spain*); *Joan Garcia-Garcia* (*Universitat Autonoma de Barcelona, Spain*);

14:40 Negative Group Delay Network Using CMOS Cascade Amplifier and Bonding-wire
Jaeyeon Kim (*Chonbuk National University, Republic of Korea*); *Junsik Park* (*Chonbuk National University, Republic of Korea*); *Girdhari Chaudhary* (*Chonbuk National University, Republic of Korea*); *Yongchae Jeong* (*Chonbuk National University, Republic of Korea*); *Namsik Ryu* (*Electronics and Telecommunications Research Institute, Republic of Korea*); *Jongsik Lim* (*Soonchunhyang University, Republic of Korea*);

15:00 High Efficiency TM_{01}-mode Cylindrical Waveguide Microwave Reactor for Microwave Material Continuing Processing
Yi Chen Zhong (*University of Electronic Science and Technology of China, China*); *Wei Na Huang* (*University of Electronic Science and Technology of China, China*); *Yu Jian Cheng* (*University of Electronic Science and Technology of China, China*);

15:20 **Coffee Break**

15:40 A High-efficiency Darlington Power Amplifier Design Using 0.5 µm GaN-on-Silicon HEMT Technology
Min-Li Chou (*Chang Gung University, Taiwan, R.O.C.*); *Hong-Kun Wang* (*Chang Gung University, Taiwan, R.O.C.*); *Hsien-Chin Chiu* (*Chang Gung University, Taiwan, R.O.C.*); *Fan-Hsiu Huang* (*Chang Gung University, Taiwan*);

16:00 Design of an All-pass Phaser Using Microstrip C-sections
Weiwei Liao (*South University of Science and Technology of China, China*); *Qingfeng Zhang* (*South University of Science and Technology of China, China*); *Yifan Chen* (*South University of Science and Technology of China, China*);

16:20 A Double Ended Active Electrode Using SiP with DC and 50 Hz Rejection
Linping Gao (*Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China*); *Nikolas Gaio* (*Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China*); *Jinyong Zhang* (*Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China*); *Lei Wang* (*Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China*);

16:40 Simulation of a High-convergence Electron Optics System for an X-band High-impedance Relativistic Klystron
Danni Zhu (*National University of Defense Technology, China*); *Jun Zhang* (*National University of Defense Technology, China*); *Zumin Qi* (*National University of Defense Technology, China*); *Wei Li* (*National University of Defense Technology, China*);

17:00 The Metamaterial Technology Applied to Planar Antennas
E. F. Guelber (*Universidade Federal de São João Del Rei — UFSJ, Brazil*); *A. V. Cardoso* (*Universidade Federal de São João Del Rei — UFSJ, Brazil*); *C. E. Capovilla* (*Universidade Federal do ABC — UFABC, Brazil*); *Humberto Xavier De Araujo* (*Universidade Federal de São João Del Rei — UFSJ, Brazil*);

Session 4P_10
Antenna and Array 2

Thursday PM, August 28, 2014

Room 10

Chaired by Joshua Le-Wei Li

13:00 Analysis and Design of the Switched-beam Antenna Array for Automotive Radar Applications
Jau-Jr Lin (*National Changhua University of Education, Taiwan, R.O.C.*);

13:20 Compact Printed Ultra-wide Band Antenna with Band-notched Characteristics
Chongzhi Han (*Harbin Institute of Technology, China*); *Jiaran Qi* (*Harbin Institute of Technology, China*); *Jing-Hui Qiu* (*Harbin Institute of Technology, China*);

13:40 A Triangular Antenna with Spiral Slot Arrays for Beidou Navigation
Jianhua Zhou (*Xiamen University, China*); *Kaishuang Zhang* (*Xiamen University, China*); *Baiqiang You* (*Xiamen University, China*);

14:00 A New Spiral Antenna with Improved Axial Ratio and Shorted Arm Length
Hui-Fen Huang (*South China University of Technology, China*); *Zonglin Lv* (*South China University of Technology, China*);

14:20 Compact Frequency-reconfigurable Antenna for Multi-band Wireless Applications
Abdulkareem S. Abdullah (*University of Basrah, Iraq*); *Yasir I. Abdulraheem* (*University of Basrah, Iraq*); *Ayman Nasih Salman Younis* (*University of Thi-Qar, Iraq*);

14:40 Tri-band Dual-polarized Multilayer SAR Microstrip Antenna
Hossam Hamza (*Xidian Univeristy, China*); *Khaled Hussien* (*Military Technical College, Egypt*);

15:00 A Multiple-notch UWB Printed Slot Antenna with CNSS Enhanced
Baiqiang You (*Xiamen University, China*); *Tao Zhou* (*Xiamen University, China*); *Jianhua Zhou* (*Xiamen University, China*);

15:20 **Coffee Break**

15:40 Active Phased Array Radars as an Effective ECCM systems
Faran Awais Butt (*University of Management and Technology (UMT), Pakistan*); *Ahmed Malik* (*University of Management and Technology (UMT), Pakistan*); *Madiha Jalil* (*University of Management and Technology (UMT), Pakistan*);

16:00 Design and Implementation of a New Missile-borne Conical Conformal Antenna
Ming Li (*Xidian University, China*); *Liang Xu* (*Xidian University, China*); *Wen Bin Zeng* (*Xidian University, China*); *Guo Liu* (*Xidian University, China*);

16:20 A Study of Parameterization on Rectangular Patched Microstrip Antenna Using High Frequency Structure Simulator (HFSS)
Anas Abdu (*Tianjin University of Technology and Education, China*); *Hong-Xing Zheng* (*Tianjin University of Technology and Education, China*);

16:40 Absorption of 30 and 20 GHz Microwave Communication Signal as a Function of Rain Rate
Inderjit Singh Hudiara (*Chitkara University, India*);

Session 4P_11a
SC1: Novel Mathematical Methods in Electromagnetics

Thursday PM, August 28, 2014

Room 11

Organized by Kazuya Kobayashi, Yury V. Shestopalov

Chaired by Kazuya Kobayashi, Yury V. Shestopalov

13:00 On the Influence of the Electronic Structure of Atoms on the Behavior of Radiation Transition Probabilities in Alternating Electric Fields
Elena Vladimirovna Koryukina (*National Research Tomsk State University, Russia*);

13:20 Higher-order Surface Modes in the Goubau Line
Ekaterina Kuzmina (*Moscow State Institute of Radio Engineering, Electronics, and Automation (Technical University), Russia*); *Yury V. Shestopalov* (*University of Gävle, Sweden*);

13:40 Inverse Problem Method for Permittivity Reconstruction of Two-layered Media: Numerical and Experimental Results
Yury V. Shestopalov (*University of Gävle, Sweden*); *Yury G. Smirnov* (*Penza State University, Russia*); *Ekaterina D. Derevyanchuk* (*Penza State University, Russia*);

14:00 Propagation of TM Waves in a Double-layer Nonlinear Inhomogeneous Cylindrical Waveguide
Eugene Smol'kin (*Penza State University, Russia*); *Dmitry V. Valovik* (*Penza State University, Russia*);

14:20 Numerical Analyze of Waveguide Transmission Coefficient with Non-uniform Dielectric Slab
Aleksander P. Smirnov (*Lomonosov Moscow State University, Russia*); *A. N. Semenov* (*Lomonosov Moscow State University, Russia*); *Yury V. Shestopalov* (*University of Gävle, Sweden*);

14:40 Near Field Optimization in EM Simulation of Smart Shelf RFID Antenna Radiation
Andrey S. Andrenko (*SYSU-CMU Shunde International Joint Research Institute, China*);

15:00 Energetic Wave Process of Time-domain Signal Propagation in Hollow Waveguides
Ozlem Akgun (*Aksaray University, Turkey*); *Oleg A. Tretyakov* (*Gebze Institute of Technology, Turkey*);

15:20 **Coffee Break**

Session 4P_11b
Computational Electromagnetics

Thursday PM, August 28, 2014

Room 11

Chaired by Philippe Helluy, Lei Zhao

15:40 Efficient Method for Field Coupling to Nonuniform Transmission Line Using Cascaded SPICE Model
Haiyan Xie (*Northwest Institute of Nuclear Technology, China*); *Jianguo Wang* (*Northwest Institute of Nuclear Technology, China*); *Yong Li* (*Northwest Institute of Nuclear Technology, China*); *Hongfu Xia* (*Northwest Institute of Nuclear Technology, China*); *Chun Xuan* (*Northwest Institute of Nuclear Technology, China*);

16:00 Self-consistent Simulation of the Nuclear (E1) HEMP
Meiyan Fu (*Northwest Institute of Nuclear Technology, China*); *Maoyu Zhang* (*Northwest Institute of Nuclear Technology, China*);

16:20 Reduced Vlasov-Maxwell Modeling
Philippe Helluy (*University of Strasbourg, Inria Tonus, France*); *M. Massaro* (*University of Strasbourg, France*); *L. Navoret* (*University of Strasbourg, Inria Tonus, France*); *N. Pham* (*University of Strasbourg, Inria Tonus, France*); *T. Strub* (*AxesSim, France*);

16:40 Discontinuous Galerkin Time Domain Method for Scattering Problems Simulation with GPU Acceleration
Geng Chen (*Xuzhou Normal University, China*); *Lei Zhao* (*Jiangsu Normal University, China*); *Wenhua Yu* (*State College, USA*);

17:00 A Fast Algorithm for Calculating Complex Targets Near-field EM Scattering Characteristics
Yanjie Cui (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Wenqiang Chen* (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Xiang-Yang Zhang* (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Jianping Zheng* (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Yang Bai* (*Science and Technology on Electromagnetic Scattering Laboratory, China*);

17:20 Fast Iterative Computation of Internal Field Intensity for Cabin on HIRF Based on Energy Conservation Modification
Zichang Liang (*The State Key-Lab for Electromagnetic Characters of Environment, China*); *Yi Liao* (*Shanghai Key Laboratory of Electromagnetic Environmental Effects for Aerospace Vehicle, China*); *Pengcheng Gao* (*Science and Technology on Electromagnetic Scattering Laboratory, China*); *Liangshuai Guo* (*Shanghai Key Laboratory of Electromagnetic Environmental Effects for Aerospace Vehicle Yangpu, China*);

Session 4P_12
SC1&4: Antennas, Shielding, HPEM and EMC Measurement

Thursday PM, August 28, 2014

Room 12

Organized by Rafal Przesmycki, Leszek Nowosielski

Chaired by Leszek Nowosielski, Marek Bugaj

13:00 Dual Band Microstrip Antenna
Rafal Przesmycki (*Military University of Technology, Poland*); *Pawel Skokowski* (*Military University of Technology, Poland*);

13:20 Wideband Microstrip Antenna
Rafal Przesmycki (*Military University of Technology, Poland*); *Marek Bugaj* (*Military University of Technology, Poland*); *Marian Tadeusz Wnuk* (*Military University of Technology, Poland*);

13:40 Ultra-wideband Antenna with Metamaterial and Periodic Structure
Roman Kubacki (*Military University of Technology, Poland*); *Salim Lamari* (*Military University of Technology, Poland*); *Miroslaw Czyzewski* (*Military University of Technology, Poland*);

14:00 Identification of Interface in the Complex Systems Based on Radiated Emission of Mobile Computer
Rafal Przesmycki (*Military University of Technology, Poland*); *Marian Tadeusz Wnuk* (*Military University of Technology, Poland*); *Pawel Skokowski* (*Military University of Technology, Poland*); *Marek Bugaj* (*Military University of Technology, Poland*);

14:20 Measurement and Analysis of Compromising Emanation for Laser Printer
Rafal Przesmycki (*Military University of Technology, Poland*);

14:40 Compromising Emanations from USB 2 Interface
Leszek Nowosielski (*Military University of Technology, Poland*); *Marian Tadeusz Wnuk* (*Military University of Technology, Poland*);

15:00 Attenuation Measurements of Materials Used in Construction of Buildings
Marek Bugaj (*Military University of Technology, Poland*);

15:20 **Coffee Break**

15:40 New Attempt to Building Materials Permittivity Measurements
Roman Kubacki (*Military University of Technology, Poland*);

16:00 Measurements of Wall Attenuation in Closed Spaces inside a Building
Marek Bugaj (*Military University of Technology, Poland*);

16:20 Analytical Model of EMP Pulse
Leszek Nowosielski (*Military University of Technology, Poland*);

16:40 Measurement of Shielding Effectiveness with the Method Using High Power Electromagnetic Pulse Generator
Leszek Nowosielski (*Military University of Technology, Poland*); *Jerzy Lopatka* (*Military University of Technology, Poland*);

17:00 Honeycomb Ventilation Grill Shielding Effectiveness Measuring Methodology
Leszek Nowosielski (*Military University of Technology, Poland*); *Cezary Piotrowski* (*Military University of Technology, Poland*);

17:20 Technique of High Power Microwave Pulses Dosimetry of Living Systems
Roman Kubacki (*Military University of Technology, Poland*); *Salim Lamari* (*Military University of Technology, Poland*);

17:40 Modelling of Electromagnetic Wave Propagation with the Use of the Ray-tracing Method
Leszek Nowosielski (*Military University of Technology, Poland*); *Jerzy Lopatka* (*Military University of Technology, Poland*); *Michal Silaczuk* (*Military University of Technology, Poland*);

18:00 Electromagnetically Shielded Real-time MANET Testbed
Anna Kaszuba (*Military University of Technology, Poland*); *Radoslaw Checinski* (*Military University of Technology, Poland*); *Michal Kryk* (*Military University of Technology, Poland*); *Jerzy Lopatka* (*Military University of Technology, Poland*); *Leszek Nowosielski* (*Military University of Technology, Poland*);

	MONDAY AM 8:00 August 25	MONDAY PM 13:00 August 25		TUESDAY AM 8:00 August 26	TUESDAY PM 13:00 August 26	
ROOM 1	1A1 - Plenary Session	1P1 - Casimir Effect and Heat Transfer		2A1 - Education for Electromagnetics	2P1 - Advances in Multiscale, Multiphysics Computation	
ROOM 2	1A1 - Plenary Session	1P2a - Integrated Microwave Photonics	1P2b - Solid-state Quantum Photonics	2A2 - Focus Session on Radio-over-Fiber Systems	2P2a - THz Metamaterials and Applications	2P2b - Optical Microcavities in Biosensing
ROOM 3		1P3a - Inorganic & Semiconductor Photovoltaics	1P3b - Light Management for Photovoltaics	2A3 - Organic and Hybrid Solar Cells 1	2P3a - Organic and Hybrid Solar Cells 2	2P3b - Graphene Photovoltaics
ROOM 4		1P4a - Plasmonic Nanophotonics 1	1P4b - Nano-focusing and Applications	2A4 - Plasmonic Nanophotonics 2 --- Design, Modeling and Simulation	2P4 - Wave Manipulations by Metasurfaces	
ROOM 5		1P5 - Tunable and Reconfigurable Metamaterials and Plasmonics 1		2A5 - Transfromation Optics 1	2P5a - Thermal and Acoustic Metamaterials	2P5b - Optical Metamaterials and Applications
ROOM 6		1P6 - Photoacoustic Tomography and Sensing		2A6 - Disordered Photonics	2P6 - Biophotonics --- Clinical and Preclinical Applications	
ROOM 7		1P7 - Nonlinear Optics: Structured Materials, Functional Devices and Applications 1		2A7 - Optical Resonances and Microresonators	2P7a - Advanced Micro-/Nano-fabrication for Optical Sensing and Imaging Applications	2P7b - Nonlinear Optics: Structured Materials, Functional Devices and Applications 2
ROOM 8		1P_8a - Plasmonic, Metallic, or Dielectric Nanolasers	1P_8b - Semiconductor Lasers	2A8 - Effective Medium Theories and Homogenization	2P8 - Light Harvesting for Energy and Optoelectronic Applications	

	MONDAY AM 8:00 August 25	MONDAY PM 13:00 August 25		TUESDAY AM 8:00 August 26		TUESDAY PM 13:00 August 26	
ROOM 9		1P_9a - Functional Optical Fiber Devices	1P_9b - Integrated Nanophotonics for Optical Interconnects in Data Centers	2A_9 - Optical Fiber Sensing Devices		2P9a - Fiber Optic Sensing Technologies for Structural Health Monitoring and Applications	2P9b - Ultrasensitive Optical Sensors
ROOM 10		1P_10a - Advances in Optical Networking: Parts 1	1P_10b - Onchip Multiplexing Tech. and Devices for Optical Interconnects	2A_10 - Advances in Optical Networking: Parts 2		2P10a - Physics and Applications of Photonic Crystals, Materials, and Nanostructures	2P10b - Photonic Crystals
ROOM 11		1P_11 - Recent Progress on Magnetic and Multiferroic Materials		2A_11a - Recent Advances in Magneto-impedance Sensors	2A_11b - Advanced Magnetic Materials for Microwave Applications	2P11a - Computational Techniques in Electromagnetics and Applications	2P11b - Electronics and Optoelectronics Using Two-dimensional Materials and Their Heterostructures
ROOM 12		1P_12a - Si-based Microwave Devices and ICs	1P_12b - Specialty Optical Fibers: Design, Applications, Devices, and Process	2A12 - Array Antenna for Wireless Communication		2P12 - Compact Microwave Filters	
ROOM 13		1P_13a - Optimal Antennas	1P_13b - THz Antennas and Systems	2A13 - Wireless Power Transfer		2P13a - Progresses in Monolithic and Multilayer/Planar IC & Components	2P13b - Reconfigurable Antennas
ROOM 14		1P_14a - Inverse Problems: Theories, Computations, and Applications	1P_14b - Microwave Imaging: Detection, Localization and Profiling	2A14 - Remote Sensing		2P14a - Remote Sensing of the Atmosphere, Ocean, Hydrology and Cryosphere	2P14b - Synthetic Aperture Radar Imaging and Advanced Radar Techniques
ROOM 15		1P_15a/b/c - Oral Presentations for Best Student Paper Awards		2A15a - Oral Presentations for Best Student Paper Awards -- Optics and Photonics	2A15b - Oral Presentations for Best Student Paper Awards -- Metamaterials, Plasmonics	2P15 - High-speed Optical Communications and Advanced Optical Signal Processing	
ROOM FOYER		1P0 - Poster Session 1		2A0 - Poster Session 2		2P0 - Poster Session 3	

	WEDNESDAY AM 8:00 August 27		WEDNESDAY PM 13:00 August 27		THURSDAY AM 8:00 August 28		THURSDAY PM 13:00 August 28	
ROOM 1	3A1 - Sesquicentennial Commemoration Session for Maxwell's Equations 1		3P1a - Sesquicentennial Commemoration Session for Maxwell 2	3P1b - Plasmonics: Beyond Local-response Dynamics	4A1 - Real-time High-speed Measurements for Communication, Biomedical & Industrial Appl.		4P1 - Nanoparticle-assisted Bioimaging and Sensing	
ROOM 2	3A2 - Focus Session on Microwave Photonics Components and Systems		3P2 - Photonics and Optoelectronics in Industry		4A2 - Design and Simulation of Electromagnetic and Optical Devices 1		4P2a - Design and Simulation of Electromagnetic and Optical Devices 2	4P2b - Optoelectronic and Photonics Devices
ROOM 3	3A3a - Light Emtting Diodes	3A3b - Organic Light Emitting Diodes 1	3P3 - Organic Light Emitting Diodes 2		4A3 - Organic Transistors/Integrated Circuits and Dye-sensitized Solar Cells		4P3a - Fano Resonance in Nanoscale Structures	4P3b - Nanophotonics: Design of Nano-devices and Interaction with Molecules
ROOM 4	3A4 - Tunable and Reconfigurable Metamaterials and Plasmonics 2		3P4 - Graphene for Plasmonics and Sensing		4A4 - Plasmonics for Sensing Applications		4P4a - Science and Applications of Electromagnetic Vortices and OAM	4P4b - Optical Imaging for Biomedical Appl., Spectroscopic and THz BioEM
ROOM 5	3A5 - Microwave Metamaterials 1		3P5a - Functional Chiral Metamaterials	3P5b - Structured Light	4A5 - Transfromation Optics 2		4P5 - Microwave Metamaterials 2	
ROOM 6	3A6 - Laser Spectroscopy for Sensing and Environmental Monitoring 1		3P6a - Subwavelength-focusing and Super Resolution Imaging 1	3P6b - Nonreciprocal Electromagnetics and Photonics	4A6 - Novel Techniques for Subwavelength-focusing and Super Resolution Imaging 2		4P6a - Laser Spectroscopy for Sensing and Monitoring 2	4P6b - Optical Polarization and Coherence in the Near-field Range
ROOM 7	3A7 - Optical Signal Processing		3P7a - Liquid Crystals	3P7b - Advanced Display Technologies	4A7 - High Power Fiber Lasers 1		4P7a - High Power Fiber Lasers 2	4P7b - High Speed Interconnects for High Performance Computing
ROOM 8	3A8 - Luminescent Materials, Devices and Application		3P8 - Zero-index Media, Extremely Anisotropic Media, and Nonlocal Photonic Media		4A8a - Plasmon Enhanced Light-matter Interactions	4A8b - Photonics-applied Electromagnetic Measurement	4P8 - Characterization, Propagation and Application of Beams with Controlled Polarization, Coherence and Phase	
ROOM 9	3A9 - Quantum Optics		3P9a - Photonic Crystal and Multi-material Fibers	3P9b - Fibers and Fiber Devices for Optical Communications	4A9 - Ultrafast Optics		4P9 - Microwave and Millimeter Wave Circuits and Devices, CAD	

	WEDNESDAY AM 8:00 August 27		WEDNESDAY PM 13:00 August 27		THURSDAY AM 8:00 August 28		THURSDAY PM 13:00 August 28	
ROOM 10	3A10a - Nanoimprint and Applications	3A10b - Heterogeneous Photonic Integration Technologies and Devices on Silicon	3P10a - Chaotic/Random Lasers and Their Applications	3P10b - Spectroscopy and Nanoscopy for Sensing and Imaging	4A10 - Nanoantennas		4P10 - Antenna and Array 2	
ROOM 11	3A11 - Advanced Mathematical and Computational Methods in Electromagnetic Theory and Their Applications		3P11a - Microwave and Millimeter-wave Measurements and Sensing	3P11b - Novel Materials and Technologies for Microwave Components	4A11 - Advanced Numerical Techniques in Computational Electromagnetics		4P11a - Novel Mathematical Methods in Electromagnetics	4P11b - Computational Electromagnetics
ROOM 12	3A12 - Novel Frequency Selective Structures		3P12a - MIMO Systems and Applications	3P12b - Antenna-channel Interactions and Multipath Wireless Channels	4A12 - Extended/Unconventional Electromagnetic Theory, EHD/EMHD, and Electro-biology		4P12 - Antennas, Shielding, HPEM and EMC Measurement	
ROOM 13	3A13a - Graded Index Structures and Metamaterials for Antenna Applications	3A13b - Antenna and Array 1	3P13a - Advanced Antenna Theory and Techniques	3P13b - RFID Antennas	4A13a - Remote Sensing of the Earth, Ocean, and Atmosphere	4A13b - Metamaterials for Antenna Applications: Practical Solutions		
ROOM 14	3A14 - Inverse Problems, Diagnostics, and Estimation		3P14 - Application/Effects of EM Field/Radiation in Medicine/Bio and in Ecological Industrial Technologies					
ROOM 15	3A15 - SCNU Special Session on Biophotonics --- Analytical Biophotonics		3P_15a - SCNU Special Session on Biophotonics --- Biophotonics Imaging	3P_15b - Antennas and RF Devices Based on Superconductors				
ROOM FOYER	3A0 - Poster Session 4		3P0 - Poster Session 5					