

# PIERS 2011 Suzhou

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Progress In Electromagnetics Research Symposium

Program

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September 12–16, 2011  
Suzhou, CHINA

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**Progress In Electromagnetics Research Symposium**  
**September 12–16, 2011**  
**Suzhou, CHINA**

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## PIERS 2011 SUZHOU SPONSORS

- Soochow University
- Zhejiang University
- The Electromagnetics Academy at Zhejiang University
- Centre for Optical and Electromagnetic Research of Zhejiang University
- The Electromagnetics Academy
- Suzhou Association for Science and Technology



## **SYMPOSIUM VENUE**

The 2011 Progress in Electromagnetics Research Symposium will be held on September 12–16, 2011, at Grand Metropark Hotel Suzhou, China. During the symposium, the PIERS OFFICE will be located in Grand Metropark Hotel Suzhou.

## **REGISTRATION**

The PIERS technical sessions will begin on Monday morning, September 12, 2011 in Grand Metropark Hotel Suzhou. You may register in the PIERS OFFICE on Sunday, September 11, from 13:00 to 17:00, or during the symposium from 8:00 through 17:00, September 12–16, 2011.

The on-site registration fee is US\$580. The student registration fee is US\$350 (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 Monday, September 12, 2011, from 11:30 to 13:00, symposium reception will take place at the PIERS host hotel. For registered PIERS participant, the reception is free. For unregistered companions, the price is USD 20 per person. Please make reservation in advance and pay cash at PIERS check-in desk.

### **Symposium Banquet**

On Wednesday evening, September 14, 2011, 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 60 per person. Please make reservation and pay in advance before September 12, 2011.

## **PIERS ONLINE**

Information on PIERS 2011 Suzhou and future PIERS is posted at [www.piers.org](http://www.piers.org).

## GUIDELINE FOR PRESENTER

### 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.
- **20 mins time limit:**  
Each oral presentation, including questions and answers, should be less than 20 minutes.
- **DO NOT change presentation sequence:**  
Session Chair, please be present in the session room at least 15 minutes before the start of the session and must strictly observe the starting time and time limit of each talk and refrain from changing paper presentation sequence.

Presenters choosing to use overhead projectors with transparencies, please inform PIERS OFFICE to prepare in advance.

### Poster Presentations

Presenters should indicate time slots of their presence on the panel and be present for interactive questions within the posted time slots. All presenters are suggested to be present during 10:00–10:20 and 15:00–15:20.

One panel (about 90(W) x 200(H) cm) will be available for each poster.

All presenters are required to mount their papers one hour before the session and remove them at the end of their sessions.

## ACCOMMODATION

Participants are responsible for making their own housing arrangements. The PIERS Host Hotel is Grand Metropark Hotel Suzhou. Online Reservation is available. Please visit PIERS 2011 website for detailed information. The information below is provided for your convenience.

### **Grand Metropark Hotel Suzhou**

*<http://www.metroparkhotels.com/hotel/eng/index.php?hotel=suzhou>*

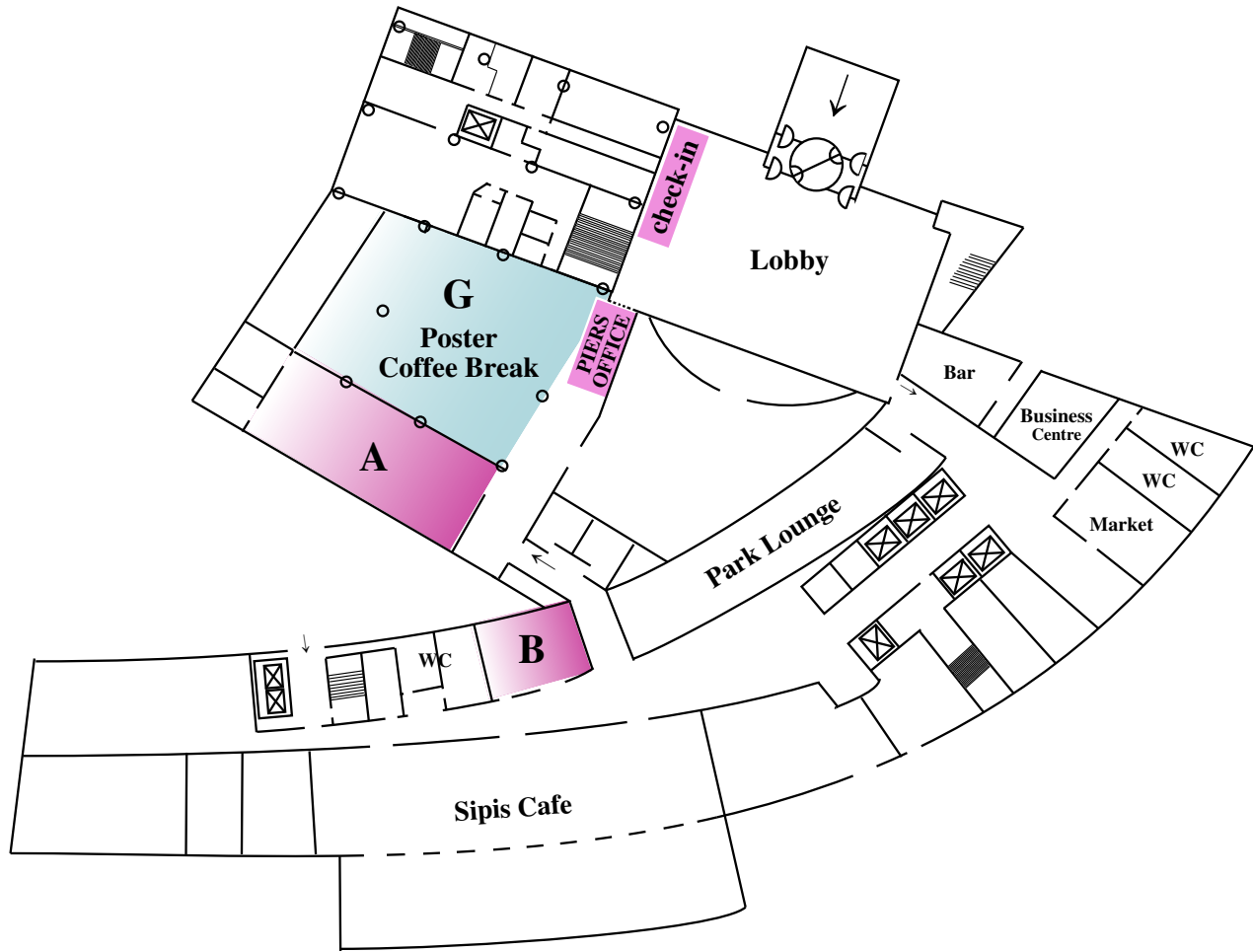
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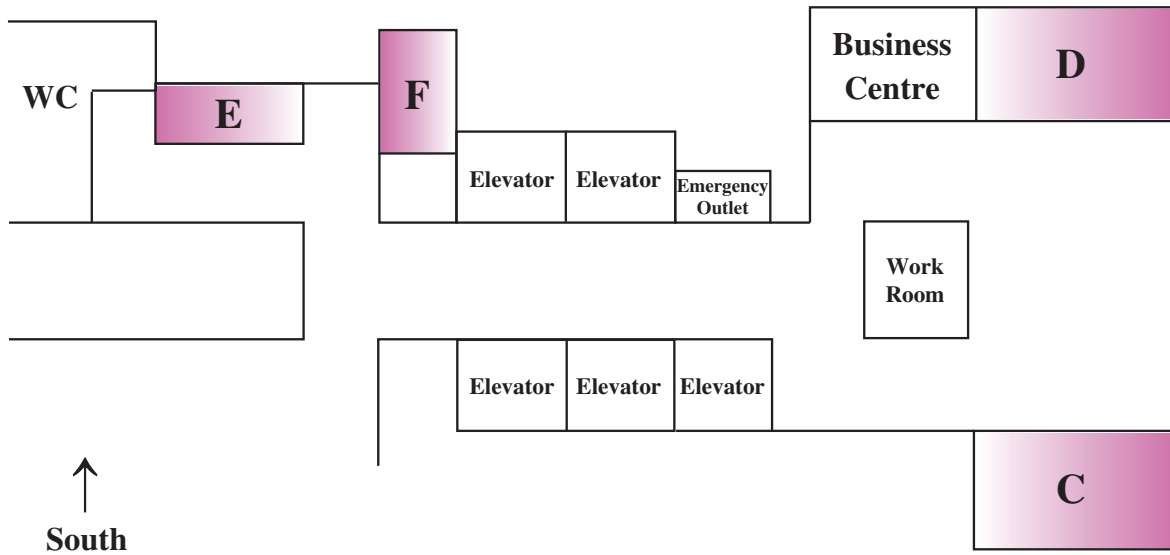
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## MAP OF CONFERENCE SITE



**1st Floor**

**Grand Metropark Hotel Suzhou**



**2nd Floor**

**Grand Metropark Hotel Suzhou**

## GENERAL INFORMATION

### LANGUAGE

The official language for the Symposium is English. However, in the public society, Chinese mandarin is commonly spoken.

### CURRENCY AND CREDIT CARDS

Chinese currency is CNY with its monetary unit CNY (*Yuan*). The exchange rate is 1 USD for about 6.5 CNY. The credit cards and cash in US dollars are acceptable at the hotel registration desk in PIERS Host Hotel. This is also the case in most large shopping centers and other hotels.

### 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.

- **Stores**

Opening hours: usually 10:00 to 21:00, but large shopping centers serve till 22:00, from Monday to Sunday.

### ELECTRICITY

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

## PIERS 2011 SUZHOU TECHNICAL PROGRAM

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### Session 1A1

#### Passive Optical Waveguide Theory and Numerical Modelling

Monday AM, September 12, 2011

#### Room A

Organized by Hung-Wen Chang

Chaired by Hung-Wen Chang

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- 08:20 Method of Connected Local Fields for Large Scale Modeling of Passive Waveguide Devices  
*Hung-Wen Chang (National Sun Yat-Sen University, Taiwan); Sin-Yuan Mu (National Sun Yat-Sen University, Taiwan);*
- 08:40 Error and Dispersion Analysis of LFE-9 Formulae in the Theory of Connected Local Fields  
*Hung-Wen Chang (National Sun Yat-Sen University, Taiwan); Sin-Yuan Mu (National Sun Yat-Sen University, Taiwan);*
- 09:00 Interference Effect of Fiber Bragg Gratings Using Coupled Mode Method  
*Nai-Hsiang Sun (I-Shou University, Taiwan); Chia-Ming Hu (I-Shou University, Taiwan); Ping-Hung Lin (I-Shou University, Taiwan); Shih-Chiang Lin (I-Shou University, Taiwan, R.O.C.);*
- 09:20 Analysis of Grating-assisted Contra-directional Couplers  
*Nai-Hsiang Sun (I-Shou University, Taiwan); Chia-Ming Hu (I-Shou University, Taiwan); Shou-Feng Tsai (I-Shou University, Taiwan);*
- 10:00 **Coffee Break**
- 10:20 Improving the Pseudospectral Optical Waveguide Mode Solver Using the Penalty Skill  
*Po-Jui Chiang (National Kaohsiung University of Applied Sciences, Taiwan); Nai-Hsiang Sun (I-Shou University, Taiwan); Chia-Ming Hu (I-Shou University, Taiwan);*

- 10:40 Surface Integral Equation Method for Surface Plasmon Mode in Optical Fibers  
*Jung-Sheng Chiang (I-Shou University, Taiwan); Ming-Jeng Huang (I-Shou University, Taiwan); Wen-Ying Hong (I-Shou University, Taiwan); Nai-Hsiang Sun (I-Shou University, Taiwan); Shih-Chiang Lin (I-Shou University, Taiwan, R.O.C.);*
- 11:00 Gaussian Wave Propagation in Alternating Positive and Negative Coupling Waveguide Arrays  
*Keivan Mahmoud Aghdami (Payame Noor University, Iran); Fatemeh Mokhtari (Payame Noor University, Iran);*
- 11:20 Surface and Non-surface Gap Solitons at the Junction of Two Periodic Lattices with Phase Mismatch  
*Keivan Mahmoud Aghdami (Payame Noor University, Iran); Somayyeh Alidust (Payame Noor University, Iran);*

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### Session 1A2

#### Electromagnetic Theory and Design on the Optical Dispersive Materials, Invisible Cloak and Photonic Crystals

Monday AM, September 12, 2011

#### Room B

Organized by Ganquan Xie, Tzong-Jer Yang,  
Chien-Jang Wu

Chaired by Ganquan Xie, Tzong-Jer Yang

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- 08:00 Novel Characteristics of Reducing Wide-band Crosstalk for Guiding Microwave in Corrugated Metal Strip Lines with Subwavelength Periodic Hairpin Slits  
*Jin-Jei Wu (Chung Hua University, Taiwan, R.O.C.); Tzong-Jer Yang (Chung-Hua University, Taiwan, R.O.C.); Her-Lih Chiueh (Lunghwa University of Science and Technology, Taiwan); Linfang Shen (Zhejiang University, China); Wei-Lien Ouyang (Chung Hua University, Taiwan); Chih-Hsiang Wen (Chung-Hua University, Taiwan, R.O.C.);*

- 08:20 A New Practicable GLLH EM Invisible Cloak without Exceeding Light Speed Wave  
*Jianhua Li (GL Geophysical Laboratory, USA); Ganquan Xie (GL Geophysical Laboratory, USA); Lee Xie (GL Geophysical Laboratory, USA); Feng Xie (GL Geophysical Laboratory, USA); Hao Zhou (Supercomputational Science Center, China);*
- 08:40 Analysis of Multiple Filtering Properties in a Superconductor-dielectric Superlattice at Terahertz Frequency  
*Wei-Hsiao Lin (National Cheng Kung University, Taiwan); Chien-Jang Wu (National Taiwan Normal University, Taiwan); Tzong-Jer Yang (Chung-Hua University, Taiwan, R.O.C.); Shoou-Jinn Chang (National Cheng Kung University, Taiwan, R.O.C.);*
- 09:00 The Momentum of Photon May Explain the Measurement's Paradox in the Subatomic World  
*Antonio Puccini (Order of Malta, Italy);*
- 09:20 A Ground-plane Cloak Made of Subwavelength Elliptical Rod Arrays  
*Hanhong Gao (Massachusetts Institute of Technology, USA); Baile Zhang (Massachusetts Institute of Technology, USA); George Barbastathis (Massachusetts Institute of Technology, USA);*
- 09:40 Measurement of Conductivity for Thin Metal Films at Various Frequencies by Microwave Microstrip Method  
*Jih-Hsin Liu (Tunghai University, Taiwan); Hsin-Yuan Miao (Tunghai University, Taiwan); Bin-Wei Huang (Tunghai University, Taiwan, R.O.C.); Wen-Hsiang Wang (National Tsing Hua University, Taiwan, R.O.C.);*
- 10:00 **Coffee Break**
- 10:20 Homogeneous Beam Squeezer with Low Reflectance  
*Hongyi Xu (Nanyang Technological University, Singapore); Baile Zhang (Massachusetts Institute of Technology, USA); George Barbastathis (Massachusetts Institute of Technology, USA); Handong Sun (Nanyang Technological University, Singapore);*
- 10:40 Electro-optic Phase Modulator Based on Guide Mode Resonance of Grating Waveguide Structure  
*Wen-Kai Kuo (National Formosa University, Taiwan, R.O.C.); Shin-Chung Chu (National Formosa University, Taiwan, R.O.C.); Chih-Hao Chang (National Formosa University, Taiwan, R.O.C.);*
- 11:00 High Birefringence and Low Loss of Photonic Crystal Fibers with Modified Elliptical Air-holes in Fiber Cladding  
*Yuan-Fong Chau (Ching Yun University, Taiwan); You Zhe Ho (National Taiwan University, Taiwan);*
- 11:20 A Study on the Properties of Optical Absorption of Buckpaper  
*J. L. Ciou (Tunghai University, Taiwan, R.O.C.); Hsin-Yuan Miao (Tunghai University, Taiwan); J. H. Liu (Tunghai University, Taiwan);*
- 11:40 Enhanced Free Exciton Emission in Crystalline Ultrathin ZnO Films Grown on Si-nanowires by Atomic Layer Deposition  
*Yuan-Ming Chang (National Chiao Tung University, Taiwan); Jiann Shieh (National United University, Taiwan); Pei-Yuan Chu (National Chiao Tung University, Taiwan); Hsin-Yi Lee (National Synchrotron Radiation Research Center, Taiwan); Chih-Ming Lin (National Hsinchu University of Education, Taiwan); Jenh-Yih Juang (National Chiao Tung University, Taiwan);*

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**Session 1A3**
**Synthetic Aperture Radar: Algorithms and Applications**


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**Monday AM, September 12, 2011**
**Room C**

Organized by Kazuo Ouchi, Haipeng Wang

 Chaired by Kazuo Ouchi, Haipeng Wang

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- 08:20 Comparison for Cultivated Laver Detection in Shallow Water Using Two ALOS PALSAR Full-pol Data  
*Jung-Hwan Song (Korea Ocean Research & Development Institute, Korea); Chan-Su Yang (Korea Ocean Research and Development Institute, Korea); Sudhir Kumar Chaturvedi (Korea Ocean Research & Development Institute, Korea);*
- 08:40 Design of Satellite-based Oil Spill Monitoring System  
*Chan-Su Yang (Korea Ocean Research and Development Institute, Korea); Jung-Hwan Song (Korea Ocean Research & Development Institute, Korea); Sudhir Kumar Chaturvedi (Korea Ocean Research & Development Institute, Korea);*

- 09:00 Dependency of Microwave Backscattering from Ocean Surface on Ocean Winds Using Airborne Dual-frequency Polarimetric Synthetic Aperture Radar  
*Akitsugu Nadai (National Institute of Information and Communications Technology (NICT), Japan); Toshihiko Umehara (National Institute of Information and Communications Technology, Japan); Takeshi Matsuoka (National Institute of Information and Communications Technology (NICT), Japan); Makoto Satake (National Institute of Information and Communications Technology (NICT), Japan); Tatsuharu Kobayashi (National Institute of Information and Communications Technology, Japan); Junpei Uemoto (National Institute of Information and Communications Technology (NICT), Japan); Seiho Uratsuka (National Institute of Information and Communications Technology, Japan);*
- 09:20 Ship Detection by Synthetic Aperture Radar with Ground-based Maritime Radar with AIS  
*Eun-Sung Won (National Defense Academy, Japan); Kazuo Ouchi (National Defense Academy, Japan);*
- 09:40 Preliminary Design for Integration of SAR and AIS for Ship Identification  
*Sudhir Kumar Chaturvedi (Korea Ocean Research & Development Institute, Korea); Chan-Su Yang (Korea Ocean Research and Development Institute, Korea); Jung-Hwan Song (Korea Ocean Research & Development Institute, Korea); Palanisamy Shanmugam (Indian Institute of Technology Madras, India);*
- 10:00 **Coffee Break**
- 10:20 On the SAR Image Classification by Rotation of the Covariance Matrix in the Four-component Scattering Power Decomposition  
*Mitsunobu Sugimoto (National Defense Academy, Japan); Kazuo Ouchi (National Defense Academy, Japan);*
- 10:40 Ocean Waveheight Estimation Using Polarization Ratio of Synthetic Aperture Radar Data  
*Mitsunobu Sugimoto (National Defense Academy, Japan); Nobuaki Shioto (National Defense Academy, Japan); Kazuo Ouchi (National Defense Academy, Japan);*
- 11:00 Evaluation of Typhoon-damaged Forests by PolSAR and InSAR Images  
*Haipeng Wang (Fudan University, China); Kazuo Ouchi (National Defense Academy, Japan);*
- 11:20 Detection and Evaluation of Building Damages in Earthquake from VHR Optical and SAR Images Using Multiple Mutual Information Techniques  
*Tian-Lin Wang (Fudan University, China); Ya-Qiu Jin (Fudan University, China);*

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**Session 1A4a**  
**AC Transport, Impedance Spectra,**  
**Magnetoimpedance**

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**Monday AM, September 12, 2011**

**Room D**

Organized by Jifan Hu

Chaired by Jifan Hu

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- 08:00 Magneto-impedance of  $[\text{Co}_{40}\text{Fe}_{40}\text{B}_{20}/\text{Cu}]$  Multilayer Films  
*S. U. Jen (Institute of Physics, Academia Sinica, Taiwan, R.O.C.); T. Y. Chou (Institute of Physics, Academia Sinica, Taiwan, R.O.C.); C. K. Lo (National Taiwan Normal University, Taiwan, R.O.C.);*
- 08:20 The Phenomenon of Positive Magnetoimpedance in  $\text{La}_{0.75}\text{Sr}_{0.25}\text{MnO}_3$  PLD Film  
*Yifei Wang (Shandong University, China); Hua Liu (Shandong University, China); Jifan Hu (Shandong University, China);*
- 08:40 Magnetoimpedance in Perovskite  $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$  Ceramics  
*Hua Liu (Shandong University, China); Qingfang Huang (Shandong University, China); Jifan Hu (Shandong University, China);*
- 09:00 Investigation of the Electrical Properties of BCN-codoped  $\text{TiO}_2$  Thin Film Using Impedance Spectroscopy  
*Ling Zhang (University of Jinan, China); Yongfang Zhang (University of Jinan, China); Lianguo Yan (University of Jinan, China); Fang He (University of Jinan, China);*
- 09:20 Impedance Spectroscopy Study on the Bulk of  $\text{TiO}_2$   
*Ling Zhang (University of Jinan, China); Yongfang Zhang (University of Jinan, China); Lianguo Yan (University of Jinan, China); Fang He (University of Jinan, China);*
- 09:40 Giant Magnetoimpedance in Nanocrystalline Fe-Zr-B-Cu Ribbon  
*Ling Zhang (University of Jinan, China); Yongfang Zhang (University of Jinan, China); Lianguo Yan (University of Jinan, China); Fang He (University of Jinan, China);*
- 10:00 **Coffee Break**



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**Session 1A4b**  
**Modeling, Processing, and Inversion of EM**  
**Geophysics and Their Applications**

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**Monday AM, September 12, 2011**

**Room D**

Organized by Junsheng Hou

Chaired by Junsheng Hou

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- 10:20 New Scattered Potential Finite-difference Method with Anisotropic Background to Simulate Multi-component Induction Logs  
*Junsheng Hou (Halliburton Energy Services, Inc., USA); Michael Bittar (Halliburton Energy Services, Inc., USA); Dagang Wu (Halliburton Energy Services, Inc., USA); Luis San Martin (Halliburton Energy Services, Inc., USA); Baris Guner (Halliburton Energy Services, Inc., USA);*
- 10:40 Method of Measuring the Range from the UWB Borehole Logging Tool to the Oil-water Contact  
*M. I. Epov (Trofimuk Institute of Petroleum Geology and Geophysics, SB, RAS, Russia); Valery L. Mironov (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences, Russia); Konstantin Victorovich Muzalevskiy (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences, Russia);*
- 11:00 Modified Diagonal Tensor Approximation Algorithm for Three-dimensional GPR Forward Scattering  
*Yueqin Huang (Duke University, USA); Jianzhong Zhang (Ocean University of China, China); Qing Huo Liu (Duke University, USA);*
- 11:20 Fast Three-dimensional GPR Backward Scattering Based on Wideband Diagonal Tensor Approximation  
*Yueqin Huang (Duke University, USA); Jianzhong Zhang (Ocean University of China, China); Qing Huo Liu (Duke University, USA);*
- 11:40 UWB Borehole Logging Tool to Explore the Electrical and Structural Properties of Near-wellbore Fluid-filled Areas  
*M. I. Epov (Trofimuk Institute of Petroleum Geology and Geophysics, SB, RAS, Russia); Valery L. Mironov (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences, Russia); Konstantin Victorovich Muzalevskiy (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences, Russia); I. N. Yeltsov (Trofimuk Institute of Petroleum Geology and Geophysics, SB, RAS, Russia);*

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**Session 1A5**  
**Extended/Unconventional Electromagnetic**  
**Theory, EHD**  
**(Electro-hydrodynamics)/EMHD**  
**(Electro-magneto-hydrodynamics), and**  
**Electro-biology**

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**Monday AM, September 12, 2011**

**Room E**

Organized by Eva Gescheidtová

Chaired by Eva Gescheidtová, Pavel Fiala

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- 08:00 Charge Continuity Equation in the Adjoint Fields  
*Zi-Hua Weng (Xiamen University, China);*
- 08:20 A Generalized Variational Principle of Linear Elastic Materials with Voids  
*Ji-Huan He (Soochow University, China);*
- 08:40 Using Numerical Analysis for NMR Coils Optimization  
*Dusan Nesper (Brno University of Technology, Czech Republic); Karel Bartusek (Brno University of Technology, Czech Republic); Pavel Fiala (Brno University of Technology, Czech Republic);*
- 09:00 Limits to the Measurement of the Magnetic Susceptibility Using NMR Method  
*Petr Marcon (Brno University of Technology, Czech Republic); Karel Bartusek (Institute of Scientific Instruments, Academy of Sciences of the Czech Republic, Czech Republic); M. Cap (Brno University of Technology, Czech Republic);*
- 09:20 Sensitivity of the Diffusion Coefficients Measurement to Gradient Field Changes  
*Petr Marcon (Brno University of Technology, Czech Republic); Karel Bartusek (Institute of Scientific Instruments, Academy of Sciences of the Czech Republic, Czech Republic); M. Cap (Brno University of Technology, Czech Republic);*
- 09:40 Evaluation of Errors in Manual Image Processing  
*Jan Mikulka (Brno University of Technology, Czech Republic); Eva Gescheidtová (Brno University of Technology, Czech Republic); Karel Bartusek (Brno University of Technology, Czech Republic);*
- 10:00 **Coffee Break**
- 10:20 Multiple Reflection from Layered Heterogeneous Medium  
*Radim Kadlec (Brno University of Technology, Czech Republic); Eva Kroutilova (Brno University of Technology, Czech Republic); Pavel Fiala (Brno University of Technology, Czech Republic);*

- 10:40 Stochastic Models of Electrodynamics  
*Pavel Fiala (Brno University of Technology, Czech Republic); Martin Friedl (Brno University of Technology, Czech Republic);*
- 11:00 EMHD Models Respecting Relativistic Processes of Trivial Geometries  
*Pavel Fiala (Brno University of Technology, Czech Republic); Zoltán Szabó (Brno University of Technology, Czech Republic); Martin Friedl (Brno University of Technology, Czech Republic);*
- 11:20 A Solar Element with Controlled Efficiency  
*Pavel Fiala (Brno University of Technology, Czech Republic); D. Nešpor (Brno University of Technology, Czech Republic);*
- 11:40 Fusion of the T1, T2 Weighted and Perfusion Weighted Images for Peritumoral Region Evaluation  
*Martin Cap (Brno University of Technology, Czech Republic); Eva Gescheidtová (Brno University of Technology, Czech Republic); Petr Marcon (Brno University of Technology, Czech Republic); Karel Bartusek (Brno University of Technology, Czech Republic); Andrea Sprlakova (Masaryk University, Czech Republic);*
- 14:20 A High Extinction Ratio Micro-Fabry-Perot Resonator Using Thin Tellurite Glass Film over a Ge-diffused Core  
*Yu-Hsin Hsieh (National United University, Taiwan); Nan-Kuang Chen (National United University, Taiwan); Junjie Zhang (Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Science, China);*
- 14:40 Ultracompact In-line Mach-Zehnder Interferometer Made by Tapering a Hollow Optical Fiber  
*Shin-Wei Shen (National United University, Taiwan); Nan-Kuang Chen (National United University, Taiwan); Junjie Zhang (Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Science, China);*
- 15:00 **Coffee Break**
- 15:20 Fiber-based Optical Biosensing Using Tunable Near-infrared Supercontinuum Light Source  
*Chien-Hsiang Fan (National Cheng Kung University, Taiwan, R.O.C.); Chen-Han Huang (National Cheng Kung University, Taiwan, R.O.C.); Hsiang-Ying Lin (National Cheng Kung University, Taiwan, R.O.C.); Hsiang-Chen Chui (National Cheng Kung University, Taiwan);*
- 15:40 Multiphoton Flow Cytometry in Whole Blood and *in Vivo* with a Double-clad Fiber Probe  
*Yu-Chung Chang (National Changhua University of Education, Taiwan); Jing Yong Ye (University of Texas at San Antonio, U.S.A.); Thommey Thomas (University of Michigan, USA); Zhengyi Cao (University of Michigan, USA); Alina Kotlyar (University of Michigan, USA); James R. Baker, Jr. (University of Michigan, USA); Theodore B. Norris (University of Michigan, USA);*

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**Session 1P1a**

**Fiber Micro/Nano-Photonic Components and Fiber Sensors**

**Monday PM, September 12, 2011**

**Room A**

Organized by Nan-Kuang Chen, Junjie Zhang

Chaired by Hsiang-Chen Chui

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- 13:20 Thermal Properties of Light-controllable Photonic Liquid Crystal Fibers  
*Jia-Hong Liou (National Sun Yat-Sen University, Taiwan, R.O.C.); Ta Lin (National Sun Yat-Sen University, Taiwan, R.O.C.); Chin-Ping Yu (National Sun Yat-Sen University, Taiwan);*
- 13:40 Design Approach of Liquid-filled Dispersion-flattened Photonic Crystal Fibers  
*Jui-Ming Hsu (National United University, Taiwan, R.O.C.); Der-Li Ye (National United University, Taiwan, R.O.C.);*
- 14:00 A High Q Tellurite Microtoroid on Hollow Core Silica Fiber Post by a Flame Melting Technique  
*Yu-Hsin Hsieh (National United University, Taiwan); Nan-Kuang Chen (National United University, Taiwan); Junjie Zhang (Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Science, China); Sien Chi (Yuan Ze University, Taiwan);*
- 16:00 Microwave Properties of Nanocrystalline and Microcrystalline of  $\text{La}_{(1-x)}\text{Sr}_x\text{Fe}_{(1-y)}\text{Mn}_y/2\text{Ti}_y/2\text{O}_3$  Based Powders by Mechanical and Ultrasonic Assisted Milling  
*Mas Ayu Elita Hafizah (Universitas Indonesia, Indonesia); Azwar Manaf (Universitas Indonesia, Indonesia);*

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**Session 1P1b**

**Nano Scale Electromagnetics**

**Monday PM, September 12, 2011**

**Room A**

Chaired by Hsiang-Chen Chui

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- 16:20 The Use of Magnetic Spectroscopy in the Investigation of the Magnetic Viscosity of Nanoparticles at Microwave Frequencies  
*Paul C. Fannin (Trinity College, Ireland); C. N. Marin (West University of Timisoara, Romania);*

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**Session 1P2**

**Transformation Optics and Cloaking**

**Monday PM, September 12, 2011**

**Room B**

Organized by Huanyang Chen, Yun Lai

Chaired by Huanyang Chen, Yun Lai

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- 13:00 Making Macroscopic Objects Invisible  
*Baile Zhang (Massachusetts Institute of Technology, USA); Yuan Luo (Massachusetts Institute of Technology, USA); George Barbastathis (Massachusetts Institute of Technology, USA);*
- 13:20 Invisibility Cloak with an Opening  
*Thomas Ako (Royal Institute of Technology, Sweden); Min Yan (Royal Institute of Technology, Sweden); Min Qiu (Royal Institute of Technology, Sweden);*
- 13:40 An Invisibility Cloak Using Silver Nanowires  
*Huanyang Chen (Soochow University, China);*
- 14:00 Concealing an Electromagnetic Sensing System Using Three Kinds of Isotropic Homogeneous Single-negative Materials  
*Xuefeng Zhu (Nanjing University, China); Xinye Zou (Nanjing University, China); Qian Chen (Nanjing University, China); Bin Liang (Nanjing University, China); Jian-Chun Cheng (Nanjing University, China);*
- 14:20 Low Scattering Cylindrical Invisibility Cloak with Wide Frequency Band  
*Su Xu (Zhejiang University, China); Hongsheng Chen (Zhejiang University, China);*
- 14:40 Experimental Realization of an Invisible Gateway by Transmission-line Medium  
*Chao Li (Southwest Jiaotong University, China); Xiankun Meng (Institute of Electronics, Chinese Academy of Sciences, China); Xiao Liu (Institute of Electronics, CAS, China); Fang Li (Institute of Electronics, Chinese Academy of Sciences, China); Guangyou Fang (Institute of Electronics, Chinese Academy of Sciences, China); Huanyang Chen (Soochow University, China); Che Ting Chan (The Hong Kong University of Science and Technology, China);*
- 15:00 **Coffee Break**
- 15:20 Light Pulses in Maxwell's Fish Eye  
*Tomas Tyc (Masaryk University, Czech Republic);*
- 15:40 Plasmonic Luneburg and Eaton Lenses  
*Jason Valentine (Vanderbilt University, USA); Thomas Zentgraf (University of California, USA); Yongmin Liu (University of California, USA); Maiken H. Mikkelsen (University of California, USA); Xiang Zhang (University of California, USA);*
- 16:00 Investigation of Broadband Flat Antennas Using Transformation Electromagnetics  
*Wenxuan Tang (University of London, United Kingdom); Christos Argyropoulos (University of London, UK); Efthymios Kallos (Queen Mary University of London, UK); Yang Hao (Queen Mary University of London, UK);*
- 16:20 A Chirality Switching Device Designed by Transformation Optics  
*Yuan Shen (Fudan University, China); Kun Ding (Fudan University, China); Wujiong Sun (Fudan University, China); Lei Zhou (Fudan University, China);*
- 16:40 The Effective Medium Approximation of Metamaterials  
*Yun Lai (The Hong Kong University of Science and Technology, China); Y. Wu (King Abdullah University of Science and Technology, Saudi Arabia); Che Ting Chan (The Hong Kong University of Science and Technology, China); Ping Sheng (Hong Kong University of Science and Technology, China); Z. Q. Zhang (The Hong Kong University of Science and Technology, China);*
- 17:00 Epsilon-near-zero Metamaterials with Defects  
*Yadong Xu (Soochow University, China); Huanyang Chen (Soochow University, China);*
- 17:20 A Boundary Integral Method to Remote Optical Cloaking and Illusions by Active Sources  
*Jun Jun Xiao (Harbin Institute of Technology, China); Y. Lai (The Hong Kong University of Science and Technology, China); H. H. Zheng (The Hong Kong University of Science and Technology, China); C. T. Chan (The Hong Kong University of Science and Technology, China);*

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**Session 1P3a**
**Remote Sensing of the Earth, Ocean, and Atmosphere**


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**Monday PM, September 12, 2011**
**Room C**

 Chaired by Hsing-Yi Chen, Valery L. Mironov
 

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- 13:00 Estimation of Turbulent Fluxes with Geostationary Operational Environmental Satellites Data  
*Tongren Xu (Beijing Normal University, China); Shunlin Liang (University of Maryland, USA); Shaomin Liu (Beijing Normal University, China);*
- 13:20 Experimental Study of Thermal Anomaly before Earthquake Due to Gas Releasing from Crust  
*Shanjun Liu (Northeastern University, China); Lixin Wu (Northeastern University, China); Xin Liu (Northeastern University, China); Bo Tang (Northeastern University, China);*
- 13:40 Results of the SMOS Data Validation over a Steppe and Forest Area in Siberia  
*P. P. Bobrov (Omsk State Pedagogical University, Russia); O. V. Kondratieva (Omsk State Pedagogical University, Russia); Valery L. Mironov (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences, Russia); E. Shvetso (Sukachev Institute of Forest, SB RAS, Russia); A. I. Sukhinin (Sukachev Institute of Forest, SB RAS, Russia); Alexandr Sergeevich Yashchenko (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences, Russia);*
- 14:00 Wave Attenuation in Sand and Dust Storms at 10.5 GHz  
*Hsing-Yi Chen (Yuan Ze University, Taiwan, China); Xiao-Ying Dong (Xiamen University, China); Donghui Guo (Xiamen University, China);*
- 14:20 Bistatic Reflectometry and Refractometry Using GNSS Signals in the Earth's Surface and Atmosphere  
*Shuanggen Jin (University of Texas at Austin, USA); Guiping Feng (Shanghai Astronomical Observatory, Chinese Academy of Sciences, China);*
- 14:40 Accelerated Melting of Antarctic Ice-sheet Observed from 7 Years of Satellite Gravimetry  
*Guiping Feng (Shanghai Astronomical Observatory, Chinese Academy of Sciences, China); Shuanggen Jin (Shanghai Astronomical Observatory, Chinese Academy of Sciences, China); Liangjing Zhang (Shanghai Astronomical Observatory, Chinese Academy of Sciences, China);*
- 15:00 **Coffee Break**

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**Session 1P3b**
**Subsurface Imaging and Detection Technology, GPR**


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**Monday PM, September 12, 2011**
**Room C**

 Chaired by Shanjun Liu
 

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- 15:20 Infrared Imaging Detection of Hidden Danger in Mine Engineering  
*Shanjun Liu (Northeastern University, China); Zhongyin Xu (Northeastern University, China); Lixin Wu (Northeastern University, China); Baodong Ma (Northeastern University, China); Xin Liu (Northeastern University, China);*
- 15:40 Magnetic Anomaly Detection in Ferromagnetic Material  
*Johannes Atzlesberger (Johannes Kepler University, Austria); Bernhard Zagar (Johannes Kepler University, Austria);*
- 16:00 A New Analytical Method for Calculation of Eddy Current Distribution and Its Application to a System of Conductor-slab and Rectangular Coil  
*Toshiya Itaya (Suzuka National College of Technology, Japan); Koichi Ishida (Tokuyama College of Technology, Japan); Akio Tanaka (Ube National College of Technology, Japan); Nobuo Takehira (Tokuyama College of Technology, Japan); Toshikatsu Miki (Yamaguchi University, Japan);*
- 16:20 Development of Spot Welding Evaluation Using a Magnetic Flux Leakage Method  
*Kosuke Miyake (Okayama University, Japan); Kenji Sakai (Okayama University, Japan); Toshihiko Kiwa (Okayama University, Japan); Yoshinobu Hirano (Ohashi Engineering Co.Ltd, Japan); Mitsuaki Matsumoto (Ohashi Engineering Co. Ltd., Japan); Keiji Tsukada (Okayama University, Japan);*
- 16:40 Development of AC Magnetic Susceptibility Meter Using HTS-SQUID  
*Satoshi Maeda (Okayama University, Japan); Yoshitatsu Yamaguchi (Okayama University, Japan); Kenji Sakai (Okayama University, Japan); Toshihiko Kiwa (Okayama University, Japan); Akira Tsukamoto (SRL-ISTEC, Japan); Seiji Adachi (SRL-ISTEC, Japan); Keiichi Tanabe (SRL-ISTEC, Japan); Akihiko Kandori (Hitachi Ltd., Japan); Keiji Tsukada (Okayama University, Japan);*

- 17:00 Probabilistic Classification for Electromagnetic Demining — Issues and Advances towards Real Implementations  
*Federico Viani (University of Trento, Italy); Leonardo Lizzi (University of Trento, Italy); Paolo Rocca (University of Trento, Italy); Massimo Balma (Selex Galileo S.p.A., Italy); Andrea Massa (University of Trento, Italy);*

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**Session 1P4a**

**Computational Techniques and Inverse Scattering Problems**

**Monday PM, September 12, 2011**

**Room D**

Organized by Ahmed Gomaa Radwan

Chaired by Ahmed Gomaa Radwan, Chao-Fu Wang

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- 13:00 High Performance 2D and 3D Approaches for Adjoint Variable Method Suitable for Inverse Problems  
*Ahmed Gomaa Radwan (Cairo University, Egypt);*
- 13:20 Reconstruction of Target Properties for Different Distributions Using Transient Adjoint Technique  
*Ahmed Gomaa Radwan (Cairo University, Egypt);*
- 13:40 Electromagnetic Inverse Scattering of Perfectly Electric Conductors by the Subspace-based Optimization Method  
*Xiuzhu Ye (National University of Singapore, Singapore); Xudong Chen (National University of Singapore, Singapore);*
- 14:00 Reordering Techniques for Efficient Solution of Preconditioned Formulation of FE-BI Equations  
*Chao-Fu Wang (National University of Singapore, Singapore); Fu-Gang Hu (National University of Singapore, Singapore);*
- 14:20 A Novel Imaging Method for Inverse Scattering Problem Using Stepped-frequency Waveforms  
*Wei Yan (Northwestern Polytechnical University, China); Nai-Zhi Wang (Northwestern Polytechnical University, China); Amna Ajaz (Northwestern Polytechnical University, China); Jia-Dong Xu (Northwestern Polytechnical University, China);*
- 14:40 Mathematics behind the Fractional-order Smith Chart  
*Ahmed Gomaa Radwan (Cairo University, Egypt); Atif Shamim (King Abdullah University of Science and Technology, Saudi Arabia); Khaled N. Salama (King Abdullah University of Science and Technology (KAUST), Saudi Arabia);*

- 15:00 **Coffee Break**

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**Session 1P4b**

**Scattering and Inverse Problem**

**Monday PM, September 12, 2011**

**Room D**

Chaired by Pierre Borderies

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- 15:20 Algorithm Improvement for Real Time ILIDS Analysis in Airborne Research  
*Huanhuan Shen (Université de Rouen, France); Marc Brunel (Université de Rouen, France); Gérard Gréhan (Université de Rouen, France); Arnaud Querel (Centre CEA Saclay, France); Pascal Lemaitre (Centre CEA Saclay, France); Emmanuel Porcheron (Centre CEA Saclay, France);*
- 15:40 Subspace-based Optimization Method for Reconstructing Extended Scatterers from Measured Phaseless Data  
*Li Pan (National University of Singapore, Singapore); Xudong Chen (National University of Singapore, Singapore); Swee Ping Yeo (National University of Singapore, Singapore);*
- 16:00 An Improved Inverse Scattering Transform for DNLS<sup>+</sup> Equation under Nonvanishing Boundary Condition  
*Guo-Quan Zhou (Wuhan University, China);*
- 16:20 Glare Point Reconstruction in Digital Holographic Microscopy for Droplet Characterization  
*Huanhuan Shen (Université de Rouen, France); Marc Brunel (Université de Rouen, France); Sébastien Coetmellec (Université de Rouen, France); Gérard Gréhan (Université de Rouen, France); Denis Lebrun (Université de Rouen, France); Xuecheng Wu (Zhejiang University, China); Kefa Cen (Zhejiang University, China);*
- 16:40 Temporal Backscattering of Forests: Ground Measurements  
*Clément Albinet (ONERA-DEMR, France); Pierre Borderies (Office National d'Etudes et de Recherches Aérospatiales (ONERA), France); Thierry Koleck (Centre National d'Etudes Spatiales (CNES), France); Fabio Rocca (Politechnic of Milan, Italy); Stefano Tebaldini (Politecn Milan, Italy); Thuy Le Toan (CNES-CNRS-Université Paul Sabatier, France); L. Villard (CESBIO, France);*

- 17:00 Efficient Partial Concealment of Convex Conductive Body  
*Andrey M. Lebedev (Institute for Theoretical and Applied Electromagnetics, Russian Academy of Sciences, Russia); Anatoli I. Fedorenko (Institute for Theoretical and Applied Electromagnetics, Russian Academy of Sciences, Russia);*

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**Session 1P5**

**Novel Mathematical Methods in Electromagnetics**

**Monday PM, September 12, 2011**

**Room E**

Organized by Kazuya Kobayashi, Yury V. Shestopalov

Chaired by Kazuya Kobayashi

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- 13:00 Some Helicities in Electromagnetic Fields  
*Zi-Hua Weng (Xiamen University, China);*
- 13:20 Finite Element Mesh Partitioning Using a Bubble Inspired Algorithm  
*Peng Liu (Fudan University, China); Chao-Fu Wang (National University of Singapore, Singapore);*
- 13:40 Comparative Analysis of the Dynamic Stark Effect in Spectra of Rare Gas Atoms and Ions  
*Elena Vladimirovna Koryukina (Tomsk State University, Russia); Koryukin Vladimir Ivanovich (Siberian State Medical University, Russia);*
- 14:00 Differential Forms and Decomposable Media  
*Ismo Veikko Lindell (Aalto University, Finland); Luzi Bergamin (KB&P GmbH, Switzerland); Alberto Favaro (Imperial College London, UK);*
- 14:20 Asymptotics of Physical Solutions to the Lorentz-Dirac Equation for a Planar Motion in Constant Electromagnetic Fields  
*Peter O. Kazinski (Tomsk State University, Russia); M. A. Shipulya (Tomsk State University, Russia);*
- 14:40 Spectral Theory of Beam Scattering by Random Curved Surfaces for Imaging Laser Radar  
*Yasumitsu Miyazaki (Aichi University of Technology, Japan);*
- 15:00 **Coffee Break**
- 15:20 Magnetoelectric Near Fields  
*Eugene O. Kamenetskii (Ben-Gurion University of the Negev, Israel); Roman Joffe (Ben-Gurion University of the Negev, Israel); Reuven Shavit (Ben-Gurion University of the Negev, Israel);*

- 15:40 Propagation of TE-waves through a Nonlinear Metamaterial Layer with Arbitrary Nonlinearity  
*Dmitry V. Valovik (Penza State University, Russia);*
- 16:00 Stopband and Resonance Characteristics of Cylindrical Electromagnetic Bandgap Structures  
*Vakhtang Jandieri (Kyungpook National University, South Korea); Kiyotoshi Yasumoto (Kyushu University, Japan);*
- 16:20 Exact Solution for the Magnetic Force between a Thick Circular Coil and a Thick Elliptical Coil  
*John Thomas Conway (University of Agder, Norway);*
- 16:40 Backscattering Diagrams of Inhomogeneous Currents on Generic Elongated Irregularities of Surface  
*Andrey M. Lebedev (Institute for Theoretical and Applied Electromagnetics, Russian Academy of Sciences, Russia); Anatoli I. Fedorenko (Institute for Theoretical and Applied Electromagnetics, Russian Academy of Sciences, Russia);*

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**Session 1P6**

**Spin Physics in Low Dimensional Systems**

**Monday PM, September 12, 2011**

**Room F**

Organized by Yshai Avishai

Chaired by Yshai Avishai

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- 13:00 Conservation Laws and Spin Motive Force in Magnetic Nanostructures: Part 1  
*Sadamichi Maekawa (Japan Atomic Energy Agency, Japan);*
- 13:20 Conservation Laws and Spin Motive Force in Magnetic Nanostructures: Part 2  
*Sadamichi Maekawa (Japan Atomic Energy Agency, Japan);*
- 13:40 Spin Orbit Interaction and Spin Accumulation in Quantum Dot System: Part 1  
*Yasuhiro Tokura (NTT Corporation, Japan);*
- 14:00 Spin Orbit Interaction and Spin Accumulation in Quantum Dot System: Part 2  
*Yasuhiro Tokura (NTT Corporation, Japan);*
- 14:20 Electrical Control of Anisotropic Spin-orbit Interaction in InAs Self-assembled Quantum Dots: Part 1  
*Akira Oiwa (University of Tokyo, Japan); R. S. Deacon (University of Tokyo, Japan); S. Takahashi (University of Tokyo, Japan); Y. Kanai (University of Tokyo, Japan); K. Yoshida (University of Tokyo, Japan); K. Shibata (University of Tokyo, Japan); Kazuhiko Hirakawa (University of Tokyo, Japan); Yasuhiro Tokura (NTT Corporation, Japan); S. Tarucha (University of Tokyo, Japan);*

14:40 Electrical Control of Anisotropic Spin-orbit Interaction in InAs Self-assembled Quantum Dots: Part 2  
*Akira Oiwa (University of Tokyo, Japan); R. S. Deacon (University of Tokyo, Japan); S. Takahashi (University of Tokyo, Japan); Y. Kanai (University of Tokyo, Japan); K. Yoshida (University of Tokyo, Japan); K. Shibata (University of Tokyo, Japan); Kazuhiko Hirakawa (University of Tokyo, Japan); Yasuhiro Tokura (NTT Corporation, Japan); S. Tarucha (University of Tokyo, Japan);*

15:00 **Coffee Break**

15:20 Fermionic Theory for Low Dimensional Quantum Antiferromagnets with Spin  $S > 1/2$ : Part 1  
*Zheng-Xin Liu (Hong Kong University of Science and Technology, China); Yi Zhou (Hong Kong University of Science and Technology, China); Tai-Kai Ng (Hong Kong University of Science and Technology, China);*

15:40 Fermionic Theory for Low Dimensional Quantum Antiferromagnets with Spin  $S > 1/2$ : Part 2  
*Zheng-Xin Liu (Hong Kong University of Science and Technology, China); Yi Zhou (Hong Kong University of Science and Technology, China); Tai-Kai Ng (Hong Kong University of Science and Technology, China);*

16:00 Semiclassical Dynamics of Magnon Wavepacket and Magnon Hall Effect in Ferromagnets: Part 1  
*Shuichi Murakami (Tokyo Institute of Technology, Japan); Ryo Matsumoto (Tokyo Institute of Technology, Japan);*

16:20 Semiclassical Dynamics of Magnon Wavepacket and Magnon Hall Effect in Ferromagnets: Part 2  
*Shuichi Murakami (Tokyo Institute of Technology, Japan); Ryo Matsumoto (Tokyo Institute of Technology, Japan);*

16:40 Helical Magnetostatic-mode Resonances in Quasi-2D Ferrite Disks  
*Eugene O. Kamenetskii (Ben-Gurion University of the Negev, Israel);*

17:00 Room-temperature Ferromagnetism Characterization on Nano-scale Structures in GaN:Mn by Magnetic Force Microscope  
*Xianzhe Jiang (Peking University, China); Fafa Zhang (Peking University, China); Yuhao Zhang (Peking University, China); Zhiyuan Lin (Peking University, China); Cunda Wang (Peking University, China); Guoyi Zhang (Peking University, China);*

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**Session 1P7**  
**Poster Session 1**

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**Monday PM, September 12, 2011**

**14:00 PM - 17:00 PM**

**Room G**

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- 1 Parallelized FDTD-TDPO Algorithm Based on MPI Platform  
*Xiang-Qin Zhu (Northwest Institute of Nuclear Technology, China); Jianguo Wang (Northwest Institute of Nuclear Technology, China); Libing Cai (Northwest Institute of Nuclear Technology, China);*
- 2 Design of a Novel Terahertz Antenna with Fan-scanning Beam  
*Xiang Gao (Institute of Electronics, Chinese Academy of Sciences, China); Chao Li (Southwest Jiaotong University, China); Guangyou Fang (Institute of Electronics, Chinese Academy of Sciences, China);*
- 3 A Fan-beam Millimeter-wave Antenna Based on Modified Luneberg Cylindrical Lens  
*Changzhou Hua (Zhejiang University, China); Xidong Wu (Zhejiang University, China); Nan Yang (Zhejiang University, China); Huixian Wu (Zhejiang University, China); Bo Li (Nanjing University of Science and Technology, China); Wen Wu (Nanjing University of Science & Technology, China);*
- 4 A Dual Frequency Rectangular Dielectric Resonator Antenna Fed by a Coaxial Probe  
*Huixian Wu (Zhejiang University, China); Xidong Wu (Zhejiang University, China); Changzhou Hua (Zhejiang University, China); Nan Yang (Zhejiang University, China);*
- 5 A Matching Circuit with Genetic Algorithms for LNA Applications  
*Ming-Huei Chen (National Kaohsiung First University of Science and Technology, Taiwan, R.O.C.); Ming-Chih Huang (National Kaohsiung First University of Science and Technology, Taiwan, R.O.C.); Hao-Hui Chen (National Kaohsiung First University of Science and Technology, Taiwan, R.O.C.); Cheng-Yu Tasi (National Kaohsiung First University of Science and Technology, Taiwan, R.O.C.);*

- 6 A Triple-band Monopole Antenna with Genetic Algorithms for WLAN and WiMAX Applications  
*Ming-Huei Chen (National Kaohsiung First University of Science and Technology, Taiwan, R.O.C.); Hao-Hui Chen (National Kaohsiung First University of Science and Technology, Taiwan, R.O.C.); Sung-Te Lin (National Kaohsiung First University of Science and Technology, Taiwan, R.O.C.); Ming-Chih Huang (National Kaohsiung First University of Science and Technology, Taiwan, R.O.C.);*
- 7 A Circularly Polarized Rectenna for Wireless Power Transmission  
*Jwo-Shiun Sun (National Taipei University of Technology, Taiwan, R.O.C.); Ren-Hao Chen (National Taipei University of Technology, Taiwan, R.O.C.); Shao-Kai Liu (National Taipei University of Technology, Taiwan);*
- 8 Use of Frequency Selective Surface to Prevent SAR and Improve Antenna Performance of Cellular Phones  
*Han-Nien Lin (Feng-Chia University, Taiwan, R.O.C.); Ke-Wen Lin (National Chiao-Tung University, Taiwan, R.O.C.); Sheng-Chun Chen (Feng-Chia University, Taiwan, R.O.C.);*
- 9 Receiving Performance Enhancement of Active GPS Antenna with Periodic Structure  
*Han-Nien Lin (Feng-Chia University, Taiwan, R.O.C.); Ke-Wen Lin (National Chiao-Tung University, Taiwan, R.O.C.); Chung-Wei Kuo (Feng-Chia University, Taiwan, R.O.C.); Yu-Jie Huang (Feng-Chia University, Taiwan, R.O.C.);*
- 10 Finite Different Ground Shapes Printed Spiral Antennas for Multi Wide Band Applications Using PPPC Feeding Scheme  
*Adnan Ahmed Jamali (AAST, Egypt); Abd El-hamid Gaafar (AAST, Egypt); Abd Elaziz Abdelmonem Abdelaziz (Misr International University (MIU), Egypt);*
- 11 Dual-band Printed Monopole Antenna with 1-D EBG Ground Plane  
*Seung-Han Kim (Gwangju Institute of Science and Technology (GIST), Korea); Dong-Ju Kim (Gwangju Institute of Science and Technology (GIST), Korea); Jae-Young Lee (Gwangju Institute of Science and Technology (GIST), Korea); Byoung-Hyun Shin (Gwangju Institute of Science and Technology (GIST), Korea); Jae-Hyung Jang (Gwangju Institute of Science and Technology (GIST), South Korea);*
- 12 Asymmetrical Dipole-like UWB Antenna  
*The-Nan Chang (Tatung University, Taiwan);*
- 13 Wideband Antenna Design by the Stacked Koch Fractal Structures  
*Homayoon Oraizi (Iran University of Science and Technology, Iran); Shahram Hedayati (Iran University of Science and Technology, Iran);*
- 14 A Compact Planar Microstrip-Fed Feed Patch Antenna Using High Permittivity Substrate  
*Cheng-Hsing Hsu (National United University, Taiwan); Chun-Hung Lai (National United University, Taiwan); Yin-Shin Chang (National United University, Taiwan);*
- 15 Design of Microstrip Antenna with Modified Annular-ring Slot for GPS Application  
*Ching-Fang Tseng (National United University, Taiwan); Shu-Cheng Lu (National United University, Taiwan); Yu-Chia Hsu (National United University, Taiwan);*
- 16 Miniaturized Ultra-wideband Circular Metallic Plate Antenna Suspended by Shorting Pins  
*Homayoon Oraizi (Iran University of Science and Technology, Iran); Mehdi Hamidkhani (Iran University of Science and Technology, Iran);*
- 17 Design of UHF RFID Passive Tag Antenna Pasted on a Large Metal Structure  
*Shih-Chung Tuan (Oriental Institute of Technology, Taiwan); Hsi-Tseng Chou (Yuan Ze University, Taiwan); Kuo-Lun Hung (Yuan Ze University, Taiwan); Jen-Chung Chu (Yuan Ze University, Taiwan);*
- 18 A Low Profile Printed Tri-band Antenna Using Multi-band Artificial Magnetic Conductor Ground Plane  
*Fuguo Zhu (University of Surrey, UK); Shi-Chang (Steven) Gao (University of Surrey, UK); Jia-Dong Xu (Northwestern Polytechnical University, China);*
- 19 A Planar Monopole Antenna for DVB-H/GSM Applications  
*I.-Tseng Tang (National University of Tainan, Taiwan); Simon Li (National University of Tainan, Taiwan); Ding-Bing Lin (National Taipei University of Technology, Taiwan, R.O.C.); Cheng-Yu Chen (National University of Tainan, Taiwan);*
- 20 A Wide Bandwidth Rectangular Dielectric Resonator Antenna for LTE 4G Handset Front-end  
*I-Tseng Tang (National University of Tainan, Taiwan); Simon C. Li (National University of Tainan, Taiwan); Ding-Bing Lin (National Taipei University of Technology, Taiwan, R.O.C.); C. H. Syu (National University of Tainan, Taiwan); Bo-Yuo Chen (National University of Tainan, Taiwan);*



- 21 A Monopole Antenna for Digital Video Broadcasting and GSM900 Applications  
*I.-Tseng Tang (National University of Tainan, Taiwan); Simon Li (National University of Tainan, Taiwan); Ding-Bing Lin (National Taipei University of Technology, Taiwan, R.O.C.); Ming-Jhe Wu (National University of Tainan, Taiwan);*
- 22 Design of Elliptical Microstrip Patch Antenna Using ANN  
*Amit Agrawal (National Institute of Technology, India); Damera Vakula (National Institute of Technology, India); N. V. S. N. Sarma (National Institute of Technology, India);*
- 23 GPS Antenna Design and Measurement  
*Kuo-Liang Wu (National Taipei University of Technology, Taiwan); Jwo-Shiun Sun (National Taipei University of Technology, Taiwan, R.O.C.); Y. D. Chen (High Tech. Computer Corporation (HTC), Taiwan); Guan-Yu Chen (National Taipei University of Technology, Taiwan);*
- 24 A Novel Fractal Patch Antenna for UWB Applications  
*Xue-Yong Zhang (Nanjing University of Aeronautics and Astronautics, China); Shaobin Liu (Nanjing University of Aeronautics and Astronautics, China); Chun Zao Li (Nanjing University of Aeronautics and Astronautics, China); BoRui Bian (Nanjing University of Aeronautics and Astronautics, China); Xiang-Kun Kong (Nanjing University of Aeronautics and Astronautics, China);*
- 25 Flexible Antenna for Mobile Handsets  
*Ho-Jun Lee (Korea Electronics Technology Institute, Korea); Jae-Young Lee (Korea Electronics Technology Institute, Korea); Kyu-Bok Lee (Korea Electronics Technology Institute, Republic of Korea);*
- 26 WLAN Antenna Design and Measurement  
*Chien-Pang Chou (National Taipei University of Technology, Taiwan); Jwo-Shiun Sun (National Taipei University of Technology, Taiwan, R.O.C.); Y. D. Chen (High Tech. Computer Corporation (HTC), Taiwan); Guan-Yu Chen (National Taipei University of Technology, Taiwan);*
- 27 Cellular Antenna Design and Measurement  
*Chien-Pang Chou (National Taipei University of Technology, Taiwan); Y. D. Chen (High Tech. Computer Corporation (HTC), Taiwan); Jwo-Shiun Sun (National Taipei University of Technology, Taiwan, R.O.C.); Guan-Yu Chen (National Taipei University of Technology, Taiwan);*
- 28 Investigating the Effect of Nonlinearity on Adaptive Arrays  
*Cheng-Nan Hu (Oriental Institute of Technology, Taiwan, R.O.C.);*
- 29 A Differential Multi-band CMOS Low Noise Amplifier with Gain Flatness Performance and Bandwidth Enhancement  
*San-Fu Wang (Ming Chi University of Technology, Taiwan, R.O.C.); Jan-Ou Wu (De Lin Institute of Technology, Taiwan, R.O.C.); Hua-Pin Chen (Ming Chi University of Technology, Taiwan, R.O.C.); Yang-Hsin Fan (National Taitung University, Taiwan, R.O.C.);*
- 30 Performance Analysis in Using Repeaters with Coordination among Base Stations for LTE-A Systems  
*Hsien-Wei Tseng (De Lin Institute of Technology, Taiwan, R.O.C.); Yang-Han Lee (Tamkang University, Taiwan); Ming-Hsueh Chuang (National Taiwan University of Science and Technology, Taiwan, R.O.C.); Wei Chien (De Lin Institute of Technology, Taiwan, R.O.C.); Chih-Yuan Lo (Tamkang University, Taiwan); Yu-De Liao (De Lin Institute of Technology, Taiwan, R.O.C.);*
- 31 Approximate Outage Probability Expressions for Evaluating Cooperative Communications  
*Chengkun Sun (Kumamoto University, Japan); Takashi Kodama (Kumamoto University, Japan); Hua-An Zhao (Kumamoto University, Japan);*
- 32 The RF Energy Transmission System Using Electric Resonance  
*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); Je-Hoon Yun (Electronics and Telecommunications Research Institute, South of Korea); Byun Woo Jin (Electronics and Telecommunications Research Institute, South Korea); Jae-Ick Choi (Electronics and Telecommunications Research Institute, Korea);*

- 33 The Design of the Compact and Wireless Desktop Using Wireless Power Transmission  
*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); Je-Hoon Yun (Electronics and Telecommunications Research Institute, South of Korea); Byun Woo Jin (Electronics and Telecommunications Research Institute, South Korea); Jae-Ick Choi (Electronics and Telecommunications Research Institute, Korea);*
- 34 A Low Power Transceiver for Medical Implantable Applications  
*Jin-Sup Kim (Korea Electronics Technology Institute, Republic of Korea);*
- 35 Improvement of Source Stirring to Field Uniformity in Reverberation Chamber  
*Shuang Li (Northwest Institute of Nuclear Technology, China); Jianguo Wang (Northwest Institute of Nuclear Technology, China); Haiyan Xie (Northwest Institute of Nuclear Technology, China); Xicheng Lu (Northwest Institute of Nuclear Technology, China);*
- 36 Notebook EMI Noise Analysis and WLAN TIS Performance Improvement with Periodic Structure  
*Han-Nien Lin (Feng-Chia University, Taiwan, R.O.C.); Ming-Cheng Chung (Feng-Chia University, Taiwan, R.O.C.); Ming-Shan Lin (M.O.E.A., Taiwan, R.O.C.);*
- 37 Grey Relational Clustering Applied to FPGA System Routing with Minimal Wire Length and Delay  
*Jan-Ou Wu (De Lin Institute of Technology, Taiwan, R.O.C.); Yang-Hsin Fan (National Taitung University, Taiwan, R.O.C.); San-Fu Wang (Ming Chi University of Technology, Taiwan, R.O.C.);*
- 38 Design of Reaction Cavity for a Microwave-assisted Synthesis System  
*Myungsik Kim (Sogang University, Republic of Korea); Jongmin Kim (Sogang University, Republic of Korea); Kwangsoo Kim (Sogang University, Republic of Korea);*
- 39 Evaluation of Electromagnetic Shielding Effectiveness  
*Ping Li (Singapore Polytechnic, Singapore); Yueyan Shan (A\*STAR, Singapore); Junhong Deng (TUV SUD PSB Pte Ltd., Singapore);*
- 40 Simulations and Analysis of the Corner Geometry and Its Influence on the Electromagnetic Behavior of Components and Structures: Comments on GTEM and Other Microwave Guided Structures Designs  
*Humberto Xavier De Araújo (University of Campinas — UNICAMP, Brazil); Luiz Carlos Kretly (University of Campinas — UNICAMP, Brazil);*

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**Session 2A1**

**Generation, Propagation and Application of Coherent and Partially Coherent Beams with Special Beam Profile and Polarization 1**

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**Tuesday AM, September 13, 2011**

**Room A**

Organized by Yangjian Cai

Chaired by Yangjian Cai

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- 08:00 The Number of Degrees of Freedom of Aberrated and Non Aberrated Images Generated by Coherently- or Incoherently Illuminated Objects  
*Bernhard J. Hoenders (University of Broningen, The Netherlands); Yangjian Cai (Soochow University, China);*
- 08:20 Flat-topped Field Correlations in Extremely Strong Turbulence  
*Yahya Kemal Baykal (Cankaya University, Turkey);*
- 08:40 A Three-zone Ternary Phase Superresolving Diffractive Optical Element  
*Yaoju Zhang (Wenzhou University, China); Chaolong Fang (Wenzhou University, China); Xianjie Wang (Wenzhou University, China);*
- 09:00 Experimental Study of the Propagation of a Partially Coherent Beam in Turbulent Atmosphere  
*Fei Wang (Soochow University, China); Yangjian Cai (Soochow University, China);*
- 09:20 Scattering of a Partially Coherent Plane-wave Pulse  
*Chaoliang Ding (Luoyang Normal College, China); Yangjian Cai (Soochow University, China); Yongtao Zhang (Luoyang Normal College, China); Lizhan Pan (Luoyang Normal College, China);*
- 09:40 Experimental Generation of a Partially Coherent Dark Hollow Beam by a Multimode Fiber  
*Chengliang Zhao (Soochow University, China); Yangjian Cai (Soochow University, China);*
- 10:00 **Coffee Break**
- 10:20 Computation of Forward Scattering by Noncoaxial Cylinder Using a Geometrical-optics Approach  
*Xiangzhen Li (Xidian University, China); Xiang'e Han (Xidian University, China); Paerhati-jiang Tuersun (Xidian University, China);*

- 10:40 Degree of Polarization of Random Electromagnetic Vortex Beams in Atmospheric Turbulence  
*Jinhong Li (Taiyuan University of Science and Technology, China); Meiling Duan (North University of China, China); Yamei Luo (Luzhou Medical College, China); Jilin Wei (Taiyuan University of Science and Technology, China);*
- 11:00 Nonparaxial Properties of a Stochastic Electromagnetic Beam  
*Lina Zhang (Soochow University, China); Fei Wang (Soochow University, China); Yangjian Cai (Soochow University, China);*
- 11:20 Propagation Properties of a Laser Array Beam in Turbulent Atmosphere  
*Yangsheng Yuan (Soochow University, China); Yangjian Cai (Soochow University, China); Chengliang Zhao (Soochow University, China);*
- 11:40 High-power Partially Coherent Fiber Laser Beams Propagating in Real Environment  
*Rumao Tao (National University of Defense Technology, China); Lei Si (National University of Defense Technology, China); Yanxing Ma (National University of Defense Technology, China); Yongchao Zou (National University of Defense Technology, China); Pu Zhou (National University of Defense Technology, China);*
- 09:20 Magnetostatic-mode Near-field Scanning Microwave Microscopy for Chirality Measuring  
*Roman Joffe (Ben-Gurion University of the Negev, Israel); Eugene O. Kamenetskii (Ben-Gurion University of the Negev, Israel); Reuven Shavit (Ben-Gurion University of the Negev, Israel);*
- 09:40 Chirality and Anisotropy Induced Fano Resonances  
*Cheng-Wei Qiu (National University of Singapore, Singapore); Jian-Wen Dong (Sun Yat-Sen University, China);*
- 10:00 **Coffee Break**
- 10:20 Goos-Hänchen Shifts of the Reflected Waves from a Cold, Inhomogeneous and Magnetized Plasma Slab  
*Guo-Ding Xu (Suzhou University of Science and Technology, China); Tao-Cheng Zang (Suzhou University of Science and Technology, China); Tao Pan (Suzhou University of Science and Technology, China); Lei Gao (Soochow University, China);*
- 10:40 Design and Simulation of Optical Planar Chiral Metamaterial  
*Fang-Qing Yang (Ningbo University, China); Jie Li (Ningbo University, China); Jianfeng Dong (Ningbo University, China);*
- 11:00 Achieving All-optical Diode through Non-symmetrical Nonlinear Cavity and the Effect of Photon Tunneling  
*Yong-Feng Gao (Jiangsu University, China); Yun-Tuan Fang (Zhenjiang Watercraft College, China); Ming Zhou (Jiangsu University, China);*
- 11:20 Magneto-optical Photonic Band-gap Structures with Optimized Characteristics  
*Othman Sidek (Universiti Sains Malaysia, Malaysia); Muhammad Hassan Bin Afzal (Universiti Sains Malaysia, Malaysia); Shahid Kabir (Universiti Sains Malaysia (USM), Malaysia);*

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**Session 2A2**
**Photonics and Metamaterials with Chirality**


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**Tuesday AM, September 13, 2011**
**Room B**

Organized by Cheng-Wei Qiu, Lei Gao

 Chaired by Lei Gao
 

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- 08:20 Intrinsic and Extrinsic Chirality in Metamaterials  
*Eric Plum (University of Southampton, UK); Vasily A. Fedotov (University of Southampton, UK); Nikolay I. Zheludev (University of Southampton, UK);*
- 08:40 Nonlinear Goos-Hänchen Effect in the Gap of Photonic Crystals Containing Single-negative Materials  
*Dongliang Gao (Soochow University, China); Lei Gao (Soochow University, China);*
- 09:00 Goos-Hänchen Shift of the Reflected Wave through an Anisotropic Metamaterial Containing Metal/Dielectric Nanocomposites  
*Yanyan Huang (Suzhou University, China); Lei Gao (Soochow University, China);*

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**Session 2A3a**
**EM Scattering Models and Applications**


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**Tuesday AM, September 13, 2011**
**Room C**

Organized by Yang Du, Hong Tat Ewe

 Chaired by Hong Tat Ewe, Yang Du
 

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- 08:00 Velocity Curl and Theorems in Electromagnetic Fields  
*Zi-Hua Weng (Xiamen University, China);*
- 08:20 Ewald-Oseen Extinction Modeling on Si Nano-rod Scattering Induced Surface Depolarized Reflection  
*Yung-Hsiang Lin (National Taiwan University, Taiwan, R.O.C.); Gong-Ru Lin (National Taiwan University, Taiwan, R.O.C.);*

- 08:40 Comparative Strengths of a Pseudo-spectral Time Domain Method in Numerical Simulation of Single Particle Optical Scattering  
*R. Lee Panetta (Texas A&M University, USA); Chao Liu (Texas A&M University, USA); Ping Yang (Texas A&M University, USA);*
- 11:20 Surface Soil Moisture Retrieval from the Temporal Evolution of Surface Temperature for Bare Surface  
*Wei Zhao (Institute of Geographical Sciences and Natural Resources Research, CAS, China); Zhao-Liang Li (Institute of Geographical Sciences and Natural Resources Research, CAS, China);*

- 09:00 An Extended Study on Retrieval of Sea Ice Parameters Using Multipolarization Data  
*Y. J. Lee (Universiti Tunku Abdul Rahman, Malaysia); Wee Keong Lim (Multimedia University, Malaysia); Hong Tat Ewe (Universiti Tunku Abdul Rahman, Malaysia);*
- 11:40 Calibration on AMSR-E Soil Moisture Retrievals Based on SMOS Soil Moisture Product  
*Jinyang Du (Institute of Remote Sensing Applications, Chinese Academy of Sciences, China); Jian-Cheng Shi (University of California, USA);*

- 09:20 Effects of Precipitation on Backscattering and Emission from Sea Surface  
*Saibun Tjuatja (The University of Texas at Arlington, USA); Jiamei Li (Center for Space Science and Applied Research, Chinese Academy of Science, China); Xiaolong Dong (Center for Space Science and Applied Research, CAS, China);*

- 09:40 An Efficient Meshless Method for Solving Electromagnetic Volume Integral Equations  
*Mei Song Tong (Tongji University, China);*

10:00 **Coffee Break**

- 10:20 Electromagnetic Scattering from a Corn Canopy  
*Yang Du (Zhejiang University, China); Wenzhe Yan (Zhejiang University, China); Jian-Cheng Shi (University of California, USA); Zengyuan Li (Research Institute of Forest Resources Information Technique, Chinese Academy of Forestry, China); Er-Xue Chen (Institute of Forest Resources Information Techniques, Chinese Academy of Forestry, China);*

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**Session 2A3b**

**Remote Sensing of Water Cycle Related Components 1**

**Tuesday AM, September 13, 2011**

**Room C**

Organized by Jian-Cheng Shi

Chaired by Jian-Cheng Shi, Leung Tsang

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- 10:40 Sea Surface Salinity and Wind Retrieval Algorithm Using Passive-active L-band Microwave Data  
*Simon H. Yueh (California Institute of Technology, USA); Mario Julian Chaubell (California Institute of Technology, USA);*
- 11:00 Estimation of Soil Moisture with the Combined L-band Radar and Radiometer Measurements  
*Jian-Cheng Shi (University of California, USA);*

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**Session 2A4**  
**Time Modulated Antenna Arrays**

**Tuesday AM, September 13, 2011**

**Room D**

Organized by Shiwen Yang, Andrea Massa

Chaired by Shiwen Yang, Paolo Rocca

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- 08:20 Real-Time Nulling with 4D Arrays for Cognitive Radio  
*Lorenzo Poli (University of Trento, Italy); Paolo Rocca (University of Trento, Italy); Giacomo Oliveri (University of Trento, Italy); Andrea Massa (University of Trento, Italy);*

- 08:40 Exploiting Time-modulated Arrays for Harmonic Beamforming in Advanced Communications and Radar Systems  
*Lorenzo Poli (University of Trento, Italy); Paolo Rocca (University of Trento, Italy); Giacomo Oliveri (University of Trento, Italy); Andrea Massa (University of Trento, Italy);*

- 09:00 Sideband Level Suppression Improvement via Splitting Pulses in Time Modulated Arrays under Static Fundamental Radiation  
*Ertugrul Aksoy (Gazi University, Turkey); Erkan Afacan (Gazi University, Turkey);*

- 09:20 Generalized Representation of Sideband Radiation Power Calculation in Arbitrarily Distributed Time-modulated Planar and Linear Arrays  
*Ertugrul Aksoy (Gazi University, Turkey); Erkan Afacan (Gazi University, Turkey);*

10:00 **Coffee Break**

- 10:20 Synthesis of Pencil-beam Patterns with Time-modulated Concentric Circular Ring Antenna Arrays  
*Li Zheng (University of Electronic Science and Technology of China, China); Shiwen Yang (University of Electronic Science and Technology of China, China); Q. Zhu (University of Electronic Science and Technology of China, China); Zai-Ping Nie (University of Electronic Science and Technology of China, China);*
- 10:40 Sideband Suppression with Sub-sectional Optimized Time Steps in Time Modulated Linear Arrays  
*Quanjiang Zhu (University of Electronic Science and Technology of China, China); Shiwen Yang (University of Electronic Science and Technology of China, China); Li Zheng (University of Electronic Science and Technology of China, China); Zai-Ping Nie (University of Electronic Science and Technology of China, China);*
- 11:00 From Time Modulated Antenna Arrays to Four-dimensional Antenna Arrays — An Overview  
*Shiwen Yang (University of Electronic Science and Technology of China, China); Quanjiang Zhu (University of Electronic Science and Technology of China, China); Zai-Ping Nie (University of Electronic Science and Technology of China, China);*
- 09:00 GPU-based Computer-generated Hologram for Three-dimensional Display  
*Yi-Ta Lee (National Taiwan Normal University, Taiwan); Han-Yen Tu (St. John's University, Taiwan); Chau-Jern Cheng (National Taiwan Normal University, Taiwan, R.O.C.);*
- 09:20 Digital Holographic Microscopy Based on Graphic Process Unit  
*Han-Yen Tu (Chinese Culture University, Taiwan); Yi-Ta Lee (St. John's University, Taiwan); Chau-Jern Cheng (National Taiwan Normal University, Taiwan, R.O.C.);*
- 09:40 A Study of Optical Design of Blu-ray Pickup Head System with Liquid Crystal Element  
*Chih-Ta Yen (National Formosa University, Taiwan); Hui-Chen Yeh (National Kaohsiung First University of Science and Technology, Taiwan); Yi-Chin Fang (National Kaohsiung First University of Science and Technology, Taiwan, R.O.C.); Jui-Hsin Hsu (National Kaohsiung First University of Science and Technology, Taiwan);*
- 10:00 **Coffee Break**
- 10:20 A Study of Optical Design of Miniature Zoom Optics with Liquid Lenses  
*Cheng-Mu Tsai (Kun Shan University, Taiwan, R.O.C.); Yi-Chin Fang (National Kaohsiung First University of Science and Technology, Taiwan, R.O.C.); Cheng-Lun Chung (National Kaohsiung First University of Science and Technology, Taiwan, R.O.C.); Wei-Ting Li (National Kaohsiung First University of Science and Technology, Taiwan, R.O.C.); Je-Yi Huang (National Kaohsiung First University of Science and Technology, Taiwan, R.O.C.);*

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**Session 2A5a**

**Information Optics and Photonics**

**Tuesday AM, September 13, 2011**

**Room E**

Organized by Chau-Jern Cheng

Chaired by Chau-Jern Cheng

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- 08:00 A Fast 3D System for AR Film Thickness Measurement of Single Crystalline Silicon Solar Cells  
*Hsu-Nan Yen (St. John's University, Taiwan, R.O.C.); Hao-Chien Wang (St. John's University, Taiwan, R.O.C.);*
- 08:20 GPU-based Computing in Digital Holographic Microscopy  
*Han-Yan Tu (St. John's University, Taiwan); Yi-Ta Lee (St. John's University, Taiwan); Chau-Jern Cheng (National Taiwan Normal University, Taiwan, R.O.C.);*
- 08:40 Multimodality Imaging of Digital Holographic Microscopy  
*Xin-Ji Lai (National Taiwan Normal University, Taiwan); Yu-Chih Lin (National Taiwan Normal University, Taiwan); Han-Yen Tu (Chinese Culture University, Taiwan); Chau-Jern Cheng (National Taiwan Normal University, Taiwan, R.O.C.);*

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**Session 2A5b**

**Broadband Optical Access**

**Tuesday AM, September 13, 2011**

**Room E**

Organized by X. Yang, Jinlong Wei

Chaired by Jinlong Wei

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- 10:40 Adaptive Loading Algorithms Evaluations for IMDD SMF System-based Optical OFDM Transceivers  
*Elias Giacomidis (Athens Information Technology (AIT), Greece); Jinlong Wei (Bangor University, UK); E. Hugues Salas (Bangor University, UK); Jianming Tang (Bangor University, UK); Ioannis Tomkos (Athens Information Technology (AIT), Greece);*

- 11:00 Diversity Statistics of Free Space Optical Links Affected by Rain  
*Stanislav Zvanovec (Czech Technical University in Prague, Czech Republic);*
- 11:20 Effect of ADC on the Performance of Optical Fast-OFDM in MMF/SMF-based Links  
*Elias Giacomidis (Athens Information Technology (AIT), Greece); S. K. Ibrahim (University College Cork, Ireland); J. Zhao (University College Cork, Ireland); Jinlong Wei (Bangor University, UK); Jianming Tang (Bangor University, UK); A. D. Ellis (University College Cork, Ireland); Ioannis Tomkos (Athens Information Technology (AIT), Greece);*
- 11:40 Improved Transmission Performance of Adaptively Modulated OFDM Signals Using Quantum Dot Semiconductor Optical Amplifier Intensity Modulators  
*Ali Hamié (Arts, Sciences, and Technology University of Lebanon (AUL), Lebanon); M. Hamze (Arts, Sciences, and Technology University of Lebanon (AUL), Lebanon); Jinlong Wei (Bangor University, UK); Jianming Tang (Bangor University, UK); A. Sharaiha (Ecole Nationale d'Ingénieurs de Brest, France);*
- 12:00 Bandwidth Efficient Hybrid Wireless-optical Broadband-access Network (WOBAN) Based on OFDM Transmission  
*Redhwan Qasem Shaddad (Universiti Teknologi Malaysia, Malaysia); Abu Bakar Mohammad (Universiti Teknologi Malaysia (UTM), Malaysia); Abdulaziz Mohammed Al-Hetar (Universiti Teknologi Malaysia (UTM), Malaysia);*
- 08:20 Effect of an External Magnetic Field on Multipactor on a Dielectric Surface  
*Libing Cai (Northwest Institute of Nuclear Technology, China); Jianguo Wang (Northwest Institute of Nuclear Technology, China); Xiang-Qin Zhu (Northwest Institute of Nuclear Technology, China); Yue Wang (Northwest Institute of Nuclear Technology, China); Chun Xuan (Northwest Institute of Nuclear Technology, China); Hongfu Xia (Northwest Institute of Nuclear Technology, China);*
- 08:40 Asymptotic Analysis of the Scattering of Light by an Imperfection Core in a Waveguide System  
*Akira Komiyama (Osaka Electro-Communication University, Japan);*
- 09:00 Plasmon Bio-sensor Based on Metal Grating with High Resolution and Wide Measurement Range  
*Ziqian Luo (Kumamoto University, Japan); Taikei Suyama (Kumamoto University, Japan); Yoichi Okuno (Kumamoto University, Japan);*
- 09:20 Finite-width Excitation and Impedance Models  
*Yat-Hei Lo (The University of Hong Kong, China); Lijun Jiang (University of Hong Kong, China); Yongpin P. Chen (University of Hong Kong, China); Weng Cho Chew (University of Illinois, USA);*
- 09:40 Propagation Characteristics of Dielectric Waveguides with Arbitrary Inhomogeneous Media along the Middle Layer  
*Ryosuke Ozaki (Nihon University, Japan); Tsuneki Yamasaki (Nihon University, Japan);*
- 10:00 **Coffee Break**

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**Session 2A6a**  
**Computational Techniques**

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**Tuesday AM, September 13, 2011**

**Room F**

Organized by Yoichi Okuno, Tsuneki Yamasaki

Chaired by Tsuneki Yamasaki

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- 08:00 FDTD Analysis of Signal and Interference Characteristics in Multi-channel Propagation over Forests for WiMAX Communication  
*Yasumitsu Miyazaki (Aichi University of Technology, Japan); Nobuo Goto (The University of Tokushima, Japan); Koichi Takahashi (Aichi University of Technology, Japan);*

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**Session 2A6b**  
**Computational Electromagnetics, EM Method and Simulation 1**

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**Tuesday AM, September 13, 2011**

**Room F**

Chaired by Chao-Fu Wang

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- 10:20 Generalized Modal Expansion of Electromagnetic Fields in Unbounded Media  
*Qi Dai (Hong Kong University, China); Weng Cho Chew (University of Illinois, USA); Yang G. Liu (The University of Hong Kong, China); Bo Zhu (The University of Hong Kong, China); Lijun Jiang (University of Hong Kong, China);*

- 10:40 A Matrix Representation of Dyadic Green's Function for Modeling General Dielectric Objects Embedded in a Layered Medium  
*Yongpin Chen (University of Hong Kong, China); Weng Cho Chew (University of Illinois, USA); Li-jun Jiang (University of Hong Kong, China);*
- 11:00 Improved Hybrid MoM-PO Method with Iterative Framework  
*Zi-Liang Liu (National University of Singapore, Singapore); Chao-Fu Wang (National University of Singapore, Singapore);*
- 11:20 Study and Modeling of Electromagnetic Interference in the Neonatal Monitoring Systems  
*Elagiri-Ramalingam Rajkumar (VIT University, India);*
- 11:40 A Comparison and Validation of Two and Three Dimensional Dipoles in the Calculation of Radiated Coupling  
*Elagiri-Ramalingam Rajkumar (Institut de Recherche en Systèmes Electroniques Embarqués (IRSEEM), France); Abhishek Ramanujan (Institut de Recherche en Systèmes Electroniques Embarqués (IRSEEM), France); Mohamed Bensetti (Institut de Recherche en Systèmes Electroniques Embarqués (IRSEEM), France); Anne Louis (Institut de Recherche en Systèmes Electroniques Embarqués (IRSEEM), France);*
- 4 An Hybrid MoM-CG Method to Analyze Electromagnetic Scattering  
*Haifa Belhadj (National Engineering School of Tunis, Tunisia); Sonia Mili (National Engineering School of Tunis, Tunisia); Taoufik Aguilí (National Engineering School of Tunis, Tunisia);*
- 5 The Design of a Novel Quasi-omnidirectional Planar Metamaterial Absorber  
*Chao Gu (Air Force Engineering University, China); Shaobo Qu (Air Force Engineering University, China); Hua Ma (Air Force Engineering University, China); Jiafu Wang (Air Force Engineering University, China); Hang Zhou (Air Force Engineering University, China); Xin-Hua Wang (Air Force Engineering University, China); Lei Lu (Air Force Engineering University, China);*
- 6 Dual-band, Polarization-insensitive and Wide-angle Terahertz Metamaterial Absorber  
*Chao Gu (Air Force Engineering University, China); Shaobo Qu (Air Force Engineering University, China); Hua Ma (Air Force Engineering University, China); Jiafu Wang (Air Force Engineering University, China); Hang Zhou (Air Force Engineering University, China); Xin-Hua Wang (Air Force Engineering University, China); Lei Lu (Air Force Engineering University, China);*
- 7 Effect of the Three-dimensional Wideband Antenna on Plane Wave Distribution  
*Feng Lu (Nanjing Engineering Institute, China); Liyuan Su (PLA University of Science and Technology, China); Li-Hua Shi (PLA University of Science and Technology, China); Yan-Xin Li (Nanjing Engineering Institute, China); Bi-Hua Zhou (Nanjing Engineering Institute, China);*

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**Session 2A7**

**Poster Session 2**

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**Tuesday AM, September 13, 2011**

**9:00 AM - 12:00 AM**

**Room G**

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- 1 A Spherical Left-handed Metamaterial with Innate Isotropy  
*Jia Liu (Air Force Engineering University, China); Gang He (Air Force Engineering University, China); Wei Gu (Chengdu University of Technology, China);*
- 2 A Direction-selective Metamaterial Absorber with Polarization-insensitive Property  
*Jia Liu (Air Force Engineering University, China); Gang He (Air Force Engineering University, China); Wei Gu (Chengdu University of Technology, China);*
- 3 A Three-dimensional Left-handed Metamaterial Composed of Spiral Resonators and Crossing Continuous Wires  
*Wei Gu (Chengdu University of Technology, China); Jia Liu (Air Force Engineering University, China); Gang He (Air Force Engineering University, China);*
- 8 Sensitivity Analysis of Eddy Current Sensors Using Computational Simulation  
*Reimund Neugebauer (Fraunhofer Institute for Machine Tools and Forming Technology IWU, Germany); Welf-Guntram Drossel (Fraunhofer Institute for Machine Tools and Forming Technology IWU, Germany); Patrick Mainda (Fraunhofer Institute for Machine Tools and Forming Technology IWU, Germany); Hans-Juergen Roscher (Fraunhofer Institute for Machine Tools and Forming Technology IWU, Germany); Klaus Wolf (Fraunhofer Institute for Machine Tools and Forming Technology IWU, Germany); Martin Kroschke (EAAT GmbH Chemnitz, Germany);*

- 9 An Effective Formulation Based on Approximated Electromagnetic (EM) Mathematic Models of Feed Antennas to Efficient Estimate the Performances of Rotationally Symmetric Parabolic Reflector Antennas  
*Shih-Chung Tuan (Oriental Institute of Technology, Taiwan); Hsi-Tseng Chou (Yuan Ze University, Taiwan);*
- 10 Stabilizing the Method of Moments for Dielectrics Using a Combined Charge and Current Formulation of the EFIE  
*Jan-willem De Bleser (Katholieke Universiteit Leuven, Belgium); Emmanuel Van Lil (Katholieke Universiteit Leuven, Belgium); Antoine Van de Capelle (Katholieke Universiteit Leuven, Belgium);*
- 11 Electromagnetic Properties at Millimeter Wavelength Range of Diamond Films Grown by DC arc Plasma Jet Technique  
*Boris Mikhailovich Garin (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); W. Z. Tang (Beijing University of Science and Technology, China); F. X. Lu (Beijing University of Science and Technology, China);*
- 12 Calculation and Analysis of the Coupling Effects of High Voltage Transmission Lines in Joint-use Corridors Shared by Multi-systems  
*Jun Zhu (Southwest Jiaotong University, China); Guang-Ning Wu (Southwest Jiaotong University, China); Xiaobin Cao (Southwest Jiaotong University, China); Zihui Zhao (Southwest Jiaotong University, China); Li Chen (Southwest Jiaotong University, China);*
- 13 Design of Waveguide Filter with Rectangular Irises in Cylindrical Cavities  
*Uma Balaji (Farmingdale State College, USA);*
- 14 Design of the Wide Stopband CPW Bandpass Filter Using Cross Shaped Resonators  
*Jin-Sup Kim (Korea Electronics Technology Institute, Republic of Korea); Kyu-Bok Lee (Korea Electronics Technology Institute, Republic of Korea);*
- 15 A CMOS Doubly Balanced Monolithic Passive Star Mixer with a Compact IF Extraction  
*Yi-Chang Lee (National Cheng-Kung University, Taiwan); Shih-Han Hung (National Cheng-Kung University, Taiwan); Chih-Ming Lin (National Cheng-Kung University, Taiwan); Yeong-Her Wang (National Cheng-Kung University, Taiwan);*
- 16 A Miniature 18–38 GHz pHEMT MMIC Frequency Doubler  
*Wei-Chih Chien (National Cheng-Kung University, Taiwan); Chien-Hung Liu (National Cheng-Kung University, Taiwan); Shih-Han Hung (National Cheng-Kung University, Taiwan); Yi-Chang Lee (National Cheng-Kung University, Taiwan); Yeong-Her Wang (National Cheng-Kung University, Taiwan);*
- 17 Investigations on the Design of All-dielectric Frequency Selective Surfaces  
*Fei Yu (Air Force Engineering University, China); Shaobo Qu (Air Force Engineering University, China); Zhuo Xu (Xi'an Jiaotong University, China); Jiafu Wang (Air Force Engineering University, China); Yiming Yang (Air Force Engineering University, China); Xin-Hua Wang (Air Force Engineering University, China); Hang Zhou (Air Force Engineering University, China); Yuqing Li (Air Force Engineering University, China);*
- 18 The Design of A Broad Band Third-order Frequency-Selective Surfaces  
*Yuqing Li (Air Force Engineering University, China); Zhiping Pei (Air Force Engineering University, China); Shaobo Qu (Air Force Engineering University, China); Zhuo Xu (Xi'an Jiaotong University, China); Jiafu Wang (Air Force Engineering University, China); Hang Zhou (Air Force Engineering University, China); Chao Gu (Air Force Engineering University, China); Fei Yu (Air Force Engineering University, China);*
- 19 Versatile DVCC-based Universal Voltage-mode Biquadratic Filter  
*Hua-Pin Chen (Ming Chi University of Technology, Taiwan, R.O.C.); Yen-Hung Lin (Ming Chi University of Technology, Taiwan, R.O.C.); Wen-Hsuan Wu (Ming Chi University of Technology, Taiwan, R.O.C.); Chun-Lin Li (Ming Chi University of Technology, Taiwan, R.O.C.);*
- 20 High-input Impedance Tunable Voltage-mode Multi-function Biquadratic Filter Using All-grounded Passive Elements  
*Hua-Pin Chen (Ming Chi University of Technology, Taiwan, R.O.C.); Shih-Hsuan Yuan (Ming Chi University of Technology, Taiwan, R.O.C.); Wei-Yen Huang (Ming Chi University of Technology, Taiwan, R.O.C.); Yu-Hsin Lin (Ming Chi University of Technology, Taiwan, R.O.C.);*



- 21 Versatile CCII-based Universal Current-mode Bi-quadratic Filter  
Hua-Pin Chen (*Ming Chi University of Technology, Taiwan, R.O.C.*); Kai Chen (*Ming Chi University of Technology, Taiwan, R.O.C.*); Chun-Yeh Chen (*Ming Chi University of Technology, Taiwan, R.O.C.*); Ming-Shan Chen (*Ming Chi University of Technology, Taiwan, R.O.C.*);
- 22 Sensitivity of Fabry-Perot Resonator Based Measurements of Gas Absorptions  
Petr Píkša (*Czech Technical University, Czech Republic*); Stanislav Zvanovec (*Czech Technical University in Prague, Czech Republic*); Petr Cerný (*Czech Technical University in Prague, Czech Republic*);
- 23 Microstrip Diplexer Using High Permittivity Substrate  
Cheng-Hsing Hsu (*National United University, Taiwan*); Hsin-Han Tung (*National United University, Taiwan*); Chen-Kang Hsu (*National United University, Taiwan*); Jenn-Sen Lin (*National United University, Taiwan*); His-Wen Yang (*National United University, Taiwan*);
- 24 A Broadband Balun Using Meander Line  
Ching-Fang Tseng (*National United University, Taiwan*); Shu-Cheng Lu (*National United University, Taiwan*);
- 25 A Novel Multilayer Dual-mode Substrate Integrated Circular Cavity (SICC) Filter with Power Divider  
Zhigang Zhang (*University of Electronic Science and Technology of China, China*); Yong Fan (*University of Electronic Science and Technology of China, China*); Yong-Hong Zhang (*University of Electronic Science and Technology of China, China*);
- 26 Design of a Bandpass Filter Using Parallel Coupled Stepped Impedance Resonator Using the Novel Method of Lines  
Eman G. E. Ouf (*Electronics Research Institute, Egypt*); Hossam A. Saker (*Electronics Research Institute, Egypt*); Esmat Abdel-Fattah Abdallah (*Electronics Research Institute, Egypt*); Hadia M. El-Henawy (*Ain Shams University, Egypt*);
- 27 Design of On-chip Stacked Spiral Inductors with Variable Metal-line Width  
Hao-Hui Chen (*National Kaohsiung First University of Science and Technology, Taiwan, R.O.C.*); Ming-Huei Chen (*National Kaohsiung First University of Science and Technology, Taiwan, R.O.C.*); Young-Huang Chou (*Huafan University, Taiwan, R.O.C.*);
- 28 A High-Q CMOS Tunable Notch Filter  
Sen Wang (*National Taipei University of Technology, Taiwan*); Bo-Zong Huang (*National Taipei University of Technology, Taiwan, R.O.C.*);
- 29 Novel Millimeter-wave Power Combining Utilizing Wafer Level Packaging Technology  
Yingqian Huang (*Zhejiang University, China*); Xinyi Hu (*Zhejiang University, China*); Jinfang Zhou (*Zhejiang University, China*); Zhi-Guo Shi (*Zhejiang University, China*); Kangsheng Chen (*Zhejiang University, China*);
- 30 Input Signal Distribution Using Coupled  $\lambda/2$  Standing-wave Oscillators for Coherent Power Combining  
Yingqian Huang (*Zhejiang University, China*); Xi Zi (*Zhejiang University, China*); Jinfang Zhou (*Zhejiang University, China*); Kangsheng Chen (*Zhejiang University, China*);
- 31 An Investigation of Second-Harmonic Shifting Characteristic of Stepped-Impedance Resonators  
Somboon Theerawisitpong (*Rajamangala University of Technology Thanyaburi, Thailand*); Toshitatsu Suzuki (*Nippon Institute of Technology, Japan*); Yozo Utsumi (*Nippon Institute of Technology, Japan*);
- 32 A Novel Bandstop Resonator in Waveguide and Its Application for Suppressing the Spurious Responses with New Advantages to Typical Resonators  
Seyyed Ali Hassani Gangaraj (*Iran University of Science and Technology, Iran*); Majid Tayarani (*Iran University of Science and Technology (IUST), Iran*);
- 33 Design of an UWB Bandpass Filter Using a Microstrip Five-mode Step-impedance Resonator  
Zhewang Ma (*Saitama University, Japan*); Akihito Beppu (*Saitama University, Japan*); Chun-Ping Chen (*Kanagawa University, Japan*); Tet-suo Anada (*Kanagawa University, Japan*);
- 34 Novel RF Front-end Module with Power Management Technique by Dynamic Supply  
Chie-In Lee (*National Sun Yat-Sen University, Taiwan, R.O.C.*); Yan-Ting Lin (*National Sun Yat-Sen University, Taiwan, R.O.C.*); Y. H. Chen (*National Sun Yat-Sen University, Taiwan, R.O.C.*); Wei-Cheng Lin (*National Sun Yat-Sen University, Taiwan, R.O.C.*);

- 35 A Novel Power Management Technique Applied in the Low Power Transceiver  
*Chie-In Lee (National Sun Yat-Sen University, Taiwan, R.O.C.); Yan-Ting Lin (National Sun Yat-Sen University, Taiwan, R.O.C.); J. J. Chen (National Sun Yat-Sen University, Taiwan, R.O.C.); Wei-Cheng Lin (National Sun Yat-Sen University, Taiwan, R.O.C.);*
- 36 A Low-voltage and Low-power Low Noise Amplifier for Ku-band Application  
*Cheng-Chi Yu (Feng-Chia University, Taiwan, R.O.C.); Jiin-Hwa Yang (Feng-Chia University, Taiwan, R.O.C.); Lien-Chi Su (Feng-Chia University, Taiwan, R.O.C.); Heng-Yi Lee (Feng-Chia University, Taiwan, R.O.C.); Chang-Chih Chen (Feng-Chia University, Taiwan, R.O.C.);*
- 37 A Broadband Low Noise Amplifier for X-band Applications  
*Cheng-Chi Yu (Feng-Chia University, Taiwan, R.O.C.); Jiin-Hwa Yang (Feng-Chia University, Taiwan, R.O.C.); Hsiao-Hua Yeh (Feng-Chia University, Taiwan, R.O.C.); Lien-Chi Su (Feng-Chia University, Taiwan, R.O.C.);*
- 38 Effect of Buffer Layer Thickness on the Surface Impedance of Un-patterned Superconducting Films Operating in Microwave Frequencies  
*Heng-Tung Hsu (Yuan Ze University, Taiwan, R.O.C.); Chien-Jang Wu (National Taiwan Normal University, Taiwan);*
- 39 A Tri-band Bandpass Filter Using Short-stub Loaded SIR  
*Xuehui Guan (East China Jiaotong University, China); Fang Wen (East China Jiaotong University, China); Wei Fu (East China Jiaotong University, China); Hai-Wen Liu (East China Jiaotong University, China); Guo-Hui Li (Shanghai University, China); Lu Zhu (East China Jiaotong University, China);*
- 40 Waveguide-based Meniscus Thin Lens for Broadband MM-wave Power Combining Applications  
*Nan Yang (Zhejiang University, China); Huaicheng Zhao (Nanjing University of Science and Technology, China); Xidong Wu (Zhejiang University, China); Jinfang Zhou (Zhejiang University, China);*

**Session 2P1****Generation, Propagation and Application of Coherent and Partially Coherent Beams with Special Beam Profile and Polarization 2****Tuesday PM, September 13, 2011****Room A**

Organized by Yangjian Cai

Chaired by Yangjian Cai

- 13:00 Sub-cycle Pulse with Arbitrary Envelope  
*Jian Zheng (Zhejiang University, China); Enming Qiu (Zhejiang University, China); Qiang Lin (Zhejiang University, China);*
- 13:20 Beam Propagation Factor of Truncated Gaussian Schell-model Beams in Turbulence  
*Xiaoling Ji (Sichuan Normal University, China); Xiaoping Li (Sichuan Normal University, China);*
- 13:40 Radiation Force of Highly Focused Gaussian Beam on Gold Nano-particles  
*F. Y. Jiang (Zhejiang University, China); Kaikai Huang (Zhejiang University, China); Xuanhui Lu (Zhejiang University, China);*
- 14:00 Evolution Properties of a Stochastic Electromagnetic Beam in a Gaussian Cavity  
*Shijun Zhu (Soochow University, China); Yangjian Cai (Soochow University, China);*
- 14:20 Focusing Properties of a Partially Coherent Pulse  
*Yiming Dong (Soochow University, China); Yangjian Cai (Soochow University, China); Chengliang Zhao (Soochow University, China);*
- 14:40 Phase Singularities of Focused High-order Hermite-Gaussian Beams  
*Yongtao Zhang (Luoyang Normal College, China); Chaoliang Ding (Luoyang Normal College, China); Zhiguo Zhao (Luoyang Normal College, China); Lüzhan Pan (Luoyang Normal College, China);*
- 15:00 **Coffee Break**
- 15:20 Laser Radar System with a Partially Coherent Beam  
*Gaofeng Wu (Soochow University, China); Yangjian Cai (Soochow University, China); Fei Wang (Soochow University, China);*
- 15:40 The Effect of Spherical Aberration on the Spectral Stokes Singularities of Tightly Focused Partially Coherent Anomalous Hollow Beams  
*Yamei Luo (Luzhou Medical College, China); Jinhong Li (Taiyuan University of Science and Technology, China); Bihua Tang (Luzhou Medical College, China);*

- 16:00 Spatio-temporal Coupling of a Stochastic Electromagnetic Pulse  
*Min Yao (Soochow University, China); Yangjian Cai (Soochow University, China);*
- 16:20 Propagation of Nonparaxial Gaussian Schell-model Electromagnetic Beams through an Aperture  
*Haixia Wang (Luoyang Normal College, China); Chaoliang Ding (Luoyang Normal College, China); Yongtao Zhang (Luoyang Normal College, China); Lüzhan Pan (Luoyang Normal College, China);*
- 16:40 Spectral Stokes Singularities of Nonparaxial Partially Coherent Elliptical Gaussian Vortex Beams Diffracted at a Half-plane Screen  
*Shangbin Zheng (Luzhou Medical College, China); Yamei Luo (Luzhou Medical College, China); Yuan Zhu (Luzhou Medical College, China);*
- 14:20 Influence of Spherical Anisotropy on the Optical Properties of Plasmon Resonant Metallic Nanoparticles  
*Yaxian Ni (Soochow University, China); Lei Gao (Soochow University, China);*
- 14:40 Sharply Asymmetric Reflection from Magnetic Metamaterials and its Potential Applications  
*Shiyang Liu (Zhejiang Normal University, China); Wanli Lu (Fudan University, China); Zhifang Lin (Fudan University, China); Siu-Tat Chui (University of Delaware, USA);*
- 15:00 **Coffee Break**
- 15:20 Optical Force in Magnetic Plasmon Cavities  
*Hui Liu (Nanjing University, China); Jack Ng (The Hong Kong University of Science and Technology, China); S. B. Wang (The Hong Kong University of Science and Technology, China); Z. F. Lin (The Hong Kong University of Science and Technology, China); Zhihong Hang (The Hong Kong University of Science and Technology, China); Che Ting Chan (The Hong Kong University of Science and Technology, China); S. N. Zhu (Nanjing University, China);*

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**Session 2P2**

**Electromagnetic Resonances in Photonic/Plasmonic Crystals and Transformational Metamaterials**

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**Tuesday PM, September 13, 2011**

**Room B**

Organized by Cheng-Wei Qiu, Jian-Wen Dong

Chaired by Jian-Wen Dong

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- 13:00 Dirac Cones Induced by Accidental Degeneracy in Photonic Crystals and Zero Refractive Index Materials  
*Xueqin Huang (Hong Kong University of Science and Technology, China); Yun Lai (The Hong Kong University of Science and Technology, China); Zhihong Hang (The Hong Kong University of Science and Technology, China); Che Ting Chan (The Hong Kong University of Science and Technology, China);*
- 13:20 Strong Photon-plasmon Coupling in a Layered Waveguide  
*A. Castanie (University of Montpellier 2, France); Didier Felbacq (Université de Montpellier 2, France); Brahim Guizal (Université de Montpellier 2, France);*
- 13:40 Cancellation of Reflection and Transmission at Metamaterial Surfaces  
*Xinhua Hu (Fudan University, China); Jiong Yang (Fudan University, China); Jian Zi (Fudan University, China);*
- 14:00 Fabrication of Photonic Crystals by Holographic Lithography Using Single Refracting Prism and Spatial Light Modulator for Phase Control  
*Kam Sing Wong (Hong Kong University of Science and Technology, China);*
- 15:40 Observation of Backscattering-immune Tunnelling States without External Magnetic Fields  
*Jian-Wen Dong (Sun Yat-Sen University, China); Wen-Jie Chen (Sun Yat-Sen University, China); Zhihong Hang (The Hong Kong University of Science and Technology, China); C. T. Chan (The Hong Kong University of Science and Technology, China); He-Zhou Wang (Sun Yat-Sen University, China);*
- 16:00 Interaction between Resonating Elements in Conventional and Dielectric Metamaterials  
*Elena Semouchkina (Michigan Technological University, USA);*
- 16:20 Subwavelength Electromagnetic Diode: One-way Response of Cascading Nonlinear Meta-atoms  
*Yuancheng Fan (Tongji University, China); Jin Han (Tongji University, China); Zeyong Wei (Tongji University, China); Chao Wu (Tongji University, China); Yang Cao (Tongji University, China); Xing Yu (Tongji University, China); Hongqiang Li (Tongji University, China);*
- 16:40 Tuning Trapped-mode Resonances in a Planar Metamaterial  
*Jin Hui Shi (Harbin Engineering University, China); Eric Plum (University of Southampton, UK); Vasily A. Fedotov (University of Southampton, UK); Nikolay I. Zheludev (University of Southampton, UK);*

- 17:00 Modelling of a Monolithic Pulse Reshaper Based on a Photonic Crystal Waveguide  
*Tun Cao (Dalian University of Technology, China);*

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**Session 2P3**

**Remote Sensing of Water Cycle Related Components 2**

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**Tuesday PM, September 13, 2011**

**Room C**

Organized by Jian-Cheng Shi

Chaired by Jian-Cheng Shi, Leung Tsang

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- 13:00 Improve Geostationary IR Precipitation Estimation by Space-based Passive and Active Microwave Measurements  
*Peng Zhang (China Meteorological Administration, China); Danyu Qin (China Meteorological Administration, China); H. Yang (China Meteorological Administration, China); Qifeng Lu (China Meteorological Administration, China); Ran You (China Meteorological Administration, China);*
- 13:20 The Preliminary Results from Assimilating Rain Rate Derived from Satellite  
*Qifeng Lu (China Meteorological Administration, China); Xiaofeng Yang (China Meteorological Administration, China); Ran You (China Meteorological Administration, China); Danyu Qin (China Meteorological Administration, China); Hu Yang (China Meteorological Administration, China); Peng Zhang (China Meteorological Administration, China);*
- 13:40 An Initial Study on Assimilating Satellite-derived Total Precipitable Water in a Variational Assimilation System  
*Qifeng Lu (China Meteorological Administration, China); Xiaofeng Yang (China Meteorological Administration, China); Chunqiang Wu (China Meteorological Administration, China); Jing Zheng (China Meteorological Administration, China); Danyu Qin (China Meteorological Administration, China); Hu Yang (China Meteorological Administration, China); Peng Zhang (China Meteorological Administration, China);*
- 14:00 A Validation of Remotely Sensed Evapotranspiration Using In-situ Observations at Multi-scales in Hai River Basin, China  
*Zhenzhen Jia (Beijing Normal University, China); Shaomin Liu (Beijing Normal University, China); Ziwei Xu (Beijing Normal University, China);*
- 14:20 Electromagnetic Models of Like-polarization and Cross-polarization in Radar Remote Sensing of Terrestrial Snow at X- and Ku-band for CoReH20 and SCLP Applications  
*Xiaolan Xu (University of Washington, USA); Leung Tsang (University of Washington, USA); Wenmo Chang (University of Washington, USA); Simon H. Yueh (California Institute of Technology, USA);*
- 14:40 Inversion of Snow Emission from Passive Microwave Time-series Observation Using Simulated Data  
*Lingmei Jiang (Beijing Normal University, China); Jian-Cheng Shi (University of California, USA);*
- 15:00 **Coffee Break**
- 15:20 An Experimental Study on Relationship between Snow Cover Fraction and Passive Microwave Brightness Temperature  
*Tao Che (Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences, China); Liyun Dai (Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences, China); Xin Li (Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences, China);*
- 15:40 Trend of Terrestrial Water Storage Redistribution in China Detected by Recent Nine Years Satellite Gravity Observations  
*Zhi-Cai Luo (Wuhan University, China); Qiong Li (Wuhan University, China); Kun Zhang (Wuhan University, China); Bo Zhong (Wuhan University, China);*
- 16:00 The Web Site for Retrieving the Microwave Complex Permittivity Spectra of Moist Soils  
*Valery L. Mironov (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences, Russia); A. M. Epikhin (Digital Mind Development Ltd., Russia); Sergey V. Fomin (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences, Russia); Lyudmila G. Kosolapova (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences, Russia);*
- 16:20 Temperature Dependable Microwave Dielectric Model for a Pine Litter Thawed and Frozen  
*Valery L. Mironov (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences, Russia); Igor V. Savin (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences, Russia);*

- 16:40 Backscattering Measurements of River Surfaces at 35 GHz  
*Pierre Borderies (Office National d'Etudes et de Recherches Aerospatiales (ONEAR), France);*
- 17:00 Data Cube Representation of Vegetated Surfaces Based on Physical Scattering Model for SMAP Mission  
*Xiaolan Xu (University of Washington, USA); Tien-Hao Liao (University of Washington, USA); Leung Tsang (University of Washington, USA); Seung-Bum Kim (California Institute of Technology, USA); Eni Gerald Njoku (California Institute of Technology, USA);*
- 17:20 SMOS First Results Successes and Issues: Towards Global Soil Moisture and Sea Sea Salinity Maps  
*Yann H. Kerr (Centre d'Etudes Spatiales de la BIOSphere (CESBIO (CNRS/IRD/CNES/UPS)), France); P. Waldteufel (IPSL, France); Francois Cabot (CESBIO, France); P. Richaume (CESBIO, France); A. Mahmoodi (Array Systems, Canada); Steven Delwart (ESA-ESTEC, Italy); J. P. Wigneron (INRA EPHYSE, France); S. Mecklenburg (ESA-ESRIN, Italy); Nicolas Reul (IFREMER, France); Jacqueline Boutin (UPMC, France);*
- 14:00 Novel Wideband Microstrip Antenna Array with Double U-slots  
*Hong-Jun Wu (Soochow University, China); Jie-Feng Xu (Soochow University, China); Xiao Hua (Soochow University, China); Shi-Lei Zhang (Soochow University, China); Ying Wang (Soochow University, China);*
- 14:20 Dual-band Microstrip Antenna Array with EBG Structures  
*Jian-Jian Gu (Soochow University, China); Ying Wang (Soochow University, China);*
- 14:40 A Compact Printed Multi-band Antenna for Laptop Applications  
*Cheng-Chi Yu (Feng-Chia University, Taiwan, R.O.C.); Jiin-Hwa Yang (Feng-Chia University, Taiwan, R.O.C.); Chang-Chih Chen (Feng-Chia University, Taiwan, R.O.C.); Wen-Chao Hsieh (Feng-Chia University, Taiwan, R.O.C.);*
- 15:00 **Coffee Break**
- 15:20 A Novel Compact EBG Structure for Mutual Coupling Reduction in a Patch Array  
*Haoyun Fei (Soochow University, China); Huipin Guo (Soochow University, China); Xueguan Liu (Soochow University, China); Ying Wang (Soochow University, China);*

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**Session 2P4a**
**Antenna Array for Wireless Communications****Tuesday PM, September 13, 2011****Room D**

Organized by Yantao Yu

Chaired by Yantao Yu, Ying Wang

- 13:00 Method of Moment Simulation of Noise Correlation in Antenna Arrays  
*Choon Hock Niow (National University of Singapore, Singapore); Hon Tat Hui (National University of Singapore, Singapore); Yantao Yu (Chongqing University, China);*
- 13:20 A Compact Printed Array with Increased Port Isolation  
*Yantao Yu (Chongqing University, China);*
- 13:40 Study on the Decoupling of Stacked Phased Array Coils for Magnetic Resonance Imaging  
*Dandan Liang (National University of Singapore, Singapore); Hon Tat Hui (National University of Singapore, Singapore); Tat-Soon Yeo (National University of Singapore, Singapore); Yantao Yu (Chongqing University, China);*

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**Session 2P4b**
**Antenna and Array Design and Simulation Techniques 1****Tuesday PM, September 13, 2011****Room D**

Organized by Wenxing Li, Wenhua Yu

Chaired by Wenxing Li, Wenhua Yu

- 15:40 Simulation of a Conformal Reconfigurable Fractal Tree Antenna with Adaptive Multi Beam and Frequency Characteristics  
*Huseyin Altun (Fatih University, Turkey); Erdal Korkmaz (Fatih University, Turkey); Bahattin Turetken (National Research Institute of Electronics and Cryptology, Turkey);*
- 16:00 Performance Investigation of Antenna Array with FSS Radome  
*Wenhua Yu (Pennsylvania State University, USA); Wenxing Li (Harbin Engineering University, China);*

- 16:20 Convergence and Sidelobe Suppression Properties of Array Antenna  
*James Jen (California State Polytechnic University-Pomona, USA); Meng Qian (California State Polytechnic University-Pomona, USA); Zekeriya Aliyazicioglu (California State Polytechnic University-Pomona, USA); H. K. Hwang (California State Polytechnic University-Pomona, USA);*
- 14:40 Invariant Analysis of Sensor-tilt Effect in Eddy Current NDE  
*Guang Yang (Michigan State University, USA); Yiming Deng (University of Colorado Denver, USA); Zhiwei Zeng (Xiamen University, China); Xin Liu (University of Colorado Denver, USA); Lalita Udpa (Michigan State University, USA); Yuning Yang (Michigan State University, USA);*

- 16:40 Stacked Coupled Circular Microstrip Patch Antenna for Dual Band Applications  
*Pradeep Kumar (Jaypee University of Information Technology, India); Natasha (Jaypee University of Information Technology, India);*

15:00 **Coffee Break**

- 15:20 Multi-sensor Data Fusion System for Enhanced Analysis of Deterioration in Concrete Structures  
*Othman Sidek (Universiti Sains Malaysia, Malaysia); Shahid Kabir (Universiti Sains Malaysia (USM), Malaysia); Sayed Abulhasan Quadri (Universiti Sains Malaysia, Malaysia);*

- 15:40 Fiber Optic-based Sensing Approach for Corrosion Detection  
*Othman Sidek (Universiti Sains Malaysia, Malaysia); Shahid Kabir (Universiti Sains Malaysia (USM), Malaysia); Muhammad Hassan Bin Afzal (Universiti Sains Malaysia, Malaysia);*

- 16:00 Industrial Applications of SonicIR Nondestructive Evaluation Method  
*Xiaoyan Han (Wayne State University, USA); Golam Newaz (Wayne State University, USA); Lawrence D. Favro (Wayne State University, USA); Robert L. Thomas (Wayne State University, USA);*

- 16:20 Artifact Mitigation in High Energy CT via Monte Carlo Simulation  
*Xuemin Jin (Spectral Sciences, Inc., USA); Robert Y. Levine (Spectral Sciences, Inc., USA);*

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**Session 2P5**

**Electromagnetic Nondestructive Evaluation (NDE) Methods for Industrial and Medical Applications**

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**Tuesday PM, September 13, 2011**

**Room E**

Organized by Yiming Deng

Chaired by Yiming Deng, Zhiwei Zeng

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- 13:20 Electromagnetic Imaging in Nondestructive Evaluation: Industrial and Medical Applications  
*Yiming Deng (University of Colorado Denver, USA); Zhiwei Zeng (Xiamen University, China); Xin Liu (University of Colorado Denver, USA);*

- 13:40 Review of Finite Element Method for Simulating Eddy Current Testing  
*Zhiwei Zeng (Xiamen University, China); Yiming Deng (University of Colorado Denver, USA); Xin Liu (University of Colorado Denver, USA);*

- 14:00 Domain-decomposition Finite Element Method for Eddy Current Modeling  
*Rongguang He (Xiamen University, China); Lin Huang (Xiamen University, China); Zhiwei Zeng (Xiamen University, China);*

- 14:20 The Use of RBF Based on Ant Colony Algorithm and Fisher Ratio for Eddy Current Nondestructive Detecting System  
*Xiaoyun Sun (Shijiazhuang Tiedao University, China); Donghui Liu (Hebei University of Science and Technology, China); Aihua Li (Mechanical Engineering College, China);*

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**Session 2P6**

**Electromagnetic Media and Wireless Propagation**

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**Tuesday PM, September 13, 2011**

**Room F**

Chaired by Mitsuo Tateiba, Saibun Tjuatja

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- 13:20 Analysis of Depolarized Electromagnetic Waves Propagated through Random Media  
*Yukihisa Nanbu (Sasebo National College of Technology, Japan); Mitsuo Tateiba (Ariake National College of Technology, Japan); Hosam El-Ocla (Lakehead University, Canada);*

- 13:40 Anisotropic Properties of Graphene and BN Sandwiched Graphene Based on the First-principle Theory and Kramers-Kronig Relation  
*Junxia Wang (Zhejiang University, China); Yang Xu (Zhejiang University, China); Hongsheng Chen (Zhejiang University, China);*
- 14:00 Casimir Stresses in Slender Inhomogeneous Dielectric Media  
*Robin W. Tucker (Lancaster University, UK); S. Goto (Lancaster University, UK); T. Walton (Lancaster University, UK);*
- 14:20 Electromagnetic Analysis of an in-car Complex Channel of Propagation by Means of Non Invasive Measurements and FDTD Based EM Simulations  
*Jean Guy Tartarin (Université de Toulouse, France); Mohamed Cheikh (Continental Automotive France SAS, France); Jacques David (University of Toulouse, France); Alexis Morin (Continental Automotive France SAS, France);*
- 14:40 Characterisation and Modelling of Ultra Wideband Radio Propagation Links for Low Power Body-centric Wireless Network  
*Qammer Hussain Abbasi (Queen Mary, University of London, United Kingdom); Wenxuan Tang (University of London, United Kingdom); Akram Alomainy (Queen Mary University London, United Kingdom); Yang Hao (Queen Mary University of London, UK);*
- 15:00 **Coffee Break**
- 15:20 Received Signal Strength (RSS) Based Localization for WLAN Networks  
*Sreejith Sisupalan Lathikumari (The University of Texas at Arlington, USA); Suman Kumar Gunnala (The University of Texas at Arlington, USA); Saibun Tjuatja (The University of Texas at Arlington, USA);*
- 15:40 A Neural Network-ray Launching Technique for Coverage Prediction  
*Juan Pascual-Garcia (Technical University of Cartagena, Spain); Jose-Victor Rodriguez (Universidad Politecnica de Cartagena, Spain); María Teresa Martínez-Inglés (Universidad Politecnica de Cartagena, Spain); Jose-Maria Molina-Garcia-Pardo (Technical University of Cartagena (UPCT), Spain); Leandro Juan-Llacer (Technical University of Cartagena (UPCT), Spain);*
- 16:00 A Robust Indoor Wireless Localization  
*Hermawan Raharjo (Nanyang Technological University of Singapore, Singapore); Siwen Chen (Nanyang Technological University, Singapore); Pengty Ngor (Nanyang Technological University, Singapore);*
- 16:40 Channel Impulse Response Simulation Based on Propagation Graph Theory for High Speed Train Scenarios  
*Li Tian (Tongji University, China); Quan Zuo (Tongji University, China); Junhe Zhou (Tongji University, China); Xuefeng Yin (Tongji University, China); Mei Song Tong (Tongji University, China); Zhimeng Zhong (Huawei Technology Company, China); Stan X. Lu (Huawei Technology Company, China);*
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- Session 2P7**  
**Poster Session 3**
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- Tuesday PM, September 13, 2011**  
**14:00 PM - 17:00 PM**  
**Room G**
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- 1 Neural Model for Modeling of Dumbbell Shape Defected Ground Structure  
*Hamid Reza Dalili Oskoei (University of Aeronautical Science & Technology, Iran); Jafar Khalilpour (Shahid Sattary Air University, Iran);*
- 2 A Novel Multilayer Dual-mode Substrate Integrated Circular Cavity (SICC) Filter with Two Arc-shaped Coupling Slots  
*Zhigang Zhang (University of Electronic Science and Technology of China, China); Yong Fan (University of Electronic Science and Technology of China, China); Yu Jian Cheng (University of Electronic Science and Technology of China, China); Yong-Hong Zhang (University of Electronic Science and Technology of China, China);*
- 3 Design of an LNA with Ultra Low Noise and Model Noise Temperature at 2.45 GHz  
*Syed Ashhad Burney (Nanjing University of Aeronautics and Astronautics, China); Qunsheng Cao (Nanjing University of Aeronautics and Astronautics, China);*
- 4 The Study of Statistical Properties for Rainfall and Rain-induced Attenuation in Xi'an, China  
*Houbao Shi (Xidian University, China); Shu-Hong Gong (Xidian University, China); Kexiang Liu (Xidian University, China);*
- 5 Inversion of Refractive Index in Marine Atmospheric Duct by Genetic Algorithm  
*Xiao-Long Zhao (Xi'dian University, China); Yuping Wang (Tianshui Normal University, China); Li-hong Bao (Tianshui Normal University, China);*

- 6 Subsurface Imaging with NIR Light Using Polarization Gating  
*Milos Sormaz (Swiss Federal Laboratories for Materials Science and Technology (EMPA), Switzerland); P. Jenny (Swiss Federal Institute of Technology Zurich (ETH), Switzerland);*
- 7 Radar Based Tomography System for Breast Tumor Imaging  
*V. Lalitha (MNM Jain Engineering College, India); Elagiri-Ramalingam Rajkumar (IRSEEM, France);*
- 8 A Compressive Sensing Imaging Method for Simulated GPRs Data  
*Lu Zhu (East China Jiaotong University, China); Hai-Wen Liu (East China Jiaotong University, China); Shan Wang (East China Jiao Tong University, China); Xuehui Guan (East China Jiaotong University, China);*
- 9 Pseudo Random Binary Sequence GPR Imaging via Compressive Sensing  
*Xin Xu (Institute of Electronics, Chinese Academy of Sciences, China); Wei Wang (Graduate School, Chinese Academy of Sciences, China); Zhiwei Lin (Institute of Electronics, Chinese Academy of Sciences, China); Peng Zhang (Institute of Electronics, Chinese Academy of Sciences, China); Xiaojuan Zhang (Institute of Electronics, Chinese Academy of Sciences, China);*
- 10 Short Electric-field Antennae as Diagnostic Tools for Space Plasmas  
*Jean Gabriel Trotignon (Centre National de la Recherche Scientifique, CNRS, France); Jean Louis Rauch (Centre National de la Recherche Scientifique, CNRS, France);*
- 11 Absolute Determination of the Ion Density inside the Terrestrial Magnetosphere Using the Wave Propagation Properties Observed by WHISPER and STAFF Experiments on Board CLUSTER Satellites  
*Jean Louis Rauch (LPC2E, France); Jean Gabriel Trotignon (LPC2E, France); F. Mazouz (LPC2E, France); N. Cornilleau-Wehrlin (LPP, École Polytechnique, France); P. Robert (LPP, École Polytechnique, France);*
- 12 The Simulation of Reflectance Characteristics of Nanotube Array  
*Ming-Jer Jeng (Chang Gung University, Taiwan, R.O.C.); Bo-Yi Wu (Chang Gung University, Taiwan, R.O.C.); Liann-Be Chang (Chang Gung University, Taiwan, R.O.C.);*
- 13 An Analytic Solution to the Scattering Fields of Shaped Beam by a Moving Conducting Infinite Cylinder with Dielectric Coating  
*Ming-Jun Wang (Xianyang Normal College, China); Huayong Zhang (An Hui University, China); Ying-Le Li (Xianyang Normal University, China); Jia-Dong Xu (Northwestern Polytechnical University, China); Ningjing Xiang (Xianyang Normal University, China);*
- 14 Radar and Optical Modelling of Forest Remote Sensing  
*Clément Albinet (ONERA-DEMR, France); Pierre Borderies (Office National d'Etudes et de Recherches Aérospatiales (ONERA), France); Sophie Fabre (ONERA-DOTA, France);*
- 15 Quantifying Rice Map and Yield by Using Remotely-sensed Imagery  
*Yuei-An Liou (National Central University, Taiwan); Hsueh-Chun Sha (National Central University, Taiwan);*
- 16 Error of Moisture Retrieving from the SMOS Radiobrightness with the Use of the Temperature Dependable Soil Dielectric Model  
*Valery L. Mironov (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences, Russia); Lyudmila G. Kosolapova (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences, Russia); François Demontoux (Bordeaux 1 University, France);*
- 17 Topographic Normalization of Landsat TM Images in Rugged Terrain Based on the High-resolution DEM Derived from ASTER  
*Yanli Zhang (Cold and Arid Regions Environmental and Engineering Research Institute, CAS, China); Xin Li (Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences, China);*



- 18 Mapping Surface Soil Moisture Using L-band Radiometer Observations in the Second Australian Airborne Cal/val Experiment for SMOS (AACES-2)  
*Shuguo Wang (Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences, China); Xin Li (Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences, China); Tao Che (Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences, China); Xujun Han (Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences, China); Jeffrey Walker (Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences, China); Christoph Rüdiger (The University of Melbourne, Australia); Sandy Peischl (Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences, China); Nan Ye (Monash University, Australia);*
- 19 Monitoring Aurora in Day Light Side of the Earth in Relation to Solar Plasma Flow  
*Shigehisa Nakamura (Kyoto University, Japan);*
- 20 Satellite Monitoring of Subglacial Volcano in Atlantic  
*Shigehisa Nakamura (Kyoto University, Japan);*
- 21 Satellite Monitoring of Aurora Oval on the Earth in Relation to Solar Winds  
*Shigehisa Nakamura (Kyoto University, Japan);*
- 22 Intensity Distribution of the Light in a Diffuse Sphere  
*Ailin Yang (Zhejiang University, China); Jian Zheng (Zhejiang University, China); Qiang Lin (Zhejiang University, China);*
- 23 Time Reversal Method Based on Wavelet-analysis for Complex Environment  
*Qi Kong (Beijing Institute of Technology, China); Guangze Yu (Beijing Institute of Technology, China); Qingfan Shi (Beijing Institute of Technology, China);*
- 24 RCS Reduction Assisted by Surface Plasmon Polaritons  
*Jiafu Wang (Air Force Engineering University, China); Shaobo Qu (Air Force Engineering University, China); Duolin Zhang (Air Force Engineering University, China); Zhuo Xu (Xi'an Jiaotong University, China); Hua Ma (Air Force Engineering University, China); Song Xia (Xi'an Jiaotong University, China); Xin-Hua Wang (Air Force Engineering University, China); Hang Zhou (Air Force Engineering University, China); Lei Lu (Air Force Engineering University, China); Fei Yu (Air Force Engineering University, China);*
- 25 Polarization Changes of Stochastic Spatially and Spectrally Partially Coherent Electromagnetic Pulsed Beams in Turbulent Atmosphere  
*Zhiguo Zhao (Luoyang Normal College, China); Jianguo Lu (Jiaozuo Teachers College, China); Fengguo Fan (Shangqiu Teachers College, China); Haixia Wang (Luoyang Normal College, China); Yongtao Zhang (Luoyang Normal College, China);*
- 26 The Frequency Dependence Problem of Conducting Cylinder Buried in a Half-space  
*Wei Chien (De Lin Institute of Technology, Taiwan, R.O.C.); Hsien-Wei Tseng (De Lin Institute of Technology, Taiwan, R.O.C.); Kai-Xiang Huang (De Lin Institute of Technology, Taiwan, R.O.C.); Chi-Hsien Sun (Tamkang University, Taiwan, R.O.C.);*
- 27 Far-field Diffraction Patterns Evolution of a Gaussian Laser Beam due to Thermo-optical Effect in Metal Nanocolloids  
*Yurii E. Geints (Zuev Institute of Atmospheric Optics SB RAS, Russia); Nicolay S. Panamarev (Siberian Physical and Technical Institute, Russia); Aleksey A. Zemlyanov (Siberian Physical and Technical Institute, Russia);*
- 28 Two-dimensional Linear Inversion Method for Phaseless EM Problem  
*Hu Zheng (University of Electronic Science and Technology of China, China);*
- 29 An Improvement of QR-M MLD for MIMO Wireless Communications  
*Tatsuki Fukuda (Kumamoto University, Japan); T. Takahashi (Kumamoto University, Japan); H. A. Zhao (Kumamoto University, Japan);*
- 30 Experimental Validation that Optical Scintillation Obeys the Same Rules of Share Price Fluctuations  
*Changqi Yang (Xi'an Shiyou University, China); X. Li (Institute of Optics and Electronics, Chinese Academy of Sciences, China); W. Jiang (Institute of Optics and Electronics, Chinese Academy of Sciences, China); C. Rao (Institute of Optics and Electronics, Chinese Academy of Sciences, China);*
- 31 The Analysis of Paired Unequally Spaced Repeated Alternate Unequally Spaced Allocation Channels for FDM Lightwave System  
*Ashira Jumpates (King Mongkut's Institute of Technology Ladkrabang, Thailand); Vissavavit Rachnarong (King Mongkut's Institute of Technology Ladkrabang, Thailand); Suthichai Noppanakeepong (King Mongkut's Institute of Technology Ladkrabang, Thailand);*

- 32 Generation of Diffraction-compensated Beams through a Phase Plate  
*Marc Brunel (Université de Rouen, France); Huanhuan Shen (Université de Rouen, France); Driss Mgharaz (Université de Rouen, France); Sebastien Coetmellec (Université de Rouen, France); Qiulin Huang (Xidian University, China); Kamel Ait-Ameur (Université de Caen, France);*
- 33 Generation of Perfect 3D Dark Spots Using Doubling Cylindrical Vector Vortex Beams  
*Yaoju Zhang (Wenzhou University, China); Zhonghua Ma (Wenzhou University, China); Youyi Zhuang (Wenzhou University, China);*
- 34 17.9% Efficiency Silicon Solar Cells by Using Spin-on Films Processes  
*Yi-Yu Lee (National Taipei University of Technology, Taiwan); Wen-Jeng Ho (National Taipei University of Technology, Taiwan); Jhih-Kai Syu (National Taipei University of Technology, Taiwan); Quan-Ru Lai (National Taipei University of Technology, Taiwan); Cheng-Ming Yu (National Taipei University of Technology, Taiwan);*
- 35 Fresnel Lenses Based on Blue Phase Liquid Crystals  
*Chi-Huang Lin (National Sun Yat-Sen University, Taiwan); Yu-Yin Wang (National Sun Yat-Sen University, Taiwan); Chen-Wei Hsieh (National Sun Yat-Sen University, Taiwan);*
- 36 Switching of Dark Discrete Cavity Solitons  
*Keivan Mahmoud Aghdami (Payame Noor University, Iran); Reza Kheradmand (University of Tabriz, Iran); Roghayeh Karimi (University of Tabriz, Iran);*
- 37 EIT-based Coherent Control Effect Sensitive to Probe Frequency and Control Field Intensity in a Periodic Layered Medium  
*Teh-Chau Liau (Chung Hua University, Taiwan); Jin-Jei Wu (Chung Hua University, Taiwan, R.O.C.); Jianqi Shen (Zhejiang University, China); Tzong-Jer Yang (Chung-Hua University, Taiwan, R.O.C.);*
- 38 Manipulating Photonic Nanojet Parameters of Micron-sized Dielectric Microspheres  
*Yurii E. Geints (Zuev Institute of Atmospheric Optics SB RAS, Russia); Ekaterina K. Panina (Zuev Institute of Atmospheric Optics SB RAS, Russia); Alexander A. Zemlyanov (Zuev Institute of Atmospheric Optics SB RAS, Russia);*
- 39 Influence of Stokes Pulse Shapes on SBS Slow Light in Fibers  
*Shang-Lin Hou (Lanzhou University of Technology, China); Hongbing Li (Lanzhou University of Technology, China); Yunbo Shang (Lanzhou University of Technology, China); Yan-Jun Liu (Lanzhou University of Technology, China); Yongzhao Xu (Dong Guan University of Technology, China);*
- 40 Measurement of the Verdet Constant in Different Mediums by Using Ellipsometry Technique  
*Suebtarkul Suchat (Phranakhon Rajabhat University, Thailand); P. Viriyavathana (Phranakhon Rajabhat University, Thailand); P. Jaideaw (Phranakhon Rajabhat University, Thailand); N. Haisirikul (Phranakhon Rajabhat University, Thailand); W. Kerdsang (Phranakhon Rajabhat University, Thailand); S. Petcharavut (Phranakhon Rajabhat University, Thailand);*

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**Session 3A1**
**Plasmonic Nanophotonics 1**


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**Wednesday AM, September 14, 2011**
**Room A**

Organized by Yung-Chiang Lan, Din Ping Tsai

 Chaired by Din Ping Tsai, Yung-Chiang Lan
 

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- 08:20 Fabrication and Morphology Control of Metallic Micro/Nanostructures for Applications in Plasmonic Photonics  
*Xuan-Ming Duan (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, China); Wei-Er Lu (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, China); Hong-Zhong Cao (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, China); Xian-Zi Dong (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, China); Yongliang Zhang (Technical Institute of Physics and Chemistry, Chinese Academy of Science, China); Zhen-Sheng Zhao (Technical Institute of Physics and Chemistry, Chinese Academy of Science, China);*
- 08:40 High Throughput Fabrication of Localized Surface Plasmonic Devices Using Ordered Porous Structures  
*Toshiaki Kondo (Kanagawa Academy of Science and Technology, Japan); Kazuyuki Nishio (Tokyo Metropolitan University, Japan); Hideki Masuda (Tokyo Metropolitan University, Japan);*

- 09:00 Surface Enhanced Raman Scattering Based on Gold Nanoparticles Decorated on Polymer Inverse Opal Crystals  
*Cheng Yi Wu (National Chung Cheng University, Taiwan, R.O.C.); Chia Chi Huang (National Chung Cheng University, Taiwan); Jia Sin Jhang (National Chung Cheng University, Taiwan); An Chi Liu (National Chung Cheng University, Taiwan); Chun-Chen Chiang (National Chung Cheng University, Taiwan); Ming-Lung Hsieh (National Chung Cheng University, Taiwan); Ping-Ji Huang (National Chung Cheng University, Taiwan); Le Dac Tuyen (National Chung Cheng University, Taiwan, R.O.C.); Le Quoc Minh (Institute of Materials Science, Vietnam); Tzzy Schiuuan Yang (National Chung Cheng University, Taiwan); Lai-Kwan Chau (National Chung Cheng University, Taiwan); Hung-Chih Kan (National Chung Cheng University, Taiwan); Chia Chen Hsu (National Chung Cheng University, Taiwan, R.O.C.);*
- 09:20 Size Dependence of Nanoparticle-SERS Enhancement from Silver Film over Nanosphere (AgFON) Substrate  
*Wen-Chi Lin (National Taiwan Ocean University, Taiwan, R.O.C.); Lu-Shing Liao (National Taiwan Ocean University, Taiwan, R.O.C.); Yi-Hui Chen (National Taiwan University, Taiwan, R.O.C.); Hung-Chun Chang (National Taiwan University, Taiwan, R.O.C.); Din Ping Tsai (National Taiwan University, Taiwan, R.O.C.); Hai-Pang Chiang (National Taiwan Ocean University, Taiwan);*
- 10:00 **Coffee Break**
- 10:20 Light Manipulation by Plasmonics Nanobump Structure  
*C. M. Chang (National Taiwan University, Taiwan); C. H. Chu (National Taiwan University, Taiwan); M. L. Tseng (National Taiwan University, Taiwan); B. H. Chen (National Taiwan University, Taiwan); Din Ping Tsai (National Taiwan University, Taiwan, R.O.C.);*
- 10:40 Thermal Dynamics in a Plasmonic Metamaterial Absorber  
*Min Qiu (Royal Institute of Technology (KTH), Sweden); Jiaming Hao (Royal Institute of Technology (KTH), Sweden); Jing Wang (Royal Institute of Technology (KTH), Sweden); Yiting Chen (Royal Institute of Technology (KTH), Sweden); Xi Chen (Royal Institute of Technology (KTH), Sweden); Min Yan (Royal Institute of Technology (KTH), Sweden);*
- 11:00 Plasmonic Enhancement on Molecular Fluorescence by Coreshell  
*Mao-Kuen Kuo (National Taiwan University, Taiwan, R.O.C.); Chuan-Li Liu (National Taiwan University, Taiwan, R.O.C.); Jiunn-Woei Liaw (Chang Gung University, Taiwan);*
- 11:20 Acousto-plasmonics and Surface Enhanced Raman Scattering Properties of Metal Nanoparticles  
*Adnen Mlayah (Université de Toulouse, France); Renaud Marty (Université de Toulouse, France); Arnaud Arbouet (Université de Toulouse, France); Christian Girard (Université de Toulouse, France); Sudhiranjan Tripathy (A\*STAR, Singapore); Vivian Kaixin Lin (A\*STAR, Singapore); Siew Lang Teo (A\*STAR, Singapore); Enyi Ye (A\*STAR, Singapore); Ming Yong Han (A\*STAR, Singapore); Lucien Saviot (Université de Bourgogne, France);*
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- Session 3A2a**  
**Merging of Metamaterials and Natural Materials**
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- Wednesday AM, September 14, 2011**  
**Room B**  
 Organized by Ji Zhou, Fuli Zhang  
 Chaired by Ji Zhou, Fuli Zhang
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- 08:00 Special Structured Photonic Crystals Based on Colloidal Crystals and Crystal Habits of Oxides  
*Ming Fu (Beijing Jiaotong University, China);*
- 08:20 Tunable Left-handed Material by Ferrite and Metallic Wire Array: Design and Realization  
*Rui-Xin Wu (Nanjing University, China); Yin Poo (Nanjing University, China); Guang-Hua He (Nanjing University, China); Da-Yong Zhou (Nanjing University, China);*
- 08:40 THz Metamaterials by Stacked Subwavelength Hole Arrays  
*Shengziang Wang (Universite des Sciences et Technologies de Lille, France); Frederic Garet (University of Savoie, France); Eric Lheurette (Université des Sciences et Technologies de Lille, France); Jean-Louis Coutaz (University of Savoie, France); Didier Lippens (Université des Sciences et Technologies de Lille, France);*

- 09:00 Electrically Tunable Metamaterials Operating Under Normal Incidences  
*Fuli Zhang (Northwestern Polytechnical University, China); Qian Zhao (Tsinghua University, China); Jingbo Sun (Tsinghua University, China); Weihong Zhang (Northwestern Polytechnical University, China); Ji Zhou (Tsinghua University, China); Didier Lippens (Université des Sciences et Technologies de Lille, France);*
- 09:20 Ultraviolet Negative Refraction in Graphite  
*Jingbo Sun (Tsinghua University, China); Ji Zhou (Tsinghua University, China); Bo Li (Tsinghua University, China); Feiyu Kang (Tsinghua University, China);*
- 09:40 Anomalous Refractive Effects in Photonic Crystals Formed by Holographic Lithography  
*Guoyan Dong (Tsinghua University, China); J. Zhou (Tsinghua University, China); X. L. Yang (Shandong University, China); L. Z. Cai (Shandong University, China);*
- 10:00 **Coffee Break**
- 10:20 Effective Circuit Model Analysis of Dielectric Metamaterials  
*Lingyun Liu (Tsinghua University, China); Jingbo Sun (Tsinghua University, China); Ji Zhou (Tsinghua University, China); Bo Fu (Hubei University of Technology, China);*

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**Session 3A2b**  
**Cloaked Material System and Electromagnetic Compatibility**

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**Wednesday AM, September 14, 2011**

**Room B**

Organized by Jianguo Guan

Chaired by Jianguo Guan

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- 10:40 Fabrication and Electromagnetic Wave Absorption Properties of Amorphous Fe-Si-B Microwires  
*Mangui Han (University of Electronic Science and Technology of China, China); Difei Liang (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);*

- 11:00 Dielectric Device for Broadband Extraordinary Transmission in a Waveguide Using Transformation Electromagnetics  
*Di Bao (University of London, United Kingdom); Wenxuan Tang (University of London, United Kingdom); Khalid Z. Rajab (University of London, United Kingdom); Yang Hao (Queen Mary University of London, UK);*
- 11:20 Cylindrical Electromagnetic Field Concentrators with Incident-direction Dependent Concentrating Ratio  
*Wei Li (Wuhan University of Technology, China); Jianguo Guan (Wuhan University of Technology, China); Wei Wang (Wuhan University of Technology, China);*
- 11:40 Electromagnetic Cloaking with Dielectric Metamaterials  
*Elena Semouchkina (Michigan Technological University, USA);*

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**Session 3A3**

**Advanced Methods for Polarimetric Information Extraction**

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**Wednesday AM, September 14, 2011**

**Room C**

Organized by Ridha Touzi, Yun Shao

Chaired by Ridha Touzi, Yun Shao

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- 08:20 Urban Impervious Surfaces Estimation from RADARSAT-2 Polarimetric Data Using SVM Method  
*Xinwu Li (Center for Earth Observation and Digital Earth, Chinese Academy of Sciences, China); Huadong Guo (Center for Earth Observation and Digital Earth, Chinese Academy of Sciences, China); Zhongchang Sun (Center for Earth Observation and Digital Earth, Chinese Academy of Sciences, China); Guozhuang Shen (Center for Earth Observation and Digital Earth, Chinese Academy of Sciences, China);*
- 08:40 New Method for the  $\pi/4$  Compact Polarimetric SAR Mode  
*Junjun Yin (Tsinghua University, China); Jian Yang (Tsinghua University, China); Yoshio Yamaguchi (Niigata University, Japan);*

- 09:00 Snow Line Detection for Glacial Areas with Polarimetric SAR Images  
*Zhen Li (Center for Earth Observation and Digital Earth, Chinese Academy of Sciences, China); Lei Huang (Center for Earth Observation and Digital Earth, Chinese Academy of Sciences, China); Bangsen Tian (Center for Earth Observation and Digital Earth, Chinese Academy of Sciences, China); Ping Zhang (Center for Earth Observation and Digital Earth, Chinese Academy of Sciences, China);*
- 09:20 Metamodel-based Adaptive Use of a Coherent Polarimetric Backscattering Simulator for the Characterization of Forested Areas at Low Frequencies  
*A. Vasko (L2S, France); Laetitia Thirion-Lefevre (SONDRA/SUPELEC, France); S. Bilicz (L2S, France); Isabelle Champion (EPHYSE/INRA, France); Marc Lambert (SONDRA/SUPELEC, France); Szabolcs Gyimothy (Budapest University of Technology and Economics, Hungary);*
- 09:40 Ship Detection Using Polarimetric Radarsat2  
*Ridha Touzi (Natural Resources Canada, Canada);*
- 10:00 **Coffee Break**
- 10:20 Current Perspectives of Radar Polarimetry with Applications to Multiparameter POLSAR Remote Sensing of Earth, Ocean and Atmosphere  
*Wolfgang-Martin Boerner (University of Illinois at Chicago, USA);*
- 10:40 Polarimetric Signature and the Temporal Variation Analysis for Deforestation Mapping in Southwest China  
*Fengli Zhang (Institute of Remote Sensing Applications, Chinese Academy of Sciences, China); Maosong Xu (State Forestry Administration (SFA), China); Chou Xie (Institute of Remote Sensing Applications, Chinese Academy of Sciences, China); Zhongsheng Xia (Forest Resource Management and Conservation Station, China); Kun Li (Institute of Remote Sensing Applications, Chinese Academy of Sciences, China); Aimin Cai (Institute of Remote Sensing Applications, Chinese Academy of Sciences, China); Yun Shao (Institute of Remote Sensing Applications, Chinese Academy of Sciences, China); Xuejun Wang (State Forestry Administration (SFA), China); Ridha Touzi (Natural Resources Canada, Canada);*
- 11:00 Rice Monitoring Using Touzi Decomposition Based on Polarimetric SAR Data in Southwestern China  
*Kun Li (Chinese Academy of Sciences (CAS), China); Yun Shao (Institute of Remote Sensing Applications, CAS, China); Ridha Touzi (Natural Resources Canada, Canada); Brian Brisco (Natural Resources Canada, Canada); Fengli Zhang (Chinese Academy of Sciences (CAS), China);*
- 11:20 Polarimetric Radar Response of Snow Covered Area Observed by ALOS PALSAR  
*Sang-Eun Park (Niigata University, Japan); Yoshio Yamaguchi (Niigata University, Japan); G. Singh (Niigata University, Japan);*
- 11:40 Polarimetric L-band Palsar for Peatland Characterization  
*Ridha Touzi (Natural Resources Canada, Canada); G. Gosselin (Natural Resources Canada, Canada); R. Brook (University of Calgary, Canada);*
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- Session 3A4**  
**Antennas and Array Design and Simulation Techniques 2**
- 
- Wednesday AM, September 14, 2011**  
**Room D**  
Organized by Dua-Chyrh Chang, Wenxing Li  
Chaired by Dua-Chyrh Chang, Wenxing Li
- 
- 08:00 Dual-band Circularly Polarized CPW-fed Circular Slot Antenna with Two Opened-ground Rings for GPS and WLAN Applications  
*Sheau-Shong Bor (Feng-Chia University, Taiwan, R.O.C.); Chia-Yen Wei (Feng-Chia University, Taiwan, R.O.C.); Tian-Fu Hung (Feng Chia University, Taiwan); Ji-Chyun Liu (Ching Yun University, Taiwan, R.O.C.); Hai-Tao Sun (Feng-Chia University, Taiwan, R.O.C.);*
- 08:20 Compact Dual-band Monopole Antenna for WLAN/WiMAX Applications  
*Chia-Hao Ku (Ming Chi University of Technology, Taiwan, R.O.C.); Hsien-Wen Liu (Auden Techno Corp., Taiwan); Di-Yu Lin (Ming Chi University of Technology, Taiwan, R.O.C.); Yao-Xin Ding (Ming Chi University of Technology, Taiwan, R.O.C.);*
- 08:40 Synthesizing a High Gain Planar Array Antenna for Volume Scanning Arrays  
*Fikret Tokan (Yildiz Technical University, Turkey); Filiz Günes (Yildiz Technical University, Turkey);*

- 09:00 Analysis of Microstrip Antennas by Knowledge-based Support Vector Machines  
*Nurhan Turker Tokan (Yildiz Technical University, Turkey); Filiz Günes (Yildiz Technical University, Turkey); Ali Kus (Ericsson TURKEY, Turkey); Fikret Tokan (Yildiz Technical University, Turkey);*
- 09:20 Design and Construction of UWB Antennas  
*Jorge Sosa-Pedroza (Instituto Politécnico Nacional, Mexico D.F.); Edson Garduno-Nolasco (Instituto Politécnico Nacional, Mexico D.F.); Fabiola Martínez Zuniga (Instituto Politécnico Nacional, Mexico D.F.); Mauro A. Enciso-Aguilar (Instituto Politécnico Nacional, Mexico);*
- 09:40 Antennas for Compact Communication Systems  
*Dua-Chyrh Chang (Oriental Institute of Technology, Taiwan); Hsiao-Bin Liang (Climax Technology Co., Ltd, Taiwan); Cheng-Wei Chen (Oriental Institute of Technology, Taiwan);*
- 10:00 **Coffee Break**
- 10:20 A Dual Band Fractal Circular Microstrip Patch Antenna for C-band Applications  
*Nitasha Bisht (Jaypee University of Information Technology, India); Pradeep Kumar (Jaypee University of Information Technology, India);*
- 10:40 Rectangular Microstrip Patch Antenna with Photonic Band Gap Crystal for 60 GHz Communications  
*Rakesh N. Tiwari (Bahra University, India); Pradeep Kumar (Jaypee University of Information Technology, India); Nitasha Bisht (Jaypee University of Information Technology, India, India);*
- 11:00 MFIE for Numerical Analysis of Metal Aperture Antennas with the Waveguide Feeding Line  
*Hongxia Ye (Fudan University, China); Ya-Qiu Jin (Fudan University, China);*
- 11:20 Novel Shape of UWB Microstrip Patch Antenna with Enhanced Gain Using EBG Structure  
*Mohammed M. Mohanna (Research, Generation Projects and Service Company, Egypt); Deena A. Salem (Electronics Research Institute, Egypt); Esmat Abdel-Fattah Abdallah (Electronics Research Institute, Egypt); Hadia S. El-Henawy (Ain Shams University, Egypt);*
- 11:40 Circularly Polarized Elliptical Slot Antenna with Enhanced Gain Using EBG Structure  
*Mohammed M. Mohanna (Research, Generation Projects and Service Company, Egypt); Deena A. Salem (Electronics Research Institute, Egypt); Esmat Abdel-Fattah Abdallah (Electronics Research Institute, Egypt); Hadia M. El-Henawy (Ain Shams University, Egypt);*

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**Session 3A5**  
**Electromagnetic Modeling, Inversion and Applications**

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**Wednesday AM, September 14, 2011**

**Room E**

Organized by Ganquan Xie, Jianhua Li

Chaired by Ganquan Xie, Xianwei Zhou

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- 08:00 The Visible Controlling of the Electromagnetic Stirring in the Steel Caster  
*Jianhua Li (GL Geophysical Laboratory, USA); Ganquan Xie (GL Geophysical Laboratory, USA); Lee Xie (GL Geophysical Laboratory, USA); Feng Xie (GL Geophysical Laboratory, USA); Jing Li (GL Geophysical Laboratory, USA); Chien-Jang Wu (National Taiwan Normal University, Taiwan); Xianwu Zhou (University of Sciences and Technology, China);*
- 08:20 A New GL Anisotropic and Isotropic Invisible Cloak without Exceeding Light Speed Violation  
*Ganquan Xie (GL Geophysical Laboratory, USA); Jianhua Li (GL Geophysical Laboratory, USA); Lee Xie (GL Geophysical Laboratory, USA); Feng Xie (GL Geophysical Laboratory, USA);*
- 08:40 Applying Margolus-Levitin Theorem to Quantum Computers Emerges that Photons with Different Energy May Travel with Different Speeds  
*Antonio Puccini (Order of Malta, Italy);*
- 09:00 Roles of Assisting Scatterers on Solving Inverse Scattering Problem  
*Jianhua Shen (Zhejiang University, China); Yu Zhong (National University of Singapore, Singapore); Xudong Chen (National University of Singapore, Singapore); Li-Xin Ran (Zhejiang University, China);*
- 09:20 Increasing the Efficiency of Forward-backward Time-stepping Reconstruction Method  
*Hui Zhou (China University of Petroleum, China); H. J. Zhang (China University of Petroleum, China);*
- 09:40 Note on the Tangential Scattered Magnetic Field on a Perfectly Conducting Surface  
*Guyan Ni (National University of Defense Technology, China);*
- 10:00 **Coffee Break**

- 10:20 Stability Analysis of Neutral Systems and Its Application to a Partial Element Equivalent Circuit (PEEC) Model  
*Guorui Cong (National University of Defense Technology, NUDT, China); Guyan Ni (National University of Defense Technology, NUDT, China); Jian-shu Luo (National University of Defence Technology, NUDT, China);*
- 10:40 Derivation of One-minute Rain Rate from Five-minute Equivalent for the Calculation of Rain Attenuation in South Africa  
*Pius Adewale Owolawi (Mangosuthu University of Technology, South Africa);*
- 11:00 GL EM Modeling for Electromagnetic Remote Sensing Science and Technology in Multi-level Multi-scale Characteristics of in Geographic Information Systems  
*Lei Zhang (Technical Physics of the Chinese Academy of Sciences, China); Ganquan Xie (GL Geophysical Laboratory, USA);*
- 11:20 Sumudu Based Transient Magnetic Field Solutions for Maxwell's Equations  
*Fethi Bin Muhammad Belgacem (Arab Open University, Kuwait);*
- 11:40 Applications of the Natural Transform to Maxwell's Equations  
*R. Silambarasan (V.I.T. University, India); Fethi Bin Muhammad Belgacem (Faculty of Basic Education, Kuwait);*
- 09:00 Microwave Spin Wave Modes in Ferromagnetic Nanocrystalline Flake and Laminated Composites  
*Pei-Heng Zhou (University of Electronic Science and Technology of China, China); Tao Liu (University of Electronic Science and Technology of China, China); Long-Jiang Deng (University of Electronic Science and Technology of China, China);*
- 09:20 Micromagnetism Simulations on the Microwave Permeability of Bamboo-like Cobalt Nanowires  
*Mangui Han (University of Electronic Science and Technology of China, China); Li Cai (University of Electronic Science and Technology of China, China); Jianliang Xie (University of Electronic Science 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);*
- 09:40 Miniaturized Patch Antennas with Ferrite/Dielectric/Ferrite Magnetodielectric Sandwich Substrate  
*Guo-Min Yang (Fudan University, China); Ogheneyunume Obi (Northeastern University, USA); Ming Liu (Northeastern University, USA); Nian-Xiang Sun (Northeastern University, USA);*
- 10:00 **Coffee Break**
- 10:20 Tunable High Frequency Permeability of Metamaterials  
*Shunlin Zhong (University of Electronic Science and Technology of China, China); Mangui Han (University of Electronic Science and Technology of China, China); Jianliang Xie (University of Electronic Science 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);*
- 10:40 A Comparative Study of Electromagnetic Interference Shielding Effectiveness of Carbon Nanotube Composites  
*Ping Li (Singapore Polytechnic, Singapore); Xijiang Yin (Singapore Polytechnic, Singapore); Yueyan Shan (A\*STAR, Singapore); Junhong Deng (TUV SUD PSB Pte Ltd., Singapore); Jin Lin (Singapore Polytechnic, Singapore);*
- 11:00 Development of Promising Magneto-dielectric Materials for Low Frequency Applications  
*Ling Bing Kong (National University of Singapore, Singapore); Z. W. Li (National University of Singapore, Singapore); Z. H. Yang (National University of Singapore, Singapore); L. Liu (National University of Singapore, Singapore);*

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**Session 3A6**

**Electromagnetic Composite and Smart Materials for Microwave Applications 1**

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**Wednesday AM, September 14, 2011**

**Room F**

Organized by Lie Liu, Konstantin N. Rozanov

Chaired by Lie Liu, Konstantin N. Rozanov

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- 08:20 Account for a Distribution in Inclusion Shapes in the Effective Medium Approach  
*Konstantin N. Rozanov (Institute for Theoretical and Applied Electromagnetics, RAS, Russia); Marina Y. Koledintseva (Missouri University of Science and Technology, USA); James L. Drewniak (Missouri University of Science and Technology, USA);*
- 08:40 The Tunable Microwave Dielectric Spectrum of Carbon Nanotube Membrane  
*Lie Liu (National University of Singapore, Singapore); Z. H. Yang (National University of Singapore, Singapore); Ling Bing Kong (National University of Singapore, Singapore);*

- 11:20 Enhanced Microwave Absorption Properties of the Planar Metamaterials Structure and Absorber Slice Composites  
*Liang Qiao (Lanzhou University, China); Tao Wang (Lanzhou University, China); Rui Han (Lanzhou University, China); Zhaoqing Zhang (Lanzhou University, China); Fashen Li (Lanzhou University, China);*

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**Session 3A7**

**Poster Session 4**

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**Wednesday AM, September 14, 2011**

**9:00 AM - 12:00 AM**

**Room G**

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- 1 Optical Single Sideband Modulation Using Feedback Technique Based on SBS Effect in Fiber  
*Po-Hung Hsieh (Ming Chi University of Technology, Taiwan); Wen-Shing Tsai (Ming Chi University of Technology, Taiwan, R.O.C.); Zhi-Siang Lin (Ming Chi University of Technology, Taiwan); Hai-Han Lu (National Taipei University of Technology, Taiwan);*
- 2 Optical Single Sideband Modulation of 9-GHz RoF System Based on FWM Effects of SOA  
*Po-Hung Hsieh (Ming Chi University of Technology, Taiwan); Wen-Shing Tsai (Ming Chi University of Technology, Taiwan, R.O.C.); Chun-Chia Weng (Ming Chi University of Technology, Taiwan); Hai-Han Lu (National Taipei University of Technology, Taiwan);*
- 3 Dynamic Characterization of EDFA Based on ASE Selective-feedback and Gain-clamping Techniques  
*Jhe-Min Lin (National Taipei University of Technology, Taiwan); Wen-Jeng Ho (National Taipei University of Technology, Taiwan); Chih-Yung Li (National Taipei University of Technology, Taiwan);*
- 4 Generation and Transmission Characterization of Sub-picoseconds 1550 nm Optical RZ-pulse  
*Jheng-Jie Liou (National Taipei University of Technology, Taiwan); Wen-Jeng Ho (National Taipei University of Technology, Taiwan); Jhe-Min Lin (National Taipei University of Technology, Taiwan); Yi-Chia Hsieh (National Taipei University of Technology, Taiwan); Hsuan-Ming Tang (National Taipei University of Technology, Taiwan); Yu-Feng Yang (National Taipei University of Technology, Taiwan);*
- 5 Synthesis and Up-conversion Luminescence of NaYF<sub>4</sub>:Yb<sup>3+</sup>, Er<sup>3+</sup>/PVP Nanotube  
*Peng Zou (Northeast Normal University, China); Xia Hong (Northeast Normal University, China); Yichun Liu (Northeast Normal University, China);*
- 6 Output Power Increment in an Yb-doped Fiber Amplifier by Inserting an Additional Unpumped Yb Doped Fiber  
*Hoon Jeong (Korea Institute of Industrial Technology, South Korea); Hyoyeong Park (Korea Institute of Industrial Technology, South Korea); Seungtaek Kim (Korea Institute of Industrial Technology, South Korea); Sungbok Kang (Korea Institute of Industrial Technology, South Korea); Jongseok Kim (Korea Institute of Industrial Technology, South Korea);*
- 7 Efficient Generation of Broadband High-count Channels with Full Duty Cycle Amplitude Sampled Fiber Bragg Gratings  
*XiaoJun Zhu (Soochow University, China); Chinhua Wang (Soochow University, China); Jing Ge (Soochow University, China); Shixin Liu (Soochow University, China);*
- 8 Influence of Grating Period of Uniform Fiber Bragg Grating on Slow Light Delay  
*Shang-Lin Hou (Lanzhou University of Technology, China); Yunbo Shang (Lanzhou University of Technology, China); Yan-Jun Liu (Lanzhou University of Technology, China); Jingli Lei (Lanzhou University of Technology, China); Yongzhao Xu (Dong Guan University of Technology, China);*
- 9 Influence of SBS Gain Coefficient on Time Delay and Pulse Broadening in Fibers  
*Shang-Lin Hou (Lanzhou University of Technology, China); Zhong-Yi Wang (Lanzhou University of Technology, China); Yunbo Shang (Lanzhou University of Technology, China); Yan-Jun Liu (Lanzhou University of Technology, China); Jingli Lei (Lanzhou University of Technology, China); Yongzhao Xu (Dong Guan University of Technology, China);*
- 10 Dual-concentric-core Photonic Crystal Fibers with Multi Outer Core Rings  
*I-Hung Tsai (National United University, Taiwan, R.O.C.); Der-Li Ye (National United University, Taiwan, R.O.C.); Jui-Ming Hsu (National United University, Taiwan, R.O.C.);*
- 11 Polarization-maintaining Photonic Crystal Fiber with Ultra-high Modal Birefringence  
*Jui-Ming Hsu (National United University, Taiwan, R.O.C.); Der-Li Ye (National United University, Taiwan, R.O.C.);*
- 12 Dual-core Fiber for Temperature/Pressure Sensing  
*Daru Chen (Zhejiang Normal University, China); Ming-Leung Vincent Tse (The Hong Kong Polytechnic University, Hong Kong, China); Hwa-Yaw Tam (The Hong Kong Polytechnic University, Hong Kong, China);*



- 13 Toughened Epoxy Filled with Ferromagnetic Particles as High Temperature Resistant Microwave Absorbing Coating  
*Zhenjiang Song (University of Electronic Science and Technology of China, China); Jianliang Xie (University of Electronic Science and Technology of China, China); Jianing Peng (University of Electronic Science and Technology of China, China); Pei-Heng Zhou (University of Electronic Science and Technology of China, China); Long-Jiang Deng (University of Electronic Science and Technology of China, China);*
- 14 On Plasmon Resonance Spectra of Various Metal Nanoparticles  
*Xiang'e Han (Xidian University, China); Paerhati-jiang Tuersun (Xidian University, China); Jin Li (Xidian University, China);*
- 15 Influence of Localized Surface Plasmon on Radiation Pattern of Nano-optical Antenna  
*S. F. Jiang (Shandong University, China); Hui Gao (Shandong University, China); Fanmin Kong (Shandong University, China); Kang Li (Shandong University, China);*
- 16 Supercontinuum Generation in Different Zero-dispersion Photonic Crystal Fibers  
*Yanrong Song (Beijing University of Technology, China); Jianyin Zhu (Beijing University of Technology, China); Xiao Zhang (Beijing University of Technology, China); Huihui Li (Beijing University of Technology, China); Lixiao Wei (Beijing University of Technology, China); Pingxue Li (Beijing University of Technology, China);*
- 17 Measurement of Weak Magnetic Fields  
*L. Kadlčík (Brno University of Technology, Czech Republic); Jan Mikulka (Brno University of Technology, Czech Republic); Eva Gescheidtová (Brno University of Technology, Czech Republic);*
- 18 The Contribution of Power Electronics Used in Hybrid Electric Vehicles to Energy Savings in Modern Society  
*Zdenek Cerovsky (Czech Technical University, Czech Republic); Pavel Mindl (Czech Technical University, Czech Republic);*
- 19 Ultrasonic-assisted Condensation of Chitosan with Salicylaldehyde and the Adsorption of Cr(VI) Ions in Magnetic Field  
*Li-Hong Duan (South China University of Technology, China); Qiongjuan Zheng (Sun Yat-sen University, China); Siyuan Guo (South China University of Technology, China);*
- 20 Microscopic Image Processing in Studying Diverticular Disease  
*Jan Mikulka (Brno University of Technology, Czech Republic);*
- 21 Accuracy of Volumetry Depending on Smoothing Level  
*Jan Mikulka (Brno University of Technology, Czech Republic); Eva Gescheidtová (Brno University of Technology, Czech Republic); Karel Bartusek (Brno University of Technology, Czech Republic);*
- 22 Synthesis of Arc Ladder Filters with Transmission Zeros for Using in the Feed Back of the Phase Lock Loop  
*Martin Friedl (Brno University of Technology, Czech Republic); Lubomír Frohlich (Brno University of Technology, Czech Republic); Jirí Sedláček (Brno University of Technology, Czech Republic);*
- 23 A 3D Magnetic Measurement for  $S/N < 0.01$   
*Zdeněk Roubal (Brno University of Technology, Czech Republic); Tomáš Kriz (Brno University of Technology, Czech Republic);*
- 24 The Study of Transport of Substances in the Plant Stems  
*Michaela Burdková (Brno University of Technology, Czech Republic); Tomáš Kriz (Brno University of Technology, Czech Republic);*
- 25 The Frequency Source for Precision Synchronous Triggering  
*Zdeněk Roubal (Brno University of Technology, Czech Republic); Radim Kadlec (Brno University of Technology, Czech Republic);*
- 26 Evaluation of Characteristics of HV Electrometric Amplifier with Low Input Current  
*Zdeněk Roubal (Brno University of Technology, Czech Republic); Radim Kadlec (Brno University of Technology, Czech Republic);*
- 27 Special High Voltage Function Generator  
*Petr Marcon (Brno University of Technology, Czech Republic); Pavel Fiala (Brno University of Technology, Czech Republic); Miloslav Steinbauer (Brno University of Technology, Czech Republic); M. Cap (Brno University of Technology, Czech Republic);*
- 28 Filter for Processing of NMR Signal  
*Martin Friedl (Brno University of Technology, Czech Republic); Jirí Sedláček (Brno University of Technology, Czech Republic); Lubomír Frohlich (Brno University of Technology, Czech Republic); Radek Kubasek (Brno University of Technology, Czech Republic);*

- 29 Universal Arc Filters for Arc Oscillators with Automatic Sequential Filtration  
*Lubomír Frohlich (Brno University of Technology, Czech Republic); Jirí Sedláček (Brno University of Technology, Czech Republic); Martin Friedl (Brno University of Technology, Czech Republic);*
- 30 Visualization of Plant Fibres via Diffusion Tensor Imaging  
*Eva Gescheidtová (Brno University of Technology, Czech Republic); Petr Marcon (Brno University of Technology, Czech Republic); Karel Bartusek (Brno University of Technology, Czech Republic);*
- 31 Dielectric Properties of Water Solutions with Small Content of Glucose in the Millimeter Wave Band and the Determination of Glucose in Blood  
*Boris Mikhailovich Garin (Kotel'nikov Institute of Radio Engineering and Electronics of Russian Academy of Sciences, Russia); Viatcheslav V. Meriakri (Kotel'nikov Institute of Radio Engineering and Electronics RAS, Russia); E. E. Chigrai (Kotel'nikov Institute of Radio Engineering and Electronics RAS, Russia); M. P. Parkhomenko (Kotel'nikov Institute of Radio Engineering and Electronics RAS, Russia); M. G. Akat'eva (Kotel'nikov Institute of Radio Engineering and Electronics RAS, Russia);*
- 32 A Novel Compact Frequency Selective Surface with a Stable Performance Based on Substrate Integrated Waveguide Technology  
*Hang Zhou (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); Bao-Qin Lin (Air Force Engineering University, China); Hua Ma (Air Force Engineering University, China); Zhuo Xu (Xi'an Jiaotong University, China); Peng Bai (Air Force Engineering University, China); Wei-Dong Peng (Air Force Engineering University, China);*
- 33 Electric, Magnetic Resonances and the Ultrabroad Band Optical Response of Double Fishnet Metamaterials  
*Yongliang Zhang (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, China); Xian-Zi Dong (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, China); Zhen-Sheng Zhao (Chinese Academy of Sciences, China); Xuan-Ming Duan (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, China);*
- 34 Wave Transformers Based on Transformation Optics Theory  
*Xin-Hua 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); Jiafu Wang (Air Force Engineering University, China); Lei Lu (Air Force Engineering University, China); Hang Zhou (Air Force Engineering University, China); Fei Yu (Air Force Engineering University, China); Yuqing Li (Air Force Engineering University, China);*
- 35 Hybrid Electromagnetic Cloaks Mediated by Surface Plasmons: Nonperfect but Practical  
*Shaobo Qu (Air Force Engineering University, China); Jiafu Wang (Air Force Engineering University, China); Baiyu Yang (Air Force Engineering University, China); Hua Ma (Air Force Engineering University, China); Zhuo Xu (Xi'an Jiaotong University, China); Song Xia (Xi'an Jiaotong University, China);*
- 36 Tunable Dual-band Filter Based on Photonic Crystals Doped by Unmagnetized Plasma  
*Xiang-Kun Kong (Nanjing University of Aeronautics and Astronautics, China); Shaobin Liu (Nanjing University of Aeronautics and Astronautics, China); Ping Wang (Nanjing University of Aeronautics and Astronautics, China); Xin Li (Nanjing University of Aeronautics and Astronautics, China); Li Liu (Nanjing University of Aeronautics and Astronautics, China);*
- 37 Response of Plasma Flow Field to Nuclear Electromagnetic Pulse in Near Space  
*Bo-Rui Bian (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); Chun Zao Li (Nanjing University of Aeronautics and Astronautics, China);*
- 38 Guided Modes in a Slab Waveguide with Air Core Layer and Left-handed Materials Claddings  
*Lu Fa Shen (Zhejiang University, China); Jia-Cheng Qiu (Huzhou Teachers College, China); Zi Hua Wang (Shanghai University, China);*

- 39 Electromagnetic Radar Absorber Designed by Patching or Incorporating Lossy FSSs  
*Hui-Bin Zhang (University of Electronic Science and Technology of China, China); Pei-Heng Zhou (University of Electronic Science and Technology of China, China); Liang Chen (University of Electronic Science and Technology of China, China); Difei Liang (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);*
- 40 New-type Low Power and Anti-interference Transmission Module  
*Hsien-Wei Tseng (De Lin Institute of Technology, Taiwan, R.O.C.); Yih-Guang Jan (Tamkang University, Taiwan); Ming-Hsueh Chuang (National Taiwan University of Science and Technology, Taiwan, R.O.C.); Wei Chien (De Lin Institute of Technology, Taiwan, R.O.C.); Chih-Yuan Lo (Tamkang University, Taiwan); Liang-Yu Yen (Tamkang University, Taiwan); Pei-Jun Chen (De Lin Institute of Technology, Taiwan, R.O.C.);*
- 14:00 Cascade Enhancement of Optical Transmission through Composite Subwavelength Apertures in Terms of Hybridization Theory  
*Kuan-Ren Chen (National Cheng Kung University, Taiwan, R.O.C.); Anatolij V. Goncharenko (National Cheng Kung University, Taiwan, R.O.C.); Jian-Shiung Hong (National Cheng Kung University, Taiwan, R.O.C.);*
- 14:20 Plasmon Waveguide Consisting of Silver-shell Nanorods in Hexagonal Lattice for Long-range Propagation  
*Yuan-Fong Chau (Ching Yun University, Taiwan); You Zhe Ho (National Taiwan University, Taiwan);*
- 14:40 Controlling the Fluorescence of Single Molecules with Optical Antennas  
*Stephan Goetzinger (ETH Zurich, Switzerland); K.-G. Lee (ETH Zurich, Switzerland); Xuewen Chen (ETH Zurich, Switzerland); H. Eghlidi (ETH Zurich, Switzerland); A. Renn (ETH Zurich, Switzerland); Vahid Sandoghdar (ETH Zurich, Switzerland);*
- 15:00 **Coffee Break**

**Session 3P1a  
 Plasmonic Nanophotonics 2**

**Wednesday PM, September 14, 2011**

**Room A**

Organized by Yung-Chiang Lan, Din Ping Tsai  
 Chaired by Din Ping Tsai, Yung-Chiang Lan

- 13:00 Optical Log-periodic Dipole Array (LPDA) Antenna for Broadband Field Enhancement and Directional Emission  
*Chia-Hung Lin (National Taiwan University, Taiwan); Ruey-Lin Chern (National Taiwan University, Taiwan, R.O.C.); Hoang-Yan Lin (National Taiwan University, Taiwan, R.O.C.);*
- 13:20 Plasmonic Zener Tunneling in Metal-dielectric Waveguide Arrays  
*Ruei-Cheng Shiu (National Cheng Kung University, Taiwan, R.O.C.); Yung-Chiang Lan (National Cheng Kung University, Taiwan, R.O.C.);*
- 13:40 Manipulating Radiation Patterns by Exciting Local Surface Plasmon Resonances in Plasmonic Nanostructures  
*Wei-Chih Liu (National Taiwan Normal University, Taiwan);*

**Session 3P1b  
 Optics and Photonics 1**

**Wednesday PM, September 14, 2011**

**Room A**

Chaired by Hongsheng Chen

- 15:20 Biosensors Based on Waveguided Metallic Photonic Crystals  
*Xinping Zhang (Beijing University of Technology, China); Xuemei Ma (Beijing University of Technology, China); Fei Dou (Beijing University of Technology, China); Pengxiang Zhao (Beijing University of Technology, China); Hongmei Liu (Beijing University of Technology, China);*
- 15:40 Spontaneous Emission in 2D Arbitrary Inhomogeneous Environment  
*Peng-Fei Qiao (University of Hong Kong, China); Wei E. I. Sha (University of Hong Kong, China); Yongpin P. Chen (University of Hong Kong, China); Wallace C. H. Choy (University of Hong Kong, China); Weng Cho Chew (University of Illinois, USA);*

- 16:00 Optical Properties of Graphene and BN Sandwiched Graphene Based on the First-principle Theory and Kramers-Kronig Relation  
*Xiao Lin (Zhejiang University, China); Yang Xu (Zhejiang University, China); Hongsheng Chen (Zhejiang University, China);*
- 16:20 Development of Terahertz Wave Radiation Control Device  
*Keita Okada (Okayama University, Japan); Mitsuhiro Shinomiya (Okayama University, Japan); Toshihiko Kiwa (Okayama University, Japan); Keiji Tsukada (Okayama University, Japan);*
- 16:40 Subgridding Scheme for FDTD in Cylindrical Coordinates  
*Adam Mock (Central Michigan University, USA);*
- 17:00 Nonlinear Electromagnetics in Negative Index Metamaterials  
*Alexander K. Popov (University of Wisconsin-Stevens Point, USA);*
- 14:00 Switching of Forward and Backward Wave Propagation in a Two-dimensional Nonlinear Transmission-line Metamaterial  
*Zhengbin Wang (Nanjing University, China); Yijun Feng (Nanjing University, China); Junming Zhao (Nanjing University, China); Zhenzhong Yu (Nanjing University, China); Tian Jiang (Nanjing University, China);*
- 14:20 Making a Solid Metallic Film Perfectly Transparent  
*Zhengyong Song (Fudan University, China); Qiong He (Fudan University, China); Lei Zhou (Fudan University, China);*
- 14:40 Optical Properties of Metallic Helix Array  
*Hongqiang Li (Tongji University, China); Chao Wu (Tongji University, China); Zeyong Wei (Tongji University, China); Xing Yu (Tongji University, China); Fang Li (Tongji University, China); Che Ting Chan (The Hong Kong University of Science and Technology, China);*

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15:00 **Coffee Break**

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**Session 3P2**  
**Metamaterials for Achieving Extraordinary Properties and Performances**

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**Wednesday PM, September 14, 2011**

**Room B**

Organized by Sailing He, Lei Zhou

Chaired by Sailing He, Lei Zhou

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- 15:20 A Reflectionless Ultra-thin Microwave Wave-plate Based on Metamaterial  
*Sun Wujiong (Fudan, China); Qiong He (Fudan University, China); Jiaming Hao (Fudan University, China); Lei Zhou (Fudan University, China);*
- 15:40 Super Imaging with a Plasmonic Metamaterial: Role of Aperture Shape  
*Shiyi Xiao (Fudan University, China); Qiong He (Fudan University, China); Xueqing Huang (Fudan University, China); Lei Zhou (Fudan University, China);*
- 16:00 Extraordinary Imaging Properties of Hyperbolic Plasmonic Metamaterial Based Lenses  
*Changbao Ma (University of California, San Diego, USA); Zhaowei Liu (University of California, San Diego, USA);*
- 16:20 New Circular Fractal Sensors for Near-infrared Wavelengths  
*Radu Malureanu (Technical University of Denmark, Denmark); A. Sandru (Politehnica University of Bucharest, Romania); A. Novitsky (Technical University of Denmark, Denmark); Andrei V. Lavrinenko (Technical University of Denmark, Denmark);*
- 16:40 Numerical Analyses of the Realization of the D'B' Boundary Condition for Planar Surfaces  
*Ari Henrik Sihvola (Aalto University, Finland); Ismo Veikko Lindell (Aalto University, Finland);*
- 13:00 Manipulating Electromagnetic Wave Polarization through Reconfigurable Metamaterial Structure  
*Yijun Feng (Nanjing University, China); Bo Zhu (Nanjing University, China); Jinglong Fan (Nanjing University, China); Junming Zhao (Nanjing University, China); Tian Jiang (Nanjing University, China);*
- 13:20 The Quantum Property of Coupled Metamaterial  
*Shu-Ming Wang (Nanjing University, China); Shiyao Mu (Nanjing University, China); Cong Zhu (Nanjing University, China); Ping Xu (Nanjing University, China); Tao Li (Nanjing University, China); Hui Liu (Nanjing University, China); Shi-Ning Zhu (Nanjing University, China);*
- 13:40 Dirac "Photon" in Metamaterials  
*Kazuaki Sakoda (National Institute for Materials Science, Japan);*

- 17:00 Absorption and Giant Magnification with a Thin Metamaterial Structure  
*Sailing He (Royal Institute of Technology; KTH-ZJU Joint Research Center of Photonics, Sweden); Yi Jin (Zhejiang University, China); Sanshui Xiao (Technical University of Denmark, Denmark); Niels Asger Mortensen (Technical University of Denmark, Denmark);*
- 17:20 Maxwell's Fisheye Lens for Subwavelength Focusing  
*Yungui Ma (Zhejiang University, China);*

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**Session 3P3**

**Atmospheric Scattering, Radiative Transfer and Remote Sensing**

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**Wednesday PM, September 14, 2011**

**Room C**

Organized by Ping Yang, Qiang Fu

Chaired by Ping Yang, Qiang Fu

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- 13:00 A Combined Atmospheric Radiative Transfer Model (CART) and Its Applications  
*Heli Wei (Chinese Academy of Sciences, China); Xiuhong Chen (Chinese Academy of Sciences, China); Ruizhong Rao (Chinese Academy of Sciences, China); Yingjian Wang (Chinese Academy of Sciences, China);*
- 13:20 Speeding up the Polarized Radiative Transfer Model  
*Minzheng Duan (Institute of Atmospheric Physics, Chinese Academy of Sciences, China);*
- 13:40 Application of a PPDF-based Atmospheric Light-scattering Correction to Carbon Dioxide Retrievals from GOSAT Observations  
*Andrey I. Bril (National Institute for Environmental Studies, Japan); Sergey L. Oshchepkov (National Institute for Environmental Studies, Japan); Tatsuya Yokota (National Institute for Environmental Studies, Japan);*
- 14:00 A Fast Radiative Transfer Model for Simulating Hyperspectral and Narrow Band Cloudy Sky Infrared Radiances  
*Chenxi Wang (Texas A&M University, USA); Ping Yang (Texas A&M University, USA);*
- 14:20 Light Extinction by a Sphere in Absorbing Medium: Near-field versus Far-field Approaches  
*Qiang Fu (University of Washington, USA); Wenbo Sun (University of Washington, USA);*
- 14:40 Raindrop Size Distribution Model for the Prediction of Rain Attenuation in Durban  
*Pius Adewale Owolawi (Mangosuthu University of Technology, South Africa);*
- 15:00 **Coffee Break**
- 15:20 Comparison of Aerosol Radiative Forcing Observed by AERONET and MODIS at Xianghe Station — Comparison of the Aerosol Product and Its Radiative Forcing between AERONET and MODIS  
*Yan Wang (Institute of Remote Sensing Application, Chinese Academy of Sciences, China); Fengsheng Zhao (Beijing Normal University, China); Zhengqiang Li (Institute of Remote Sensing Application, Chinese Academy of Sciences, China);*
- 15:40 2-D Pattern Synthesis for Cylindrical Arrays  
*Chao Liu (Hefei University of Technology, China); Z. Ding (Hefei University of Technology, China); X. Liu (Hefei University of Technology, China);*
- 16:00 Particle Optical Properties of Ice Crystals and Dust Aerosols  
*Ping Yang (Texas A&M University, USA); George W. Kattawar (Texas A&M University, USA); R. Lee Panetta (Texas A&M University, USA);*
- 16:20 Evaluation of Radiative Heating Rate in Tropical Tropopause Layer  
*Lei Lin (Lanzhou University, China); Qiang Fu (Lanzhou University, China); Jing Su (Lanzhou University, China);*

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**Session 3P4**

**Antenna and Array Design and Simulation Techniques 3**

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**Wednesday PM, September 14, 2011**

**Room D**

Organized by Wenxing Li, Wenhua Yu

Chaired by Wenxing Li, Wenhua Yu

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- 13:00 A Multi-band Mobile Phone Antenna with CPW-FED for Applications of LTE700, GSM900/1800, DCS, PCS, UMTS, BLUETOOTH, and WIMAX  
*Chia-Yen Wei (Feng-Chia University, Taiwan, R.O.C.); Tian-Fu Hung (Feng Chia University, Taiwan); Andy Yang (Lorom Industrial Co., Ltd., Taiwan, R.O.C.); Jim Wu (Lorom Industrial Co., Ltd., Taiwan, R.O.C.); Thomas Yuan (Lorom Industrial Co., Ltd., Taiwan, R.O.C.); Sheau-Shong Bor (Feng-Chia University, Taiwan, R.O.C.); Hai-Tao Sun (Feng-Chia University, Taiwan, R.O.C.);*

- 13:20 An Aperture-couple Stack Antenna with Minkoski-island-based Patch for Circular Polarization and Wide-band Applications  
*Sheau-Shong Bor (Feng-Chia University, Taiwan, R.O.C.); Tian-Fu Hung (Feng Chia University, Taiwan); Chia-Yen Wei (Feng-Chia University, Taiwan, R.O.C.); Ji-Chyun Liu (Ching Yun University, Taiwan, R.O.C.); Hai-Tao Sun (Feng-Chia University, Taiwan, R.O.C.);*
- 13:40 UHF SATCOM Broadband CP Antenna: Moxon Type Bent-dipoles over a Ground Plane  
*Edip Niver (New Jersey Institute of Technology, USA); Ibrahim Tekin (Sabanci University, Turkey);*
- 14:00 Wideband Slotted Planar Antenna with Defected Ground Structure  
*Ayman A. R. Saad (Kosseir Radio, Egypt); Elsayed Esam M. Khaled (Assiut University, Egypt); Deena A. Salem (Electronics Research Institute, Egypt);*
- 14:20 Adaptive Beamforming Technique for Virtual Antenna Using Modified Interpolated Spatial Smoothing Algorithm  
*Wenxing Li (Harbin Engineering University, China); Yipeng Li (Harbin Engineering University, China); Lili Guo (Harbin Engineering University, China); Wenhua Yu (Pennsylvania State University, USA); Raj Mittra (The Pennsylvania State University, USA);*
- 14:40 An Integrated UWB and Bluetooth Antenna with Dual Band-notched Characteristic  
*Ka Chun Law (The University of Hong Kong, China); Sing Wai Cheung (The University of Hong Kong, China); Tung Ip Yuk (The University of Hong Kong, China);*
- 15:00 **Coffee Break**
- 15:20 Coaxial Line Fed HMSIW  $H$ -plane Horn Antenna  
*Said Ali Razavi (Ferdowsi University of Mashhad, Iran); Mohammad Hassan Neshati (Ferdowsi University of Mashhad, Iran);*
- 15:40 Side-lobe Searching Algorithm for Measured Antenna Far-field Patterns  
*Le Kuai (Southeast University, China); Zhenxin Cao (Southeast University, China);*
- 16:00 A Broad-beam Cavity Backed Slot-coupled MSA Array Using Parasitic Patches  
*Thana Puklibmoung (Suranaree University of Technology, Thailand); Piyaporn Krachodnok (Suranaree University of Technology, Thailand); Rangsan Wongsan (Suranaree University of Technology, Thailand);*
- 16:20 Patch Antennas for TTC Applications of Mini-satellites  
*Nai-Zhi Wang (Northwestern Polytechnical University, China); Xi-Bo Wang (Northwestern Polytechnical University, China); Jianzhou Li (Northwestern Polytechnical University, China); Jia-Dong Xu (Northwestern Polytechnical University, China);*
- 16:40 Optimal Calculation of the Directivity of Arrays with Azimuthal Element Pattern Symmetry  
*Emmanuel H. Van Lil (Katholieke Universiteit Leuven, Belgium); Jan-Willem De Bleser (Katholieke Universiteit Leuven, Belgium); Antoine R. Van de Capelle (Katholieke Universiteit Leuven, Belgium);*
- 17:00 A Novel UWB Filter with Dual-notch-bands Characteristic Using Radial-multimode Loaded Stub Resonator  
*Cheng-Yuan Liu (Harbin Engineering University, China); Tao Jiang (Harbin Engineering University, China); Ying-Song Li (Harbin Engineering University, China); J. Zhang (Harbin Engineering University, China);*

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**Session 3P5**
**Computational Electromagnetic, Hybrid Methods**


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**Wednesday PM, September 14, 2011**
**Room E**

 Chaired by Hong-Xing Zheng, Jun Hu
 

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- 13:00 Fast Numerical Simulation of Responses of Array Multicomponent Induction Logging Tool in Horizontally Stratified Inhomogeneous TI Formation by NMM  
*Hongnian Wang (Jilin University, China); Ping Hu (Jilin University, China); Honggen Tao (Wireline Logging Company, Daqing Drilling Engineering Company, China);*
- 13:20 Optimizing Performance of Parallel FDTD With NUMA Policy and MCA Parameters Turning  
*Geng Chen (Xuzhou Normal University, China); Ke-Jian Chen (Xuzhou Normal University, China); Lei Zhao (Xuzhou Normal University, China); Wenhua Yu (Xuzhou Normal University, China);*
- 13:40 HSS Preconditioning for the Time-harmonic Maxwell Equation in Mixed Form  
*Di Zhao (Louisiana Tech University, USA);*

- 14:00 Finite Volume Algorithm to Simulate Responses of Multi-component Induction Tools in 3D Inhomogeneous Anisotropic Formation Using Coupled Scalar-Vector Potentials  
*Ye Zhang (Jilin University, China); Hongnian Wang (Jilin University, China); Showwen Yang (Jilin University, China);*
- 14:20 Fast RCS Computation over a Frequency Band Using High-order MoM and AWE Technique  
*Jun Yan (University of Electronic Science and Technology of China, China); Jun Hu (University of Electronic Science and Technology of China, China); Kai Zheng (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);*
- 14:40 Fast Parameterized Inversion of Multicomponent Induction Logging Data in Horizontally Layered TI Formation  
*Showwen Yang (Jilin University, China); Hongnian Wang (Jilin University, China);*
- 15:00 **Coffee Break**
- 15:20 Solving Multi-scale Electromagnetic Problems by Integral Equation Based Domain Decomposition Method with Adaptive Interior-outer Iterative Technique  
*Ming Jiang (University of Electronic Science and Technology of China, China); Jun Hu (University of Electronic Science and Technology of China, China); Hanru Shao (University of Electronic Science and Technology of China, China); Jun Yan (University of Electronic Science and Technology of China, China); Zai-Ping Nie (University of Electronic Science and Technology of China, China);*
- 15:40 Forward the ADI-PSTD Algorithm to 2.5-Dimensional Full Wave Problems  
*Hong-Xing Zheng (Tianjin University of Technology and Education, China);*
- 16:00 Performance of Incident Hard and Soft Sources in the ADI-PSTD Method  
*Hong-Xing Zheng (Tianjin University of Technology and Education, China); Jing-Jing Li (Tianjin University of Technology and Education, China);*
- 16:20 Three Dimensional ADI-FDTD/PSTD Simulations for Plasma Applications  
*Hong-Xing Zheng (Tianjin University of Technology and Education, China);*
- 16:40 Efficient Computation of Sommerfeld Integral by Cubic Spline Interpolation to Determine Spatial Domain Dyadic Green's Function in Horizontally Layered TI Medium  
*Jianmei Zhou (Jilin University, China); Hongnian Wang (Jilin University, China);*
- 17:00 Contribution to the Electromagnetic Modeling and Simulation of Planar Junctions Using Boundary Element Method  
*Malika Ourabia (University of Sciences and Technologies Houari Boumediene, Algeria);*
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- Session 3P6a**  
**Electromagnetic Composite and Smart Materials for Microwave Applications 2**
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- Wednesday PM, September 14, 2011**  
**Room F**  
Organized by Lie Liu, Konstantin N. Rozanov  
Chaired by Lie Liu, Konstantin N. Rozanov
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- 13:00 Microwave Properties of Composite Metamaterials with Glass-coated Amorphous Microwires  
*Fa Xiang Qin (University of Bristol, UK); Hua-Xin Peng (University of Bristol, UK); Larissa V. Panina (University of Plymouth, UK); Mihail Ipatov (Universidad del Pais Vasco, Spain); Arcady P. Zhukov (Universidad del Pais Vasco, Spain);*
- 13:20 A Study on the SRRs Function on Metamaterial Screen Absorber  
*Yang Qiu Xu (University of Electronic Science and Technology of China, China); Pei-Heng Zhou (University of Electronic Science and Technology of China, China); Hui-Bin Zhang (University of Electronic Science 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);*
- 13:40 Relationships between the RCSR Properties of a Coated Slab and Absorbing Characteristic of the Coated RAM  
*Hai-Yan Chen (University of Electronic Science and Technology of China, China); Long-Jiang Deng (University of Electronic Science and Technology of China, China); Pei-Heng Zhou (University of Electronic Science and Technology of China, China); Liang Chen (University of Electronic Science and Technology of China, China); Jianliang Xie (University of Electronic Science and Technology of China, China); Zhi-Wei Zhu (University of Electronic Science and Technology of China, China);*

- 14:00 Experimental Study of Microwave Permeability of Fe-CoBSi Thin Films Prepared on Thin Flexible Substrates  
*Haipeng Lu (University of Electronic Science and Technology of China, China); Jing Yang (University of Electronic Science and Technology of China, China); Long-Jiang Deng (University of Electronic Science and Technology of China, China);*
- 14:20 A Simple Calibration Method for the Shorted Stripline Permeability Measurement  
*Sergey N. Starostenko (Institute for Theoretical and Applied Electromagnetics RAS, Russia); Konstantin N. Rozanov (Institute for Theoretical and Applied Electromagnetics RAS, Russia);*
- 14:40 GMI Output Stability of Glass-coated Co-based Microwires for Sensor Application  
*Jing-Shun Liu (Harbin Institute of Technology, China); Xiao-Dong Wang (Harbin Institute of Technology, China); Fa Xiang Qin (University of Bristol, UK); Fu-Yang Cao (Harbin Institute of Technology, China); Da-Wei Xing (Harbin Institute of Technology, China); Hua-Xin Peng (University of Bristol, UK); Xiang Xue (Harbin Institute of Technology, China); Jian-Fei Sun (Harbin Institute of Technology, China);*

15:00 **Coffee Break**

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**Session 3P6b**  
**Materials, Devices, Fabrications and Characterizations of Organic Electronics**

**Wednesday PM, September 14, 2011**

**Room F**

Organized by Jwo-Huei Jou  
 Chaired by Jiun-Haw Lee

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- 15:20 Electromagnetic Spinning of Nanofibers Using Polymer Bubbles  
*Ji-Huan He (Soochow University, China);*
- 15:40 Very-high Color-rendering Index OLEDs  
*Jwo-Huei Jou (National Tsing Hua University, Taiwan);*
- 16:00 Ambipolar Transporting Pyridine-containing Anthracene Derivatives for Highly Efficient OLEDs  
*Lian Duan (Tsinghua University, China); Yong Qiu (Tsinghua University, China);*

- 16:20 All Phosphorescent White Organic Light-emitting Devices with High Color Stability and Low Efficiency Roll-off  
*Mao-Kuo Wei (National Dong Hwa University, Taiwan, R.O.C.); Yi-Chi Bai (National Dong Hwa University, Taiwan, R.O.C.); Chih-Hung Hsiao (National Taiwan University, Taiwan); Yi-Hsin Lan (National Taiwan University, Taiwan); Jiun-Haw Lee (National Taiwan University, Taiwan, R.O.C.); Pei-Yu Lee (Yuan Ze University, Taiwan); Tien-Lung Chiu (Yuan Ze University, Taiwan); Chung-Chieh Lee (National Taiwan University, Taiwan); Chih-Chiang Yang (National Taiwan University, Taiwan); Man-Kit Leung (National Taiwan University, Taiwan); Shun-Wei Liu (Institute of Chemistry, Academia Sinica, Taiwan); Chin-Ti Chen (Institute of Chemistry, Academia Sinica, Taiwan);*

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**Session 3P7**  
**Poster Session 5**

**Wednesday PM, September 14, 2011**

**14:00 PM - 17:00 PM**

**Room G**

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- 1 Small Antenna Chamber Design and Measurement  
*Guan-Yu Chen (National Taipei University of Technology, Taiwan); Kuo-Liang Wu (National Taipei University of Technology, Taiwan); Y. D. Chen (High Tech. Computer Corporation (HTC), Taiwan); Jwo-Shiun Sun (National Taipei University of Technology, Taiwan, R.O.C.);*
- 2 Phase Modulation for Spectral Switches of an Asymmetrical Slit  
*Pin Han (National Chung Hsing University, Taiwan);*
- 3 On the Electrically Driven Motion  
*Sara Liyuba Vesely (I.T.B. — C.N.R., Italy); Alessandro Alberto Vesely (Via L. Anelli 13, Italy); Caterina Alessandra Dolci (Liceo Einstein, Italy);*
- 4 Novel Nonlocal Gauge Functions in Electrodynamics and Their Effect on Quantum Mechanical Phases  
*Constantinos Moulopoulos (University of Cyprus, Cyprus);*
- 5 Investigation of Illusion Optics Devices Implemented by Transmission-line Metamaterials with Full Tensors  
*Guo Chang Liu (Institute of Electronics, Chinese Academy of Sciences, China); Chao Li (Southwest Jiaotong University, China); Guangyou Fang (Institute of Electronics, Chinese Academy of Sciences, China);*



- 6 About the Zero Point Energy, Zero Point Mass, Zero Point Temperature and Zero Point Motion in the Subatomic World and Photonics  
*Antonio Puccini (Order of Malta, Italy);*
- 7 Comment on “Permanence of Light Velocity” by Applying the New Theory on Electromagnetic Wave  
*Yelin Xu (Institute of Biophysics, Chinese Academy of Sciences, China); Qiang Xu (Institute of Theoretical Physics of Haikou, China);*
- 8 A Note on Variational Theory for Piezoelectricity with Voids  
*Ji-Huan He (Soochow University, China);*
- 9 Microwave Permeability of Planar Anisotropy  $Ce_2Fe_{17}N_{3-\delta}$  Powders and Its Composite  
*Wenliang Zuo (Lanzhou University, China); Jianqiang Wei (Lanzhou University, China); Tao Wang (Lanzhou University, China); Fashen Li (Lanzhou University, China);*
- 10 Investigation on Peak Frequency of the Microwave Absorption for Planar  $Ce_2Fe_{17}N_{3-\delta}$ /resin Composite  
*Jianqiang Wei (Lanzhou University, China); Wenliang Zuo (Lanzhou University, China); Tao Wang (Lanzhou University, China); Fashen Li (Lanzhou University, China);*
- 11 A Design of Size-reduced Low Pass Filter Using Artificial Dielectric Substrate Structure  
*Jakyung Koo (Soonchunhyang University, Korea); Jaehoon Lee (Soonchunhyang University, Republic of Korea); Jun Lee (Soonchunhyang University, Republic of Korea); Jongsik Lim (Soonchunhyang University, Republic of Korea); Yongchae Jeong (Chonbuk National University, South Korea); Sang-Min Han (Soonchunhyang University, Korea); Dal Ahn (Soonchunhyang University, Korea);*
- 12 Performance Comparison of Radar Target Classification for Monostatic and Bistatic RCS  
*Sung-Jun Lee (Hannam University, Korea); In-Sik Choi (Hannam University, Korea); Seung-Jae Lee (Hannam University, Korea);*
- 13 Wavelength Tunable Micro-Fabry-Perot Interferometers Based on Thermal-optic Effect  
*Yu-Hsin Hsieh (National United University, Taiwan); Nan-Kuang Chen (National United University, Taiwan); Junjie Zhang (Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Science, China);*
- 14 Research on Encode Methods of Train-ground Wireless Credible Transmission System  
*Guochun Wan (Tongji University, China); Mei Song Tong (Tongji University, China);*
- 15 Parametric Transformation and Parametric Resonance of Confined Acoustic Phonons and Confined Optical Phonons by an External Electromagnetic Wave in Doping Superlattices  
*Nguyen Quang Bau (Hanoi National University, Vietnam); Nguyen Van Nghia (Water Resources University, Vietnam); Le Thai Hung (Hanoi National University, Vietnam);*
- 16 All-optical Controllable Double State Switch Based on DIT by Using QD  
*Karim Abbasian (University of Tabriz, Iran); Nasibeh Pasyar (University of Tabriz, Iran); Ali Rostami (University of Tabriz, Iran);*
- 17 Terahertz Wave Generation Using Nonlinear Optical Approaches  
*Yalin Lu (United States Air Force Academy, USA); Kitt Reinhardt (US Air Force Office of Scientific Research, AFOSR/NE, USA);*
- 18 Meeting the Phase Requirement for High-performance EBG Resonator Antennas  
*Yuehe Ge (Macquarie University, Australia);*
- 19 Characterization of Planar Multiport Junction  
*Malika Ourabia (University of Sciences and Technologies Houari Boumediene, Algeria);*
- 20 High-resolution Miniature Fiber Pressure Sensor Using Abrupt-tapered Mach-Zehnder Interferometers  
*Wei-Chih Kuo (National United University, Taiwan, R.O.C.); Zhi-Zheng Feng (National United University, Taiwan, R.O.C.); Shin-Wei Shen (National United University, Taiwan); Yu-Hsin Hsieh (National United University, Taiwan); Nan-Kuang Chen (National United University, Taiwan, R.O.C.);*
- 21 Characteristics for Crosstalk between Dual Microstrip Transmission Lines in PCB  
*Xin Wang (Beijing Jiaotong University, China); Hui Huang (Beijing Jiaotong University, China); Qi Liu (Beijing Jiaotong University, China);*
- 22 Surface Modes at Interface between Lossy Gyroelectric and Isotropic Media  
*Xin Wang (Beijing Jiaotong University, China); Hui Huang (Beijing Jiaotong University, China); Bo Yi (Beijing Jiaotong University, China);*

- 23 Advanced Nanostructured Glassceramics for Photonics  
*Nikolay V. Nikonorov (Saint-Petersburg University of Information Technologies, Mechanics, and Optics, Russia); V. A. Aseev (Saint-Petersburg University of Information Technologies, Mechanics, and Optics, Russia); A. I. Ignatev (Saint-Petersburg University of Information Technologies, Mechanics, and Optics, Russia); E. V. Kolobkova (Saint-Petersburg State Technological Institute, Russia); A. I. Sidorov (Saint-Petersburg University of Information Technologies, Mechanics, and Optics, Russia);*
- 24 Erbium and Ytterbium-erbium Doped Nanoglassceramics for Photonic Application  
*Vladimir Aseev (Saint-Petersburg University of Information Technologies, Mechanics, and Optics, Russia); E. V. Kolobkova (Saint-Petersburg State Technological Institute, Russia); Nikolay V. Nikonorov (Saint-Petersburg University of Information Technologies, Mechanics, and Optics, Russia); K. Moskaleva (Saint-Petersburg University of Information Technologies, Mechanics, and Optics, Russia); Y. Nekrasova (Saint-Petersburg University of Information Technologies, Mechanics, and Optics, Russia);*
- 25 Perturbation Method and Eigenmode Solution Anomalies with Modelling Lossy 3D Resonators  
*Stepan Lucyszyn (Imperial College London, UK); Stergios Papantoni (Imperial College London, UK); Makoto Kuwata-Gonokami (The University of Tokyo, Japan);*
- 26 Analytical Solution of Single-scattering Approximation on Radiative Transfer for Nonhomogeneous Media  
*Feng Zhang (Shanghai Typhoon Institute, China); Leiming Ma (Shanghai Typhoon Institute, China Meteorological Administration, China); Hua Zhang (China Meteorological Administration, China); Zhongping Shen (Shanghai Climate Center, China);*
- 27 Waveguides with Nanostructured Claddings for Scattering Suppression in Plasmonic Optics  
*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); N. L. Kazansky (Image Processing Systems Institute of the Russian Academy of Sciences, Russia);*
- 28 Transmission Line Matrix Method for Two-dimensional Modeling of Terahertz Gaussian Beam Propagation  
*Daniel M. Hailu (University of Waterloo, Canada); Shahed Shahir (University of Waterloo, Canada); Arash Rohani (University of Waterloo, Canada); Safieddin Safavi-Naeini (University of Waterloo, Canada);*
- 29 Remote Sensing Monitoring for Surface Water in Mining Area in Northwest China  
*Baodong Ma (Northeastern University, China); Lixin Wu (Northeastern University, China);*
- 30 Analysis of the Design and Optimization of a Yagi Antenna with High Gain in Meteorological Communication  
*Jue Li (Guizhou Meteorological Information Center, China); Bin Fang (Guizhou Meteorological Information Center, China); Shi-Sheng Jin (Guizhou Meteorological Information Center, China); Wei Wei Cheng (Zhejiang University, China);*
- 31 Design and Analysis of a New Oscillator Circuit for Communication Based on Wien Bridge Structure  
*Qing Zhang (Guizhou University for Nationalities, China); Sheng-Yun Luo (Guizhou University for Nationalities, China); Wei Wei Cheng (Zhejiang University, China);*
- 32 The Research of the Turbo Coding Technology in the High-speed Underwater Communication with OFDM Mode  
*Wei Lan (Guizhou Meteorological Information Center, China); Bin Fang (Guizhou Meteorological Information Center, China); Shi-Sheng Jin (Guizhou Meteorological Information Center, China); Wei Wei Cheng (Zhejiang University, China);*

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**Session 4A2a**
**Metamaterials, Surface Plasmonics and Their Applications**


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**Thursday AM, September 15, 2011**
**Room B**

Organized by Yalin Lu

 Chaired by Yalin Lu
 

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- 08:00 Electromagnetic Coupling and Resonance Modes Separation of Metallic Split Ring Resonator Pair at Microwave Frequencies  
*Min Liu (Nanjing University, China); Ping Chen (Nanjing University, China); Rui-Xin Wu (Nanjing University, China);*

- 08:20 Frequency Selectivity of One-dimensional Subwavelength Gratings in the Mid-Infrared  
*Nan Zhang (University of Electronic Science and Technology of China, China); Pei-Heng Zhou (University of Electronic Science and Technology of China, China); Li Xia Zhuo (University of Electronic Science 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);*
- 08:40 Subwavelength Imaging with SPP Waveguides  
*Weibin Zhang (Zhejiang University, China); Hongsheng Chen (Zhejiang University, China);*
- 09:00 Resonance Relation for Coated Spheres with Radial Anisotropy  
*Hui-Zhe Liu (National University of Singapore, Singapore); Koen Mouthaan (National University of Singapore, Singapore); Mook-Seng Leong (National University of Singapore, Singapore); Said Zouhdi (University Paris Sud, France);*
- 09:20 A Metal-dielectric Multilayer Film Applied to Enhance the Transmission of Two Counter-propagating Lights  
*Yaoju Zhang (Wenzhou University, China); Xiaowei Ji (Wenzhou University, China); Youyi Zhuang (Wenzhou University, China); Chongwei Zheng (Wenzhou University, China);*
- 09:40 Long Wavelength Spectroscopic Characterization of Embedded Bismuth Ferrite Nanorod Arrays  
*Yalin Lu (United States Air Force Academy, USA); J. F. Sell (United States Air Force Academy, USA); M. D. Johnson (United States Air Force Academy, USA); Kitt Reinhardt (US Air Force Office of Scientific Research, AFOSR/NE, USA); R. J. Knize (U.S. Air Force Academy, USA);*
- 10:00 **Coffee Break**
- 
- Session 4A2b**  
**THz, T-ray, T-waves**
- 
- Thursday AM, September 15, 2011**  
**Room B**  
 Organized by Roger A. Lewis, Hua Qin  
 Chaired by Roger A. Lewis, Hua Qin
- 
- 10:20 Femtosecond Laser-induced THz Emission as a Probe for Opto-electronic Properties of Thin Films  
*Patrick Hoyer (Fraunhofer-Gesellschaft, Germany); Stefan Nolte (Institute of Applied Physics, Germany); Gabor Matthäus (Institute of Applied Physics, Germany); Kevin Füchsel (Institute of Applied Physics, Germany);*
- 10:40 Extraction of Non-thermal THz Emission from a High Electron Mobility Transistor  
*Yu Zhou (Suzhou Institute of Nano-Tech and Nano-Bionics, China); Y. D. Huang (Chinese Academy of Sciences, China); W. Xue (Chinese Academy of Sciences, China); X. X. Li (Chinese Academy of Sciences, China); S. T. Lou (Chinese Academy of Sciences, China); X. Y. Zhang (Chinese Academy of Sciences, China); D. M. Wu (Chinese Academy of Sciences, China); Hua Qin (Chinese Academy of Sciences, China); B. S. Zhang (Chinese Academy of Sciences, China);*
- 11:00 Terahertz Spectroscopy of Biochar  
*Elise Maree Pogson (University of Wollongong, Australia); E. Constable (University of Wollongong, Australia); J. Horvat (University of Wollongong, Australia); Roger A. Lewis (University of Wollongong, Australia); S. D. Joseph (University of NSW, Australia);*
- 11:20 Characterisation of Fiber Metamaterial Resonances Using Terahertz Time Domain Spectroscopy  
*Elise Maree Pogson (University of Wollongong, Australia); Roger A. Lewis (University of Wollongong, Australia); Anna Wang (University of Sydney, Australia); P. G. Hunt (University of Sydney, Australia); Maryanne C. J. Large (University of Sydney, Australia); A. Bendavid (Commonwealth Scientific and Industrial Research Organization, Australia); Alessandro Tuniz (University of Sydney, Australia); Boris T. Kuhlmeiy (University of Sydney, Australia); S. C. Fleming (University of Sydney, Australia);*
- 11:40 Terahertz Photocurrent in Point Contact Devices  
*Jiandong Sun (Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences, China); D. M. Wu (Chinese Academy of Sciences, China); B. S. Zhang (Chinese Academy of Sciences, China); Hua Qin (Chinese Academy of Sciences, China);*

**Session 4A3****SAR Systems and Signal Processing****Thursday AM, September 15, 2011****Room C**

Organized by Hean-Teik Chuah, Voon Chet Koo

Chaired by Hean-Teik Chuah

- 08:20 Integrated UAVSAR Simulator and Processor Software (iSARX)  
*Tien Sze Lim (Multimedia University, Malaysia); Chee-Siong Lim (Multimedia University, Malaysia); Voon Chet Koo (Multimedia University, Malaysia);*
- 08:40 Satellite SAR System and Image Simulations by a GPU-based Algorithm  
*Cheng-Yen Chiang (National Central University, Taiwan); Kun-Shan Chen (National Central University, Taiwan); Yang-Lang Chang (National Taipei University of Technology, Taiwan); Tim Lee (National Central University, Taiwan);*
- 09:00 The Design and Development of Unmanned Aerial Vehicle Synthetic Aperture Radar  
*Yee Kit Chan (Multimedia University, Malaysia); Voon Chet Koo (Multimedia University, Malaysia);*
- 09:20 A SIMO Step-frequency Radar Technology for Imaging and Reconstruction of a 3D Complex Target  
*Wei Li (Fudan University, China); Ya-Qiu Jin (Fudan University, China);*
- 10:00 **Coffee Break**
- 10:20 Circularly Polarized Array Antennas for Synthetic Aperture Radar  
*Yohandri (Chiba University, Japan); Josaphat Tetuko Sri Sumantyo (Chiba University, Japan); Hiroaki Kuze (Chiba University, Japan);*
- 10:40 Design and Development of a Ground Based Frequency Modulated Continuous Wave Imaging Radar System  
*Yee Kit Chan (Multimedia University, Malaysia); Chin Yang Ang (Multimedia University, Malaysia); Voon Chet Koo (Multimedia University, Malaysia);*
- 11:00 A GPS/SINU Design for Motion Sensing and Compensation Using Extended Kalman Filter for Airborne UAVSAR  
*Chot Hun Lim (Multimedia University, Malaysia); Chee-Siong Lim (Multimedia University, Malaysia); W. Q. Tan (Multimedia University, Malaysia); Tien Sze Lim (Multimedia University, Malaysia); Voon Chet Koo (Multimedia University, Malaysia);*

- 11:20 Motion Compensation for UAVSAR Raw Data  
*Chot Hun Lim (Multimedia University, Malaysia); Tien Sze Lim (Multimedia University, Malaysia); Voon Chet Koo (Multimedia University, Malaysia);*

**Session 4A4****Microstrip and Printed Antennas****Thursday AM, September 15, 2011****Room D**

Chaired by Toshio Wakabayashi, Homayoon Oraizi

- 08:00 A New Dual Band E-shaped Slot Antenna Design for Wireless Applications  
*Jawad K. Ali (University of Technology, Iraq);*
- 08:20 UTD-PO Solution for the Calculation of the  $E$ -plane Radiation Pattern of Rectangular Horn Antennas with V-shaped Corrugations  
*Jose-Victor Rodriguez (Universidad Politecnica de Cartagena, Spain); Fernando D. Quesada Pereira (Universidad Politecnica de Cartagena, Spain); María Teresa Martínez-Inglés (Universidad Politecnica de Cartagena, Spain); María Martínez-Quinto (Universidad Politecnica de Cartagena, Spain); Juan Pascual-García (Universidad Politécnica de Cartagena, Spain); Jose-Maria Molina-Garcia-Pardo (Technical University of Cartagena (UPCT), Spain); Leandro Juan-Llacer (Technical University of Cartagena (UPCT), Spain);*
- 08:40 Experimental Study of a Single-feed Planar Antenna for DTV Reception  
*Herman Hideyuki Uchida (Tokai University, Japan); Hiroyasu Matsui (DX Antenna Co., Ltd, Japan); Toshio Wakabayashi (Tokai University, Japan);*
- 09:00 Combined Fractal Geometries for the Design of Wide Band Microstrip Antennas with Circular Polarization  
*Homayoon Oraizi (Iran University of Science and Technology, Iran); Shahram Hedayati (Iran University of Science and Technology, Iran);*
- 09:20 Design of Internal Dual Band Printed Monopole Antenna Based on Peano-type Fractal Geometry for WLAN USB Dongle  
*Ali J. Salim (University of Technology, Iraq); Jawad K. Ali (University of Technology, Iraq);*
- 09:40 A New Miniaturized E-shaped Printed Monopole Antenna for UWB Applications  
*Jawad K. Ali (University of Technology, Iraq); Ahmad S. Hussain (University of Technology, Iraq);*
- 10:00 **Coffee Break**

- 10:20 Reconfigurable 8 — Shape PIFA Antenna Using PIN Diode  
*Trong Duc Nguyen (Grenoble INP Minatec, France); Yvan Duroc (Grenoble Institute of Technology (Grenoble-INP), France); Vu Van Yem (Hanoi University of Science and Technology, Vietnam); Tan-Phu Vuong (Grenoble INP Minatec, France);*
- 10:40 Miniaturized Surface Wave Dipole Antenna for Millimeter Wave Application  
*Zachariah C. Alex (Vellore Institute of Technology University, India); G. Shrikanth Reddy (Vellore Institute of Technology University, India);*
- 11:00 Extended Dipole Antenna with AMC Spiral Ground and Via Holes for Millimeter Wave Application  
*G. Shrikanth Reddy (VIT University, India); Zachariah C. Alex (VIT University, India);*
- 11:20 Gain and Bandwidth Enhancement of a Microstrip Antenna Using Partial Substrate Removal in Multiple-layer Dielectric Substrate  
*Neeraj Rao (PDPM Indian Institute of Information Technology, Design & Manufacturing Jabalpur, India); Dinesh Kumar Vishwakarma (PDPM Indian Institute of Information Technology, Design & Manufacturing Jabalpur, India);*
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- Session 4A5**  
**Optics, Fiber Optics, Laser**
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- Thursday AM, September 15, 2011**  
**Room E**  
Chaired by Xinping Zhang, Lei Gao
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- 08:00 Non-spatial Filtering for Laser Beams with Volume Bragg Grating in Photo-Thermo-Refractive Glass  
*Xiang Zhang (Huazhong University of Science and Technology, China); Jiansheng Feng (Huazhong University of Science and Technology, China); Shang Wu (Soochow University, China); Baoxing Xiong (Soochow University, China); Keming Jiang (Soochow University, China);*
- 08:20 Simulation of Chirped Volume Bragg Grating with a Partition-integration Method  
*Jiansheng Feng (Huazhong University of Science and Technology, China); Xiao Yuan (Soochow University, China); Xiang Zhang (Huazhong University of Science and Technology, China); Shang Wu (Soochow University, China); Kuaisheng Zou (Soochow University, China); Guiju Zhang (Soochow University, China);*
- 08:40 Polarization Properties of Transmitting Volume Bragg Gratings in Photo-thermo-refractive Glass  
*Shang Wu (Soochow University, China); Xiao Yuan (Soochow University, China); Xiang Zhang (Huazhong University of Science and Technology, China); Jiansheng Feng (Huazhong University of Science and Technology, China); Kuaisheng Zou (Soochow University, China); Guiju Zhang (Soochow University, China);*
- 09:00 Optical Fiber System for Wavelength Calibration in Next Generation Giant Astronomical Telescopes  
*Jinping He (Nanjing Institute of Astronomical Optics & Technology, Chinese Academy of Sciences, China); Dong Xiao (Nanjing Institute of Astronomical Optics & Technology, China);*
- 09:20 High Time Resolution Fiber Laser Source with the Tunable Pulse Duration  
*Shiwei Wang (Shanghai Jiaotong University, China); Maoqing Liu (Shanghai Jiaotong University, China); Jianqiu Xu (Shanghai JiaoTong University, China);*
- 09:40 Anomalous Transmission Properties of epsilon-near-zero Metamaterials  
*Jie Luo (Soochow University, China); Huanyang Chen (Soochow University, China); Yun Lai (The Hong Kong University of Science and Technology, China); Ping Xu (Soochow University, China); Lei Gao (Soochow University, China);*
- 10:00 **Coffee Break**
- 10:20 Polymer Laser Based on Actively Waveguide Grating Structures  
*Tianrui Zhai (Beijing University of Technology, China); Xinping Zhang (Beijing University of Technology, China);*
- 10:40 Extrahigh Color Rendering Color Temperature Tunable White Light LED Cluster with Warm-white Red Green Blue LEDs  
*Guoxing He (Dong Hua University, China); J. Xu (Dong Hua University, China); H. F. Yan (Shanghai Yaming Lighting Co., Ltd., China);*
- 11:00 Spectral Optimization of Warm-white LED with Red LED Instead of Red Phosphor under Conditions of CRI  $\geq 90$  and R9  $\geq 90$   
*Guoxing He (Dong Hua University, China); J. Xu (Dong Hua University, China); H. F. Yan (Shanghai Yaming Lighting Co., Ltd., China);*
- 11:20 Design of an All-optical Controllable Switch Using Dipole Induced Transparency (DIT)  
*Karim Abbasian (University of Tabriz, Iran); K. Eftekhari (University of Bonab, Iran); Ali Rostami (University of Tabriz, Iran);*

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**Session 4A6**
**High Power Electromagnetics (HPE) &  
Electromagnetic Pulse (EMP)**


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**Thursday AM, September 15, 2011**
**Room F**

Organized by Yan-Zhao Xie, Li-Hua Shi

 Chaired by Yan-Zhao Xie, Li-Hua Shi
 

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- 08:20 System-level Susceptibility Analysis for Intentional EMI Based on Bayesian Networks  
*Congguang Mao (Northwest Institute of Nuclear Technology, China); Hui Zhou (Northwest Institute of Nuclear Technology, China); Zhitong Cui (Northwest Institute of Nuclear Technology, China); Aibin Zhai (Northwest Institute of Nuclear Technology, China); Beiyun Sun (Northwest Institute of Nuclear Technology, China);*
- 08:40 Time Domain Analysis of Nonlinear Load Terminated in Shielded Cable  
*Yinghui Zhou (PLA University of Science & Technology, China); Li-Hua Shi (PLA University of Science and Technology, China); Liyuan Su (PLA University of Science and Technology, China);*
- 09:00 Research on High Voltage Electrostatic Discharge to EED and Fuze  
*Tuan Zhao (Shaanxi Applied Physics-Chemistry Research Institute, China); Lixia Wang (Shaanxi Applied Physics-Chemistry Research Institute, China); Qingmei Feng (Shaanxi Applied Physics-Chemistry Research Institute, China); Hongzhi Yao (Shaanxi Applied Physics-Chemistry Research Institute, China); Xiangfei Ji (Shaanxi Applied Physics-Chemistry Research Institute, China);*
- 09:20 Analytic Solution of Electromagnetic Pulse (EMP) Coupling to Multiconductor Transmission Lines  
*Yan-Zhao Xie (Northwest Institute of Nuclear Technology, China); Hui Xiang (Northwest Institute of Nuclear Technology, China); Dongyang Sun (Institute of Nuclear Technology, China);*
- 09:40 A Method for Assessing EED against HPEM  
*Hongzhi Yao (Shaanxi Applied Physics-Chemistry Research Institute, China); Qingmei Feng (Shaanxi Applied Physics-Chemistry Research Institute, China); Tuan Zhao (Shaanxi Applied Physics-Chemistry Research Institute, China); Xiangfei Ji (Shaanxi Applied Physics-Chemistry Research Institute, China);*
- 10:00 **Coffee Break**

- 10:20 Measurement of the Shielding Effectiveness of Connector by Improved Triaxial Method  
*Qi Zhang (University of Science & Technology, China); Li-Hua Shi (Nanjing Engineering Institute, China); Yinghui Zhou (PLA University of Science & Technology, China); Cheng Gao (University of Science & Technology, China); Yong Chao Guo (University of Science & Technology, China);*
- 10:40 A Small-sized Fast Rise Time HEMP Simulator  
*Yan-Xin Li (Nanjing Engineering Institute, China); Qiwu Wang (Nanjing Engineering Institute, China); Li-Hua Shi (Nanjing Engineering Institute, China); Cheng Gao (Nanjing Engineering Institute, China); Feng Lu (Nanjing Engineering Institute, China); Bi-Hua Zhou (Nanjing Engineering Institute, China);*
- 11:00 Coupling Energy Analysis and Calculation of HEMP on EED  
*Xiangfei Ji (Shaanxi Applied Physics-Chemistry Research Institute, China); Qingmei Feng (Shaanxi Applied Physics-Chemistry Research Institute, China); Tuan Zhao (Shaanxi Applied Physics-Chemistry Research Institute, China); Hongzhi Yao (Shaanxi Applied Physics-Chemistry Research Institute, China);*
- 11:20 A Multi-step Electromagnetic Topology Method to Compute the Coupling of External Electromagnetic Fields and Inner Wires of a Cavity through Apertures  
*Guyan Ni (National University of Defense Technology, China); Ying Li (National University of Defence Technology, China); Jianshu Luo (National University of Defence Technology, China);*

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**Session 4P2a**
**Defected Ground Structure (DGS) and Its Applications**


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**Thursday PM, September 15, 2011**
**Room B**

Organized by Dal Ahn

 Chaired by Hai-Wen Liu, Jongsik Lim
 

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- 13:00 A Miniaturized Low Pass Filter Using Common Defected Ground Structures  
*Jun Lee (Soonchunhyang University, Republic of Korea); Jaehoon Lee (Soonchunhyang University, Republic of Korea); Jongsik Lim (Soonchunhyang University, Republic of Korea); Yongchae Jeong (Chonbuk National University, South Korea); Sang-Min Han (Soonchunhyang University, Korea); Dal Ahn (Soonchunhyang University, Korea);*

- 13:20 New Design of a Rectenna System Using Defected Ground Structures  
*Taemin Choi (Soonchunhyang University, Korea); Seok-Jae Lee (Soonchunhyang University, Korea); Heejong Lee (Soonchunhyang University, Korea); Sangtai Yu (Soonchunhyang University, Republic of Korea); Jongsik Lim (Soonchunhyang University, Republic of Korea); Dal Ahn (Soonchunhyang University, Korea); Sang-Min Han (Soonchunhyang University, Korea);*
- 13:40 Equivalent Circuit Model for Two Layer Dumbbell Type Defected Ground Structures  
*Dorjsuren Baatarxuu (Soonchunhyang University, Republic of Korea); Youngsoo Choi (Soonchunhyang University, Republic of Korea); Sangtai Yu (Soonchunhyang University, Republic of Korea); Thap Tharoeun (Soonchunhyang University, Republic of Korea); Hai-Wen Liu (East China Jiaotong University, China); Dal Ahn (Soonchunhyang University, Korea);*
- 14:00 Novel Bandpass Filter Using Defected Multi-mode Resonators (DMR)  
*Hai-Wen Liu (East China Jiaotong University, China); Jing Wan (East China Jiaotong University, China); Liyun Shi (East China Jiaotong University, China); Xuihui Guan (East China Jiaotong University, China); Dal Ahn (Soonchunhyang University, Korea);*
- 14:20 Triple Mode Resonator Bandpass Filters with Source-load Coupling  
*Ker Chia Lee (Swinburne University of Technology (Sarawak Campus), Malaysia); Hieng Tiong Su (Swinburne University of Technology (Sarawak Campus), Malaysia); Manas K. Haldar (Swinburne University of Technology (Sarawak Campus), Malaysia);*
- 14:40 Reconfigurable Beam Steering Antenna for Smart Antenna  
*Yongjin Kim (Inha Technol College, South Korea);*
- 15:00 **Coffee Break**
- 15:20 Bioradar Recording and Processing of Information about Biological Object  
*Lesya N. Anishchenko (Bauman Moscow State Technical University, Russia); A. S. Bugaev (Moscow Institute of Physics and Technology, Russia); Sergey I. Ivashov (Bauman Moscow State Technical University, Russia);*
- 15:40 Recent Challenges of Bioelectromagnetism  
*Ondrej Kucera (Czech Technical University, Czech Republic); Jiri Pokorny (Institute of Photonics and Electronics, Academy of Sciences of the Czech Republic, Czech Republic); Michal Cifra (Institute of Photonics and Electronics, Academy of Sciences of the Czech Republic, Czech Republic); Daniel Havelka (Czech Technical University, Czech Republic);*
- 16:00 Biological Effect of Extremely Low Frequency Electromagnetic Field (ELF-EMF) on Osteoblasts  
*Li-Jun Sun (Xi'an Jiaotong University, China); Xiaoyun Lu (Xi'an Jiaotong University, China); Jianbao Zhang (Xi'an Jiaotong University, China);*
- 16:20 A Conjoint Analysis for Breast Cancer Detection by Volume Rendering of Low Dosage Three Dimensional Mammogram  
*R. Dharanija (Panimalar Engineering College, Anna University, India); T. Rajalakshmi (Panimalar Engineering College, Anna University, India);*
- 16:40 The Effect of MRET Polymer Compound on SAR Values of RF Phones  
*Igor V. Smirnov (Global Quantech, Inc., USA);*
- 17:00 Simulation of a Detailed Human Throat Model in a Circular Antenna System for Electromagnetic Hyperthermia Application  
*Omer Isik (Fatih University, Turkey); Erdal Korkmaz (Fatih University, Turkey); Ashrf Aoad (Fatih University, Turkey);*

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**Session 4P3**
**Microwave Remote Sensing and Polarimetry, SAR**


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**Thursday PM, September 15, 2011**
**Room C**

 Chaired by Jian Yang
 

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**Session 4P2b**  
**Bioelectromagnetics, RF Biological Effect**


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**Thursday PM, September 15, 2011**
**Room B**

 Chaired by Igor V. Smirnov
 

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- 13:00 Scattering from Periodic Cone Structure Array  
*Ming Jin (Beihang University, China); Ming Bai (Beihang University, China); W. Y. Chen (Shanghai Aerospace Electronic Technology Institute, China); J. K. He (Shanghai Aerospace Electronic Technology Institute, China); Jungang Miao (Beihang University, China);*

- 13:20 Cylindrical Slot Antennas for Monitoring the Quality of Milled Rice  
*Kok Yeow You (University Teknologi Malaysia, Malaysia); J. Salleh (University Teknologi Malaysia, Malaysia); Zulkifly Abbas (University Putra Malaysia, Malaysia); L. L. You (International Medical University, Malaysia);*
- 13:40 Leaf Area Index Inversion Based on Ground Passive Microwave Measurement Experiment  
*Jianli Shuang (Northeastern University, China); Shanjun Liu (Northeastern University, China); Lixin Wu (Northeastern University, China); Qi Li (Northeastern University, China); Jianying Zhuo (Northeastern University, China);*
- 14:00 Three Dimensional Visualization of Pol-InSAR Image  
*Guangyi Zhou (Tsinghua University, China); Tao Xiong (Tsinghua University, China); Jian Yang (Tsinghua University, China);*
- 14:20 Classification of Forest Vegetation Species Based on Reconstruction of Tomography  
*Peifeng Ma (Center for Earth Observation and Digital Earth, Chinese Academy of Science, China); Hong Zhang (Center for Earth Observation and Digital Earth, CAS, China); Chao Wang (Center for Earth Observation and Digital Earth, CAS, China);*
- 14:40 H- $\alpha$  Decomposition and Alternative Parameters for Dual Polarization SAR Data  
*Zili Shan (Chinese Academy of Science, China); Chao Wang (Center for Earth Observation and Digital Earth, CAS, China); Hong Zhang (Center for Earth Observation and Digital Earth, CAS, China); Jiehong Chen (Center for Earth Observation and Digital Earth, CAS, China);*
- 15:00 **Coffee Break**
- 15:20 Forest Model for Height Estimation Using POLinSAR Data  
*Jiehong Chen (Center for Earth Observation and Digital Earth, CAS, China); Hong Zhang (Center for Earth Observation and Digital Earth, CAS, China); Chao Wang (Center for Earth Observation and Digital Earth, CAS, China); Yizian Tang (China Remote Sensing Satellite Ground Station, Chinese Academy of Sciences, China);*
- 15:40 Improved Sigma Filter for Speckle Filtering of PolinSAR Imagery  
*Hong Zhang (Center for Earth Observation and Digital Earth, CAS, China); Wuping Lu (Center for Earth Observation and Digital Earth, CAS, China); Chao Wang (Center for Earth Observation and Digital Earth, CAS, China); Jiehong Chen (Center for Earth Observation and Digital Earth, CAS, China); Bo Zhang (Center for Earth observation and Digital Earth, CAS, China);*
- 16:00 An Analysis Method on Scattering Characteristics of Finite Periodic Array  
*Zhiping Li (Beijing University of Aeronautics and Astronautics, China); Xuan Li (Science and Technology on Space Microwave Laboratory, China); Jungang Miao (Beihang University, China); Dawei Liu (Beihang University, China); Wenle Liang (Beihang University, China);*
- 16:20 The Simulation and Measurement of Scattering Property and Emissivity of the Microwave Radiometer Calibrator  
*Wenle Liang (Beihang University, China); Xuan Li (Science and Technology on Space Microwave Laboratory, China); Jungang Miao (Beihang University, China); Dawei Liu (Beihang University, China);*
- 16:40 Experimental Investigations of Conductor Detection Using Radio-frequency Transmitter-receiver Pairs  
*Scott E. Irvine (Defence Research and Development Canada, Canada);*

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**Session 4P4a**
**Computational Electromagnetics, EM Method and Simulation 2**


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**Thursday PM, September 15, 2011**
**Room D**

 Chaired by Qijun Zhang
 

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- 13:00 Fast Parametric Models for Microwave Components Using Vector Fitting, Neural Networks and Space-mapping Techniques  
*Zhiyu Guo (Carleton University, Canada); Qijun Zhang (Carleton University, Canada); Jianjun Gao (East China Normal University, China);*
- 13:20 Electromagnetic Simulation of a Bulk Current Injection Test Setup for Automotive Applications  
*Flavia Grassi (Politecnico di Milano, Italy); Sergio Pignari (Politecnico di Milano, Italy);*



- 13:40 The Numerical Solution of Aperture Penetrating Integral Equations Based on Wavelet Galerkin Method  
*Jianshu Luo (National University of Defence Technology, China); Zhenzheng Ouyang (National University of Defence Technology, China);*
- 14:00 Analysis and Simulation for RF Interconnect  
*Jianfei Xu (Fudan University, China); Na Yan (Fudan University, China);*

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**Session 4P4b**
**Mobile Antennas, UWB Antenna and Array**


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**Thursday PM, September 15, 2011**
**Room D**

 Chaired by Zhipeng Wu
 

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- 14:20 Miniaturised Slot Loop Antennas on Dielectric and Magnetic Substrates  
*Fang He (The University of Manchester, UK); Zhipeng Wu (University of Manchester, UK);*
- 14:40 Studies of Planar Antennas with Different Radiator Shapes for Ultra-wideband Body-centric Wireless Communications  
*Yiye Sun (The University of Hong Kong, China); Sing Wai Cheung (The University of Hong Kong, China); Tung Ip Yuk (The University of Hong Kong, China);*
- 15:00 **Coffee Break**
- 15:20 Bandwidth Improvements Using Ground Slots for Compact UWB Microstrip-fed Antennas  
*Li Liu (University of Hong Kong, Hong Kong, China); Sing Wai Cheung (The University of Hong Kong, China); Tung Ip Yuk (The University of Hong Kong, China);*
- 15:40 Compact Directional UWB Antenna with Improved Performance  
*Fuguo Zhu (University of Surrey, UK); Shi-Chang (Steven) Gao (University of Surrey, UK); Anthony T. S. Ho (University of Surrey, UK); Tim W. C. Brown (University of Surrey, UK); Jia-Dong Xu (Northwestern Polytechnical University, China);*
- 16:00 Band-notch Patch Ultra-wide Band Antenna  
*Ayman Ayd Ramadan Saad (Telecom Egypt, Egypt); Deena A. Salem (Electronics Research Institute, Egypt); Elsayed Esam M. Khaled (Assiut University, Egypt);*

- 16:20 Novel Design of Proximity-fed Ultra-wide Band Annular Slot Antenna  
*Ayman Ayd Ramadan Saad (Telecom Egypt, Egypt); Elsayed Esam M. Khaled (Assiut University, Egypt); Deena A. Salem (Electronics Research Institute, Egypt);*
- 16:40 Optimization of Radiation Patterns of Array Antennas  
*Valluri Rajya Lakshmi (Anil Neerukonda Institute of Technology and Sciences, India); Gotumukkala Surya Narayana Raju (Andhra University, India);*

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**Session 4P5**
**Optics and Photonics 2**


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**Thursday PM, September 15, 2011**
**Room E**

 Chaired by Ioannis M. Besieris
 

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- 13:00 Longitudinally Polarized Light  
*Haifeng Wang (A\*star, Data Storage Institute, Singapore); Boris Luk'yanchuk (A\*star, Data Storage Institute, Singapore);*
- 13:20 Cerenkov-type Second Harmonic Generation and Its Application to Three-dimensional Nonlinear Microscopy  
*Yan Sheng (Australian National University, Australia); Wieslaw Krolikowski (Australian National University, Australia); Ady Arie (Tel-Aviv University, Israel); Kaloian Koynov (Max Planck Institute for Polymer Research, Germany);*
- 13:40 Bending (Accelerating) Airy Beams  
*Ioannis M. Besieris (Virginia Polytechnic Institute and State University, USA); Amr M. Shaarawi (The American University in Cairo, Egypt);*
- 14:00 Cylindrical Vector Beams are Eigenstates of Total Angular Momentum  
*Shuang-Yan Yang (Shanghai University, China); Ting-Ting Wang (Shanghai University, China); Chun-Fang Li (Shanghai University, China);*
- 14:20 Characterization of Vector Diffraction-free Light Beams  
*Ting-Ting Wang (Shanghai University, China); Shuang-Yan Yang (Shanghai University, China); Chun-Fang Li (Shanghai University, China);*
- 14:40 The Enhancement of the Light Scattering/Absorption from the Correlation Effect between Molecules  
*Wei-Xing Xu (NewTech Monitoring Inc., Canada);*
- 15:00 **Coffee Break**

- 15:20 Self-field Theory, General Relativity and Quantum Theory  
*Anthony H. J. Fleming (Biophotonics Research Institute, Australia);*
- 15:40 Two-dimensional Tunable Plasma Photonic Crystal Filters  
*Limei Qi (Qufu Normal University, China); Fengqin Lu (Senior High School of Fengcheng, China); Liang Shang (Qufu Normal University, China);*
- 16:00 The Dependence of the Acoustomagnetolectric Current on the Parameters of a Cylindrical Quantum Wire with an Infinite Potential in the Presence of an External Magnetic Field  
*Nguyen Quang Bau (Hanoi National University, Vietnam); Nguyen Vu Nhan (Academy of Defence force-Air force, Vietnam); Nguyen Van Nghia (Water Resources University, Vietnam);*
- 16:20 The Parametric Resonance of Confined Acoustic Phonons and Confined Optical Phonons by an External Electromagnetic Wave in Cylindrical Quantum Wires with an Infinite Potential  
*Nguyen Quang Bau (National University in Hanoi, Vietnam); Le Thai Hung (Hanoi National University, Vietnam); Le Thi Thu Phuong (Hanoi National University, Vietnam);*
- 16:40 Physical Processes of the Nonlinear Optical Response of Glasses with Semiconductor and Metallic Nanoparticles  
*Alexander A. Kim (National Research University Information Technology, Mechanics and Optics (ITMO), Russia); Nikolay V. Nikonorov (Saint-Petersburg University of Information Technologies, Mechanics, and Optics, Russia);*
- 13:20 Full-wave Analysis of Two Parallel Slotlines on a Common Substrate  
*Vaclav Kotlan (Czech Technical University in Prague, Czech Republic); Jan Machac (Czech Technical University, Czech Republic); Francisco L. Mesa (University of Seville, Spain); Raul Rodriguez-Berral (University of Seville, Spain);*
- 13:40 Advances in the Theory of  $A$ ,  $B$ ,  $C$  Numbers and Its Application to Waveguide Propagation  
*Mariana Nikolova Georgieva-Grosse (Consulting in Physics and Computer Sciences, Germany); Georgi Nikolov Georgiev (University of Veliko Tirmovo "St. St. Cyril and Methodius", Bulgaria);*
- 14:00 An Extra Reduced Size Dual-mode Bandpass Filter for Wireless Communication Systems  
*Jawad K. Ali (University of Technology, Iraq); Nasr N. Hussain (University of Technology, Iraq);*
- 14:20 New Defected Microstrip Structure Bandstop Filter  
*Jian-Kang Xiao (Xidian University, China); Wen-Jun Zhu (Hohai University, China);*
- 14:40 Dual-band Bandpass Filter Using SIR Structure  
*Jian-Kang Xiao (Xidian University, China); Wen-Jun Zhu (Hohai University, China);*
- 15:00 **Coffee Break**
- 15:20 An Investigation of Unloaded Quality Factor of  $\lambda/2$  and  $\lambda/4$  Resonators  
*Somboon Theerawisitpong (Rajamangala University of Technology Thanyaburi, Thailand); Toshitatsu Suzuki (Nippon Institute of Technology, Japan); Yozo Utsumi (Nippon Institute of Technology, Japan);*
- 15:40 Design of an Extra-low-loss Broadband Y-branch Waveguide Splitter Based on a Tapered MMI Structure  
*Pengfei Wang (University of Southampton, UK); Gilberto Brambilla (University of Southampton, UK); Yuliya Semenova (Dublin Institute of Technology, Ireland); Qiang Wu (Dublin Institute of Technology, Ireland); Gerald Farrell (Dublin Institute of Technology, Ireland);*
- 16:00 Scanning Near-field Millimeter Wave Microscope Combining Dielectric Tapered Probes and Metal Tips  
*Bin Zhu (Vrije Universiteit Brussel, Belgium); S. Vanlooche (UGent, Belgium); V. Matvejev (Vrije Universiteit Brussel, Belgium); Johan Stiens (Vrije Universiteit Brussel (VUB), Belgium); Daniel De Zutter (Ghent University, Belgium); Roger Vounckx (Vrije Universiteit Brussel, Belgium);*
- 16:20 A New Method for the Characterizing and Modeling of Arbitrarily Shaped Multiport Junctions  
*Malika Ourabia (University of Sciences and Technologies Houari Boumediene, Algeria);*

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**Session 4P6**
**Microwave and Millimeter Wave Circuits and Devices, CAD**


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**Thursday PM, September 15, 2011**
**Room F**

 Chaired by Jan Machac, Mariana Nikolova  
Georgieva-Grosse
 

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- 13:00 Applying Capacitive Terminal of Microwave Transmission Line as Sensitive Sound Transducer  
*Jian Qian (Nanjing University, China); Shaomin He (Nanjing University, China); Xidong Fu (Nanjing University, China); Zhicai Xu (Nanjing University, China); Ping Chen (Nanjing University, China);*

16:40 New Method to Calculate the Low Frequency Noise  
Hooge Parameter: Applications to SiGe HFET

*Luis Manuel Rodriguez Mendez (Instituto Politecnico Nacional, Mexico); Mauro A. Enciso-Aguilar (Instituto Politecnico Nacional, Mexico); Martha C. Galaz Larios (Instituto Politécnico Nacional, México D. F.);*

## PIERS SURVEY

This is to inform you about future Progress in Electromagnetics Research Symposium (PIERS).

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Should you be interested in organizing a session, please online fill out this PIERS Survey Form in PIERS web site at <http://emacademy.org> or <http://piers.org>.

Name: \_\_\_\_\_ Position: \_\_\_\_\_  
Affiliation: \_\_\_\_\_ Email: \_\_\_\_\_  
\_\_\_\_\_  
Phone: \_\_\_\_\_  
Address: \_\_\_\_\_ Fax: \_\_\_\_\_  
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Web: \_\_\_\_\_  
\_\_\_\_\_  
Date: \_\_\_\_\_

A1. For the next PIERS to be held on 27–30 March, 2012 in Kuala Lumpur, MALAYSIA,

( ) I will be interested in organizing and chairing a session, and the proposed title is  
\_\_\_\_\_

B. For past PIERS, I attended

- |                                 |                                 |                                 |
|---------------------------------|---------------------------------|---------------------------------|
| ( ) 1st PIERS1989 in Boston     | ( ) 2nd PIERS1991 in Cambridge  | ( ) 3rd PIERS1993 in Pasadena   |
| ( ) 4th PIERS1994 in Noordwijk  | ( ) 5th PIERS1995 in Seattle    | ( ) 6th PIERS1996 in Innsbruck  |
| ( ) 7th PIERS1997 in Hong Kong  | ( ) 8th PIERS1997 in Cambridge  | ( ) 9th PIERS1998 in Nantes     |
| ( ) 10th PIERS1999 in Taipei    | ( ) 11th PIERS2000 in Cambridge | ( ) 12th PIERS2001 in Osaka     |
| ( ) 13th PIERS2002 in Cambridge | ( ) 14th PIERS2003 in Singapore | ( ) 15th PIERS2003 in Honolulu  |
| ( ) 16th PIERS2004 in Pisa      | ( ) 17th PIERS2004 in Nanjing   | ( ) 18th PIERS2005 in Hangzhou  |
| ( ) 19th PIERS2006 in Cambridge | ( ) 20th PIERS2006 in Tokyo     | ( ) 21st PIERS2007 in Beijing   |
| ( ) 22nd PIERS2007 in Prague    | ( ) 23rd PIERS2008 in Hangzhou  | ( ) 24th PIERS2008 in Cambridge |
| ( ) 25th PIERS2009 in Beijing   | ( ) 26th PIERS2009 in Moscow    | ( ) 27th PIERS2010 in Xi'an     |
| ( ) 28th PIERS2010 in Cambridge | ( ) 29th PIERS2011 in Marrakesh | ( ) 30th PIERS2011 in Suzhou    |

C. I have the following comments about PIERS:

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# PIERS 2012 in Kuala Lumpur

## Progress in Electromagnetics Research Symposium

27 – 30 March, 2012 Kuala Lumpur, MALAYSIA

### CALL FOR PAPERS

PIERS provides an international forum for reporting progress and recent advances in all aspects of electromagnetics. Spectra range from statics to RF, microwave, photonics, and beyond. Topics include radiation, propagation, diffraction, scattering, guidance, resonance, power, energy and force issues, and all applications and modern developments. Potential session organizers are welcome to propose specific technical topics by filling out the PIERS survey at <http://piers.org/>.

#### SUGGESTED TOPICS:

- |  |  |
|--|--|
| 1 Electromagnetic theory                             | 2 Computational electromagnetics, hybrid methods               |
| 3 Spectra, time, and frequency domain techniques     | 4 Fast iteration, large scale and parallel computation         |
| 5 Transmission lines and waveguide discontinuities   | 6 Resonators, filters, interconnects, packaging, MMIC          |
| 7 Antenna theory and radiation                       | 8 Microstrip and printed antennas, phase array antennas        |
| 9 RF and wireless communication, multipath           | 10 Mobile antennas, conformal and smart skin antennas          |
| 11 Power electronics, superconducting devices        | 12 Systems and components, electromagnetic compatibility       |
| 13 Nano scale electromagnetics, MEMS                 | 14 Magnetic levitation, transportation and collision avoidance |
| 15 Precision airport landing systems, GPS            | 16 Radar sounding of atmosphere, ionospheric propagation       |
| 17 Microwave remote sensing and polarimetry, SAR     | 18 Subsurface imaging and detection technology, GPR            |
| 19 Active and passive remote sensing systems         | 20 Electromagnetic signal processing, wavelets, neural network |
| 21 Rough surface scattering and volume scattering    | 22 Remote sensing of the earth, ocean, and atmosphere          |
| 23 Scattering, diffraction, and inverse scattering   | 24 Microwave and millimeter wave circuits and devices, CAD     |
| 25 Optics and photonics, gyrotrons, THz technology   | 26 Quantum well devices, microwave photonic systems, PBG       |
| 27 Medical electromagnetics, biological effects, MRI | 28 Fiber optics, optical sensors, quantum computing            |
| 29 Biological media, composite and random media      | 30 Plasmas, nonlinear media, fractal, chiral media, LHM        |
| 31 Constitutive relations and bianisotropic media    | 32 Moving media, relativity, field quantization, and others    |

### PAPER SUBMISSION MUST BE RECEIVED BY 20 SEPTEMBER 2011

**Abstract Guidelines:** Authors are invited to submit a one-page abstract of no less than 250 words in English. No full-length paper is required. The abstract should explain clearly the content and relevance of the proposed technical contribution. On a separate page list the following information: (1) Title of the paper, (2) Name, affiliation, and email of each author, (3) Mailing address, (4) Telephone/Fax numbers, (5) Corresponding author and Presenting author, (6) Topic or Session Organizer, if applicable, (7) State if poster presentation is preferred.

Please use On-Line-Submission (<http://piers.org>) to submit your contribution or via email ([tpc@piers.org](mailto:tpc@piers.org)) by attachments. Authors are recommended to use \*.tex, \*.doc, or \*.pdf as the file format. The abstract submission deadline is **20 September 2011** and the author pre-registration deadline is **20 November 2011**.

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### PRESENTING AUTHORS MUST PRE-REGISTER BY 20 NOVEMBER 2011

Each presenting author is limited to presenting no more than three papers in oral and poster sessions, and must pre-register by paying a **non-refundable** fee of **US\$570** before **20 November 2011**. For students with valid identification, the non-refundable pre-registration fee is **US\$300**. Registration fee will be raised to **\$680** and **\$400** for students after **20 November 2011**. Only pre-registered articles will be scheduled in the final Technical Program. Inclusion of the article in the Technical Program and PIERS Proceedings is guaranteed only after the registration of the presenting author is completed. Registration fee include admission to all technical sessions, break areas, and a copy of the draft proceedings in CD-ROM.

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# PIERS 2012 in Moscow

## Progress in Electromagnetics Research Symposium

### 19 – 23 August, 2012

Moscow, RUSSIA

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## CALL FOR PAPERS

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PIERS provides an international forum for reporting progress and recent advances in all aspects of electromagnetics. Spectra range from statics to RF, microwave, photonics, and beyond. Topics include radiation, propagation, diffraction, scattering, guidance, resonance, power, energy and force issues, and all applications and modern developments. Potential session organizers are welcome to propose specific technical topics by filling out the PIERS survey at <http://piers.org/>.

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- |  |  |
|--|--|
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| 29 Biological media, composite and random media      | 30 Plasmas, nonlinear media, fractal, chiral media, LHM        |
| 31 Constitutive relations and bianisotropic media    | 32 Moving media, relativity, field quantization, and others    |

## PAPER SUBMISSION MUST BE RECEIVED BY 20 FEBRUARY 2012

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**Abstract Guidelines:** Authors are invited to submit a one-page abstract of no less than 250 words in English. No full-length paper is required. The abstract should explain clearly the content and relevance of the proposed technical contribution. On a separate page list the following information: (1) Title of the paper, (2) Name, affiliation, and email of each author, (3) Mailing address, (4) Telephone/Fax numbers, (5) Corresponding author and Presenting author, (6) Topic or Session Organizer, if applicable, (7) State if poster presentation is preferred.

Please use On-Line-Submission (<http://piers.org>) to submit your contribution or via email ([tpc@piers.org](mailto:tpc@piers.org)) by attachments. Authors are recommended to use \*.tex, \*.doc, or \*.pdf as the file format. The abstract submission deadline is **20 February 2012** and the author pre-registration deadline is **20 April 2012**.

**Full-length Papers:** Author of an accepted abstract is invited to (but is not required to) submit a full-length paper of 4–5 pages. All full papers will be subject to a peer-review process. Only accepted and registered papers will be published in the final PIERS Proceedings and available online after the conference. Selected full-length papers will be published on **PIERS Online**. Please visit PIERS website for the latest PIERS sample files. The deadline for the submission of extended papers is **20 April 2012**.

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## PRESENTING AUTHORS MUST PRE-REGISTER BY 20 APRIL 2012

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Each presenting author is limited to presenting no more than three papers in oral and poster sessions, and must pre-register by paying a **non-refundable** fee of **US\$570** before **20 April 2012**. For students with valid identification, the non-refundable pre-registration fee is **US\$300**. Registration fee will be raised to **\$680** and **\$400** for students after **20 April 2012**. Only pre-registered articles will be scheduled in the final Technical Program. Inclusion of the article in the Technical Program and PIERS Proceedings is guaranteed only after the registration of the presenting author is completed. Registration fee include admission to all technical sessions, break areas, and a copy of the draft proceedings in CD-ROM.

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	<b>MONDAY AM</b> 8:00 September 12		<b>MONDAY PM</b> 13:00 September 12		<b>TUESDAY AM</b> 8:00 September 13		<b>TUESDAY PM</b> 13:00 September 13	
<b>ROOM A</b>	1A1 - Passive Optical Waveguide Theory and Numerical Modelling		1P1a - Fiber Micro/Nano-Photonic Components and Fiber Sensors	1P1b - Nano Scale Electromagnetics	2A1 - Generation, Propagation and Application of Coherent and Partially Coherent Beams with Special Beam Profile and Polarization 1		2P1 - Generation, Propagation and Application of Coherent and Partially Coherent Beams with Special Beam Profile and Polarization 2	
<b>ROOM B</b>	1A2 - Electromagnetic Theory and Design on the Optical Dispersive Materials, Invisible Cloak and Photonic Crystals		1P2 - Transformation Optics and Cloaking		2A2 - Photonics and Metamaterials with Chirality		2P2 - Electromagnetic Resonances in Photonic/Plasmonic Crystals and Transformational Metamaterials	
<b>ROOM C</b>	1A3 - Synthetic Aperture Radar: Algorithms and Applications		1P3a - Remote Sensing of the Earth, Ocean, and Atmosphere	1P3b - Subsurface Imaging and Detection Technology, GPR	2A3a - EM Scattering Models and Applications	2A3b - Remote Sensing of Water Cycle Related Components 1		2P3 - Remote Sensing of Water Cycle Related Components 2
<b>ROOM D</b>	1A4a - AC Transport, Impedance Spectra, Magnetoimpedance	1A4b - Modeling, Processing, and Inversion of EM Geophysics and Their Applications	1P4a - Computational Techniques and Inverse Scattering Problems	1P4b - Scattering and Inverse Problem	2A4 - Time Modulated Antenna Arrays		2P4a - Antenna Array for Wireless Communications	2P4b - Antenna and Array Design and Simulation Techniques 1
<b>ROOM E</b>	1A5 - Extended/Unconventional Electromagnetic Theory, EHD (Electro-hydrodynamics)/EMHD (Electro-magneto-hydrodynamics), and Electro-biology		1P5 - Novel Mathematical Methods in Electromagnetics		2A5a - Information Optics and Photonics	2A5b - Broadband Optical Access		2P5 - Electromagnetic Nondestructive Evaluation (NDE) Methods for Industrial and Medical Applications
<b>ROOM F</b>			1P6 - Spin Physics in Low Dimensional Systems		2A6a - Computational Techniques	2A6b - Computational Electromagnetics, EM Method and Simulation 1		2P6 - Electromagnetic Media and Wireless Propagation
<b>ROOM G</b>			1P7 - Poster Session 1		2A7 - Poster Session 2		2P7 - Poster Session 3	

	<b>WEDNESDAY AM</b> 8:00 September 14		<b>WEDNESDAY PM</b> 13:00 September 14		<b>THURSDAY AM</b> 8:00 September 15		<b>THURSDAY PM</b> 13:00 September 15	
<b>ROOM A</b>	3A1 - Plasmonic Nanophotonics 1		3P1a - Plasmonic Nanophotonics 2	3P1b - Optics and Photonics 1				
<b>ROOM B</b>	3A2a - Merging of Metamaterials and Natural Materials	3A2b - Cloaked Material System and Electromagnetic Compatibility	3P2 - Metamaterials for Achieving Extraordinary Properties and Performances		4A2a - Metamaterials, Surface Plasmonics and Their Applications	4A2b - THz, T-ray, T-waves	4P2a - Defected Ground Structure (DGS) and Its Applications	4P2b - Bioelectromagnetics, RF Biological Effect
<b>ROOM C</b>	3A3 - Advanced Methods for Polarimetric Information Extraction		3P3 - Atmospheric Scattering, Radiative Transfer and Remote Sensing		4A3 - SAR Systems and Signal Processing		4P3 - Microwave Remote Sensing and Polarimetry, SAR	
<b>ROOM D</b>	3A4 - Antennas and Array Design and Simulation Techniques 2		3P4 - Antenna and Array Design and Simulation Techniques 3		4A4 - Microstrip and Printed Antennas		4P4a - Computational Electromagnetics, EM Method and Simulation 2	4P4b - Mobile Antennas, UWB Antenna and Array
<b>ROOM E</b>	3A5 - Electromagnetic Modeling, Inversion and Applications		3P5 - Computational Electromagnetic, Hybrid Methods		4A5 - Optics, Fiber Optics, Laser		4P5 - Optics and Photonics 2	
<b>ROOM F</b>	3A6 - Electromagnetic Composite and Smart Materials for Microwave Applications 1		3P6a - Electromagnetic Composite and Smart Materials for Microwave Applications 2	3P6b - Materials, Devices, Fabrications and Characterizations of Organic Electronics	4A6 - High Power Electromagnetics (HPE) & Electromagnetic Pulse (EMP)		4P6 - Microwave and Millimeter Wave Circuits and Devices, CAD	
<b>ROOM G</b>	3A7 - Poster Session 4		3P7 - Poster Session 5					