

PIERS 2016 Shanghai

Progress In Electromagnetics Research Symposium

Program

August 8–11, 2016
Shanghai, CHINA

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THE ELECTROMAGNETICS ACADEMY

The Progress in Electromagnetics Research Symposium (PIERS) is sponsored by The Electromagnetics Academy.

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

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

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

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SYMPOSIUM VENUE

The 2016 Progress in Electromagnetics Research Symposium will be held in Shanghai during August 8–11, 2016, in Shanghai International Convention Center.

REGISTRATION

The PIERS technical sessions will begin at 8:00 on Monday, August 8, 2016. You're encouraged to register during 10:00-18:00, Sunday, August 7, 2016, at the registration desk/room located in Shanghai International Convention Center. Registration is also possible in Shanghai International Convention Center from 08:00 to 18:00 during the Symposium, August 8–11, 2016.

The on-site registration fee is USD 680, and the reduced registration fee for a student is USD 400 (a valid student ID is required). If you have pre-registered and paid, your name badge and symposium program will be ready for you to pick up at the registration desk during the symposium. Please wear your name badge throughout the meeting. Access to the coffee break, interactive areas, and technical sessions will be prohibited if a name badge is not visible.

SPECIAL EVENTS

Symposium Reception

On Sunday evening, August 7, 2016, all conference participants are invited to a welcome reception at the conference hotel. The tickets are free and handed out on a first-come-first-served basis. Please make reservation in advance for the reception by July 20.

Symposium Banquet

On Wednesday evening, August 10, 2016, symposium banquet is planned for PIERS participants and their guests. A limited number of banquet tickets will be available. For all participants, the price is USD 80 & RMB 480 per person. Please make reservation and pay by credit card (USD) or by Alipay in advance for the banquet by July 20.

PIERS ONLINE

Information on PIERS 2016 Shanghai and future PIERS is posted at www.piers.org.

GUIDELINE FOR PRESENTERS

Oral Presentations

- **Load and TEST presentation files in advance:**

Presenting authors should upload and test presentation files in the PIERS OFFICE no later than 12 hours before the scheduled talk. Presenters are not allowed to detach the session computer and attach their own notebook/laptop to the LCD projector in session rooms.

- **Presentation files format:**

PDFs and Powerpoint files are recommended. Movies or animations in MPEG, Windows Media, etc, should be tested in PIERS computer in PIERS OFFICE no later than half day before the session. Presentation files in USB disk, CD-ROM, DVD are acceptable by PIERS Computer.

- **Report to Session Chair:**

Presenters are required to report to their session chairs at least 10 minutes prior to the start of their session.

- **Length of your talk:**

In a regular session, the time length for each talk is 20 minutes. In a focus session, the presentation time limit is 30 minutes for a keynote talk, 20 minutes for an invited talk, and 15 minutes for a contributed talk.

- **DO NOT change presentation sequence:**

A session Chair should be present in the session room at least 15 minutes before the start of the session and must strictly observe the starting time and time limit of each talk and refrain from changing paper presentation sequence.

- **NO picture request:**

When such a request is made by the presenter, the session chair and session helpers will do their best to ensure that no pictures will be taken at the presentation.

Poster Presentations

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

One panel (about 100(W) x 200(H) cm) will be available for each poster.

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

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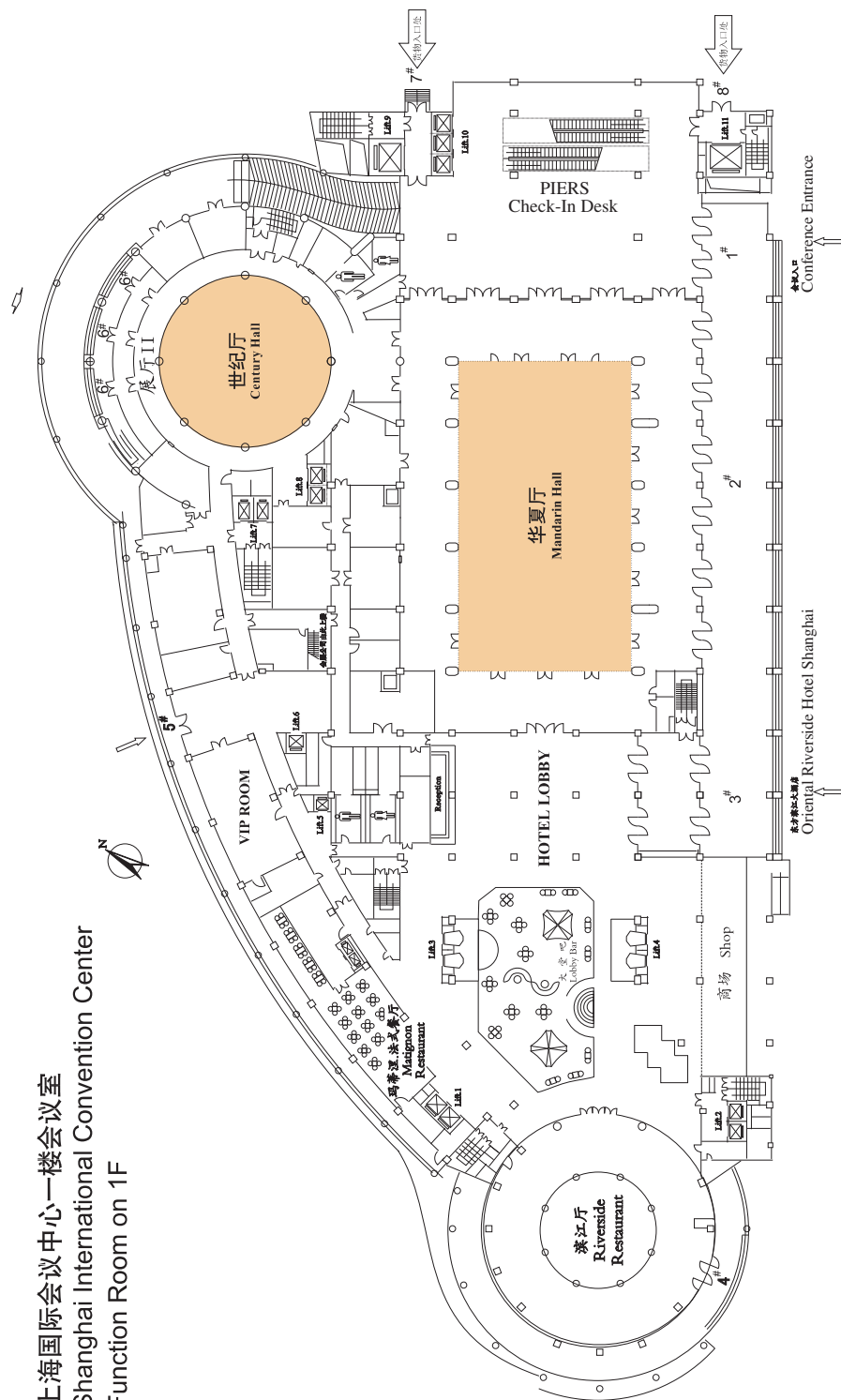
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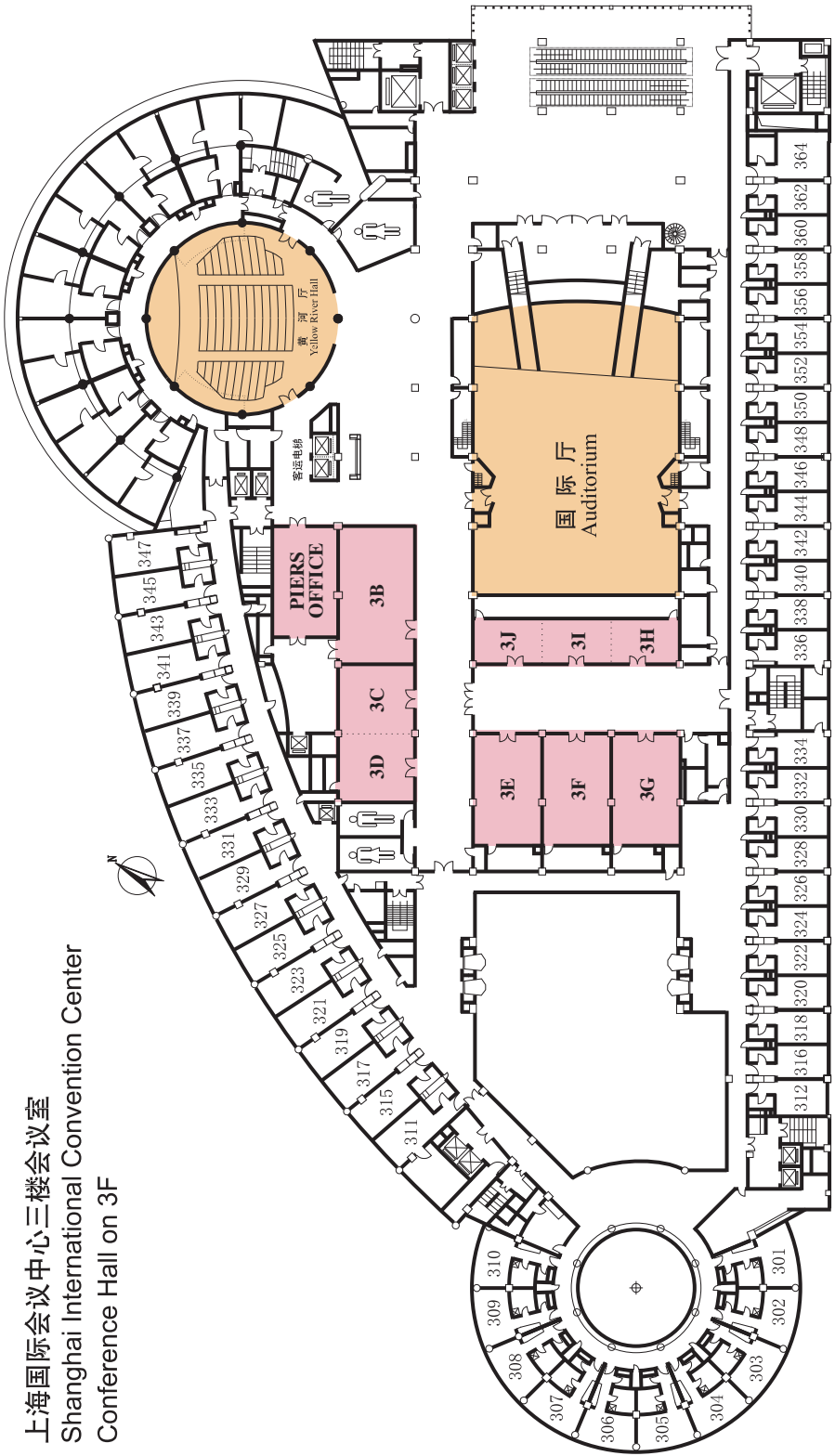
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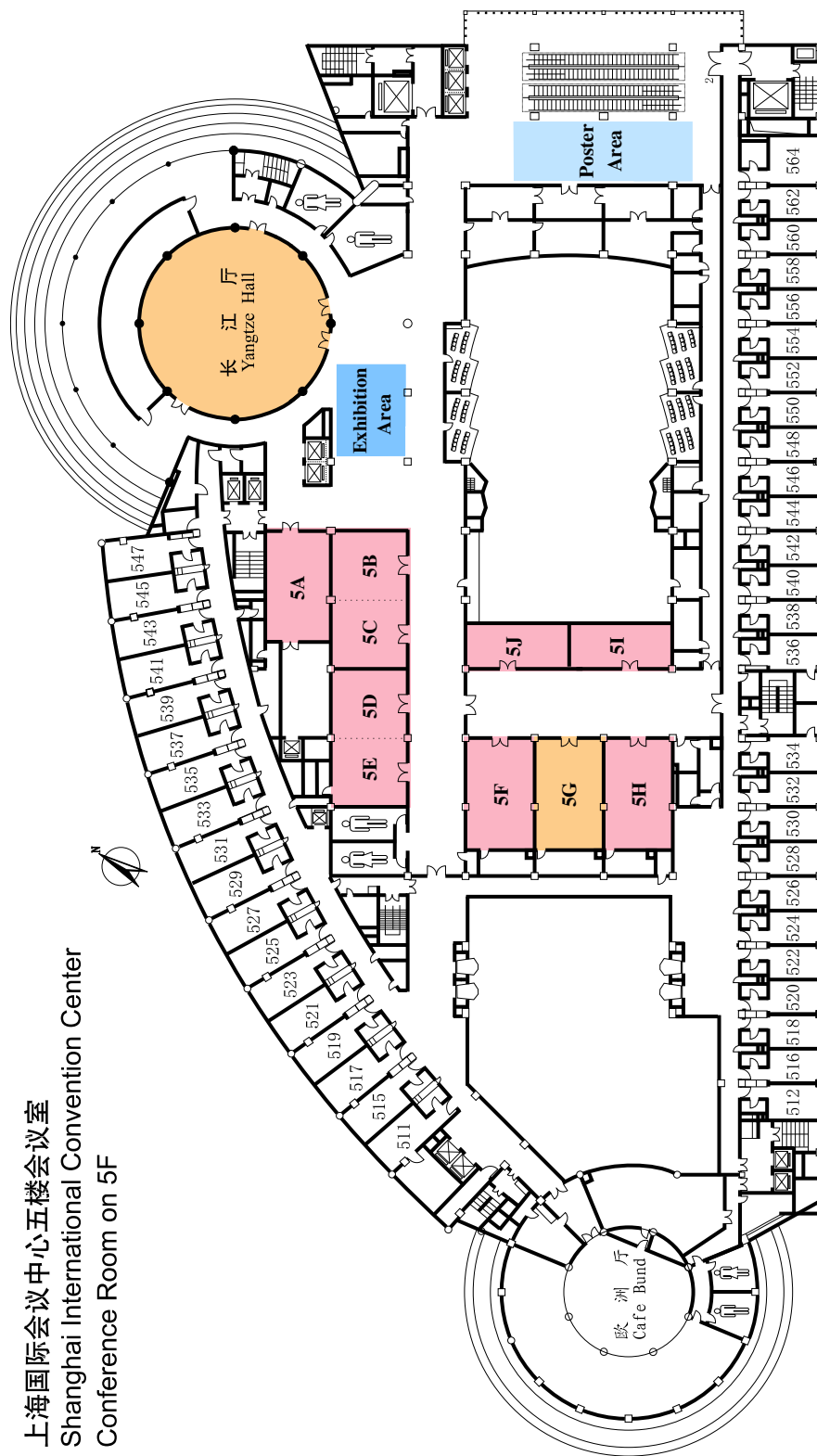


MAP OF CONFERENCE SITE





上海国际会议中心五楼会议室
Shanghai International Convention Center
Conference Room on 5F



GENERAL INFORMATION

LANGUAGE

The official language for the Symposium is English.

CURRENCY AND CREDIT CARDS

Chinese currency is CNY with its monetary unit CNY (Yuan). The exchange rate is 1 USD for about 6.5 CNY. Credit cards and cash are acceptable for payments. International credit cards are acceptable in almost all shops, restaurants etc..

TAX AND TIP

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

TAXI

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

BUSINESS OPENING HOURS

- **Bank and Post Office**

Opening hours: 9:00 – 17:00, from Monday to Sunday.

- **Government Office**

Opening hours: 8:00 – 17:00, from Monday to Friday.

- **Store**

Opening hours: usually 10:00 to 21:00, but the large shopping center serves till 22:00, from Monday to Sunday.

ELECTRICITY

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

ARRIVAL GUIDE

The address of the conference site, Shanghai International Convention Center (SHICC) & Oriental Riverside Hotel, is located at, 2727 Riverside Avenue Pudong, Shanghai, China. Tel: +86 (21) 5037 0000. Fax: +86 (21) 5037 0999. Email: hotel@shicc.net.

SHICC is close to the Lujiazui Station of Metro line No. 2. The walking distance from No. 1 Exit of Lujiazui station to SHICC is about 500 m and 7 minutes.

It takes about 55 minutes (45 km and 160 RMB) from Shanghai Pudong International Airport to SHICC by taxi. If by Metro Line No. 2, it takes about 40 minutes. It takes about 35 minutes (25 km and 100 RMB) from Shanghai Hongqiao High Speed Rail Station to SHICC by taxi. If by Metro Line No. 2, it takes about 40 minutes.



LUNCH INFORMATION

SHICC is close to the Super Band Mall. There is a food court on Floor B2 of the Super Band Mall. It is within the walking distance (about 500 m and 7 minutes). You can easily find varieties of Chinese, Western or Fast food in the food court. There are also many restaurants in the Lujiazui area, mostly within walking distance of around 10 minutes from SHICC.

- KFC — In Super Brand Mall, 5th Floor, (average 30 RMB per person)
- McDonald — If you go to the footbridge, you can easily find it. (about 30 RMB per person)
- Buffet Lunch at SHICC-Riverside Hotel (158 RMB per person)
- Food Court in Super Brand Mall — Chinese Noodles, Japanese noodles, Starbucks Coffee and many other restaurants (20 RMB – 100 RMB per person)

PIERS 2016 SHANGHAI TECHNICAL PROGRAM

Session 1A1

FocusSession.SC2: Transformation Optics 1

Monday AM, August 8, 2016

Room 5B/5C

Organized by Hongsheng Chen, Yu Luo

Chaired by Hongsheng Chen, Yu Luo

- 08:20 Graphene as a Tunable Plasmonic Metasurface with
invited Transformation Optics
Paloma Arroyo Huidobro (Imperial College London); Matthias Kraft (Imperial College London); S. A. Maier (Imperial College London); John B. Pendry (Imperial College London);
- 08:40 Wavefront Shaping through Emulating Curved Space
invited in Transformation Optics
Chong Sheng (Nanjing University); Rivka Bekenstein (Solid State Institute); Hui Liu (Nanjing University); Shi-Ning Zhu (Nanjing University); Mordechai Segev (Technion — Israel Institute of Technology);
- 09:00 Integrated Optical Device Design Based on Transfor-
invited mation Optics
Shuyi Li (Huazhong University of Science and Technology); Dingshan Gao (Huazhong University of Science and Technology);
- 09:20 Conformal Transparency
invited
Lin Xu (Soochow University); Zhan Xiong (Soochow University); Huiwen Kan (Soochow University); Huanyang Chen (Soochow University);
- 09:40 Conformal Mapping in Hyperbolic Metamaterial: Ap-
invited plication of Two-dimensional Clifford Algebra
Shahram Dehdashti (Zhejiang University); Lian Shen (Zhejiang University); Hongsheng Chen (Zhejiang University);

10:00 Coffee Break

- 10:20 Optoelectronic Design on the Hot-carrier Photodetec-
invited tors
Yaohui Zhan (Soochow University); Cheng Zhang (Soochow University); Kai Wu (Soochow University); Xiaofeng Li (Soochow University);
- 10:40 Boosting Wireless Transmission of Power with Mag-
invited netic Metamaterials
Jordi Prat-Camps (Universitat Autònoma de Barcelona); Carles Navau (Universitat Autònoma de Barcelona); Alvaro Sanchez (Universitat Autònoma de Barcelona);
- 11:00 Ultradirectional Scattering of Radially Anisotropic
invited Nanoparticles
Wei Liu (National University of Defense Technology);

Session 1A2

FocusSession.SC2: Plasmonic Nanolasers and Active Metamaterials

Monday AM, August 8, 2016

Room 5D/5E

Organized by Renmin Ma, Cheng-Wei Qiu

Chaired by Renmin Ma

- 08:05 Tunable Nanoparticle Lasing Spasers
invited
Teri W. Odom (Northwestern University);
- 08:25 Robust and Ultracompact Room Temperature Oper-
invited ated Surface Plasmon Polariton Nanolasers
Tien-Chang Lu (National Chiao Tung University);

- 08:45 Vertical Radiation and Directional Emission for
invited Metal-confined Nanocylinder Resonator
Yue-De Yang (Institute of Semiconductors, Chinese Academy of Sciences); Jin-Long Xiao (Institute of Semiconductors, Chinese Academy of Sciences); Yong-Zhen Huang (Institute of Semiconductors, Chinese Academy of Sciences);
- 09:05 Plasmon Lasers for Sensing
invited
Renmin Ma (Peking University);
- 09:25 Controlling the Spontaneous Emission Rate of Quantum Wells in Rolled-up Hyperbolic Metamaterials
K. Marvin Schulz (Technische Universität Hamburg); Hoan Vu (Universität Hamburg); Stephan Schwaiger (Universität Hamburg); Andreas Rottler (Universität Hamburg); Tobias Korn (Universität Regensburg); David Sonnenberg (Universität Hamburg); Tobias Kipp (Universität Hamburg); Stefan Mendach (Universität Hamburg);
- 09:40 Generating Intense Optical Fields with Hybrid-gap
invited Plasmon Lasers
Michael P. Nielsen (Imperial College London); Lucas Lafone (Imperial College London); Ngoc Nguyen (Imperial College London); Themistoklis P. H. Sidiropoulos (Imperial College London); Edmund Clarke (University of Sheffield); Paul Fry (University of Sheffield); Stefan Alexander Maier (Imperial College London); Rupert Francis Oulton (Imperial College London);
- 10:00 **Coffee Break**
- 10:20 Ultrafast and Quantum Dynamics of Plasmonic
keynote Nanolasing
Ortwin Hess (Imperial College London);
- 10:50 Semiconductor Nanorod Plasmonic Lasers: Single-
invited nanorod and Ensemble Measurements
Yu-Jung Lu (National Tsing-Hua University); Chun-Yuan Wang (National Tsing-Hua University); Hung-Ying Chen (National Tsing-Hua University); Shangjr Gwo (National Tsing-Hua University);
- 11:10 Active Hyperbolic Metasurfaces at Telecommunication Frequencies
Joseph S. T. Smalley (University of California); Felipe Vallini (University of California); Sergio Montoya (University of California); Lorenzo Ferrari (University of California); Shiva Shahin (University of California); Conor T. Riley (University of California); Boubacar Kante (University of California); Eric E. Fullerton (University of California); Zhaowei Liu (University of California); Yeshe-iahu Shaya Fainman (University of California at San Diego);

- 11:25 Electronically Tunable Conducting Oxide Plasmonics
invited and Metasurfaces
Howard Ho Wai Lee (Baylor University);
- 11:45 Surface Plasmon Distributed Feedback Lasers and
invited Parity-time Symmetric Gratings
Elham Karami Keshmarzi (Carleton University); Choloong Hahn (Hanyang University); Seok Ho Song (Hanyang University); Cha-Hwan Oh (Hanyang University); Niall Tait (Carleton University); Pierre Berini (University of Ottawa);

Session 1A3

SC2: Thermal and Acoustic Metamaterials

Monday AM, August 8, 2016

Room 5F

Organized by Baile Zhang, Nicholas X. Fang

Chaired by Baile Zhang, Nicholas X. Fang

- 08:20 Geometric Phases, Synthetic Gauge Flux and Weyl
invited Points and in Acoustic Systems
Meng Xiao (Stanford University); Che Ting Chan (The Hong Kong University of Science and Technology);
- 08:40 Dual-band Negative Index Ultrasonic Metafluids
invited
B. Mascaro (University of Bordeaux); S. Raffy (University of Bordeaux); J. Leng (University of Bordeaux); O. Mondain-Monval (University of Bordeaux); Olivier Poncelet (University of Bordeaux); Christophe Aristegui (University of Bordeaux); Thomas Brunet (University of Bordeaux);
- 09:00 Metamaterial-based Wavefront Engineering for
invited Acoustic Waves
Jian-Chun Cheng (Nanjing University);
- 09:20 Valley Vortex States in Sonic Crystals
invited
Jiuyang Lu (Wuhan University); Chungyin Qiu (Wuhan University); Manzhu Ke (Wuhan University); Zhengyou Liu (Wuhan University);
- 09:40 Novel Effects of Phononic Crystals for Surface Acoustic Waves
invited
Ming-Hui Lu (Nanjing University); Si-Yuan Yu (Nanjing University); Cheng He (Nanjing University); Xiao-Ping Liu (Nanjing University); Yan-Feng Chen (Nanjing University);
- 10:00 **Coffee Break**

- 10:20 Effect of Compressibility and Non-uniformity of Fluid Convection to the Scattering Pattern of Acoustic Metamaterial
Wonju Jeon (Korea Advanced Institute of Science and Technology);
- 10:40 Polygon Acoustic Cloak Designed with Coordinate Transformation
Rongrong Zhu (Zhejiang University); Bin Zheng (Zhejiang University); Hongsheng Chen (Zhejiang University);
- 11:00 Bifunctional Acoustic Lens
Muhyiddeen Yahya (Zhejiang University); Bin Zheng (Zhejiang University); Rongrong Zhu (Zhejiang University); Hongsheng Chen (Zhejiang University);
- 11:20 Acoustic Resonator Systems with Topological Semimetal Phases
Zhaoju Yang (Nanyang Technological University); Baile Zhang (Nanyang Technological University);

Session 1A4

FocusSession.SC3: Advanced Photonic Materials and Devices, Part 1

Monday AM, August 8, 2016

Room 5G

Organized by Kwang-Sup Lee, Hong-Bo Sun

Chaired by Andre-Jean Attias, Jing Feng

- 08:00 Far-field Laser Nanomachining in Glass with Sub-50 nm Resolution
keynote *Ya Cheng (Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences); Yang Liao (Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences); Jintian Lin (Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences); Jielei Ni (Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences); Lingling Qiao (Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences);*
- 08:30 Light-control-light Holographic Elements through Direct Laser Fabrication
invited *Xiangping Li (Jinan University);*
- 08:50 Direct Laser Writing of Optical Field Concentrator Structures
invited *I. Fanyaeu (Shizuoka University); Vygantas Mizeikis (Shizuoka University);*
- 09:10 Mechanical Properties of Polymer Micro/Nano Structures Fabricated by Two-photon Lithography
invited *Satoru Shoji (The University of Electro-Communications);*

- 09:30 3D Printing and Integration: From Photonic Elements to Devices
keynote

Saulius Juodkazis (Swinburne University of Technology);

10:00 Coffee Break

- 10:20 Femtosecond Laser Micro-nanofabrication: An Enabler for High-performance Photonics Devices
invited *Qi-Dai Chen (Jilin University);*

- 10:40 Layered 2D Semiconductors for Ultrafast Photonic Applications
invited *Jun Wang (Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences);*

- 11:00 Fluorescent Non-covalent Functionalization of Graphene by Two-dimensional Supramolecular Self-assembly
invited *Andre-Jean Attias (Universite Pierre et Marie Curie); Ping Du (Universite Pierre et Marie Curie); David Kreher (Universite Pierre et Marie Curie); Fabrice Mathevet (Universite Pierre et Marie Curie); Sylvain Le Liepvre (CEA/SPEC); Celine Fiorini (CEA/SPEC); Ludovic Douillard (CEA/SPEC); Fabrice Charra (CEA/SPEC);*

- 11:20 Super-resolution Imaging Using Microspheres Supported by a Gold Nanowire Array in Transmission Mode

Jinlong Zhu (University of Illinois at Urbana-Champaign); Lynford L. Goddard (University of Illinois, Urbana-Champaign Urbana);

Session 1A5

FocusSession.SC3: Nanophotonics and Integration Part 1

Monday AM, August 8, 2016

Room 5H

Organized by Pavel Cheben, Laurent Vivien, Andrew Wing On Poon, Goran Z. Mashanovich

Chaired by Goran Z. Mashanovich

- 08:20 Mode Conversion/Coupling for Silicon Nanophotonics
invited *Daoxin Dai (Zhejiang University);*

08:40 Ultrafast All-optical Modulation for Characterizing
invited and (Re)defining Functionalities in Silicon Photonics

Roman Bruck (University of Southampton); Kevin Vynck (CNRS-IOGS-University Bordeaux); Philippe Lalanne (Institut d'Optique/LCFIO); Ben E. Mills (University of Southampton); David J. Thomson (University of Southampton); Goran Z. Mashanovich (University of Southampton); Graham T. Reed (University of Southampton); Otto L. Muskens (University of Southampton);

09:00 Fourier-transform on-chip Microspectrometers

invited

Aitor V. Velasco (Consejo Superior de Investigaciones Cientificas); Pavel Cheben (National Research Council); Maria Luisa Calvo (Universidad Complutense de Madrid); Andre Delage (Institute for Microstructural Sciences, National Research Council Canada (NRC)); Jens H. Schmid (National Research Council Canada); Jean Lapointe (Information and Communication Technologies, National Research Council Canada); Siegfried Janz (Institute for Microstructural Sciences, National Research Council Canada (NRC)); Dan-Xia Xu (Institute for Microstructural Sciences, National Research Council Canada (NRC)); Martin Vachon (Information and Communication Technologies, National Research Council Canada); Milos Nedeljkovic (University of Southampton); Ali Z. Khokhar (University of Southampton); Goran Z. Mashanovich (University of Southampton); Alaine Herrero-Bermello (Optics Institute "Daza de Valdes", Consejo Superior de Investigaciones Cientificas); Pedro Corredera (Optics Institute "Daza de Valdes", Consejo Superior de Investigaciones Cientificas);

09:20 Magneto-optical Nonreciprocal Devices on Silicon

invited

Tetsuya Mizumoto (Tokyo Institute of Technology); Yuya Shoji (Tokyo Institute of Technology);

09:40 Planar Integrated Optics for Quantum Technologies

invited

Peter G. R. Smith (University of Southampton); James C. Gates (University of Southampton); Corin B. E. Gawith (University of Southampton); Christopher Holmes (Optoelectronics Research Centre); Lewis G. Carpenter (University of Southampton); Samuel A. Berry (University of Southampton); Teresa I. Ferreira (University of Southampton); Paolo L. Mennea (University of Southampton); Matthew T. Posner (University of Southampton); Peter A. Cooper (University of Southampton); Stephen G. Lynch (University of Southampton); Rex Bannerman (University of Southampton); Miranda Turvey (University of Southampton); Alexander Jantzen (University of Southampton);

10:00 **Coffee Break**

10:20 Design, Fabrication and SNOM Investigation of Plas-
invited monic Devices

Radu Malureanu (Technical University of Denmark); Vladimir A. Zenin (University of Southern Denmark); Andrei Andryieuski (Technical University of Denmark); Ilya P. Radko (University of Southern Denmark); Valentyn S. Volkov (University of Southern Denmark); Dmitri. K. Gramotnev (Nanophotonics Pty. Ltd.); Andrei V. Lavrinenko (Technical University of Denmark); Sergey I. Bozhevolnyi (University of Southern Denmark);

10:40 Passively Biased Resonantly Enhanced Silicon Pho-
invited tonics Carrier Depletion Modulator with High Optical Bandwidth

Sebastian Romero-Garcia (RWTH Aachen University); Saeed Sharif Azadeh (RWTH Aachen University); Bin Shen (RWTH Aachen University); Alvaro Moscoso-Martir (RWTH Aachen University); Juliana Muller (RWTH Aachen University); Florian Merget (RWTH Aachen University); Jeremy Witzens (RWTH Aachen University);

11:00 Nanophotonic Structures for Waveguide Couplers and
invited Polarizers

Bingqing Zhu (The Chinese University of Hong Kong); W. Zhou (The Chinese University of Hong Kong); Hon Ki Tsang (The Chinese University of Hong Kong);

11:20 TriPleX: The Versatile Silicon Nitride Waveguide
invited Platform

Arne Leinse (LioniX BV); Shaoxian Zhang (Vision & Actions); Rene G. Heideman (LioniX BV);

11:40 Free-electron Tuning and Steering of Surface Plasmon Wakes on a Metallic Nano-film
Weihao Liu (University of Science and Technology of China);

Session 1A6

SC3: Integrated Photonics for Microwave Signal Processing

Monday AM, August 8, 2016

Room 5I

Organized by Linjie Zhou, Shaoqi Feng

Chaired by Linjie Zhou

08:00 Integrated Microwave Photonics on Silicon-on-insulator Platform

Hui Yu (Zhejiang University); Jianyi Yang (Zhejiang University); Xiaoqing Jiang (Zhejiang University);

08:20 On-chip Arbitrary Waveform Generator and Differentiator

Jianji Dong (Huazhong University of Science and Technology); Shasha Liao (Huazhong University of Science and Technology);

08:40 Broadband Radar Beam Forming Technology Based on Silicon Photonics on Chip Integration

Junbo Feng (East China Research Institute of Electronic Engineering); Jin Guo (East China Research Institute of Electronic Engineering); Naidi Cui (East China Research Institute of Electronic Engineering); Guowei Cao (East China Research Institute of Electronic Engineering); Heng Zhao (East China Research Institute of Electronic Engineering); Jie Zhou (East China Research Institute of Electronic Engineering);

09:00 Hybrid Integrated Si₃N₄/InP Photonic Integrated Circuits for Dynamic Optical Arbitrary Waveform Generation

Shaoqi Feng (University of California); Chuan Qin (University of California); Kuanping Shang (University of California); Shibnath Pathak (University of California); Binbin Guan (University of California); Matthew Clements (University of California); Hongbo Lu (University of California); S. J. Ben Yoo (University of California);

09:20 Integrated Optical Analog Signal Processing

Ming Li (Institute of Semiconductors, Chinese Academy of Sciences);

09:40 Thermal Nonlinearity Based Optical Pulse Generation in Microrings

Nima Davoudzadeh (University of Illinois at Urbana-Champaign); Amir Arbabi (University of Illinois at Urbana-Champaign); Lynford L. Goddard (University of Illinois, Urbana-Champaign Urbana);

10:00 **Coffee Break**

10:20 Dual-mode and Broadband Quantum Dot Lasers

invited

Ruizhe Yao (University of Massachusetts Lowell); Chi-Sen Lee (University of Massachusetts Lowell); Wei Guo (University of Massachusetts Lowell);

10:40 Reflective-type Ring Resonators for Flat-top Optical Filter and Wideband True Time Delay Line

invited

Simin Li (Nanjing University of Aeronautics and Astronautics); Menghao Huang (Nanjing University of Aeronautics and Astronautics); Shilong Pan (Nanjing University of Aeronautics and Astronautics);

11:00 Microwave Photonics Phase Shifter with Small Radio-frequency Power Variation Based on Coupling-modulated Microring Resonators

Jian Tang (Institute of Semiconductors, Chinese Academy of Sciences); Ming Li (Institute of Semiconductors, Chinese Academy of Sciences); Shuqian Sun (Institute of Semiconductors, Chinese Academy of Sciences); Ye Deng (Institute of Semiconductors, Chinese Academy of Sciences); Nuan Nuan Shi (Institute of Semiconductors, Chinese Academy of Sciences); Zhi-Yong Li (Institute of Semiconductors, Chinese Academy of Sciences); Wei Li (The Institute of Semiconductors, Chinese Academic of Sciences); Ning Hua Zhu (Institute of Semiconductors, Chinese Academy of Sciences);

11:20 Towards a Universal RF Photonic Integrated Circuit Architecture for Microwave Applications

Mehedi Hasan (University of Ottawa); De Gui Sun (University of Ottawa/Changchun University of Science & Technology); Peng Liu (University of Ottawa); Trevor J. Hall (University of Ottawa);

Session 1A7

SC2&1: Effective Medium Theories

Monday AM, August 8, 2016

Room 5J

Organized by Ying Wu, Jun Mei

Chaired by Ying Wu

- 08:20 The Effective-medium Theories for One-dimensional Gratings and Subwavelength Cylinder Arrays
Shiwei Tang (Ningbo University); Baocheng Zhu (Fudan University); Qiong He (Fudan University); Lei Zhou (Fudan University);
- 08:40 Effective Medium Theory of Boundary Optical Stress
Shubo Wang (The Hong Kong University of Science and Technology); Che Ting Chan (The Hong Kong University of Science and Technology);
- 09:00 Fluid-like Elasticity Induced by Anisotropic Effective Mass Density
Guancong Ma (Hong Kong University of Science and Technology); Caixing Fu (HKUST); Guanghao Wang (Soochow University); Philipp Del Hougne (HKUST); Johan Christensen (Technical University of Denmark); Yun Lai (Soochow University); Ping Sheng (Hong Kong University of Science and Technology);
- 09:20 Nonlocal Effective Medium Theory for Photonic Crystals and Metamaterials
Jie Luo (Soochow University); Yun Lai (Soochow University);
- 10:00 **Coffee Break**
- 10:20 Angular Selection of Incident Waves by Photonic Crystals with Configurable Dirac Points
Chang Qing Xu (Soochow University); Zhi Hong Hang (Soochow University); Yun Lai (Soochow University);
- 10:40 Optical Broadband Angular Selectivity for Normal Incidence
Qiang Yin (Soochow University); Jie Luo (Soochow University); Sucheng Li (Soochow University); Weixin Lu (Soochow University); Bo Hou (Soochow University); Yun Lai (Soochow University);
- 11:00 The Transmission Characteristics of Metallic Like Smartphone Case Made of Resin and Small Metallic Particles
Yiwei He (Osaka Electro-Communication University);
- 11:20 EIT-like Effect in a Zero Index Metamaterial Waveguide Equipped with Two Cylindrical Defects
Aichen Chen (Soochow University); Erting Qian (Soochow University); Yadong Xu (Soochow University); Huanyang Chen (Soochow University);

Session 1A8**SC4: Compact Wideband and Multi-band Antennas and Their Novel Applications****Monday AM, August 8, 2016****Room 3B**

Organized by Shuai Zhang, Zhinong Ying

Chaired by Zhinong Ying, Shuai Zhang

- 08:20 Wideband Horizontally Polarized Omni-directional Antenna
Yu-Feng Yu (No. 36 Research Institute of China Electronics Technology Group Corporation (CETC)); Qingfeng Dai (No. 36 Research Institute of China Electronics Technology Group Corporation (CETC)); Ling-Lu Chen (No. 36 Research Institute of China Electronics Technology Group Corporation);
- 08:40 Enhancement of Impedance Bandwidth for the Microstrip Monopole Slot Antenna
Kuan-Wei Li (National University of Tainan); Wen-Bin Tsai (National University of Tainan); Chien-Jen Wang (National University of Tainan);
- 09:00 Investigation of Probe Distortion in 28 GHz Near-field Antenna Measurement for 5G Communication Application
Bo Xu (KTH Royal Institute of Technology); Zhinong Ying (Sony Mobile Communication AB); Sailing He (Zhejiang University); Jun Hu (Zhejiang University);
- 09:20 Direction Non-sensitive Chipless RFID Tag Using Retro-reflective UWB Array
Hui Li (Dalian University of Technology);
- 10:00 **Coffee Break**
- 10:20 Modified Vivaldi Antenna with Improved Gain and Phase Center Stability
Shuai Zhang (Aalborg University);
- 10:40 Compact Dual-band MIMO Antenna with High Isolation for 3/4G, Wi-Fi, Bluetooth, Wi-MAX and WLAN Applications
Anjali A. Chaudhari (St. Francis Institute of Technology); Vidya Jadhav (Terna Engineering College); Shilpa U. Kharche (Indian Institute of Technology (IIT) Bombay); Rajiv K. Gupta (Indian Institute of Technology);

- 11:00 Dual Port UWB-MIMO Antenna with Ring Decoupling Structure
Asim Quddus (University of Engineering and Technology); Rashid Saleem (The University of Manchester); Tayyab Shabbir (University of Engineering and Technology); Sabih ur Rehman (Charles Sturt University); Mumammad Farhan Shafique (COMSATS Institute of Information Technology);

Session 1A9

SC1: Recent Advances on Electromagnetics Simulation Techniques

Monday AM, August 8, 2016

Room 3C/3D

Organized by Jun Hu, Yu Mao Wu

Chaired by Jun Hu, Yu Mao Wu

- 08:20 Radar Echo Simulation of Large Scale Environments Including Complex Targets
Nicolas Douchin (OKTAL Synthetic Environment); Fei Li (China AutoSoft Technologies Co., Ltd);
- 08:40 Minimization of Gibb's Oscillations in Transients' Simulations Using Damping Resistance
Afonso Jose Do Prado (UNESP — Universidade Estadual Paulista); Kassyele Oliveira Conceicao (UNEMAT — University of Mato Grosso State); Ketholyn Jaqueline Bepalhuk (UNEMAT — University of Mato Grosso State); Bruno Franca Da Silva (UNEMAT — University of Mato Grosso State); Elmer Mateus Gennaro (UNESP — Universidade Estadual Paulista); Martinez Cargnin-Stieler (UNEMAT — University of Mato Grosso State); Jose Pissolato Filho (UNICAMP — State University of Campinas);
- 09:00 Solving Electromagnetic Scattering from Composite Dielectric/Metallic Objects by EFIE-PMCHWT Based Domain Decomposition Method
Jun Hu (University of Electronic Science and Technology of China); Ran Zhao (University of Electronic Science and Technology of China); Ming Jiang (University of Electronic Science and Technology of China); Zai-Ping Nie (University of Electronic Science and Technology of China);
- 09:20 Analysis of Antennas on Large Platforms Using Equivalent Model Method
*Siping Gao (Institute of High Performance Computing); Huapeng Zhao (University of Electronic Science and Technology of China); Binfang Wang (Institute of High Performance Computing); Wei-Jiang Zhao (A*STAR Institute of High Performance Computing);*

- 09:40 Numerical Estimation of Electromagnetic Backscattering from Near-zone Vehicles for the Side-look Vehicle-detection Radar Applications at Millimeter Waves
Hsi-Tseng Chou (National Taiwan University); Shih-Chung Tuan (Oriental Institute of Technology); Hsien-Kwei Ho (Yuan Ze University);

10:00 Coffee Break

- 10:20 Symmetry and Symmetry Breaking in a Class of Solutions of the Poisson-Boltzmann Equation
Zhijing Hu (Illinois Institute of Technology); Tao Shen (Kunming University of Science and Technology); Ming Yan (Keysight Technologies, Inc.); Thomas T. Y. Wong (Illinois Institute of Technology);
- 10:40 Calculating the High Frequency Physical Optics Scattered Fields from the Electrically Large NURBS Scatterers by the Numerical Steepest Descent Path Technique
Yu Mao Wu (Fudan University); S. J. Teng (Fudan University); D. F. Yang (Fudan University);
- 11:00 Study of the Quasi-periodic Effect in the Design of Reflectarray Antennas
Tong Liu (Tsinghua University); Maokun Li (Tsinghua University); Fan Yang (Tsinghua University); Shenheng Xu (Tsinghua University);
- 11:20 A New Hybrid Integral Representation for Frequency Domain Scattering in Layered Media
Jun Lai (New York University); Leslie Greengard (New York University); Michael O'Neil (New York University);
- 11:40 The Calculation of Electromagnetic Wave Diffraction from the Dielectric Convex Scatterers
Ning Zou (Fudan University); Yang Yang (Fudan University); Yu Mao Wu (Fudan University);

Session 1A_10

FocusSession.SC5: Inverse Scattering and Imaging Part 1

Monday AM, August 8, 2016

Room 3E

Organized by Xudong Chen, Maokun Li, Aria Abubakar

Chaired by Aria Abubakar, Maokun Li

08:15 A Modified CLEAN Algorithm for Improving Aper-
invited ture Synthesis Observations of Radio Astronomy
Lan Chen (Shanghai Institute of Technology);
Lin Mao Li (Shanghai Institute of Technology);
Guo Chun Wan (Tongji University); Mei Song Tong
(Tongji University);

08:35 On Recent Advances and Issues Ahead in Modeling
keynote and Electromagnetic Imaging of Perturbed Compos-
ite Laminates
Dominique Lesselier (UMR8506 (CNRS, Supelec,
University Paris-Sud)); M. Lambert (Universite Paris
Saclay);

09:05 Reverse-time Migration and Full Waveform Inversion
invited for Subsurface Imaging
Hai Liu (Xiamen University); Zhijun Long (Xia-
men University); Chen Qiu (Xiamen University);
Feng Han (Xiamen University); Qing Huo Liu (Duke
University);

09:25 Two-dimensional Inversion of Triaxial Induction Log-
invited ging Data Using a Fast Forward Solver
Gong Li Wang (Schlumberger Houston Formation
Evaluation); Aria Abubakar (Schlumberger Houston
Formation Evaluation);

09:45 Iterative Inverse Source Reconstruction in Elastic In-
homogeneous Media with Application to Transcranial
Photoacoustic Tomography
Joemini Poudel (Washington University in St. Louis);
Kenji Mitsuhashi (Washington University in St.
Louis); Thomas P. Matthews (Washington University
in St. Louis); Alejandro Garcia-Urbe (Washington
University in St. Louis); Li Hong V. Wang (Wash-
ington University); Mark A. Anastasio (Washington
University in St. Louis);

10:00 **Coffee Break**

10:20 Ill-posedness in Electromagnetic Inverse Problems
invited
Anyong Qing (University of Electronic Science and
Technology of China);

10:40 A New Algorithm for Flexible Spatial Encoding Strat-
invited egy for a Low-field MRI System
Jiasheng Su (Singapore University of Technology and
Design); Shao Ying Huang (Massachusetts Institute
of Technology);

11:00 Super-resolution Imaging in Near-field Scanning Mi-
crowave Impedance Microscopy by Inversion
Zhun Wei (National University of Singapore);
Rui Chen (National University of Singapore);
Xudong Chen (National University of Singapore);

11:15 Multiplicative-regularized Subspace Technique to
Solve High Contrast Inverse Scattering Problems
Kuiwen Xu (Hangzhou Dianzi University); Yu Zhong
*(A*STAR); Gaofeng Wang (Hangzhou Dianzi Univer-*
sity);

11:30 Research on W-band Full Polarimetric Two-
dimensional Imaging
Fang Liu (Science and Technology on Electromagnetic
Scattering Laboratory); Yang Bai (Science and Tech-
nology on Electromagnetic Scattering Laboratory);
Yang Wu (Science and Technology on Electromagnetic
Scattering Laboratory);

Session 1A_11

SC3&2: Light Harvesting, Photovoltaics, Optoelectronics in Energy, Part 1

Monday AM, August 8, 2016

Room 3G

Organized by Wallace C. H. Choy, Jiun-Haw Lee,
Liming Ding

Chaired by Taiho Park, Hin-Lap Yip

08:00 Patch Antenna Based on a Photovoltaic Solar Cell
Grid Collection
Chokri Baccouch (Tunis El Manar University);
Hedi Sakli (Institut Supérieur d'Informatique de
Médenine); Dhaou Bouchouicha (Tunis El Manar
University); Mohamed Latrach (Ecole Supérieure
d'Electronique de l'Ouest); Taoufik Aguil (Engineers'
National School of Tunis);

08:20 Semi-crystalline Low Bandgap Polymers for Fullerene
invited and Nonfullerene-based Organic Photovoltaic Devices
Han Young Woo (Korea University);

08:40 Analysis on Energy Distribution of Infinitesimal Map-
ping Method
Jin-Yong Zhang (Guangdong Industry Polytechnic);
Ruei-Fu Jao (Guangdong Industry Technical College);

09:00 Fiber-shaped Energy Harvesting and Storage Devices
invited
Huisheng Peng (Fudan University);

09:20 High Efficient Planar-heterojunction Solar Cells
invited Achieved by Using a Smooth $\text{CH}_3\text{NH}_3\text{PbI}_3$ Film via
a New Approach of Forming the PbI_2 Nanostructure
Together with Strategically High $\text{CH}_3\text{NH}_3\text{I}$ Concen-
tration
Wallace C. H. Choy (The University of Hong Kong);
H. Zhang (The University of Hong Kong); J. Mao
(The University of Hong Kong); H. L. Zhu (The Uni-
versity of Hong Kong);

09:40 Hemi-isoindigo Based Polymers for High Performance
invited Solar Cell Applications
Qing Zhang (Shanghai Jiaotong University);

10:00 **Coffee Break**

10:20 Efficient Fiber-shaped Devices for Energy Conversion
invited and Storage
Dechun Zou (Peking University);

10:40 Surfactant n-Dopant in Cathode Interlayer or Elec-
invited tron Transport Layer for Polymer or Perovskite Solar
Cells with Improving Performance
*Chih-Yu Chang (Feng Chia University); Wen-
Kuan Huang (Feng Chia University); Jhao-Lin Wu
(Institute of Chemistry, Academia Sinica); Chao-
Tsen Chen (National Taiwan University); Chin-
Ti Chen (Institute of Chemistry, Academia Sinica);*

11:00 Non-conjugated Organic Small Molecule Buffer Mate-
invited rials and Their Photovoltaic Performance
*Junfeng Fang (Ningbo Institute of Materials and Tech-
nology and Engineering, Chinese Academy of Sci-
ences);*

11:20 Improvement of Bodipy-based Bulk Heterojunction
invited Solar Cell Using 1,8-diodooctane
*Hung-Lu Tsai (National Sun Yat-sen University); Li-
Yin Chen (National Sun Yat-sen University);*

11:40 Halide Perovskite — An Emerging Class of Optoelec-
invited tronic Materials
Hanwei Gao (Florida State University);

Session 1A_12

SC3: New Frontiers in Quantum Photonics

Monday AM, August 8, 2016

Room 3H

Organized by Zhimin Shi, Christoph Marquardt

Chaired by Zhimin Shi

08:20 Towards Light-matter Interface for the NV Center in
Diamond
*Vadim V. Vorobyov (PN Lebedev Institute
RAS); Vladimir Soshenko (PN Lebedev Insti-
tute RAS); Stepan Bolshedvorskii (PN Lebedev
Institute RAS); Javid Javazade (Moscow Insti-
tute of Physics and Technology); Nikolay Lebedev
(Moscow Institute of Physics and Technology);
Andrey N. Smolyaninov (Photonic Nano-Meta Tech-
nologies); Vadim N. Sorokin (PN Lebedev Institute
RAS); Alexey V. Akimov (Texas A&M University);*

08:40 Experimental Demonstration of Delayed-choice Deco-
herence Suppression
*Jong-Chan Lee (POSTECH); Hyang-Tag Lim
(POSTECH); Kang-Hee Hong (POSTECH); Youn-
Chang Jeong (POSTECH); M. S. Kim (Imperial
College London); Yoon-Ho Kim (POSTECH);*

09:00 On-chip Entangled Photon Pair Generation Using
Spontaneous Four-wave Mixing Process
*Changwoo Ha (Pohang University of Science and
Technology (POSTECH)); Inho Yang (Pohang Uni-
versity of Science and Technology (POSTECH));
Heedeuk Shin (Pohang University of Science and
Technology (POSTECH));*

09:20 Spatial Quantum Correlations in Entangled Twin
Beams
Alberto M. Marino (University of Oklahoma);

10:00 **Coffee Break**

10:20 Optimal Quantum Measure for Polarization of Light
with Indefinite Number of Photons
*Kam Wai Clifford Chan (University of Oklahoma-
Tulsa); Lu Zhang (University of Oklahoma-Tulsa);
Pramode Verma (University of Oklahoma-Tulsa);*

10:40 Second-order Correlation Weak-value Measurements
*Jianming Wen (Yale University); Yanhong Xiao
(Fudan University); Weizhi Qu (Fudan University);
Yoon-Ho Kim (Pohang University of Science & Tech-
nology); Liang Jiang (Yale University);*

11:00 Direct Measurement of an One-million-dimensional
Photonic State
*Zhimin Shi (University of South Florida); Moham-
mad Mirhosseini (University of Rochester); Jes-
sica Margiewicz (University of South Florida);
Mehul Malik (University of Rochester); Freida Rivera
(University of South Florida); Ziyi Zhu (University
of South Florida); Robert W. Boyd (University of
Rochester);*

11:20 Programmable Quantum Interference in Complex Op-
tical Networks Realized in Opaque Scattering Media
*Ravitej Uppu (University of Twente); Tom A. W. Wolterink (University of Twente); Geor-
gios Ctistis (University of Twente); Willem L. Vos
(University of Twente); Klaus-Jochen Boller
(Laser Physics and Nonlinear Optics Group);
Pepijn W. H. Pinkse (University of Twente);*

Session 1A_13
Novel Mathematical Methods in
Electromagnetics

Monday AM, August 8, 2016

Room 3I

Organized by Yury V. Shestopalov, Kazuya
Kobayashi

Chaired by Yury V. Shestopalov, Kazuya Kobayashi

- 08:20 High-frequency Asymptotics for Paraxial Diffraction by Elongated Bodies
Ivan Viktorovitch Andronov (St. Petersburg University);
- 08:40 Depolarization of Electromagnetic Waves Propagated through Random Media
Yukihisa Nanbu (National Institute of Technology, Sasebo College); Mitsuo Tateiba (Kyushu University);
- 09:00 Analysis of Scattering from Circular Cylinders Characterized by Extended Surface Impedance
Ken'ichiro Yashiro (Chiba University); Ning Guan (Fujikura Ltd.);
- 09:20 Statistical Analysis of Electromagnetic Environment in Electrically Large Enclosure with Aperture Array
Yuan Zhao (Sichuan University); Xiang Zhao (Sichuan University); Liping Yan (Sichuan University); Kama Huang (Sichuan University);
- 09:40 Optimization of the Boundary Conditions and Computational Parameters for the FDTD Solution of the Inverse Problem of Reconstructing Permittivity of a Dielectric Inclusion in a Waveguide
E. A. Sheina (Lomonosov Moscow State University); Aleksander P. Smirnov (Lomonosov Moscow State University); Yury V. Shestopalov (University of Gavle);
- 10:00 **Coffee Break**
- 10:20 Numerical-analytical Method for Reconstructing Tensor Permittivity and Permeability of a Diaphragm in a Rectangular Waveguide
Yury V. Shestopalov (University of Gavle); Yury G. Smirnov (Penza State University); Ekaterina D. Derevyanchuk (Penza State University);
- 10:40 Numerical Analysis of Electromagnetic Wave Propagation in Metal-dielectric Waveguides Filled with Nonlinear Medium
Eugene Yu. Smolkin (Penza State University); Yury V. Shestopalov (University of Gavle);

- 11:00 On Two-dimensional Numerical Inverse Laplace Transforms with Transmission Line Applications
Nawfal Al-Zubaidi R-Smith (Brno University of Technology); Lubomir Brancik (Brno University of Technology);
- 11:20 Scattering of Light by a Nanowire Grating on a Dielectric Slab
Kiyotoshi Yasumoto (Kyushu University); Vakhtang Jandieri (University of Duisburg-Essen); Peiwen Meng (Delft University of Technology); Yunfei Liu (Nanjing Forestry University);
- 11:40 Non-paraxial Corrections and the Effect of Spatio-temporal Couplings on Laser-driven Electron Acceleration
Pierre Favier (Universite Paris-Sud, CNRS/IN2P3); Kevin Cassou (Universite Paris-Sud); Kevin Dupraz (Universite Paris-Sud); Aurelien Martens (Universite Paris-Sud); Fabian Zomer (Universite Paris 11);

Session 1A_14
Novel Optical Fibers and Fiber Laser

Monday AM, August 8, 2016

Room 3J

Chaired by Zhi-Yuan Li

- 08:20 How to Design Large Birefringence in Hollow-core Anti-resonant Fibers
Wei Ding (Institute of Physics, Chinese Academy of Sciences); Ying-Ying Wang (Beijing University of Technology);
- 08:40 Photonic Crystal Cavities in Microfibers with Modest Finesse and Wavelength Scale Mode Volume
Yang Yu (Institute of Physics, Chinese Academy of Sciences); Yi-Zhi Sun (Institute of Physics, Chinese Academy of Sciences); Steve R. Andrews (University of Bath); Zhi-Yuan Li (Institute of Physics, Chinese Academy of Sciences); Wei Ding (Institute of Physics, Chinese Academy of Sciences);
- 09:00 Radiation Pressure and Electrostrictive Force in Optical Microfibers
Yun-Chao Shi (Nanjing University);

- 09:20 Femtosecond Inscription of Fiber Bragg and Long-period Gratings with Special Characteristics for Applications in Fiber Lasers

Alexandr V. Dostovalov (Institute of Automation and Electroetry, SB, RAS); A. A. Wolf (Institute of Automation and Electroetry SB RAS); A. V. Parygin (Institute of Automation and Electroetry, SB, RAS); M. I. Skvortsov (Institute of Automation and Electroetry, SB, RAS); E. A. Zlobina (Institute of Automation and Electroetry, SB, RAS); S. I. Kablukov (Institute of Automation and Electroetry, SB, RAS); D. S. Kharenko (Institute of Automation and Electroetry, SB, RAS); S. A. Babin (Institute of Automation and Electroetry, SB, RAS);

10:00 **Coffee Break**

- 10:20 Stability Peculiarities in the Stretch Pulse Hybrid Mode-locked Erbium-doped All-fiber Ring Laser

Dmitriy A. Dvoretzkiy (Bauman Moscow State Technical University); Stanislav Grigorievich Sazonkin (Bauman Moscow State Technical University); D. A. Shelestov (Bauman Moscow State Technical University); M. A. Negin (Bauman Moscow State Technical University); A. B. Pnev (Bauman Moscow State Technical University); V. E. Karasik (Bauman Moscow State Technical University); A. A. Krylov (Fiber Optics Research Center of the RAS); Elena D. Obraztsova (A. M. Prokhorov Institute of General Physics, Russian Academy of Sciences);

- 10:40 Properties of Subwavelength-core Silicon Optical Fibers

Yucheng Ye (Fudan University); Limin Xiao (Fudan University); Yang Hao (Fudan University);

- 11:00 Single-mode Lasing in $\text{CH}_3\text{NH}_3\text{PbBr}_3$ Perovskite Microplates via Micro-manipulation

Shuai Liu (Harbin Institute of Technology); Wenzhao Sun (Harbin Institute of Technology); Zhiyuan Gu (Harbin Institute of Technology); Kaiyang Wang (Harbin Institute of Technology); Nan Zhang (Harbin Institute of Technology); Qinghai Song (Harbin Institute of Technology);

- 11:20 Nonlinear Optical Frequency Conversion in Optomechanical Waveguides

Zhen-Xing Wu (Nanjing University);

Session 1A_15

SC2: Parity-time Symmetry Synthetic Metamaterials 1

Monday AM, August 8, 2016

Room 5A

Organized by Ming-Hui Lu, Jensen Li

Chaired by Ming-Hui Lu, Jensen Li

- 08:00 Linear and Nonlinear PT-symmetric Waveguide Couplers
invited

Wiktor Walasik (University at Buffalo, The State University of New York); Chicheng Ma (University at Buffalo, The State University of New York); Natalia M. Litchinitser (University at Buffalo, The State University of New York);

- 08:20 Parity-time Synthetic Phononic Media
invited

Johan Christensen (DTU);

- 08:40 Merging of Exceptional Points in Classical Waves
Kun Ding (The Hong Kong University of Science and Technology); Guancong Ma (Hong Kong University of Science and Technology); Meng Xiao (Stanford University); Zhao-Qing Zhang (The Hong Kong University of Science and Technology); Che Ting Chan (The Hong Kong University of Science and Technology);

- 09:00 Experimental Observation of Multi-mode Chiral Edge State

Yin Poo (Nanjing University); Rui-Xin Wu (Nanjing University); Qun Lou (Nanjing University); Zongfu Yu (University of Wisconsin);

- 09:20 Generalized Surface Polaritons and Their Quantum Spin Hall Effect

Yadong Xu (Soochow University); Jian-Hua Jiang (Soochow University); Huanyang Chen (Soochow University);

- 09:40 Integrated Photonics Engineered around Exceptional
invited Points

Liang Feng (The State University of New York at Buffalo);

10:00 **Coffee Break**

- 10:20 Anomalous Parity-time Symmetry Transition Away
invited from an Exceptional Point

Li Ge (City University of New York);

- 10:40 Absence and Recovery of Exceptional Points in Coupled Waveguides with Complex Conjugate Distribution of Refractive Index

Zhen Zhen Liu (Shenzhen Graduate School, Harbin Institute of Technology); Jun Jun Xiao (Harbin Institute of Technology);

- 11:00 Lossy and Gain Metasurfaces for Applications of Antireflection Coatings and Parity-time-symmetric Systems
Jie Luo (Soochow University); Jensen Li (University of Birmingham); Yun Lai (Soochow University);
- 11:20 Transmission and Scattering Properties of PT Symmetric System
Fan Yang (Lanzhou University); Zhong-Lei Mei (Lanzhou University);
- 11:40 General Coupled Mode Theory in Non-Hermitian Waveguides
Yuntian Chen (Huazhong University of Science and Technology); Bei Wu (Huazhong University of Science and Technology); Jing Xu (Huazhong University of Science and Technology);

Session 1A_16

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

Monday AM, August 8, 2016

Room 3F

Chaired by Wei E. I. Sha

- 08:20 Full-wave Electromagnetic Optimizations Using Surface Integral Equations and the Multilevel Fast Multipole Algorithm
B. Karaosmanoglu (Middle East Technical University); C. Onol (Middle East Technical University); S. Guler (Middle East Technical University); A. Altinoklu (Middle East Technical University); Ozgur Ergul (Middle East Technical University);
- 08:40 Hybridized Discontinuous Galerkin Time Domain Method with Boundary Integral Equation Method
Cheng-Yi Tian (Xidian University); Yan Shi (Xidian University); Long Li (Xidian University);
- 09:00 Boundary Integral Equations Accelerated by Adaptive Cross Approximation for Distributed Parameter Extraction
Yu Zhao (Shanghai Jiao Tong University); Jun-Fa Mao (Shanghai Jiao Tong University);
- 09:20 Time-Domain Analysis for Transient Electromagnetic Scattering by Conducting-Dielectric Objects
Wen Jie Chen (Tongji University); Mei Song Tong (Tongji University);
- 09:40 Design of Microwave Heating Apparatus for Titanium Powder for Mass Production
Satoshi Arimasa (Kyoto University); Naoki Shinohara (Kyoto University); Tomohiko Mitani (Kyoto University); Keiichiro Kashimura (Chubu University);

10:00 Coffee Break

- 10:20 Scattering Center Model for Edge Diffraction Based on EEC Formula
Xiao-Tong Zhao (Beijing Institute of Technology); Kun-Yi Guo (Beijing Institute of Technology); Xing Qing Sheng (Beijing Institute of Technology);
- 10:40 Parallel Solutions of Inverse Multiple Scattering Problems with Born-type Fast Solvers
Mert Hidayetoglu (University of Illinois at Urbana-Champaign); Chunxia Yang (University of Illinois at Urbana-Champaign); Lang Wang (University of Illinois at Urbana-Champaign); Anthony Podkova (University of Illinois at Urbana-Champaign); Michael L. Oelze (University of Illinois at Urbana-Champaign); Wen-Mei Hwu (University of Illinois at Urbana-Champaign); Weng Cho Chew (University of Illinois);
- 11:00 An Efficient Preconditioning Approach of Surface Integral Solution of Scattering from Multilayer Dielectric Bodies
Bei-Bei Kong (Beijing Institute of Technology); Xin-Qing Sheng (Beijing Institute of Technology);

Session 1A0

Poster Session 1

Monday AM, August 8, 2016

9:00 AM - 12:00 AM

Room Poster Area

- 1 Fast Algorithm for Near Field Backscattering Using Contour Integral
Xinyi He (Science and Technology on Electromagnetic Scattering Laboratory); Kun Cai (Science and Technology on Electromagnetic Scattering Laboratory);
- 2 An Adaptive Dual-order Finite-element Method by Adjusting Degrees-of-Freedom in Transient Field Analysis
Weinong Fu (Hong Kong Polytechnic University); Yanpu Zhao (Hong Kong Polytechnic University);
- 3 A Fast Remesh-free Mesh Deformation Method Based on Radial Basis Function Interpolation and Its Application to Optimal Design of Electromagnetic Devices
Yanpu Zhao (Hong Kong Polytechnic University); Weinong Fu (Hong Kong Polytechnic University);

- 4 FDTD Method for Property Analysis of Waveguide Loaded Artificial Circular Dielectric Resonator with Anisotropic Permittivity
Hepi Ludyati (Institut Teknologi Bandung); Andriyan Bayu Suksmono (Institut Teknologi Bandung); Achmad Munir (Institut Teknologi Bandung);
- 5 A New Hybrid Tracking Algorithm for Characteristic Mode Analysis
Qi-Hong He (Wuhan University); Ziping Gong (Wuhan University); Heng-Yu Ke (Wuhan University);
- 6 Core Losses Estimation in Design of High Speed Electric Machines
Wei-Ming Su (National Tsing Hua University); Shang-Hsun Mao (ANSYS Taiwan); Pei Jen Wang (National Tsing Hua University);
- 7 Simulation of Graphene-based Plasmonic Metamaterial Absorbers by Using Spectral Element Method
Yijun Cai (Xiamen University); Jinfeng Zhu (Xiamen University); Shuang Yan (Xiamen University); Lirong Zhang (Xiamen University); Qing Huo Liu (Duke University);
- 8 A Graphical User Interface (GUI) with FDTD for Electromagnetic Scattering from a Dielectric Sphere
Yunping Qi (Northwest Normal University); Yan Song (Northwest Normal University);
- 9 UTD Solution for the Diffraction by an Anisotropic Impedance Wedge at Arbitrary Skew Incidence: Numerical Matching Method Based the Revision of Maliuzhinets Function
Liang-Liang Zhang (Wuhan University); Guo-Qiang Zhu (Wuhan University); Si-Yuan He (Wuhan University); Zhen-Min Rao (Wuhan University);
- 10 Efficient Analysis of Microstrip Antenna Mounted on Helicopter Using CBFM
Ke Xiao (National University of Defense Technology); Liang Ding (National University of Defense Technology); Shun-Lian Chai (National University of Defense Technology);
- 11 Simulation of Electromagnetic Wave Propagation in the Medium Using FDTD Method
Anton Aleksandrovich Skubachevskii (Moscow Institute of Physics and Technology);
- 12 Simulation and Application of Near-field Target Characteristic of Electromagnetic Scattering for Fuse
Yanjie Cui (Science and Technology on Electromagnetic Scattering Laboratory); Wenqiang Chen (Science and Technology on Electromagnetic Scattering Laboratory); Jia Qi (Science and Technology on Electromagnetic Scattering Laboratory); Jianguang Zhao (Science and Technology on Electromagnetic Scattering Laboratory); Man Liang (Science and Technology on Electromagnetic Scattering Laboratory); Xiang-Yang Zhang (Science and Technology on Electromagnetic Scattering Laboratory);
- 13 Lorentz Force Distribution inside a Conductor Moving in the Vicinity of a Magnetic Dipole with Arbitrary Orientation
Bojana Petkovic (Technische Universitat Ilmenau); Konstantin Weise (Technische Universitat Ilmenau); Jens Haueisen (Technical University of Ilmenau);
- 14 Efficient Scattering Analysis of PEC Objects above Halfspace over Wide Angular and Frequency Band
Yunqin Hu (Nanjing University of Posts and Telecommunications); Jian Zhu (Nanjing University of Posts and Telecommunications);
- 15 Efficient Analysis of Ultra-wideband Wireless Channels with Three-dimensional ADI-FDTD Algorithm
Jian Zhu (Nanjing University of Posts and Telecommunications); Yiping Zuo (Nanjing University of Posts and Telecommunications); Zhe Huang (Nanjing University of Posts and Telecommunications); Yunqin Hu (Nanjing University of Posts and Telecommunications);
- 16 The NQR RF Decoupler Construction Based on Transformer
Miloslav Steinbauer (Brno University of Technology); Pavel Fiala (Brno University of Technology); Tomas Kriz (Brno University of Technology); Zdenek Roubal (Brno University of Technology);
- 17 RCS Reduction for Patch Antenna Based on Metamaterial Absorber
Zi-Xiao Zhang (AVIC The First Aircraft Institute); Jun-Chao Zhang (AVIC The First Aircraft Institute);
- 18 High Efficiency Broadband Metamaterial Polarization Converter
Hua Yang (Nanjing University of Aeronautics and Astronautics); Shaobin Liu (Nanjing University of Aeronautics and Astronautics); Feng Xue (Nanjing University of Aeronautics and Astronautics); Zi-Xiao Zhang (AVIC The First Aircraft Institute);

- 19 Frequency-selective Flexible Metamaterial Absorber with Wideband Absorption
Wei Shi (Nanjing University of Aeronautics and Astronautics); Bu-Sheng Zheng (Nanjing University of Aeronautics and Astronautics); Zi-Xiao Zhang (AVIC The First Aircraft Institute);
- 20 Frequency Splitter Based on Graphene Plasmonic Waveguide
Yize Shen (Harbin Engineering University); Yongjiao Lu (Harbin Engineering University); Yihang Xu (Harbin Engineering University); Rang Chu (Harbin Engineering University); Gilberto Brambilla (University of Southampton); Chungying Guan (Harbin Engineering University);
- 21 Tri-band Ultra-thin Absorber for Wide Angle of Incidence Based on Frequency Selective Surface
Tao Zhong (Missile Institute of Airforce Engineering University); Hou Zhang (Air Force Engineering University);
- 22 Low Sidelobe Leaky-wave Antenna Based on Spoof Plasmonic Waveguide
Gu Sheng Kong (Southeast University); Meng Wang (Southeast University); Huifeng Ma (Southeast University);
- 23 Antenna Beam Steering Using Phase Gradient Meta-surface Radome
Yongfeng Li (Air Force Engineering University); Jieqiu Zhang (Air Force Engineering University); Mingde Feng (Air Force Engineering University); Yongqiang Pang (Air Force Engineering University); Hongya Chen (Air Force Engineering University);
- 24 The Propagation Characteristics of the Diffraction Field by an Annular Aperture of Bessel-Gauss Beam Based on Surface Plasmon Polaritons
Yue Hu (Northwest Normal University); Yunping Qi (Northwest Normal University);
- 25 The Light Splitter Based on the Octagonal Photonic Quasicrystals
Ziyu Wang (Southeast University, Chengxian College); Xiaopeng Shen (China University of Mining and Technology); Kui Han (China University of Mining and Technology);
- 26 Spectrally Selective $\text{TiO}_2/\text{Ag}/\text{TiO}_2/(\text{SiO}_2/\text{TiO}_2)^5$ Film for Energy-efficient Windows
Dong Qi (Huazhong University of Science and Technology); Xian Wang (Huazhong University of Science and Technology); Fang Wang (Huazhong University of Science and Technology); Yongzhi Cheng (Wuhan University of Science and Technology); Yan Nie (Huazhong University of Science & Technology); Rong Zhou Gong (Huazhong University of Science and Technology);
- 27 Bright Single-photon Source at $1.3\mu\text{m}$ Based on an InAs/GaAs Bilayer Quantum Dot in Distributed Bragg Reflectors Structure
Zesheng Chen (Institute of Semiconductors, Chinese Academy of Science); Ben Ma (Institute of Semiconductors, Chinese Academy of Science); Xiangjun Shang (Institute of Semiconductors, Chinese Academy of Sciences); Li-Chun Zhang (Institute of Semiconductors, Chinese Academy of Sciences); Hai-Qiao Ni (Institute of Semiconductors, Chinese Academy of Sciences); Jin-Liang Wang (Beihang University); Zhichuan Niu (Institute of Semiconductors, Chinese Academy of Sciences);
- 28 In situ Probing and Integration of Quantum-dot for 'All Fiber' Devices
Ben Ma (Institute of Semiconductors, Chinese Academy of Science); Zesheng Chen (Institute of Semiconductors, Chinese Academy of Science); Guo-Wei Zha (Institute of Semiconductors, Chinese Academy of Sciences); Xiangjun Shang (Institute of Semiconductors, Chinese Academy of Sciences); Li-Chun Zhang (Institute of Semiconductors, Chinese Academy of Sciences); Hai-Qiao Ni (Institute of Semiconductors, Chinese Academy of Sciences); Zhichuan Niu (Institute of Semiconductors, Chinese Academy of Sciences);
- 29 TiO_2 Nanoparticles Loading on the Microwave and Optical Properties of the Electro-optic Polymer PMMA-DR1 for Optimization of Microwave Photonic Components
Den God Frez Palessonga (Universite de Nantes); Mohammed El-Gibari (Lunam Universite, Universite de Nantes); Stephane Ginestar (Lunam Universite, Universite de Nantes); H. Terrisse (Universite de Nantes); Benoit Guiffard (University of Nante); A. Kassiba (Universite du Maine); Hongwu Li (Lunam Universite, Universite de Nantes);
- 30 Transmission Properties of Photonic Crystal near Dirac Point
Guoyan Dong (University of Chinese Academy of Sciences);

- 31 Epitaxial Growth of Thin Ferroelectric Polymer on Graphene and Fully Transparent and Flexible Non-volatile Memory
Kang Lib Kim (Yonsei University); Cheolmin Park (Yonsei University);
- 32 Supramolecular Self-assembled Nanoporous Thin Film of Functionalized Polymers for Anti-reflection Coating
Suk Man Cho (Yonsei University); Kang Lib Kim (Yonsei University); Cheolmin Park (Yonsei University);
- 33 Magnetically Tunable Ferrite-loaded Waveguide Isolator Based on Magnetic Photonic Crystals
Weiwei Tong (Air Force Engineering University); Jiafu Wang (Air Force Engineering University); Tianshuo Qiu (Air Force Engineering University); Zhaotang Liu (Air Force Engineering University); Wenjie Wang (Air Force Engineering University); Shaobo Qu (Air Force Engineering University);
- 34 COMSOL Multiphysics[®] Based Simulation of DPSS Laser Dicing in Wide-gap Thin Substrate
Guillaume Savriama (University of Orleans); Nadjib Semmar (CNRS/Universite d'Orleans);
- 35 A Beam-steering Dual-polarization Reconfigurable Antenna
Xiaoling Zhang (University of Electronic Science and Technology of China); Feng Yang (University of Electronic Science and Technology of China); Peng Yang (University of Electronic Science and Technology of China (UESTC));
- 36 A Novel Microstrip Antenna with Pre-controllable Resonant Frequency and Impedance Matching
Xue Li (Chengdu Agricultural College); C.-J. Zou (Chengdu Agricultural College); P. Yu (Chengdu Agricultural College); Mingye Fu (Southwest Jiaotong University); Qianying Xiang (Southwest Jiaotong University);
- 37 The Study of Plasmonic Nanoantennas with Different Elliptical Metal Rods Embedded in a Two-arm Grating
Yaw-Dong Wu (National Kaohsiung University of Applied Sciences); Tien-Tsornng Shih (National Kaohsiung University of Applied Sciences); Li-Hsiang Wang (National Kaohsiung University of Applied Sciences);
- 38 The Design of Push-broom Scanning Satellite Antenna
Bingbing Qi (Beijing University of Posts and Telecommunication); Xiaoming Liu (Beijing University of Posts and Telecommunications); Hai Wang (Beijing University of Posts and Telecommunications); Junsheng Yu (Beijing University of Posts and Telecommunications); Xiaodong Chen (Queen Mary University of London); Yuan Yao (Beijing University of Posts and Telecommunications); Limei Qi (Beijing University of Posts and Telecommunication); Zhi-jiao Chen (Beijing University of Posts and Telecommunication);
- 39 Full Metal Case Antenna Design and Measurement
Ming-Jhih Tsai (National Taipei University of Technology); Jwo-Shiun Sun (National Taipei University of Technology); Guan-Yu Chen (National Taipei University of Technology);
- 40 Characterization of Ultra-wide Band Diamond Shaped Monopole Using Singularity Expansion Method
Sajjad Ur Rehman (King Saud University); Majeed A. S. Alkanhal (King Saud University);
- 41 A Novel Low Profile UWB Monopole Antenna
Dingyi Luo (Shanghai Key Laboratory of Electromagnetic Environmental Effects for Aerospace Vehicle); Xiaolin Zhou (Shanghai Key Laboratory of Electromagnetic Environmental Effects for Aerospace Vehicle); Jianying Li (Shanghai Key Laboratory of Electromagnetic Environmental Effects for Aerospace Vehicle);
- 42 Resonant Frequency Lowering of Square Patch Antenna Using Anisotropic Artificial Dielectric Material
Achmad Munir (Institut Teknologi Bandung);
- 43 Implementation of a Multi-waveband, High-precision, Wideband Waveform Generator Based on DDWS for Antenna Channel Characteristics Test
Xiaoying Zhao (National University of Defense Technology); Jiong Yang (National University of Defense Technology); Yue Zhang (National University of Defense Technology); Qian Qiang Lin (National University of Defense Technology); Zeng Ping Chen (National University of Defense Technology);
- 44 A Novel Miniaturized Microstrip Antenna Using Interdigital Capacitor Based on Defected Ground Structure
Rongwei Wang (East China Normal University); Jizhou Wang (Shanghai Electro-mechanical Engineering Institute); Rensheng Xie (East China Normal University); Xi Wang (East China Normal University); Zhi Xu (East China Normal University); Shouzheng Zhu (East China Normal University);

- 45 A Study of Dielectric Resonator Antenna Array Applied to 5G Communication System
Rensheng Xie (East China Normal University); Jie Cao (East China Normal University); Rongwei Wang (East China Normal University); Xi Wang (East China Normal University); Zhi Xu (East China Normal University); Shouzheng Zhu (East China Normal University);
- 46 Low Cost Phase Calibration in Millimeter Wave Imaging System
Yang Meng (University of Electronic Science and Technology of China); C. Zhang (University of Electronic Science and Technology of China); J. F. Zang (Southwest Jiaotong University); Chuan Lin (University of Electronic Science and Technology of China); Dan Cao (University of Electronic Science and Technology of China); Anyong Qing (University of Electronic Science and Technology of China);
- 47 WLAN Band-notched Planar UWB Antenna Loaded by CSRR
Hangying Yuan (Air Force Engineering University); Shaobo Qu (Air Force Engineering University); Jieqiu Zhang (Air Force Engineering University); Jiafu Wang (Air Force Engineering University); Yongfeng Li (Air Force Engineering University); Yajuan Han (Air Force Engineering University); Zhaotang Liu (Air Force Engineering University); Hang Zhou (Air Force Engineering University);
- 48 The Calculation and Calibration of Element Mutual Coupling in Adaptive Anti-interference Antenna Array
Rundong Zheng (National University of Defense Technology); Ji-Bin Liu (National University of Defense Technology); Ning Zhao (National University of Defense Technology); Qihui Zhou (National University of Defense Technology);
- 49 An Improved Method of Diagnosis of Failed Elements in Arrays Based on Far-field Radiation Pattern
Jing Miao (China Electronic Technology Group Corporation No. 38 Research Institute); Bo Chen (University of Electronic Science and Technology of China); Xiaolin Zhang (China Electronic Technology Group Corporation No. 38 Research Institute); Yang Chen (Key Lab of Aperture Array and Space Application (KLAASA));
- 50 Dual-band (2.4/5 GHz) Antenna Design for Digital Signage
Ho-Jun Lee (Korea Electronics Technology Institute); In Su Yeom (Seoul National University of Science and Technology);
- 51 Designing of Smart Antenna for Improved Directivity and Gain at Terahertz Frequency Range
Ayodele S. Oluwole (Howard College, University of KwaZulu-Natal); Viranjay M. Srivastava (Howard College, University of KwaZulu-Natal);
- 52 Analysis of Smart Antenna with Improved Signal Quality and Spatial Processing
Ayodele S. Oluwole (University of KwaZulu-Natal); Viranjay M. Srivastava (University of KwaZulu-Natal);
- 53 Performance Analysis of Smart Antenna Bandwidth at Terahertz Frequency Range
Ayodele S. Oluwole (University of KwaZulu-Natal); Viranjay M. Srivastava (University of KwaZulu-Natal);
- 54 Design of a V-band Low Sidelobe and Wideband Linear DRA Array
Wenhui Shen (Shanghai University); Jiahong Lin (Shanghai University); Kang Yang (Shanghai University);
- 55 A Novel Miniaturized and Wideband Microstrip Antenna Based on Metamaterials
Yahao Liu (Huazhong University of Science and Technology); Yongzhi Cheng (Wuhan University of Science and Technology); Yan Nie (Huazhong University of Science & Technology); Xian Wang (Huazhong University of Science and Technology); Rongzhou Gong (Huazhong University of Science and Technology);
- 56 A Novel Dual-band Antenna for WLAN Application
Hui Liu (South China Normal University (Guangzhou University Town Campus of South China Normal University)); Luokai Zhang (South China Normal University); Jiwei Pan (South China Normal University); Cheng Liu (South China Normal University); Zhoufu Lin (South China Normal University);
- 57 Design of Sleeve Broadband Antenna for Mobile Terminals
Zhoufu Lin (South China Normal University); Hui Liu (Guangdong Peizheng College); Cheng Liu (Guangdong Peizheng College);
- 58 Design of Multi-band Antenna for 4G Mobile Terminals
Youhuan Guo (Guangdong Peizheng College); Hui Liu (Guangdong Peizheng College); Xin Dai (Guangdong Peizheng College); Zhoufu Lin (Guangdong Peizheng College);
- 59 Localisation System for Network Planning in 2-Tier Heterogeneous Networks
Dorathy O. Abonyi (The University of Sheffield); Jonathan M. Rigelsford (The University of Sheffield);

- 60 Electron Density Measurement in Space Plasma, Comparison between Two Techniques: Sounder by Relaxation and Mutual Impedance Probe
Jean Louis Rauch (Centre National de la Recherche Scientifique, CNRS); P. Henri (3A av. de la Recherche Scientifique); Jean-Pierre Lebreton (Universite d'Orleans); X. Vallieres (LPC2E, 3A av. de la Recherche Scientifique); O. Le Duff (LPC2E); F. Colin (LPC2E); D. Lagoutte (LPC2E);
- 61 The Formation of High-resolution FMCW SAR Video
Chengfei Gu (National University of Defense Technology); Wenge Chang (National University of Defense Technology); Xiangyang Li (National University of Defense Technique); Xinqun Luan (Science and Technology on Near-Surface Detection Laboratory);
- 62 Simulation of the Infrared Signature of Exo-atmosphere Micro-motion Object
Yabei Wu (National University of Defense Technology); Huanzhang Lu (National University of Defense Technology); Fei Zhao (Automatic Target Recognition Laboratory); Zhiyong Zhang (National University of Defense Technology);
- 63 A Signal Model for the IR Signature of Exo-atmosphere Micro-motion Targets
Yabei Wu (National University of Defense Technology); Huanzhang Lu (National University of Defense Technology); Fei Zhao (Automatic Target Recognition Laboratory); Zhiyong Zhang (National University of Defense Technology);
- 64 T/V Calibration for Microwave Humidity and Temperature Sounder onboard Chinese FY-3D Satellite
Jieying He (National Space Science Center, Chinese Academy of Sciences); Zhenzhan Wang (National Space Science Center/Center for Space Science and Applied Research, Chinese Academy of Sciences); Shengwei Zhang (National Space Science Center, Chinese Academy of Sciences);
- 65 A Deblurring Method for Dynamic Target Observation of the Geostationary Interferometric Microwave Sounder (GIMS)
Ying Zhang (National Space Science Center, Chinese Academy of Sciences); Hao Liu (National Space Science Center, Chinese Academy of Sciences); Ji Wu (National Space Science Center, Chinese Academy of Sciences); Cheng Zhang (National Space Science Center, Chinese Academy of Sciences); Jieying He (National Space Science Center, Chinese Academy of Sciences);
- 66 Human Tracking Using Range and Velocity Measurements by Multistatic Radar
Jun Zhang (National University of Defense Technology); Tian Jin (National University of Defense Technology); Yuan He (National University of Defense Technology); Lei Qiu (National University of Defense Technology); Zhimin Zhou (National University of Defense Technology);
- 67 Application and FPGA Implementation of Wideband Real-time Spectrum Analysis in Spaceborne Electronic Reconnaissance
Tao Li (National University of Defense Technology); Minghui Li (China Aerodynamics Research and Development Center); Xiaolei Fan (National University of Defense Technology); Zeng Ping Chen (National University of Defense Technology); Yurong Wan (National University of Defense Technology);
- 68 Design of Wideband Radar Signal Reconnaissance Real-time Processing System Based on Multi-DSP
Xiaolei Fan (National University of Defense Technology); Yabei Wu (National University of Defense Technology); Tao Li (National University of Defense Technology); Zeng Ping Chen (National University of Defense Technology);
- 69 A Way of Cable Force Measurement Based on Interference Radar
Heng Dong (National University of Defense Technology); Jian Wang (National University of Defense Technology); Qian Song (National University of Defense Technology);
- 70 The Correction of Broadband Channels Based on Adaptive Filter
Bo Sheng (National University of Defense Technology); Qinglong Bao (National University of Defense Technology); Zeng Ping Chen (National University of Defense Technology);
- 71 A Novel Detection Method Based on FrFT for Passive Radar
Qinglong Bao (National University of Defense Technology); Yuting Qiao (National University of Defense Technology); Zeng Ping Chen (National University of Defense Technology);
- 72 Implementation of Large Points Pulse Compression Using Multicore DSP
Shulei Nie (National University of Defense Technology); Qinglong Bao (National University of Defense Technology); Zeng Ping Chen (National University of Defense Technology);

- 73 A Detection Algorithm for Radar Weak Targets under the Interference of Strong Targets
Ruiqi Tian (National University of Defense Technology); Zhongping Fan (National University of Defense Technology); Caiyong Lin (National University of Defense Technology); Qinglong Bao (National University of Defense Technology); Zeng Ping Chen (National University of Defense Technology);
- 74 Giant Magnetoresistance (GMR) Sensors Based on Co/Cu Multilayers for Biomaterial Detection Applications
Indra Pardede (Gadjah Mada University); Ferawati A. Hasibuan (Gadjah Mada University); Edi Suharyadi (Gadjah Mada University);
- 75 2D Grating Diffractive Motifs on a Curved Surface: Floral Iridescence-inspired Structural Colorization
Kyung Jin Park (Sungkyunkwan University (SKKU)); Seon Ju Yeo (Sungkyunkwan University (SKKU)); Kai Guo (Sungkyunkwan University (SKKU)); Pil J. Yoo (Sungkyunkwan University (SKKU)); Seungwoo Lee (Sungkyunkwan University (SKKU));
- 76 Rhythmic Spontaneous UPE in Seedlings — Overview
Cristiano De Mello Gallep (University of Campinas);
- 77 Asymmetric Electromagnetic Analysis and Design of a Permanent Biased Axial Magnetic Bearings
Xiaojun Ren (Fundamental Science on Novel Inertial Instrument & Navigation System Technology Laboratory); Yun Le (Fundamental Science on Novel Inertial Instrument & Navigation System Technology Laboratory); Bangcheng Han (Fundamental Science on Novel Inertial Instrument & Navigation System Technology Laboratory);
- 78 Evaluation of Algebraic Reconstruction Technique Algorithm for Microwave Imaging
Dhani Elevani (Universitas Indonesia); Rifqi Ramadhan (Universitas Indonesia); Dita Tessa Parastika (Universitas Indonesia); Basari (Universitas Indonesia);
- 79 Towards a Biophysical Approach to Different Levels of Low Back Pain
Alberto Foletti (University of Applied Sciences of Southern Switzerland-SUPSI); Paolo Baron (Clinical Biophysics International Research Group);
- 80 Seven-core Fiber SPR Sensor
Jing Han (Capital Normal University); Zhenwei Xie (Harbin Institute of Technology); Shengfei Feng (Capital Normal University); Yan Zhang (Capital Normal University);
- 81 Shared Risk Link Groups (SRLG)-aware Virtual Network Mapping in Space Division Multiplexing (SDM) Optical Networks with Multi-mode Fibers
Chenbei Yu (Beijing University of Posts and Telecommunications); Yina Song (Beijing University of Posts and Telecommunications); Xiaosong Yu (Beijing University of Posts and Telecommunications); Yongli Zhao (Beijing University of Posts and Telecommunications); Jie Zhang (Beijing University of Posts and Telecommunications);
- 82 On the Performance Comparisons of Several Sparse Reconstruction Algorithms
Dou Sun (National University of Defense Technology); Shiqi Xing (National University of Defense Technology); Yongzhen Li (National University of Defense Technology); Dahai Dai (National University of Defense Technology); Bo Pang (National University of Defense Technology);
- 83 An On-site Fast Test System Based on a Novel Miniaturized GTEM Cell
Guochang Shi (Shanghai Key Laboratory of Electromagnetic Environmental Effects for Aerospace Vehicle); Yi Liao (Shanghai Key Laboratory of Electromagnetic Environmental Effects for Aerospace Vehicle); Xiaojun Ying (Beihang University); Yuan Zhang (Shanghai Key Laboratory of Electromagnetic Environmental Effects for Aerospace Vehicle);
- 84 Wideband Low Noise Amplifier Using a Novel Equalization
Juncai Lv (University of Electronic Science and Technology of China); Yongfang Bao (University of Electronic Science and Technology of China); Jiu Rong Huang (University of Electronic Science and Technology of China);
- 85 0.13- μm CMOS Load Modulator for MIMO System
Jun-Sup Kim (Korea Electronics Technology Institute); Seok-Chul Lee (Korea Electronics Technology Institute);
- 86 Two-stage Cascaded Coaxial LEMP and NEMP Protection Modules with High Power Handling Capability and Fast Response for HF/VHF Applications
Dongdong Wang (Science and Technology on Electromagnetic Compatibility Laboratory); Lan Gao (China Ship Development and Design Center); Shengquan Zheng (Science and Technology on Electromagnetic Compatibility Laboratory);

- 87 Simulation Method of Charge Collection Mechanism in CVD Diamond Detector
Yong Li (Northwest Institute of Nuclear Technology); Jianguo Wang (Northwest Institute of Nuclear Technology); Haiyan Xie (Northwest Institute of Nuclear Technology); Linyue Liu (Northwest Institute of Nuclear Technology); Jianfu Zhang (Northwest Institute of Nuclear Technology); Chun Xuan (Northwest Institute of Nuclear Technology);
- 88 Analytical Study of Transmission Characteristics of MSL Bonded NSS by Dielectric Adhesive with Different Thickness
Yusuke Tomizuka (National Institute of Technology, Kisarazu College); Genki Ichihara (National Institute of Technology, Kisarazu College); Yugo Uchida (National Institute of Technology, Kisarazu College); Keisuke Ejiri (National Institute of Technology, Kisarazu College); Hiroki Sato (National Institute of Technology, Kisarazu College); Takanobu Ohno (Kisarazu National College of Technology); Kosei Tanii (National Institute of Technology, Kisarazu College); Masahiro Uehara (National Institute of Technology, Kisarazu College);
- 89 Experimental Study on Relative Position between NSS Placed on Metal Film and Transmission Line
Yugo Uchida (National Institute of Technology, Kisarazu College); Akinori Hashio (Gifu University); Yusuke Tomizuka (National Institute of Technology, Kisarazu College); Genki Ichihara (National Institute of Technology, Kisarazu College); Hiroki Sato (National Institute of Technology, Kisarazu College); Keisuke Ejiri (National Institute of Technology, Kisarazu College); Takanobu Ohno (Kisarazu National College of Technology); Kosei Tanii (National Institute of Technology, Kisarazu College); Masahiro Uehara (National Institute of Technology, Kisarazu College);
- 90 Effect of Electromagnetic Interference (EMI) on the Performance of Electron Y-branch Switch (YBS) Based Inverting Amplifier
Muhammad Taher Abuelma'atti (King Fahd University of Petroleum and Minerals);
- 91 Effect of Electromagnetic Interference (EMI) on the Performance of Class-AB CMOS Transconductance Stage
Muhammad Taher Abuelma'atti (King Fahd University of Petroleum and Minerals); Ali M. T. Abuelmaatti (RFMD (UK) Ltd.);
- 92 Effect of Electromagnetic Interference (EMI) on the Performance of NMOSFET Current Mirror
Muhammad Taher Abuelma'atti (King Fahd University of Petroleum and Minerals); Ali M. T. Abuelmaatti (RFMD (UK) Ltd.);
- 93 Alternative Hardware and Software Development for Photon Pulse Counting
Kevin Nogueira Moreira (FT-UNICAMP); Pedro Henrique Silva E Oliveira (FT-UNICAMP); Cristiano De Mello Gallep (University of Campinas);
- 94 Electromagnetic Interference Shielding Effectiveness and Microwave Absorption of Ferrite-polymer Composite Using $\text{Ni}_{0.32}\text{Cu}_{0.08}\text{Zn}_{0.6}\text{Fe}_2\text{O}_4$ Ferrite
Wangchang Li (Zhejiang University of Technology); Cheng Le (Zhejiang University of Technology); Liang Qiao (Zhejiang University of Technology); Jingwu Zhen (Zhejiang University of Technology); Yao Ying (Zhejiang University of Technology); Liang Yu (Zhejiang University of Technology); Liqiang Jiang (Zhejiang University of Technology); Shenglei Che (Zhejiang University of Technology);
- 95 A Digital Compensation Method for Piezoresistive Pressure Sensor
Jia Xin Wan (East China Normal University); Ling Yi Tang (Tongji University); Wen Jie Chen (Tongji University); Mei Song Tong (Tongji University);
- 96 Asymmetric Transmission of Linearly Polarized Wave in All-dielectric Chiral Metamaterial
Hui Ma (Nanjing University); Rui-Xin Wu (Nanjing University);
- 97 Probing Surface Evanescent Waves with an Ultra-high Sensitive Terahertz Near-field Microscope
Qianchun Weng (Shanghai Institute of Technical Physics, Chinese Academy of Sciences); Le Yang (Fudan University); Zhenghua An (Fudan University); Pingping Chen (Shanghai Institute of Technical Physics, Chinese Academy of Sciences); Bo Zhang (Shanghai Institute of Technical Physics, Chinese Academy of Sciences); Susumu Komiyama (The University of Tokyo); Ziqiang Zhu (East China Normal University); Wei Lu (Shanghai Institute of Technical Physics, Chinese Academy of Sciences);

- 98 Effects of Hydrogen Bonds and Volatilization on Absorption Properties for a Microwave Absorbing Coating
Zhenjiang Song (513 Institute, Fifth Academy of China Aerospace Science and Technology Corporation); Jingshi Shen (513 Institute, Fifth Academy of China Aerospace Science and Technology Corporation); Hongyan Xu (513 Institute, Fifth Academy of China Aerospace Science and Technology Corporation); Xiujun Huang (513 Institute, Fifth Academy of China Aerospace Science and Technology Corporation); Dele Shi (Fifth Academy of China Aerospace Science and Technology Corporation); Mingrui Xin (513 Institute, Fifth Academy of China Aerospace Science and Technology Corporation); Xiao Long Weng (University of Electronic Science and Technology of China); Jianliang Xie (University of Electronic Science and Technology of China);
- 99 Dyadic Green's Function of the Magnetic Vector Potential for Unbounded Uniaxial Anisotropic Media
J. Zhuo (Xiamen University); Feng Han (Xiamen University); Na Liu (Xiamen University); Longfang Ye (Xiamen University); Q. H. Liu (Duke University);
- 100 Three-dimensional Reconstructing of Objects Buried in Spherically Multilayered Medium Using Born Iterative Methods
Y. Chen (Xiamen University); Feng Han (Xiamen University); Na Liu (Xiamen University); Yanhui Liu (Xiamen University); Q. H. Liu (Duke University);
- 101 Inverse Scattering from Inhomogeneous Disturbed Region in Planarly Layered Dispersive Plasma Medium
P. We (Xiamen University); Feng Han (Xiamen University); Na Liu (Xiamen University); Hai Liu (Xiamen University); Q. H. Liu (Duke University);
- 102 3D Imaging System Based on a MIMO Approach at 360 GHz for Security Screening
Sandra Nowok (Fraunhofer FHR); Reinhold Herschel (Fraunhofer FHR); Rudiger Zimmermann (Fraunhofer FHR); Alex Shoykhetbrod (Fraunhofer FHR); Stefan A. Lang (Fraunhofer Institute for High Frequency Physics and Radar Techniques); Nils Pohl (Fraunhofer FHR);
- 103 Special Dark Chamber for Spectrum Analysis of Ultraweak Light Emission by Organisms
J. F. Viana (FT-UNICAMP); Cristiano De Mello Gallep (University of Campinas);
- 104 A Study on Uniform Heating of Food in Microwave Oven by Using Phase Difference of Power Output from Two Ports
Keisuke Ejiri (National Institute of Technology, Kisarazu College); Yusuke Tomizuka (National Institute of Technology, Kisarazu College); Genki Ichihara (National Institute of Technology, Kisarazu College); Hiroki Sato (National Institute of Technology, Kisarazu College); Yugo Uchida (National Institute of Technology, Kisarazu College); Takanobu Ohno (Kisarazu National College of Technology); Kosei Tanii (National Institute of Technology, Kisarazu College); Masahiro Uehara (National Institute of Technology, Kisarazu College);
- 105 Verification of FDTD Code Using the Method of Exact Solutions
Yong Li (Northwest Institute of Nuclear Technology); Haiyan Xie (Northwest Institute of Nuclear Technology); Yonghui Guo (Northwest Institute of Nuclear Technology); Chun Xuan (Northwest Institute of Nuclear Technology);
- 106 Efficient Analysis of EM Scattering from Objects within a Half Space Using Higher Order Basis Functions Accelerated by ACA
Xin Qi (University of Electronic Science and Technology of China); Zai-Ping Nie (University of Electronic Science and Technology of China); Wan Luo (University of Electronic Science and Technology of China); Yu Wang (University of Electronic Science and Technology of China); Yuan Yang (University of Electronic Science and Technology of China); Yue Wang (University of Electronic Science and Technology of China);
- 107 Efficient Numerical Modeling of Monostation RCS for Electrically Extreme Large PEC Targets
Yu Wang (University of Electronic Science and Technology of China); Zai-Ping Nie (University of Electronic Science and Technology of China); Xin Qi (University of Electronic Science and Technology of China);
- 108 Interpolation and Extrapolation Techniques Based Neural Network in Estimating the Missing Ionospheric TEC Data
Vikneswary Jayapal (Universiti Sains Islam Malaysia); Ahmad Faizal Mohd Zain (Universiti Sains Islam Malaysia);
- 109 Continuous Dual-band Reconfigurable FSS Based on PIN Diode Switches
Zhan-Bo Lu (AVIC LeiHua Electronic Technology Research Institute); Jian-Jian She (AVIC LeiHua Electronic Technology Research Institute); Xuequan Yan (Radar and Avionics Institute of AVIC);

Session 1P1**FocusSession.SC2: Dynamic Metamaterial Devices and Applications**

Monday PM, August 8, 2016**Room 5B/5C**

Organized by Willie J. Padilla, Hou-Tong Chen

Chaired by Nicholas X. Fang, Hou-Tong Chen

13:00 Electrically Switchable Metamaterials

keynote

*Hou-Tong Chen (Los Alamos National Laboratory);*13:30 Gbps THz External Modulator Based on the
invited AlGa_N/Ga_N High Electron Mobility Transistor-metamaterial*Yaxin Zhang (University of Electronic Science and Technology of China); Shen Qiao (University of Electronic Science and Technology of China); Shixiong Liang (Hebei Semiconductor Research Institute); Zhihong Feng (Hebei Semiconductor Research Institute); Qin Chen (Suzhou Institute of Nano-tech and Nano-bionics, Chinese Academy of Sciences); Ziqiang Yang (University of Electronic Science and Technology of China);*13:50 Theoretical and Experimental Determination of Sur-
invited face Susceptibility of Switchable Terahertz Metasur-
faces*N. Karl (Brown University); Martin S. Heimbeck (U.S. Army AMRDEC); Henry O. Everitt (U.S. Army AMRDEC); H. T. Chen (Los Alamos National Laboratory); A. J. Taylor (Los Alamos National Laboratory); Alex Benz (Sandia National Laboratories); John L. Reno (Sandia National Laboratories); Igal Brener (Sandia National Laboratories); R. Mendis (Brown University); Daniel M. Mittleman (Brown University);*14:10 Modulating Terahertz Wave by DC-biased Supercon-
invited ducting Metamaterial*Biaobing Jin (Nanjing University); C. H. Zhang (Nanjing University); C. Li (Nanjing University); L. Kang (Nanjing University); W. W. Xu (Nanjing University); J. Chen (Nanjing University); P. H. Wu (Nanjing University);*14:30 Analysis of Ku-band Steerable Metamaterials Reflec-
invited tarray with Tunable Varactor Diodes*Jing Nie (Kuang-Chi Institute of Advanced Technology); Yan-Qing Tan (Kuang-Chi Institute of Advanced Technology); Chunlin Ji (Kuang-Chi Institute of Advanced Technology); Ruo-Peng Liu (Kuang-Chi Institute of Advanced Technology);*14:50 Application of Fourier Transform in the Design of
keynote Coding Metasurfaces for Controlling the Radiation
Beams*Shuo Liu (Southeast University); Tie Jun Cui (South-east University);*15:20 **Coffee Break**15:40 Tunable Metacomposites Containing Hybrid Co- and
Fe-based Ferromagnetic Microwires*Yang Luo (University of Bristol); F. Scarpa (University of Bristol); Faxiang Qin (National Institute for Materials Science); Jorge Carbonell (Universidad Politecnica de Valencia); Mihail Ipatov (Universidad del Pais Vasco); Arkady P. Zhukov (Universidad del Pais Vasco); H. X. Peng (Zhejiang University);*15:55 Smart Metasurface Based on Electrically Tunable
Mie-type Dielectric Resonators*Zhaoxian Su (Northwestern Polytechnical University); Jianbo Yin (Northwestern Polytechnical University);*16:10 Engineering Fluorescent Decay Rate by Metal-
invited mediated Superradiance in Two-dimensional Molec-
ular Aggregates*Qing Hu (Massachusetts Institute of Technology); Dafei Jin (Massachusetts Institute of Technology); Sang Hoon Nam (Massachusetts Institute of Technology); Jun Xiao (University of California); Yongmin Liu (Northeastern University); Xiang Zhang (University of California); Nicholas X. Fang (Massachusetts Institute of Technology);*16:30 Split Ring Resonator Based THz Emitter and Photo-
invited imprinted THz Diffraction Gratings*Liang Luo (Iowa State University); Jigang Wang (Iowa State University);*16:50 Dynamically Switchable Metasurfaces Based on
invited Graphene and Origami*Yongmin Liu (Northeastern University); Zuojia Wang (Zhejiang University); Liqiao Jing (Zhejiang University); Hongsheng Chen (Zhejiang University);*

Session 1P2**FocusSession.SC2&3:****Micro-/nano-manipulations: Fundamentals and Applications**

Monday PM, August 8, 2016**Room 5D/5E**

Organized by Yuebing Zheng, Chenglong Zhao

Chaired by Zhi-Yuan Li, Giovanni Volpe

- 13:10 New Physics with Optical Tweezers: Active Matter,
invited Nonequilibrium and Critical Phenomena
Giovanni Volpe (Bilkent University);
- 13:30 Boundary Stress Induced by Electromagnetic Wave
invited
Shubo Wang (The Hong Kong University of Science and Technology); Che Ting Chan (The Hong Kong University of Science and Technology);
- 13:50 Controlled Motion of Janus Particles in Point, Circular and Linear Optical Traps
invited
Jing Liu (Institute of Physics, Chinese Academy of Science); Honglian Guo (Institute of Physics, Chinese Academy of Science); Zhi-Yuan Li (Institute of Physics, Chinese Academy of Sciences);
- 14:10 Advanced Optical Manipulation Exploiting Materials
keynote Science
Kishan Dholakia (University of St Andrews);
- 14:40 Effects of Nonlinear Polarization in Optical Trapping
invited
Hiromi Okamoto (Institute for Molecular Science); Y. Jiang (Institute of Genetics and Developmental Biology, Chinese Academy of Sciences); T. Narushima (Institute for Molecular Science);
- 15:00 Near Infrared Plasmonic Optical Trapping Based on Hybrid Metal Nanorod
Zhiyun Li (Lanzhou University); Zhinan Wang (Lanzhou University); Pengfei Cao (Lanzhou University); Yongji Guan (Lanzhou University); Lin Cheng (Lanzhou University); Linshan Chen (Lanzhou Petrochina Company);
- 15:20 **Coffee Break**
- 15:40 Light Speeds up Colloidal Nanomotors
invited
Lei Shao (Chalmers University of Technology); Daniel Andren (Chalmers University of Technology); Zhong-Jian Yang (Chalmers University of Technology); Nils Odebo Lank (Chalmers University of Technology); Peter Johansson (Chalmers University of Technology); Mikael Kall (Chalmers University of Technology);
- 16:00 A Relativistic Treatment of the Kinetic and Canonical Electromagnetic Systems
Cheyenne J. Sheppard (Arkansas State University); Brandon A. Kemp (Arkansas State University);
- 16:15 Optical Trapping with Plasmonic and Photonic
keynote Nanostructures
Kenneth B. Crozier (The University of Melbourne);
- 16:45 Optically Driven Micromachines for Biomimetics and
invited Microfluidics
Halina Rubinsztein-Dunlop (The University of Queensland);
- 17:05 Brownian Dynamics of Optically Trapped Semiconductor Nanowires
invited
Peter J. Reece (University of New South Wales);
- 17:25 Plasmonic Nanoring Devices for Micro- and Nanoparticle Trapping and Detection Using Low Incident Laser Powers
Viet Giang Truong (OIST Graduate University); Xue Han (OIST Graduate University); Marios Sergides (OIST Graduate University); Sile Nic Chormaic (Okinawa Institute of Science and Technology Graduate University);
- 17:40 Manipulating Plasmonic Nanoparticles with Tailored
invited Optical Focal Field
Guanghao Rui (Southeast University); Bing Gu (Southeast University); Qi-Wen Zhan (University of Dayton); Yiping Cui (Southeast University);
- 18:00 Multiple Particle Trapping and Self-organization in the Evanescent Fields of Optical Micro- and Nanofibres
Viet Giang Truong (OIST Graduate University); Aili Maimaiti (OIST Graduate University); Mark Daly (OIST Graduate University); Sile Nic Chormaic (Okinawa Institute of Science and Technology Graduate University);

Session 1P3

SC2: Advanced Fabrication Methods for Plasmonics and Metamaterials

Monday PM, August 8, 2016

Room 5F

Organized by Laura Na Liu, Huigao Duan

Chaired by Huigao Duan

- 13:00 DNA Directed Plasmonic Nanostructures with Designed Chirality
Qiangbin Wang (Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences);
- 13:20 Fabrication of Continuous Gradient Plasmonic Nanostructures
Lei Shao (Chalmers University of Technology); Robin Ogier (Chalmers University of Technology); Mikael Svedendahl (Chalmers University of Technology); Mikael Kall (Chalmers University of Technology);

- 13:40 Plasmonics in Combination with New Technologies and Materials
Roman Bruck (University of Southampton); Yudong Wang (University of Southampton); Kees C. H. De Groot (University of Southampton); Luca Bergamini (University of the Basque Country UPV-EHU); Nerea Zabala (University of the Basque Country UPV-EHU); Javier Aizpurua (Donostia International Physics Center (DIPC) and Centro Mixto de Física de Materiales (CSIC-UPV/EHU)); Geoffrey Gaskell (University of Salford); David W. Sheel (Salford University); Otto L. Muskens (University of Southampton);
- 14:00 Plasmonic Nanostructuring with Ultrafast Optical Functions
Xinping Zhang (Beijing University of Technology);
- 14:20 Design and Fabrication of Resonant Nanoscale Color Pixels
Joel K. W. Yang (Singapore University of Technology and Design);
- 14:40 Plasmonic Nanoantennas with Sub-nanometer Gaps: Fabrication and Observation of Quantum Mechanical Effects
Kenneth B. Crozier (The University of Melbourne);
- 15:00 Multilayered Plasmonic Gold Nanorod Array for High-density Optical Storage
James W. M. Chon (Swinburne University of Technology);
- 15:20 **Coffee Break**
- 15:40 Metamaterials in Three-dimensional Architectures Using Anisotropic Colloidal Assembly and Templating
Ming Fu (Beijing Jiaotong University); Zheli Wu (Beijing Jiaotong University); Caixia Li (Beijing Jiaotong University);
- 16:00 Magnetoplasmonics in Split Ring-ring Structures Fabricated with Hole-mask Colloidal Lithography
Hua Yu Feng (IMDEA-nano); Feng Luo (IMDEA-nano); Raul Arenal (Universidad de Zaragoza, and Fundacion ARAID); Fernando Garcia (IMM-Instituto de Microelectronica de Madrid (CNM-CSIC)); Gaspar Armelles (Instituto de Microelectronica de Madrid (IMM-CNM-CSIC)); Alfonso Cebollada (Instituto de Microelectronica de Madrid (IMM-CNM-CSIC));
- 16:20 Plasmonic Laser Printing for Functional Metasurfaces
Xiaolong Zhu (Technical University of Denmark); M. S. Carstensen (Technical University of Denmark); Christoph Vannahme (Technical University of Denmark); E. Hojlund-Nielsen (Technical University of Denmark); N. A. Mortensen (Technical University of Denmark); A. Kristensen (Technical University of Denmark);
- 16:40 Atomic-layer Lithography of Sub-10-nm Plasmonic Nanogaps on Flat Metallic Surface
Borui Chen (The State University of New York at Buffalo); Dengxin Ji (The State University of New York at Buffalo); Alec Cheney (The State University of New York at Buffalo); Nan Zhang (The State University of New York at Buffalo); Haomin Song (The State University of New York at Buffalo); Xie Zeng (The State University of New York at Buffalo); Tim Thomay (The State University of New York at Buffalo); Qiaoqiang Gan (The State University of New York at Buffalo); Alexander N. Cartwright (The State University of New York at Buffalo);
- 17:00 “Sketch and Peel” Lithography for Multiscale Patterning of Plasmonic Structures
Yiqin Chen (Hunan University); Quan Xiang (Hunan University); Zhiqin Li (Hunan University); Huigao Duan (Hunan University);
- 17:20 Optical Characterization and Emission Properties of Periodic Arrays of Titanium Nitride Nanoparticles
Ryosuke Kamakura (Kyoto University); Shunsuke Murai (Kyoto University); Koji Fujita (Kyoto University); Katsuhisa Tanaka (Kyoto University);
- 17:40 Does the Fano Formula Always Work for Optical Fano Effects?
Wanxia Huang (Fudan University); Meng Qiu (Fudan University); Xin Li (Fudan University); Shaojie Ma (Fudan University); Chaoran Tianxiao (Fudan University); Min Jia (Fudan University); Qiong He (Fudan University); Shulin Sun (Fudan University); Juanjuan Guo (Anhui Normal University); Jianping Shi (Anhui Normal University); Jiaming Hao (Shanghai Institute of Technical Physics, CAS); Lei Zhou (Fudan University);

- 18:00 Fabrication of Three-dimensional Plasmonic Structure and Multilayer Metamaterials by Femtosecond Laser-induced Forward Transfer
Cheng Hung Chu (National Taiwan University); Ming Lun Tseng (National Taiwan University); Hui Jun Wu (National Taiwan University); Pin Chieh Wu (National Taiwan University); Wei-Yi Tsai (National Taiwan University); Mu-Ku Chen (National Taiwan University); Hung-I Lin (Research Center for Applied Sciences); Hsiang-Chu Wang (National Taiwan University); Ching-Fu Chen (National Taiwan University); Jia-Wern Chen (National Taiwan University); Ting-Yu Chen (National Taiwan University); Yi-Hao Chen (National Taiwan University); Pei Ru Wu (National Taiwan University); Din Ping Tsai (National Taiwan University);

Session 1P4

FocusSession.SC3: Advanced Photonic Materials and Devices, Part 2

Monday PM, August 8, 2016

Room 5G

Organized by Kwang-Sup Lee, Hong-Bo Sun

Chaired by Kwang-Sup Lee

- 13:10 Flexible Transition Metal Dichalcogenide Nanosheets
 invited for Band-selective Photodetection
Cheolmin Park (Yonsei University);
- 13:30 Designer Materials for Molecular and Supramolecular
 keynote Optoelectronics
Soo Young Park (Seoul National University);
- 14:00 Energy and Charge Transfer Behaviors of Quantum
 invited Dot-based Organic-inorganic Hybrids for Photonic Applications
Ju Hyoung Jung (Hannam University); Xue-Cheng Teng (Hannam University); Sumin Jeon (Hannam University); Prem Prabhakaran (Hannam University); Yoon Deok Han (Korea University); Jin-soo Joo (Korea University); Kwang-Sup Lee (Hannam University);
- 14:20 Exploiting Plasmonic Coupling for High Performance
 invited Photodectors, Photovoltaics and Sensors
Dong Ha Kim (Ewha Womans University);
- 14:40 Plasmonic Color Filter of Corrugated Metallic Thin
 invited Film
Atsushi Ono (Shizuoka University); Atsuta Miyamichi (Shizuoka University);

- 15:00 Local Surface Potential Characterization of Nanos-
 invited tructures: Understanding Interplay among Charges, Photons, and Surface Plasmons
Dong-Wook Kim (Ewha Womans University);

15:20 Coffee Break

- 15:40 Waveguide Lasers Based on Platforms of Optical Di-
 keynote electric Crystals
Yang Tan (Shandong University); Feng Chen (Shandong University);

- 16:10 High Performance Organic Electro-optic Materials
 invited Enabling Efficient Optical Modulation for Advanced Photonic Devices
Jingdong Luo (University of Washington); Alex K. Y. Jen (University of Washington);

- 16:30 Single-element Nanoscale Visible Filters

invited
Jerome Kartham Hyun (Ewha Womans University);

- 16:50 Realization of a Large Reflective Surface of Silica-
 PLC Waveguide Turning Corner with Strategic Deep Trenching
Jia Yi (Changchun University of Science and Technology); De Gui Sun (University of Ottawa/Changchun University of Science & Technology); Jun Wang (Changchun University of Science and Technology); Peng Liu (University of Ottawa); Trevor J. Hall (University of Ottawa);

- 17:05 Magneto-optical Light Modulator with local Domain
 Wall Manipulation
Nikolai Evgenyevich Khokhlov (Lomonosov Moscow State University); Anastasiya Evgenyevna Khramova (Lomonosov Moscow State University); Elena Petrovna Nikolaeva (Lomonosov Moscow State University); Tatiyana Borisovna Kosykh (Lomonosov Moscow State University); Alexey Vladimirovich Nikolaev (Lomonosov Moscow State University); Alexander Pavlovich Pyatakov (Lomonosov Moscow State University); Vladimir I. Belotelov (Russian Quantum Center);

- 17:20 Photothermal Effect of Conducting Polymer Films
 keynote for Harvesting of Electrical Energy from Superfluous Heat
Eunkyoung Kim (Yonsei University);

- 17:50 Super-resolution Optical Far-field Microscope with
 invited Arrays of Near-field Probes
Xiangdong Chen (University of Science and Technology of China); Fangwen Sun (University of Science and Technology of China);

Session 1P5
**FocusSession.SC3: Nanophotonics and
Integration Part 2**

Monday PM, August 8, 2016
Room 5H

 Organized by Pavel Cheben, Laurent Vivien, Andrew
Wing On Poon, Goran Z. Mashanovich

 Chaired by Andrew Wing On Poon

 13:00 On-chip Optical Pulse Shaping Using Cascaded Co-
invited directional Couplers

Hamed Pishvai Bazargani (Institut National de la Recherche Scientifique — Energie, Matériaux et Telecommunications (INRS-EMT)); Jose Azana (Institut National de la Recherche Scientifique — Energie, Matériaux et Telecommunications (INRS-EMT));

 13:20 Hybrid III-V-on-Si MOS Microring Resonator
invited

Geza Kurczveil (Hewlett Packard Enterprise); Di Liang (Hewlett Packard Enterprise); Xue Huang (Hewlett Packard Enterprise); Marco Fiorentino (Hewlett Packard Enterprise); Raymond Beausoleil (Hewlett Packard Enterprise);

 13:40 Silicon Nitride Waveguide Integration Platform for
invited Medical Diagnostic Applications

Rainer Hainberger (AIT Austrian Institute of Technology GmbH); Paul Muellner (AIT Austrian Institute of Technology GmbH); Eva Melnik (AIT Austrian Institute of Technology GmbH); Giorgio Mutinati (AIT Austrian Institute of Technology GmbH); Moritz Eggeling (AIT Austrian Institute of Technology GmbH); Alejandro Maese-Novo (AIT Austrian Institute of Technology GmbH); Florian Vogelbacher (AIT Austrian Institute of Technology GmbH); Jochen Kraft (Ams AG); Guenther Koppitsch (Ams AG); Gerald Meinhardt (Ams AG); Franz Schrank (Ams AG);

 14:00 Recent Progress on High- Q Photonic Crystal
invited Nanocavities: Photolithographic Fabrication and Reconfigurable System

Takasumi Tanabe (Keio University); Tomohiro Tetsumoto (Keio University); Yuta Ooka (Keio University); Nurul Ashikin Binti Daud (Keio University);

 14:20 Enabling Efficient Tolerance Analysis in Silicon Pho-
invited tonic Integrated Circuits

Mahdi Nikdast (Polytechnique Montreal); Gabriela Nicolescu (Polytechnique Montreal); Jelena Trajkovic (Concordia University); Odile Liboiron-Ladouceur (McGill University);

 14:40 Principles and Design of a Planar Waveguide Fourier
invited Transform Spectrometer for Remote-sensing Applications

Hugh Podmore (York University); Pavel Cheben (National Research Council of Canada); A. Scott (Honeywell Aerospace); R. Lee (York University);

 15:00 Bragg Gratings in Ultra-thin Silicon Waveguides and
invited Hybrid Plasmonic Waveguides

Linjie Zhou (Shanghai Jiao Tong University); Zhi Zou (Shanghai Jiao Tong University); Sheng Liu (Shanghai Jiao Tong University); Jianping Chen (Shanghai Jiao Tong University);

 15:20 **Coffee Break**

 15:40 Figures of Merit for Passive and Active Plasmonic Cir-
invited cuits

Alexey V. Krasavin (King's College London); Anatoly V. Zayats (King's College London);

 16:00 Integrated Polarization Controllers
invited

Carlos Alonso-Ramos (Universite Paris 11); J. D. Sarmiento-Merenguel (Universidad de Malaga); Robert Halir (Universidad de Malaga); Xavier Le Roux (Universite Paris-Sud); Laurent Vivien (Universite Paris-Sud); Pavel Cheben (National Research Council of Canada); Elena Duran-Valdeiglesias (Universite Paris 11); Inigo Molina-Fernandez (Malaga University); Delphine Marris-Morini (Universite Paris 11); Dan-Xia Xu (Institute for Microstructural Sciences, National Research Council Canada (NRC)); Jens H. Schmid (National Research Council); Siegfried Janz (Institute for Microstructural Sciences, National Research Council Canada (NRC)); Alejandro Ortega-Monux (University Malaga);

16:20 Subwavelength Engineering in Silicon Photonics
keynote

Jens H. Schmid (National Research Council Canada); Pavel Cheben (National Research Council of Canada); D.-X. Xu (National Research Council of Canada); Siegfried Janz (Institute for Microstructural Sciences, National Research Council Canada (NRC)); Jean Lapointe (Information and Communication Technologies, National Research Council Canada); M. Rahim (Institute for Microstructural Sciences, National Research Council Canada (NRC)); Shurui Wang (Information and Communication Technologies, National Research Council Canada); Martin Vachon (Information and Communication Technologies, National Research Council Canada); Robert Halir (Universidad de Malaga); Alejandro Ortega-Monux (University Malaga); G. Wanguemert-Perez (Universidad de Malaga); Inigo Molina-Fernandez (Malaga University); J. Pond (Lumerical, Inc.); D. Benedikovic (University of Paris Sud and CNRS); M. Dado (University of Zilina); W. N. Ye (Institute for Microstructural Sciences, National Research Council Canada (NRC)); M. Papes (VSB-Technical University of Ostrava); Vladimir Vasinek (VSB-Technical University of Ostrava);

16:50 Mid-IR Silicon Photonics

keynote

Goran Z. Mashanovich (University of Southampton);

17:20 Silicon Photonic Integrated Circuits

keynote

Po Dong (Bell Labs, Nokia);

Session 1P6

Topological Effects in Electromagnetic Waves

Monday PM, August 8, 2016

Room 5I

Organized by Jian-Hua Jiang

Chaired by Jian-Hua Jiang

13:10 Lossy Photonic Dirac Cones Stop Light
invited

Kazuaki Sakoda (National Institute for Materials Science);

13:30 Topological Electromagnetic Propagation Achieved in Terms of Dielectric Material
Xiao Hu (National Institute for Materials Science);

13:50 Three-dimensional Photonic Crystal with Z_2 Dirac and Weyl Points

Hai Xiao Wang (Soochow University); Lin Xu (Soochow University); Huanyang Chen (Soochow University); Jian-Hua Jiang (Soochow University);

14:10 Topological Weyl Points and Line Nodes in 3D Photonic Crystals
keynote

Ling Lu (MIT);

14:40 Multi Topological Weyl Points in Photonic Crystals
Mingli Chang (The Hong Kong University of Science and Technology); Meng Xiao (Stanford University); Wen-Jie Chen (The Hong Kong University of Science and Technology); Che Ting Chan (The Hong Kong University of Science and Technology);

15:00 FEM Modeling of Non-self-adjoint Waveguide Problems

Weijin Chen (Huazhong University of Science and Technology); Yuntian Chen (Huazhong University of Science and Technology);

15:20 **Coffee Break**

15:40 Experimental Characterization of the Deterministic Interface States in Two-dimensional Photonic Crystals

Yu Ting Yang (Soochow University); Xueqin Huang (The Hong Kong University of Science and Technology); Zhi Hong Hang (Soochow University);

16:00 Zak Phase and Zero Extinction of Topologically Protected Edge States in PT -symmetric Plasmonic Chains

Chi Wai Ling (The Hong Kong Polytechnic University); T. C. Mok (The Hong Kong Polytechnic University); K. H. Choi (The Hong Kong Polytechnic University); Kin Hung Fung (The Hong Kong Polytechnic University);

16:20 Towards Non-classical Topological Physics in Photonic Structures

Mohammad Hafezi (University of Maryland);

16:40 Integrated Topological Photonics with Time-reversal Symmetry Breaking

Kejie Fang (California Institute of Technology);

17:00 Topologically Protected One-way Edge Mode in Networks of Acoustic Resonators with Circulating Air Flow

Xu Ni (Nanjing University); Cheng He (Nanjing University); Xiao-Chen Sun (Nanjing University); Ming-Hui Lu (Nanjing University); Yan-Feng Chen (Nanjing University);

- 17:20 Topological Phase Transitions and Edge States in Dielectric Photonic Crystals of Triangular Lattice
Lin Xu (Soochow University); Hai Xiao Wang (Soochow University); Yadong Xu (Soochow University); Huanyang Chen (Soochow University); Jian-Hua Jiang (Soochow University);
- 17:40 Investigation of Fractional Charge OAM Beam Generation and Its Decomposition
Pachava Srinivas (Indian Institute of Technology Madras); Pidishety Shankar (Indian Institute of Technology Madras); Balaji Srinivasan (Indian Institute of Technology Madras);
- 18:00 Interplay between Global PT-symmetry and Local PT-symmetry in Coupled Waveguide Chain
Bei Wu (Huazhong University of Science and Technology); Yuntian Chen (Huazhong University of Science and Technology);
- 18:20 Observation of the Edge Modes in Photonic Graphene
J. Wang (Soochow University); Y. Shao (Soochow University); Zhi Hong Hang (Soochow University);

Session 1P7

Nano-plasmonics for Sensing

Monday PM, August 8, 2016

Room 5J

Organized by Andrea Toma, Remo Proietti Zaccaria

Chaired by Andrea Toma, Remo Proietti Zaccaria

- 13:00 Effect of Finite Aperture on Interferometric Surface Plasmon Microscopic Sensing Performance
Bei Zhang (Beihang University); Peng Yan (Beihang University); Le Wang (Beihang University); Chengqian Zhang (Beihang University);
- 13:20 In-situ TERS Observation of Mechanically- and Electrically-induced Chemical Reactions
Taka-aki Yano (Tokyo Institute of Technology); Tomohiro Hayashi (Tokyo Institute of Technology); Masahiko Hara (Tokyo Institute of Technology);
- 13:40 Time-resolved Optical Studies, Heat Dissipation and Melting of Ag and Au Nanoparticle Systems and Arays
Patrick O'Keeffe (CNR-ISM); L. Avaldi (CNR-ISM); D. Catone (CNR-ISM); A. Paladini (CNR-ISM); F. Toschi (CNR-ISM); S. Turchini (CNR-ISM); A. Cartoni (Universita Sapienza); Ilaria Fratoddi (Universita Roma La Sapienza); Iole Venditti (Universita Roma La Sapienza);

- 14:00 White Nano-light-source for TERS Nanoimaging
invited Prabhat Verma (Osaka University);
- 14:20 Strong Coupling Detected in the Photoluminescence of J-aggregate/plasmon Hybrid Systems
invited Ruben Esteban (Donostia International Physics Center DIPC); D. Melnikau (Centro de Fisica de Materiales (MPC, CSIC-UPV/EHU)); D. Savateeva (Centro de Fisica de Materiales (MPC, CSIC-UPV/EHU)); A. Sanchez-Iglesias (CIC biomaGune); M. Grzelczak (CIC biomaGune); M. K. Schmidt (Centro de Fisica de Materiales (MPC, CSIC-UPV/EHU)); L. M. Liz-Marzan (CIC biomaGune); J. Aizpurua (Donostia International Physics Center (DIPC)); Y. P. Rakovich (Donostia International Physics Center (DIPC));
- 14:40 Excitation of Polymerization Reaction and Optical Gradient Force through Local Surface Plasmon Resonance of Gold Nanorods
invited Satoru Shoji (The University of Electro-Communications);
- 15:00 Plamon-enhanced Optoelectronic Devices Based on Metal Nanostructures
invited Junchang Zhang (Soochow University (Suzhou)); Liubiao Zhong (Soochow University (Suzhou)); Jianmei Chen (Soochow University (Suzhou)); Lin Jiang (Soochow University (Suzhou));
- 15:20 **Coffee Break**
- 15:40 Random Nano-textured Surfaces for Sensing
invited A. Balcytis (Swinburne University of Technology); X. W. Wang (Swinburne University of Technology); G. Seniutinas (Swinburne University of Technology); Saulius Juodkasis (Swinburne University of Technology);
- 16:00 Enhancement of SPR-sensor Sensitivity in Garnet-based Plasmonic Heterostructures
Daria O. Ignatyeva (Lomonosov Moscow State University); Sergey K. Sekatskii (Ecole Polytechnique Federale de Lausanne); Nikolai Evgenyevich Khokhlov (Lomonosov Moscow State University); Mohammad Nur-E-Alam (Edith Cowan University); Mikhail Vasiliev (Edith Cowan University); Kamal E. Alameh (Edith Cowan University); Vladimir I. Belotelov (Russian Quantum Center);
- 16:20 Sub-10-nm Three-dimensional Plasmonic Probes and Sensors
invited Stefano Cabrini (Molecular Foundry, LBNL);
- 16:40 Imaging the Quantum Properties of Plasmonic Fields at the Nano-scale
invited Yoshie Murooka (Ecole Polytechnique Federale de Lausanne (EPFL));

- 17:00 Fano Resonances in Interacting Graphene Nanodisk Oligomers and Their Applications for Sensing
Jialong Peng (National University of Defense Technology); Jianfa Zhang (National University of Defense Technology); Zhihong Zhu (National University of Defense Technology); Xiao-Dong Yuan (National University of Defense Technology); Shiqiao Qin (National University of Defense Technology);
- 17:20 Plasmonon-enhanced Raman Spectroscopy: From invited Plasmonic Nanogap to SERS and TERS
Dai Zhang (Eberhard Karls University Tuebingen); Kathrin Swider (Eberhard Karls University Tuebingen); Jan Rogalski (Eberhard Karls University Tuebingen); Xiao Wang (Eberhard Karls University Tuebingen); Kai Braun (Eberhard Karls University Tuebingen); Anke Horneber (Eberhard Karls University Tuebingen); Alfred J. Meixner (Eberhard-Karls-University Tuebingen);
- 17:40 In-situ Photoreduction of Intracellular Surface-enhanced Raman Probes for Biological Imaging and Analysis
Nicholas Isaac Smith (Osaka University);

Session 1P8a
Novel Techniques in the Analysis and Design for Antennas

Monday PM, August 8, 2016
Room 3B

Organized by Mei Song Tong, Xue-Xia Yang

 Chaired by Mei Song Tong, Xue-Xia Yang

- 13:00 Frequency-coded Chipless RFID Tag Based on Spiral Resonators
Quan Gu (Tongji University); Guo Chun Wan (Tongji University); Chuang Gao (Tongji University); Mei Song Tong (Tongji University);
- 13:20 Study of the Radiation Characteristic of Plasma Antenna Using 2-D FDTD Method
Gurkirandeep Kaur (Institute for Plasma Research); Rana Pratap Yadav (Thapar University);
- 13:40 A Multi-band Antenna Loaded with a Windmill-shaped Metastructure for WLAN/ WiMAX Applications
Jianhua Zhou (Xiamen University); Yu Tang (Xiamen University); Ruidi Xu (Xiamen University); Baiqiang You (Xiamen University);

- 14:00 Fan-beam Patch Antenna Array with Low Cross-polarization
Zhen Hui Li (South China University of Technology); Xiu-Yin Zhang (South China University of Technology);
- 14:20 A Slot UHF RFID Tag Antenna with a Shorted Stub for Application to Metallic Objects
Yun Jing Zhang (Tongji University); Dan Wang (Tongji University); Mei Song Tong (Tongji University);
- 14:40 Characteristic Mode Theory for Antennas with Multilayered Media
Yikai Chen (University of Electronic Science and Technology of China); Shiwen Yang (University of Electronic Science and Technology of China);
- 15:00 Metamaterial-inspired Channelized Coplanar Waveguide (CCPW) Based Human Head Coil for a 10.5 MRI System
Linfeng Li (Singapore University of Technology and Design); Shao Ying Huang (Massachusetts Institute of Technology);
- 15:20 **Coffee Break**

Session 1P8b
SC4: Compact Antenna Designs for Portable Terminals

Monday PM, August 8, 2016
Room 3B

Organized by Yingsong Li, Dau-Chyrh Chang

 Chaired by Yingsong Li, Dau-Chyrh Chang

- 15:40 Small-size Reconfigurable Loop Antenna for Mobile Phone Applications
Hao Wang (Shanghai University); Yibo Wang (Shanghai University); Guangli Yang (Shanghai University);
- 16:00 Design of a Printed Circuit Board Antenna for Multiple Utilizations in IEEE802.16a Spectrum and Beyond
Gerard Rushingabigwi (University of Science and Technology of China (USTC)); Liguang Sun (University of Science and Technology of China (USTC)); Yuxing He (University of Science and Technology of China (USTC)); Jean De Dieu Ntawangaheza (University of Science and Technology of China (USTC));
- 16:20 Compact Wideband Single-layer RFID Tag Antenna Tolerant on Mounting Objects
Hui Li (Dalian University of Technology);

- 16:40 Defect Monopole Antenna with Asymmetry Environment
Dau-Chyrh Chang (Oriental Institute of Technology); Jing-Ting Liou (Oriental Institute of Technology); Cheng-Wei Chen (Oriental Institute of Technology);
- 17:00 Dual Band Sleeve Dipole Array for WiFi Application
Dau-Chyrh Chang (Oriental Institute of Technology); Yi-Ci Su (Oriental Institute of Technology);
- 17:20 Microstrip MIMO/Diversity Antenna with High Isolation for WLAN Applications
Anjali A. Chaudhari (St. Francis Institute of Technology); Anjali Rochkari (Terna Engineering College); Shilpa U. Kharche (Indian Institute of Technology (IIT) Bombay); Rajiv K. Gupta (Terna Engineering College);
- 17:40 Balance Dipole Antenna with Defect Differential Transmission Line
Dau-Chyrh Chang (Oriental Institute of Technology); Yu-Liang Liu (Oriental Institute of Technology);
- 18:00 Compact Multiband Coplanar Antenna for RF Energy Harvesting Application
Bui Do Hanh Ngan (Grenoble Institute of Technology); Tan-Phu Vuong (Universite Grenoble-Alpes, IMEP-LAHC); Jacques Verdier (Universite de Lyon); Bruno Allard (Universite de Lyon); Philippe Benech (IMEP-LAHC, Grenoble Universite);

Session 1P9

FocusSession.SC1: Multiscale and Multiphysics Computation and Applications

Monday PM, August 8, 2016

Room 3C/3D

Organized by Qing Huo Liu, Weng Cho Chew

Chaired by Weng Cho Chew, Qing Huo Liu

- 13:10 Discrete Electromagnetic Theory with Exterior Calculus
Shu Chen (University of Illinois); Weng Cho Chew (University of Illinois);
- 13:25 Direct and Robust Boundary Integral Method for Electromagnetic Scattering of Perfect Electric Conductors
Qiang Sun (University of Melbourne); Derek Y. C. Chan (University of Melbourne);

13:40 Quantum Electromagnetics: A New Look

keynote

Weng Cho Chew (University of Illinois); Ai Yin Liu (University of Illinois); Carlos Salazar-Lazaro (University of Illinois); Wei E. I. Sha (University of Hong Kong);

14:10 On Improving the Iteration Speed of the System Matrix for Line-fed Patch Antenna

invited
Yi-Ling Wang (University of Electronic Science and Technology of China (UESTC)); Zai-Ping Nie (University of Electronic Science and Technology of China); Dingbang Wen (University of Electronic Science and Technology of China (UESTC));

14:30 Fast Band Diagram Simulation of 2D Periodic Scatterers Using Surface Integral Equations with Broadband Green's Function

invited
Shurun Tan (University of Michigan); Leung Tsang (University of Michigan at Ann Arbor);

14:50 Radar Scattering Analysis of Wake Vortex under Different Weather Conditions

Jianbing Li (National University of Defense Technology); Tao Wang (National University of Defense Technology); Xuesong Wang (National University of Defense Technology);

15:05 Multiscale Transport Simulation of Nanoelectronic Devices with NEMO5

Jun Z. Huang (Purdue University); Pengyu Long (Purdue University); Hesameddin Ilatikhameneh (Purdue University); Tarek Ameen (Purdue University); Rajib Rahman (Purdue University); Michael Povolotskyi (Purdue University); Mark J. W. Rodwell (University of California); Gerhard Klimeck (Purdue University);

15:20 Coffee Break

15:40 A Novel Hybrid FDTD Technique for Efficient Solution of Multi-scale Problems

invited
Kapil Sharma (The Pennsylvania State University); Raj Mittra (The Pennsylvania State University);

16:00 A Full Wave Integral Equation Analysis of Conductors

Tian Xia (University of Illinois); Hui Gan (University of Illinois); Michael Wei (University of Illinois); Weng Cho Chew (University of Illinois);

16:15 Integration of Statistical Wave Theories with Heat Diffusion, Signal Processing, and Seismic Wave Fluctuations

invited
Akira Ishimaru (University of Washington); Yasuo Kuga (University of Washington); Ce Zhang (University of Washington);

- 16:35 Recent Advances in Multiscale Simulations: Wide-band Fast Integral Solver and Domain Decomposition Method
invited
Mengmeng Li (Nanjing University of Science and Technology); Zhenhong Fan (Nanjing University of Science and Technology); Dazhi Ding (Nanjing University of Science and Technology); Rushan Chen (Nanjing University of Science and Technology); M. A. Francavilla (ISMB — Istituto Superiore Mario Boella); Giuseppe Vecchi (Polytechnic of Turin);
- 16:55 A Novel DG-FETD Scheme Based on Parametric Variational Principle for Nonlinear and Multiscale Electromagnetic Simulations
invited
Bao Zhu (Dalian University of Technology); Jiefu Chen (University of Houston);
- 17:15 An Unconditionally Stable Matrix-free Time-domain Method Independent of Element Shape for Multiscale and Large-scale Electromagnetic Analysis
invited
Jin Yan (Purdue University); Dan Jiao (Purdue University);
- 17:35 System-by-Design for Multiscale Synthesis Problems — Methodologies and Applications
invited
Andrea Massa (University of Trento); Giacomo Oliveri (University of Trento); Marco Salucci (University of Trento); Paolo Rocca (University of Trento); Toshifumi Moriyama (University of Nagasaki); Takashi Takenaka (Nagasaki University);

Session 1P_10

FocusSession.SC5: Inverse Scattering and Imaging Part 2

Monday PM, August 8, 2016

Room 3E

Organized by Xudong Chen, Maokun Li, Aria Abubakar

Chaired by Xudong Chen, Maokun Li

- 13:10 A New Optimization Method for Solving Electromagnetic Inverse Scattering Problems
invited
Yu Zhong (Institution of High Performance Computing); Marc Lambert (Universite Paris Saclay); Dominique Lesselier (UMR8506 (CNRS, Supelec, University Paris-Sud));
- 13:30 Reconstruction of Full Polarimetric SAR Data from Compact Polarimetric Measurements Based on Bayesian Regularization
Dong-Xiao Yue (Fudan University); Feng Xu (University of Shanghai for Science and Technology); Ya-Qiu Jin (Fudan University);

- 13:45 2-D Sparse Target Localization Based on Coherent Imaging
invited
Tianyi Zhou (Laboratory of Applied Research on Electromagnetics (ARE)); Jiangtao Huangfu (Zhejiang University); Li-Xin Ran (Zhejiang University);
- 14:05 Method for Focusing Physical Scattering Phenomenon in Subspace-based ISAR Imaging
Jon Mitchell (The University of Texas at Arlington); Saibun Tjuatja (University of Texas at Arlington);
- 14:20 Time Reversal Far-field Super-resolution Electromagnetic Imaging Aided by the Near-field Sub-wavelength Structures
invited
Xiao-Hua Wang (University of Electronic Science and Technology of China); Qiang Gao (University of Electronic Science and Technology of China); Zhi-Shuang Gong (University of Electronic Science and Technology of China); Min Hu (University of Electronic Science and Technology of China); Bing-Zhong Wang (University of Electronic Science and Technology of China);
- 14:40 Image Reconstruction of Objects with Time Reversed Fields by Filtered Forward-backward Time-stepping Method
invited
Toshifumi Moriyama (Nagasaki University); Marco Salucci (University of Trento); Toshiyuki Tanaka (Nagasaki University); Takashi Takenaka (Nagasaki University);
- 15:00 Effects of Data Collection Schemes and Systems on the Imaging Performance of Electromagnetic Inverse Problems
invited
Joe LoVetri (University of Manitoba); M. Asefi (University of Manitoba); A. Baran (University of Manitoba); K. Nemez (University of Manitoba);
- 15:20 **Coffee Break**
- 15:40 Electromagnetic Modeling and Inversion Application for Oil and Gas Industry
keynote
Aria Abubakar (Schlumberger Houston Formation Evaluation); Gong Li Wang (Schlumberger Houston Formation Evaluation); Lin Liang (Schlumberger); Tarek M. Habashy (Schlumberger-Doll Research); Maokun Li (Tsinghua University);
- 16:10 A Distorted Born Subspace Based Optimization Method
invited
Xiuzhu Ye (Beihang University); Xudong Chen (National University of Singapore);
- 16:30 Near Field Microwave Imaging by Near to Far Field Transformation
Chuan Chen (Beijing Institute of Technology); Wu Ren (Beijing Institute of Technology); Zheng Hui Xue (Beijing Institute of Technology); Wei-Ming Li (Beijing Institute of Technology);

- 16:45 Imaging Complex Targets through Alphabet-based
invited Compressive Sensing
Paolo Rocca (University of Trento); Giacomo Oliveri (University of Trento); Lorenza Tenuti (University of Trento); Marco Salucci (University of Trento); Toshifumi Moriyama (University of Nagasaki); Takashi Takenaka (Nagasaki University); Andrea Massa (University of Trento);
- 17:05 Inverse Scattering Problem: Back-projection, Beam-
invited forming, and Joint Migration-inversion
Lanbo Liu (University of Connecticut);
- 17:25 Knowledge-aided Object-oriented Three-dimensional
invited Microwave Imaging
Long Gang Wang (Peking University); Lianlin Li (Peking University); Hengxin Ruan (Peking University); Tie Jun Cui (Southeast University);
- 17:45 A Generalized Kaczmarz Algorithm with Projection
Adjustment
Chuan Lin (University of Electronic Science and Technology of China); Jiefeng Zang (University of Electronic Science and Technology of China); Anyong Qing (University of Electronic Science and Technology of China);
- 13:40 Non-doped White Organic Light-emitting Diode with
Low Turn-on Voltage by Emitting Layer Design
Ming-Zer Lee (National Taiwan University); Bo-Yen Lin (National Taiwan University); Yi-Ze Hsiao (National Taiwan University); Po-Chen Tseng (National Taiwan University); Jiun-Haw Lee (National Taiwan University); Tien-Lung Chiu (Yuan Ze University); Chi-Feng Lin (National United University);
- 14:00 Transient Photoluminescence of Rubrene Thin-film
with Different Film Thickness
Chia-Hsun Chen (National Taiwan University); Cheng-Pin Chen (National Taiwan University); Jiun-Haw Lee (National Taiwan University); Pin-Hao Sher (Institute of Atomic and Molecular Sciences Academia Sinica Taipei); Juen-Kai Wang (National Taiwan University); Geoffrey B. Piland (University of California, Riverside); Christopher J. Bardeen (University of California, Riverside); Tien-Lung Chiu (Yuan Ze University); Chi-Feng Lin (National United University);
- 14:20 Transient Electroluminescence of Exciplex-based Organic
Light-emitting Diode
Yi-Ze Hsiao (National Taiwan University); Bo-Yen Lin (National Taiwan University); Ming-Zer Lee (National Taiwan University); Po-Chen Tseng (National Taiwan University); Jiun-Haw Lee (National Taiwan University); Tien-Lung Chiu (Yuan Ze University); Chi-Feng Lin (National United University);
- 14:40 The Role of Exciton Delocalization in the Performance
of Bulk-Heterojunction Polymer Solar Cells
Zi Shuai Wang (The University of Hong Kong); Wei E. I. Sha (University of Hong Kong); Wallace C. H. Choy (The University of Hong Kong);
- 15:00 Small Molecule-based Organic Solar Cells
invited
Ken-Tsung Wong (National Taiwan University);
- 15:20 **Coffee Break**
- 15:40 New Polymers for Photovoltaics
invited
Yingping Zou (Central South University);
- 16:00 Numerical Modeling and Optomization of PE-
invited DOT:PSS/Si Nanostructure Hybrid Solar Cell
Yuh-Renn Wu (National Taiwan University); Kuan-Ying Ho (National Taiwan University);

Session 1P_11

SC3&2: Light Harvesting, Photovoltaics, Optoelectronics in Energy, Part 2

Monday PM, August 8, 2016

Room 3G

Organized by Wallace C. H. Choy, Jiun-Haw Lee,
Liming Ding

Chaired by Han Young Woo, Chin-Ti Chen

- 13:00 Rapid Atmospheric-pressure-plasma Processed Nano-
invited materials for Electrochemical Energy Harvesting and
Storage Devices
I-Chun Cheng (National Taiwan University); Jian-Zhang Chen (National Taiwan University); Cheng-Che Hsu (National Taiwan University);
- 13:20 The Nonbonding Conformational Locks for Con-
invited structing Highly Planar π -conjugated Systems
Tao Dong (University of Chinese Academy of Sciences); Pan Ye (University of Chinese Academy of Sciences); Lei Lv (Northwestern University); Lei Yang (Northwestern University); Xinlong Wang (Northwestern University); Hui Huang (University of Chinese Academy of Sciences);

16:20 Design and Synthesis of Host Molecules for Blue
invited PhOLED

Pei-Ling Ting (National Taiwan University); Lik-Ka Yun (National Taiwan University); Jiun-Haw Lee (National Taiwan University); Tien-Lung Chiu (Yuan Ze University); Jau-Jiun Huang (National Taiwan University); Chi-Feng Lin (National United University); Man-Kit Leung (National Taiwan University);

16:40 A Highly Twisted Green Fluorescent Bipolar Molecule
invited Harnessing Both Thermally Activated Delayed and Exciplex Emissions

Yi-Tzu Hung (National Taiwan University); Chih-Hao Chang (Yuan Ze University); Hao-Che Kao (Yuan Ze University); Hao-Xiang Huang (Yuan Ze University); Wei-Lung Tsai (National Taiwan University); Chung-Chih Wu (National Taiwan University); Ken-Tsung Wong (National Taiwan University);

17:00 Ultra-thick Wetting Layer Induced Phase Separations in P3HT/Fullerene Solar Cells: The Femtosecond Time-resolved Photo-luminescence and the Transient Absorption

Hsieh-Cheng Han (Research Center for Applied Sciences, Academia Sinica); Chi-Feng Lin (National United University); Tien-Li Chang (National Taiwan Normal University); Jiun-Haw Lee (National Taiwan University);

17:20 Molecular Engineering toward High Performance
invited Polymer Photodetectors and Photovoltaics

Yongye Liang (South University of Science and Technology of China); Wei Huang (South University of Science and Technology of China); Tingbin Yang (South University of Science and Technology of China); Luozheng Zhang (South University of Science and Technology of China);

17:40 Material Design and Interface Engineering for High-
invited performance Polymer Solar Cells

Qingdong Zheng (Fujian Institute of Research on the Structure of Matter, Chinese Academy of Sciences);

18:00 Dye Sensitized Solar Cells with Carbon and Cobalt
invited Derivatives as Counter Electrodes

Chi-Feng Lin (National United University); Yu-Chen Chou (National United University); Pin-Hung Chen (National United University); Ting-Hsuan Hsieh (National United University); Hsieh-Cheng Han (Research Center for Applied Sciences, Academia Sinica); Kuo-Yuan Chiu (National Chi Nan University);

18:20 High-speed Visible Light Communication Using
invited Light-emitting Diodes Embedded with Photonic Crystals

Yu-Feng Yin (National Taiwan University); Jian-Jang Huang (National Taiwan University);

Session 1P_12

FocusSession.SC2&3: Spin Orbit Interaction of Light and Topological Photonics

Monday PM, August 8, 2016

Room 3H

Organized by Shuang Zhang, Yongmin Liu

Chaired by Yongmin Liu

13:00 Spin-orbit Interactions of Light: Fundamentals and
invited Experimental Works in Spin-momentum Locking of Evanescent Waves

Francisco J. Rodriguez Fortuno (King's College London);

13:20 Extraordinary Properties of Light including the Quantum Spin Hall Effect of Light

Franco Nori (Advanced Science Institute, RIKEN); K. Y. Bliokh (Advanced Science Institute, RIKEN);

13:40 Existence of a Topological Subspace in Apparently
invited Non-topological Systems

Yixin Xiao (The Hong Kong University of Science and Technology); Zhao-Qing Zhang (The Hong Kong University of Science and Technology); Che Ting Chan (The Hong Kong University of Science and Technology);

14:00 Topological Protection of Photonic Quantum Entanglement

Mikael C. Rechtsman (The Pennsylvania State University); Yaakov Lumer (Technion — Israel Institute of Technology); Yonatan Plotnik (Technion — Israel Institute of Technology); Armando Perez-Leija (Friedrich-Schiller-Universität Jena); Alexander Szameit (Friedrich-Schiller-Universität Jena); Mordechai Segev (Technion — Israel Institute of Technology);

14:20 Chiral Edge Plasmon by Valley Polarization in
invited Gapped Dirac Systems

Anshuman Kumar (Massachusetts Institute of Technology); Tony Low (University of Minnesota); Kin Hung Fung (The Hong Kong Polytechnic University); Andrei Nemilentsau (University of Wisconsin); George W. Hanson (University of Wisconsin); Nicholas X. Fang (Massachusetts Institute of Technology);

- 14:40 Metamaterial Structures to Realize Real-space Gauge
invited Field
Fu Liu (University of Birmingham); Saisai Wang (Soochow University); Zhi Hong Hang (Soochow University); Jensen Li (University of Birmingham);
- 15:00 Hyperbolic Weyl Point in Reciprocal Chiral Metama-
invited terial
Meng Xiao (Stanford University); Qian Lin (Stanford University); Shanhui Fan (Stanford University);
- 15:20 **Coffee Break**
- 15:40 Topological Interface State between a Photonic Crys-
invited tal and a Metasurface
Qiang Wang (Nanjing University); Meng Xiao (Stanford University); Hui Liu (Nanjing University); Shi-Ning Zhu (Nanjing University); Che Ting Chan (The Hong Kong University of Science and Technology);
- 16:00 Symmetry-protected Topological Photonic Crystal in
invited 3D
Ling Lu (MIT);
- 16:20 Spin-orbit Interaction of Light in Photonic
Nanowaveguides: A Proposal of Graphene-based
Optical Isolators
Jingwen Ma (The Chinese University of Hong Kong); Xiang Xi (The Chinese University of Hong Kong); Ze-jie Yu (The Chinese University of Hong Kong); Xi-ankai Sun (The Chinese University of Hong Kong);
- 16:35 Acoustic Topological States and Robust One-way
invited Sound Transport
Ming-Hui Lu (Nanjing University); Cheng He (Nanjing University); Xu Ni (Nanjing University); Yan-Feng Chen (Nanjing University);
- 16:55 Valley-protected Backscattering Suppression in Sili-
invited con Photonic Graphene
Jian-Wen Dong (Sun Yat-Sen University); Xiao-Dong Chen (Sun Yat-Sen University);
- 17:15 Testing Robustness of Topological Photonic States
invited
Fei Gao (Nanyang Technological University); Zhen Gao (Nanyang Technological University); Hong-sheng Chen (Zhejiang University); Ling Lu (Massachusetts Institute of Technology); Yidong Chong (Nanyang Technological University); Baile Zhang (Nanyang Technological University);
- 17:35 Spin-orbital Interaction of Surface Plasmon Polaritons
with Different Spin Angular Momentum Locking Fea-
tures
Qiang Zhang (Harbin Institute of Technology); Zhen Zhen Liu (Shenzhen Graduate School, Harbin Institute of Technology); Jun Jun Xiao (Harbin Institute of Technology);

- 17:50 Exotic Optic Edge States Created by Inversed Pho-
invited tonic Valley Pseudospins
Jiuyang Lu (Wuhan University); Chunyin Qiu (Wuhan University); Zhengyou Liu (Wuhan University);
- 18:10 Quantum Simulation of Topological Energy Bands
invited and Strong Many-body Correlation in Photonic Crystals
Jian-Hua Jiang (Soochow University);
- 18:30 The Non-trivial States Excited by Bianisotropic Meta-
materials
Liang Peng (Hangzhou Dianzi University); Yun-tian Chen (Huazhong University of Science and Technology);
- 18:45 Amplification of Vortex Beam in Nd:YAG Power Am-
plifiers
Xudong Chen (Huaqiao University); Chengcheng Chang (Huaqiao University); Jixiong Pu (Huaqiao University);

Session 1P_13
**SC3: Advanced Optofluidics: Optical Control
and Photonics with Fluid Matter**

Monday PM, August 8, 2016
Room 3I

Organized by Francesco Simoni, Luigino Criante

Chaired by Luigino Criante

- 13:00 Optofluidic Nano-manipulation and Sorting
invited
Ai Qun Liu (Nanyang Technological University);
- 13:20 Integrated Optofluidics: Optical Control of Particles
invited and Droplets in Fluidic Environments
Jens Schnelle (University of Muenster); Robert Meissner (University of Muenster); Patrick Rose (University of Muenster); Christina Alpmann (University of Muenster); Michael Esseling (University of Muenster); Cornelia Denz (Westfälische Wilhelms-Universität Münster);
- 13:40 Tubular Optical Microcavity for Optofluidic Applica-
invited tion
Yonglei Li (Fudan University); Jiao Wang (Fudan University); Gaoshan Huang (Fudan University); Yongfeng Mei (Fudan University);
- 14:00 Integrated Optics Based on Liquid Crystals Embed-
invited ded in PDMS Microfluidic Channels
Rita Asquini (University of Rome La Sapienza); Luca Civita (University of Rome La Sapienza); Luca Martini (University of Rome La Sapienza); Antonio d'Alessandro (University of Rome La Sapienza);

- 14:20 Droplet Manipulation on a Liquid Crystal and Polymer Composite Film
invited *Yi-Hsin Lin (National Chiao Tung University); Ming-Syuan Chen (National Chiao Tung University);*
- 14:40 Lasing in Optofluidic Ring Resonators with Aqueous Quantum Dots as Their Gain Medium and the Prospects of Such Lasers for Biochemical Sensing
invited *Alper Kiraz (Koc University); Q. Chen (University of Michigan); Mehdi Aas (Koc University); Alexandr Jonas (Istanbul Technical University); X. Fan (University of Michigan);*
- 15:00 Three-dimensional on-chip Tunable Microlenses by Femtosecond Micro-machining
invited *M. Natile (Istituto Italiano di Tecnologia); Roberta Ramponi (Institute of Photonics and Nanotechnology (IFN) — CNR); Luigino Criante (Istituto Italiano di Tecnologia);*
- 15:20 **Coffee Break**
- 15:40 Label-free Sensing in Optofluidics
invited *Kristian Tolbol Sorensen (Technical University of Denmark); C. Zhou (Technical University of Denmark); A Kristensen (Technical University of Denmark);*
- 16:00 Light-driven Tweezers, Motors, and Self-assembly from Scalable Optofluidic Vortex Arrays Generated by Graphene Oxide
invited *Xiaobo Xing (South China Normal University); Jianxin Yang (South China Normal University); Kezhang Shi (South China Normal University); Jiapeng Zheng (South China Normal University); Debin Zhu (South China Normal University); Zongbao Li (Tongren University);*
- 16:20 Lasing from Liquid Crystal Droplets Generated in a Microfluidic Device
invited *Daniele Eugenio Lucchetta (Università Politecnica delle Marche); Francesco Simoni (Università Politecnica delle Marche); R. J. Hernandez (CNR-NANOTEC); A. Mazzulla (CNR-NANOTEC); Gabriella Cipparrone (University of Calabria);*
- 16:40 3D Designable Microstructures and Functional Microdevices by Ultrafast Laser Microfabrication
invited *Dong Wu (University of Science and Technology of China); Bing Xu (University of Science and Technology of China); Yanlei Hu (University of Science and Technology of China); Jiawen Li (University of Science and Technology of China);*
- 17:00 High Index Contrast Subwavelength-scale Optofluidic Waveguide in MOFs
Yang Hao (Fudan University); Limin Xiao (Fudan University); Yucheng Ye (Fudan University); Ping Hua (University of Southampton);
- 17:20 Tomography of Microfluidic Channels by Synthetic Holography
Andrea Di Donato (Università Politecnica delle Marche); Sara Lo Turco (Istituto Italiano di Tecnologia); Luigino Criante (Istituto Italiano di Tecnologia);
- 17:40 Scattering Analysis in fs-laser Fabricated 3D Microstructures in Glass
Sara Lo Turco (Istituto Italiano di Tecnologia); Andrea Di Donato (Università Politecnica delle Marche); Luigino Criante (Istituto Italiano di Tecnologia);
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- Session 1P_14**
Antennas, Sensors and EMC Problems
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- Monday PM, August 8, 2016**
Room 3J
Organized by Leszek Nowosielski, Rafal Przesmycki
Chaired by Marian Tadeusz Wnuk, Leszek Nowosielski
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- 13:00 HPEM Susceptibility Estimation of Informatics Devices
Rafal Przesmycki (Military University of Technology); Marian Tadeusz Wnuk (Military University of Technology);
- 13:20 USB 3.0 Interface in the Process of Electromagnetic Infiltration
Rafal Przesmycki (Military University of Technology); Leszek Nowosielski (Military University of Technology);
- 13:40 Compromising Emanations from VGA and DVI Interface
Leszek Nowosielski (Military University of Technology); Rafal Przesmycki (Military University of Technology); Michal Nowosielski (Medical University of Warsaw);
- 14:00 Mobile Stand for the Field Strength Measurement
Marek Bugaj (Military University of Technology); Rafal Przesmycki (Military University of Technology); Damian Olak (Military University of Technology);
- 14:20 Analysis the Identification Process of Information Interfaces Based on Radiated Emissions and Database
Rafal Przesmycki (Military University of Technology); Marek Bugaj (Military University of Technology);

- 14:40 Influence of the Doppler Effect on Signal Fading Parameters — Simulation Studies
Leszek Nowosielski (Military University of Technology); Marian Tadeusz Wnuk (Military University of Technology); Cezary Ziolkowski (Military University of Technology); Jan M. Kelner (Military University of Technology);
- 15:00 Impact of Transmission Parameters of Propagation Environment on the Power Azimuth Spectrum
Leszek Nowosielski (Military University of Technology); Marian Tadeusz Wnuk (Military University of Technology); Jan M. Kelner (Military University of Technology); Cezary Ziolkowski (Military University of Technology);
- 15:20 **Coffee Break**
- 15:40 U Shape Microstrip Wideband Antenna
Marek Bugaj (Military University of Technology); Jaroslaw Bugaj (Military University of Technology); Marian Tadeusz Wnuk (Military University of Technology);
- 16:00 The Microstrip Antenna with Periodic Planar Pattern
Roman Kubacki (Military University of Technology); Salim Lamari (Military University of Technology); Karol Rudyk (Military University of Technology);
- 16:20 Microstrip Wideband Antenna with Rectangular Patch
Marek Bugaj (Military University of Technology); Jaroslaw Bugaj (Military University of Technology); Robert Borkowski (Military University of Technology);
- 16:40 The Analysis of the Antenna System Covered by Magnetic Absorber
Roman Kubacki (Military University of Technology); Karol Rudyk (Military University of Technology); Mariusz Blazejewicz (Kubara Lamina SA);
- 17:00 COOJA Testbed for Assessment of Broadcast Mechanism Efficiency in Clustered Wireless Sensor Networks
Wojciech Bednarczyk (Military University of Technology); Jaroslaw Wojtun (Military University of Technology); Jaroslaw Michalak (Military University of Technology); Leszek Nowosielski (Military University of Technology);
- 17:20 WINE: A Weighted Interconnection Node Election Algorithm for MANET
Jaroslaw Michalak (Military University of Technology); Wojciech Bednarczyk (Military University of Technology); Leszek Nowosielski (Military University of Technology);

- 17:40 Energy-efficient Dynamic Spectrum Management in Cognitive Radio Sensor Networks
Wojciech Bednarczyk (Military University of Technology); Piotr Gajewski (Military University of Technology); Leszek Nowosielski (Military University of Technology);

Session 1P_15a
SC2: Parity-time Symmetry Synthetic Metamaterials 2

Monday PM, August 8, 2016
Room 5A

Organized by Ming-Hui Lu, Jensen Li

 Chaired by Li Ge

- 13:20 Zero Extinction and Topological Edge Modes in **PT**-symmetric Plasmonic Chains
Chi Wai Ling (The Hong Kong Polytechnic University); K. H. Choi (The Hong Kong Polytechnic University); T. C. Mok (The Hong Kong Polytechnic University); Kin Hung Fung (The Hong Kong Polytechnic University);
- 13:40 The Role of Charge Conjugation Symmetry in Topological Photonics
Henning Schomerus (Lancaster University);
- 14:00 Parity-time Symmetry and Nonreciprocal Optical Transmission in High-Q Microcavities
Xiaoshun Jiang (Nanjing University); Long Chang (Nanjing University); Chao Yang (Nanjing University); Shiyue Hua (Nanjing University); Jianming Wen (Yale University); Liang Jiang (Yale University); Min Xiao (Nanjing University);
- 14:20 Solution of the Master Equation for the PT-symmetry Processes
Long Li (Nanjing University); Li-Jian Zhang (Nanjing University);
- 14:40 Observation of PT-symmetric Exceptional Point from Magnetolectric Bianisotropy
Shiyi Xiao (University of Birmingham); Yong Sun (Tongji University); Liwen Zhang (Tongji University); James Gear (University of Birmingham); Richard Fitzgerald (University of Birmingham); Stefan Rotter (Vienna University of Technology (TU Wien)); Hong Chen (Tongji University); Jensen Li (University of Birmingham);
- 15:20 **Coffee Break**

Session 1P_15b
Oral Presentations for Best Student Paper Awards — SC4: Antennas and Microwave Technologies

Monday PM, August 8, 2016
Room 5A

 Chaired by Zhongxiang Shen

- 15:40 A Novel Multilayer *E*-plane Half-mode Substrate Integrated Waveguide (HMSIW) 3-dB Coupler with Improved Out-of-band Rejection
Zhigang Zhang (University of Electronic Science and Technology of China); Yong Fan (University of Electronic Science and Technology of China); Yujian Cheng (University of Electronic Science and Technology of China); Yonghong Zhang (University of Electronic Science and Technology of China);
- 16:00 Comparison of Array Antenna Designs for 77 GHz Radar Applications
Aulia Dewantari (Yonsei University); Se-Yeon Jeon (Yonsei University); Sumin Kim (Yonsei University); Seok Kim (Yonsei University); Jaeheung Kim (Yonsei University); Min-Ho Ka (Yonsei University);
- 16:20 Towards Environmentally Friendly RFID Applications: Fabrication of Antennas and Interconnections
Han He (Tampere University of Technology); Jun Tajima (Osaka University); Lauri Sydanheimo (Tampere University of Technology); Hiroshi Nishikawa (Osaka University); Leena Ukkonen (Tampere University of Technology); Johanna Virkki (Tampere University of Technology);
- 16:40 Dual-functional Broadband Holographic Reflectarray Based on Antenna-array Theory
Wei Wu (Southeast University); Yunbo Li (Southeast University); Chuan Bo Shi (Southeast University); Rui Yuan Wu (Southeast University); Tie Jun Cui (Southeast University);
- 17:00 High Gain Multifaceted Novel UWB Flexible Microstrip Patch Antennas for Indoor Location and Tracking Equipment Applications
Nitika (Punjabi University); Vatanjeet Singh (Punjabi University); Gurnoor Singh Brar (Thapar Polytechnic College); Avneet Kaur (Punjabi University); Asheesh Sharma (Punjabi University); Lovepreet Singh (Punjabi University); Payal Kalra (Punjabi University); Ekambir Sidhu (Punjabi University);

- 17:20 3-D Square Coaxial Waveguide FSS and Equivalent Circuit Model

Jinqun Ge (Jiangsu Center for Collaborative Innovation in Geographical Information Resource Development and Application); Jianping Zhu (Nanjing University of Science and Technology); Haiyong Zhang (Jiangsu Center for Collaborative Innovation in Geographical Information Resource Development and Application); Wei Zhuang (Jiangsu Center for Collaborative Innovation in Geographical Information Resource Development and Application); Wanchun Tang (University of Nanjing Science and Technology);

- 17:40 Biological Effect of ELF Electric Field in Blood Aggregability

Miki Kanemaki (Hokkaido University of Science); Hisae O. Shimizu (Hokkaido University of Science); Masataka Kitama (Hokkaido University of Science); Masaji Yamashita (Hokkaido University of Science); Hiroko Miura (Hokkaido University of Science); Koichi Shimizu (Waseda University);

- 18:00 High Gain Substrate Slotted Microstrip Patch Antenna Design for X-band Satellite Uplink Applications
Divesh Mittal (Punjabi University); Avneet Kaur (Punjabi University); Maninder Singh (Punjabi University); Roopan (Punjabi University); Raveena Bhatia (Punjabi University); Anshula Garg (Punjabi University); Ekambir Sidhu (Punjabi University);

Session 1P_16
Ultra-thin Metal-dielectric Structured Surfaces and Thin Films for Antireflection, Light Trapping, and Perfect Absorption

Monday PM, August 8, 2016
Room 3F

Organized by Junpeng Guo

 Chaired by Junpeng Guo

- 13:00 Recent Progress of the Research on the Multi-layered Metal/Dielectric Film Structure with High and Broadband Efficiency of Photon-to-heat Conversion in the Solar Radiation Region
X. X. Liu (Nanjing University of Post and Telecommunications); E. T. Hu (Fudan University); Y. Yao (Fudan University); K. Y. Zang (Fudan University); A. Q. Jiang (Waseda University); J. J. Zheng (Nanjing University of Post and Telecommunications); W. Wei (Nanjing University of Post and Telecommunications); Y. X. Zheng (Fudan University); S. Y. Wang (Fudan University); H. B. Zhao (Fudan University); O. Yoshie (Waseda University); Y. P. Lee (Hanyang University); C. Z. Wang (Iowa State University); D. W. Lynch (Iowa State University); Liangyao Chen (Fudan University);
- 13:20 Strong Light-matter Interaction through Mode Engineering in Plasmonic Nanoantenna Arrays
Syed Hamed Shams Mousavi (Georgia Institute of Technology); Hossein Taghinejad (Georgia Institute of Technology); Mohammad Taghinejad (Georgia Institute of Technology); Ali A. Eftekhar (Georgia Institute of Technology); Ali Adibi (Georgia Institute of Technology);
- 13:40 Is Plasmonic Enhancement Limited If Metal Becomes "Lossless"?
Greg Sun (University of Massachusetts Boston);
- 14:00 Experimental Study on Light Transmission through Au Wedge-shaped Films
Z. H. Liu (Fudan University); Yu-Xiang Zheng (Fudan University); L. Yang (Fudan University); S. D. Yang (Fudan University); Rongjun Zhang (Fudan University); Songyou Wang (Fudan University); Liangyao Chen (Fudan University);
- 14:20 Wide-band Solar Light Perfect Absorbers Using Metal-dielectric Layer Structures
Jinnan Chen (University of Alabama in Huntsville); Junpeng Guo (University of Alabama in Huntsville); Liangyao Chen (Fudan University);
- 14:40 Simulations of Enhance Broadband Optical Absorption by Tuning Mie Resonance in Silicon Nancone Arrays
Ziyi Wang (Fudan University); Rongjun Zhang (Fudan University); Songyou Wang (Fudan University); Caizhuang Wang (Iowa State University); Kai-Ming Ho (Iowa State University);
- 15:00 Large-scale Uniform Plasmonic Light-trapping Nanostructures Using Soft UV Nanoimprint Lithography
Jinfeng Zhu (Xiamen University); Lirong Zhang (Xiamen University); Shuang Yan (Xiamen University); Junjun Cheng (Xiamen University); Qing Huo Liu (Duke University);
- 15:20 **Coffee Break**
- 15:40 Perfect Light Absorption in Ultrathin Optical Nanocavity and Its Application for Color Filters
Seyed Sadreddin Mirshafieyan (University of Alabama in Huntsville); Junpeng Guo (University of Alabama in Huntsville);
- 16:00 Light Trapping in 2D Subwavelength Period Gold Nanotrench Grating and Its Application for Sensing
Hong Guo (University of Alabama in Huntsville); Zhitong Li (University of Alabama in Huntsville); Junpeng Guo (University of Alabama in Huntsville);
- 16:20 High Performance Optical Elements and Devices Based on Dielectric Metasurface
Guoxing Zheng (Wuhan University); Ping'an He (Wuhan University); Song Li (Wuhan University); Zile Li (Wuhan University);
- 16:40 Design of High Efficiency Organic Solar Cells Based on Two-dimensional Arrayed Dielectric Nanospheres
Ming Chen (Taiyuan University of Technology); Yuying Hao (Taiyuan University of Technology); Yanxia Cui (Taiyuan University of Technology); Ye Zhang (Taiyuan University of Technology); Wenyan Wang (Taiyuan University of Technology); Furong Zhu (Hong Kong Baptist University);
- 17:00 Fabrication and Evaluation of Electromagnetic Wave Absorbers Using Frequency Selective Surface
Takahiko Yoshida (Doshisha University); Masato Matsushita (Nitta Corporation); Takumi Kubota (Doshisha University); Shinzo Yoshikado (Doshisha University);
- 17:20 Terahertz Low-scattering Metasurface with Custom Bandwidth
Jie Zhao (Southeast University); Qiang Cheng (Southeast University); Tie Jun Cui (Southeast University);
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- Session 1P0**
Poster Session 2
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- Monday PM, August 8, 2016**
14:00 PM - 17:00 PM
Room Poster Area
-
- 1 Electromagnetic Analysis of Wireless Power Transfer System with Improvised Absorbing Boundary Conditions
Kengo Sugahara (Kindai University);

- 2 Fast Calculation of Wideband RCS of Objects by Combining Improved Ultra-wide Band Characteristic Basis Function Method and AWE Technique
Zhong-Gen Wang (Anhui University); Wen-Yan Nie (Huainan Normal University);
- 3 Fast Solutions of Wide-band RCS of Objects Using General Characteristic Basis Function Method with the Model Based Parameter Estimation
Wen-Yan Nie (Huainan Normal University); Zhong-Gen Wang (Anhui University of Science and Technology);
- 4 Methods for Enhancing the Detectability of Hydrocarbon in MCSEM
Xuan Wang (China Petroleum University (Beijing)); Jinsong Shen (China Petroleum University); Zhong-min Zhu (China University of Petroleum (Beijing));
- 5 Eigenmode Analysis of a Hole Fiber by Multipole Method with the Sakurai-Sugiura Projection Method
Yasuo Tsushima (Muroran Institute of Technology); Yoshihito Morita (Muroran Institute of Technology); Shingo Sato (Muroran Institute of Technology); Koji Hasegawa (Muroran Institute of Technology);
- 6 Characteristic Mode Analysis with Discontinuous Galerkin Surface Integral Equations
Yibei Hou (Shanghai Jiao Tong University); Gao-biao Xiao (Shanghai Jiao Tong University);
- 7 Bandwidth Properties of Pillowy Groove Waveguide with Moment Methods
Yinqin Cheng (Northwest University for Nationalities); Guojian Li (Northwest University for Nationalities);
- 8 Dispersion Characteristics of Dielectric Loaded Circular Quadruple-ridged Waveguide
Guojian Li (Northwest University for Nationalities); Yinqin Cheng (Northwest University for Nationalities); Aning Ma (Lanzhou University);
- 9 Localization of Obstacles in Sea Environment by Using the Inverse Algorithm of Two-way Parabolic Equation
Kun Wang (Sun Yat-Sen University);
- 10 Study on Nano-aperture with Metallic Nano-spheres for Near-field Optical Disk
Hikaru Koyanagi (Kansai University); Toshiaki Kitamura (Kansai University);
- 11 FDTD Analysis of Metal-insulator-metal Waveguide Resonant Cavity with Metallic Nano-cylinders
Kazuki Okada (Kansai University); Toshiaki Kitamura (Kansai University);
- 12 Time-domain Integration Method of Moments Used for Ultra Wideband Response of Monopole Antenna
Shoulin Yin (Shenyang Normal University); Hang Li (Shenyang Normal University);
- 13 Topological Interface States in Multiscale Spoof-insulator-spoof Waveguides
Yan Meng (Chongqing University); Hong Xiang (Chongqing University); Ruo-Yang Zhang (Nankai University); Xiaoxiao Wu (Hong Kong University of Science & Technology); Dezhuan Han (Chongqing University); C. T. Chan (The Hong Kong University of Science and Technology); Weijia Wen (The Hong Kong University of Science and Technology);
- 14 Sub-wavelength Imaging and Negative Refraction Measurement of Triangle Prism
Xujin Yuan (Science and Technology on Electromagnetic Scattering Laboratory); Yongxing Che (Science and Technology on Electromagnetic Scattering Laboratory); Yongfeng Wang (Science and Technology on Electromagnetic Scattering Laboratory); Xiao-Feng Yuan (Science and Technology on Electromagnetic Scattering Laboratory);
- 15 Design and Test of an Absorber with a Transparent Window
Yongxing Che (Science and Technology on Electromagnetic Scattering Laboratory); Haotong Li (Science and Technology on Electromagnetic Scattering Laboratory); Yongfeng Wang (Science and Technology on Electromagnetic Scattering Laboratory); Xiao-Feng Yuan (Science and Technology on Electromagnetic Scattering Laboratory); Xinyu Hou (Science and Technology on Electromagnetic Scattering Laboratory);
- 16 Simulation Research of Band-pass Frequency Selective Surfaces (FSS) Radome
Rong-Qing Sun (Xidian University); Jing Xie (Aerospace Research Institute of Materials & Processing Technology); Yang-Wei Zhang (Aerospace Research Institute of Materials & Processing Technology);
- 17 A Composite Metasurface for End-fire Scattering with Artificial Magnetic Conductor Lattice-like Arrangement
Xiao Liu (Air Force Engineering University of CPLA); Jun Gao (Air Force Engineering University of CPLA); Xiang-Yu Cao (Air Force Engineering University of CPLA); Yi Zhao (Air Force Engineering University of CPLA);

- 18 3D Optical Metamolecules by DNA Origami-guided Self-assembly of Metallic Nanoparticle Clusters
Yoon Jo Hwang (Sungkyunkwan University (SKKU)); Shelley F. J. Wickham (Wyss Institute for Biologically Inspired Engineering at Harvard University, Dana-Farber Cancer Institute); Steven D. Perrault (Wyss Institute for Biologically Inspired Engineering at Harvard University, Dana-Farber Cancer Institute); Sanghyun Yoo (Sungkyunkwan University (SKKU)); Sung Ha Park (Sungkyunkwan University (SKKU)); William M. Shih (Wyss Institute for Biologically Inspired Engineering at Harvard University, Dana-Farber Cancer Institute); Seungwoo Lee (Sungkyunkwan University (SKKU));
- 19 Unnaturally High Refractive Index Metamaterial at Optical Frequency by Self-assembly of Metallic Nanoparticle
Ji-Hyeok Huh (SKKU Advanced Institute of Nanotechnology (SAINT)); Seungwoo Lee (Sungkyunkwan University (SKKU));
- 20 Understanding the Enhancement Mechanisms of Surface Plasmon-mediated Photoelectrochemical Electrodes: A Case Study on Au Nanoparticle Decorated TiO₂ Nanotubes
Zhen Xu (Shanghai Advanced Research Institute, Chinese Academy of Sciences); Dongdong Li (Shanghai Advanced Research Institute, Chinese Academy of Sciences);
- 21 Differential Optical Absorption Spectroscopy Employing Scattering Material as Gas Cell
Hongze Lin (Zhejiang University); Chunsheng Yan (Zhejiang University);
- 22 Electromagnetic Emissivity Asymmetry in Bio Systems
Karl F. Kaspereck (Consulenze Tecniche Energia); Paolo Cardoni (via D. De Palma);
- 23 Development of a Polarization Detection Multipoint Fiber-optical Strain Sensor System
Yao Zhao (Muroran Institute of Technology); Koki Kikuchi (Muroran Institute of Technology); Shinya Sato (Muroran Institute of Technology);
- 24 Temperature Compensation Measurement of a Series of Fiber Bragg Grating Strain Sensors Using Laser Diode
Lili Yuan (Muroran Institute of Technology); Yusuke Sugibayashi (Muroran Institute of Technology); Shinya Sato (Muroran Institute of Technology);
- 25 Temperature Sensing System of Photonic Crystal Fiber Filled with Mixed Liquid
Yanyun Jin (Nantong University); Hongbing Li (Nantong University); Ronghua Cui (Nantong University); Baozhu Pan (Nantong University); Liping Fan (Nantong University);
- 26 Characterization of OTDR Based Fiber-optic Humidity Sensor
Hyejin Kim (Chung-Ang University); Kyounghwon Jang (Konkuk University); Sang Hun Shin (Konkuk University); D. E. Lee (Konkuk University); M. Kim (Chung-Ang University); Y. B. Song (Chung-Ang University); Wook Jae Yoo (Konkuk University); Bongsoo Lee (Chung-Ang University);
- 27 Monte Carlo Simulation of Fiber-optic Radiation Sensor Based on the Cerenkov Principle
Hwa Jeong Han (Soonchunhyang University); Beom Kyu Kim (Soonchunhyang University); Byung Gi Park (Soonchunhyang University);
- 28 Coherent Laser Structure Analysis for High Speed Optical Communication
Laksmi Juwita (Universitas Indonesia); Purnomo Sidi Priambodo (Universitas Indonesia);
- 29 A Novel Cherenkov Oscillator Based on Microcavity in Photonic Crystal Waveguide
Tao Fu (Shenzhen Key Laboratory of Micro-Nano Photon Information Technology); Yin-Bing An (Key Laboratory of Optoelectronic Devices and Systems of Ministry of Education and Guangdong Province); Zhengbiao Ouyang (Shenzhen University);
- 30 A Hardware Localisation System for ZigBee Wireless Sensor Networks
Dorathy O. Abonyi (The University of Sheffield); Jonathan M. Rigelsford (The University of Sheffield);
- 31 Research and Design of a Dual Band Notch UWB Monopole Antenna
Wenqi Liu (Harbin Engineering University); Tao Jiang (Harbin Engineering University);
- 32 Joint DOD and DOA Estimation of Bistatic MIMO Radar Based on LP-EVD
Xia Zhao (Northwestern Polytechnical University); Chen-Jiang Guo (Northwestern Polytechnical University); Yan Qu (Northwestern Polytechnical University); Jun Ding (Northwest Polytechnical University);
- 33 Design of a Wideband Dual-polarized Stacked Patch Antenna with High Isolation and Low Cross Polarization for X-band Applications
Yanfang Wang (Hohai University); Fuguo Zhu (Science and Technology on Antenna and Microwave Laboratory); Steven Gao (University of Kent);

- 34 Compact Coplanar Waveguide-fed Ultra-wideband MIMO Antenna with Half Slot Structure
Jun Tao (Southwest Jiaotong University); Quanyuan Feng (Southwest Jiaotong University); Dengyao Tian (Southwest Jiaotong University);
- 35 The Behavior of Noise Radiator Fields
Jiri Chytil (Brno University of Technology); Rastislav Motuz (Brno University of Technology);
- 36 Generation of OAM-carrying Beams with Different Array Configurations
Meng Yang (National University of Defense Technology); Kang Liu (National University of Defense Technology); Yongqiang Cheng (National University of Defense Technology); Yu-Liang Qin (National University of Defense Technology); Xiang Li (National University of Defense Technology);
- 37 Generation of OAM Beams with Array Error Contributions
Yanwen Jiang (National University of Defense Technology); Kang Liu (National University of Defense Technology); Hongqiang Wang (National University of Defense Technology); Yu-Liang Qin (National University of Defense Technology);
- 38 Study on the Superposition State for the Generation of Orbital-angular-momentum-carrying Beam
Hongyan Liu (National University of Defense Technology); Yongqiang Cheng (National University of Defense Technology); Yu-Liang Qin (National University of Defense Technology); Kang Liu (National University of Defense Technology); Tiezhu Yuan (National University of Defense Technology);
- 39 Analysis of Uplink MU-MIMO Performance and Simulation Method
Na Liu (China Mobile Design Institute); Jiangbo Dong (China Mobile Design Institute); Wei Liu (China Mobile Design Institute); Yanlei Chen (China Mobile Design Institute); Nan Li (China Mobile Design Institute); Yunbo Han (China Mobile Design Institute); Yebing Ren (China Mobile Design Institute);
- 40 A Dual-band Loop MIMO Antenna for Smart Watch Applications
Fangchao Zhou (Zhejiang University); Qingchong Liu (Zhejiang University); Kun Zhao (KTH — Royal Institute of Technology);
- 41 Generation of Radio Beams Carrying OAM Basing on Coaxial Waveguide
Fuchun Mao (Wireless Innovation Lab of Yunnan University); Tinghua Li (Wireless Innovation Lab of Yunnan University); Yu Shao (Wireless Innovation Lab of Yunnan University); Ming Huang (Yunnan University); Na Dong (Wireless Innovation Lab of Yunnan University);
- 42 Efficient Linear Array Synthesis including Coupling Effects by Iterative Fourier Transform via Virtual Active Element Pattern Expansion
Xin Huang (Xiamen University); Yanhui Liu (Xiamen University); Pengfei You (Xiamen University); Qing Huo Liu (Duke University);
- 43 Design Parameter Optimization of a Dual-band Right-handed Circularly Polarized GPS Antenna
Bihong Zhan (Wuhan University); Wen Ding (Wuhan University); Sheng Liu (Wuhan University);
- 44 Decoupling of Antennas Array Using Integrated Closed Chip Loop Structure
Zhaotang Liu (Air Force Engineering University); Jiafu Wang (Air Force Engineering University); Hangying Yuan (Air Force Engineering University); Yajuan Han (Air Force Engineering University); Weiwei Tong (Air Force Engineering University); Jieqiu Zhang (Air Force Engineering University); Shaobo Qu (Air Force Engineering University);
- 45 Experimental Study of a Broadband Aperture-coupled Stacked Patch Array
Na Li (National University of Defense Technology); Lei Qiu (National University of Defense Technology);
- 46 Impact of Mechanical Deformation of Patch Antenna on Its Resonant Frequency
Shi Cong Wang (Tongji University); Mei Song Tong (Tongji University);
- 47 Compact On-chip Ultra Wide Band Antenna with Cavity Structure
Xiaoming Zhu (Harbin Engineering University); Xiaodong Yang (Harbin Engineering University); Xiaoguang Wang (49th Research Institute of CETC); Kai Yu (Harbin Engineering University);
- 48 Optimization of Planar Thinned Antenna Array Based on Genetic and Convex Hybrid Algorithm
Yu Fu (Fudan University); Zhi-Gui Guo (Fudan University); Haowen Wang (Shanghai Research Center for Wireless Communications); Yunsong Gui (Shanghai Research Center for Wireless Communications); Guo-Min Yang (Fudan University);

- 49 Design of a Miniaturized 433 MHz MIMO Antenna
Luokai Zhang (South China Normal University); Jiwei Pan (South China Normal University); Cheng Liu (South China Normal University); Hui Liu (South China Normal University (Guangzhou University Town Campus of South China Normal University)); Takenaka Takashi (South China Normal University);
- 50 Compact Multi-band Printed Antenna for Mobile Phone Applications
Cheng Liu (South China Normal University); Luokai Zhang (South China Normal University); Jiwei Pan (South China Normal University); Hui Liu (South China Normal University (Guangzhou University Town Campus of South China Normal University));
- 51 Compact Tri-band UHF RFID Tag Antenna for Monza4 Chip
Cheng Liu (South China Normal University); Hui Liu (South China Normal University); Sailing He (South China Normal University);
- 52 Design of a Dual Band Small Antenna for WLAN System
Hui Liu (Guangdong Peizheng College); Jiwei Pan (Guangdong Peizheng College); Luokai Zhang (Guangdong Peizheng College); Cheng Liu (Guangdong Peizheng College); Zhoufu Lin (South China Normal University);
- 53 A UHF RFID Reader Antenna with Near Field Inductive Wireless Power Transfer Feature
Bingjie Wang (South China Normal University); Hui Liu (South China Normal University (Guangzhou University Town Campus of South China Normal University)); Cheng Liu (South China Normal University); Luokai Zhang (South China Normal University); Jiwei Pan (South China Normal University); Yoichi Okuno (South China Normal University);
- 54 A Novel Compact Printed Inverted-F MIMO Antenna Operating at 5.8 GHz for WiFi Applications
Jiwei Pan (South China Normal University); Luokai Zhang (South China Normal University); Cheng Liu (South China Normal University); Hui Liu (South China Normal University (Guangzhou University Town Campus of South China Normal University)); Yoichi Okuno (South China Normal University);
- 55 A Novel and Compact Wide Band Dual-polarized Printed Dipole Antenna
Ling-Lu Chen (No. 36 Research Institute of China Electronics Technology Group Corporation); Lei Chang (No. 36 Research Institute of CETC); Yufeng Yu (China Jiangnan Electronics Communication Institute);
- 56 Real-time Parameter Extraction of the Frequency Agile PAR Based on FPGA
Zhongping Fan (National University of Defense Technology); Ruiqi Tian (National University of Defense Technology); Qinglong Bao (National University of Defense Technology); Zeng Ping Chen (National University of Defense Technology);
- 57 An Experimental Study of Multiband Bistatic Passive Radar System
Qinglong Bao (National University of Defense Technology); Yasen Wang (National University of Defense Technology); Yue Zhang (National University of Defense Technology); Zeng Ping Chen (National University of Defense Technology);
- 58 Experimental Study of Uncooperative Radar Signals as Illuminators for Passive Bistatic Radar Applications
Yasen Wang (National University of Defense Technology); Qinglong Bao (National University of Defense Technology); Zeng Ping Chen (National University of Defense Technology);
- 59 A Novel Dual-channel Joint Analysis and Measurement Algorithm on Broadband Cross-channel Radar Radiant Signal
Yurong Wan (National University of Defense Technology); Tao Li (National University of Defense Technology); Zeng Ping Chen (National University of Defense Technology);
- 60 An Adaptive Method of Pulse Detection Based on Frequency-domain CFAR
Xiaolei Fan (National University of Defense Technology); Yurong Wan (National University of Defense Technology); Tao Li (National University of Defense Technology); Zeng Ping Chen (National University of Defense Technology);
- 61 Application and FPGA Implementation of Wideband Real-time Spectrum Analysis in Spaceborne Electronic Reconnaissance
Tao Li (National University of Defense Technology); Xiaolei Fan (National University of Defense Technology); Yurong Wan (National University of Defense Technology); Zeng Ping Chen (National University of Defense Technology);

- 62 Weak Target Detection Exploiting Bernoulli Filter for Ubiquitous Radar
Jian Wang (National University of Defense Technology); Weidong Hu (National University of Defense Technology); Le Feng Zhang (National University of Defense Technology);
- 63 Design and Implementation of Moving Target Detection Algorithm Based on the Multicore DSP
Chunlei Cui (National University of Defense Technology); Jiong Yang (National University of Defense Technology); Yue Zhang (National University of Defense Technology); Zeng Ping Chen (National University of Defense Technology);
- 64 Robust Adaptive Wideband Beamforming with Combined Frequency Response Invariance and Eigenvector Constraints
Jiong Yang (National University of Defense Technology); Yue Zhang (National University of Defense Technology); Zeng Ping Chen (National University of Defense Technology);
- 65 DOA Estimation of Wideband Signals in Multipath Environment
Rui Guo (National University of Defense Technology); Jiong Yang (National University of Defense Technology); Yue Zhang (National University of Defense Technology); Zeng Ping Chen (National University of Defense Technology);
- 66 Application of LS-SVM to the Retrieval of Bare-surface Soil Moisture from Simulated Active and Passive Microwave Data
Weibo Liang (China Three Gorges University); Qing He Zhang (China Three Gorges University);
- 67 The Offset Correction Using GPS for SAR Onboard Processing
Chengfei Gu (National University of Defense Technology); Wenge Chang (National University of Defense Technology); Xiangyang Li (National University of Defense Technique); Xinqun Luan (Science and Technology on Near-Surface Detection Laboratory);
- 69 Study of the Squint Imaging Algorithm for FMCW SAR
Xiwang Liu (National University of Defense Technology); Wenge Chang (National University of Defense Technology); Yifu Guan (National University of Defense Technology);
- 69 A Local Feature with Rotation-invariance Based on Gradient Ratio for SAR Image
Qing Wang (National University of Defense Technology); Tao Tang (National University of Defense Technology); Yi Su (National University of Defense Technology);
- 70 Analysis and Validation of 3D and Bistatic SAR Scattering Model
Haibo Song (National University of Defense Technology); Kefeng Ji (National University of Defense Technology); Kai Yang (National University of Defense Technology); Huanxin Zou (National University of Defense Technology);
- 71 Biophysical Approach to Minor Anxiety and Depressive Disorders
Alberto Foletti (University of Applied Sciences of Southern Switzerland-SUPSI); Paolo Baron (Clinical Biophysics International Research Group);
- 72 Improvement of Cervical Spine Mobility with a Biophysical Treatment
Marina Cipollone (Clinical Biophysics International Research Group); Alberto Foletti (University of Applied Sciences of Southern Switzerland-SUPSI);
- 73 Image Monitoring for Head Phantom of Intracranial Hemorrhage Using Electrical Impedance Tomography
Lei Wang (The Fourth Military Medical University); Wen-Bo Liu (Xijing Institute of Clinical Neuroscience); Xiao Yu (The Fourth Military Medical University); Can-Hua Xu (The Forth Military Medical University); Xiu-Zhen Dong (The Fourth Military Medical University);
- 74 A New Design of 3D Electromagnetic Inverse Scattering Imaging System
Jiefeng Zang (University of Electronic Science and Technology of China); Chuan Lin (University of Electronic Science and Technology of China); Anyong Qing (University of Electronic Science and Technology of China);
- 75 Extremely Low Frequency Magnetic Fields at Electric Facilities of a Hospital
Tapio Vahekoski (Sahkoinsinooritoimisto Matti Leppa Oy); Jussi Sankari (The Hospital District of Southwest Finland); Timo Seppala (The Hospital District of Southwest Finland); Leena Korpinen (Tampere University of Technology);
- 76 Examples of Extremely Low-frequency Magnetic Field Measurements at Treatment Facilities of a University Hospital
Jussi Sankari (The Hospital District of Southwest Finland); Tapio Vahekoski (Sahkoinsinooritoimisto Matti Leppa Oy); Timo Seppala (The Hospital District of Southwest Finland); Leena Korpinen (Tampere University of Technology);

- 77 The Electric Field Exposure of the Work Tasks from a Ladder at 400 kV Substations in Finland
Herkko Pirkkalainen (Fingrid Oyj); Leena Korpinen (Tampere University of Technology); Timo Heiskanen (Fingrid Oyj); Mika Penttila (Fingrid Oyj); Jarmo Elovaara (Fingrid Oyj);
- 78 An Insertable Sensor for SAR Quantification in 2.4 GHz Wireless Applications
Fabian Vazquez (Universidad Nacional Autonoma de Mexico);
- 79 High Sensitivity Photoacoustic Measurement of Environmental NO₂
Gaoxuan Wang (Universite du Littoral Cote d'Opale); Hongming Yi (Universite du Littoral Cote d'Opale); Eric Fertein (University of the Littoral Opal Coast); Markus W. Sigrist (ETH Zurich); Wei Dong Chen (University of the Littoral Opal Coast);
- 80 Laser Interference Exposure Lithography for Fabricating Super-hydrophobic Polymer Microstructures
Ryusaku Hida (The University of Electro-Communications); Satoru Shoji (The University of Electro-Communications);
- 81 Monitoring Resonant Vibration Modes of Glass Microstructures by Means of Confocal Laser Microscopy
Taiki Yamamoto (The University of Electro-Communications); Satoru Shoji (The University of Electro-Communications);
- 82 Ultra-broadband Reflective Polarization Converter Using Ring-chain Metamaterial
Xiao-Xia Zheng (Shanghai University); Zhongyin Xiao (Shanghai University); Xin-Yan Ling (Shanghai University); Kai-Kai Xu (Shanghai University); Jing-Yao Tang (Shanghai University);
- 83 Construction and Validation for a PSoC Wireless Transmission System
Ke Xue (Tongji University); Guo Chun Wan (Tongji University); Mei Song Tong (Tongji University);
- 84 Relationship between Spectral Efficiency and Energy Efficiency in 10 Gbps NRZ-OOK, 40 Gbps NRZ-DPSK and 100 Gbps DP-QPSK WDM Transmission Systems
Deniss Pavlovs (Riga Technical University); Vjaceslavs Bobrovs (Riga Technical University);
- 85 Probe Crystal as Temperature Sensor for Piezoelectric Resonance Laser Calorimetry
A. E. Korolkov (State University); Oleg A. Ryabushkin (State University); Aleskey Viktorovich Konyashkin (Moscow Institute of Physics and Technology);
- 86 The Suspended SU-8 Waveguide MSM-photodetector for Visible Light Directly Based on Silicon Substrate
Li Jin (China Electronics Technology Group Corporation No. 38 Research Institute); Daoxin Dai (Zhejiang University); Ming Zhang (Zhejiang University); Xin Fu (Zhejiang University); Wanjun Wang (China Electronics Technology Group Corporation No. 38 Research Institute); Jie Zhou (China Electronics Technology Group Corporation No. 38 Research Institute); Junbo Feng (East China Research Institute of Electronic Engineering); Jin Guo (China Electronics Technology Group Corporation No. 38 Research Institute);
- 87 High-order Mode Rotator for Si Integrated Circuits
Jiamin Wang (Huazhong University of Science and Technology); Donghui Zhao (Huazhong University of Science and Technology); Jing Xu (Huazhong University of Science and Technology); Xun Xue (Huazhong University of Science and Technology); Xinliang Zhang (Huazhong University of Science and Technology);
- 88 Simulation of Space-based Observed Star Map in Space Radiation Environment
Qian Zhu (National University of Defense Technology); Zhaodong Niu (National University of Defense Technology); Yu Duan (National University of Defense Technology); Zeng Ping Chen (National University of Defense Technology); Wenzhen Wu (National University of Defense Technology);
- 89 Sub-micron Scale Polarization Beam Splitter with High Performances Using Dielectric Materials
Ming-Sheng Lai (National Chung Hsing University); Chia Chien Huang (National Chung Hsing University);
- 90 Evaluation of Propagation Loss of Lithographically Etched Optical Waveguide Based on Scalar and Vector Models
Junhe Zhou (Tongji University); Daoqiang Liu (Tongji University);
- 91 Research on Optical Sampling Based on SOA's Non-linear Polarization Rotation
Chen Wu (Beijing University of Posts and Telecommunications); Yongjun Wang (Beijing University of Posts and Telecommunications); Mingxiao Zhang (Beijing University of Posts and Telecommunications); Shuai Wang (Beijing University of Posts and Telecommunications); Yichuan Geng (Beijing University of Posts and Telecommunications);

- 92 All-optical Flip-flop Based on SOA and MZI Switch
Lina Wang (Beijing University of Posts and Telecommunications); Yongjun Wang (Beijing University of Posts and Telecommunications); Shuai Wang (Beijing University of Posts and Telecommunications); Yichuan Geng (Beijing University of Posts and Telecommunications); Mingxiao Zhang (Beijing University of Posts and Telecommunications);
- 93 Temperature and Strain Properties of Photonic Bandgap Fiber Sensors
Xin Yan Fan (Tongji University); Guo Chun Wan (Tongji University); Mei Song Tong (Tongji University);
- 94 Estimation the Transmission between Antennas Using Artificial Neural Networks in the UWB Band
Martin Kotol (Brno University of Technology); Ales Prokes (Brno University of Technology); Tomas Mikulasek (Brno University of Technology); Zbynek Raida (Brno University of Technology);
- 95 Bi-static Angular Glint Calculation on Complex Targets in Near-Regions via Multilevel Fast Multipole Algorithm
Huiyuan Zhang (Science and Technology on Electromagnetic Scattering Laboratory); Liangshuai Guo (Shanghai Key Laboratory of Electromagnetic Environmental Effects for Aerospace Vehicle Yangpu); Zichang Liang (Science and Technology on Electromagnetic Scattering Laboratory); Xiaobing Wang (Science and Technology on Electromagnetic Scattering Laboratory);
- 96 Materials Characterization by Near-field Scanning Microwave Microscopy
Sijia Gu (University Lille 1); Tianjun Lin (University Lille 1); Tuami Lasri (UMR CNRS);
- 97 Radiation from a PCB Trace with Broadband Harmonic Frequency Signals
Chih-Hung Lee (Electronics Testing Center); Chi-Yuan Yao (Electronics Testing Center); Hai-Ching Li (Electronics Testing Center); Ding-Bing Lin (National Taipei University of Technology);
- 98 Investigation on Near-field Optical Disk Using Rectangular Nano-aperture with Ledges
Ryosuke Kanda (Kansai University); Toshiaki Kitamura (Kansai University);
- 99 A Theoretical Analysis of Second and Third Harmonic Generation in Metal Nanospheres
Yaguang Zhang (Anhui University); Zhi-Xiang Huang (Anhui University);
- 100 High Stability Symplectic Filtered Finite-difference Time-domain Method
Gaochao Zhang (Anhui University); Zhi-Xiang Huang (Anhui University);
- 101 Numerical Calculation for Axial Force of Adjustable Speed Asynchronous Magnetic Coupling
Kaikai Zhou (Dalian Jiaotong University); Zhi Yuan (Dalian Jiaotong University); Peng Wang (Dalian Jiaotong University); Yanjun Ge (Dalian Jiaotong University);
- 102 A New Topology of CMG for High Torque and Low Loss
Yanjun Ge (Dalian Jiaotong University); Qingyang Li (Dalian Jiaotong University); Junyue Yang (Dalian Jiaotong University); Fei Fang (Dalian Jiaotong University);
- 103 Practical Application of Electrical Impedance Tomography and Electrical Resistive Tomography
Tomas Kriz (Brno University of Technology); Zdenek Roubal (Brno University of Technology);
- 104 A 3-D Electromagnetic-model-based Algorithm for High-resolution Range Profile Motion Compensation
Xiaoliang Yang (National University of Defense Technology); Gongjian Wen (National University of Defense Technology); Conghui Ma (National University of Defense Technology); Baiyuan Ding (National University of Defense Technology); Shao Hua Qiu (National University of Defense Technology);
- 105 Modified Basic Moments Feature Extraction Based on Segmented Micro-Doppler Area
Xiang Lin (National University of Defense Technology); Ting Gong (National University of Defence Technology); Yongxiang Liu (National University of Defense Technology);
- 106 A Novel Pogo Pin Connector Design for High Speed USB3.1 Operations
Kuo-Liang Wu (National Taipei University of Technology); Jwo-Shiun Sun (National Taipei University of Technology); Guan-Yu Chen (National Taipei University of Technology);
- 107 Detection of Neutrino-induced Air Showers by the Artificial Neural Network FPGA Trigger
Zbigniew Szadkowski (University of Lodz); Dariusz Glas (University of Lodz); Krzysztof Pytel (University of Lodz);

- 108 The Research on Echo Signal Processing for Outdoor RCS Measurement System
Wenqiang Chen (Science and Technology on Electromagnetic Scattering Laboratory); Li Yang (Science and Technology on Electromagnetic Scattering Laboratory); Zhihe Xiao (Science and Technology on Electromagnetic Scattering Laboratory); Yuwei Wang (Science and Technology on Electromagnetic Scattering Laboratory); Yanjie Cui (Science and Technology on Electromagnetic Scattering Laboratory);
- 109 Remote Sensing-based Dynamic Study of Nature Reserve in Panjin Red Beach Remote Sensing-based Dynamic Study of Nature Reserve in Panjin Red Beach
Hua Ding (Shenyang Janzhu University); Hao Lin (Shenyang Janzhu University); Ru Ren Li (Shenyang Janzhu University);
- 110 Monitoring and Evaluation on Water Quality of Hun River Based on landsat Satellite Data
Hua Ding (Shenyang Janzhu University); Ru Ren Li (Shenyang Janzhu University); Hao Lin (Shenyang Janzhu University); Xin Wang (Shenyang Janzhu University);

Session 2A1

SC2: Recent Advances of Metamaterials for Novel Electromagnetic and Photonic Devices 1

Tuesday AM, August 9, 2016

Room 5B/5C

Organized by Yungui Ma, Sailing He

Chaired by Yungui Ma, Sailing He

- 08:00 Experimental Realization of a 3D Magnetic Cloak and
 invited a Magnetic Wormhole
Jordi Prat-Camps (Universitat Autònoma de Barcelona); Carles Navau (Universitat Autònoma de Barcelona); Alvaro Sanchez (Universitat Autònoma de Barcelona);
- 08:20 Self-collimated One-way Light in Gyromagnetic Phonic Crystals
 invited
Rui-Xin Wu (Nanjing University); Qing-Bo Li (Nanjing University); Zhen Li (Nanjing University); Yin Poo (Nanjing University);
- 08:40 All-silicon Dirac Metalens with Zero Refractive Index
 invited
Jian-Wen Dong (Sun Yat-Sen University); Xin-Tao He (Sun Yat-Sen University);
- 09:00 Unidirectionally Molding Electromagnetic Waves with
 invited Magnetic Metamaterials and Metasurfaces
Shiyang Liu (Zhejiang Normal University); Jialin Zhou (Zhejiang Normal University); Xin-ning Yu (Fudan University); Huajin Chen (Fudan University); Zhifang Lin (Fudan University); Che Ting Chan (The Hong Kong University of Science and Technology);
- 09:20 3D Printing: A Useful Tool for the Fabrication of Artificial Electromagnetic (EM) Medium
 invited
Xiaoyong Tian (Xi'an Jiaotong University); Lixian Yin (Xi'an Jiaotong University);
- 09:40 Experimental Verification of Spoof Plasmon Hybridization
 invited
Yu Luo (Nanyang Technological University); Zhen Liao (Southeast University); Jingjing Zhang (Nanyang Technological University); Tie Jun Cui (Southeast University);
- 10:00 **Coffee Break**
- 10:20 Efficient Generation of Prominent and Robust Plasmonic Fano Resonances in 3D Metamaterials
 invited
Jiafang Li (Institute of Physics, Chinese Academy of Sciences); Zhiguang Liu (Institute of Physics, Chinese Academy of Sciences); Zhi-Yuan Li (Institute of Physics, Chinese Academy of Sciences);
- 10:40 The Linear-circular Polarization Transfer in a Caustic Vector Optical Field
 invited
Rui Pin Chen (Zhejiang Sci-Tech University); Li-Xin Zhong (Zhejiang University of Finance and Economics); Huiwen Zhu (Zhejiang Sci-Tech University);
- 11:00 Purely Imaginary Conjugate Metamaterials
 invited
Yanyan Cao (Soochow University); Yangyang Fu (Soochow University); Yadong Xu (Soochow University); Huanyang Chen (Soochow University);
- 11:20 Lead Halide Perovskite Based Microdisk and Microrod Lasers
 invited
Zhiyuan Gu (Harbin Institute of Technology); Kaiyang Wang (Harbin Institute of Technology); Shuai Liu (Harbin Institute of Technology); Wenzhao Sun (Harbin Institute of Technology); Shumin Xiao (Harbin Institute of Technology); Qinghai Song (Harbin Institute of Technology);

Session 2A2**FocusSession.SC1: Casimir Effect and Heat Transfer 1****Tuesday AM, August 9, 2016****Room 5D/5E**

Organized by Mauro Antezza, Brahim Guizal

Chaired by Mauro Antezza, Brahim Guizal

08:00 Enhanced Near-field Radiative Heat Transfer by Coupled Polaritons in Graphene/hBN Heterostructures

Bo Zhao (Georgia Institute of Technology); Zhuomin M. Zhang (Georgia Institute of Technology);

08:30 Heat Flux Splitting and Photon Thermal Hall Effect in Two Dimensional Plasmonic Nanoparticle Arrays

Philippe Ben-Abdallah (Universite Paris-Sud 11); Svend-Age Biehs (Carl von Ossietzky Universitat);

08:50 Hyperbolic Waveguide for Long Distance Transport of Near-field Heat Flux

Svend-Age Biehs (Carl von Ossietzky Universitat); Riccardo Messina (University of Montpellier 2); Brahim Guizal (Universite de Montpellier 2); Mauro Antezza (Universite de Montpellier); Philippe Ben-Abdallah (Universite Paris-Sud 11);

09:10 Giant Heat Transfer and Its Material Dependence at the Nanometer Scale

Achim Kittel (University of Oldenburg); Svend-Age Biehs (Carl von Ossietzky Universitat); David Hellmann (University of Oldenburg); Konstantin Kloppstech (University of Oldenburg); Nils Kanne (University of Oldenburg); Ludwig Worbes (University of Oldenburg); Alejandro W. Rodriguez (Princeton University);

09:40 Experimental Demonstration of Near-field Thermal Radiation between Flat Plates at Submicron Distances Down to 180 nm

Jesse I. Watjen (Georgia Institute of Technology); Bo Zhao (Georgia Institute of Technology); Zhuomin M. Zhang (Georgia Institute of Technology);

10:00 **Coffee Break**

10:20 Radiative Heat Transfer across Nanometer-size Gaps
invited

Victor Fernandez-Hurtado (Universidad Autonoma de Madrid); K. Kim (University of Michigan); B. Song (University of Michigan); W. Lee (University of Michigan); W. Jeong (University of Michigan); L. Cui (University of Michigan); D. R. Thompson (University of Michigan); Johannes Feist (Universidad Autonoma de Madrid); M. T. Homer Reid (Massachusetts Institute of Technology); Francisco J. Garcia-Vidal (Universidad Autonoma de Madrid); Juan Carlos Cuevas (Universidad Autonoma de Madrid); Edgar Meyhofer (University of Michigan); Pramod Reddy (University of Michigan);

10:40 Dynamics of the Driven Dicke Model: Time Dependent Mean Field and Quantum Fluctuations

Francesco Plastina (Universita'della Calabria); G. Francica (Universita'della Calabria); Mauro Paternostro (Queen's University Belfast);

11:00 Thermodynamic Work from Operational Principles
invited

Rodrigo Gallego (Freie Universitat Berlin); Henrik Wilming (Freie Universitat Berlin); Jens Eisert (Freie Universitat Berlin);

11:20 Exciton Transport in Organic Microcavities in the Strong Coupling Regime

Johannes Feist (Universidad Autonoma de Madrid);

Session 2A3**FocusSession.SC2: Advances in Metasurfaces 1****Tuesday AM, August 9, 2016****Room 5F**

Organized by Din Ping Tsai, Shulin Sun

Chaired by Din Ping Tsai, Shulin Sun

08:00 Active Metasurfaces for Dynamic Electromagnetic Wave Control

Yijun Feng (Nanjing University); Ke Chen (Nanjing University); Bo Zhu (Nanjing University); Junming Zhao (Nanjing University); Tian Jiang (Nanjing University);

08:20 The Polarization States of Light in Metastructures
invited

Ru-Wen Peng (Nanjing University); Shang-Chi Jiang (Nanjing University); Ren-Hao Fan (Nanjing University); Xiang Xiong (Nanjing University); Mu Wang (Nanjing University);

08:40 Terahertz Metasurface-based Devices for Wavefront
invited Modulation

Yan Zhang (Capital Normal University); Xinke Wang (Capital Normal University); J. W. He (Capital Normal University);

09:00 Spatial-temporal Dispersion Engineering of Longitu-
invited dinally Coupled Spoof Surface Plasmon Polaritons for Free-space EM Wave Modulation

Jiafu Wang (Air Force Engineering University); Shaobo Qu (Air Force Engineering University); Jiequ Zhang (Air Force Engineering University); Hua Ma (Xi'an Jiaotong University);

09:20 Active Microwave Metasurfaces for High-performance
invited Operations: Dispersion Compensation and Dynamical Switch

He-Xiu Xu (Air Force Engineering University); Shiwei Tang (Ningbo University); Shaojie Ma (Fudan University); Weijie Luo (Fudan University); Tong Cai (Air Force Engineering University of China); Shulin Sun (Fudan University); Qiong He (Fudan University); Lei Zhou (Fudan University);

09:40 Some Applications Based on Sub-wavelength Gradi-
invited ent Metallic Gratings

Erting Qian (Soochow University); Yangyang Fu (Soochow University); Aichen Chen (Soochow University); Yadong Xu (Soochow University); Huanyang Chen (Soochow University);

10:00 **Coffee Break**

10:20 Novel Coupled-resonator Surface-wave Waveguides
invited with Spoof Surface Plasmons

Zhen Gao (Nanyang Technological University); Fei Gao (Nanyang Technological University); Baile Zhang (Nanyang Technological University);

10:40 Planar Fourier Transform Enabled by Surface Plas-
invited mon Polaritons

Shan Shan Kou (University of Melbourne); Guanghui Yuan (Nanyang Technological University); Qian Wang (Institute of Materials Research and Engineering); Luping Du (Shenzhen University); Eugeniu Balaur (La Trobe University); Daohua Zhang (Nanyang Technological University); Dingyuan Tang (Jiangsu Normal University); Brian Abbey (Australian Research Council Centre of Excellence for Advanced Molecular Imaging); Xiao-Cong Yuan (Shenzhen University); Jiao Lin (University of Melbourne);

11:00 Temperature Effects on Surface Plasmon Enhanced
invited Smith-Purcell Terahertz Radiation for InSb-based Grating

Bo Han Cheng (Academia Sinica); Yu-Siou Ye (National Cheng Kung University); Yung-Chiang Lan (National Cheng Kung University); Din Ping Tsai (National Taiwan University);

11:20 New Concept and Experimental Realization of Sur-
invited face Plasmon Meta-couplers

Wujiong Sun (Fudan University); Qiong He (Fudan University); Shulin Sun (Fudan University); Lei Zhou (Fudan University);

11:40 Cloaking by Metasurfaces in the Transmission Geom-
invited etry

Hong Chen Chu (Soochow University); Jie Luo (Soochow University); Yun Lai (Soochow University);

Session 2A4a

FocusSession.SC3: Advanced Photonic Materials and Devices, Part 3

Tuesday AM, August 9, 2016

Room 5G

Organized by Kwang-Sup Lee, Hong-Bo Sun

Chaired by Kwang-Sup Lee

08:00 Efficient Charge Extraction at a ~ 300 nm Thick BHJ
invited Photovoltaic Device Based on Semi-crystalline Photovoltaic Polymers

Han Young Woo (Korea University);

08:20 Development of Organic/Inorganic Charge Transport
invited Layers for High-performance Perovskite Solar Cells

Jong Hyun Kim (Chungnam National University);

08:40 Conducting Polymers for OTFT and Solar Cells: Ef-
invited fective Charge Transportation

Taiho Park (Pohang Institute of Science and Technology (POSTECH));

09:00 High-efficiency and Mechanically Robust Stretchable
invited Organic-light Emitting Devices

Jing Feng (Jilin University);

09:20 High-performance Flexible OLEDs on Outcoupling
invited Enhanced Plastics

Jianxin Tang (Soochow University);

09:40 Transmission of Electromagnetic Waves through Fiber
Bragg Gratings

Pedro Pereyra (Universidad Autonoma Metropolitana);

10:00 **Coffee Break**

Session 2A4b
Oral Presentations for Best Student Paper
Awards — SC3: Optics and Photonics

Tuesday AM, August 9, 2016

Room 5G

Chaired by Iam-Choon Khoo

- 10:20 A Switchable and Tunable Dual-passband Microwave Photonic Filter
Rui Wu (Xiamen University); Hao Chen (Xiamen University); Shiwei Zhang (Xiamen University); Hongyan Fu (Xiamen University);
- 10:40 Large-area and Uniform Silver Nanowires Based Transparent Electrodes on Rigid and Flexible Substrates Fabricated by Polymethylmethacrylate-assisted Spin-coating
Pengfei Kou (Zhejiang University); Liu Yang (Zhejiang University); Kequn Chi (Zhejiang University); Sailing He (Zhejiang University);
- 11:00 Photonic Generation of Phase-coded Microwave Signals Based on Dual Parallel Phase Modulators
Qiong Yu (Chongqing University of Technology); Fei Wang (Chongqing University of Technology); Weibin Wang (Chongqing University of Technology); Xin Zhang (Chongqing University of Technology); Youxi Lu (Chongqing University of Technology); Gu Jun (Chongqing University of Technology); Huihui Xiao (Chongqing University of Technology);
- 11:20 Imaging Spectrometers Based on Waveguide Echelle Diffraction Gratings
Minyue Yang (Zhejiang University); Han Wang (Zhejiang University); Mingyu Li (Zhejiang University); Jian-Jun He (Zhejiang University);
- 11:40 A Versatile Fiber Laser Delivering Dispersion-managed Soliton and Q-switched Pulse
Qiong Yu (Chongqing University of Technology); Fei Wang (Chongqing University of Technology); Xin Zhang (Chongqing University of Technology); Youxi Lu (Chongqing University of Technology); Jun Gu (Chongqing University of Technology); Weibin Wang (Chongqing University of Technology);

Session 2A5
FocusSession.SC3: Nanophotonics and
Integration Part 3

Tuesday AM, August 9, 2016

Room 5H

Organized by Pavel Cheben, Laurent Vivien, Andrew Wing On Poon, Goran Z. Mashanovich

Chaired by Carlos Alonso-Ramos

- 08:10 Ge-based Photonic Devices on Si
 invited *Yasuhiko Ishikawa (The University of Tokyo);*
- 08:30 Heterogeneous 2D and 3D Photonic Integrated Circuits
 keynote *S. J. Ben Yoo (University of California, Davis);*
- 09:00 Graphene (Oxide) for Photonic Integration
 invited *Richard M. De La Rue (University of Glasgow); C. K. Lai (University of Malaya); W. H. Lim (University of Malaya); Y. K. Yap (Heriot-Watt University Malaysia); Harith Ahmad (University of Malaya); W. Y. Chong (University of Malaya);*
- 09:20 Highly-sensitive Optical Biosensors Based on Silicon-on-Insulator Nanowire Waveguide
 invited *Jian-Jun He (Zhejiang University);*
- 09:40 Optical Nanowaveguides Based on Zinc Oxide Plasmonic Materials
Alexander M. Lerer (Southern Federal University); Pavel Eugenjevich Timoshenko (Southern Federal University); Viacheslav V. Zemlyakov (Southern Federal University); Evgeny M. Kaidashev (Southern Federal University); Alexey Sergeevich Puzanov (Southern Federal University);
- 10:00 **Coffee Break**
- 10:20 Advanced Optical Characterization of Nanostructures and Nanomaterials in the X-ray Range
 invited *Eva Majkova (Institute of Physics SAS); Peter Sifalovic (Institute of Physics SAS); Karol Vegso (Institute of Physics SAS); Matej Jergel (Institute of Physics SAS); Stefan Luby (Institute of Physics SAS);*
- 10:40 Low Pump Power Spontaneous Four-wave Mixing Source Using Triple Photonic Crystal Microcavities in Silicon
 invited *Ellen Schelew (University of British Columbia); Jeff F. Young (University of British Columbia);*
- 11:00 Nanoscale Devices Using Asymmetric Long Range Hybrid Plasmonic
 invited *Yiwen Su (University of Toronto); Charles Lin (University of Toronto); Pohan Chang (University of Toronto); Amr S. Helmy (University of Toronto);*

11:20 Carbon Nanotubes Integration on Silicon

invited

Elena Duran-Valdeiglesias (Universite Paris 11); W. Zhang (Universite Paris-Sud); H. C. Hoang (Universite Paris 11); Carlos Alonso-Ramos (Universite Paris 11); Samuel Serna (Universite Paris-Sud); Xavier Le Roux (Universite Paris-Sud); Eric Cassan (Universite Paris-Sud); Laurent Vivien (Universite Paris-Sud); F. Sarti (University of Florence); U. Torrini (University of Florence); M. Gurioli (University of Florence); M. Balestrieri (LICSSEN); A. Keita (LICSSEN); Arianna Filoramo (CEA Saclay, IRAMIS, NIMBE (UMR 3685), LICSSEN); H. Yang (Technische Universitaet Dresden); V. Bezugly (Technische Universitaet Dresden); Gianaurelio Cuniberti (Technische Universitaet Dresden);

Session 2A6

FocusSession.SC3: Nonlinear Fiber Effects for Sensing and Signal Processing

Tuesday AM, August 9, 2016

Room 5I

Organized by Weiwen Zou, Yosuke Mizuno

Chaired by Kwang Yong Song, Xin Long

08:20 Hetero-core Fiber Optic Surface Plasmon Resonance Sensor Based on Au/Ta₂O₅/Pd Multi-layer Films for Hydrogen Sensing

invited

Ai Hosoki (Soka University); Michiko Nishiyama (Soka University); Hirotaka Igawa (Japan Aerospace Exploration Agency); Kazuhiro Watanabe (Soka University);

08:40 Raman Scattering in Hydrogenated Amorphous Silicon Waveguides at Telecommunication Wavelengths

invited

Ken Tanizawa (National Institute of Advanced Industrial Science and Technology (AIST)); Satoshi Suda (National Institute of Advanced Industrial Science and Technology (AIST)); Yoichi Sakakibara (National Institute of Advanced Industrial Science and Technology (AIST)); Toshihiro Kamei (National Institute of Advanced Industrial Science and Technology (AIST)); Ryouhei Takei (National Institute of Advanced Industrial Science and Technology (AIST)); Hitoshi Kawashima (National Institute of Advanced Industrial Science and Technology (AIST)); Shu Namiki (National Institute of Advanced Industrial Science and Technology (AIST)); Masahiko Mori (National Institute of Advanced Industrial Science and Technology (AIST)); Hiroshi Ishikawa (National Institute of Advanced Industrial Science and Technology (AIST));

09:00 1200°C High-temperature Distributed Optical Fiber Sensing by Using Brillouin Optical Time Domain Analysis

invited

Pengbai Xu (Harbin Institute of Technology); Yongkang Dong (Harbin Institute of Technology); Dengwang Zhou (Harbin Institute of Technology); Cheng Fu (Harbin Institute of Technology); Juwang Zhang (Harbin Institute of Technology); Hongying Zhang (Harbin University of Science and Technology); Zhiwei Lu (Harbin Institute of Technology); Liang Chen (University of Ottawa); Xiaoyi Bao (University of Ottawa); Lei Teng (Harbin Institute of Technology);

09:20 Characterization of Brillouin Scattering in Plastic Optical Fibers for Sensing Applications

invited

Neisei Hayashi (The University of Tokyo); Yosuke Mizuno (Tokyo Institute of Technology); Kentaro Nakamura (Tokyo Institute of Technology);

09:40 All-optical Pulse Compression Based on Stimulated Brillouin Scattering in Optical Fibers

invited

Xin Long (Shanghai Jiao Tong University); Weiwen Zou (Shanghai Jiao Tong University); Jianping Chen (Shanghai Jiao Tong University);

10:00 Coffee Break

10:20 Distributed Sensors Based on Brillouin Dynamic Grating in Specialty Fibers

invited

Kwang Yong Song (Chung-Ang University); Yong Hyun Kim (Chung-Ang University);

10:40 Multi-frequency Optoelectronic Oscillators: Realiza-
invited tion and Applications
Fangzheng Zhang (Nanjing University of Aeronautics and Astronautics); Pei Zhou (Nanjing University of Aeronautics and Astronautics); Bindong Gao (Nanjing University of Aeronautics and Astronautics); Shilong Pan (Nanjing University of Aeronautics and Astronautics);

11:00 Wide-range Frequency Drift Compensation for Tun-
invited able Optoelectronic Oscillator
Jian Dai (Beijing University of Posts and Telecommunications); Xingyuan Xu (Beijing University of Posts and Telecommunications); Kun Xu (Beijing University of Posts and Telecommunications);

11:20 Microwave Photonics for Multi-target Detection
invited
Ming Li (Institute of Semiconductors, Chinese Academy of Sciences); Nuan Nuan Shi (Institute of Semiconductors, Chinese Academy of Sciences);

11:40 Ultra-narrow Linewidth Fiber Laser Based on
invited Rayleigh Backscattering and Its Applications
Tao Zhu (Chongqing University); Shihong Huang (Chongqing University); Lei Lei Shi (Chongqing University); Dongmei Huang (Chongqing University); Baomei Zhang (Chongqing University);

Session 2A7

SC1: Wave Propagation and Interaction in Layered Media

Tuesday AM, August 9, 2016

Room 5J

Organized by Jiming Song

Chaired by Jiming Song

08:20 A New Algorithm for Radar Imaging of the Targets
Buried in Layered Media
Zhijie Xie (Science and Technology on Electromagnetic Scattering Laboratory); Yun Lin (Science and Technology on Electromagnetic Scattering Laboratory); Hui Yue (Science and Technology on Electromagnetic Scattering Laboratory);

08:40 Half-space Green's Function and Ray Tracing Method
for EM Scattering from the Large Object on a Ground
Wei Yang (National University of Singapore); Chao-Fu Wang (National University of Singapore);

09:00 Statistical Distributions of Stokes Parameters from
Random Double-layered Sastrugi Surfaces
Peng Xu (Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences); Kun-Shan Chen (Institute of Remote Sensing and Digital Earth, Chinese Academy of Science); Rui Jiang (Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences);

09:20 An Approximate Method to Calculate the Reflection
Coefficient of a Rectangular Open-ended Waveguide
Lutong Li (University of Electronic Science and Technology of China); Pu Tang (University of Electronic Science and Technology of China); Bo Chen (University of Electronic Science and Technology of China); Pingyou Wang (University of Electronic Science and Technology of China); Senhang He (University of Electronic Science and Technology of China);

09:40 Electromagnetic Modeling for Finite FSS with Lay-
ered Dielectric Substrate Using SED Method
Yunqin Hu (Nanjing University of Posts and Telecommunications); Quanguan Wang (Nanjing University of Posts and Telecommunications); Jian Zhu (Nanjing University of Posts and Telecommunications);

10:00 Coffee Break

10:20 Matrix Friendly Formulation for Layered Doubly Pe-
riodic Structure and Its Computation
Kun Chen (Iowa State University); Zhiwei Liu (Iowa State University); Jiming Song (Iowa State University);

10:40 Study on Calculation and Verification of Radiowave
Propagation Using Parabolic Equation for the An-
tenna Near the Ground
Chengyou Yin (Hefei Electronic Engineering Institute); Jie Zhu (Hefei Electronic Engineering Institute); Qiaofei Wei (Hefei Electronic Engineering Institute);

11:00 Effective Medium Model for Multilayered Anisotropic
Media with Different Orientations
Yang Bao (Iowa State University); Jiming Song (Iowa State University);

11:20 A Multilayer Effective Medium Model for Plasmonic
Perfect Absorber
Khagendra Bhattarai (University of South Florida); Sinhara Silva (University of South Florida); Jiyeon Jeon (Korea Research Institute of Standards and Science); Jun Oh Kim (Korea Research Institute of Standards and Science); Kun Song (Northwestern Polytechnical University); Sang Jun Lee (Korea Research Institute of Standards and Science); Zahyun Ku (The University of New Mexico); Jiangfeng Zhou (University of South Florida);

Session 2A8a**Design of Radio Astronomy Antennas, New Challenges****Tuesday AM, August 9, 2016****Room 3B**

Organized by Chengjin Jin

Chaired by Chengjin Jin

- 08:00 A Unique Wide Band Receiver, Warm Electronics, for the FAST Telescope
Stephen Smith (Cosmic Microwave Technology, Inc.); Sander Weinreb (Cosmic Microwave Technology, Inc.);
- 08:20 Development of the L-band Phased Array Feed for the Five-hundred-meter Aperture Spherical Radio Telescope
Yang Wu (NAOC); Chengjin Jin (National Astronomical Observatories, CAS); J. Fan (National Astronomical Observatories, Chinese Academy of Sciences); X. Zhao (National Astronomical Observatories, Chinese Academy of Sciences); L. Yu (National Astronomical Observatories, Chinese Academy of Sciences); B. Du (The 54th Research Institute of CETC);
- 08:40 Some Aspects of Digital Data Processing vs. Analogue Signal Analysis
Chengjin Jin (National Astronomical Observatories, CAS); X. Zhao (National Astronomical Observatories, Chinese Academy of Sciences); Y. Zhu (National Astronomical Observatories, CAS);
- 09:00 The Collaboration for Astronomy Signal Processing and Electronics Research (CASPER): Lowering Barriers to Entry in Radio Astronomy Research with Open-source, Community-driven Digital Signal Processing Hardware and Software
Jack Hickish (University of California, Berkeley); Dan Werthimer (University of California, Berkeley);
- 09:20 Studies of Dish Optical Design for High Sensitivity
S. Liu (The 54th Research Institute of CETC); Yang Wu (NAOC); B. Du (The 54th Research Institute of CETC);
- 09:40 Antenna Technology and Radio Astronomical Research — A Perspective on the Trends
Peter Wilkinson (The University of Manchester);
- 10:00 **Coffee Break**

Session 2A8b**Metasurface Antenna****Tuesday AM, August 9, 2016****Room 3B**

Organized by Jun-Ping Geng, Ming-Chun Tang

Chaired by Jun-Ping Geng, Ming-Chun Tang

- 10:20 A Filter-integrated Method to Improve the Radiation Performance of Planar UWB Antenna
Ming-Chun Tang (Chongqing University); Ting Shi (Chongqing University); Richard W. Ziolkowski (University of Arizona);
- 10:40 A Wideband Microstrip Patch Antenna Loaded with Dual Split-loop Structure
Ming-Chun Tang (Chongqing University); Li Guo (Chongqing University); Han Xiong (Chongqing University); Hong Liu (No. 24 Research Institute, China Electronics Technology Group Corporation, Chongqing); Youbing Pang (No. 24 Research Institute, China Electronics Technology Group Corporation, Chongqing);
- 11:00 High-gain and Low-profile EBG Patch Antenna Design
Zi-Jian Han (Beijing Institute of Technology); Wei Song (Beijing Institute of Technology); Wen-Ji Li (Beijing Institute of Technology); Xin-Qing Sheng (Beijing Institute of Technology);
- 11:20 Unidirectional RF Antenna by Stacked Spoof Surface Plasmon Resonators
Fei Fei Qin (Harbin Institute of Technology); Jun Jun Xiao (Harbin Institute of Technology);
- 11:40 The Study on the Antenna with Metasurface
Jun-Ping Geng (Shanghai Jiao Tong University); Rong-Hong Jin (Shanghai Jiaotong University); Xianling Liang (Shanghai Jiao Tong University); Kun Wang (Shanghai Jiao Tong University); Han Zhou (Shanghai Jiao Tong University); Luyang Duan (Shanghai Jiao Tong University); Xiang Liu (Shanghai Jiao Tong University);

Session 2A9a**FocusSession.SC2: Plasmonics for Energy****Tuesday AM, August 9, 2016****Room 3C/3D**

Organized by Nicholas X. Fang, Kin Hung Fung

Chaired by Nicholas X. Fang, Kin Hung Fung

- 08:00 Quantum Plasmonics and Hot Electron Induced Processes
invited *Peter Nordlander (Rice University);*
- 08:20 Plasmon-optical and Plasmon-electrical Effects for Improve Performances of Solar Cells
invited *Wallace C. H. Choy (The University of Hong Kong);*
- 08:40 Index-near-zero Materials for Advanced Light Management
invited *Zongfu Yu (University of Wisconsin);*
- 09:00 Narrow-band Perfect Absorbers
invited *Zhengdong Yong (Zhejiang University); Sailing He (Zhejiang University);*
- 09:20 Efficient Transport and Focusing of Optical Signal and Energy via Spiral Conical Plasmonic Tip Integrated with Optical Fiber
invited *Jiafang Li (Institute of Physics, Chinese Academy of Sciences); Zhiguang Liu (Institute of Physics, Chinese Academy of Sciences); Zhi-Yuan Li (Institute of Physics, Chinese Academy of Sciences);*
- 09:40 Temperature Modulated Nanoplasmonics
Alessandro Alabastri (Istituto Italiano di Tecnologia); Andrea Toma (Istituto Italiano di Tecnologia); Mario Malerba (Istituto Italiano di Tecnologia); Remo Proietti Zaccaria (Istituto Italiano di Tecnologia);
- 10:00 **Coffee Break**

Session 2A9b
Fiber Lasers and 2-D Materials for Fiber Lasers 2

Tuesday AM, August 9, 2016
Room 3C/3D

Organized by Jianfeng Li, Fengqiu Wang

 Chaired by Jianfeng Li

- 10:20 Cylindrical Vector Pulse Generation from Mode-locked Fiber Laser with Few-mode Fiber Grating
invited *Zuxing Zhang (Nanjing University of Posts and Telecommunications); Hongdan Wan (Nanjing University of Posts and Telecommunications); Hongye Li (Nanjing University of Posts and Telecommunications); Lin Zhang (Nanjing University of Posts and Telecommunications);*

- 10:40 All-fiber Ultra-short Pulse Hybrid Mode-locked Laser with High Power Amplifier
A. A. Krylov (Fiber Optics Research Center of the RAS); Stanislav Grigorievich Sazonkin (Bauman Moscow State Technical University); R. R. Kharisov (Moscow Institute of Physics and Technology); Dmitriy A. Dvoretzkiy (Bauman Moscow State Technical University); A. B. Pnev (Bauman Moscow State Technical University); V. E. Karasik (Bauman Moscow State Technical University); Elena D. Obraztsova (A. M. Prokhorov Institute of General Physics, Russian Academy of Sciences);
- 11:00 A Tunable and Switchable Dual-wavelength Mode-locked Tm³⁺-doped Fiber Laser Based on a Fiber Taper
Yazhou Wang (University of Electronic Science and Technology of China (UESTC)); Jianfeng Li (University of Electronic Science and Technology of China (UESTC)); Yong Liu (University of Electronic Science and Technology of China (UESTC));
- 11:20 A Novel Erbium-Raman Random Fiber Laser with High Efficiency
Han Wu (University of Electronic Science & Technology of China); Zinan Wang (University of Electronic Science & Technology of China); Wei Sun (University of Electronic Science & Technology of China); Qiheng He (University of Electronic Science & Technology of China); Mengqiu Fan (University of Electronic Science & Technology of China); Yun-Jiang Rao (University of Electronic Science and Technology of China);
- 11:40 High-average-power Linear-polarized Ultrafast Fiber Laser and Their Coherent Beam Combining
invited *Pu Zhou (National University of Defense Technology); Hailong Yu (National University of Defense Technology); Pengfei Ma (National University of Defense Technology); Rongtao Su (National University of Defense Technology (NUDT)); Xiaolin Wang (National University of Defense Technology);*

Session 2A.10a
Oral Presentations for Best Student Paper Awards — SC2: Metamaterials, Plasmonics and Complex Media

Tuesday AM, August 9, 2016
Room 3E

 Chaired by Yongmin Liu

- 08:00 Transformation Optics and EELS, a Frequency- and Time-domain Analysis
invited *Matthias Kraft (Imperial College London); Yu Luo (Nanyang Technological University); John B. Pendry (Imperial College London);*
- 08:20 SWIPT Using Plane Ultra-subwavelength Magnetic Metamaterials
Zhiyang Liu (Tongji University); Yunhui Li (Tongji University); Kai Fang (Tongji University); Yewen Zhang (Tongji University); Hong Chen (Tongji University);
- 08:40 Dual-band, Polarization-insensitive, and Wide-angle Ultra-thin Metamaterial Absorber with Interference Theory Analysis
Guorui Zhang (University of Electronic Science and Technology of China); Li Wang (University of Electronic Science and Technology of China); Yang Zhou (University of Electronic Science and Technology of China); Pei-Heng Zhou (University of Electronic Science and Technology of China); Hai-Yan Chen (University of Electronic Science and Technology of China); Long-Jiang Deng (University of Electronic Science and Technology of China);
- 09:00 Fano Resonances in Core-shell Particles with High Permittivity Covers
Xianghong Kong (Shanghai Jiao Tong University); Gaobiao Xiao (Shanghai Jiao Tong University);
- 09:20 High-efficiency Electromagnetic Wave Conversion Metasurfaces for Wireless Energy Harvesting
Chao Zhang (Shanghai University); Yong Jin Zhou (Shanghai University); Qian Xun Xiao (Shanghai University); Liu Yang (Shanghai University); Tian Yang Pan (Southeast University); Huifeng Ma (Southeast University);
- 09:40 Nonlocality in Anisotropic Optical Metamaterials
Kirill L. Koshelev (The Academic University); Andrey A. Bogdanov (ITMO University);
- 10:00 Coffee Break
- 10:20 A Novel Polarimetric Interferometric SAR Coherence Parameter and Its Application in Buildings Detection
Feiya Zhu (National Space Science Center, Chinese Academy of Sciences); Yunhua Zhang (National Space Science Center, Chinese Academy of Sciences); Dong Li (National Space Science Center, Chinese Academy of Sciences);
- 10:40 Experimental Validation of Sparse Sensing Technique in Subsurface Microwave Holography
Margarita A. Chizh (Bauman Moscow State Technical University); Andrey V. Zhuravlev (Bauman Moscow State Technical University); Vladimir V. Razev (Bauman Moscow State Technical University); Sergey I. Ivashov (Bauman Moscow State Technical University);
- 11:00 Acceleration of Multiplicative Regularized Contrast Source Inversion Algorithm Using Paralleled Computing Architecture
invited *Xue Yang Wang (Tsinghua University); Maokun Li (Tsinghua University); Aria Abubakar (Schlumberger Houston Formation Evaluation);*
- 11:20 Wavelet Based Human Target Detection in Complex Ruins Using a Low Center Frequency UWB Radar
Qiang An (The Fourth Military Medical University); Zhao Li (The Fourth Military Medical University); Fulai Liang (The Fourth Military Medical University); Hao Lv (The Fourth Military Medical University); Fuming Chen (Fourth Military Medical University); Fugui Qi (The Fourth Military Medical University); Jianqi Wang (The Fourth Military Medical University);
- 11:40 Iterative ADMM for Inverse FE-BI Problem
invited *Huan Su (Fudan University); Feng Xu (University of Shanghai for Science and Technology);*

Session 2A_11
SC3&2: Light Harvesting, Photovoltaics, Optoelectronics in Energy, Part 3

Tuesday AM, August 9, 2016
Room 3G

Organized by Wallace C. H. Choy, Jiun-Haw Lee, Liming Ding

Chaired by Elbert E. M. Chia, Qing Zhang

- 08:00 Role of Disorder and Free-carrier Recombination Kinetics in $\text{CH}_3\text{NH}_3\text{PbI}_3$ Perovskite Films
invited *Elbert E. M. Chia (Nanyang Technological University);*

Session 2A_10b
Oral Presentations for Best Student Paper Awards — SC5: Remote Sensing, Inverse Problems, Imaging, Radar and Sensing

Tuesday AM, August 9, 2016
Room 3E

Chaired by Xudong Chen

08:20 Solution-processible Conductive Organics for Efficient
invited Polymer and Perovskite Solar Cells
Chang-Zhi Li (Zhejiang University);

08:40 Upconversion Nanocrystals in Nanostructured Opti-
invited cal Fibers
Howard Ho Wai Lee (Baylor University); Jingyi Yang (Baylor University); Lei Lei (China Jiliang University);

09:00 Design and Preparation of D-A Conjugated Copoly-
invited mers for Polymer Solar Cells
*Qiang Peng (Sichuan University); Kai Li (Sichuan University); Xiaopeng Xu (Sichuan University); Zhen-
guo Wang (Sichuan University); Zuoja Li (Sichuan University); Kui Feng (Sichuan University);*

09:20 Near-infrared Organic Photovoltaic Driven Image De-
invited vice for Three-dimensional Image Sensing
Shun-Wei Liu (Ming Chi University of Technology);

09:40 Interface Engineering for High Performance Polymer
invited and Perovskite Solar Cells
*Hin-Lap Yip (South China University of Technol-
ogy); Qifan Xue (South China University of Technol-
ogy); Chen Sun (South China University of Technol-
ogy); Kai Zhang (South China University of Technol-
ogy); Fei Huang (South China University of Technol-
ogy); Yong Cao (South China University of Technol-
ogy (SCUT));*

10:00 Coffee Break

10:20 Polymeric Hole Conductors in Perovskite Solar Cells
invited with High Efficiency and Long-term Stability
*Taiho Park (Pohang University of Science and Tech-
nology (POSTECH));*

10:40 Efficient and Stable Large-area Perovskite Solar Cells
invited
*Liyuan Han (National Institute for Materials Sci-
ence); Xudong Yang (National Institute for Materials
Science);*

11:00 High Efficiency Blue Phosphorescent Organic Light-
invited emitting Diode with Partially Mixed Host
Huan-Jie Gao (Yuan Ze University); Tzu-Chan Lin (Yuan Ze University); Tien-Lung Chiu (Yuan Ze University); Jau-Jiun Huang (National Taiwan University); Man-Kit Leung (National Taiwan University); Chi-Feng Lin (National United University); Jiun-Haw Lee (National Taiwan University);

11:20 D²-D 1-A Random Terpolymer Based Solar Cells Ex-
invited hibiting 1 V of Open-circuit Voltage
Jialing Wang (Fudan University); Ziqi Liang (Fudan University);

11:40 Efficient Autonomous Solar Panel and Thermo-
Electric Generator (TEG) Integrated Hybrid Energy
Harvesting System

Maninder Singh (Punjabi University); Jaspreet Singh (Punjabi University); Anshula (Punjabi University); Parth Kuchroo (Punjabi University); Hemant Bhatia (Punjabi University); Sushmeet Bhagat (Punjabi University); Geetika Sharma (Lovely Professional University); Ekambir Sidhu (Punjabi University);

Session 2A_12

SC1&3: Design and Simulation of Electromagnetic and Optical Devices

Tuesday AM, August 9, 2016

Room 3H

Organized by Shinichiro Ohnuki, Jun Shibayama

Chaired by Shinichiro Ohnuki, Jun Shibayama

08:00 Techniques Related to FDTD Simulation for the Anal-
ysis of Circular Photonic Devices Having Angular Pe-
riodic Structures
Yasuo Ohtera (Tohoku University);

08:20 Analysis of Radiation Power for Fiber Bragg Gratings
by Leaky Harmonics
Nai-Hsiang Sun (I-Shou University); Min-Yu Tsai (I-Shou University); Yu-Wei Liu (I-Shou University); Jung-Sheng Chiang (I-Shou University);

08:40 Topology Optimal Design of Optical Waveguides
in Consideration of Polarization Dependence Using
BPM and AVM
Akito Iguchi (Muroran Institute of Technology); Y. Tsuji (Muroran Institute of Technology); T. Yasui (Kitami Institute of Technology); K. Hirayama (Kitami Institute of Technology);

09:00 Optic Studies of Electromagnetic Mass Separator with
Geant4
Mohamed Lhadi Bouhssa (Hassan II-Casablanca University); A. Khouaja (Hassan II-Casablanca University); J. Inchaouh (Hassan II-Casablanca University); A. Morsad (Hassan II-Casablanca University); H. Chakir (Hassan II-Casablanca University); S. Boudhaim (Hassan II-Casablanca University); Z. Housni (Hassan II-Casablanca University); N. Harakat (Hassan II-Casablanca University); M. Fiak (Hassan II-Casablanca University); A. Kartouni (Hassan II-Casablanca University); M. Krim (Hassan II-Casablanca University); S. Lablak (Hassan II-Casablanca University); M. R. Mesradi (University of Hassan 1);

- 09:20 Three-dimensional Analysis of a THz Filter with InSb Square Patches
Jun Shibayama (Hosei University); Takaya Yamazaki (Hosei University); Junji Yamauchi (Hosei University); Hisamatsu Nakano (Hosei University);
- 09:40 Proposal and Design of Metallic-Photonic-Crystal-Resonator Filters with Attenuation Poles Using Coupling Matrix Method
Chun-Ping Chen (Kanagawa University); Tet-suo Anada (Kanagawa University); Shigeki Takeda (Antenna Giken Co., Ltd.); Zhewang Ma (Saitama University);
- 10:00 **Coffee Break**
- 10:20 Design of Taper Coupler Type Polarization Splitter with Single-polarization Photonic Crystal Fiber
Zejun Zhang (Muroran Institute of Technology); Yasuhide Tsuji (Muroran Institute of Technology); Masashi Eguchi (Chitose Institute of Science and Technology);
- 10:40 Development of an LOD-FDTD Method for the Analysis of the Cole-Cole Model
Jun Shibayama (Hosei University); Yasuki Kusaka (Hosei University); Junji Yamauchi (Hosei University); Hisamatsu Nakano (Hosei University); Yuki-hisa Suzuki (Tokyo Metropolitan University);
- 11:00 A Novel Analog Broadband RF Predistortion Circuit in Directly Modulated Lasers for Radio-over-fiber Systems
Chen Fan (Southeast University); Zhigong Wang (Southeast University); Xuenong Tian (Southeast University);
- 11:20 Time-domain Analysis of Electromagnetic Fields Using the Fast Inverse Laplace Transform
Shinichiro Ohnuki (Nihon University); S. Watanabe (Nihon University); K. Nagasawa (Nihon University);
- 11:40 Design, Analysis, Fabrication and Comparison of Linear Induction Motor and Linear Permanent Magnet Synchronous Motor
Monojit Seal (Indian Institute of Engineering Science and Technology); Mainak Sengupta (Indian Institute of Engineering Science and Technology);

Session 2A.13a
Extended/Unconventional Electromagnetic Theory, EHD(Electro-hydrodynamics)/EMHD(Electro-magneto-hydrodynamics), and Electro-biology

Tuesday AM, August 9, 2016

Room 3I

Organized by Eva Gescheidtova

Chaired by Martin Cap

- 08:00 The Fixed Analyzer Method in PMD Measurement
Rastislav Motuz (Brno University of Technology);
- 08:20 Numerical Models of a Graphene Coaxial Line
Pavel Fiala (Brno University of Technology); Miloslav Steinbauer (Brno University of Technology); Tomas Kriz (Brno University of Technology); J. Maxa (Brno University of Technology);
- 08:40 Diagnosing Brain Tumors with MRI
Petr Marcon (Brno University of Technology); Karel Bartusek (Institute of Scientific Instruments of the ASCR); Premysl Dohnal (Brno University of Technology); Martin Cap (Brno University of Technology); K. Siruckova (Brno University of Technology); Tomas Kriz (Brno University of Technology);
- 09:00 Advanced Image Segmentation Methods Using Partial Differential Equations: A Concise Comparison
Jiri Sliz (Brno University of Technology); Jan Mikulka (Brno University of Technology);
- 09:20 Comparison of Methods for Detecting the Signal Arrival Time in TDOA Localization Method
Martin Cap (Brno University of Technology); Petr Drexler (Brno University of Technology); Milos Kaska (TES Trebic s.r.o.);
- 09:40 Passive Optical Detection of Moving Targets
Petr Marcon (Brno University of Technology); S. Blazej (Brno University of Technology); Pavel Fiala (Brno University of Technology); Premysl Dohnal (Brno University of Technology); Radim Kadlec (Brno University of Technology);
- 10:00 **Coffee Break**

Session 2A_13b
Coherent Perfect Absorption in
Electromagnetic and Acoustic Waves

Tuesday AM, August 9, 2016

Room 3I

Organized by Wenjie Wan

Chaired by Wenjie Wan

- 10:20 Perfect Absorption under Coherent Illumination: From Frequency-independent Performance to Record-thin Material
Bo Hou (Soochow University);
- 10:40 Theoretical Requirements for Broadband Perfect Absorption of Electromagnetic Waves and Acoustic Wave
Jie Luo (Soochow University); Yun Lai (Soochow University);
- 11:00 Time-reversed Nonlinear Optical Wave Mixing
Yuanlin Zheng (Shanghai Jiaotong University); Xianfeng Chen (Shanghai Jiao Tong University); Wenjie Wan (University of Michigan — Shanghai Jiao Tong University Joint Institute);
- 11:20 Coherent Control of Light-matter Interactions in Metamaterials: Absorption and Beyond
Jianfa Zhang (National University of Defense Technology);
- 11:40 Progress in Metamaterials as Perfect Absorbers for Electromagnetic Waves
Young Pak Lee (Hanyang University); Y. J. Yoo (Hanyang University);

Session 2A_14
Electromagnetic and Optical Properties of
Photonic Materials, Structures, and Crystals

Tuesday AM, August 9, 2016

Room 3J

Organized by Chien-Jang Wu, Tzong-Jer Yang

Chaired by Chien-Jang Wu, Tzong-Jer Yang

- 08:00 Strong Second-harmonic Generation from Bilayer-graphene Embedded in One-dimensional Photonic Crystals
Shihao Zhang (Beijing Institute of Technology); Xiandong Zhang (Beijing Computational Science Research Center);

- 08:20 Single and Bilayer Films of Silver and Gold for Active Plasmonics: Structural Properties, Dielectric Permittivities and Radiation Resistance
Georgiy M. Yankovskii (All-Russian Research Institute of Automatics); Alexey V. Komarov (All-Russian Research Institute of Automatics); P. N. Tananaev (All-Russian Research Institute of Automatics); Igor V. Bykov (All-Russian Research Institute of Automatics); Alexander V. Baryshev (All-Russian Research Institute of Automatics); Konstantin N. Afanasyev (All-Russian Research Institute of Automatics); Irina A. Boginskaya (All-Russian Research Institute of Automatics); I. V. Trofimov (All-Russian Research Institute of Automatics); Ilya A. Rodionov (All-Russian Research Institute of Automatics); Ilya A. Ryzhykov (All-Russian Research Institute of Automatics);

- 08:40 Localized Surface Plasmon Resonance Arising from the Diffusive Electrons in a Semiconductor Core-shell Structure
Yu Gu (Nanjing University of Science and Technology); Haibo Zeng (Nanjing University of Science and Technology);

- 09:00 Analysis of Shielding Effectiveness in Different Kinds of Electromagnetic Shielding Fabric in the Wide Frequency of 1 GHz ~ 18 GHz
Yaping Li (Zhongyuan University of Technology); Xiuchen Wang (Zhongyuan University of Technology); Zhen Pan (Zhongyuan University of Technology); Ying Su (Zhongyuan University of Technology); Zhe Liu (Zhongyuan University of Technology);

- 09:20 THz Leaky Mode Properties Exhibited in a Plasmonic Waveguide with Periodic Subwavelength Corrugated Metallic Wire Structure
Jin-Jei Wu (Chung Hua University); Tzong-Jer Yang (Chung-Hua University); Chien-Jang Wu (National Taiwan Normal University); Her-Lih Chiueh (Lunghwa University of Science and Technology); In-Hang Chung (Chung Hua University); Jian Qi Shen (Zhejiang University); Chengchi Yuan (Chung Hua University); Pin Jung Huang (Chung Hua University);

- 09:40 Coupling Effects between an Electric Dipole and a Magnetic Dipole
Jing Lin (Fudan University); Meng Qiu (Fudan University); Huijie Guo (Fudan University); Qiong He (Fudan University); Lei Zhou (Fudan University);

- 10:00 **Coffee Break**

- 10:20 Exciton Emission from Plasmonic-organic-III-V-semiconductor Nanowires and Nanorods
Hans-Peter Wagner (University of Cincinnati); Masoud Kaveh (University of Cincinnati); Fatemesadat Mohammadi (University of Cincinnati); Heidrun Schmitzer (Xavier University); Qiang Gao (The Australian National University); Chennupati Jagadish (The Australian National University); Gerd Kunert (University of Bremen); Detlef Hommel (University of Bremen); Jingxuan Ge (University of Tennessee); Gerd Duscher (University of Tennessee);
- 10:40 Nonlinear Excitation of Plasmon Superlocalized Modes and the Emission Polarization Characteristics
Po-Wen Tang (National Central University); Chung-Kai Tseng (National Central University); Chao-Yi Tai (National Central University);
- 11:00 Terahertz Multichannel Filters Based on the Use of Triadic-Cantor-set Semiconductor Photonic Crystal
Tzu-Chyang King (National Pingtung University of Education); Chi-Chung Liu (National Formosa University); Chien-Jang Wu (National Taiwan Normal University);
- 11:20 Scanning Antenna Constructed by a Plasmonic Waveguide with Periodic Subwavelength Metallic Hollow Blocks
Her-Lih Chiueh (Lunghwa University of Science and Technology); Tzong-Jer Yang (Chung-Hua University); Jin-Jei Wu (Chung Hua University); Chien-Jang Wu (National Taiwan Normal University); Da Jun Hou (Chung-Hua University); Jian Qi Shen (Zhejiang University); Yuli Lin (Chung Hua University); Yao-Huang Kao (Chung-Hua University); Wen-Chen Lo (National Taiwan University);
- 11:40 Photoluminescence Enhancement of Silicon Nanocrystals Covered by Periodic Array of Gold Nanowires
Sergey A. Dyakov (Skolkovo Institute of Science and Technology); Denis M. Zhigunov (Lomonosov Moscow State University); Aleksandrs Marinins (KTH Royal Institute of Technology); M. R. Scherbakov (Lomonosov Moscow State University); Sergei Popov (Royal Institute of Technology (KTH)); M. Zacharias (Albert-Ludwigs-University); S. G. Tikhodeev (A. M. Prokhorov General Physics Institute, RAS); N. A. Gippius (Lomonosov Moscow State University);

Session 2A_15
FocusSession.SC2&3: Unconventional Fabrication and Novel Applications of Deep Sub-wavelength Nanophotonic Structures 1

Tuesday AM, August 9, 2016
Room 5A

Organized by Junsuk Rho, Liang Pan

 Chaired by Junsuk Rho, Liang Pan

- 08:00 Unnatural Molding of Visible Light Flow by DNA
 invited *Origami-guided Assembly of Metallic Nanostructures*
Seungwoo Lee (Sungkyunkwan University (SKKU));
- 08:20 Large-area Metasurfaces Produced with nm Precision
 invited *by UV Nanoimprint Lithography*
Masanobu Iwanaga (National Institute for Materials Science);
- 08:40 Nanostructured Thin-film Materials Fabricated by
 invited *Oblique Angle Deposition and Their Applications*
Jong Kyu Kim (POSTECH);
- 09:00 3D Fabrication for Optical Metamaterials and Meta-
 invited *surfaces*
Zi Jing Wong (University of California); Xiang Zhang (University of California);
- 09:20 Multishell Nanowires for Next-generation Photo-
 invited *voltaics*
Hong-Gyu Park (Korea University); Sun-Kyung Kim (Korea University); Kyung-Deok Song (Korea University); Thomas J. Kempa (Harvard University); Charles M. Lieber (Harvard University);
- 09:40 Spectral Modulation of Molecular/Intermolecular Vi-
 invited *brational Mode by Infrared Plasmon*
Kosei Ueno (Hokkaido University);
- 10:00 **Coffee Break**
- 10:20 Short-range Surface Plasmonics and Its (Sub-
 keynote) *femtosecond Dynamics*
Harald Giessen (University of Stuttgart);

10:50 Novel Applications of Plasmonic Metamaterials

keynote

Hui Jun Wu (National Taiwan University);
Ming Lun Tseng (National Taiwan University);
Cheng Hung Chu (National Taiwan University);
Pin Chieh Wu (National Taiwan University); Wei-
Yi Tsai (National Taiwan University); Mu-Ku Chen
(National Taiwan University); Hung-I Lin (Research
Center for Applied Sciences); Hsiang-Chu Wang
(National Taiwan University); Ching-Fu Chen (Na-
tional Taiwan University); Jia-Wern Chen (National
Taiwan University); Ting-Yu Chen (National Taiwan
University); Yi-Hao Chen (National Taiwan Uni-
versity); Pei Ru Wu (National Taiwan University);
Din Ping Tsai (National Taiwan University);

11:20 Plasmon Enhanced Solar Desalination

invited

Jia Zhu (Nanjing University);

11:40 Continuous Fabrication of Film Type Acoustic Meta-
materials for Acoustic Attenuation

invited

Sung Ho Lee (Kyungpook National University);
Beom-Seok Bae (Kyungpook National University);
Jin Ho Choi (Kyungpook National University);
Gyu Man Kim (Kyungpook National University);
Yong Rae Roh (Kyungpook National University);
Hoon Eui Jeong (Ulsan National Institute of Science
and Technology); Jun-Ho Choi (Pukyong National
University); Moon Kyu Kwak (Kyungpook National
University);

Session 2A0**Poster Session 3****Tuesday AM, August 9, 2016****9:00 AM - 12:00 AM****Room Poster Area**1 Multi-look HRR-ATR Based on Joint Sparse Repre-
sentation

Qinglin Zhai (National University of Defense Tech-
nology); Jiemin Hu (National University of Defense
Technology); Wenxia Ding (National University of
Defense Technology); Shengqi Liu (National Univer-
sity of Defense Technology); Wei Wang (National
University of Defense Technology);

2 A Robust Preprocessing Method for Noisy Blind
Source Separation

Shan-Shan Lu (National University of Defense Tech-
nology); Wei Wang (National University of Defense
Technology); Zhao-Yu Gu (National University of De-
fense Technology); Guoyu Wang (National University
of Defense Technology);

3 Double V-chirp Waveform Scheme for False Targets
Suppression in Nonlinear Processing of Delay-Doppler
Maps

Jiahua Zhu (National University of Defense Technol-
ogy); Chongyi Fan (National University of Defense
Technology); Su-Dan Han (National University of De-
fense Technology); Xiaotao Huang (National Univer-
sity of Defense Technology);

4 A Kind of Method of Anti-corner Reflector Interfer-
ence for Millimeter Wave High Resolution Radar Sys-
tem

Kaibo Cui (National University of Defense Technol-
ogy); Wei Wang (Naval Aviation Academy); Xi Chen
(National University of Defense Technology); Nai-
Chang Yuan (National University of Defense Tech-
nology);

5 Experimental Studies and Computer Simulations of
Magnetoplastic Effect

V. I. Alshits (Shubnikov Institute of Crystallography,
RAS); E. V. Darinskaya (Shubnikov Institute of Crys-
tallography, RAS); M. V. Koldaeva (Shubnikov Insti-
tute of Crystallography, RAS); Romuald K. Kotowski
(Polish-Japanese Academy of Information Technol-
ogy); E. A. Petrzhik (Shubnikov Institute of Crys-
tallography, RAS); P. K. Tronczyk (Polish-Japanese
Academy of Information Technology);

6 Equivalent Circuit Method Analysis Metamaterial
Han Xiong (Chongqing University); Ming-Chun Tang
(Chongqing University); Shiyong Chen (Chongqing
University);7 High-performance Broadband Circular Polarizer Us-
ing Self-similar Patterns

Xiaoxiao Wu (The Hong Kong University of Science
& Technology); Weijia Wen (The Hong Kong Univer-
sity of Science and Technology);

8 A Compact and Polarization-insensitive Perfect Meta-
material Absorber for Electromagnetic Energy Har-
vesting Application

Yongzhi Cheng (Huazhong University of Science and
Technology); Cong Fang (Huazhong University of Sci-
ence and Technology); Zhe Zhang (Wuhan University
of Science and Technology); Bin Wang (Wuhan Uni-
versity of Science and Technology); Jun-Feng Chen
(Huazhong University of Science and Technology);
Rong Zhou Gong (Huazhong University of Science and
Technology);

9 Magnetic Response at Visible and Near-infrared Fre-
quencies from Black Phosphorus Sheet Arrays

Tiecheng Wang (Beijing Institute of Technology); Xi-
angdong Zhang (Beijing Computational Science Re-
search Center);

- 10 A Novel Broadband Absorber with Honeycomb Lattices Based on the Flexible Metamaterial
Yue-Hong Hu (Nanjing University of Aeronautics and Astronautics); Hai Feng Zhang (Nanjing University of Aeronautics and Astronautics); Ling-Ling Wang (Nanjing University of Aeronautics and Astronautics); Wei Shi (Nanjing University of Aeronautics and Astronautics); Chen-Yang Mao (Nanjing University of Aeronautics and Astronautics);
- 11 A Broadband Flexible Metamaterial Absorber with a Transparent Window
Ling-Ling Wang (Nanjing University of Aeronautics and Astronautics); Hai Feng Zhang (Nanjing University of Aeronautics and Astronautics); Xiang-Kun Kong (Nanjing University of Aeronautics and Astronautics); Bo-Rui Bian (Nanjing University of Aeronautics and Astronautics);
- 12 Omnidirectional Photonic Band Gaps Enlarged by 1D Plasma Photonic Crystals with Quasi-periodic Structures
Xue Feng (Nanjing University of Aeronautics and Astronautics); Hai Feng Zhang (Nanjing University of Aeronautics and Astronautics); Xiang-Kun Kong (Nanjing University of Aeronautics and Astronautics); Ling-Ling Wang (Nanjing University of Aeronautics and Astronautics);
- 13 A Novel Broadband Metamaterial Absorber Based on the Fractal Structure
Lu-Lu Liu (University of Aeronautics and Astronautics); Hai Feng Zhang (Nanjing University of Aeronautics and Astronautics); Ling-Ling Wang (Nanjing University of Aeronautics and Astronautics);
- 14 Research on Photo-reduced Graphene Oxide by Ultrafast Spectral
Yuan-Yuan Yue (Jilin University); Yan-Xia Zhang (Jilin University); Hai-Yu Wang (Jilin University);
- 15 Diffraction Properties of Bessel-Gauss Beams by Fresnel Zone Plate
Haitao Zhang (Luohe Medical College); Lan Liu (Luohe Medical College);
- 16 Reversible Transition between FP Lasing and WGM Lasing in $\text{CH}_3\text{NH}_3\text{PbBr}_3$ Perovskite Microwires
Kaiyang Wang (Harbin Institute of Technology); Z. Y. Gu (Harbin Institute of Technology); S. Liu (Harbin Institute of Technology); J. K. Li (Harbin Institute of Technology); S. M. Xiao (Harbin Institute of Technology); Q. H. Song (Harbin Institute of Technology);
- 17 Charged Inverted Pendulum as a New Model for Control of Unstable Systems
Mikhail E. Semenov (Zhukovsky-Gagarin Air Force Academy); Peter A. Meleshenko (Voronezh State University); Vladimir A. Gorlov (Zhukovsky-Gagarin Air Force Academy); Anton G. Rukavitsyn (Voronezh State University); Olga O. Reshetova (Voronezh State University); Zainib Hatif Abbas (Voronezh State University of Architecture and Civil Engineering); Hang T. T. Nguyen (Vietnam National University); Alexander F. Klinskikh (Voronezh State University);
- 18 Comparative Analysis of the Aperture Averaging Function between Cassegrain System and Singular Aperture System
Changqi Yang (Xi'an Shiyou University); Ning Xu (Xi'an Shiyou University); Zhimin Wu (Xi'an Shiyou University); Fan Wang (Xi'an Shiyou University); Simin Liu (Xi'an Shiyou University); Liuyi Yang (Xi'an Shiyou University); Xiaoyu Tu (Xi'an Shiyou University);
- 19 Laser Atmospheric Propagation Performance Analysis for a 300-Meter Path
Changqi Yang (Xi'an Shiyou University); Ning Xu (Xi'an Shiyou University); Zhimin Wu (Xi'an Shiyou University); Fan Wang (Xi'an Shiyou University); Simin Liu (Xi'an Shiyou University); Liuyi Yang (Xi'an Shiyou University); Xiaoyu Tu (Xi'an Shiyou University);
- 20 Patterned Graphene as an Anode for Organic Light-emitting Diode
Yang Chen (Jilin University); Yan-Gang Bi (Jilin University); Jing Feng (Jilin University);
- 21 Flexible Light-emitting Diodes Using Organometal Halide Perovskite with Ultrathin Au Electrode
Yu-Shan Liu (Jilin University); Jing Feng (Jilin University);
- 22 Design of an Optically Pumped Distributed Feedback Laser with Perovskite Active Media
Yafei Feng (Zhejiang University); Haoyu Deng (Zhejiang University); Jian-Jun He (Zhejiang University);
- 23 Narrow Spectral Width FP Lasers for High-speed Short-reach Applications
Junwei Fu (Huazhong University of Science and Technology); Yanping Xi (Huazhong University of Science and Technology);

- 24 Single-layer Broadband Linearly Polarized Reflectarray Antenna by Using Phase-delay Lines
Chunhui Han (National Space Science Center, Chinese Academy of Sciences); Yunhua Zhang (National Space Science Center, Chinese Academy of Sciences); Qingshan Yang (Center for Space Science and Applied Research, Chinese Academy of Sciences);
- 25 A Broadband Reflectarray Using Patch with Slot Ring on Ground Plane Elements
Fei Xue (National Space Science Center, Chinese Academy of Sciences); Hongjian Wang (National Space Science Center, Chinese Academy of Sciences); Min Yi (National Space Science Center, Chinese Academy of Sciences); Xingchao Dong (National Space Science Center, Chinese Academy of Sciences);
- 26 The Design for Multi-frequency Microstrip Antenna Based on Gap-coupled
Yaxiu Sun (Harbin Engineering University); Tingting Guo (Harbin Engineering University); Xiaomeng Wang (Harbin Engineering University); Ruiying Sun (Harbin Engineering University);
- 27 OLR-Filtenna for Wi-Fi Applications
Nair S. Bhuvana (Amrita Center for Wireless Networks and Applications); Sreedevi K. Menon (Amrita School of Engineering);
- 28 Design and Analysis of Modified Log Periodic Dipole Antenna with Enhanced Gain
A. Shruthi (Amrita University); Sreedevi K. Menon (Amrita University);
- 29 A Planar Anti-interference UWB Antenna with Designated Tunable and Reconfigurable Multiple Filtering Bands
Yingsong Li (Harbin Engineering University); Xiaomin Liu (Harbin Engineering University); Kai Yu (Harbin Engineering University); Yanyan Wang (Harbin Engineering University);
- 30 A Multi-band Square Patch Antenna Based on Shorted Pins and Asymmetric-circular Shaped Slots
Xiaomin Liu (Harbin Engineering University); Yingsong Li (Harbin Engineering University); Yanyan Wang (Harbin Engineering University);
- 31 Development of a Microstrip-fed Multi-band Antenna by Means of Defected Microstrip Structures
Yanyan Wang (Harbin Engineering University); Tao Jiang (Harbin Engineering University); Yingsong Li (Harbin Engineering University);
- 32 Design of a K-band LTCC Microstrip Antenna Array
Cheng-Nan Hu (Oriental Institute of Technology); Kevin Peng (Oriental Institute of Technology);
- 33 A Method to Optimize Cross-polarization of Full Polarimetric Conformal Antenna Array
Jihong Zhang (NUDT); Shun-Lian Chai (National University of Defense Technology); Fei Zhao (Southwest Electronics and Telecommunication Technology Research Institute); Ke Xiao (National University of Defense Technology);
- 34 A Broadband Dual-polarization Slot Antenna Based on Substrate-integrated Cavity
Ge Gao (National University of Defense Technology); Hu Yang (National University of Defense Technology); Zusheng Jin (National University of Defense Technology); Qi Wu (National University of Defense Technology);
- 35 Analysis and Optimization of a Microwave Switching Network Using Non-uniform Transmission Lines
Yong Zhou (University of Texas Rio Grande Valley);
- 36 A Novel Compact Printed ACS Fed Dual-band Antenna for Bluetooth/WLAN/WiMAX Applications
Arvind Kumar (Symbiosis International University (DU)); Praveen Vummadisetty Naidu (Symbiosis International University);
- 37 A Compact O-shaped Printed ACS Fed Monopole Dual-band Antenna for 2.4 GHz Bluetooth and 5 GHz WLAN/WiMAX Applications
Arvind Kumar (Symbiosis International University (DU)); Praveen Vummadisetty Naidu (Symbiosis International University);
- 38 A Rectangular Patch Antenna with Wideband High Order Harmonic Suppression Using Compact Defected Microstrip Structure
Wen-Lu Xie (Beihang University); Yuan Wei (Beihang University); Jun Wang (Beijing Electromechanical Engineering Institute); Tao Hong (Beihang University); Lingfeng Mao (University of Science and Technology); Fei Liu (Beihang University); Huansheng Ning (University of Science and Technology);
- 39 Compact Dual-band ACS-fed Monopole Omnidirectional Antenna for WLAN/WiMAX Applications
Xue Bin Niu (Air-Defense and Antimissile Institute of Air Force Engineering University); Jian-Gang Liang (Air Force Engineering University); Guo-Cheng Wu (Air Force Engineering University); Yongfan Lin (Air Force Engineering University);
- 40 Wearable GPS Patch Antenna on Jeans Fabric
Ignacio Gil (Universitat Politècnica de Catalunya (UPC)); Raul Fernandez-Garcia (Universitat Politècnica de Catalunya);

- 41 Study of a Conformal Elliptical Tapered Slot Antenna for UWB Applications
Yongxing Che (*Science and Technology on Electromagnetic Scattering Laboratory*); Xujin Yuan (*Science and Technology on Electromagnetic Scattering Laboratory*); Yongfeng Wang (*Science and Technology on Electromagnetic Scattering Laboratory*); Xiaofeng Yuan (*Science and Technology on Electromagnetic Scattering Laboratory*); Xinyu Hou (*Science and Technology on Electromagnetic Scattering Laboratory*);
- 42 Design of Miniaturized Ultra-wideband Quasi-Yagi Antenna
Yulong Zhou (*Air Force Engineering University of CPLA*); Guang Zhang (*Military Representative Office in the 765 Factory*); Xiang-Yu Cao (*Air Force Engineering University of CPLA*); Jun Gao (*Air Force Engineering University of CPLA*); Yuejun Zheng (*Air Force Engineering University*);
- 43 Low-cost Single-fed Circularly Polarized Stacked Patch Antenna for UHF RFID Reader Applications
Shiqiang Fu (*Dalian Maritime University*); Chanyuan Li (*Dalian Maritime University*); Shao-Jun Fang (*Dalian Maritime University*); Zhongbao Wang (*Dalian Maritime University*);
- 44 A Printed Log-periodic Dipole Antenna with Balanced Feed Structure
Lianbo Yu (*National University of Defense Technology*); Shun-Lian Chai (*National University of Defense Technology*); Hao Huang (*National University of Defense Technology*); Liang Ding (*National University of Defense Technology*); Ke Xiao (*National University of Defense Technology*); Fei Zhao (*Southwest Electronics and Telecommunication Technology Research Institute*); Fei Zhao (*Southwest Electronics and Telecommunication Technology Research Institute*);
- 45 Design and Analysis of a Tri-band Notch UWB Monopole Antenna
Wenqi Liu (*Harbin Engineering University*); Tao Jiang (*Harbin Engineering University*);
- 46 Design of a Low-profile 2–10 GHz Ultra-wideband Antenna Array
Yanfang Wang (*Hohai University*); Fuguo Zhu (*Science and Technology on Antenna and Microwave Laboratory*); Steven Gao (*University of Kent*);
- 47 Planar Dual-polarized Slot Antenna for UWB MIMO Applications
Yanfang Wang (*Hohai University*); Fuguo Zhu (*Science and Technology on Antenna and Microwave Laboratory*); Steven Gao (*University of Kent*);
- 48 Design and Study Miniaturized-element Wideband Frequency Selective Surface
Lin Zheng (*Air Force Engineering University*); Shaobo Qu (*Air Force Engineering University*); Jieqiu Zhang (*Air Force Engineering University*); Mingbao Yan (*Air Force Engineering University*); Yongfeng Li (*Air Force Engineering University*); Yueyu Meng (*Air Force Engineering University*); Zhuoluo Wang (*Air Force Engineering University*);
- 49 Supervised Classification of PolSAR Images Using Adaptive Sample Censoring Strategy
Tiancheng Luo (*National University of Defense Technology*); Huanxin Zou (*National University of Defense Technology*); Hongyan Kang (*National University of Defense Technology*); Xianxiang Qin (*Air Force Engineering University*); Shilin Zhou (*National University of Defense Technology*); Kefeng Ji (*National University of Defense Technology*);
- 50 A Waveform with Low Intercept Probability for OFDM SAR
Xiang Yu (*National University of Defense Technology*); Yaowen Fu (*National University of Defense Technology*); Lei Nie (*National University of Defense Technology*); Guanhua Zhao (*National University of Defense Technology*); Wenpeng Zhang (*National University of Defense Technology*);
- 51 Full-polarization Bistatic Scattering Characteristics Analysis of Stealth Aircraft
Xiaofeng Ai (*National University of Defense Technology*); Feng Zhao (*National University of Defense Technology*); Jin Liu (*National University of Defense Technology*); Jianhua Yang (*National University of Defense Technology*); Zhaoyu Gu (*National University of Defense Technology*);
- 52 Deviation Analysis of Pulse Compression in ISAR Imaging Based on Direct Intermediate Frequency Sampling Data
Wenzhen Wu (*National University of Defense Technology*); Shi You Xu (*National University of Defense Technology*); Zeng Ping Chen (*National University of Defense Technology*);
- 53 ISAR Imaging with Sparse Pulses Based on Compressed Sensing
Yi Zhuang (*National University of Defense Technology*); Shi You Xu (*National University of Defense Technology*); Zeng Ping Chen (*National University of Defense Technology*); Qiwei Dai (*National University of Defense Technology*);

- 54 Near Range Microwave 3D Imaging Algorithm Based on L1 Optimization in Range Direction for Target Feature Enhancements
Yanping Wang (China Academy of Safety Science and Technology); W. X. Tan (Inner Mongolia University of Technology); Yaolong Qi (China Academy of Safety Science and Technology); Rui Li (National Computer Network Emergency Response Technical Team/Coordination Center of China); L. Z. Jin (University of Science and Technology Beijing);
- 55 Measurement Matrix Optimization Schemes for DL-SLA 3-D SAR Cross-track Reconstruction Based on Mutual Coherence Criteria
Qian Bao (Institute of Electronics, Chinese Academy of Sciences); Yun Lin (Institute of Electronics, Chinese Academy of Sciences); Wen Hong (Institute of Electronics, Chinese Academy of Sciences); Yang Li (Institute of Beijing Aerospace Automatic Control Research);
- 56 SVM-based Land Use/Cover Classification in Shihezi Area
Tiaojun Zeng (Shihezi University); Chuan Jian Wang (Shihezi University);
- 57 Method for Choosing Regularization Parameter in 2D SAR Imaging
Xiaoxiang Zhu (National University of Defence Technology); Guanghu Jin (National University of Defence Technology); Feng He (National University of Defence Technology); Zhen Dong (National University of Defence Technology);
- 58 Theoretical Study on Polarimetric Features of Microwave Scattering from Sea Surface
Honglei Zheng (Ocean University of China); Yan-Min Zhang (Ocean University of China); Yunhua Wang (Ocean University of China); Chaofang Zhao (Ocean University of China);
- 59 Research on Motion Compensation of FMCW Continuous Mode Slope Radar
Yaolong Qi (China Academy of Safety Science and Technology); Yanping Wang (China Academy of Safety Science and Technology); Xiaolin Yang (China Academy of Safety Science and Technology); Rui Li (National Computer Network Emergency Response Technical Team/Coordination Center of China); Zengshu Huang (Beihang University); L. Z. Jin (University of Science and Technology Beijing);
- 60 Atmospheric Phase Correction Based on Coherent Scatterers in GB-SAR Interferometry Using a Single InSAR Pair
Zengshu Huang (Beihang University); Yaolong Qi (China Academy of Safety Science and Technology); Jinping Sun (Beihang University); W. X. Tan (Inner Mongolia University of Technology); Yanping Wang (China Academy of Safety Science and Technology); Xiaolin Yang (China Academy of Safety Science and Technology);
- 61 Narrowband Imaging for Sliding-type Scatterers of Precessional Targets via Filtered Back Projection Algorithm
Yuling Liu (National University of Defense Technology); Xizhang Wei (National University of Defense Technology); Bo Peng (National University of Defense Technology);
- 62 The Antenna by Using Hybrid Material and Analysis the Effect on Human Body
Ho-Jun Lee (Korea Electronics Technology Institute); In Su Yeom (Seoul National University of Science and Technology);
- 63 A Compact FMCW Interrogator of Microstrip Antenna for Foot Pressure Sensing
Jun Yao (University of Texas at Arlington); Saibun Tjuatja (University of Texas at Arlington); Haiying Huang (University of Texas at Arlington);
- 64 Directive 2013/35/EU for Electromagnetic Fields of Workers' Exposure and Working from the Ladder near a 400 kV Power Line
Leena Korpinen (Tampere University of Technology); Rauno Paakkonen (Finnish Institute of Occupational Health); Lourdes Farrugia (Finnish Institute of Occupational Health); Hiroo Tarao (Tampere University of Technology); Fabriziomaria Gobba (University of Modena and Reggio Emilia);
- 65 Possibilities to Decrease the Extremely Low-frequency Electric Field Exposure with a Faraday Cage under a 400 kV Power Line
Rauno Paakkonen (Finnish Institute of Occupational Health); Lourdes Farrugia (Finnish Institute of Occupational Health); Hiroo Tarao (Tampere University of Technology); Fabriziomaria Gobba (University of Modena and Reggio Emilia); Leena Korpinen (Tampere University of Technology);
- 66 The Response of the Human Organism to Ionospheric Changes
Michael Hanzelka (Brno University of Technology); Jiri Dan (Masaryk University); Pavel Fiala (Brno University of Technology); Premysl Dohnal (Brno University of Technology); Vladan Holcner (University of Defence);

- 67 Tools for the Evaluation of Broadband Signal Tasks
Zoltan Szabo (Brno University of Technology); Jan Mikulka (Brno University of Technology); Dusan Nespor (Brno University of Technology); Pavel Fiala (Brno University of Technology);
- 68 RF Magnetic Field Enhancement in MRI by Metamaterial Structures
Dusan Nespor (Brno University of Technology); Petr Drexler (Brno University of Technology); Martin Cap (Brno University of Technology);
- 69 A Novel Method of Front Vehicle Recognition
Guanli Zhang (Tongji University); Feng Lin (Tongji University); Lan Lin (Tongji University);
- 70 Fabrication of 4×4 Si Nanowire Arrayed Waveguide Grating
Silin Liu (Huazhong University of Science & Technology); Shiqi Tao (Huazhong University of Science & Technology); Jinsong Xia (Huazhong University of Science and Technology (HUST));
- 71 On the Use of Augmented Reality Devices for Subsurface Radar Imaging
Andrey V. Zhuravlev (Bauman Moscow State Technical University); Vladimir V. Razevig (Bauman Moscow State Technical University); Margarita A. Chizh (Bauman Moscow State Technical University); Alexander S. Bugaev (Moscow Institute of Physics and Technology);
- 72 Numerical Comparison of Mono-static and Multi-static Array Performance in Personnel Screening Systems
Vladimir V. Razevig (Bauman Moscow State Technical University); Margarita A. Chizh (Bauman Moscow State Technical University); Valery V. Chapursky (Bauman Moscow State Technical University); Sergey I. Ivashov (Bauman Moscow State Technical University); Andrey V. Zhuravlev (Bauman Moscow State Technical University);
- 73 Application of an Adaptive Two-wave Mixing Interferometer for Detection of Surface Defects
Jiachen Ke (Zhejiang University); Changqi Duan (Zhejiang University); Wei Yi (Zhejiang University); Chunsheng Yan (Zhejiang University);
- 74 Study on Several Methods of Improving Precision of Test in the RCS Measurements
Yan Wang (Science and Technology on Electromagnetic Scattering Laboratory); Yongfeng Wang (Science and Technology on Electromagnetic Scattering Laboratory); Kainan Qi (Communication University of China); Xiao-Feng Yuan (Science and Technology on Electromagnetic Scattering Laboratory); Tuo Liu (Science and Technology on Electromagnetic Scattering Laboratory);
- 75 Distributed Sensor Diagnosis for Wire Fault of Complex Topology Wired Networks Based on Chaos-TDR
Bingjie Wang (Ministry of Education and Shanxi Province); Hang Xu (Ministry of Education and Shanxi Province); Yuncai Wang (Taiyuan University of Technology); Guanghui Wu (Ministry of Education and Shanxi Province); Li Liu (Ministry of Education and Shanxi Province);
- 76 Design of a Wideband Phase Shifter Using Loaded Element
Hui Liu (Guangdong Peizheng College); Luokai Zhang (Guangdong Peizheng College); Jiwei Pan (Guangdong Peizheng College); Youhuan Guo (Guangdong Peizheng College); Xin Dai (South China Normal University, Samsung Mobile R & D Center);
- 77 Evaluation of High Definition Digital Video Signal over Coaxial Transmission Lines
Raul Fernandez-Garcia (Universitat Politècnica de Catalunya); Ignacio Gil (Universitat Politècnica de Catalunya (UPC));
- 78 Impact of Nonlinear MOS Capacitance Effect on Transient Analysis of Interposer Through-Silicon Vias
Jie Zheng (Hangzhou Dianzi University); Xuan Gao (Hangzhou Dianzi University); Wen-Sheng Zhao (Hangzhou Dianzi University); Gaofeng Wang (Hangzhou Dianzi University);
- 79 Analysis of On-Chip Copper-Single-Walled Carbon Nanotube Composite Interconnects Using Transmission Line Model
Xuan Gao (Hangzhou Dianzi University); Jie Zheng (Hangzhou Dianzi University); Wen-Sheng Zhao (Hangzhou Dianzi University); Gaofeng Wang (Hangzhou Dianzi University);
- 80 Research of Enhancement Algorithms Based on Visible Images of Transmission Line
Shu Jia Yan (Shanghai University of Engineering Science); Zhen Hui Zhou (Shanghai University of Engineering Science); Mei Song Tong (Tongji University);
- 81 Analysis of New Differential-mode Source Cable Bundle Crosstalk Model Based on FDTD
Yaxiu Sun (Harbin Engineering University); Xiaomeng Wang (Harbin Engineering University);

- 82 Design of 4–5 GHz Transition from Double-ridge Waveguide to Coaxial Line
Lei Xiao (University of Electronic Technology and Science of China); Bo Chen (University of Electronic Technology and Science of China); Jiu Rong Huang (University of Electronic Technology and Science of China);
- 83 Analysis of the Radiation from a Pigtail-terminated Coaxial Cable Using the Imbalance Difference Model
Mengxi Liu (Beihang University); Junjun Wang (Beihang University); Xuyue Wu (Beihang University);
- 84 Study of the Exposure to Time-varying Electric Field in the ESEIAAT UPC School
Ignacio Gil (Universitat Politecnica de Catalunya (UPC)); Raul Fernandez-Garcia (Universitat Politecnica de Catalunya);
- 85 Analyze of the Contactless Power Transfer Model in FEM Analysis Software
Radek Fajtl (Czech Technical University in Prague); Karel Buhr (Czech Technical University in Prague);
- 86 A Metal Frame Antenna Design and Measurement
Hsiang Su (National Taipei University of Technology); Guan-Yu Chen (National Taipei University of Technology); Jwo-Shiun Sun (National Taipei University of Technology);
- 87 Microlaser Array on Plasmonic Grating
Shang Sun (Harbin Institute of Technology); Chen Zhang (Harbin Institute of Technology); Kaiyang Wang (Harbin Institute of Technology); Wenzhao Sun (Harbin Institute of Technology); Shuai Wang (Harbin Institute of Technology); Qinghai Song (Harbin Institute of Technology); Shumin Xiao (Harbin Institute of Technology);
- 88 Inhibiting the Auger Recombination of Perovskite Micro-rod Laser through the Monolayer Graphene
Chen Zhang (Harbin Institute of Technology); Kaiyang Wang (Harbin Institute of Technology); Y. S. Gao (Harbin Institute of Technology); M. X. Zhu (Harbin Institute of Technology); Wenzhao Sun (Harbin Institute of Technology); S. Liu (Harbin Institute of Technology); K. Xu (Harbin Institute of Technology); Shumin Xiao (Harbin Institute of Technology); Qinghai Song (Harbin Institute of Technology);
- 89 Study of an Electro-optic Leaky Waveguide Deflector for Application in All-optical Analog-to-Digital Converters
Massinissa Hadjloum (Lunam Universite, Universite de Nantes); Mohammed El-Gibari (Lunam Universite, Universite de Nantes); Hongwu Li (Lunam Universite, Universite de Nantes); Afshin S. Daryoush (Drexel University);
- 90 Research on Rough Sea Surface EM Computation Model Based on Parallel FDTD Method
Xiaowei Zhang (Harbin Engineering University); Hanlin Duan (Harbin Engineering University); Tao Jiang (Harbin Engineering University);
- 91 Research on EM Simulation Model of 2D Rough Sea Surface
Xiaojun Wang (Harbin Engineering University); Xiaowei Zhang (Harbin Engineering University); Tao Jiang (Harbin Engineering University);
- 92 Application of a New Restricted Boltzmann Machine to Radar Target Recognition
Jingyuan Xia (National University of Defense Technology); Xiang Li (National University of Defense Technology); Yongxiang Liu (National University of Defense Technology);
- 93 Radiation Pattern Control and Synthesis for the Generation of OAM-beams
Kang Liu (National University of Defense Technology); Yongqiang Cheng (National University of Defense Technology); Yu-Liang Qin (National University of Defense Technology); Xiang Li (National University of Defense Technology); Yanwen Jiang (National University of Defense Technology);
- 94 Independent Component Analysis in Bioradar Data Processing
Lesya N. Anishchenko (Bauman Moscow State Technical University);
- 95 An Improved Method of Data Alignment for Angle Measurement in Monopulse Radar
Qingzhan Shi (National University of Defense Technology); Deping Zhang (National University of Defense Technology); Kelei Wei (National University of Defense Technology); Nai-Chang Yuan (National University of Defense Technology);
- 96 Multiple False Targets Jamming Method Based on FIFO
Ning Tai (National University of Defense Technology); Kelei Wei (National University of Defense Technology); Chao Wang (National University of Defense Technology); Nai-Chang Yuan (National University of Defense Technology);
- 97 A Design of Coherent Moving Target Simulator for Inverse Synthetic Aperture Radar
Ning Tai (National University of Defense Technology); Chao Wang (National University of Defense Technology); Nai-Chang Yuan (National University of Defense Technology);

- 98 A Coherent Signal Processing Method for Distributed Radar System
Chunfeng Lin (National University of Defense Technology); Chunlin Huang (National University of Defense Technology); Yi Su (National University of Defense Technology);
- 99 Coherent Point Drift Based Scattering Center Matching Method with Application to SAR ATR
Conghui Ma (National University of Defense Technology); Gongjian Wen (National University of Defense Technology); Xiaohong Huang (National University of Defense Technology); Xiaoliang Yang (National University of Defense Technology); Shaohua Qiu (National University of Defense Technology);
- 100 An Electromagnetic Model Based Scattering Center Detection Method by Hypothesis Testing
Conghui Ma (National University of Defense Technology); Gongjian Wen (National University of Defense Technology); Baiyuan Ding (National University of Defense Technology); Jingrong Zhong (National University of Defense Technology);
- 101 The Influence of Polarization Cancellation on Radar SINR
Chu-Qiao Mao (National University of Defense Technology); Longfei Shi (National University of Defense Technology); Bo Ren (National University of Defense Technology); Wen-Ming Zhang (National University of Defense Technology);
- 102 A Traffic Sign Recognition Method Based on Deep Visual Feature
Feng Lin (Tongji University); Yan Lai (Tongji University); Lan Lin (Tongji University); Yuxin Yuan (Fudan University);
- 103 Shift-frequency Jamming against Pulse Compression Radar
Kelei Wei (National University of Defense Technology); Ning Tai (National University of Defense Technology); Lei Huang (National University of Defense Technology); Naichang Yuan (National University of Defense Technology);
- 104 Fresh Look at Lorenz-like System
Hang T. T. Nguyen (Vietnam National University); Peter A. Meleshenko (Voronezh State University); Mikhail E. Semenov (Zhukovsky-Gagarin Air Force Academy); Ilya E. Kuznetsov (Zhukovsky-Gagarin Air Force); Vladimir A. Gorlov (Zhukovsky-Gagarin Air Force Academy); Alexander F. Klinskikh (Voronezh State University);
- 105 Mechanically Tunable Metamaterials for Larger Incident Absorption
Yang Shen (Air Force Engineering University); Ya Fan (Air Force Engineering University); Yongqiang Pang (National University of Defense Technology); Jieqiu Zhang (Air Force Engineering University); Shaobo Qu (Air Force Engineering University);
- 106 Extraordinary Transmission of Electromagnetic Waves through 1D Slot Arrays with Angular Selectivity
Yongqiang Pang (National University of Defense Technology); Jiafu Wang (Air Force Engineering University); Mingde Feng (Air Force Engineering University); Yongfeng Li (Air Force Engineering University); Zhuo Xu (Xi'an Jiaotong University); Shaobo Qu (Air Force Engineering University);
- 107 The Reflection of Electromagnetic Waves from Anisotropic Magnetized Plasmas Coating on a Metal Plane
Zhen-Min Rao (Wuhan University); Si-Yuan He (Wuhan University); Yunhua Zhang (Wuhan University); Guo-Qiang Zhu (Wuhan University);
- 108 A Novel Receiver Architecture for Frequency Diverse Array Radar
Su-Dan Han (National University of Defense Technology); Chongyi Fan (National University of Defense Technology); Xiaotao Huang (National University of Defense Technology);
- 109 A Novel Training Sample Selection Method for STAP Based on Clutter Sparse Recovery
Su-Dan Han (National University of Defense Technology); Chongyi Fan (National University of Defense Technology); Xiaotao Huang (National University of Defense Technology);
- 110 Research on Land Use Classification of Hulun Lake Basin Based on Hyperion Hyperspectral Data
Hua Ding (Shenyang Jiaozhu University); Ru Ren Li (Shenyang Jiaozhu University); Xin Wang (Shenyang Jiaozhu University); Hao Lin (Shenyang Jiaozhu University);

Session 2P1a**SC3&2: Controlling Optical Nonlinearity with Metamaterials**

Tuesday PM, August 9, 2016**Room 5B/5C**

Organized by Shuang Zhang, Yongmin Liu

Chaired by Yongmin Liu

13:00 MultiPhoton Chiroptical Effects in Metal Nanospirals
invited and in Chirally Coupled Plasmonic Nanostructures

Ventsislav K. Valev (University of Bath);

13:20 Nonlinear and Plasmo-electronic Metasurfaces Using
invited Plasmonic Nanoantennas

Pai-Yen Chen (Wayne State University);

13:40 Computational Modeling of Higher-harmonic Gener-
invited ation in Periodic 2D-3D Heteromaterials

Nicolae-Coriolan Panoiu (University College London); Martin Weismann (University College London);

14:00 Linearly Polarized Dipolar Second Harmonic Gener-
invited ation from Gold Nano-antennas by Controlling Their Radiation Phase

Mohsen Rahmani (Imperial College London); Sylvain D. Gennaro (Imperial College London); Vincenzo Giannini (Imperial College London); Heykel Aouani (Imperial College London); Themistoklis P. H. Sidiropoulos (Imperial College London); Miguel Navarro-Cia (Imperial College London); Stefan Alexander Maier (Imperial College London); Rupert Francis Oulton (Imperial College London);

14:20 Necklace Beam Generation in Nonlinear Colloidal En-
invited gineered Media and Negative Index Metamaterials

Salih Z. Silahli (University at Buffalo, The State University of New York); Wiktor Walasik (University at Buffalo, The State University of New York); Jingbo Sun (University at Buffalo, The State University of New York); Natalia M. Litchinitser (University at Buffalo, The State University of New York);

14:40 Active Spoof Surface Plasmon Polaritons and Appli-
invited cations

Hao Chi Zhang (Southeast University); Tie Jun Cui (Southeast University);

15:00 Second-harmonic Generation in Hyperbolic Plasmonic
invited Nanorod Metamaterials

Alexey V. Krasavin (King's College London); Giuseppe Marino (King's College London); P. Segovia (Tel Aviv University); Nicolas Olivier (King's College London); P. Ginzburg (Tel Aviv University); Gregory A. Wurtz (University of North Florida); Anatoly V. Zayats (King's College London);

15:20 Coffee Break

15:40 Gradient Nonlinear Metasurfaces for Continuous
invited Phase Control

Jongwon Lee (Ulsan National Institute of Science and Technology (UNIST)); N. Nookala (University of Texas at Austin); M. Tymchenko (University of Texas at Austin); Juan Sebastian Gomez-Diaz (The University of Texas at Austin); F. Demmerle (Technische Universitat Munchen); Gerhard Boehm (Technische Universitat Munchen); K. Lai (University of Texas at Austin); Gennady Shvets (The University of Texas at Austin); Markus C. Amann (Walter Schottky Institut, Technische Universitat Munchen); A. Alu (University of Texas at Austin); Mikhail A. Belkin (University of Texas at Austin);

Session 2P1b**SC2: Optical Metamaterials and Applications**

Tuesday PM, August 9, 2016**Room 5B/5C**

Organized by Shumin Xiao, Xingjie Ni

Chaired by Shumin Xiao

16:00 Large-radius Nanowire Based Hybrid Plasmonic
Nanolasers

Zhiyuan Gu (Harbin Institute of Technology); Kaiyang Wang (Harbin Institute of Technology); Nan Zhang (Harbin Institute of Technology); Shumin Xiao (Harbin Institute of Technology); Qinghai Song (Harbin Institute of Technology);

16:20 Fano-like Interference Induced by Optical Magnetic-
magnetic Coupling within 3D Metamolecule Made of Super-spherical Gold Nanoparticles

Kai Guo (Sungkyunkwan University (SKKU)); Kyung Jin Park (Sungkyunkwan University (SKKU)); Dong-Kwan Kim (Sungkyunkwan University (SKKU)); Jinsung Park (Korea University); Gaehang Lee (Korea Basic Science Institute (KBSI)); Hong-Gyu Park (Korea University); Gi-Ra Yi (Sungkyunkwan University (SKKU)); Seungwoo Lee (Sungkyunkwan University (SKKU));

- 16:40 Magneto-optical Plasmonic Structures with Various Designs: Faraday Rotation Enhancement and Polarization Conversion
Alexey N. Shaymanov (Lomonosov Moscow State University); Kirill M. Khabarov (All-Russian Research Institute of Automatics); Georgiy M. Yankovskii (All-Russian Research Institute of Automatics); Alexander M. Merzlikin (Institute for Theoretical and Applied Electromagnetics of the Russian Academy of Sciences); Alexander V. Baryshev (All-Russian Research Institute of Automatics);
- 17:00 Design and Simulation of Planar Chiral Meta-surface for the Application to NIR Multi-patterned Band-pass Filters
Yasuo Ohtera (Tohoku University);
- 17:20 A Wide-angle Metamaterial Narrow-band-stop Filter for 532 nm Wavelength Green Light
Liyang Yue (Bangor University); Songkun Ji (Bangor University); Bing Yan (Bangor University); Nguyen Thanh Tung (Institute of Material Science, Vietnam Academy of Sciences and Technology); Vu Dinh Lam (Institute of Material Science, Vietnam Academy of Sciences and Technology); Zengbo Wang (Bangor University);
- 17:40 Lasing Boosted with Plasmonic Nanostructures
Xiangeng Meng (Purdue University); Zhuoxian Wang (Purdue University); Urcan Guler (Purdue University); Jieran Fang (Purdue University); Jingjing Liu (Purdue University); Nikita Arnold (Johannes Kepler University Linz); Thomas A. Klar (Johannes Kepler University Linz); Ludmila J. Prokopenko (Purdue University); Vladimir M. Shalaev (Purdue University); Alexander V. Kildishev (Purdue University);
- 18:00 2D Asymmetric Propagation Based on CPA in Helical Photonic Lattices
Xinyuan Qi (Northwest University); Shasha Li (Northwest University);
- 18:20 Study of the Growth Mechanism of $\text{Cu}_2\text{ZnSnS}_4$ Films Fabricated by Nanoparticle during the Annealing Process
Xingfeng Zhang (Waseda University); Masakazu Kobayashi (Waseda University);

Session 2P2a**FocusSession.SC1: Casimir Effect and Heat Transfer 2**

Tuesday PM, August 9, 2016**Room 5D/5E**

Organized by Mauro Antezza, Brahim Guizal

Chaired by Mauro Antezza, Brahim Guizal

- 13:10 Casimir Forces between Corrugated Silicon Structures
invited
Ho Bun Chan (The Hong Kong University of Science and Technology); Lu Tang (The Hong Kong University of Science and Technology); Mingkan Wang (The Hong Kong University of Science and Technology); C. Y. Ng (The Hong Kong University of Science and Technology); M. Nikolic (Princeton University); J. Zou (The Hong Kong University of Science and Technology); Che Ting Chan (The Hong Kong University of Science and Technology); A. W. Rodriguez (Princeton University);
- 13:30 Light-induced Optomechanical Forces in Graphene
invited Waveguides
Brahim Guizal (University of Montpellier); Mauro Antezza (Universite de Montpellier);
- 13:50 Experimental Test of the Entanglement of Radiation
keynote Generated by the Dynamical Casimir Effect
Ben Schneider (Chalmers University of Technology); Michael Roger Andre Simoen (Chalmers University of Technology); Ida-Maria Svensson (Chalmers University of Technology); Andreas Bengtsson (Chalmers University of Technology); Thomas Aref (Chalmers University of Technology); Jonas Bylander (Chalmers University of Technology); C. M. Wilson (University of Waterloo); Goran Johansson (Chalmers University of Technology); Per Delsing (Chalmers University of Technology);
- 14:20 Fluctuational Electrodynamics for Anisotropic Particles
invited
Matthias Kruger (University of Stuttgart & Max Planck Institute for Intelligent Systems);
- 14:40 Van der Waals Interactions in Confined Geometries
invited
Stefan Scheel (University of Rostock); Helge Dobbertin (University of Rostock);
- 15:00 Failure of Local FDT in Fluctuation-induced Interactions
invited
Diego Alejandro Roberto Dalvit (Los Alamos National Laboratory);
- 15:20 **Coffee Break**

15:40 From Casimir-Polder Force to Dicke Physics: Interaction between Atoms and a Topological Insulator
invited *Sebastian Fuchs (Albert-Ludwigs-Universitat Freiburg); Stefan Yoshi Buhmann (University of Freiburg);*

16:00 Body-assisted Casimir-Polder Interaction between Two Chiral Molecules
invited *Pablo Barcellona (University of Freiburg); Stefan Yoshi Buhmann (University of Freiburg);*

Session 2P2b
SC3: Ultrafast Nonlinear Imaging and Biophotonic Applications

Tuesday PM, August 9, 2016

Room 5D/5E

Organized by Zhiwen Liu, Kebin Shi

Chaired by Kebin Shi

16:20 Quantitative Optical Spectroscopy and Imaging for Cancer Diagnosis and Treatment Monitoring
Bing Yu (The University of Akron);

16:40 Mirror Reflective Interference Axial-narrowing Super-resolution Microscopy
Xusan Yang (Peking University); Hao Xie (Peking University); Peng Xi (Peking University);

17:00 Super-resolution Fluorescence Dipole Orientation Microscopy
Karl Zhanghao (Peking University); Long Chen (Tsinghua University); Xusan Yang (Peking University); Miaoyan Wang (Peking University); Zhenli Jing (University of Chinese Academy of Sciences); Hongbin Han (Peking University Third Hospital); Michael Q. Zhang (The University of Texas); Dayong Jin (University of Technology Sydney); Juntao Gao (Tsinghua University); Peng Xi (Peking University);

17:20 Simple Configurations for Hybrid Coherent Raman Microspectroscopy
Tao Cao (Huazhong University of Science & Technology); Le Huang (Huazhong University of Science & Technology); Jiahui Peng (Huazhong University of Science & Technology);

17:40 Role of Raman Spectroscopy in Bio and Agriculture as an Optical Diagnostic Tool

Mushtaq Ahmed (National Institute of Lasers & Optronics (NILOP)); M. Bilal (National Institute of Lasers & Optronics (NILOP)); M. Saleem (National Institute of Lasers & Optronics (NILOP)); S. Khan (National Institute of Lasers & Optronics (NILOP)); R. Ullah (National Institute of Lasers & Optronics (NILOP)); H. Ali (National Institute of Lasers & Optronics (NILOP)); F. Nurjuz (National Institute of Lasers & Optronics (NILOP));

18:00 Chiral Sum Frequency Generation Microscopy by Using Polarization Manipulation
Ziheng Ji (Peking University); Kebin Shi (Peking University);

18:20 Aspartate-induced Biophotonic Activities in Mice Brain Slices
Chi Xu (South Central University for Nationalities); Jiapeli Dai (South Central University for Nationalities);

18:40 Super-resolution for Optical Data Storage in Nanoscale
Yaoyu Cao (Jinan University);

Session 2P3
FocusSession.SC2: Advances in Metasurfaces 2

Tuesday PM, August 9, 2016

Room 5F

Organized by Din Ping Tsai, Shulin Sun

Chaired by Din Ping Tsai, Shulin Sun

13:20 High-performance Metasurface Lenses
invited

Hou-Tong Chen (Los Alamos National Laboratory);

13:40 Metasurface-based Illusion Optics
invited

Shiyi Xiao (University of Birmingham); Pengjiang Wei (City University of Hong Kong); Jensen Li (University of Birmingham);

14:00 Active Metasurface Devices Based on Correlated Perovskites
invited

Zhaoyi Li (Columbia University); You Zhou (Harvard University); Hao Qi (Drexel University); Norman Nan Shi (Columbia University); Qiwei Pan (Drexel University); Ming Lu (Center for Functional Nanomaterials); Aaron Stein (Brookhaven National Laboratory, Center for Functional Nanomaterials); Christopher Y. Li (Drexel University); Shriram Ramanathan (Harvard University); Nanfang Yu (Columbia University);

- 14:20 Unusual Ultrathin Optical Devices: Metasurfaces
invited Make Them Practical
Xianzhong Chen (Heriot-Watt University); Dandan Wen (Heriot-Watt University); Fuyong Yue (Heriot-Watt University);
- 14:40 Metasurface Holography with Multiple Channels
invited
Lingling Huang (Beijing Institute of Technology); Holger Muhlenbernd (University of Paderborn); Yongtian Wang (Beijing Institute of Technology); Thomas Zentgraf (University of Paderborn);
- 15:00 Realization of High-efficiency Pancharatnam-Berry Metasurfaces
Weijie Luo (Fudan University); Shiyi Xiao (Fudan University); Qiong He (Fudan University); Shulin Sun (Fudan University); Lei Zhou (Fudan University);
- 15:20 **Coffee Break**
- 15:40 Metasurfaces for Full Control of Reflected Light
invited
Anders Pors (University of Southern Denmark); Sergey I. Bozhevolnyi (University of Southern Denmark);
- 16:00 Ultrafast Nonlinearities from Electron Excitations in Gold Metasurfaces
invited
Francisco J. Rodriguez Fortuno (King's College London); Giovanni Sartorello (King's College London); L. H. Nicholls (King's College London); Nicolas Olivier (King's College London); Gary P. Wiederrecht (Argonne National Laboratory); D. Gosztola (Argonne National Laboratory); Gregory A. Wurtz (King's College London); Anatoly V. Zayats (King's College London);
- 16:20 High-efficiency Generation of Circularly Polarized Light by Metasurface
Xiang Xiong (Nanjing University); S. C. Jiang (Nanjing University); Z. H. Wang (Nanjing University); M. Wang (Nanjing University); Ru-Wen Peng (Nanjing University);
- 16:35 Polarization-controlled Bifunctional Metasurfaces in Transmission and Reflection Geometries
Tong Cai (Air force Engineering University of China); Shiwei Tang (Ningbo University); Guang Ming Wang (AFEU University); He-Xiu Xu (Air Force Engineering University); Qiong He (Fudan University); Shulin Sun (Fudan University); Lei Zhou (Fudan University);
- 16:50 Creating Arbitrary Illusions by Planar Ultrathin Metasurfaces
Ren Wang (University of Electronic Science and Technology of China); Bing-Zhong Wang (University of Electronic Science and Technology of China);

- 17:05 Investigation of an Optimal Distance between the Microstrip Patch Antenna and the Surrounding Electromagnetic Bandgap Structure
N. B. Tesneli (Sakarya University); C. Tangel (Sakarya University); Muhammet Hilmi Nisanci (Sakarya University); A. Y. Tesneli (Sakarya University);
- 17:20 Wide-angle and Full-angle Negative Reflection Based on Metasurfaces with Specific Surface Phase Gradient
Bingyi Liu (Harbin Institute of Technology); Yongyuan Jiang (Harbin Institute of Technology);
- 17:35 A Slot Antenna with Metasurface Ground
Yi Zhao (Air Force Engineering University of CPLA); Xiang-Yu Cao (Air Force Engineering University of CPLA); Jun Gao (Air Force Engineering University of CPLA); Xiao Liu (Air Force Engineering University of CPLA); Quan Wang (Air Force Engineering University of CPLA);

Session 2P4

SC3: Optical Switching and Routing

Tuesday PM, August 9, 2016

Room 5G

Organized by Yikai Su, Ciyuan Qiu

Chaired by Yikai Su, Ciyuan Qiu

- 13:20 Low Power All-optical Switching with Graphene-silicon Integration
invited
Tingyi Gu (Princeton University);
- 13:40 Integrated Optical Signal Processing with Silicon Platform
invited
Jian Wang (Huazhong University of Science and Technology);
- 14:00 **32 × 32** Strictly-non-blocking Si-wire Optical Switch Based on Thermo-optic Effects
invited
Ken Tanizawa (National Institute of Advanced Industrial Science and Technology (AIST)); Keijiro Suzuki (National Institute of Advanced Industrial Science and Technology (AIST)); Kazuhiro Ikeda (National Institute of Advanced Industrial Science and Technology (AIST)); Shu Namiki (National Institute of Advanced Industrial Science and Technology (AIST)); Hitoshi Kawashima (National Institute of Advanced Industrial Science and Technology (AIST));
- 14:20 Thermally Switchable/Tunable Photonic Integrated Devices on Silicon
invited
Daoxin Dai (Zhejiang University); Sitao Chen (Zhejiang University); Longhai Yu (Zhejiang University); Yaocheng Shi (Zhejiang University);

14:40 Hybrid Packet/Fine-Grained-Optical Switching Architectures for Future Large-scale Data Center Networks
Nan Hua (Tsinghua National Laboratory for Information Science and Technology (TNList)); Yao Li (Tsinghua National Laboratory for Information Science and Technology (TNList)); Xiaoping Zheng (Tsinghua University);

15:00 Photonic Microwave Switching for Satellite Communication
Dan Zhu (Nanjing University of Aeronautics and Astronautics); Shilong Pan (Nanjing University of Aeronautics and Astronautics);

15:20 **Coffee Break**

15:40 All-optical Generation of ASK, PSK, and FSK Radio-frequency Signals
Wei Li (Institute of Semiconductors, Chinese Academy of Sciences); Ming Li (Institute of Semiconductors, Chinese Academy of Sciences); Ning Hua Zhu (Institute of Semiconductors, Chinese Academy of Sciences);

16:00 All-optical Wavelength Conversion Based on Tunable V-cavity Laser
Xiaobo Zhang (Zhejiang University); Xiaolu Liao (Zhejiang University); Zhipeng Hu (Zhejiang University); Jian-Jun He (Zhejiang University);

16:20 Hybrid OPS/OCS Data Center Network with Torus Topology Enabled by Hybrid Optoelectronic Router
Ryo Takahashi (NTT Corporation); Salah Ibrahim (NTT Corporation); Tatsushi Nakahara (NTT Corporation); Hiroshi Ishikawa (NTT Corporation); Yusuke Muranaka (NTT Corporation); Toru Segawa (NTT Corporation);

16:40 Large Scale $N \times N$ Silicon Optical Switches
Tao Chu (Institute of Semiconductors, Chinese Academy of Sciences); Lei Qiao (Institute of Semiconductors, Chinese Academy of Sciences); Weijie Tang (Institute of Semiconductors, Chinese Academy of Sciences);

17:00 Recent Progress in Large-scale Optical Switches for Intra-datacenter Interconnection
Koh Ueda (Nagoya University); Yojiro Mori (Nagoya University); Hiroshi Hasegawa (Nagoya University); Ken-ichi Sato (Nagoya University);

17:20 Wavelength Switching and All-optical Flip-flop in Tunable V-cavity Laser
Jian-Jun He (Zhejiang University);

17:40 Remote Access Unit for Optic-to-Wireless Conversion
L. Chorchos (Warsaw University of Technology); Simon Rommel (Technical University of Denmark); J. P. Turkiewicz (Warsaw University of Technology); I. T. Monroy (Technical University of Denmark); Juan Jose Vegas Olmos (Technical University of Denmark);

Session 2P5a

SC2: THz Plasmonics

Tuesday PM, August 9, 2016

Room 5H

Organized by Zhanghua Han, Qiang Cheng

Chaired by Qiang Cheng

13:20 Leaky Wave Antennas Based on Spoof SPP along Metallic Wire with Gradient Radial Grooves
Jia Yuan Yin (Southeast University); Tie Jun Cui (Southeast University);

13:40 A Compact Double-frequency Rejection Filter Using Spoof Surface Plasmons and Metamaterial Resonators
Qian Zhang (Southeast University); Tie Jun Cui (Southeast University);

14:00 Sensing Applications with THz Plasmonic Metamaterials
Xinlong Xu (Northwest University);

14:20 Characterization of Terahertz Surface Plasmonic Wave
Yan Zhang (Capital Normal University); Xinke Wang (Capital Normal University); S. Wang (Harbin Institute of Technology);

14:40 Chiral Terahertz Surface Wave on the Helically Grooved Metal Wire
Haizi Yao (Fuzhou University); Shuncong Zhong (Fuzhou University);

15:00 Tunable Terahertz Response of Plasmonic Vee-shaped Assemblies with a Graphene Monolayer
Arash Ahmadvand (Florida International University); Mustafa Karabiyik (Florida International University); Raju Sinha (Florida International University); Burak Gerislioglu (Florida International University); Nezh Pala (Florida International University);

15:20 **Coffee Break**

Session 2P5b
**SC3: THz Metamaterials and
Plasmonic-enhanced THz Technology**

Tuesday PM, August 9, 2016
Room 5H

Organized by Jiangfeng Zhou, Jigang Wang

 Chaired by Jiangfeng Zhou

 15:40 Optoelectronic Properties in the Terahertz of
invited Femtosecond-laser-ablated GaAs

J. Madeo (Okinawa Institute of Science and Technology Graduate University); A. Margiolakis (Okinawa Institute of Science and Technology Graduate University); Z.-Y. Zhao (Shanghai Normal University); P. J. Hale (Okinawa Institute of Science and Technology Graduate University); M. K. L. Man (Okinawa Institute of Science and Technology Graduate University); Q.-Z. Zhao (Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences); W. Peng (Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences); W.-Z. Shi (Shanghai Normal University); Keshav M. Dani (Okinawa Institute of Science and Technology Graduate University); Bala Murali Krishna Mariserla (Okinawa Institute of Science and Technology Graduate University);

 16:00 Coherent Absorption and Polarization Control Using
invited Terahertz Chiral Metamaterials

Yugian Ye (Hangzhou Normal University); Derrick Hay (Hangzhou Normal University); Zhimin Shi (University of South Florida);

 16:20 Terahertz Metamaterial and Its Sensing Application
invited

Qin Chen (Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences); Xin Hu (Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences); Gaiqi Xu (Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences); Yaxin Zhang (University of Electronic Science and Technology of China); David Robert Sime Cumming (University of Glasgow);

16:40 Design of Polarization-independent Electromagnetically Induced Transparency Structure in Terahertz Band

Xiaobin Wang (Beijing University of Posts and Telecommunications); Limei Qi (Qufu Normal University); Yizhe Li (Beijing University of Posts and Telecommunications); Junsheng Yu (Beijing University of Posts and Telecommunications); Yuan Yao (Beijing University of Posts and Telecommunications); Xiaoming Liu (Beijing University of Posts and Telecommunications); Zhijiao Chen (Beijing University of Posts and Telecommunication);

17:00 Terahertz Vortex Beam Generation Using Anisotropic Chiral Metasurfaces

Yudai Taira (Shinshu University); Yosuke Nakata (Shinshu University); Fumiaki Miyamaru (Shinshu University); Mitsuo W. Takeda (Shinshu University);

 17:20 A THz Plasmonic Perfect Absorber and Fabry-Perot
invited Cavity Mechanism

Khagendra Bhattarai (University of South Florida); Sinhara Silva (University of South Florida); Jiyeon Jeon (Korea Research Institute of Standards and Science); Jun Oh Kim (Korea Research Institute of Standards and Science); Kun Song (Northwestern Polytechnical University); Sang Jun Lee (Korea Research Institute of Standards and Science); Zahyun Ku (The University of New Mexico); Jiangfeng Zhou (University of South Florida);

Session 2P6
**SC3: Nano-photonic Devices for Optical
Interconnects and Optical Sensing**

Tuesday PM, August 9, 2016
Room 5I

Organized by Alan X. Wang

 Chaired by Alan X. Wang

 13:00 On-chip Hybrid Photonic Crystal Surface Emitting
invited Membrane Lasers

Deyin Zhao (University of Wisconsin-Madison); Shih-Chia Liu (University of Wisconsin-Madison); Hongjun Yang (University of Wisconsin-Madison); Zhenqiang Ma (University of Wisconsin-Madison); Weidong Zhou (The University of Texas Arlington);

13:20 Characterization of Surface- and Defect-state Absorption in Silicon Waveguides and Microring Resonators in 1310–1550 nm

Yu Li (The Hong Kong University of Science and Technology); Andrew Wing On Poon (The Hong Kong University of Science and Technology);

- 13:40 Enhanced Light Emission from Ge Dots in Optical
invited Microcavities
Jinsong Xia (Huazhong University of Science and Technology (HUST));
- 14:00 Optical Micro-ring Resonators on Silicon for Optical
invited Communications and Optical Sensing
Daoxin Dai (Zhejiang University);
- 14:20 High Performance Flexible Phototransistors Based on
invited Transferrable Silicon Nanomembranes
Jung-Hun Seo (University of Wisconsin-Madison); Kan Zhang (University of Wisconsin-Madison); Munho Kim (University of Wisconsin-Madison); Deyin Zhao (University of Wisconsin-Madison); Hongjun Yang (University of Wisconsin-Madison); Weidong Zhou (The University of Texas Arlington); Zhenqiang Ma (University of Wisconsin-Madison);
- 14:40 Half-wavelength Pitch Waveguide Superlattice for
invited High-density Photonic Integration and Space-division Multiplexing
Wei Jiang (The State University of New Jersey);
- 15:00 Compressing and Routing Light through a Silicon
invited Nanorod Array
Fuwan Gan (Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences); Wei Li (Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences); Hao Li (Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences); Haiyang Huang (Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences); Zhen Sheng (Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences); Aimin Wu (Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences); Shichang Zou (Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences); Xi Wang (Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences);
- 15:20 **Coffee Break**
- 15:40 On-chip Infrared Spectroscopic Sensing: Redefining
invited the Benefits of Scaling
Hongtao Lin (MIT); Derek Kita (MIT); Zhao-hong Han (MIT); Junying Li (MIT); Yizhong Huang (MIT); Lan Li (MIT); Qingyang Du (MIT); Anu Agarwal (MIT); Lionel C. Kimerling (MIT); Tian Gu (MIT); Juejun Hu (MIT); Spencer Novak (University of Central Florida); Charmayne Smith (University of Central Florida); Kathleen Richardson (University of Central Florida);
- 16:00 Surface Plasmon Resonance Spectrometer Sensor Us-
invited ing Super-period Metal Nano-grating
Junpeng Guo (University of Alabama in Huntsville); Hong Guo (University of Alabama in Huntsville); Xueli Tian (University of Alabama in Huntsville);
- 16:20 Large-area Metasurface Substrate for Surface-
invited enhanced Raman Spectroscopy with Broadband Enhancement Spectrum
Nan Zhang (The State University of New York at Buffalo); Haomin Song (The State University of New York at Buffalo); Dengxin Ji (The State University of New York at Buffalo); Xie Zeng (The State University of New York at Buffalo); Qiaoqiang Gan (The State University of New York at Buffalo);
- 16:40 Ultrafast Photocurrent Spectroscopy in a Black Phos-
invited phorus Photodetector Structures
Nathan Youngblood (University of Minnesota); Mo Li (University of Minnesota);
- 17:00 On-chip Plasmonic Photonic Crystals for Near-
infrared Absorption Spectroscopy
Erwen Li (Oregon State University); Xinyuan Chong (Oregon State University); Alan X. Wang (Oregon State University);
- 17:20 Index Sensing in Silicon Slot Waveguide Microring
Resonators: From Single-peak Detection to Critical
Coupling Envelope Detection
Weiwei Zhang (Universite Paris-Sud); Samuel Serna (Universite Paris-Sud); Xavier Le Roux (Universite Paris-Sud); Laurent Vivien (Universite Paris-Sud); Eric Cassan (Universite Paris-Sud);
- 17:40 Phase-sensitive Near-field Probe: Relationship with
the Local Density of Optical State
R. Prasad (Universite de technologie de Troyes); Remi Vincent (Universite de technologie de Troyes);
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- Session 2P7**
Modeling and Laser-material Processing
-
- Tuesday PM, August 9, 2016**
Room 5J
Organized by Tatiana E. Itina
Chaired by Tatiana E. Itina, Saulius Juodkazis
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- 13:20 Studying Laser Ablation with Molecular Dynamics
invited Simulations: From Metals to Covalent Materials
Johannes Roth (University Stuttgart); A. Kiselev (University Stuttgart); H.-R. Trebin (University Stuttgart);

- 13:40 Real-time First-principle Calculation for the Laser-matter Interaction
invited *Tomohito Ootobe (Japan Atomic Energy Agency (JAEA));*
- 14:00 Femtosecond Laser Filament Remote Isotope Sensing
invited *Vassilia Zorba (Lawrence Berkeley National Laboratory);*
- 14:20 Numerical Study of Ultrashort Laser-induced Nanotransformation in Dielectrics
Anton Rudenko (Lyon University); Jean-Philippe Colombier (Lyon University); Tatiana E. Itina (University of Lyon);
- 14:40 Imaging of Bessel Filaments in Fused Silica and Impact on Modelling the Underlying Light-matter Physics
invited *Francois Courvoisier (Universite de Franche-Comte); R. Giust (Institut FEMTO-ST, CNRS and University of Bourgogne Franche-Comte); C. Xie (Institut FEMTO-ST, CNRS and University of Bourgogne Franche-Comte); V. Jukna (Ecole Polytechnique Universite Paris-Saclay); L. Furfaro (Institut FEMTO-ST, CNRS and University of Bourgogne Franche-Comte); R. Meyer (Institut FEMTO-ST, CNRS and University of Bourgogne Franche-Comte); L. Rapp (Institut FEMTO-ST, CNRS and University of Bourgogne Franche-Comte); M. Jacquot (Institut FEMTO-ST, CNRS and University of Bourgogne Franche-Comte); J. M. Dudley (Institut FEMTO-ST, CNRS and University of Bourgogne Franche-Comte); A. Couairon (Ecole Polytechnique Universite Paris-Saclay);*
- 15:00 Surface Patterning by Laser Ablation and Polymerization
invited *X. W. Wang (Swinburne University of Technology); Saulius Juodkakis (Swinburne University of Technology);*
- 15:20 **Coffee Break**
- 15:40 Transient Electron-hole Dynamics at the Surface of Silicon upon Femtosecond Laser Irradiation in Modification Regime
invited *Thibault J.-Y. Derrien (Institute of Physics, Academy of Science of the Czech Republic); Nadezhda M. Bulgakova (Institute of Physics AS CR, Czech Republic and Institute of Thermophysics SB RAS);*
- 16:00 Time-resolved Phase Microscopy for the Study of Laser-material Interactions in Optical Materials
invited *Laurent Gallais (Aix Marseille Universite); Serge Monneret (Aix Marseille Universite);*
- 16:20 Nanostructures on Metallic Glass Surfaces Irradiated by Femtosecond Laser
invited *Guanghua Cheng (Xi'an Institute of Optics and Precision Mechanics of CAS); Wei Zhang (Xi'an Institute of Optics and Precision Mechanics of CAS); Chen Li (Xi'an Institute of Optics and Precision Mechanics of CAS); Hao Zhang (Universit  de Lyon, Universit  Jean Monnet); Razvan Stoian (Universit  de Lyon, Universit  Jean Monnet);*
- 16:40 Fast Optical Methods for Real-time Monitoring of Pulsed Laser Processing of Thin Films
invited *Nadjib Semmar (CNRS/Universite d'Orleans);*
- 17:00 Colloidal Nanoparticles: Mechanisms of Laser Synthesis and Interactions
Tatiana E. Itina (University of Lyon); Anton Rudenko (Lyon University);
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- Session 2P8a**
SC4: High-gain Antennas
-
- Tuesday PM, August 9, 2016**
Room 3B
Organized by Zhongxiang Shen, Yuehe Ge
Chaired by Zhongxiang Shen, Yuehe Ge
-
- 13:20 A Planar Circularly Polarized Antenna with High Radiation Gains
invited *Zhang-Cheng Hao (Southeast University);*
- 13:40 Design Considerations of Conformal Wideband End-fire Antenna Mountable on Cylindrical Platforms
Zhuozhu Chen (Nanyang Technological University); Zhongxiang Shen (Nanyang Technological University);
- 14:00 Performance Enhancement of Fabry-Perot Resonator Antennas
Yuehe Ge (Huaqiao University);
- 14:20 A Slotted Waveguide Phased Array for Airborne SAR Applications
Zhu Sun (Shanghai University); Y. Huang (Shanghai Aerospace Communication Equipment Research Institute); L. L. Xue (Shanghai Aerospace Communication Equipment Research Institute); J. H. Zhang (Shanghai Aerospace Communication Equipment Research Institute); J. Y. Hu (Shanghai Aerospace Communication Equipment Research Institute);
- 14:40 High Gain Wideband Fabry-Perot Resonator Antenna Integrated with Parabolic-shape Ground Plate
Zhen-Guo Liu (Southeast University);

- 15:00 Shaped Power Pattern Antenna Array Synthesis with Reduction of Dynamic Range Ratio
Jingjing Bai (Xiamen University); Yanhui Liu (Xiamen University); Juan Cheng (Xiamen University); Pengfei You (Xiamen University); Qing Huo Liu (Duke University);

15:20 **Coffee Break**

Session 2P8b

SC4: Antenna and EM Challenges in 5G Technologies

Tuesday PM, August 9, 2016

Room 3B

Organized by Guangli Yang, Zhinong Ying

Chaired by Guangli Yang, Zhinong Ying

- 15:40 Design of Dipole Beam-steering Antenna Array for 5G Handset Applications
Yibo Wang (Shanghai University); Hao Wang (Shanghai University); Guangli Yang (Shanghai University);
- 16:00 Body Effect on Phased Array in Mobile Terminal for 5G Communication
Kun Zhao (KTH — Royal Institute of Technology); Zhinong Ying (Sony Mobile Communication AB); Thomas Bolin (Sony Mobile Communications AB); Jakob Helander (Lund University); Daniel Sjöberg (Lund University); Sailing He (Zhejiang University);
- 16:20 Human Exposure of Mobile Terminal for 5G Mobile System
Kun Zhao (KTH — Royal Institute of Technology); Zhinong Ying (Sony Mobile Communication AB); Sailing He (Zhejiang University);
- 16:40 Design of mm-wave Phased Array in Mobile Terminal for 5G Mobile System
Ming Cai (Shanghai University); Congcong He (Shanghai University); Xiaoqiang Li (Shanghai University); Guangli Yang (Shanghai University);
- 17:00 Design and Analysis of a Compact Reconfigurable Phased Antenna Array with 3D Coverage for 5G Applications in Portable Devices
Hanyue Xia (Shanghai University); Jingwei Lei (Shanghai University); Lingqin Meng (Shanghai University); Guangli Yang (Shanghai University);
- 17:20 A Compact Printed UWB MIMO Antenna with WLAN Band Rejection
Yueyuan Zhang (East China Jiaotong University); Xiliang Wu (East China Jiaotong University); Yichao Li (East China Jiaotong University); Zhiwei Liu (East China Jiaotong University);

- 17:40 A New Fractal-like Tree Structure of Circular Patch Antennas for 5G Multi-band and Wide-band Applications

Salah Hamdy Salahelden Abdelnaby (Arab Academy for Science, Technology and Maritime Transport (AASTMT)); Ahmed El-Khouly (Arab Academy for Science, Technology and Maritime Transport (AASTMT)); Amira Ibrahim Zaki (Arab Academy for Science, Technology and Maritime Transport (AASTMT)); Said Esmail El-Khamy (Alexandria University);

- 18:00 35 Gb/s Ultra-wideband Technology for Advanced Communications

Rafael Puerta (Technical University of Denmark); Juan Jose Vegas Olmos (Technical University of Denmark); Idelfonso Tafur Monroy (Technical University of Denmark);

Session 2P9a

SC1: Novel Numerical Techniques for Solving Electromagnetic Problems

Tuesday PM, August 9, 2016

Room 3C/3D

Organized by Mei Song Tong, Qingsheng Zeng

Chaired by Mei Song Tong, Qingsheng Zeng

- 13:00 A Novel Method for Analysis of EM Scattering from Objects within Half Space
Xin Qi (University of Electronic Science and Technology of China); Zai-Ping Nie (University of Electronic Science and Technology of China); Xiaofeng Que (University of Electronic Science and Technology of China); Yue Wang (University of Electronic Science and Technology of China); Dongwei Lu (University of Electronic Science and Technology of China); Yuan Yang (University of Electronic Science and Technology of China);
- 13:20 Research of Influences from Typical Scene Parameters on Target and Rough Surface Composite Electromagnetic Scattering Characteristics
Yu Liang (Yangzhou University); Li-Xin Guo (Xidian University); Mei Song Tong (Tongji University); Zhen-Sen Wu (Xidian University); Qing Huo Liu (Duke University);
- 13:40 Perturbation Approach for Open Boundary Problems Based on the Equivalence Theorem
Kengo Sugahara (Kindai University);

- 14:00 DGTD Analysis of EM Interactions on Microwave Systems Loaded with Circuit Interfaced Thin Wires
Ping Li (Purdue University); Yifei Shi (King Abdullah University of Science and Technology (KAUST)); Hakan Bagci (King Abdullah University of Science and Technology (KAUST));
- 14:20 An Efficient Domain Decomposition WLP-FDTD Method for Super-resolution Analyses of TR Waves
Xiao-Kun Wei (University of Electronic Science and Technology of China); Wei Shao (University of Electronic Science and Technology of China); Bing-Zhong Wang (University of Electronic Science and Technology of China);
- 14:40 Accurate Solution of Electromagnetic Scattering by Very Thin Conducting Objects
Si Cong Yan (Tongji University); Mei Song Tong (Tongji University);
- 15:00 Research on the Position Correction of Component-level Parametric Scattering Center Models Established in a Forward Approach
Lei Zhang (Wuhan University); Guo-Qiang Zhu (Wuhan University); Si-Yuan He (Wuhan University);
- 15:20 **Coffee Break**
- 15:40 Calibration Function Estimation Using 3D Interpolation for Indoor EM (Electromagnetic) Location Finding System
Asad Husnain Baqar (Harbin Engineering University); Xiangyu Meng (Harbin Engineering University); Tao Jiang (Harbin Engineering University);
- 16:20 Fast Transient Thermal Simulation of Packages Using Alternating-direction-implicit Method
Qiangqiang Feng (Shanghai Jiao Tong University); Min Tang (Shanghai Jiaotong University); Jun-Fa Mao (Shanghai Jiao Tong University);
- 16:40 Numerical Simulation of the Body of Revolution Hypersonic Object Cruise in Near Space
Xingkun Dou (Nanjing University of Science and Technology); Tao Zhuang (Nanjing University of Science and Technology); Mengmeng Li (Nanjing University of Science and Technology); Zhenhong Fan (Nanjing University of Science and Technology); Dazhi Ding (Nanjing University of Science and Technology); Rushan Chen (Nanjing University of Science and Technology);
- 17:00 A Hybrid Method for Quantitative Statistical Analysis of In-situ IC and Electronics in Complex and Wavechaotic Enclosures
Shen Lin (UNM); Zhen Peng (University of New Mexico); Thomas Antonsen, Jr. (University of Maryland);
- 17:20 Non-uniform Quantized Exponential Entropy-based Spectrum Sensing Algorithm in Cognitive Radio
Fang Ye (Harbin Engineering University); Xun Zhang (Harbin Engineering University);

Session 2P_10a
FocusSession.SC5: Microwave Remote Sensing of Soil Moisture

Tuesday PM, August 9, 2016
Room 3E

Organized by Steven K. Chan, Alicia T. Joseph

Chaired by Steven K. Chan, Alicia T. Joseph

Session 2P9b
SC1: Innovative Techniques for Solving Multiphysics Electromagnetic Problems

Tuesday PM, August 9, 2016
Room 3C/3D

Organized by Gaobiao Xiao, Mei Song Tong

Chaired by Gaobiao Xiao, Mei Song Tong

- 16:00 Reverse Operation Self-consistent Evaluation for the Implementation of Integral Equations Using Constant Vector Basis Functions
Xuezhe Tian (The Ohio State University); Yongpin Chen (The Ohio State University); Jin-Fa Lee (The Ohio State University); Gaobiao Xiao (Shanghai Jiao Tong University);
- 13:00 A Dielectric Model at a Frequency of 1.4 GHz for Frozen Mineral Soils in the Temperature Range -1 to -30°C
Valery L. Mironov (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences); Liudmila G. Kosolapova (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences); Yury I. Lukin (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences); A. Y. Karavayevsky (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences); I. P. Molostov (Altai State University);

- 13:20 A Simulation Study of the Sensitivity of Bistatic Scattering to Soil Moisture and Surface Roughness at L-band
Jiangyuan Zeng (Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences); Kun-Shan Chen (Institute of Remote Sensing and Digital Earth, Chinese Academy of Science); Haiyun Bi (Institute of Geology, China Earthquake Administration); Quan Chen (Center for Earth Observation and Digital Earth, Chinese Academy of Sciences);
- 13:40 Surface Roughness Parameters Estimation over the Tibetan Plateau: Optimization, Calibration and Validation in the Dense Soil Moisture Networks
Hui Lu (Tsinghua University); Menglei Han (Tsinghua University); Kun Yang (Institute of Tibetan Plateau Research, Chinese Academy of Sciences); Jun Qin (Institute of Tibetan Plateau Research, Chinese Academy of Sciences); Yingying Chen (Institute of Tibetan Plateau Research, Chinese Academy of Sciences);
- 14:00 An Alternate Dual Channel Algorithm for Passive Soil Moisture Retrieval from the Soil Moisture Active Passive (SMAP) Mission
Steven K. Chan (NASA Jet Propulsion Laboratory, California Institute of Technology);
- 14:20 Multiple Scattering Effects in Vegetated Surfaces at L-band and C-band for Remote Sensing of Soil Moisture
Huanting Huang (University of Michigan); Leung Tsang (University of Michigan at Ann Arbor); Tien-Hao Liao (University of Michigan);
- 14:40 Combined Active and Passive Microwave Remote Sensing of Soil Moisture for Vegetated Surfaces at L-band
Huanting Huang (University of Michigan); Tien-Hao Liao (University of Michigan); Leung Tsang (University of Michigan at Ann Arbor); Eni Gerald Njoku (California Institute of Technology); Andreas Colliander (California Institute of Technology); Thomas J. Jackson (USDA ARS Hydrology and Remote Sensing Laboratory); Mariko Burgin (California Institute of Technology); Simon H. Yueh (California Institute of Technology);
- 15:00 Development of VHF (240–270 MHz) Antennas for SoOp (Signal of Opportunity) Receiver for 6U Cube-sat Platforms
Alicia T. Joseph (NASA Goddard Space Flight Center); Manohar D. Deshpande (NASA Goddard Space Flight Center); P. E. O'Neill (NASA/Goddard Space Flight Center (GSFC)); L. Miles (NASA/Goddard Space Flight Center (GSFC));

15:20 Coffee Break

Session 2P_10b
FocusSession.SC5: Microwave Remote Sensing
Part 1: Land

Tuesday PM, August 9, 2016

Room 3E

Organized by Hong Tat Ewe, Yang Du

Chaired by Hong Tat Ewe, Yang Du

- 15:40 Urban Damage Mapping Using Fully Polarimetric SAR Data with Scattering Mechanism Modeling and Interpretation Technique
Si-Wei Chen (National University of Defense Technology); Xuesong Wang (National University of Defense Technology);
- 16:00 A Novel Time-frequency Analysis Method Based on HHT for Finer-grained Human Activity Using SFCW Radar
Fu Gui Qi (The Fourth Military Medical University); Zhao Li (The Fourth Military Medical University); Fulai Liang (The Fourth Military Medical University); Hao Lv (The Fourth Military Medical University); Qiang An (The Fourth Military Medical University); Jianqi Wang (The Fourth Military Medical University);
- 16:20 Ground Based Synthetic Aperture Radar for Land De-
 invited formation Monitoring: Preliminary Result
Yee Kit Chan (Multimedia University); Ched-Chang Chai (IRadar Sdn Bhd); Chih-Yuan Chu (G-AVE Technology Ltd.);
- 16:40 Polarimetric Scattering from Inhomogeneous Dielectric Cylinders of Arbitrary Finite Length
Chao Yang (Zhejiang University); J. C. Shi (Institute of Remote Sensing Applications, Chinese Academy of Sciences); Qinhuo Liu (Institute of Remote Sensing Applications, Chinese Academy of Sciences); Yang Du (Zhejiang University);
- 17:00 A Study of Scattering from a Layer of Random Discrete Medium with Hierarchical Equivalent Source Algorithm (HESA)
Chan-Fai Lum (Universiti Tunku Abdul Rahman); Fu Xin (University of Hong Kong); Hong Tat Ewe (Universiti Tunku Abdul Rahman); Li Jun Jiang (The University of Hong Kong);

- 17:20 Front Ground Radar Image Generation Using FMCW SAR
Hyukjung Lee (Korea Advanced Institute of Science and Technology (KAIST)); Joohwan Chun (Korea Advanced Institute of Science and Technology (KAIST)); Sungchan Song (Hanwha Tales Co.);
- 17:40 JPDAS Multi-target Tracking Algorithm for Cluster Bombs Tracking
Hyoungrae Kim (Korea Advanced Institute of Science and Technology (KAIST)); Joohwan Chun (Korea Advanced Institute of Science and Technology (KAIST));
- 18:00 Super-resolution Range Estimation in FMCW Radar System
Junghoon Kim (Korea Advanced Institute of Science and Technology (KAIST)); Joohwan Chun (Korea Advanced Institute of Science and Technology (KAIST));

Session 2P_11

FocusSession.SC3: Solid-state Quantum Photonics

Tuesday PM, August 9, 2016

Room 3G

Organized by Jin Liu, Luca Sapienza

Chaired by Satoshi Iwamoto, Xinlun Cai

- 13:15 Towards Multi-photon Experiments with Quantum
 keynote Dots
Chao-Yang Lu (University of Science and Technology of China); Christian Schneider (Universitat Wurzburg); Sven Hoefling (Universitat Wurzburg); J.-W. Pan (University of Science and Technology of China);
- 13:45 Single Photon Emission of InAs QD with GaAs/Air-
 invited gap Based Distributed Bragg Reflector
J. H. Kyhm (Korea Institute of Science and Technology); I. P. Rho (Korea Institute of Science and Technology); Jin Dong Song (Korea Institute of Science and Technology);
- 14:05 Nanowire Quantum Dots Tuned to Atomic Reso-
 invited nances
Nika Akopian (Technical University of Denmark);
- 14:25 Emission and Control of Single Photons in Photonic
 Quantum Circuits
Soren Stobbe (University of Copenhagen); Peter Lodahl (University of Copenhagen);

- 14:40 Wave Function Control in Single Semiconductor
 invited Quantum Dots with a Magnetic Field
Jing Tang (Institute of Physics, Chinese Academy of Sciences); Shuo Cao (Institute of Physics, Chinese Academy of Sciences); Yue Sun (Institute of Physics, Chinese Academy of Sciences); Kai Peng (Institute of Physics, Chinese Academy of Sciences); Yanhui Zhao (Institute of Physics, Chinese Academy of Sciences); Chenjiang Qian (Institute of Physics, Chinese Academy of Sciences); David A. Williams (Hitachi Cambridge Laboratory, Cavendish Laboratory); Weidong Sheng (Institute of Physics, Chinese Academy of Sciences); Kuijuan Jin (Institute of Physics, Chinese Academy of Sciences); Xiulai Xu (Institute of Physics, Chinese Academy of Sciences);
- 15:00 Ultrafast Electrically-triggered Sources of Single Pho-
 invited tons and Entangled-photon Pairs Based on Strain-tunable Quantum Dots LEDs
Jiaxiang Zhang (Leibniz Institute for Solid State and Materials Research); Yongheng Huo (IFW Dresden); Eugenio Zallo (IFW Dresden); Rinaldo Trotta (Johannes Kepler University Linz); Fei Ding (IFW Dresden); Armando Rastelli (Johannes Kepler University Linz); Oliver G. Schmidt (IFW Dresden);

15:20 Coffee Break

- 15:40 Coherent Interaction of Single Solid-state Quantum
 invited Systems and Their Nanoenvironment
Xuewen Chen (Huazhong University of Science and Technology);
- 16:00 Control of Quantum Dot Light Emission by Chiral
 keynote Photonic Crystal Structures
Satoshi Iwamoto (The University of Tokyo); Shun Takahashi (The University of Tokyo); Takeyoshi Tajiri (The University of Tokyo); Yasutomo Ota (The University of Tokyo); Yasuhiko Arakawa (The University of Tokyo);
- 16:30 On-chip Orbital Angular Momentum Single-photon
 invited Source
Juntao Li (Sun Yat-sen University); Rongbin Su (Sun Yat-sen University); Tengwei Zhang (Sun Yat-sen University); Xue-Hua Wang (Sun Yat-Sen University);
- 16:50 Efficient and Low Noise Single-photon-level Frequency
 invited Conversion Interfaces Using Si₃N₄ Microrings
Qing Li (National Institute of Standards and Technology, Gaithersburg); Marcelo Davanco (National Institute of Standards and Technology); Kartik Srinivasan (National Institute of Standards and Technology);

- 17:10 Silicon Quantum Photonics for Pair Photon Sources
invited and Wavelength Conversion
Bryn A. Bell (University of Sydney); J. He (University of Sydney); Chunle Xiong (University of Sydney); Benjamin J. Eggleton (University of Sydney);
- 17:30 Strong Coupling of a Quantum Emitter in a Plasmonic Dimer
Antonio I. Fernandez-Dominguez (Universidad Autonoma de Madrid);

Session 2P_12a

SC1&4: Electromagnetics Modeling Methodologies for Millimeter Wave, Terahertz and Nano Technologies

Tuesday PM, August 9, 2016

Room 3H

Organized by Li Jun Jiang, Wei E. I. Sha

Chaired by Wei E. I. Sha

- 13:20 Beam Steering of Second Harmonic Radiation by a Compact Nonlinear Yagi-Uda Nanoantenna
Xiaoyan Y. Z. Xiong (University of Hong Kong); Li Jun Jiang (The University of Hong Kong); Wei E. I. Sha (University of Hong Kong); Yat-Hei Lo (The University of Hong Kong); Weng Cho Chew (University of Illinois);
- 13:40 A 94 GHz Millimeter-wave Radar Conduct Speech Enhancement Based on Signal Subspace Algorithm
Fuming Chen (Fourth Military Medical University); Sheng Li (The Fourth Military Medical University); Chuan Tao Li (The Fourth Military Medical University); Fulai Liang (The Fourth Military Medical University); Qiang An (The Fourth Military Medical University); Zhao Li (The Fourth Military Medical University); Jianqi Wang (The Fourth Military Medical University);
- 14:00 Achieving Perfect Absorption of Graphene in the Near-infrared and Visible Wavelength Ranges by Critical Coupling with a Photonic Crystal Slab
Jie Xu (Anhui University); Zhi-Xiang Huang (Anhui University); Bo Wu (Anhui University); Xian-liang Wu (Anhui University);
- 14:20 Simulation of Transients in Electrical Systems with Ferromagnetic Steels
Hongcai Chen (The Hong Kong Polytechnic University); Ya-Ping Du (The Hong Kong Polytechnic University);

- 14:40 Hybrid Field-circuit Simulation by Coupling DGTD with Behavioral Macromodel
Huan Huan Zhang (Xidian University); Li Jun Jiang (The University of Hong Kong); He Ming Yao (The University of Hong Kong); Xun-Wang Zhao (Xidian University); Yu Zhang (Xidian University);

15:20 **Coffee Break**

Session 2P_12b

SC1: Computational Nanoelectronics & Nanoelectromagnetics Methods and Their Applications

Tuesday PM, August 9, 2016

Room 3H

Organized by Wen-Yan Yin

Chaired by Wen-Yan Yin

- 15:40 Electrical Modeling of Carbon Nanotube Based Through-Silicon Vias for Three-dimensional ICs
Jie Zheng (Hangzhou Dianzi University); Xuan Gao (Hangzhou Dianzi University); Wen-Sheng Zhao (Hangzhou Dianzi University); Gaofeng Wang (Hangzhou Dianzi University);
- 16:00 Electrically Tunable Polarizer Based on Graphene-loaded Plasmonic Cross Antenna
Yuwei Qin (University of Hong Kong); Xiaoyan Y. Z. Xiong (University of Hong Kong); Wei E. I. Sha (University of Hong Kong); Li Jun Jiang (The University of Hong Kong);
- 16:20 Electro-thermal Investigation on Monolayer MoS₂ Field Effect Transistor
Wenchao Chen (Zhejiang University); Wen-Yan Yin (Zhejiang University);
- 16:40 Efficient Simulation of Tunable Graphene-based Frequency Selective Surfaces (GFSS) with an Improved HIE-FDTD Method
Meng-Lin Zhai (Donghua University); Hong-Li Peng (Shanghai Jiao Tong University); Jun-Fa Mao (Shanghai Jiao Tong University); Wen-Yan Yin (Zhejiang University);
- 17:00 Computational Study of Strain-engineered III-V Tunneling Transistors
Jun Z. Huang (Purdue University); Yu Wang (Purdue University); Pengyu Long (Purdue University); Yao-hua Tan (University of Virginia); Michael Povolotskyi (Purdue University); Gerhard Klimeck (Purdue University);

- 17:20 Explicit and Locally One-dimensional Finite-Difference Time-Domain Methods Incorporated with Memristor
Zaifeng Yang (Nanyang Technological University); Eng Leong Tan (Nanyang Technological University); Ding Yu Heh (Nanyang Technological University);

Session 2P_13

SC3: Optical Microcavities

Tuesday PM, August 9, 2016

Room 3I

Organized by Andrew Wing On Poon, Ali Serpenguzel

Chaired by Andrew Wing On Poon

- 13:00 Kerr Comb Generation in a Whispering Gallery Mode Microcavity: The Effect of Mode Coupling
Takasumi Tanabe (Keio University); Takumi Kato (Keio University); Ryo Suzuki (Keio University); Shun Fujii (Keio University);
- 13:20 The Effect of Raman Scattering in Kerr Comb Generation in a Silica Toroidal Microcavity
Kato Takumi (Keio University); Tomoya Kobatake (Keio University); Akihiro Jinnai-Chen (Keio University); Atsuhiko Hori (Keio University); Takasumi Tanabe (Keio University);
- 13:40 Non-reciprocal Optically Induced Transparency in a Micro-cavity
Yuanlin Zheng (Shanghai Jiaotong University); Wenjie Wan (University of Michigan-Shanghai Jiao Tong University Joint Institute);
- 14:00 Fingerprints of Strong Coupling between Molecular Vibrations and Microcavities
Javier Del Pino (Universidad Autonoma de Madrid); Francisco J. Garcia-Vidal (Universidad Autonoma de Madrid); Johannes Feist (Universidad Autonoma de Madrid);
- 14:20 Modifying Chemical Structure through Cavity QED
Javier Galego (Universidad Autonoma de Madrid); Francisco J. Garcia-Vidal (Universidad Autonoma de Madrid); Johannes Feist (Universidad Autonoma de Madrid);
- 14:40 Whispering-gallery-mode Resonators and Their Applications: From Nanoscale Measurement to Directional Lasing
Lan Yang (Washington University);

- 15:00 Interaction-induced Mode Switching and Threshold Condensation in Steady-state Microlasers
Li Ge (City University of New York); D. Liu (Massachusetts Institute of Technology); S. G. Johnson (Massachusetts Institute of Technology); S. Rotter (Vienna University of Technology); H. E. Tureci (Princeton University); A. Cerjan (Yale University); H. Cao (Yale University); A. D. Stone (Yale University);

15:20 Coffee Break

- 15:40 Switchable Single-mode Microdisk Lasers
Nan Zhang (Harbin Institute of Technology); Z. Y. Gu (Harbin Institute of Technology); S. Liu (Harbin Institute of Technology); Kaiyang Wang (Harbin Institute of Technology); S. M. Xiao (Harbin Institute of Technology); Q. H. Song (Harbin Institute of Technology);
- 16:00 Ultrahigh-Q Deformed Square Resonator with Enhanced Transverse Mode Interval
Hai-Zhong Weng (Institute of Semiconductors, Chinese Academy of Sciences); Yong-Zhen Huang (Institute of Semiconductors, Chinese Academy of Sciences); Yue-De Yang (Institute of Semiconductors, Chinese Academy of Sciences); Xiu-Wen Ma (Institute of Semiconductors, Chinese Academy of Sciences); Jin-Long Xiao (Institute of Semiconductors, Chinese Academy of Sciences); Yun Du (Institute of Semiconductors, Chinese Academy of Sciences);
- 16:20 Optical Sensor for Humidity and Hydrogen Gas Based on Polymer Microresonators
Alper Kiraz (Koc University); Mustafa Eryurek (Koc University); Z. Tasdemir (Koc University); Y. Karadag (Marmara University); S. Anand (Koc University); N. Kilinc (Nigde University); B. Erdem Alaca (Koc University);
- 16:40 Ultra-sensitive Label-free Optofluidic Microbubble Resonator Biosensors
Xiang Wu (Fudan University);
- 17:00 Whispering Gallery Resonators for Nonlinear Optics and Optical Manipulation
Sile Nic Chormaic (Okinawa Institute of Science and Technology Graduate University); Ramgopal Madugani (OIST Graduate University); Sho Kasumie (OIST Graduate University); Jonathan Ward (OIST Graduate University); Yong Yang (OIST Graduate University);

- 17:20 Tuning Liquid Whispering Gallery Mode Microlasers by Surface Tension
Shancheng Yang (Nanyang Technological University); Van Duong Ta (Nanyang Technological University); Yue Wang (Nanyang Technological University); Rui Chen (Nanyang Technological University); Tingchao He (Nanyang Technological University); Hilmi Volkan Demir (Nanyang Technological University); Handong Sun (Nanyang Technological University);
- 17:40 Silicon Active Microring Resonators for Optical Switching
Linjie Zhou (Shanghai Jiao Tong University); Liangjun Lu (Shanghai Jiao Tong University); Shuoyi Zhao (Shanghai Jiao Tong University); Dong Li (Shanghai Jiao Tong University); Zhanzhi Guo (Shanghai Jiao Tong University); Jianping Chen (Shanghai Jiao Tong University);

Session 2P_14

SC1: Fast Methods in Computational Electromagnetics

Tuesday PM, August 9, 2016

Room 3J

Organized by Dan Jiao

Chaired by Dan Jiao, Maokun Li

- 13:20 Fast Direct Solution of Large-scale Volume Integral Equations with Exact Arithmetic
Miaomiao Ma (Purdue University); Dan Jiao (Purdue University);
- 13:40 Fast Solution of Volume-surface Integral Equations for Conducting-dielectric Structures
Jie Zhang (Tongji University); Mei Song Tong (Tongji University);
- 14:00 On the Accuracy and Efficiency of Surface Formulations in Fast Analysis of Plasmonic Structures via MLFMA
B. Karaosmanoglu (Middle East Technical University); A. Yilmaz (Middle East Technical University); Ozgur Ergul (Middle East Technical University);
- 14:20 Adaptive Multilevel Fast Multipole Algorithm with AEFIE for Multiscale Problems
Hongpeng Dong (Nanjing University of Science and Technology); Jihong Gu (Nanjing University of Science and Technology); Dazhi Ding (Nanjing University of Science and Technology); Zhenhong Fan (Nanjing University of Science and Technology); Rushan Chen (Nanjing University of Science and Technology);
- 14:40 Implementing PTD Efficiently for Electrically Large Objects
Chun Yun Kee (National University of Singapore); Zi-Liang Liu (National University of Singapore); Chao-Fu Wang (National University of Singapore); Tat-Soon Yeo (National University of Singapore);
- 15:00 Weston-type Absorber Green's Function Method for MoM Matrix Thinning
Raphael Kastner (Tel Aviv University); Naor Shay (Tel Aviv University); Daniel S. Weile (University of Delaware);
- 15:20 **Coffee Break**
- 15:40 Broad Band Green's Function with Low Wavenumber Extraction (BBGFL) for Inhomogeneous Waveguide of Arbitrary Shape
Tien-Hao Liao (University of Michigan); Leung Tsang (University of Michigan at Ann Arbor); Kung-Hau Ding (Air Force Research Laboratory, Wright-Patterson AFB);
- 16:00 The Operator Marching Method on Calculating the Electromagnetic Scattered Fields from the Nanophotonic Layered Medium Structures
Z. H. Yang (Fudan University); K. W. Chen (Fudan University); Yu Mao Wu (Fudan University);
- 16:20 2D Quasi-periodic Array Modeling Using Reduced Basis Method
Xunwang Dang (Tsinghua University); Maokun Li (Tsinghua University); Fan Yang (Tsinghua University); Shenheng Xu (Tsinghua University);
- 16:40 Comparison of the Mie Series Method and FEM in Electromagnetic Analysis of Spherical Dielectric-coated Media
Li Li (Hohai University); Hongjie Wang (Hohai University); Xuwei Ping (Hohai University); Xinghui Yin (Hohai University);
- 17:00 Precision Measurement of Dielectric Properties for Thick Ceramic Film on a Ceramic Substrate Using the TE₀₁₁ Split-circular Cavity Resonator at 10 GHz Band by Applying Mode-matching Method
Kouji Shibata (Hachinohe Institute of Technology);
- 17:20 Fast Low-frequency Methods in Computational Electromagnetics
Sheng Sun (The University of Hong Kong);

Session 2P_15a**FocusSession.SC2&3: Unconventional Fabrication and Novel Applications of Deep Sub-wavelength Nanophotonic Structures 2****Tuesday PM, August 9, 2016****Room 5A**

Organized by Junsuk Rho, Liang Pan

Chaired by Junsuk Rho, Liang Pan

- 13:10 Localized Excitation and Detection of Surface Plasmon Polaritons Using Heterodyne Nearfield Optical Microscopy
invited *Phillip Ahn (Northwestern University); Zhen Zhang (Northwestern University); Biqin Dong (Northwestern University); Cheng Sun (Northwestern University); Oluwaseyi Balogun (Northwestern University);*
- 13:30 Self-deflection of Airy Plasmons in Graphene Based Waveguides
invited *Muhammad Imran (Zhejiang University); Rujiang Li (Zhejiang University); Hongsheng Chen (Zhejiang University);*
- 13:50 Deep Sub-wavelength Surface Acoustic Waveguides by Template Assisted Assembly of Silica Microspheres
invited *T. Gan (Massachusetts Institute of Technology); J. K. Eliason (Massachusetts Institute of Technology); N. Boechler (University of Washington); Keith A. Nelson (Massachusetts Institute of Technology); A. A. Maznev (Massachusetts Institute of Technology); Nicholas X. Fang (Massachusetts Institute of Technology);*
- 14:10 Omni-directional Perfect Absorbers Engineered with a Spatial Kramers-Kronig Relation Permittivity Profile
Wei Jiang (Zhejiang University); Yungui Ma (Zhejiang University);
- 14:25 Circular Dichroism Metamirrors with Near-perfect Extinction
invited *Zuojia Wang (Zhejiang University); Hui Jia (Northeastern University); Kan Yao (Northeastern University); Wenshan Cai (Georgia Institute of Technology); Hongsheng Chen (Zhejiang University); Yongmin Liu (Northeastern University);*
- 14:45 Complementary Patterning Using Plasmon-excited Electron Beamlets
invited *Liang Pan (Purdue University);*
- 15:20 **Coffee Break**

Session 2P_15b**SC3: Optical Sensors for Industrial Applications****Tuesday PM, August 9, 2016****Room 5A**

Organized by Cees Ronda

Chaired by Cees Ronda

- 15:40 Copper Bromide Laser Monitor for Combustion Processes Visualization
Fedor Alexandrovich Gubarev (Tomsk Polytechnic University); Andrei Vladimirovich Mostovshchikov (Tomsk Polytechnic University); Miron Stanislavovich Klenovskii (Tomsk Polytechnic University); Alexander Petrovich Il'in (Tomsk Polytechnic University); Lin Li (Tomsk Polytechnic University);
- 16:00 Self-referenced, Microdegree, Optical Rotation Polarimeter — A Detailed Analysis
Zeev Weissman (Shenkar College of Engineering & Design); Doron Goldberg (MIGAL Galilee Research Institute);
- 16:20 Investigation on Stable Conditions for Multipoint Identification of Hetero-core Optical Fiber Sensor
Kumi Torii (Soka University); Norihiko Shinomiya (Soka University);
- 16:40 Investigation of Food Freshness Sensing Technology for Consumer Use
invited *Weimin Xiao (Philips (China) Investment Co., Ltd.); Weishun Bao (Philips (China) Investment Co., Ltd.); Yafang Jin (Philips (China) Investment Co., Ltd.); Lucia Lu (Philips (China) Investment Co., Ltd.); George Luo (Philips (China) Investment Co., Ltd.); Yuqiang Wu (Philips (China) Investment Co., Ltd.);*
- 17:00 Optical Sensing Using InP Integrated Photonics
invited *Kevin A. Williams (Eindhoven University of Technology); Sylwester Latkowski (Eindhoven University of Technology); Valentina Moskalenko (Eindhoven University of Technology); Monica Llorens-Revull (Eindhoven University of Technology); Erwin A. J. M. Bente (Eindhoven University of Technology);*

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- 17:20 Novel Mono Mode Interband Cascade Laser Sources for Challenging TLAS Applications in the MIR
S. Becker (Nanoplus Nanosystems and Technologies GmbH); G. Gerlach (Nanoplus Nanosystems and Technologies GmbH); Lars Hildebrandt (Nanoplus Nanosystems and Technologies GmbH); J. Koeth (Nanoplus Nanosystems and Technologies GmbH); M. Von Edlinger (Nanoplus Nanosystems and Technologies GmbH); J. Scheuermann (Nanoplus Nanosystems and Technologies GmbH); L. Nahle (Nanoplus Nanosystems and Technologies GmbH); M. Fischer (Nanoplus Nanosystems and Technologies GmbH); R. Weih (Universitat Wurzburg); Martin Kamp (Wurzburg University); S. Hofling (Universitat Wurzburg);
- 17:40 Nanoscale Thermal Expansion Imaging of a Resistive Thermal Heater Using Diffraction Phase Microscopy
Xiaozhen Wang (University of Illinois at Urbana-Champaign); Xin Yu (University of Illinois at Urbana-Champaign); Lynford L. Goddard (University of Illinois, Urbana-Champaign Urbana);
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- Session 2P0**
Poster Session 4
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- Tuesday PM, August 9, 2016**
14:00 PM - 17:00 PM
Room Poster Area
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- 1 Extraordinary Transmission of Microwave Using Connected Ring Resonators at Resonant Frequencies
Li Wang (The Hong Kong University of Science and Technology); Weijia Wen (The Hong Kong University of Science and Technology);
- 2 Terahertz Dual-band Asymmetric Transmission of Linear Polarization in Multi-layered Chiral Metamaterials
Shenyang Fang (Harbin Engineering University); Hong Liu (Harbin Engineering University); Yuxiang Li (Harbin Engineering University); Jin Hui Shi (Harbin Engineering University);
- 3 Tunable Broadband Polarization Conversion Based on Coherent Control
Hong Liu (Harbin Engineering University); Tingting Lv (Northeast Petroleum University); Zheng Zhu (Harbin Engineering University); Yuxiang Li (Harbin Engineering University); Jin Hui Shi (Harbin Engineering University);
- 4 Dual-band Ordered and Disordered Metamaterial Absorber
Wenjin Lv (Harbin Engineering University); Dan Wang (Harbin Engineering University); Zheng Zhu (Harbin Engineering University); Yuxiang Li (Harbin Engineering University); Jin Hui Shi (Harbin Engineering University);
- 5 A Ultra-thin and Polarization-independent Phase Gradient Metasurface with Anomalous Reflection
Chenjun Wu (Huazhong University of Science and Technology); Yongzhi Cheng (Wuhan University of Science and Technology); Rong Zhou Gong (Huazhong University of Science and Technology);
- 6 Achieving Fishnet All-dielectric Left-handed Metamaterial via High Permittivity Ceramics
Jun Wang (Air Force Engineering University); Jiafu Wang (Air Force Engineering University); Liyang Li (Air Force Engineering University); Hua Ma (Air Force Engineering University); Shaobo Qu (Air Force Engineering University); Zhuo Xu (Xi'an Jiaotong University);
- 7 The Effective Susceptibility Concept. Implementation for Nanocomposite Systems and Sensing
Valeri Lozovski (Taras Shevchenko National University of Kyiv); Margarita Razumova (Taras Shevchenko National University of Kyiv);
- 8 Asymmetric Transmission of Both Linearly and Circularly Polarized Waves in Multi-layered Meta-surface
Kai-Kai Xu (Shanghai University); Zhongyin Xiao (Shanghai University); Jing-Yao Tang (Shanghai University); Xiao-Xia Zheng (Shanghai University); Xinyan Ling (Shanghai University);
- 9 L-band Directly Modulated Laser for 10 G PONs
Jiachen Liu (Huazhong University of Science and Technology); Jia Li (Huazhong University of Science and Technology); Yanping Xi (Huazhong University of Science and Technology); Xun Li (McMaster University); Cheng Ke (Huazhong University of Science and Technology); Ying Wang (ZTE Corporation); Zhiming Fu (ZTE Corporation);
- 10 Infrared Target Detection and False Alarm Elimination Based on Multi-feature Fusion Decision
Qiwei Dai (National University of Defense Technology); Weihua Wang (National University of Defense Technology); Zeng Ping Chen (National University of Defense Technology);
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- 11 An Investigation of Techniques for the Infrared-to-visible Spectrum Transformation
R. Matloch (Brno University of Technology); Pavel Fiala (Brno University of Technology); Premysl Dohnal (Brno University of Technology); Radim Kadlec (Brno University of Technology);
- 12 Development of a Cryogen-free Passive Near-field Microscope
Kuan-Ting Lin (The University of Tokyo); Susumu Komiyama (The University of Tokyo); Sunmi Kim (The University of Tokyo); Ken-ichi Kawamura (Tokyo Instruments, Inc.); Yusuke Kajihara (The University of Tokyo);
- 13 Compact THz Source System Using Quantum Cascade Lasers
Isao Morohashi (National Institute of Information and Communications Technology); Norihiko Sekine (National Institute of Information and Communications Technology); Akifumi Kasamatsu (National Institute of Information and Communications Technology); Iwao Hosako (National Institute of Information and Communications Technology);
- 14 Numerical Analysis of Metallic Periodic Structures in THz Region
Dusan Nespor (Brno University of Technology); Petr Drexler (Brno University of Technology); Radim Kadlec (Brno University of Technology); Martin Cap (Brno University of Technology);
- 15 Terahertz Cavities for Frequency Manipulations
Juraj Darmo (Technische Universitat Wien); Ch. Derntl (Technische Universitat Wien); M. Wenclawiak (Technische Universitat Wien); K. Unterreiner (Technische Universitat Wien);
- 16 Design of the Infrared Selective Thermal Radiation Based on Metamaterials
Cuilian Xu (Air Force Engineering University); Shaobo Qu (Air Force Engineering University); Mingbao Yan (Air Force Engineering University); Jieqiu Zhang (Air Force Engineering University); Wenjie Wang (Air Force Engineering University); Jiafu Wang (Air Force Engineering University); Yongqiang Pang (Air Force Engineering University); Yongfeng Li (Air Force Engineering University); Hua Ma (Air Force Engineering University);
- 17 The THz SAR Moving Target Imaging Method Based on the Phase Compensation
Ye Zhang (National University of Defense Technology); Chengguang Wu (National University of Defense Technology); Bin Deng (National University of Defense Technology); Yu-Liang Qin (National University of Defense Technology); Hong-Qiang Wang (National University of Defense Technology);
- 18 Design of a Novel Eight-band Handset Antenna for LTE/WWAN Application
Hui-Fen Huang (South China University of Technology); Shu-Guang Xiao (South China University of Technology); Li Su (South China University of Technology);
- 19 Compact Dual-resonator Loaded Band-notched MIMO Antenna with High Frequency Selectivity and Controllable Bandwidth
Hui-Fen Huang (South China University of Technology); Shu-Guang Xiao (South China University of Technology);
- 20 A Microstrip-line-fed Tri-band Monopole Antenna for WLAN/WiMAX Applications
Yonghao Xin (Southwest Jiaotong University); Quanyuan Feng (Southwest Jiaotong University); Dengyao Tian (Southwest Jiaotong University);
- 21 A Low-cost Compact Wideband Printed Planar Log Periodic Sierpinski Antenna
Jolly Rajendran (Amrita University); Sreedevi K. Menon (Amrita University);
- 22 A Passive Radar System for Detecting UAV Based on the OFDM Communication Signal
Xiaoqi Yang (National University of Defense Technology); Kai Huo (National University of Defense Technology); Weidong Jiang (National University of Defense Technology); Jingjing Zhao (National University of Defense Technology); Zhaokun Qiu (National University of Defense Technology);
- 23 Efficient Mainlobe Interference Suppression in Coherent Multipath Environment
Yasen Wang (National University of Defense Technology); Qinglong Bao (National University of Defense Technology); Zeng Ping Chen (National University of Defense Technology);
- 24 Modelling of Multiferroic Microwave Patch Antenna
Alexander Sergeevich Tatarenko (Novgorod State University); Roman Valer'evich Petrov (Novgorod State University); A. O. Nikitin (Novgorod State University); Mirza Imamovich Bichurin (Novgorod State University); Satoshi Tomita (Nara Institute of Science and Technology (NAIST)); Tetsuya Ueda (Kyoto Institute of Technology);
- 25 A Circularly Polarized Wide-angle Scanning Phased Array Antenna Design
Yan Li (Xi'an Institute of Space Radio Technology (CAST Xi'an)); Buning Tian (China Academy Space Technology (Xi'an)); Jiangbo Xue (Xi'an Institute of Space Radio Technology (CAST Xi'an));

- 26 Review of Calibration Techniques for Space-borne Active Array Antenna
Bowei Wang (Xi'an Institute of Space Radio Technology); Buning Tian (China Academy Space Technology (Xi'an)); Yan Li (Xi'an Institute of Space Radio Technology (CAST Xi'an));
- 27 A Wideband WLAN 2.4/5.2/5.8 GHz MIMO Antenna Based on Cavity Mode in Full Metal Cover Tablet Computer
Peng Chen (Shanghai University); Zheqiang Wu (Shanghai University); Guangli Yang (Shanghai University);
- 28 A Novel EBG-based MIMO Antenna with Enhanced Isolation for WLAN Applications
Qingchong Liu (Zhejiang University); Qi Liu (Zhejiang University); Fangchao Zhou (Zhejiang University);
- 29 The Design of Array Antenna Based on Multi-modal OAM Vortex Electromagnetic Wave
Xuehong Sun (Ningxia University); Yu Du (Ningxia University); Yutang Fan (Ningxia University); Muge Sun (Ningxia University);
- 30 Heart-shaped Band-notched UWB Antenna with U-shaped Slots
Juhong Shen (Xichang Satellite Launch Center); Jian Wang (Xichang Satellite Launch Center); Chun Li (Xichang Satellite Launch Center);
- 31 Radial Line Slotted Antenna for Satellite Communications in Ku-band
Marwa Youssef Shalaby (Arab Academy for Science Technology & Maritime Transport (AASTMT)); Wael Swelam (Egyptian Armed Forces); Mohamed Hassan Abd El-Azeem (Arab Academy for Science, Technology and Maritime Transport);
- 32 A Comparative Study for Designing and Modeling Patch Antenna with Different Electromagnetic CAD Approaches — A Case Study
Iman I. M. Abu Sulayman (Taif University); Sami H. A. Almalki (Taif University); Mohamed S. Soliman (Taif University); Majed O. Dwairi (Al-Balqa' Applied University);
- 33 A Fan-shaped Quad Band-notched UWB Antenna Using Two Fork-shaped Resonators
Kai Yu (Harbin Engineering University); Yingsong Li (Harbin Engineering University); Xianping Luo (Harbin Engineering University); Yanyan Wang (Harbin Engineering University);
- 34 A Dual Frequency Beam Configuration Reflectarray Antenna
Bo Cheng (Beihang University); Dawei Liu (Beihang University);
- 35 Linear-to-Linear High Directional Antenna Using Transmission Polarization Metasurface
Wenjie Wang (Air Force Engineering University); Mingbao Yan (Air Force Engineering University); Jiafu Wang (Air Force Engineering University); Hangying Yuan (Air Force Engineering University); Yongqiang Pang (Air Force Engineering University); Cuilian Xu (Air Force Engineering University); Shaobo Qu (Air Force Engineering University); Mingde Feng (Air Force Engineering University); Hua Ma (Air Force Engineering University); Jun Wang (Air Force Engineering University); Hongya Chen (Air Force Engineering University); Zhiqiang Li (Air Force Engineering University);
- 36 Simulation of the HPM Power and Pulse Width on the Influence of ESD Protection Device
Zhijuan Huang (Xi'an Jiaotong University); Meiqin Liu (Xi'an Jiaotong University); Ming Zhu (China Academy of Space Technology); Yong Li (Northwest Institute of Nuclear Technology);
- 37 The Study of Microwave Absorption Characteristics of Sodium Chloride in a Novel Quasi-optical Cavity Based on the Parametric Sensitivity Analysis
Jin Zhang (Kunming University of Science and Technology); Hua Chen (Kunming University of Science and Technology); Zebin Fan (Kunming University of Science and Technology); J. H. Peng (Ministry of Education);
- 38 Bragg Interactions in the Double Periodic Left-handed Line
Makoto Tsutsumi (Kyoto Institute of Technology);
- 39 Dual Tunable Magnetolectric Resonator in a Slot Line for Microwave Applications
Alexander Sergeevich Tatarenko (Novgorod State University); Darya Valerievna Lavrentieva (Novgorod State University); Mirza Imamovich Bichurin (Novgorod State University);
- 40 Generation of Microwave Oscillations in a Current-driven Magnetic Nanocontact with Ferroelectric and Multiferroic Junction
Ansar R. Safin (National Research University "Moscow Power Engineering Institute"); Mirza Imamovich Bichurin (Novgorod State University); R. Petrov (Novgorod State University); Alexander Sergeevich Tatarenko (Novgorod State University);

- 41 A Direct Integral Imaging Method for Near-field 3-D Imaging
Yingzhi Kan (National University of Defense Technology); Yongfeng Zhu (National University of Defense Technology); Qiang Fu (National University of Defense Technology);
- 42 The Recent Advances of Data Imaging and Fusion Processing for Airborne X-SAR with High Resolution
Ting Shen (Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences); Jun Li (Beijing Institute of Radio Measurement); Zhirui Wang (Beijing Institute of Radio Measurement); Lei Huang (Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences); Liwei Li (Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences); Ping Zhang (Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences);
- 43 P Band UWB CSAR Vehicle Experiment and Raw Data Processing
Leping Chen (National University of Defense Technology); Dao Xiang An (National University of Defense Technology); Xiaotao Huang (National University of Defense Technology);
- 44 Extended Factorized Geometrical Autofocus for Circular Synthetic Aperture Radar Processing
Yuxiao Luo (National University of Defense Technology); Leping Chen (National University of Defense Technology); Dao Xiang An (National University of Defense Technology); Xiaotao Huang (National University of Defense Technology);
- 45 Bistatic ISAR Imaging Based on BP Algorithm
Shunda Wang (National University of Defense Technology); Chongyi Fan (National University of Defense Technology); Xiaotao Huang (National University of Defense Technology); Leping Chen (National University of Defense Technology);
- 46 A Novel SAR Imaging Method Based on FRFT and BFGS Algorithm
Qianrong Lu (Shanghai Jiao Tong University); Kaizhi Wang (Shanghai Jiao Tong University); Ji Guo (Shanghai Jiaotong University); Xingzhao Liu (Shanghai Jiaotong University);
- 47 A Novel Method of 3D Imaging Based on Orthogonal-track Arc GB-SAR
Ji Guo (Shanghai Jiaotong University); Kaizhi Wang (Shanghai Jiao Tong University); Xingzhao Liu (Shanghai Jiaotong University);
- 48 A Novel Ship Detection Algorithm Based on Anomaly Detection Theory for SAR Images
Liang Zhai (National University of Defense Technology); Yu Li (National University of Defense Technology); Yi Su (National University of Defense Technology);
- 49 An Amplitude and Phase Imbalance Correction Scheme for a Switch ULA FMCW SAR System
Xiaolin Yang (China Academy of Safety Science and Technology); Yanping Wang (China Academy of Safety Science and Technology); Yaolong Qi (China Academy of Safety Science and Technology);
- 50 Method for Extracting Geometrical Features of Aircraft Targets in SAR Image
Yujie Chen (National University of Defense Technology); Lingjun Zhao (National University of Defense Technology); Gangyao Kuang (National University of Defense Technology);
- 51 Study on the Reconstruction of Periodic Nonuniformly Sampled Azimuth Signal via Matrix Inversion for Multi-channel SAR
Shengqiang Lou (National University of Defense Technology); Pu Cheng (National University of Defense Technology);
- 52 Target Recognition by Scattering Centers with Partial Occlusion
Conghui Ma (National University of Defense Technology); Gongjian Wen (National University of Defense Technology); Xiaohong Huang (National University of Defense Technology); Xiaoliang Yang (National University of Defense Technology); Shao Hua Qiu (National University of Defense Technology);
- 53 A Filtering Algorithm for InSAR Interferogram Based on Wavelet Transform and Median Filter
Pengpeng Li (Henan University of Technology); Xiao-Zhen Ren (Henan University of Technology);
- 54 An Optical SAR Data Processor Based on DMD
Jie Zhang (Shanghai Jiao Tong University); Yesheng Gao (Shanghai Jiao Tong University); Kaizhi Wang (Shanghai Jiao Tong University); Xingzhao Liu (Shanghai Jiaotong University);
- 55 Imaging Characteristics of Corner Reflector under Multi-azimuth Angles
Shiyu Zhang (Beihang University); Bing Sun (Beihang University);

- 56 A Novel Combination-type Electromagnetic Gradient Metasurface for Specular RCS Reduction
Li Wang (University of Electronic Science and Technology of China); Guorui Zhang (University of Electronic Science and Technology of China); Hai-Yan Chen (University of Electronic Science and Technology of China); Pei-Heng Zhou (University of Electronic Science and Technology of China); Xiao Long Weng (University of Electronic Science and Technology of China); Long-Jiang Deng (University of Electronic Science and Technology of China);
- 57 The Statistical Evaluation of MRI Data of a Plant Tissue
Petr Marcon (Brno University of Technology); Karel Bartusek (Institute of Scientific Instruments of the ASCR); Pavel Fiala (Brno University of Technology); Tomas Kriz (Brno University of Technology); Martin Cap (Brno University of Technology);
- 58 Contactless Fall Detection by Means of CW Bioradar
Maria K. Dremina (Bauman Moscow State Technical University); Lesya N. Anishchenko (Bauman Moscow State Technical University);
- 59 Structure of the Smart Energo Model Control System
Ivo Vesely (Brno University of Technology); Petr Marcon (Brno University of Technology); Zoltan Szabo (Brno University of Technology); Frantisek Zezulka (Brno University of Technology); O. Sajdl (Brno University of Technology);
- 60 Parameter Identification of PMSM
Ivo Vesely (Brno University of Technology); Petr Marcon (Brno University of Technology); Zoltan Szabo (Brno University of Technology); Frantisek Zezulka (Brno University of Technology); O. Sajdl (Brno University of Technology);
- 61 The Efficiency of a Microgrid Hydrogen Circuit
Petr Marcon (Brno University of Technology); Ivo Vesely (Brno University of Technology); Zoltan Szabo (Brno University of Technology); Zdenek Roubal (Brno University of Technology); Frantisek Zezulka (Brno University of Technology);
- 62 Comparison of the Extremely Low-frequency Electric Field Meters at 400kV and 220kV Substations
Herkko Pirkkalainen (Fingrid Oyj); Leena Korpinen (Tampere University of Technology); Hiroo Tarao (Tampere University of Technology); Timo Heiskanen (Fingrid Oyj); Mika Penttila (Fingrid Oyj); Jarmo Elovaaara (Fingrid Oyj);
- 63 Possibilities to Decrease the Electric Field Exposure with a Shield over Worker under the 400 kV Power Lines
Rauno Paakkonen (Finnish Institute of Occupational Health); Leena Korpinen (Tampere University of Technology); Hiroo Tarao (National Institute of Technology, Kagawa College); Fabriziomaria Gobba (University of Modena and Reggio Emilia);
- 64 Measurements of Leakage Magnetic Fields from Induction Heating Range Using Different Sized Pans
Hiroo Tarao (Tampere University of Technology); Noriyuki Hayashi (University of Miyazaki); Leena Korpinen (Tampere University of Technology); Katsuo Isaka (The University of Tokushima);
- 65 Electromagnetic Tunneling for Using in Wireless Power Transfer
Junfei Zhao (Tongji University); Yewen Zhang (Tongji University); Yunhui Li (Tongji University); Kai Fang (Tongji University); Li He (Tongji University); Hong Chen (Tongji University);
- 66 Study on Series-parallel Mixed-resonance Model of Wireless Power Transfer via Magnetic Resonance Coupling
Shengming Wang (Huazhong University of Science and Technology); Jun-Feng Chen (Huazhong University of Science and Technology); Zhaoyang Hu (Huazhong University of Science and Technology); Minghai Liu (Huazhong University of Science and Technology);
- 67 Research on the Cooperative Working Principle of Coupling Mechanism in Driving Wireless Charging for Electric Vehicle
Xiaokang Wu (Tianjin Polytechnic University); Xian Zhang (Tianjin Polytechnic University); Siyuan Jiang (Tianjin Polytechnic University); Zhaoyang Yuan (Tianjin Polytechnic University);
- 68 Design of a Compact Wideband Microstrip Bandpass Filter Using Multiple-mode Resonator
Tiaojun Zeng (Shihezi University); Chuan Jian Wang (Shihezi University);
- 69 Analytic Expression of the Aperture Averaging Function for Cassegrain System
Changqi Yang (Xi'an Shiyong University); Ning Xu (Xi'an Shiyong University); Simin Liu (Xi'an Shiyong University); Zhimin Wu (Xi'an Shiyong University); Liuyi Yang (Xi'an Shiyong University); Xiaoyu Tu (Xi'an Shiyong University); Fan Wang (Xi'an Shiyong University);

- 70 The Thickness Resonance of the Bandpass Frequency Selective Surface Using High-permittivity Dielectric Materials
Fei Yu (Air Force Engineering University); Jun Wang (Air Force Engineering University); Jiafu Wang (Air Force Engineering University); Hua Ma (Air Force Engineering University); Hongliang Du (Air Force Engineering University); Ya Fan (Air Force Engineering University); Yang Shen (Air Force Engineering University); Tengqiang Shao (Air Force Engineering University); Shaobo Qu (Air Force Engineering University);
- 71 Design of a Visualized System for Monitoring Tunnel's Risk Based on Wireless Data Transmission
Lan Chen (Shanghai Institute of Technology); Tao Geng (Shanghai Institute of Technology); Guo Chun Wan (Tongji University); Ke Shao (Mcc Baosteel Technology Services CO., LTD); Mei Song Tong (Tongji University);
- 72 Design of Passive Wireless Antenna Sensors for Strain Measurement
Lan Chen (Shanghai Institute of Technology); Tao Geng (Shanghai Institute of Technology); Guo Chun Wan (Tongji University); Li Yu Xie (Tongji University); Mei Song Tong (Tongji University);
- 73 Design of Digital Baseband Converter for the Observation of Pulsars Based on ROACH2 Platform
Lan Chen (Shanghai Institute of Technology); Hao Xia (Shanghai Institute of Technology); Chuang Gao (Tongji University); Mei Song Tong (Tongji University);
- 74 Scattering Centers Diagnosis and Parameters Modification of the Complex Targets' Geometry Model Based on the Limited Observed Data
Jin Liu (Wuhan University); Si-Yuan He (Wuhan University); Yunhua Zhang (Wuhan University); Guo-Qiang Zhu (Wuhan University);
- 75 Stable MOT Solution for TE Transient Scattering from Two-dimensional Conducting Objects
Qiang Wang (Xidian University); Li-Xin Guo (Xidian University); Z. Y. Liu (Xidian University);
- 76 The Two-slit Interference of Vector Optical Fields with Radially-variant Polarization
Tengyue Gao (Zhejiang Sci-Tech University); Chaoyang Qian (Zhejiang Sci-Tech University); Rui Pin Chen (Zhejiang Sci-Tech University);
- 77 Effect of the Longitudinal Component on the Near Field Distribution of Vector Optical Field with Radially Variant Polarization
Chaoyang Qian (Zhejiang Sci-Tech University); Rui Pin Chen (Zhejiang Sci-Tech University);
- 78 Manipulation of Plasmonic Resonances in Graphene Coated Dielectric Cylinders
Lixin Ge (Chongqing University); Dezhuhan Han (Chongqing University); Ying Wu (King Abdullah University of Science and Technology (KAUST));
- 79 Radar Cross Section Measurement in Terahertz
Yang Wu (Science and Technology on Electromagnetic Scattering Laboratory); Yang Bai (Science and Technology on Electromagnetic Scattering Laboratory);
- 80 Sub-Nyquist Sampling Jamming against Wideband LFM Radar with CS-based Matched Filtering
Zhao-Yu Gu (National University of Defense Technology); Xiaoyi Pan (National University of Defense Technology); Qixiang Fu (National University of Defense Technology); Wei Wang (National University of Defense Technology); Guoyu Wang (National University of Defense Technology);
- 81 Application of MUSIC for Imaging Extended Dielectric Inhomogeneities Embedded in a Inhomogeneous Medium
Chi Young Ahn (National Institute for Mathematical Sciences); Taeyoung Ha (National Institute for Mathematical Sciences); Kiwan Jeon (National Institute for Mathematical Sciences); Won-Kwang Park (Kookmin University);
- 82 Detection of Small Dielectric Inhomogeneities Enclosed by Random Scatterers via Kirchhoff and Subspace Migration
Won-Kwang Park (Kookmin University);
- 83 Multi-frequency MUSIC for Searching Small Dielectric Inclusions Surrounded by Random Scatterers
Won-Kwang Park (Kookmin University);
- 84 Fine Particle Formation by Microwave Irradiation: Prevention of Superheat Behavior by Addition of Alcohol
Matsumura Shungo (University of Hyogo); Ryosuke Nakata (University of Hyogo); Yusuke Asakuma (University of Hyogo);
- 85 An All-fiber Tunable Ultralow Frequency Shifter Based on Cascaded Acousto-optic Tunable Filters
Pengfa Chang (Nankai University); Ligang Huang (Nankai University); Xiaobo Song (Nankai University); Feng Gao (Nankai University); Guoquan Zhang (Nankai University); Jingjun Xu (Nankai University);

- 86 A Novel Approach for Dual-band Microstrip Antenna RCS Reduction Based on AMC Structure
Fei Liu (Beihang University); Tao Hong (Beihang University); Jian-Nan Ma (The 54th Research Institute of China Electronics Technology Group Corporation); Jing-Cheng Zhao (Beihang University); Wen-Lu Xie (Beihang University);
- 87 Analysis on Electromagnetic Wave Propagation in Lithosphere-atmosphere System
Dan Xia (Tianjin University of Technology);
- 88 A Broadband Reflective Linear Polarization Converter Based on Multi-reflection Interference Theory
Cong Fang (Huazhong University of Science and Technology); Yongzhi Cheng (Wuhan University of Science and Technology); Zhiqiang He (Huazhong University of Science and Technology); Rong Zhou Gong (Huazhong University of Science and Technology);
- 89 Methods for the Measurement and Ultra-low-frequency Evaluation of Geomagnetic and Ionospheric Changes
Michael Hanzelka (Brno University of Technology); Pavel Fiala (Brno University of Technology); Premysl Dohnal (Brno University of Technology); Martin Friedl (Brno University of Technology); Jiri Sliz (Brno University of Technology);
- 90 Comparing the Responses of a Layered Material to EMG Waves from a Pulse Source
Radim Kadlec (Brno University of Technology); Pavel Fiala (Brno University of Technology);
- 91 Extraction of Inductance Parameter for Nonuniform Transmission Line in Anisotropic Dielectric
Yaxiu Sun (Harbin Engineering University); Xiaomeng Wang (Harbin Engineering University);
- 92 Modeling of Contact Resistance Using Fuzzy System
Jianying Zhong (Pinggao Group Co., Ltd.); Shengwu Tan (Pinggao Group Co., Ltd.); Gang Wang (Pinggao Group Co., Ltd.); Zhijun Wang (Pinggao Group Co., Ltd.);
- 93 Based on AC and DC Coupling of the DC Wall Bushing Electric Field Analysis
Shengwu Tan (Pinggao Group Co., Ltd.); Yapei Liu (Pinggao Group Co., Ltd.); Shengjun Lin (Pinggao Group Co., Ltd.); Zhijun Wang (Pinggao Group Co., Ltd.); Bo Zhang (Pinggao Group Co., Ltd.); Gang Wang (Pinggao Group Co., Ltd.); Hao Zhang (Pinggao Group Co., Ltd.); Changyu Bai (Pinggao Group Co., Ltd.); Guan Wang (Pinggao Group Co., Ltd.);
- 94 Influences of the Internal Connector Structure to the Loss and Heat of GIS Bus Bar
Bo Zhang (Pinggao Group Co., Ltd.); Shengwu Tan (Pinggao Group Co., Ltd.); Yujing Guo (Pinggao Group Co., Ltd.); Shengjun Lin (Pinggao Group Co., Ltd.); Zhijun Wang (Pinggao Group Co., Ltd.); Yapei Liu (Pinggao Group Co., Ltd.); Gang Wang (Pinggao Group Co., Ltd.); Hao Zhang (Pinggao Group Co., Ltd.); Guan Wang (Pinggao Group Co., Ltd.); Changyu Bai (Pinggao Group Co., Ltd.);
- 95 A New Method of Electromagnetic Radiant Sources Based on Support Vector Machine
Yang Sun (Shenyang Normal University); Xinyuan Hu (Shenyang Normal University); Shoulin Yin (Shenyang Normal University); Jie Liu (Shenyang Normal University);
- 96 Simulation of Wu-Yang Monopole in Superfluid
Wei Jia (Beijing Institute Technology); Yi-Rong Ma (Beijing Institute Technology); Qing Zhao (Beijing Institute of Technology); Mo-Lin Ge (Beijing Institute Technology);
- 97 A Novel Broadband EBG Using Multi-via and Double-layer Structure
Xiaolan Liu (Communication University of China); Guizhen Lu (Communication University of China);
- 98 Parallel Shooting and Bouncing Ray Method with Virtual Divergence Factor for Fast Analysis of Scattering from Complex Targets
Pengcheng Gao (Shanghai Key Laboratory of Electromagnetic Environmental Effects for Aerospace Vehicle); Zichang Liang (Shanghai Key Laboratory of Electromagnetic Environmental Effects for Aerospace Vehicle); Xinyi He (Shanghai Key Laboratory of Electromagnetic Environmental Effects for Aerospace Vehicle); Xiao-Bing Wang (Shanghai Key Laboratory of Electromagnetic Environmental Effects for Aerospace Vehicle);
- 99 Real Time High Precision Hardware Correlator
Zhijun Xu (Shanghai Astronomical Observatory, Chinese Academy of Science); Jiantao Lai (Shanghai Institute of Technology);
- 100 A Novel Three-dimension Fast Radar Imaging Method Based on Far-field-approximation
Long Gang Wang (Peking University); Lianlin Li (Peking University); Tie Jun Cui (Southeast University);

- 101 Research on Chatter Suppression Based on MRF in Turning
Chunrui Tang (Heilongjiang University of Science and Technology); Dandan Liu (Heilongjiang University of Science and Technology); Qiugen Xiao (Dalian Airforce Communication NCO Academy); Jie Wang (China Coal Technology Engineering Group Chongqing Research Institute);
- 102 A Broadband and Polarization-insensitive Metamaterial Absorber
Xin-Yan Ling (Shanghai University); Zhongyin Xiao (Shanghai University); Xiao-Xia Zheng (Shanghai University); Jing-Yao Tang (Shanghai University); Kai-Kai Xu (Shanghai University);
- 103 Ultrathin and Broadband Metamaterial Absorber Based on New Four L Structure in Infrared and Visible Region
Jing-Yao Tang (Shanghai University); Zhongyin Xiao (Shanghai University); Kai-Kai Xu (Shanghai University); Xin-Yan Ling (Shanghai University); Xiao-Xia Zheng (Shanghai University);
- 104 Printing Color Using Resonant Scattering of Si Nanoparticle Array
Seokhyeon Hong (Chung-Ang University); Young Jin Lee (Chung-Ang University); Soon-Hong Kwon (Chung-Ang University);
- 105 Enhancement of Wavelength Conversion in Subwavelength Thickness Layer Based on Metamaterial Mirror
Young Jin Lee (Chung-Ang University); Kihwan Moon (Chung-Ang University); Soon-Hong Kwon (Chung-Ang University);
- 106 Tuneable Switching in Dielectric-loaded Graphene Plasmon Waveguides
Zhe Qi (National University of Defense Technology); Zhihong Zhu (National University of Defense Technology); Wei Xu (National University of Defense Technology); Jianfa Zhang (National University of Defense Technology); Chu-Cai Guo (National University of Defense Technology); Ken Liu (National University of Defense Technology); Xiao-Dong Yuan (National University of Defense Technology); Shigiao Qin (National University of Defense Technology);
- 107 Splitter Feeding Network for Array Radiations of Spoof Surface Plasmon Polaritons
Jun Jun Xu (Southeast University); Jia Yuan Yin (Southeast University); Hao Chi Zhang (Southeast University); Tie Jun Cui (Southeast University);
- 108 Microwave Analog of Optical Theorem for Transformation Media Application
Qian Duan (Soochow University); Sucheng Li (Soochow University); Jianfeng Yang (Soochow University); Weixin Lu (Soochow University); Bo Hou (Soochow University);
- 109 In-plane Focus Reflector Antennas Based on Phase Gradient Metasurface
Ya Fan (Air Force Engineering University); Yang Shen (Air Force Engineering University); Fei Yu (Air Force Engineering University); Jiafu Wang (Air Force Engineering University); Yongfeng Li (Air Force Engineering University); Yongqiang Pang (Air Force Engineering University);
- 110 Two-dimensional Graphene Metasurfaces for Wavefront Manipulation
Ji Long Liu (Southeast University); Wei Bing Lu (Southeast University); Jian Wang (Southeast University); Xiao Bing Li (Southeast University); Zhen-Guo Liu (Southeast University); Wu Yang (Southeast University);

Session 3A1

FocusSession.SC2: Novel Dispersions and Applications of Zero-index Materials

Wednesday AM, August 10, 2016

Room 5B/5C

Organized by Yun Lai, Zhi Hong Hang

Chaired by Yun Lai, Zhi Hong Hang

- 08:00 Enhancing Light-matter Interaction with Zero-index Materials
invited Zongfu Yu (University of Wisconsin);
- 08:20 Broadband Fractal Acoustic Metamaterials
invited Gang Yong Song (Southeast University); Qiang Cheng (Southeast University); Bei Huang (Southeast University); Tie Jun Cui (Southeast University);
- 08:40 Zero-index Metamaterials Based on Two-dimensional Transmission Lines
invited Yuan Li (Tongji University); Weiwei Liu (Tongji University); Haitao Jiang (Tongji University); Hong Chen (Tongji University);
- 09:00 Broadband Focusing and Collimation of Water Waves by Zero Refractive Index
invited Chi Zhang (Fudan University); Che Ting Chan (The Hong Kong University of Science and Technology); Xinhua Hu (Fudan University);

- 09:20 Coherent Perfect Absorption and Lasing with an
invited “Energy-balanced” Zero-index Medium
Ping Bai (Soochow University); Kun Ding (The Hong Kong University of Science and Technology); Gang Wang (Soochow University); Jie Luo (Soochow University); Zhao-Qing Zhang (Hong Kong University of Science and Technology); Che Ting Chan (The Hong Kong University of Science and Technology); Ying Wu (King Abdullah University of Science and Technology (KAUST)); Yun Lai (The Hong Kong University of Science and Technology);
- 09:40 Elastic Waves Scattering without Conversion in Meta-
invited materials with Simultaneous Zero Indices for Longitudinal and Transverse Waves
Fengming Liu (Hubei University of Technology); Zhengyou Liu (Wuhan University);
- 10:00 **Coffee Break**
- 10:20 Zero-refractive Index and Pseudo-spin Physics in Pho-
keynote tonic Systems
Che Ting Chan (The Hong Kong University of Science and Technology);
- 10:50 Full Polarization Conical Dispersion and Zero-
invited refractive-index in Two-dimensional Photonic Hypercrystals
Jian-Wen Dong (Sun Yat-Sen University); Xiao-Dong Chen (Sun Yat-Sen University);
- 11:10 Acoustic Extraordinary Transmission Based on Density-
invited near-zero Metamaterials
Ying Cheng (Nanjing University); Y. Gu (Nanjing University); C. Zhou (Nanjing University); B. G. Yuan (Nanjing University); X. J. Liu (Nanjing University);
- 11:30 Conical Dispersions Induced Interface States in Two-
invited dimensional Photonic Crystals
Xueqin Huang (South China University of Technology); Meng Xiao (Stanford University); Zhao-Qing Zhang (The Hong Kong University of Science and Technology); Che Ting Chan (The Hong Kong University of Science and Technology);
- 11:50 Realization of Complementary Medium Using Pho-
invited tonic Crystals
Tao Xu (Soochow University); Anan Fang (The Hong Kong University of Science and Technology); Zhi Hong Hang (Soochow University);

Session 3A2**FocusSession.SC2: Plasmonics Based on Graphene and other 2D Materials 1****Wednesday AM, August 10, 2016****Room 5D/5E**

Organized by Lei Shi, Hugen Yan

Chaired by Lei Shi

- 08:20 Coupling Effects in Plasmonic Nanoparticle Arrays:
invited The Weak and the Strong Coupling Regime and the Effects of Spin-orbit Coupling
Tommi K. Hakala (Aalto University); M. Kataja (Aalto University); Lei Shi (Fudan University); A. Julku (Aalto University); H. T. Rekola (Aalto University); M. J. Huttunen (Aalto University); J.-P. Martikainen (Aalto University); R. J. Moerland (University of Technology); S. van Dijken (Aalto University); Paivi Torma (Aalto University);
- 08:40 Nano-plasmonic Phenomena in Graphene
invited
Zhe Fei (Iowa State University);
- 09:00 Perfect Absorption of the Graphene with Truncated
invited Photonic Crystals
Yiping Liu (Shandong University at Weihai); Lei Du (Shandong University at Weihai); Guang Lu (Shandong University at Weihai); Shan Zhang (Shandong University at Weihai); Fen Liu (Shandong University at Weihai); Gui-Qiang Du (Shandong University at Weihai);
- 09:20 Beyond Graphene Plasmonics
invited
Tony Low (University of Minnesota);
- 09:40 Graphene Nanophotonics: From Fundamentals to Ap-
invited plications
Sanshui Xiao (Technical University of Denmark);
- 10:00 **Coffee Break**
- 10:20 Topological Interface States in Multilayer Graphene
invited Systems
Dezhuan Han (Chongqing University);
- 10:40 Enhancing Light Absorption of Single-layer Graphene
invited
Zongfu Yu (University of Wisconsin);

- 11:00 Towards Nano-optical Tweezers with Graphene Plasmons
Wenbin Liu (National University of Defense Technology); Jianfa Zhang (National University of Defense Technology); Zhihong Zhu (National University of Defense Technology); Xiao-Dong Yuan (National University of Defense Technology); Shiqiao Qin (National University of Defense Technology);
- 11:15 Near-field Investigation of Plasmons in Graphene Etched by Ion Beams
Weiwei Luo (Nankai University); Wei Cai (Nankai University); Wei Wu (Nankai University); Yin-xiao Xiang (Nankai University); Mengxin Ren (Nankai University); Xinzhen Zhang (Nankai University); Jingjun Xu (Nankai University);
- 11:30 Electrical Detection of Graphene Plasmons
Renwen Yu (The Barcelona Institute of Science and Technology); F. Javier Garcia De Abajo (ICFO Institut de Ciències Fotoniques, Mediterranean Technology Park);
- 11:45 Unidirectional Excitation of Graphene Plasmons in Au-Graphene Composite Structures by a Linear Polarized Light Beam
Zenghong Ma (Nankai University); Wei Cai (Nankai University); Xinzhen Zhang (Nankai University); Jingjun Xu (Nankai University);
- 09:00 A System-by-Design Approach to the Synthesis of Mantle Cloaks for Large Dielectric Cylinders
Giacomo Oliveri (University of Trento); Ephrem T. Bekele (Addis Ababa Institute of Technology); Marco Salucci (University of Trento); Lorenza Tenuti (University of Trento); Giorgio Gottardi (University of Trento); Toshifumi Moriyama (University of Nagasaki); Takashi Takenaka (Nagasaki University); Filiberto Bilotti (University "Roma Tre"); Alessandro Toscano ("Roma Tre" University); Andrea Massa (University of Trento);
- 09:20 Manipulations of Dual Beams with Dual Polarizations Based on Tensor Metasurface
Xiang Wan (Southeast University); Tie Jun Cui (Southeast University);
- 09:40 Parity-time Symmetric Graphene Metasurfaces
Pai-Yen Chen (Wayne State University);
- 10:00 **Coffee Break**
- 10:20 Generation of High-directivity Beams by Using Metasurfaces
Wei Xiang Jiang (Southeast University); Qiang Cheng (Southeast University); Tie Jun Cui (Southeast University);
- 10:40 High Efficient Waveplates and Microlens Arrays Designed by Metasurface
Yungui Ma (Zhejiang University); Wei Jiang (Zhejiang University); Jun Yuan (Zhejiang University); Sailing He (Zhejiang University);
- 11:00 Transmission Cloaks Based on Metasurfaces
Hong Chen Chu (Soochow University); Jie Luo (Soochow University); Yun Lai (Soochow University);
- 11:20 Dual-band Transmitarray
Rui Yuan Wu (Southeast University); Yunbo Li (Southeast University); Tie Jun Cui (Southeast University);
- 11:40 A Compact Dual-band Patch Antenna Enabled by Complementary Split Ring Resonator Loaded Metasurfaces
Taiwei Yue (The Pennsylvania State University); Zhi Hao Jiang (The Pennsylvania State University); Douglas H. Werner (The Pennsylvania State University); Pingjuan L. Werner (The Pennsylvania State University);

Session 3A3

SC3: Advanced Metasurface-enabled Devices: From RF to Optical

Wednesday AM, August 10, 2016

Room 5F

Organized by Douglas H. Werner, Zhi Hao Jiang

Chaired by Zhi Hao Jiang

- 08:00 Electrically Controlled Switch Based on Fano Resonance Micro-structure
Quanhong Fu (Northwestern Polytechnical University); Fuli Zhang (Northwestern Polytechnical University); Yuancheng Fan (Northwestern Polytechnical University);
- 08:20 Control Radiation with Epsilon-near-zero Metamaterials
Shuomin Zhong (Ningbo University);
- 08:40 An Open Chiro-waveguide Enabled by Anisotropic Impedance Surfaces
Zhi Hao Jiang (The Pennsylvania State University); Douglas H. Werner (The Pennsylvania State University); Pingjuan L. Werner (The Pennsylvania State University);

Session 3A4**SC3: Silicon-plus Photonics for High Density Optical Interconnects****Wednesday AM, August 10, 2016****Room 5G**

Organized by Daoxin Dai, Liu Liu

Chaired by Daoxin Dai, Liu Liu

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- 08:00 Silicon-plus Photonics
Daoxin Dai (Zhejiang University);
- 08:20 Multiplexing and Switching for Mode Division Multiplexed Optical Interconnects
Hon Ki Tsang (The Chinese University of Hong Kong); Xinru Wu (The Chinese University of Hong Kong); Linghai Liu (The Chinese University of Hong Kong);
- 08:40 Single Crystal Silicon-Germanium-on-Insulator for High Density Optical Interconnects
Callum G. Littlejohns (Nanyang Technological University); Mohamed Said Rouifed (Nanyang Technological University); Haodong Qiu (Nanyang Technological University); Tina Guo Xin (Nanyang Technological University); Ting Hu (Nanyang Technological University); Thalia Dominguez Bucio (University of Southampton); Milos Nedeljkovic (University of Southampton); David J. Thomson (University of Southampton); Ali Z. Khokhar (University of Southampton); Goran Z. Mashanovich (University of Southampton); Graham T. Reed (University of Southampton); Hong Wang (Nanyang Technological University); Frederic Y. Gardes (University of Southampton);
- 09:00 Ring Lasers and Photodetectors on the Hybrid III-V-on-Si Platform
Xue Huang (Hewlett Packard Enterprise); Geza Kurczveil (Hewlett Packard Enterprise); Di Liang (Hewlett Packard Enterprise); Marco Fiorentino (Hewlett Packard Enterprise); Raymond Beausoleil (Hewlett Packard Enterprise);
- 09:20 Silicon-based Ge and GeSn Photodetectors
Chunlai Xue (Institute of Semiconductors, Chinese Academy of Sciences);
- 09:40 High-**Q** Photonic Crystal Nanobeam Cavities on Silicon
Yaocheng Shi (Zhejiang University);
- 10:00 **Coffee Break**
- 10:20 An Ultra-efficient Nonlinear Platform: AlGaAs-on-Insulator
Minhao Pu (Technical University of Denmark); Luisa Ottaviano (Technical University of Denmark); Elizaveta Semenova (Technical University of Denmark); Hao Hu (Technical University of Denmark); Leif Katsuo Oenlowe (Technical University of Denmark); Kresten Yvind (Technical University of Denmark);
- 10:40 III-V/Si Hybrid Integrated Devices for Optical Interconnect
Liu Liu (South China Normal University);
- 11:00 Subwavelength Engineered Structures for Integrated Photonics
Pavel Cheben (National Research Council of Canada); Jens H. Schmid (National Research Council); D.-X. Xu (National Research Council); Siegfried Janz (Institute for Microstructural Sciences, National Research Council Canada (NRC)); Jean Lapointe (Information and Communication Technologies, National Research Council Canada); S. Wang (National Research Council of Canada); Martin Vachon (Information and Communication Technologies, National Research Council Canada); D. Benedikovic (University of Paris Sud and CNRS); Carlos Alonso-Ramos (Universite Paris 11); Laurent Vivien (Universite Paris-Sud); Robert Halir (Universidad de Malaga); Alejandro Ortega-Monux (University Malaga); G. Wanguemert-Perez (Universidad de Malaga); Inigo Molina-Fernandez (Malaga University); M. Dado (University of Zilina); J. Mullerova (University of Zilina); J. Soler Penades (University of Southampton); Milos Nedeljkovic (University of Southampton); Goran Z. Mashanovich (University of Southampton);
- 11:30 Integration of InAs QD Comb Lasers with Silicon Photonics Ring Resonators
Ruizhe Yao (University of Massachusetts Lowell); Zihao Wang (Rochester Institute Technology); Stefan Preble (Rochester Institute Technology); Chi-Sen Lee (University of Massachusetts Lowell); Wei Guo (University of Massachusetts Lowell);
- 11:50 Photonic Integrated Devices for Exploiting the Orbital Angular Momentum of Light in Optical Communications
Xinlun Cai (Sun Yat-Sen University);
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Session 3A5**Fiber Lasers and 2-D Materials for Fiber Lasers 1****Wednesday AM, August 10, 2016****Room 5H**

Organized by Jianfeng Li, Fengqiu Wang

Chaired by Jianfeng Li

08:00 45° Tilted Fiber Grating Based in-fiber Linear Polar-
invited izer and Applications

Zhijun Yan (Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences); Hushan Wang (Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences); Kaiming Zhou (Aston University); Chengbo Mou (Shanghai University); Jianfeng Li (University of Electronic Science and Technology of China (UESTC)); Zuxing Zhang (Nanjing University of Posts and Telecommunications); Lin Zhang (Aston University); Yishan Wang (Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences); Wei Zhao (Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences);

08:20 Broadband Ultrafast Photoresponse of 1D and 2D
invited Semiconductors

Zhonghui Nie (Nanjing University); Chunhui Zhu (Nanjing University); Fengqiu Wang (Nanjing University);

08:40 My Recent Works on Ultrafast Fiber Laser and Car-
invited bon Based Materials for the Ultrafast Pulse Generation

Xiaohui Li (Shaanxi Normal University);

09:00 A Fiber Laser Using a Taper Covered with Single-
invited layer Graphene but Mode-locked by Weak Polarization Dependence

Luming Zhao (Jiangsu Normal University);

09:20 Molybdenum Diselenide (MoSe₂) Q-switched Polar-
ization Maintaining Erbium-doped Fiber Laser

Xun Wu (Shanghai Jiao Tong University); Rong Yang (Shanghai Jiao Tong University); Xiang Feng (Shanghai Jiao Tong University); Bohua Chen (Shanghai Jiao Tong University); Kan Wu (Shanghai Jiao Tong University); Weiwen Zou (Shanghai Jiao Tong University); Jianping Chen (Shanghai Jiao Tong University);

09:40 Deposition of the MoSe₂ Ethanol Dispersions on Tapered Fiber

Xiang Feng (Shanghai Jiao Tong University); Zhiyi Wang (Shanghai Jiao Tong University); Ruoyuan Qu (Shanghai Jiao Tong University); Xu Xiao (Shanghai Jiao Tong University); Hao Wang (Shanghai Jiao Tong University); Kan Wu (Shanghai Jiao Tong University); Weiwen Zou (Shanghai Jiao Tong University); Jianping Chen (Shanghai Jiao Tong University);

10:00 **Coffee Break**

10:20 Mid-infrared Supercontinuum Generation in Soft
invited Glass Fibers

Guanshi Qin (Jilin University);

10:40 Mid-infrared Pulsed Fiber Lasers by Using Black
invited Phosphorus as Saturable Absorber

Jianfeng Li (University of Electronic Science and Technology of China (UESTC));

11:00 The Stability of WSe₂ Q-Switched Fiber Laser

Liping Hou (Shanghai Jiao Tong University); Hui Liu (Shanghai Jiao Tong University); Ruoyuan Qu (Shanghai Jiao Tong University); Chaoshi Guo (Shanghai Jiao Tong University); Bohua Chen (Shanghai Jiao Tong University); Kan Wu (Shanghai Jiao Tong University); Weiwen Zou (Shanghai Jiao Tong University); Jianping Chen (Shanghai Jiao Tong University);

11:20 SESAM Passively Q-switched Laser Seeded Fiber
MOPA at 2.8 μm

Hongyu Luo (University of Electronic Science and Technology of China (UESTC));

11:40 Widely Tunable Pulsed Erbium-doped ZBLAN Fiber
Laser

Chujun Zhao (Hunan University); B. Huang (Hunan University); J. Liu (Shenzhen University); P. H. Tang (Hunan University); Shuangchun Wen (Hunan University);

12:00 Low-frequency Intensity Noise Dramatically Sup-
invited pressed Frequency-stabilized Single-frequency Fiber Laser at 1083 nm

Shanhui Xu (South China University of Technology); Qilai Zhao (South China University of Technology); Zhongmin Yang (South China University of Technology);

Session 3A6**SC3: Novel Phenomena in Engineered Photonic Structures****Wednesday AM, August 10, 2016****Room 5I**

Organized by Zhigang Chen, Fangwei Ye

Chaired by Fangwei Ye

- 08:20 Dirac Physics in Silicon via ‘Photonic Boron Nitride’
Matthew Collins (The Pennsylvania State University); Jack Zhang (The University of British Columbia); Richard Bojko (University of Washington); Lukas Chrostowski (University of Washington); Mikael C. Rechtsman (The Pennsylvania State University);
- 08:40 Grating Assisted Tunneling in Photonic Lattices: The Harper-Hofstadter Hamiltonian
Tena Dubcek (University of Zagreb); Karlo Lelas (University of Zagreb); Dario Jukic (University of Zagreb); Robert Pezer (University of Zagreb); Marin Soljacic (Massachusetts Institute of Technology); Hrvoje Buljan (University of Zagreb);
- 09:00 Flat Band and Dipolar Discrete Optics
Rodrigo A. Vicencio (Universidad de Chile);
- 09:20 Control of Light in Complex Aperiodic and Random Photonic Lattices
Alessandro Zannotti (Westfälische Wilhelms-Universität Münster); Falko Diebel (Westfälische Wilhelms-Universität Münster); Martin Boguslawski (Westfälische Wilhelms-Universität Münster); Cornelia Denz (Westfälische Wilhelms-Universität Münster);
- 09:40 Linear and Nonlinear Pulse Propagations in Metamaterials via Plasmon-induced Transparency
Guoxiang Huang (East China Normal University);
- 10:00 **Coffee Break**
- 10:20 Photonic Quantum Walks in Waveguide Lattices
Markus Grafe (Friedrich-Schiller-Universität Jena); Armando Perez-Leija (Friedrich-Schiller-Universität Jena); Maxime Lebugle (Friedrich-Schiller-Universität Jena); Steffen Weimann (Friedrich-Schiller-Universität Jena); Rene Heilmann (Friedrich-Schiller-Universität Jena); Alexander Szaameit (Friedrich-Schiller-Universität Jena);

- 10:40 Anomalous Topological Phases, Unpaired Dirac Cones, and Weak Antilocalization in Helical Photonic Lattices
Daniel Leykam (Nanyang Technological University); Mikael C. Rechtsman (The Pennsylvania State University); Yidong Chong (Nanyang Technological University);
- 11:00 Watching Pythagorean Numbers: Localization-delocalization Transition in Two-dimensional Aperiodic Potentials
Changming Huang (Shanghai Jiao Tong University); Fangwei Ye (Shanghai Jiao Tong University); Xianfeng Chen (Shanghai Jiao Tong University); Yaroslav V. Kartashov (ICFO); Vladimir V. Kono-top (Universidade de Lisboa, Campo Grande); Lluis Torner (The Barcelona Institute of Science and Technology);
- 11:20 Observation of Valley Pseudospin-mediated Vortex Generation in Photonic Graphene
Daohong Song (Nankai University); Jing Su (Nankai University); Liqin Tang (Nankai University); Jingjun Xu (Nankai University); Zhigang Chen (San Francisco State University);

Session 3A7**SC1: Interaction of Electromagnetic Wave with Complex Media****Wednesday AM, August 10, 2016****Room 5J**

Organized by Mei Song Tong, Lin E. Sun

Chaired by Mei Song Tong, Lin E. Sun

- 08:20 Computation of Scattered Fields from Inhomogeneous Objects by Volume Integral Equation Methods
Lin E. Sun (Youngstown State University);
- 08:40 Discussion on Multiple Electromagnetic Strategies for Surface with Different Scale of Roughness Combined with Different Environmental Factors
Yu Liang (Yangzhou University); Xiang-Hua Zeng (Yangzhou University); Li-Xin Guo (Xidian University); Zhen-Sen Wu (Xidian University);
- 09:00 Review on the Pre-study about Specific Target and Rough Soil Surface Composite Electromagnetic Scattering Basing on an Efficient Numerical Strategy
Yu Liang (Yangzhou University); Xiang-Hua Zeng (Yangzhou University); Li-Xin Guo (Xidian University); Zhen-Sen Wu (Xidian University);

- 09:20 Frequency Selective Surface in Millimeter-wave Automotive Radar Radome Applications
Huan Lei Chen (Tongji University); Li Bo Huang (Tongji University); Mei Song Tong (Tongji University);
- 09:40 A Nystrom Scheme Based on Cuboid Elements for Solving Volume Integral Equations
Zhi Guo Zhou (Tongji University); Mei Song Tong (Tongji University);
- 10:00 **Coffee Break**
- 10:20 Transient Analysis for Electromagnetic Scattering by Dielectric Objects Based on PMCHWT Equations
Peng Cheng Wang (Tongji University); Mei Song Tong (Tongji University);
- 10:40 A Microwave Imaging Chamber Using Bowtie Antennas for Biomedical Applications
Muhammad Hassan Khalil (Tsinghua University); Maokun Li (Tsinghua University); Fan Yang (Tsinghua University); Shenheng Xu (Tsinghua University);
- 11:00 Numerical Modeling of the Interaction of Laser Beams with Plasma at the Entrance Hole of ICF Hohlraum
Zhili Lin (Huaqiao University); Jixiong Pu (Huaqiao University);
- 11:20 Hybrid T -matrix Modeling of Electromagnetic Scattering from Simplified Leaf Structures
Paul Jason Co (Tokyo Institute of Technology); Jun-Ichi Takada (Tokyo Institute of Technology);
- 11:40 Statistical Moments of Scattered Ordinary and Extraordinary Waves in the Turbulent Plasma
George Vakhtang Jandieri (Georgian Technical University); Zh. M. Diasamidze (Batumi Shota Rustaveli State University); M. R. Diasamidze (Batumi State Maritime Academy); Ioseb Aleqsandr Nemsadze (Batumi Shota Rustaveli State University);
- 08:00 A Dual-band Balanced Amplifier with CRLH Transmission Lines Fully Implemented
Jongsik Lim (Soonchunhyang University); Qi Wang (Chonbuk National University); Yongchae Jeong (Chonbuk National University);
- 08:20 Radial Uniform Circular Antenna Array for Dual-mode OAM Communication
Zhi-Gui Guo (Fudan University); Guo-Min Yang (Fudan University); Yu Fu (Fudan University);
- 08:40 RF/Microwave Processing in RF Systems
Sang-Min Han (Soonchunhyang University); Seok-Jae Lee (Soonchunhyang University); Won-Sang Yoon (Hoseo University);
- 09:00 A Design of Phase Shifter with Constant Insertion Loss
Seungho Jeong (Chonbuk National University); Boram An (Chonbuk National University); Phirun Kim (Chonbuk National University); Yongchae Jeong (Chonbuk National University); Jongsik Lim (Soonchunhyang University);
- 09:20 Low Noise Figure CMOS 2-Port Active Inductor Using LC Resonator
Jageon Koo (Chonbuk National University); Seungwook Lee (Chonbuk National University); Junhyung Jeong (Chonbuk National University); Girdhari Chaudhary (Chonbuk National University); Yongchae Jeong (Chonbuk National University);
- 09:40 A Novel Dual-band Filtering Power Divider with U-section Loaded Resonator
Min-Hong Yang (Zhejiang University); Yun Long Lu (Ningbo University); Kai Li (Zhejiang University);
- 10:00 **Coffee Break**
- 10:20 The Compact Waveguide Filters with Complex Aperture Resonant Diaphragms
Viacheslav V. Zemlyakov (Southern Federal University); Sergey V. Krutiev (Southern Federal University); Anatoliy B. Kleshchenkov (Southern Federal University);
- 10:40 RF Characteristics of SU-8 and Quartz Particle Composite Dielectric for Terahertz Applications
Jung-Mu Kim (Chonbuk National University); Ignacio Llamas-Garro (Centre Tecnologic de Telecomunicacions de Catalunya (CTTC)); Moises Espinosa-Espinosa (Centre Tecnologic de Telecomunicacions de Catalunya); Maolong Ke (Dynex Semiconductor Ltd); Michael J. Lancaster (The University of Birmingham); Marcos T. de Melo (Universidade Federal de Pernambuco);

Session 3A8

Advanced Antenna and RF Circuits Design 1

Wednesday AM, August 10, 2016

Room 3B

Organized by Malay Ranjan Tripathy, Yongchae Jeong

Chaired by Jongsik Lim, Malay Ranjan Tripathy

- 11:00 Understanding Stability of Rate Control Schemes on Dynamic Communication Networks
Saumay Pushp (KAIST); Priya Ranjan (Amity University Uttar Pradesh); Malay Ranjan Tripathy (Amity University Uttar Pradesh); Junehwa Song (KAIST);
- 11:20 Design Parameter Optimization of Ultra-wideband Antenna Using Quantum-behaved Particle Swarm Optimization
Wen Ding (Wuhan University); Gaofeng Wang (Hangzhou Dianzi University);
- 11:40 Beamforming Control System Design for Broadband Wireless Access Antenna
Yusron A. Rahman (Universitas Indonesia); Fitri Yuli Zulkifli (University of Indonesia); Eko Tjipto Rahardjo (Universitas Indonesia);
- 09:00 Faraday Shielding of One-turn Planar ICP Antennas
Ivan P. Ganachev (Shibaura Mechatronics Corporation); Makoto Moriyama (Chubu University); Daisuke Ogawa (Chubu University); Keiji Nakamura (Chubu University);
- 09:20 Modelling of Large Two- and Three-dimensional Resonant Nano-patterned Structures
Eugeniy Popov (University de Provence); P. C. Chaumet (UMR CNRS 6133); Guillaume Demesy (Aix-Marseille Universite); Anne Sentenac (Universite Paul Cezanne); Anne-Laure Fehrembach (Aix-Marseille Universite);
- 09:40 Complex Analysis of the Transmission Line Theory: Analytical Characterization and Examples of Use
Pablo Vidal-Garcia (University of Oviedo); Emilio Gago-Ribas (University of Oviedo);

10:00 **Coffee Break**

Session 3A9
Advanced Mathematical and Computational
Methods in Electromagnetic Theory and
Their Applications 1

Wednesday AM, August 10, 2016

Room 3C/3D

Organized by Georgi Nikolov Georgiev, Mariana
Nikolova Georgieva-Grosse

Chaired by Mariana Nikolova Georgieva-Grosse

- 08:00 Scattering of an Electromagnetic Vortex Bessel Beam
invited by a Gyrotropic Cylinder Perpendicular to the Beam Symmetry Axis
Vasily Alekseevich Es'kin (University of Nizhny Novgorod); Alexander V. Kudrin (University of Nizhny Novgorod); L. L. Popova (University of Nizhny Novgorod);
- 08:20 Calculation of the Electrostatic Field in a Dielectric-
invited loaded Waveguide Due to an Arbitrary Charge Distribution on the Dielectric Layer
Andres Berenguer Alonso (Universidad Miguel Hernandez de Elche); Angela Coves Soler (Universidad Miguel Hernandez de Elche); Francisco L. Mesa (Universidad de Sevilla); Enrique Bronchalo (Universidad Miguel Hernandez de Elche); Benito Gimeno Martinez (Universidad de Valencia); Vicente E. Boria (Universidad Politecnica de Valencia);
- 08:40 Evaluation of Variances in Hybrid MTL Systems with Stochastic Parameters via SDAE Approach
Lubomir Brancik (Brno University of Technology); Edita Kolarova (Brno University of Technology);
- 10:20 Some Zeros of the Real Kummer Function and Their
invited Application to the Theory of Waveguides
Georgi Nikolov Georgiev (University of Veliko Tirmovo "St. St. Cyril and Methodius"); Mariana Nikolova Georgieva-Grosse (Consulting and Researcher in Physics and Computer Sciences);
- 10:40 A Gauge-potential Formulation for Electromagnetic Field in Arbitrary Anisotropic Media
Bing Zhou (The Petroleum Institute);
- 11:00 Laplace's Analyses for Application of π Circuits' Associations in Digital Simulations
Afonso Jose Do Prado (UNESP — Universidade Estadual Paulista); Leonardo S. Lessa (UNESP — Universidade Estadual Paulista); Edvaldo Assuncao (UNESP — Universidade Estadual Paulista); Marcelo C. M. Teixeira (Universidade Estadual Paulista — UNESP); Rafael Cuerdo Monzani (UNICAMP — State University of Campinas); Jose Pissolato Filho (UNICAMP — State University of Campinas);
- 11:20 CAD Models of Losses for Slotline on Multilayered Dielectric Substrates
Payal Majumdar (Kuang-Chi Institute of Advanced Technology); Anand Kumar Verma (University of Delhi);
- 11:40 The Green's Functions Theory Based on a Generalized Signals & Systems Theory and Its Application to Electromagnetics
Luis Ganoza-Quintana (University of Oviedo); Emilio Gago-Ribas (University of Oviedo); Pablo Vidal-Garcia (University of Oviedo);

Session 3A_10a
Advance in Optical Remote Sensing of
Atmosphere and Ocean

Wednesday AM, August 10, 2016

Room 3E

Organized by Wenbo Sun

Chaired by Wenbo Sun

- 08:00 An Introduction of Calipso Ocean Subsurface Measurements
Yongxiang Hu (NASA Langley Research Center); Kuan-Man Xu (NASA Langley Research Center);
- 08:20 Constraints on the Optical Properties of Ice Clouds and Airborne Dust Based on Passive and Active Remote Sensing Observations
Ping Yang (Texas A&M University); Michael D. King (University of Colorado); Guanglin Tang (Texas A&M University); Souichiro Hioki (Texas A&M University); Jiachen Ding (Texas A&M University);
- 08:40 Aerosol Microphysical Properties Retrievals from High Spectral Resolution Lidar Data
Xu Liu (NASA Langley Research Center);
- 09:00 Synergetic Atmospheric Remote Sensing under Cloudy Sky Using Single Field of View IR/MW Observations
Wan Wu (NASA Langley Research Center); Xu Liu (NASA Langley Research Center); Qiguang Yang (Science Systems and Applications, Inc.); Susan Kizer (Science Systems and Applications, Inc.);
- 09:20 Remote Sensing of Atmospheric Aerosol and Gas Using Scheimpflug Lidar (SLidar) Based on Diode Lasers
Liang Mei (Dalian University of Technology);
- 09:40 FDTD Modeling of OAM Beam's Interaction with Dielectric Particle
Wenbo Sun (Science Systems and Applications, Inc.); Yongxiang Hu (NASA Langley Research Center); Carl Weimer (Ball Aerospace and Technologies Corp);
- 10:00 **Coffee Break**

Session 3A_10b
FocusSession.SC5: Microwave Remote Sensing
Part 2: Ocean

Wednesday AM, August 10, 2016

Room 3E

Organized by Yang Du, Shuanggen Jin

Chaired by Shuanggen Jin

- 10:20 The Evaluation on the Scattering Results between SBR Simulation and Measurement of the Ship Targets Based on FSV
Chong-Hua Fang (National Key Laboratory of Science and Technology on EMC); Li Tao (National Key Laboratory of Science and Technology on EMC); Hui Tan (The National Key Laboratory of EMC, China Ship Research & Design Center);
- 10:40 Variation Characteristics of Salinity in the Pacific in Twentieth Century
Bin Cai (Hohai University); Jun Cheng Zuo (Hohai University);
- 11:00 Bathymetric Features of Subei Bank on ENVISAT ASAR Images
Shuangshang Zhang (Hohai University); Qing Xu (Hohai University); Yongcun Cheng (Old Dominion University); Yizhi Li (Hohai University); Qingze Huang (Hohai University);
- 11:20 Sea Surface Air Pressure Measurements Using O₂-band Radar
Bing Lin (NASA Langley Research Center); Qilong Min (State University of New York at Albany); Yongxiang Hu (NASA Langley Research Center);
- 11:40 Numerical Study of Polarimetric Bistatic Scattering from Sea Surfaces with 5 m/s Wind Speed at L Band
Jingsong Yang (Second Institute of Oceanography, State Oceanic Administration); Yang Du (Zhejiang University); Jian-Cheng Shi (Institute of Remote Sensing Applications, Chinese Academy of Sciences); Dejun Li (Zhejiang University);

Session 3A_11
Novel Frequency Selective Structures

Wednesday AM, August 10, 2016

Room 3G

Organized by Bo Li, Raj Mittra

Chaired by Bo Li, Raj Mittra

- 08:00 Study of Periodic Dielectric Frequency-selective Surfaces under 3D Plane Wave Incidence
Angela Coves Soler (Universidad Miguel Hernandez de Elche); Stephan Marini (Universidad de Alicante); Benito Gimeno Martinez (Universidad de Valencia); Vicente E. Boria (Universidad Politecnica de Valencia);

- 08:20 All-dielectric Frequency Selective Surfaces Based on Dielectric Resonators
Zhengbin Wang (Nanjing University); Hao Wu (Nanjing University of Posts and Telecommunications); Zhihang Wu (Nanjing University of Posts and Telecommunications); Hua-Mei Zhang (Nanjing University of Posts and Telecommunications); Ye-Rong Zhang (Nanjing University of Posts and Telecommunications);
- 08:40 Selective Wave-transmitting Absorber through Combined Metasurfaces
Zhiwei Sun (Nanjing University); Junming Zhao (Nanjing University); Yijun Feng (Nanjing University);
- 09:00 A Diplexer with a Split-ring Resonator Junction
Eugene Amobichukwu Ogbodo (University of Greenwich); Yi Wang (University of Greenwich); Yun Wu (University of Greenwich);
- 09:20 Dual-band Filters Using Mixed Resonators with Dual Coupling Paths
Eugene Amobichukwu Ogbodo (University of Greenwich); Yun Wu (University of Greenwich); Yi Wang (University of Greenwich);
- 09:40 Miniaturized Frequency Selective Surface Using the Double Layered Convoluted Structures
Peng-Chao Zhao (Nanjing University of Science and Technology); Zhi-Yuan Zong (Nanjing University of Science and Technology); Wen Wu (Nanjing University of Science and Technology); Dagang Fang (Nanjing University of Science and Technology);
- 10:00 **Coffee Break**
- 10:20 All-dielectric Metamaterial Band Stop Frequency Selective Surface via High-permittivity Ceramics
Liyang Li (Air Force Engineering University); Jun Wang (Air Force Engineering University); Jiafu Wang (Air Force Engineering University); Hua Ma (Xi'an Jiaotong University); Mingde Feng (Air Force Engineering University); Mingbao Yan (Air Force Engineering University); Jieqiu Zhang (Air Force Engineering University); Shaobo Qu (Air Force Engineering University);
- 10:40 A Frequency Selective Radome with Wide Stopband
Mei Qing Qi (Southeast University); Tie Jun Cui (Southeast University);
- 11:00 Analysis and Implementation of 3D Frequency Selective Structures Using Multi-layer PCBs
Bo Li (Nanjing University of Posts and Telecommunications); Lijie Xu (Nanjing University of Science and Technology); Yumei Chang (Nanjing University of Posts and Telecommunications); Yiming Tang (Nanjing University of Posts and Telecommunications); Liqing Xu (Nanjing University of Posts and Telecommunications); Ming Zhang (Nanjing University of Posts and Telecommunications); Yaming Bo (Nanjing University of Posts and Telecommunications);
- 11:20 Parameter Analysis of a Novel Single Layer 3D Band-pass FSS Designed by Combination of Continuous and Discontinuous Conductive Rods
Muhammet Hilmi Nisanci (Sakarya University); A. Y. Tesneli (Sakarya University); N. B. Tesneli (Sakarya University); E. Tek (Sakarya University);
- 11:40 Design of a Broadband Frequency Selective Surface for X Band Application
Qing-Xin Guo (Communication University of China); Guizhen Lu (Communication University of China); Zengrui Li (Communication University of China);

Session 3A_12**SC3: Terahertz Near-field Optics****Wednesday AM, August 10, 2016****Room 3H**

Organized by Susumu Komiyama

Chaired by Zhenghua An

- 08:20 Calibration of a Nano-scaled near Field Sensor for the
invited Imaging of the Local Heat Transfer Quantitatively
Achim Kittel (University of Oldenburg); David Hellmann (University of Oldenburg); Konstantin Kloppstech (University of Oldenburg); Nils Konne (University of Oldenburg); Ludwig Worbes (University of Oldenburg);
- 08:40 Theoretical Description of a Near-field Scanning Thermal Microscope
invited Svend-Age Biehs (Carl von Ossietzky Universität); Alejandro W. Rodriguez (Princeton University); Konstantin Kloppstech (University of Oldenburg); Nils Konne (University of Oldenburg); Ludwig Worbes (University of Oldenburg); David Hellmann (University of Oldenburg); Achim Kittel (University of Oldenburg);

09:00 Enhancement of Excitation Energy Transfer Due to
invited Evanescent-wave from Metallic Environments
Xin Chen (Xi'an Jiaotong University); Amrit Poudel (Northwestern University); Mark A. Ratner (Northwestern University);

09:20 Terahertz Imaging with Ultimate Resolution
invited

Tyler Cocker (University of Regensburg); Markus A. Huber (University of Regensburg); Max Eisele (University of Regensburg); Markus Plankl (University of Regensburg); Fabian Mooshammer (University of Regensburg); Fabian Sandner (University of Regensburg); Dominik Peller (University of Regensburg); Jascha Repp (University of Regensburg); Rupert Huber (University of Regensburg);

09:40 Highly Tunable Quantum Hall Mid- to Far-
invited infrared Photodetector by Use of GaAs/Al_xGa_{1-x}As-
Graphene Composite Material
Chiu-Chun Tang (National Tsing Hua University); C. C. Chi (National Tsing Hua University); D. C. Ling (Tamkang University); Jeng-Chung Chen (National Tsing Hua University);

10:00 **Coffee Break**

10:20 Ultra-highly Sensitive Passive Near-field Microscopy
invited of Electromagnetic Evanescent Waves
Kuan-Ting Lin (The University of Tokyo); Susumu Komiyama (The University of Tokyo); Yusuke Kajihara (The University of Tokyo);

10:40 Passive Terahertz Near-field Nanoscopy of Semicon-
invited ductor Nanodevices
Zhenghua An (Fudan University); Qianchun Weng (Shanghai Institute of Technical Physics, Chinese Academy of Sciences); Le Yang (Fudan University); Jie Xu (Fudan University); Pingping Chen (Shanghai Institute of Technical Physics, Chinese Academy of Sciences); Bo Zhang (Shanghai Institute of Technical Physics, Chinese Academy of Sciences); Yusuke Kajihara (The University of Tokyo); Susumu Komiyama (The University of Tokyo); Wei Lu (Shanghai Institute of Technical Physics, Chinese Academy of Sciences);

11:00 Single Photon Detection of the Coherent THz Radia-
invited tion of HTS Josephson Junctions
Vladimir Antonov (Royal Holloway, University of London); Rais Shaikhaidarov (Royal Holloway, University of London); Alexander Tzalenchuk (NPL);

11:20 Single Photon Detection of Terahertz Waves on an
invited Integrated-circuit Resonator
Shun Okano (Tokyo University of A & T); Kenji Ikushima (Tokyo University of A & T);

11:40 Measurement of Dielectric Properties of Polymers and Semiconductor Materials Using Terahertz Time-domain Spectroscopy along with Principal Component Analysis

Mushtaq Ahmed (National Institute of Lasers & Optronics (NILOP)); I. Ahmed (National Institute of Lasers & Optronics); M. Mumtaz (National Institute of Lasers & Optronics); M. A. Zia (National Institute of Lasers & Optronics); M. A. Mahmood (National Institute of Lasers & Optronics); S. D. Khan (National Institute of Lasers & Optronics);

Session 3A_13a

SC3: Nanostructured Optoelectronic Devices

Wednesday AM, August 10, 2016

Room 3I

Organized by Yanxia Cui

Chaired by Yanxia Cui

08:00 3D Micro- and Nano Sensing Devices Creation on the Facets of Optical Fibers via Two-photon Lithography
Hui Wang (Capital Normal University); Zhenwei Xie (Harbin Institute of Technology); Shengfei Feng (Capital Normal University); Yan Zhang (Capital Normal University);

08:20 Tandem Organic Semiconductor Devices for Optical Sensor Application
Furong Zhu (Hong Kong Baptist University);

08:40 High Efficiency Thin-film Amorphous Silicon Solar Cells Achieved by 3-D Geometry Design in Both Microscale and Macroscale
Dongdong Li (Shanghai Advanced Research Institute, Chinese Academy of Sciences); Linfeng Lu (Shanghai Advanced Research Institute, Chinese Academy of Sciences); Chi Zhang (Shanghai Advanced Research Institute, Chinese Academy of Sciences);

09:00 A Novel Electro-optic Modulator with Metal/Dielectric/Graphene Nanostructure: Simulation of Isotropic and Anisotropic Graphene
Junjun Cheng (Xiamen University); Jinfeng Zhu (Xiamen University); Shuang Yan (Xiamen University); Lirong Zhang (Xiamen University); Qing Huo Liu (Duke University);

09:20 Role of Silver Cuboidal in Performance Enhancement of Organic Photovoltaic Devices
Yuying Hao (Taiyuan University of Technology); Zhiyuan Wang (Taiyuan University of Technology); Yanxia Cui (Taiyuan University of Technology); Furong Zhu (Hong Kong Baptist University);

- 09:40 Active Modulation of Visible Light with Graphene-loaded Ultrathin Metal Plasmonic Antennas
Renwen Yu (The Barcelona Institute of Science and Technology); Valerio Pruneri (The Barcelona Institute of Science and Technology); F. Javier Garcia De Abajo (ICFO Institut de Ciències Fotoniques, Mediterranean Technology Park);
- 10:00 **Coffee Break**

Session 3A_13b
Modeling and Inversion in Geophysical and Borehole Electromagnetics

Wednesday AM, August 10, 2016

Room 3I

Organized by Jiefu Chen, Ji Chen

Chaired by Jiefu Chen, Ji Chen

- 10:20 2.5D Spectral Finite-difference Method for Geophysical Applications
Dawei Li (University of Houston); Fangzhou Chen (University of Houston); Jiefu Chen (University of Houston); Ji Chen (University of Houston);
- 10:40 Application of the Near-optimal Quadrature to 2.5D Wave Modeling
Maokun Li (Tsinghua University); Vladimir L. Druskin (Schlumberger Doll Research); Aria Abubakar (Schlumberger Houston Formation Evaluation); Tarek M. Habashy (Schlumberger-Doll Research);
- 11:00 A Novel Downhole Antenna for Measurement-while-drilling Electromagnetic Telemetry
Qiuzhao Dong (Weatherford International); German Cortes (Weatherford International); Marc Lahitte (Weatherford International); Darwin Luna (Weatherford International); Jiefu Chen (University of Houston);
- 11:20 Characteristic Analysis for Dual-induction Logging Response in Highly Deviated Wells and Horizontal Wells
Yanjun Chen (Xi'an Shiyou University); Zhigang Chen (CNPC Logging Co.); Jie Wu (Xi'an Shiyou University); Yanhui Mao (Xi'an Shiyou University); Shaocheng Luo (CNPC Logging Co.); Fei Xiao (CNPC Logging Co.); Zhixin Yang (CNPC Logging Co.); Haofeng Gao (CNPC Logging Co.);
- 11:40 An Efficient Semianalytical Finite Element Scheme Developed in the Hamiltonian System and Its Applications in Well Loggings
Jiefu Chen (University of Houston);

Session 3A_14a
Optical Switches and Modulators, Basic Elements and Integrated Chips

Wednesday AM, August 10, 2016

Room 3J

Organized by Linjie Zhou, Richard Soref

Chaired by Linjie Zhou

- 08:00 Silicon-graphene Hybrid Photonic Devices for Optical Switching
invited Tingyi Gu (Princeton University);
- 08:20 Silicon Optical Switch Monolithically Integrated with Driver Electronics and Its Power Efficient Driving
invited Guangwei Cong (National Institute of Advanced Industrial Science and Technology (AIST)); T. Matsukawa (National Institute of Advanced Industrial Science and Technology (AIST)); M. Ohno (National Institute of Advanced Industrial Science and Technology (AIST)); Ken Tanizawa (National Institute of Advanced Industrial Science and Technology (AIST)); Keiji Suzuki (National Institute of Advanced Industrial Science and Technology (AIST)); H. Kuwatsuka (National Institute of Advanced Industrial Science and Technology (AIST)); Hiroshi Ishikawa (National Institute of Advanced Industrial Science and Technology (AIST)); K. Ikeda (National Institute of Advanced Industrial Science and Technology (AIST)); Shu Namiki (National Institute of Advanced Industrial Science and Technology (AIST)); Hitoshi Kawashima (National Institute of Advanced Industrial Science and Technology (AIST)); K. Yamada (National Institute of Advanced Industrial Science and Technology (AIST));
- 08:40 Demonstration of a 4×4 -port Self-configuring Universal Linear Optical Component
invited Antonio Ribeiro Alves Junior (Ghent University); Alfonso Ruocco (Ghent University); L. Vanacker (Ghent University); W. Bogaerts (Ghent University-IMEC);
- 09:00 High Speed Silicon Optical Modulators: Applications, Technologies and Integrations
invited Xi Xiao (Wuhan Research Institute of Posts and Telecommunications); Lei Wang (Wuhan Research Institute of Posts and Telecommunications); Miao Feng Li (Wuhan Research Institute of Posts and Telecommunications); Daigao Chen (Wuhan Research Institute of Posts and Telecommunications); Ying Qiu (Wuhan Research Institute of Posts and Telecommunications); Qi Yang (Wuhan Research Institute of Posts and Telecommunications);

- 09:20 Monolithic Silicon DP-IQ Modulator for Digital Co-herent Transmission
invited Kazuhiro Goi (*Fujikura Ltd.*); Akira Oka (*Fujikura Ltd.*); Hiroki Ishihara (*Fujikura Ltd.*); Yasuhiro Mashiko (*Fujikura Ltd.*); Norihiro Ishikura (*Fujikura Ltd.*); Shinichi Sakamoto (*Fujikura Ltd.*); Haike Zhu (*Fujikura Ltd.*); Kensuke Ogawa (*Fujikura Ltd.*); Tsung-Yang Liow (*A*STAR*); Xiaoguang Tu (*A*STAR*); Guo-Qiang Lo (*A*STAR*); Dim-Lee Kwong (*Institute of Microelectronics*);
- 09:40 Total-internal-reflection Optical Switch in Silicon
invited Hyo-Hoon Park (*Korea Advanced Institute of Science and Technology (KAIST)*); Jong-Hun Kim (*Korea Advanced Institute of Science and Technology (KAIST)*);
- 10:00 **Coffee Break**
- 10:20 Integrated Silicon Optical Modulators
invited David J. Thomson (*University of Southampton*); Callum G. Littlejohns (*Nanyang Technological University*); K. Li (*University of Southampton*); Milos Nedeljkovic (*University of Southampton*); Ali Z. Khokhar (*University of Southampton*); Frederic Y. Gardes (*University of Southampton*); Goran Z. Mashanovich (*University of Southampton*); Cosimo Lacava (*University of Southampton*); Periklis Petropoulos (*University of Southampton*); David J. Richardson (*University of Southampton*); Mohamed Said Rouifed (*Nanyang Technological University*); Haodong Qiu (*Nanyang Technological University*); Tina Guo Xin (*Nanyang Technological University*); Ting Hu (*Nanyang Technological University*); Zecen Zhang (*Nanyang Technological University*); Hong Wang (*Nanyang Technological University*); Po Wei Chiu (*National Tsing Hua University*); Fan-Yi Lin (*National Tsing Hua University*); Shawn S. H. Hsu (*National Tsing Hua University*); Graham T. Reed (*University of Southampton*);
- 10:40 Virtual Reality and Motion Sensing Conjoint Applications Based on Stereoscopic Display
Jiahui Wang (*Sun Yat-sen University*); Yuman Xu (*Sun Yat-sen University*); Haowen Liang (*Sun Yat-sen University*); Kunyang Li (*Sun Yat-sen University*); Haiyu Chen (*Sun Yat-sen University*); Jianying Zhou (*Sun Yat-sen University*);
- 11:00 Display Development in the Advanced Displays Laboratory at NTU
Phil Surman (*Nanyang Technological University*); Shizheng Wang (*Nanyang Technological University*); Zhenfeng Zhuang (*Nanyang Technological University*); Hongjuan Wang (*Nanyang Technological University*); Oleg Yaroshchuk (*National Academy of Sciences of Ukraine*); Xiao Wei Sun (*Nanyang Technological University*); Yuanjin Zheng (*Nanyang Technological University*);
- 11:20 Simulation Approach of Display Uniformity in a Backlight Illuminated Lens Array
Yangui Zhou (*Sun Yat-sen University*); Hang Fan (*Sun Yat-sen University*); Kunyang Li (*Sun Yat-sen University*); Haowen Liang (*Sun Yat-sen University*); Jiahui Wang (*Sun Yat-sen University*); Jianying Zhou (*Sun Yat-sen University*);
- 11:40 Research on 3D Cutting Force Sensor Based on Magneto-rheological Elastomers
Chunrui Tang (*Heilongjiang University of Science and Technology*); Dandan Liu (*Heilongjiang University of Science and Technology*); Dewen Li (*China Coal Technology Engineering Group Chongqing Research Institute*);
- 12:00 Research on Resonance Balance Based on Metal Powder Laser Oscillation 3D Printing Technology
Chunrui Tang (*Heilongjiang University of Science and Technology*); Dandan Liu (*Heilongjiang University of Science and Technology*); Hua Yuan (*Dalian Airforce Communication NCO Academy*); Jie Wang (*China Coal Technology Engineering Group Chongqing Research Institute*);

Session 3A_14b
Optics in 3-D Display, 3D Cutting & Printing

Wednesday AM, August 10, 2016

Room 3J

Chaired by Jianying Zhou

Session 3A0
Poster Session 5

Wednesday AM, August 10, 2016

9:00 AM - 12:00 AM

Room Poster Area

- 1 Simulation Research of Terahertz Coded-aperture Imaging Technology with High Resolution
Kaicheng Cao (National University of Defense Technology); Chenggao Luo (National University of Defense Technology); Yongqiang Cheng (National University of Defense Technology); Bin Deng (National University of Defense Technology); Yulian Qin (National University of Defense Technology); Hong-Qiang Wang (National University of Defense Technology); Shuo Chen (National University of Defense Technology);
- 2 Temperature Measurement in the Core of an Active Fiber under High-power Lasing Conditions Using Quadrature Interferometer
Vladimir V. Gainov (Kotelnikov Institute of Radio Engineering and Electronics of RAS); Oleg A. Ryabushkin (State University);
- 3 Measurement of Free Carrier Concentration in Semiconductor with High Spatial Resolution by Optical Fiber with Two Electrodes
Oleg A. Ryabushkin (Moscow Institute of Physics and Technology); Dmitrii Protasena (Moscow Institute of Physics and Technology (State University));
- 4 Design of Single TM-like Mode Photonic Crystal Fiber with an Actinomorphic Elliptical-hole Lattice Core
Zheng Zhong (Muroran Institute of Technology); Yasuhide Tsuji (Muroran Institute of Technology); Masashi Eguchi (Chitose Institute of Science and Technology);
- 5 Study on Characteristics of Fiber Loop Mirror Filters Based on Single Fiber Mach-Zehnder (M-Z) Optimization
Zhengbing Lv (Suzhou University of Science and Technology); Xing-Fa Dong (Suzhou University of Science and Technology); Xiang-Xia Ding (Suzhou University of Science and Technology); Li Jiang (Suzhou University of Science and Technology); Jing Wu (Suzhou University of Science and Technology); Jun Wang (Suzhou University of Science and Technology);
- 6 Investigation on Nonlinearity of Optical Fiber with Uniaxial Crystal Material Cladding
Caijian Xie (Lanzhou University of Technology); Shanglin Hou (Lanzhou University of Technology); Yan-Jun Liu (Lanzhou University of Technology); Daobin Wang (Lanzhou University of Technology); Xiaoxiao Li (Lanzhou University of Technology); Jingli Lei (Lanzhou University of Technology);
- 7 FMWC Radar for Breath Detection
Lau Frejstrup Suhr (Technical University of Denmark); Idelfonso Tafur Monroy (Technical University of Denmark); Juan Jose Vegas Olmos (Technical University of Denmark);
- 8 Power Optimization in Hybrid Visible Light Communication for Indoor Applications
Ching Han Tan (Taylor's University); Chiao Mei Choong (Taylor's University); Yow Chuan Teo (Multimedia University); Yandan Lin (Fudan University); Kai Choy Ho (Daikin Electronic Devices);
- 9 Evaluation of Effective Area and Nonlinearity Coefficient of Erbium-Ytterbium Doped Optical Fibers
Ingrida Lavrinovica (Riga Technical University); Juris Porins (Riga Technical University); Edwards Bruklitis (Riga Technical University); Andis Supe (Riga Technical University);
- 10 A Microstrip in-line Band Rejection Structure
Hong-Pu Lin (National Chin Yi University of Technology); B.-T. Lai (National Chin Yi University of Technology); C.-C. Ku (National Chin Yi University of Technology); J.-M. Li (National Chin Yi University of Technology); Jan-Dong Tseng (National Chin-Yi University of Technology);
- 11 Miniaturized and High Selectivity LTCC Filters with Harmonic-suppression for S-band Application
Zhigang Zhang (University of Electronic Science and Technology of China); Yong Fan (University of Electronic Science and Technology of China); Yonghong Zhang (University of Electronic Science and Technology of China);
- 12 A Novel Miniaturized Dual-stop-band FSS for Wi-Fi Application
Mingbao Yan (Air Force Engineering University); Shaobo Qu (Air Force Engineering University); Jiafu Wang (Air Force Engineering University); Mingde Feng (Air Force Engineering University); Wenjie Wang (Air Force Engineering University); Cuilian Xu (Air Force Engineering University); Zhiqiang Li (Air Force Engineering University); Lin Zheng (Air Force Engineering University); Hang Zhou (Air Force Engineering University);
- 13 Virtual Laboratory for Microwave Engineers Education
D. S. Gubsky (Southern Federal University); Viacheslav V. Zemlyakov (Southern Federal University); D. V. Lonkina (Southern Federal University);
- 14 Graphene Effects on the RF Interdigital Capacitors
Hee-Jo Lee (Daegu University);

- 15 New Power Dividers Using π - and T-shaped Impedance Transformers
Tsung-Han Hsieh (National University of Kaohsiung); Pu-Hua Deng (National University of Kaohsiung); Shi-Ang Xu (National University of Kaohsiung); Wei Lo (National University of Kaohsiung); Zong-Shiann Tsai (National University of Kaohsiung);
- 16 A UHF 3rd Order 5-bit Digital Tunable Bandpass Filter Based on Mixed Coupled Open Ring Resonators
Mingye Fu (Southwest Jiaotong University); Qianying Xiang (Southwest Jiaotong University); Dan Zhang (Southwest Jiaotong University); Dengyao Tian (Southwest Jiaotong University); Quanyuan Feng (Southwest Jiaotong University);
- 17 A Constant Absolute Bandwidth Tunable Bandpass Filter Based on Mixed Coupled Varactor Loaded Open Ring Resonators
Dan Zhang (Southwest Jiaotong University); Qianying Xiang (Southwest Jiaotong University); Mingye Fu (Southwest Jiaotong University); Dengyao Tian (Southwest Jiaotong University); Quanyuan Feng (Southwest Jiaotong University);
- 18 X-band Microstrip Narrowband BPF Composed of Split Ring Resonator
Ria Lovina Defitri (Institut Teknologi Bandung); Achmad Munir (Institut Teknologi Bandung);
- 19 Design of Novel Compact Filtering Power Divider with High Selectivity and Wide Stopband
Hui Liu (Guangdong Peizheng College); Xin Dai (South China Normal University, Samsung Mobile R & D Center); Sailing He (Zhejiang University);
- 20 Design of Novel Compact Dual-band Filtering Power Divider with High Selectivity
Hui Liu (South China Normal University (Guangzhou University Town Campus of South China Normal University)); Youhuan Guo (Guangdong Peizheng College); Luokai Zhang (South China Normal University); Jiwei Pan (South China Normal University); Xin Dai (South China Normal University, Samsung Mobile R & D Center);
- 21 Analysis of Hexagonal Split Ring Resonator
Neema C. Babu (Amrita University); Sreedevi K. Menon (Amrita University);
- 22 A Design of Band-pass Filter with Steep Stopband Attenuation Based on Transmission Zeros
Qi Wu (National University of Defense Technology); Hu Yang (National University of Defense Technology); Zusheng Jin (EMC Research and Measurement Center of Navy); Ge Gao (National University of Defense Technology); Difeng Cao (East China Research Institute of Microelectronics);
- 23 A Novel-fed Fixed Frequency-source Dielectric Resonator for Frequency Stability-dependent Applications
Seyi Stephen Olokede (University of Johannesburg); Babu Sena Paul (University of Johannesburg); Mohd Fadzil bin Ain (Universiti Sains Malaysia);
- 24 A Compact Ultra-wideband Band-pass Filter Integrated with Dual Tunable Notch Bands
Shumiao Hao (Harbin Engineering University); Tao Jiang (Harbin Engineering University);
- 25 A Compact Semi-dumbbell Slot Resonator
Li-Jung Hsu (National University of Tainan); Zhong-Wei Wu (National University of Tainan); Chien-Jen Wang (National University of Tainan);
- 26 Miniaturization Cross-coupled Interdigital Filter Design Using High Permittivity Substrate
Cheng-Hsing Hsu (National United University); Cheng-Chi Yu (Feng-Chia University); Ja-Hao Chen (Feng-Chia University); Jen-Chieh Liu (National United University); Hsin-Han Tung (National United University); Ching-Fang Tseng (National United University); Sen-Hung Huang (National United University); Chung-I. Hsu (National Yunlin University of Science and Technology);
- 27 A Constant Fractional Bandwidth Tunable Bandpass Filter with Magnetic Coupling
Dengyao Tian (Southwest Jiaotong University); Quanyuan Feng (Southwest Jiaotong University); Qianying Xiang (Southwest Jiaotong University); Zhixiong Di (Southwest Jiaotong University);
- 28 Mechanical Bound State in the Continuum for Optomechanical Microresonators
Yuan Chen (University of Science and Technology of China); Zhen Shen (University of Science and Technology of China); Xiao Xiong (University of Science and Technology of China); Chun-Hua Dong (University of Science and Technology of China); Chang-Ling Zou (University of Science and Technology of China); Guangcan Guo (University of Science and Technology of China);
- 29 Design of a Six-pole Tunable Band-pass Filter with Constant Absolute Bandwidth
Xiao-Guo Huang (Southwest Jiaotong University); Jin-Qi Zhang (China Electronic Technology Group Corporation No. 36 Institute); Yi-Qun Lin (China Electronic Technology Group Corporation No. 36 Institute); Qian-Yin Xiang (Southwest Jiaotong University);

- 30 Electronic Tunable Diplexer with Wide Tuning Range
Xiao-Guo Huang (Southwest Jiaotong University); Jin-Qi Zhang (China Electronic Technology Group Corporation No. 36 Institute); Yi-Qun Lin (China Electronic Technology Group Corporation No. 36 Institute); Qian-Yin Xiang (Southwest Jiaotong University);
- 31 Nonreciprocal Optically Induced Transparency Created in an Asymmetric Double Microrings Structure
Like Deng (Huazhong University of Science & Technology); Heng Cai (Huazhong University of Science & Technology); Yi Wang (Huazhong University of Science & Technology);
- 32 Electrothermal Actuation of MEMS Resonator Based Filters with Piezoelectric Sensing
Boris Svilicic (University of Edinburgh); E. Mastropaolo (University of Edinburgh); R. Cheung (University of Edinburgh);
- 33 Dual-mode Dual-band Microstrip Bandpass Filter with High Selection Performance
Hong-Shu Lu (National University of Defense Technology); Qian Li (Wuhan University); Jingjian Huang (National University of Defense Technology); Xiao-Fa Zhang (National University of Defense Technology); Nai-Chang Yuan (National University of Defense Technology);
- 34 Design and Realization of High-performance Microwave and Millimeter Wave Band-pass Filters on Thin Polymer Films
Mohammed El-Gibari (Lunam Universite, Universite de Nantes); Sara Bretin (Universite de Lille 1); Massinissa Hadjloulm (Lunam Universite, Universite de Nantes); Patrick Derval (Lunam Universite, Universite de Nantes); Guillaume Lirzin (Lunam Universite, Universite de Nantes); Hongwu Li (Lunam Universite, Universite de Nantes);
- 35 Synthetic Bandwidth Method for ISAR in DIFS Mode
Pengjiang Hu (National University of Defense Technology); Jiangwei Zou (National University of Defense Technology); Biao Tian (National University of Defense Technology); Shiyu Xu (National University of Defense Technology); Zengping Chen (National University of Defense Technology);
- 36 Analysis of Novel Approaches for SAR-GMTI Based on Modulated Stepped-frequency Signals
Jiangwei Zou (National University of Defense Technology); Biao Tian (National University of Defense Technology); Pengjiang Hu (National University of Defense Technology); Zeng Ping Chen (National University of Defense Technology);
- 37 A Research of Sidelobe Suppression for SAR Image Performance
Su Yu (Beihang University); Ze Yu (Beihang University); Youming Wu (Beihang University);
- 38 The Application of 3-D Coherent Backscattering Model on SAR Imaging of Virtual Vegetation
Lifang Qiao (Beihang University); Dawei Liu (Beihang University);
- 39 On the Interaction of Electromagnetic Waves with Charged Aerosol Particles in Atmosphere
Ilya E. Kuznetsov (Zhukovsky-Gagarin Air Force); Mikhail E. Semenov (Zhukovsky-Gagarin Air Force Academy); Olesya I. Kanishcheva (Zhukovsky-Gagarin Air Force Academy); Peter A. Meleshenko (Voronezh State University);
- 40 Multifrequency Range Imaging of Atmospheric Structures Using VHF-band atmosphere Radars
Jenn-Shyong Chen (China Medical University); Shih-Chiao Tsai (National Defense University); Yen-Hsyang Chu (National Central University); Chung-Lun Su (National Central University);
- 41 Time-frequency Diffusion Analysis for DOA Estimation of Tropospheric Scatter Signal
Jing Wang (National University of Defense Technology); Zhuang Wang (National University of Defense Technology); Mengnan Wang (National University of Defense Technology); Zhu Cheng (National University of Defense Technology);
- 42 A Geographic Information Based Sea-land Segmentation Method for HR Optical Remote Sensing Image
Xiaoyuan Ren (National University of Defense Technology); Libing Jiang (National University of Defense Technology); Dongdong Guan (National University of Defense Technology); Xiao-An Tang (National University of Defense Technology);
- 43 Spaceborne AT-InSAR Raw Signal Simulation of Dynamic Ocean Scene
Qi Liu (National University of Science and Technology); Haifeng Huang (National University of Defense Technology); Zhihua He (National University of Defense Technology); Zhiwei Huang (National University of Science and Technology); Feng He (National University of Science and Technology);
- 44 SAR Image Despeckling by Iterative Non-local Low-rank Constraint
Yunshu Zhang (National University of Defense Technology); Yanchen Zhao (Xi'an Aerospace Propulsion Institute); Kefeng Ji (National University of Defense Technology); Haibo Song (National University of Defense Technology); Huanxin Zou (National University of Defense Technology);

- 45 A Hierarchical Method for Ship Discrimination in SAR Imagery
Xiangguang Leng (National University of Defense Technology); Yanchen Zhao (Xi-an Aerospace Propulsion Institute); Kefeng Ji (National University of Defense Technology); Shilin Zhou (National University of Defense Technology); Huanxin Zou (National University of Defense Technology);
- 46 ICA Based Remote Sensing Image Classification Algorithm and Its Use in Land Use/Cover Classification
Tiaojun Zeng (Shihezi University); Chuan Jian Wang (Shihezi University);
- 47 Temperature Dependence of SMOS/MIRAS, GCOM-W1/AMSR2 Brightness Temperature and ALOS/PALSAR Radar Backscattering at Arctic Test Sites
Konstantin Victorovich Muzalevskiy (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences); Z. Ruzicka (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences); Liudmila G. Kosolapova (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences); Valery L. Mironov (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences);
- 48 The Application of Remote Sensing Technology in Opencast Soil Moisture Inversion
Lishuang Sun (Shenyang Jianzhu University); Dajun Chen (Northeastern University);
- 49 Electromagnetic Simulation and Time-frequency Analysis of Sea Clutter
Conghui Qi (University of Electronic Science and Technology of China); Wei Yang (National University of Singapore); Zhiqin Zhao (University of Electronic Science and Technology of China);
- 50 Tomography SAR Imaging Based on Distributed Compressed Sensing
Xiao-Zhen Ren (Henan University of Technology); Yao Qin (Henan University of Technology); Lihong Qiao (Henan University of Technology); Pengpeng Li (Henan University of Technology);
- 51 Interaction Study of SSVEP and P300 in Electroencephalogram
Jie Li (Tong Ji University); Rong Gu (Tongji University); Hongfei Ji (Tong Ji University); Zilong Pang (Tong Ji University); Maozhen Li (Brunel University);
- 52 A New Approach for EEG Feature Extraction for Detecting Error-related Potentials
Zilong Pang (Tong Ji University); Jie Li (Tong Ji University); Hongfei Ji (Tong Ji University); Maozhen Li (Brunel University);
- 53 The Neurophysiological Effects of Distraction on Sustained Attention
Hongfei Ji (Tong Ji University); Jie Li (Tong Ji University); Maozhen Li (Brunel University); Zilong Pang (Tong Ji University);
- 54 A Multiband Magnetic Type Wearable Antenna for Wireless Patient Monitoring Applications
Hari Purwanto (Universitas Indonesia); Aditya Rakhmadi (Universitas Indonesia); Basari (Universitas Indonesia);
- 55 Numerical Simulation on Electromagnetic Properties of the Solid Rocket Plume Affected by the Environmental Pressure
Xiaobin Tan (University of Electronic Science and Technology of China); Mao Yan Wang (University of Electronics Science and Technology); Hai-Long Li (University of Electronic Science and Technology of China); Zifang Li (University of Electronic Science and Technology of China); Xiao-Chuan Zhang (University of Electronic Science and Technology of China); Yu-Liang Dong (University of Electronic Science and Technology of China); Jun Xu (University of Electronic Science and Technology of China);
- 56 Parametric Array as a Source of Audible Signal
Jan Mikulka (Brno University of Technology); David Hladky (Brno University of Technology); Jiri Sliz (Brno University of Technology);
- 57 Analyzing the Photonic Band Gaps in Two-dimensional Fractal Plasma Photonic Crystals with Monte Carlo Method
Hai Feng Zhang (Nanjing University of Aeronautics and Astronautics);
- 58 The Tunable Omnidirectional Reflector Realized by the Two-dimensional Plasma Photonic Crystals
Hai Feng Zhang (Nanjing University of Aeronautics and Astronautics); Yue-Hong Hu (Nanjing University of Aeronautics and Astronautics);
- 59 FD-UAPO Solutions for the Diffraction by a Composite Wedge
Marcello Frongillo (University of Salerno); Gianluca Gennarelli (National Research Council); Giovanni Riccio (University of Salerno);
- 60 Scattering of Infrared by Pristine Cloud Ice Crystals
Jawad A. Shaker (University of Essex); David H. O. Bebbington (University of Essex);

- 61 Spatial Resolution Enhancement of Microwave Tomography Using Inhomogeneous Background
Liang Ding (National University of Defense Technology); Ke Xiao (National University of Defense Technology); Peiguo Liu (National University of Defense Technology); Ji-Bin Liu (National University of Defense Technology); Shun-Lian Chai (National University of Defense Technology);
- 62 On Enhancement Effect of Scattering Communication by Acoustic Wave Interference in the Troposphere
Xiao-Long Zhao (Tianshui Normal University);
- 63 TM Electromagnetic Scattering Analysis of a Finite Conducting Cone Loaded with a Slot
Hai-Yan Chen (University of Electronic Science and Technology of China); Linbo Zhang (University of Electronic Science and Technology of China); Yang Zhou (University of Electronic Science and Technology of China); You-Jie Deng (University of Electronic Science and Technology of China); Li Wang (University of Electronic Science and Technology of China); Xiao Long Weng (University of Electronic Science and Technology of China); Haipeng Lu (University of Electronic Science and Technology of China); Pei-Heng Zhou (University of Electronic Science and Technology of China); Jianliang Xie (University of Electronic Science and Technology of China); Long-Jiang Deng (University of Electronic Science and Technology of China);
- 64 Research on Application of GNSS in Vertical Control Survey
Lishuang Sun (Shenyang Jianzhu University); Jialiang Liu (Shenyang Jianzhu University);
- 65 Research on the Accuracy of GPS Baseline Solution
Lishuang Sun (Shenyang Jianzhu University); Lianghong Ji (Shenyang Jianzhu University);
- 66 Formal Analysis of Timeliness in Electronic Commerce Protocols
Yi Liu (National University of Defense Technology); Xingtong Liu (National University of Defense Technology); Jiayi Ye (National University of Defense Technology); Chaojing Tang (National University of Defense Technology);
- 67 Automatically Discover Vulnerability through Similar Functions
Qingkun Meng (National University of Defense Technology); Shameng Wen (National University of Defense Technology); Bin Zhang (National University of Defense Technology); Chaojing Tang (National University of Defense Technology);
- 68 Tunable Superradiance and Quantum Phase Gate Based on Graphene Wrapped Nanowire
Weixuan Zhang (Beijing Institute of Technology); Jun Ren (Beijing Institute of Technology); Xiangdong Zhang (Beijing Computational Science Research Center);
- 69 A Theoretical Analysis of Quantum-corrected Model in Metal Nanowire Dimer
Kaikun Niu (Anhui University); Bo Wu (Anhui University); Zhi-Xiang Huang (Anhui University);
- 70 Extremely Low Frequency Magnetic Fields in the Work Environment
Lourdes Farrugia (University of Malta); Charles V. Sammut (University of Malta); G. Gauci (University of Malta); Leena Korpinen (Tampere University of Technology);
- 71 A Hardware-in-the-loop Model and Simulation for the Braking System of Freight Trains
Chuang Gao (Tongji University); Guo Chun Wan (Tongji University); Mei Song Tong (Tongji University);
- 72 The Impact Analysis of Disturbance Stimulation on Sustained Attention Based on EEG
Rong Gu (Tongji University); Jie Zhang (Tongji University); Shi Cong Wang (Tongji University); Mei Song Tong (Tongji University);
- 73 Composite Metasurface for End-fire Scattering with Artificial Magnetic Conductor Lattice-like Arrangement
Xiao Liu (Air Force Engineering University of CPLA);
- 74 Electric Field of the Electric Dipole in Presence of Anisotropic Medium
Jin Li (Shaanxi Xueqian Normal University); Yingle Li (Shaanxi Xueqian Normal University); Ming-Jun Wang (Xianyang Normal College); Qun-Feng Dong (Xianyang Normal University);
- 75 60 GHz Millimeter-wave Radio in South Africa: Link Design Feasibility and Prospects
Akintunde Ayodeji Alonge (University of KwaZulu-Natal); Thomas Joachim Odhiambo Afullo (University of Kwa-Zulu Natal (UKZN));
- 76 High-speed and Fault-tolerant Data Playback of VLBI Hardware Correlator
Jiangying Gan (Shanghai Astronomical Observatory); Zhi Jun Xu (Shanghai Astronomical Observatory, Chinese Academy of Science);
- 77 Correction for the Non-constancy of the Speed of Light in Vacuum for Different Galilean Reference Systems
Namik Yener (Kocaeli University);

- 78 On the Speed of Light in Vacuum
Namik Yener (Kocaeli University);
- 79 Research on Position Determination of Satellite Based on Vision
Qing Xue (National University of Defense Technology); Hongwen Yang (National University of Defense Technology); Jian Wang (National University of Defense Technology);
- 80 Discretization of Maxwell's Equations for Rotating Observers Using Space-time Algebra
Mariusz Klimek (Technische Universitat Darmstadt); Stefan Kurz (Technische Universitat Darmstadt); Sebastian Schops (Technische Universitat Darmstadt); Thomas Weiland (Technische Universitat Darmstadt);
- 81 Birefringence in Time-dependent Moving Media
Shi-Rong Lin (Beijing Institute of Technology); Ruoyang Zhang (Nankai University); Yan-Wang Zhai (Beijing Institute of Technology); Jian-Ye Wei (Beijing Institute of Technology); Qing Zhao (Beijing Institute of Technology);
- 82 Propagation of Electromagnetic Wave through a Vortex
Jian-Ye Wei (Beijing Institute of Technology); Waqas Mahmood (Beijing Institute of Technology); Shi-Rong Lin (Beijing Institute of Technology); Qing Zhao (Beijing Institute of Technology);
- 83 Homogenization of Non-uniform Data Grid in Millimeter Scanning Imaging System by Time Shifting
Dan Cao (University of Electronic Science and Technology of China); Chuan Lin (University of Electronic Science and Technology of China); Yang Meng (University of Electronic Science and Technology of China); Tiantian Gao (University of Electronic Science and Technology of China); Anyong Qing (University of Electronic Science and Technology of China);
- 84 Correlation Reconstruction Method of Stochastic Video without Synchronization Information
Yufeng Hu (National University of Defense Technology); Chunlin Huang (National University of Defense Technology); Min Lu (National University of Defense Technology);
- 85 The Progress of Pulsed Optically Pumped Rubidium Clock at SIOM
Gongxun Dong (Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences); Jianliao Deng (Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences); Jinda Lin (Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences); Song Zhang (Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences); Yuzhu Wang (Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences);
- 86 Analysis of the Spontaneous Rayleigh-Brillouin Scattering Spectra Based on Wiener Filtering
Tao Wu (Nanchang Hangkong University); Ruziao Xia (Nanchang Hangkong University); Xingdao He (Nanchang Hangkong University); Xinyi Zhang (Nanchang Hangkong University); Huan Yu (Nanchang Hangkong University);
- 87 A Modified Time-frequency Approach for Radar Signal Analysis Based on Spectrogram and Entropy Evaluation
Jiangwei Zou (National University of Defense Technology); Pengjiang Hu (National University of Defense Technology); Biao Tian (National University of Defense Technology); Zengping Chen (National University of Defense Technology);
- 88 Stealth Mechanism Analysis of the Phase-modulated Surface
Kainan Qi (Communication University of China); Yongfeng Wang (Science and Technology on Electromagnetic Scattering Laboratory); Xiaofeng Yuan (Science and Technology on Electromagnetic Scattering Laboratory);
- 89 The Research of Circuit Analog Absorber Using Square Resistance Arrays
Yongfeng Wang (Science and Technology on Electromagnetic Scattering Laboratory); Xiao-Feng Yuan (Science and Technology on Electromagnetic Scattering Laboratory); Kainan Qi (Communication University of China); Xujin Yuan (Science and Technology on Electromagnetic Scattering Laboratory);
- 90 Waveguide Demonstration of Active Frequency Selective Surface in K-band
Yang Cao (Shanghai Radio Equipment Institute); Xing Yu (Shanghai Radio Equipment Institute); Hongquan Feng (Shanghai Radio Equipment Institute); Rubing Han (Shanghai Radio Equipment Institute); Yuanyun Liu (Shanghai Radio Equipment Institute);

- 91 An Ultrathin Spiral Phase Plate for Generation of OAM Radio Waves
Chuan Bo Shi (Southeast University); Yunbo Li (Southeast University); Wei Wu (Southeast University); Rui Yuan Wu (Southeast University); Tie Jun Cui (Southeast University);
- 92 A Dual-polarity Metasurfaces for Focusing or Diffusing Reflection Electromagnetic Wave
Fu-Long Yang (Lanzhou University of Technology); Xiaoyan Wang (Lanzhou University of Technology); Caijian Xie (Lanzhou University of Technology);
- 93 Miniaturization of Electromagnetic Soft Surface Using Metallic Strips with C-shaped Slots
Youjie Deng (University of Electronic Science and Technology of China); Hai-Yan Chen (University of Electronic Science and Technology of China); Linbo Zhang (University of Electronic Science and Technology of China); Guorui Zhang (University of Electronic Science and Technology of China); Pei-Heng Zhou (University of Electronic Science and Technology of China); Jianliang Xie (University of Electronic Science and Technology of China); Long-Jiang Deng (University of Electronic Science and Technology of China);
- 94 Dual-band Polarization Converter Based on Reflective Metamaterial at Microwave Frequencies
Linbo Zhang (University of Electronic Science and Technology of China); Jun Luo (University of Electronic Science and Technology of China); Pei-Heng Zhou (University of Electronic Science and Technology of China); Hai-Yan Chen (University of Electronic Science and Technology of China); Jianliang Xie (University of Electronic Science and Technology of China); Long-Jiang Deng (University of Electronic Science and Technology of China);
- 95 Thermal Tuning of Mid-infrared Smart Absorbers Based on Vanadium Oxide
Lin Yang (University of Electronic Science and Technology of China); Pei-Heng Zhou (University of Electronic Science and Technology of China); Taizeng Huang (University of Electronic Science and Technology of China); Lei Bi (University of Electronic Science and Engineering of China); Long-Jiang Deng (University of Electronic Science and Technology of China);
- 96 The Realization of Circulation Performance Using Reciprocal Metamaterial in Free Space
Tianshuo Qiu (Air Force Engineering University); Jiafu Wang (Air Force Engineering University); Weiwei Tong (Air Force Engineering University); Shaobo Qu (Air Force Engineering University); Wenjie Wang (Air Force Engineering University);
- 97 Dispersion Compensation Methods Evaluation of Effectiveness for Fiber-optic Transmission Systems
Valts Dilendorfs (Riga Technical University); Vjaceslavs Bobrovs (Riga Technical University);
- 98 Extended Reach 32-channel Dense Spectrum-sliced Optical Access System
Sandis Spolitis (Riga Technical University); Vjaceslavs Bobrovs (Riga Technical University); Rolands Parts (Riga Technical University); Girts Ivanovs (Riga Technical University);
- 99 Demonstration of a Dual-pump FOPA Based 48 Channel Multicarrier Optical Source for WDM Transmission Systems
Sergejs Olonkins (Riga Technical University); Vjaceslavs Bobrovs (Riga Technical University); Girts Ivanovs (Riga Technical University); Rolands Parts (Riga Technical University); Peteris Gavars (Riga Technical University);
- 100 Investigation of in-line Distributed Raman Amplifiers with Co and Counter-propagating Pumping Schemes
Sergejs Olonkins (Riga Technical University); Igors Stankunovs (Riga Technical University); Anita Alsevska (Riga Technical University); Lilita Gegere (Riga Technical University); Vjaceslavs Bobrovs (Riga Technical University);
- 101 Comparison of EDFA and LRA Preamplifier Performance in WDM Transmission Systems
Sergejs Olonkins (Riga Technical University); Vjaceslavs Bobrovs (Riga Technical University); Dmitrijs Pilats (Riga Technical University); Juris Porins (Riga Technical University);
- 102 Comparison of Modulation Formats for Use in the Next Generation Passive Optical Networks
Inna Kurbatska (Riga Technical University); Anita Alsevska (Riga Technical University); Lilita Gegere (Riga Technical University); Vjaceslavs Bobrovs (Riga Technical University);
- 103 All-passive Optical Fiber Sensor Network with Self-healing Functionality
Ching-Hung Chang (National Chiayi University); Wei-Hong Lin (National Chiayi University); Dong-Yi Lu (National Chiayi University);
- 104 Performance Evaluation of a 40 Gbps WDM Transmission System with a Single-pump Raman Amplifier
Vladislavs Bickovs (Riga Technical University); Vjaceslavs Bobrovs (Riga Technical University);
- 105 Evaluation of Erbium Doped Fiber Amplifier Application in Fiber Optics Transmission Systems
Julija Putrina (Riga Technical University); Vjaceslavs Bobrovs (Riga Technical University);

- 106 Experimental Demonstration of Datacenter Networking Based on Software Defined Optical Networks with Flexible ROADM
Yongli Zhao (Beijing University of Posts and Telecommunications); Yina Song (Beijing University of Posts and Telecommunications); Chunhui Wang (Beijing University of Posts and Telecommunications); Yajie Li (Beijing University of Posts and Telecommunications); Jie Zhang (Beijing University of Posts and Telecommunications);
- 107 Multi-mode Bandpass Filters Using Triangular Half-mode Substrate Integrated Waveguide
Mingkang Li (Key Laboratory of Electromagnetic Space Information, Chinese Academy of Sciences, University of Science and Technology of China); Chang Chen (Key Laboratory of Electromagnetic Space Information, Chinese Academy of Sciences, University of Science and Technology of China); Xiang Zhang (Key Laboratory of Electromagnetic Space Information, Chinese Academy of Sciences, University of Science and Technology of China); Weidong Chen (University of Science and Technology of China);
- 108 Metamaterial Based Fractal Antenna for THz Application
Umesh Kumar (Amity University Uttar Pradesh); Devesh Kumar (Amity University Uttar Pradesh); Malay Ranjan Tripathy (Amity University Uttar Pradesh); Priya Ranjan (Amity University Uttar Pradesh); Daniel Ronnow (University of Gavle);
- 109 Design and Simulation of GaN HEMT and Its Application to RF Amplifiers
Akriti Gupta (Amity University Uttar Pradesh); Neel Chatterjee (Amity University Uttar Pradesh); Malay Ranjan Tripathy (Amity University Uttar Pradesh); Sujata Pandey (Amity University);
- 110 Phase Compensation in Digital Holography Microscopy
Zhulei Xiang (Capital Normal University); Weijuan Qu (Ngee Ann Polytechnic); Shuaiyang Zhao (Peking University); Zhaomin Wang (Ngee Ann Polytechnic); Guixia Guan (Capital Normal University); Xin Jing (Peking University); Zhiguo Liu (Beijing Institute of Collaborative Innovation);

Session 3P1**FocusSession.SC2: Transformation Optics 2****Wednesday PM, August 10, 2016****Room 5B/5C**

Organized by Hongsheng Chen, Yu Luo

Chaired by Hongsheng Chen

- 13:20 Experimental Investigations of Transformation Optics
 invited in Microwave and Electrostatics
Wei Xiang Jiang (Southeast University); Tie Jun Cui (Southeast University);
- 13:40 Some Simplified Routes to Illusion Devices
 invited
Guo Dong Bai (Lanzhou University); Zhong-Lei Mei (Lanzhou University);
- 14:00 Geometrical Invisibility Cloak for Diffusion Fields
 invited
Hongyi Xu (Nanyang Technological University); Krishnaswamy Gunasheel Kauwtilyaa (Nanyang Technological University); Shastri Kunal Krishnaraj (Nanyang Technological University); Fu Yang Tay (Nanyang Technological University); Baile Zhang (Nanyang Technological University);
- 14:20 Illusionary Effects with Generalized Transformation
 invited Optics
Jie Luo (Soochow University); Zhong Qi Yao (Soochow University); Yun Lai (Soochow University);
- 14:40 Transformation Optics Description of Spontaneous
 invited Emission Rate in Plasmonics
Jingjing Zhang (Nanyang Technological University); Yu Luo (Nanyang Technological University);
- 15:00 Nonlinear Wave Mixing in Plasmonic Structures: A
 invited Transformation Optics Approach
K. Nireekshan Reddy (Ben-Gurion University); Parry Y. Chen (Tel Aviv University); Antonio I. Fernandez-Dominguez (Universidad Autonoma de Madrid); Yonatan Sivan (Ben-Gurion University);
- 15:20 **Coffee Break**
- 15:40 Transformation Optics and Simulation of Strong Cou-
 keynote pling in Plasmonic Nanocavities
Ortwin Hess (Imperial College London);
- 16:10 Transformation-optics Antennas: From Generating
 invited Pencil-beams to the Fan-beam Synthesis
Rui Yang (Xidian University);
- 16:30 Meta-surface Design Based on Transformation Optics
 invited
Zhan Zhang (Beijing Jiaotong University);

16:50 Transformation-optics Recipes for Strong Coupling of
invited a Single Emitter in Plasmonic Gaps

Antonio I. Fernandez-Dominguez (Universidad Autonoma de Madrid);

17:10 Remote Electromagnetic Devices Designed with
invited Transformation Optics

*Hamza Ahmad Madni (Zhejiang University);
Bin Zheng (Zhejiang University); Hongsheng Chen (Zhejiang University);*

17:30 The KdV Hierarchy in Optics

invited

Simon A. R. Horsley (University of Exeter);

Session 3P2

FocusSession.SC2: Plasmonics Based on Graphene and Other 2D Materials 2

Wednesday PM, August 10, 2016

Room 5D/5E

Organized by Lei Shi, Hugen Yan

Chaired by Lei Shi

13:00 Extreme Manipulation of Light-matter Interactions in
invited 2D TMDC Materials

Linyou Cao (North Carolina State University);

13:20 Design of Ultra-compact Graphene-based Superscat-
invited terers

Rujiang Li (Zhejiang University); Xiao Lin (Zhejiang University); Hongsheng Chen (Zhejiang University);

13:40 Graphene Plasmonics Using Metallic Nanostructures
invited and Graphene THz Devices

Yang Wu (National University of Singapore); Jing Niu (National University of Singapore); Hyunsoo Yang (National University of Singapore);

14:00 Graphene Nanophotonics

keynote

F. Javier Garcia De Abajo (ICFO Institut de Ciencies Fotoniques, Mediterranean Technology Park);

14:30 Vertical Plasmonic Nanocavity Array for Sensing Ap-
invited plications

Weihua Zhang (Nanjing University);

14:50 A Frequency-dependent LOD-FDTD Method with
the ADE Technique for Extraordinary Optical Trans-
mission Analyses

Tu-Lu Liang (University of Electronic Science and Technology of China); Wei Shao (University of Electronic Science and Technology of China); Xiao-Kun Wei (University of Electronic Science and Technology of China); Bingzhong Wang (University of Electronic Science and Technology of China (UESTC));

15:05 Giant All-optical Nonlinear Switching in Graphene
Plasmonic Waveguides

Kelvin J. A. Ooi (Singapore University of Technology and Design); Dawn T. H. Tan (Singapore University of Technology and Design);

15:20 Coffee Break

15:40 Optical Modulators with Two-dimensional Layered
invited Materials

Zhipei Sun (Aalto University);

16:00 Quantum Plasmon of Luttinger Liquid in Metallic
invited Carbon Nanotubes

Zhiwen Shi (Shanghai Jiao Tong University); Feng Wang (University of California at Berkeley);

16:20 Excitation of Dual Plasmonic Wave in a Graphene
Based Hybrid Slab and Its Application

Guoxiong Cai (Xiamen University); Ying Chen (Xiamen University); Na Liu (Xiamen University); Qing Huo Liu (Duke University);

16:35 Active Quantum Plasmonics

keynote

Peter Nordlander (Rice University);

17:05 Using Active Gain Medium to Maximize Light Ab-
sorption

Jie Wang (Fudan University); Xiaohan Liu (Fudan University); Lei Shi (Fudan University); Jian Zi (Fudan University);

17:20 Symmetry-breaking Induced Excitations of Anti-
symmetric Modes in Graphene Nanoribbons

Yunyun Dai (Fudan University); Ang Chen (Fudan University); Yuyu Xia (Fudan University); Dezhuhan Han (Chongqing University); Xiaohan Liu (Fudan University); Lei Shi (Fudan University); Jian Zi (Fudan University);

- 17:35 Dual-frequency Tunable Terahertz Half-wave Plate Based on Coupling and Hybridization Effect in Graphene Nanodisk Dimers
Jialong Peng (National University of Defense Technology); Xiao-Dong Yuan (National University of Defense Technology); Zhihong Zhu (National University of Defense Technology); Jianfa Zhang (National University of Defense Technology); Shiqiao Qin (National University of Defense Technology);
- 17:50 Nonequilibrium Plasmon Emission and Amplification in Photo-excited Graphene
Joachim Hamm (Imperial College London); A. F. Page (Imperial College London); F. Ballout (Imperial College London); J. Bravo-Abad (Universidad Autonoma de Madrid); F. J. Garcia-Vidal (Universidad Autonoma de Madrid); Ortwin Hess (Imperial College London);
- 18:05 Recent Progress on Localized-field Enhanced Two-dimensional Material Visible/Infrared Photodetectors
 invited *Wei-Da Hu (Shanghai Institute of Technical Physics, Chinese Academy of Sciences); Wenjin Luo (Shanghai Institute of Technical Physics, Chinese Academy of Sciences); Hehai Fang (Shanghai Institute of Technical Physics, Chinese Academy of Sciences); Peng Wang (Shanghai Institute of Technical Physics, Chinese Academy of Sciences); Xiaoshuang Chen (Shanghai Institute of Technical Physics, Chinese Academy of Sciences); Wei Lu (Shanghai Institute of Technical Physics, Chinese Academy of Sciences);*
- 18:25 Enhancement of Light-matter Interaction in MoS₂ Monolayers by Resonant Nanoparticles
Falk Eilenberger (Friedrich Schiller University); Franz J. Lochner (Friedrich-Schiller-Universitat Jena); Stefan Fasold (Friedrich Schiller University); Antony George (Friedrich-Schiller-Universitat Jena); Paul D. Harrison (Friedrich-Schiller-Universitat Jena); Tobias Bucher (Friedrich-Schiller-Universitat Jena); Christoph Menzel (Friedrich Schiller University Jena); Frank Setzpfandt (Friedrich-Schiller-Universitat Jena); Isabelle Staude (Friedrich-Schiller-Universitat Jena); Andrey Turchanin (University of Bielefeld); Thomas Pertsch (Friedrich-Schiller-Universitat);

Session 3P3
Nonlinear Optics in Photonic Nanostructures and 2D Nanomaterials

Wednesday PM, August 10, 2016
Room 5F

Organized by Nicolae-Coriolan Panoiu, Ventsislav K. Valev

 Chaired by Nicolae-Coriolan Panoiu, Ventsislav K. Valev

- 13:10 Ultrafast Hybrid Nonlinear Plasmonics
 keynote *Harald W. Giessen (University of Stuttgart);*
- 13:40 Near-field Optical Imaging of Ultrafast Dynamics in Gold Nanorods
Hiromi Okamoto (Institute for Molecular Science); Y. Nishiyama (Kanazawa University); K. Imaeda (Waseda University); Kohei Imura (Waseda University);
- 14:00 The Ultrafast Nonlinear Properties of Nanoparticle-on-mirror
William M. Deacon (University of Cambridge); Anna Lombardi (University of Cambridge); Felix Benz (University of Cambridge); Jeremy J. Baumberg (University of Cambridge);
- 14:20 Nonlinear Plasmonic Metamaterials and Experimental Verifications
Zhen Liao (Southeast University); Yu Luo (Nanyang Technological University); Tie Jun Cui (Southeast University);
- 14:40 Imaging of the Second-harmonic Response of Spatially-oriented Individual Ion-shaped Nanoparticles
Abdallah Slablab (Tampere University of Technology); Leo Turquet (Tampere University of Technology); Tero Isotalo (Tampere University of Technology); Jouni Makitalo (Tampere University of Technology); Godofredo Bautista (Tampere University of Technology); Pierre E. Coulon (CEA-IRAMIS-CNRS); Tapio Niemi (Tampere University of Technology); Mathieu Kociak (University Paris-Sud); Giancarlo Rizza (CEA-IRAMIS-CNRS); Martti Kauranen (Tampere University of Technology);
- 15:00 Plasmonic Gap Modes in Metal Film-coupled Nanoparticle Dimers for Enhanced Photoluminescence Spectroscopy and Second Harmonic Generation
Dangyuan Lei (The Hong Kong Polytechnic University);

 15:20 **Coffee Break**

- 15:40 Nonlocal Nonlinear Plasmonics
A. V. Krasavin (*King's College London*); P. Ginzburg (*Tel Aviv University*); Giuseppe Marino (*King's College London*); P. Segovia (*Tel Aviv University*); Gregory A. Wurtz (*University of North Florida*); Anatoly V. Zayats (*King's College London*);
- 16:00 On a Dedicated Volume Integral Equation Solver for Nanoparticle-on-Mirror (NPoM) Structures
Xuezhi Zheng (*KU Leuven*); Guy A. E. Vandenbosch (*Katholieke Universiteit Leuven*); Victor V. Moshchalkov (*KU Leuven*);
- 16:20 Modeling of Nonlinear Response from Metallic Metamaterials by Maxwell-hydrodynamic Equations
Ming Fang (*University of Hong Kong*); Xiaoyan Y. Z. Xiong (*University of Hong Kong*); Wei E. I. Sha (*University of Hong Kong*); Li Jun Jiang (*The University of Hong Kong*); Zhi-Xiang Huang (*Anhui University*);
- 16:40 Hybrid Microfiber-Lithium Niobate on Insulator Waveguides for Efficient Second Harmonic Generation in Fiber Communication
Wei Ding (*Institute of Physics, Chinese Academy of Sciences*); Andrey V. Gorbach (*University of Bath*); Lutong Cai (*Institute of Physics, Chinese Academy of Sciences*); Yang Yu (*Institute of Physics, Chinese Academy of Sciences*);
- 17:00 Silicon-organic Hybrid Devices for THz Generation Based on Difference Frequency Generation
K. Marvin Schulz (*Technische Universitat Hamburg*); Alexander Yu. Petrov (*Hamburg University of Technology*); Manfred Eich (*Hamburg University of Technology*);
- 17:20 Photonic Nanostructures for Efficient Solar-to-fuel Energy Conversion
Liwu Zhang (*Fudan University*);
- 17:40 Influence of Confined Optical Phonons on the Hall Effect in a Quantum Well with High Infinite Potential under the Presence of an Intense Electromagnetic Wave
Do Tuan Long (*Hanoi University of Science, Vietnam National University*); Le Thai Hung (*Viet Nam National University*); Nguyen Quang Bau (*Hanoi National University*);
- 18:00 Impact of a Linearly Polarized Electromagnetic Wave and Confined Phonons on the Radioelectric Effect in the Rectangular Quantum Wires with an Infinite Potential
Le Thai Hung (*Viet Nam National University*); Do Tuan Long (*Hanoi University of Science, Vietnam National University*); Nguyen Quang Bau (*Hanoi National University*);

- 18:20 The Influence of the Electromagnetic Wave on the Acoustomagnetolectric Effect in a Doped Superlattice
Nguyen Dinh Nam (*Hanoi University of Science, Vietnam National University*); Nguyen Van Hieu (*Danang University of Education*); Nguyen Quang Bau (*Hanoi National University*);

Session 3P4

FocusSession.SC3: Photonics-enabled Millimeter and Terahertz-wave Technologies

Wednesday PM, August 10, 2016

Room 5G

Organized by Tadao Nagatsuma, Guillermo Carpintero del Barrio

Chaired by Tadao Nagatsuma, Guillermo Carpintero del Barrio

- 13:00 Dual Wavelength Slot Coupled Fabry-Perot Semiconductor Laser
Zhipeng Hu (*Zhejiang University*); Lin Li (*Zhejiang University*); Xiaobo Zhang (*Zhejiang University*); Jian-Jun He (*Zhejiang University*);
- 13:15 Investigation of Microwave Properties of Planar Heterojunction Diodes in K_a Frequency Range Using Probe Station
Algirdas Suziedelis (*Center for Physical Sciences and Technology*); Steponas Asmontas (*Semiconductor Physics Institute*); Jonas Gradauskas (*Center for Physical Sciences and Technology*); Andrzej Lucun (*Center for Physical Sciences and Technology*); Aurimas Cerskus (*Center for Physical Sciences and Technology*); C. Paskevicius (*Center for Physical Sciences and Technology*); Tomas Anbindeis (*Elmika Ltd.*);
- 13:30 Photonic THz-wave Generation by UTC-PD and Its Related Device
keynote Hiroshi Ito (*Kitasato University*);
- 14:00 Photonics Technologies for High-power Coherent THz Generation
invited Kazutoshi Kato (*Kyushu University*);
- 14:20 Precise Measurement Techniques for Optical-to-electric Conversion Devices
invited Tetsuya Kawanishi (*National Institute of Information and Communications Technology*); Keizo Inagaki (*National Institute of Information and Communications Technology*); Atsushi Kanno (*National Institute of Information and Communications Technology*); Naoukatu Yamamoto (*National Institute of Information and Communications Technology*);

- 14:40 Mode-locked Photonic Integrated Circuits for Mil-
invited limeter and Terahertz Wave Wireless Communica-
tions
Mu-Chieh Lo (Universidad Carlos III de Madrid); Robinson Cruzoe Guzman Martinez (Universidad Carlos III de Madrid); Carlos Diego Gordon (Universidad Carlos III de Madrid); Guillermo Carpintero del Barrio (Universidad Carlos III de Madrid);
- 15:00 Millimeter-wave Radio-over-fiber System for High-
invited speed Railway Communication
Atsushi Kanno (National Institute of Information and Communications Technology); Pham Tien Dat (National Institute of Information and Communications Technology); Naoukatu Yamamoto (National Institute of Information and Communications Technology); Tetsuya Kawanishi (National Institute of Information and Communications Technology);
- 15:20 **Coffee Break**
- 15:40 Ultra-stable Near-field Terahertz Communications
Tadao Nagatsuma (Osaka University); Kazuki Oogimoto (Osaka University); Y. Inubushi (Osaka University); Jiro Hirokawa (Tokyo Institute of Technology);
- 15:55 Circumventing Limitations of Tilted-pulse-front Terahertz Generation Using a Stair-step Echelon
Koustuban Ravi (Massachusetts Institute of Technology); Benjamin. K. Ofori-Okai (Massachusetts Institute of Technology); Prasahnt Sivarajah (Massachusetts Institute of Technology); Wenqian R. Huang (Massachusetts Institute of Technology); Franz X. Kartner (Deutsches Elektronen-Synchrotron DESY); Keith A. Nelson (Massachusetts Institute of Technology);
- 16:10 Development of Terahertz-wave Technology Based on
keynote Nonlinear Optical Effect
Hiroaki Minamide (RIKEN);
- 16:40 Experimental Comparison of Detectors for Nonlinear Time Domain Terahertz Spectroscopy
Steve R. Andrews (University of Bath); A. C. Muir (University of Bath);
- 16:55 Application to Non-destructive Evaluation of Gas Barrier Films Using a High-speed Terahertz Time-domain Spectroscopy
Masaya Inamo (Okayama University); Kenji Sakai (Okayama University); Toshihiko Kiwa (Okayama University); Keiji Tsukada (Okayama University);
- 17:10 Terahertz Sensing Based on Photonic Crystal Cavity
invited and Resonant Tunneling Diode
Kazuisao Tsuruda (Osaka University); Kazuma Okamoto (Osaka University); Sebastian Diebold (Osaka University); Shintaro Hisatake (Osaka University); Masayuki Fujita (Osaka University); Tadao Nagatsuma (Osaka University);
- 17:30 Development of Terahertz Chemical Microscope for Detecting Small Molecules
Takuya Kuwana (Okayama University); Yuki Hanaoka (Okayama University); Toshihiko Kiwa (Okayama University); Kenji Sakai (Okayama University); Keiji Tsukada (Okayama University);
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- Session 3P5**
SC3: Micro-/Nano-scale Chemical and Physical Sensing and Imaging, and Their Early Adaptations in Translational Medicine
-
- Wednesday PM, August 10, 2016**
Room 5H
Organized by Hyuck Choo, Jongho Lee
Chaired by Hyuck Choo, Jongho Lee
-
- 13:10 Photonic Crystal Nanocavities: A Label-free Method
invited to Study Molecular Interactions
Qimin Quan (Rowland Institute at Harvard University);
- 13:30 Photonic Crystal Biosilica for Biosensing with Single
invited Molecule Sensitivity
Xianming Kong (Oregon State University); Yuting Xi (Oregon State University); Paul Le Duff (Oregon State University); Gregory L. Rorrer (Oregon State University); Alan X. Wang (Oregon State University);
- 13:50 Nanoscale Platform for Control, Interrogation and
invited Optimization of Molecular Sensing Interfaces, toward Application to Nanomedicine
Sivashankar Krishnamoorthy (Luxembourg Institute of Science and Technology (LIST));
- 14:10 Field-enhancing Metasurface for Sensing Applications
invited
Jonghwa Shin (KAIST); N. Lee (KAIST); R. H. Kim (KAIST); T. Y. Chang (KAIST); J. Y. Kim (KAIST); H. W. Kim (KAIST);
- 14:30 Recent Progress on Fluorescent Probes and Activat-
keynote able Photosensitizer
Juyoung Yoon (Ewha Womans University);

15:00 Aggregation-induced Emission (AIE) Nanoparticles for Multiphoton Microscopic *in vivo* Brain Imaging
Jun Qian (Zhejiang University);

15:20 **Coffee Break**

15:40 Glucose Measurement Using Surface Enhanced Raman Scattering
invited

Daejong Yang (California Institute of Technology); Jeong Oen Lee (California Institute of Technology); Hyunjun Cho (California Institute of Technology); Sukmo Koo (California Institute of Technology); Sagar R. Vaidyanathan (California Institute of Technology); Kelly Woo (California Institute of Technology); Hyuck Choo (California Institute of Technology);

16:00 Subdermal Photovoltaic Power Generation for Medical Electronic Implants
invited

Jongho Lee (Gwangju Institute of Science and Technology);

16:20 Microfluidics and Optical Micro Resonators on Chip for Biomedical Sensing
invited

Yves-Alain Peter (Ecole Polytech);

16:40 *In Vivo* Intraocular Pressure Measurements Using a Miniaturized Nanophotonics-enhanced Sensor Implant
invited

Jeong Oen Lee (California Institute of Technology);

17:00 Reflective Color Filters and Monolithic Color Printing Based on Asymmetric Fabry-Perot Cavities
invited

Zhengmei Yang (Hunan University); Yanming Zhou (Hunan University); Yiqin Chen (Hunan University); Huigao Duan (Hunan University);

17:20 A Neural Network Approach to Monitor Intraocular Pressure for Glaucoma Diagnosis

Ashwin Balakrishna (California Institute of Technology); Oliver Chen (California Institute of Technology); Jeong Oen Lee (California Institute of Technology); Hyuck Choo (California Institute of Technology);

17:40 ZnO-nanowire Morphology Optimization for Glucose-SERS Sensing

Kelly Woo (California Institute of Technology); Daejong Yang (California Institute of Technology); Hyunjun Cho (California Institute of Technology); Hyuck Choo (California Institute of Technology);

Session 3P6

SC5: Inverse Scattering and Applications

Wednesday PM, August 10, 2016

Room 5I

Organized by Toshifumi Moriyama, Takashi Takenaka

Chaired by Zhi Qi Meng, Toshifumi Moriyama

13:20 Electromagnetic Near-field Imaging of Missing Fibers in Periodic Fiber-reinforced Laminates

Zicheng Liu (Universite Paris Saclay); Changyou Li (Singapore University of Technology and Design); Dominique Lesselier (UMR8506 (CNRS, Supelec, University Paris-Sud)); Yu Zhong (Institution of High Performance Computing);

13:40 On the Radiation of Antennas within a Subwavelength-separated Wire Distribution, Super-localization and Time-reversal

Huilin Tu (University of Electronic Science and Technology of China (UESTC)); Shao-Qiu Xiao (University of Electronic Science and Technology of China); Dominique Lesselier (UMR8506 (CNRS, Supelec, University Paris-Sud)); Mohammed Serhir (CentraleSupelec);

14:00 Nonlinear Waveform Inversion by Use of the Regularized Dual Averaging Method for Ultrasound Computed Tomography

Thomas P. Matthews (Washington University in St. Louis); Kun Wang (Washington University in St. Louis); Cuiping Li (Delphinus Medical Technologies); Neb Duric (Delphinus Medical Technologies); Mark A. Anastasio (Washington University in St. Louis);

14:20 An Adaptive Reconstruction Algorithm in Concrete Diagnosis

Zhi Qi Meng (Fukuoka University);

14:40 Steel Reinforcing Bar Detection Using Electromagnetic Method

Dong Feng He (National Institute for Materials Science); Mitsuharu Shiwa (National Institute for Materials Science); S. Takaya (Kyoto University); Koichi Tsuchiya (National Institute for Materials Science);

15:20 **Coffee Break**

- 15:40 Real-time Eddy-current-testing of Metallic Structures through Statistical Learning Methodology
Giacomo Oliveri (University of Trento); Paolo Rocca (University of Trento); Lorenzo Poli (University of Trento); Nicola Anselmi (University of Trento); Marco Salucci (University of Trento); Toshifumi Moriyama (University of Nagasaki); Takashi Takenaka (Nagasaki University); Andrea Massa (University of Trento);
- 16:00 Three Dimensional Inverse Scattering Problems with an Inhomogeneous Background Medium
Rui Chen (National University of Singapore); Zhun Wei (National University of Singapore); Xudong Chen (National University of Singapore);
- 16:20 On the Computation of Electromagnetic Dyadic Green's Function in Inhomogeneous Forward and Inverse Scattering Problems
Feng Han (Xiamen University); Na Liu (Xiamen University); H. Liu (Xiamen University); Qing Huo Liu (Duke University);
- 16:40 Speed-up of FBTS Method by Using Time-delay Pulses
Toshiyuki Tanaka (Nagasaki University); Akio Hiroshige (Nagasaki University); Toshifumi Moriyama (Nagasaki University); Takashi Takenaka (Nagasaki University);
- 17:00 Reconstruction of Dielectric Profile from Total Electric Field Data
Toshifumi Moriyama (Nagasaki University); Marco Salucci (University of Trento); Takashi Takenaka (Nagasaki University);
- 13:40 Extending Quantum Coherence Time in Light-atom Interaction
keynote *Lijun Wang (Tsinghua University);*
- 14:10 Thulium Atom as New Platform for Quantum Simulations and Quantum Information
invited *Ivan S. Cojocaru (Russian Quantum Center); Sergey Pyatchenkov (Russian Quantum Center); Stepan Snigirev (Russian Quantum Center); Ilya Luchnikov (Russian Quantum Center); Denis Sukachev (Harvard University); Elena Kalganova (PN Lebedev Institute RAS); Vadim N. Sorokin (PN Lebedev Institute RAS); Alexey V. Akimov (Texas A&M University);*
- 14:30 Full Control of Single Atoms in Micro-trap and Micro-cavity
invited *Tiancai Zhang (Shanxi University);*
- 14:50 Highly Squeezed Two Mode Condensate through Quantum Phase Transitions
keynote *Xin-Yu Luo (Tsinghua University); Ling-Na Wu (Tsinghua University); Meng Khoon Tey (Tsinghua University); Li You (Tsinghua University);*
- 15:20 **Coffee Break**
- 15:40 Spectroscopy of Atoms Confined in Hollow-core Photonic Crystal Fibers
invited *Fetah Benabid (University of Limoges);*
- 16:00 Neutral ^{87}Rb Atoms near the Surface of Optical Nanofibres
invited *Sile Nic Chormaic (Okinawa Institute of Science and Technology Graduate University); Thomas Nieddu (Okinawa Institute of Science and Technology Graduate University); Krishnapriya Subramonian Rajasree (Okinawa Institute of Science and Technology Graduate University); Ravi Kumar (Okinawa Institute of Science and Technology Graduate University); Vandna Gokhroo (Okinawa Institute of Science and Technology Graduate University); Tridib Ray (Okinawa Institute of Science and Technology Graduate University); Jinjin Du (Okinawa Institute of Science and Technology Graduate University);*
- 16:20 Microwave Spectroscopy of Nanofiber-trapped Cesium Atoms
invited *Philipp Schneeweiss (TU Wien); B. Albrecht (TU Wien); C. Clausen (TU Wien); A. Dureau (TU Wien); Y. Meng (TU Wien); A. Rauschenbeutel (TU Wien);*
- 16:40 Multipartite Quantum Steering and Cryptographical Application
invited *M. Wang (Peking University); Zbigniew Ficek (The National Centre for Mathematics and Physics); Qiong Yi He (Peking University); Qihuang Gong (Peking University);*

Session 3P7

SC3: Atom-light Interaction and Applications

Wednesday PM, August 10, 2016

Room 5J

Organized by Yanhong Xiao, Eugeny E. Mikhailov

Chaired by Yanhong Xiao, Limin Xiao

- 13:00 Solid State Memory
invited *Chuanfeng Li (University of Science and Technology of China);*
- 13:20 Atom-light Hybrid Interferometer
invited *Liqing Chen (East China Normal University); Z. Y. Ou (Indiana University-Purdue University Indianapolis); Weiping Zhang (East China Normal University);*

- 17:00 Towards Spin Squeezing of an Atomic Ensemble with 10^{11} Atoms
Han Bao (Fudan University); Ming-Feng Wang (Wenzhou University); Pengxiong Li (Fudan University); Weizhi Qu (Fudan University); Eugeny E. Mikhailov (College of William & Mary); Irina Novikova (College of William and Mary); Heng Shen (Institute of Quantum Optics and Quantum Information, Austria Academy of Science); Yanhong Xiao (Fudan University);
- 17:20 Narrowband Biphoton Generation in the Group Delay invited Regime
Luwei Zhao (Hongkong University of Science and Technology); Yumian Su (Hongkong University of Science and Technology); Xianxin Guo (The Hong Kong University of Science and Technology); Shengwang Du (The Hong Kong University of Science and Technology);
- 17:40 Can Quantum Teleportation Be Achieved without the Need for Classical Channel?
Mohammad Al-Amri (KACST); Zheng-Hong Li (KACST); M. Suhail Zubairy (Texas A&M University);
- 18:00 Dynamic Beam Splitting by Using Light Storage in invited Cold Atoms
Kwang-Kyoon Park (POSTECH); Tian-Ming Zhao (POSTECH); Jong-Chan Lee (POSTECH); Young-Tak Chough (Gwangju University); Yoon-Ho Kim (POSTECH);
- 18:20 Image Security Using Quantum Rivest-Shamir-Adleman Cryptosystem Algorithm and Digital Watermarking
Hend A. Elsayed (Delta University for Science and Technology); Yasir Khalid Jadaan (Alexandria University); Shawkat K. Guirguis (Alexandria University);
- 13:00 The Possibilities of Passive UHF RFID Textile Tags as Comfortable Wearable Sweat Rate Sensors
Sari Merilampi (Satakunta University of Applied Sciences); Han He (Tampere University of Technology); Lauri Sydanheimo (Tampere University of Technology); Leena Ukkonen (Tampere University of Technology); Johanna Virkki (Tampere University of Technology);
- 13:20 Radiation Characteristics of Slotted Waveguide Array Antenna for X-Band Dual-polarized Weather Radar
Risdianto Yuli Hermansyah (Universitas Indonesia); Fitri Yuli Zulkifti (University of Indonesia); Eko Tjipto Rahardjo (Universitas Indonesia);
- 13:40 Radiation Characteristics of Microstrip Array Antenna for X-band Radar Application
Heru Sam Setiadi (Universitas Indonesia); Eko Tjipto Rahardjo (Universitas Indonesia); Fitri Yuli Zulkifti (University of Indonesia);
- 14:00 A CPW-fed Quad-band Monopole Antenna for L-band, WLAN and WiMAX Communication Applications
Kai Yu (Harbin Engineering University); Ying-song Li (Harbin Engineering University); Xian-ping Luo (Harbin Engineering University);
- 14:20 Unidirectional Emission of an Electric Dipole Coupled to an Ultra-compact Nanoantenna
Xiao Ming Zhang (Harbin Institute of Technology); Jun Jun Xiao (Harbin Institute of Technology);
- 14:40 Study on the Active Medium Coated Cylindrical Nano Particle Antenna
Jun-Ping Geng (Shanghai Jiao Tong University); Rong-Hong Jin (Shanghai Jiaotong University); Xi-anling Liang (Shanghai Jiao Tong University); Richard Ziolkowski (Shanghai Jiao Tong University); Sami Ur Rehman (Shanghai Jiao Tong University);
- 15:20 **Coffee Break**
- 15:40 A Wideband Annular Cylindrical Dielectric Resonator Antenna for X-band Applications
Ning Zhao (National University of Defense Technology); Gaosheng Li (National University of Defense Technology); Rundong Zheng (National University of Defense Technology); Qihui Zhou (National University of Defense Technology);
- 16:00 Comparison of Sequential Subarrays of Circularly Polarized DR and Patch Antennas Based on Hybrid Ring Feeding in MMW
Mohammad Akbari Choubar (Urmia University); Shraman Gupta (Concordia University); Reza Movahedinia (Concordia University); Abdel Razik Sebak (Concordia University);

Session 3P8
Microstrip and Printed Antenna, Array Antenna

Wednesday PM, August 10, 2016
Room 3B

 Chaired by Thomaskutty Mathew

- 16:20 Analysis of Novel Non-uniform Spaced Array System
Jacob Adopley (Ghana Technology University College);
- 16:40 360° Scanning Multi-beam Antenna Based on Spoof Surface Plasmon Polaritons
Yajuan Han (Air Force Engineering University); Jieqiu Zhang (Air Force Engineering University); Yongfeng Li (Air Force Engineering University); Jiafu Wang (Air Force Engineering University); Hangying Yuan (Air Force Engineering University); Zhaotang Liu (Air Force Engineering University); Shaobo Qu (Air Force Engineering University);
- 17:00 Reconfigurable Antenna Based on Liquid Crystal (LC) Technology
Yizhe Zhao (University of Electronic Science and Technology of China); Anyong Qing (University of Electronic Science and Technology of China);
- 17:20 A Compact Triple Wideband LTE/WWAN/GPS/GLONASS MIMO Antenna for Tablet Computers
Aqsa Ahmad (National University of Sciences and Technology); Farooq Ahmad Tahir (National University of Sciences and Technology (NUST)); Muhammad Umar Khan (National University of Sciences and Technology (NUST)); M. Javed (National University of Sciences and Technology (NUST));
- 17:40 A Uniplanar Frequency Reconfigurable MIMO Antenna for Laptop Computer Applications
Aqsa Ahmad (National University of Sciences and Technology); Farooq Ahmad Tahir (National University of Sciences and Technology (NUST)); Muhammad Umar Khan (National University of Sciences and Technology (NUST));
- 13:20 Frequency-domain Analytical Solutions of Two-wire Transmission Line with Multi-impedance
Guyan Ni (National University of Defense Technology, NUDT); Ying Li (National University of Defence Technology); Mengshi Zhang (National University of Defence Technology);
- 13:40 Fast Numerical Simulations of Electromagnetic Scattering from One-dimensional Rough Surface over a Frequency Band
Ran Bao (Anhui University); An-Qi Wang (Xidian University); Zhi-Xiang Huang (Anhui University);
- 14:00 Fast Numerical Method Based on Compressive Sensing for Electromagnetic Back Scattering from One-dimensional Rough Surface with Wide Incidence
Ying-Ying Pang (Anhui University); An-Qi Wang (Xidian University); Tongqing Liao (Anhui University);
- 14:20 On the Multimodal Analysis and Design of Guided Filters in Circular Waveguide Technology
Angel-Antonio San-Blas (University Miguel Hernandez of Elche); J. M. Roca (University Miguel Hernandez of Elche); Angela Coves Soler (Universidad Miguel Hernandez de Elche);
- 14:40 High-performance MOM Parallel Computation of Electrically Large Antenna Array Used for Target Location
Wen Wang (University of Electronic Science and Technology of China); Sheng-Jian Lai (University of Electronic Science and Technology of China);
- 15:00 Fast Computation of Electromagnetic Scattering from Multiple Cavities Embedded in Infinite Ground Plane
H. K. Lin (National University of Defense Technology); J. S. Luo (National University of Defence Technology, NUDT); Y. Li (National University of Defence Technology);
- 15:20 Coffee Break

Session 3P9a

Advanced Numerical Techniques in Computational Electromagnetics 1

Wednesday PM, August 10, 2016

Room 3C/3D

Organized by Rushan Chen, Mei Song Tong

Chaired by Rushan Chen, Mei Song Tong

- 13:00 Finite Element Simulation of Three Dimensional Cloaks
Xuwei Ping (Hohai University); Hongjie Wang (Hohai University); Xinghui Yin (Hohai University); Li Li (Hohai University); Qing-Bo Li (Huaiyin Normal University);

Session 3P9b

SC1: Computational Electromagnetics

Wednesday PM, August 10, 2016

Room 3C/3D

Organized by Yoichi Okuno, Tsuneki Yamasaki

Chaired by Yoichi Okuno, Tsuneki Yamasaki

- 15:40 Numerical Analysis of the Plane Wave Scattering by a Dielectric Grating
Akira Komiyama (Osaka Electro-Communication University);

- 16:00 Plasmon Excitation on a Thin Metal-film Grating: Profile Effect and Applications
Benwen Chen (South China Normal University); Rui Gong (South China Normal University); Yoichi Okuno (South China Normal University); Xun Xu (Kyushu Sangyo University);
- 16:20 Resolution of a Grating-based Plasmon Index Sensor with Efficiency-alone Interrogation
Rui Gong (South China Normal University); Benwen Chen (South China Normal University); Xun Xu (Kyushu Sangyo University); Yoichi Okuno (South China Normal University);
- 16:40 Comparative Simulations of Hybrid Systems with Nonuniform MTLs via Wendroff and NILT Based Techniques
Lubomir Brancik (Brno University of Technology); Nawfal Al-Zubaidi R-Smith (Brno University of Technology);
- 17:00 Extraction of Incident Field from Total Field Data
Rui Yang (South China Normal University); Zhi Qi Meng (Fukuoka University); Takashi Tanaka (Nagasaki University);
- 17:20 Energy Distribution of Dielectric Waveguides with Arbitrary Shape of Dielectric Constant — The Influence of Dielectric Structures along a Middle Layer
Ryosuke Ozaki (Nihon University); Tsuneki Yamasaki (Nihon University);
- 17:40 SAR Computation for Multiple Wearable Antennas
Louis-Ray Olivier Harris (University of the West Indies, Mona);
- 13:40 Imaging from Random Targets by In-door SAR Experiments
Ming Jin (Institute of Remote Sensing and Digital Earth, CAS); Chiung-Shen Ku (Institute of Remote Sensing and Digital Earth, CAS); Kun-Shan Chen (Institute of Remote Sensing and Digital Earth, Chinese Academy of Science); Peng Xu (Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences);
- 14:00 Efficient Simulation of Airborne Stripmap SAR Raw Signal of Extended Scenes
Yuhua Guo (Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences); Qin-Huo Liu (Institute of Remote Sensing Application, Chinese Academy of Sciences); Bo Zhong (Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences);
- 14:20 SAR Imaging of Randomly Corrugated Surfaces with Irregular Grooves
Chiung-Shen Ku (Institute of Remote Sensing and Digital Earth, CAS); Kun-Shan Chen (Institute of Remote Sensing and Digital Earth, Chinese Academy of Science); Peng Xu (Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences); Pao-Chi Chang (National Central University); Yang-Lang Chang (National Taipei University of Technology);
- 14:40 Radar backscattering from Dielectric Random Rough Surfaces Using 3D Numerical Simulation of Maxwell's Equation
Tai Qiao (University of Michigan); Tien-Hao Liao (University of Michigan); Leung Tsang (University of Michigan at Ann Arbor); Douglas Vandemark (University of New Hampshire); Simon H. Yueh (California Institute of Technology);

Session 3P_10a

FocusSession.SC5: SAR Imaging of Random Media

Wednesday PM, August 10, 2016

Room 3E

Organized by Kun-Shan Chen

Chaired by Kun-Shan Chen

- 13:20 Experimental Study on the Phase Statistics of GB-SAR Imagery
Chee-Siong Lim (Multimedia University); Voon Chet Koo (Multimedia University); Yee Kit Chan (Multimedia University); Cheng-Yen Chiang (National Central University); Chih-Tien Wang (National Central University); Chih-Yuan Chu (G-AVE Technology Ltd.);
- 15:00 A New Client-server Architecture for Real-time Micro-movement Ground Based SAR System
Chih-Yuan Chu (G-AVE Technology Ltd.); Chih-Tien Wang (National Central University); Cheng-Yen Chiang (National Central University); Voon Chet Koo (Multimedia University); Yee Kit Chan (Multimedia University); Yang-Lang Chang (National Taipei University of Technology);
- 15:20 **Coffee Break**

Session 3P_10b
FocusSession.SC5: Remote Sensing of
Terrestrial Snow

Wednesday PM, August 10, 2016

Room 3E

Organized by Xiaolan Xu, Jian-Cheng Shi

Chaired by Jian-Cheng Shi

- 15:40 Effects of Layered Media with Random Permittivi-
 invited ties and Roughness on Icesheet Emissions from 0.5–
 2.0 GHz
Leung Tsang (University of Michigan at Ann Arbor); Shurun Tan (University of Michigan); Haokui Xu (University of Michigan); Tianlin Wang (University of Michigan); Mohammadreza Sanamzadeh (University of Michigan); Joel T. Johnson (The Ohio State University); Kenneth C. Jezek (The Ohio State University);
- 16:00 The Potential of Estimating Snow Depth from
 invited QuikScat Scatterometer Data and Snow Physical
 Model
Chuan Xiong (Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences); Jian-Cheng Shi (Institute of Remote Sensing Applications, Chinese Academy of Sciences); Yurong Cui (Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences);
- 16:20 Numerical Simulation of Maxwell's Equation in 3D
 invited (NMM3D) Applied to Active and Passive Remote
 Sensing of Terrestrial Snow and Snow on Sea Ice
Shurun Tan (University of Michigan); Jiyue Zhu (University of Michigan); Leung Tsang (University of Michigan at Ann Arbor); Son V. Nghiem (California Institute of Technology);
- 16:40 The Spatiotemporal Heterogeneity of Snow Param-
 invited eters in a Passive Microwave Remote Sensing Pixel and
 Its Effect on the Inversion of the Operational Snow
 Parameters
Xiaofeng Li (Northeast Institute of Geography and Agroecology, Chinese Academy of Science); Lili Wu (Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences); Kai Zhao (Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences); Yinan Du (Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences); Xingming Zheng (Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences); Tao Jiang (Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences);
- 17:00 Estimation of Snow Water Equivalent Using X-band
 invited and Ku-band Backscattering
Yurong Cui (Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences); Chuan Xiong (Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences); Jian-Cheng Shi (Institute of Remote Sensing Applications, Chinese Academy of Sciences);
- 17:20 Uniaxial Effective Permittivity Extracted from
 invited Anisotropic Bicontinuous Media Using Numerical So-
 lution of Maxwell Equation in 3D and Strong Permit-
 tivity Fluctuations
Shurun Tan (University of Michigan); Chuan Xiong (Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences); Xiaolan Xu (Jet Propulsion Laboratory); Leung Tsang (University of Michigan at Ann Arbor);
- 17:40 Using a Linear Unmixing Method to Improve Passive
 invited Microwave Snow Depth Retrieval
Xiaojing Liu (Beijing Normal University); Lingmei Jiang (Beijing Normal University); Gongxue Wang (Jointly Sponsored by Beijing Normal University and the Institute of Remote Sensing and Digital Earth of Chinese Academy of Sciences); Zheng Lu (Beijing Normal University);
- 18:00 Snow Parameter Analysis of Saline-alkali Land in the
 invited Western Jilin Province of China Based on Remote
 Sensing Data
Lingjia Gu (Jilin University); Mingbo Sun (Jilin University); Ruizhi Ren (Jilin University);
- 18:20 A Comprehensive Snow Cover Experiment in a Whole
 of Snow Season
Tao Che (Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences); Liyun Dai (Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences); Xiaohua Hao (Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences); Hongyi Li (Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences); Chunlin Huang (Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences); Jian Wang (Cold and Arid Regions Environmental and Engineering Research Institute, CAS); Xin Li (Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences);

- 18:40 The First-order Difference: A Potential Methodology
invited to Evaluate Fractional Snow Cover Time Series
Gong-Xue Wang (Beijing Normal University and the Institute of Remote Sensing and Digital Earth of Chinese Academy of Sciences); Lingmei Jiang (Beijing Normal University);

Session 3P_11

SC4: Design and Applications of Frequency Selective Surfaces and Metasurfaces

Wednesday PM, August 10, 2016

Room 3G

Organized by Long Li, Raj Mittra

Chaired by Long Li, Zhongxiang Shen

- 13:20 Design of Dual-band Frequency Selective Surface for Antenna RCS Reduction
Pingyou Wang (University of Electronic Science and Technology of China); Pu Tang (University of Electronic Science and Technology of China); Wugong Luo (University of Electronic Science and Technology of China); Ziyuan He (University of Electronic Science and Technology of China); Lutong Li (University of Electronic Science and Technology of China); Senhang He (University of Electronic Science and Technology of China);
- 13:40 Orbital Angular Momentum Generation Using a Bi-layered Complementary Metasurface with a High Conversion Efficiency
invited *Menglin L. N. Chen (The University of Hong Kong); Li Jun Jiang (The University of Hong Kong); Wei E. I. Sha (University of Hong Kong);*
- 14:00 New Method for Generating Orbital Angular Momentum Vortex Beams in the Radio Frequency Domain
Shixing Yu (Xidian University); Long Li (Xidian University);
- 14:20 Design of a Dual-polarized MIMO Antenna with High Isolation
invited *Hao Zhou (Communication University of China); Dazhi Piao (Communication University of China);*
- 14:40 Radio-frequency Source Estimation Using Field Distribution Measured on Metamaterial Absorber Surface
invited *Satoshi Yagitani (Kanazawa University); Naoki Tonooka (Kanazawa University); Ryohi Kanaura (Kanazawa University); Ryohi Hayashi (Kanazawa University); Mitsunori Ozaki (Kanazawa University); Tomohiko Imachi (Kanazawa University);*

- 15:00 Surface Waveguide Topologies Supporting Both TM- and TE-Mode with the Same Phase Velocity
invited *Mei Li (University of Electronic Science and Technology of China (UESTC)); Shao-Qiu Xiao (University of Electronic Science and Technology of China); Jiang Long (University of California at San Diego); Daniel F. Sievenpiper (University of California at San Diego);*

15:20 Coffee Break

- 15:40 Terahertz Coding Metasurface and Its Applications
invited *Qiang Cheng (Southeast University); Tie Jun Cui (Southeast University);*
- 16:00 A Microwave RCS Reduction Structure by Antiradiation Reflection Design of Gradient Metasurface
Yang Zhou (University of Electronic Science and Technology of China); Guorui Zhang (University of Electronic Science and Technology of China); Pei-Heng Zhou (University of Electronic Science and Technology of China); Hai-Yan Chen (University of Electronic Science and Technology of China); Jianliang Xie (University of Electronic Science and Technology of China); Long-Jiang Deng (University of Electronic Science and Technology of China);
- 16:20 A Novel Approach to Designing Phase Shifters for Array Antennas for Satellite Communication by Using Reconfigurable FSS Screens
Ravi Kumar Arya (The Pennsylvania State University); Shaileshachandra Pandey (The Pennsylvania State University); Raj Mittra (The Pennsylvania State University);
- 16:40 Effect of Dimension, Spacing, Periodicity and Shape of RIS on Resonant Frequency and Bandwidth of 2×2 Antenna Array
Nayana Chaskar (M. H. Saboo Siddik Engineering College); Sneha Dalvi (Terna Engineering College); Sandip Rathod (Terna Engineering College); Anjali A. Chaudhari (St. Francis Institute of Technology); Rajiv K. Gupta (Terna Engineering College);
- 17:00 Study of Finite Planar Frequency Selective Surfaces Based on Babinet Principle
Bing Liu (University of Electronic Science and Technology of China); Zai-Ping Nie (University of Electronic Science and Technology of China); Jun Tan (University of Electronic Science and Technology of China);

Session 3P_12
FocusSession.SC3: Advanced Photonic Technologies for Spectroscopic Sensing of the Atmosphere

Wednesday PM, August 10, 2016
Room 3H

Organized by Wei Dong Chen, Vincenzo Spagnolo

 Chaired by Wei Dong Chen, Vincenzo Spagnolo

13:10 Interband Cascade Lasers for Gas Sensing

invited

Sven Hoefling (Universitat Wurzburg); R. Weih (Universitat Wurzburg); A. Schade (University of Wurzburg); Martin Kamp (University of Wurzburg);

13:30 Recent Advances of the Quartz-enhanced Photoacoustic Trace Gas Detection Technique

invited

Vincenzo Spagnolo (Technical University of Bari); P. Patimisco (Technical University of Bari); A. Sampao (Technical University of Bari); M. Giglio (Technical University of Bari); L. Dong (Shanxi University); Frank K. Tittel (Rice University);

13:50 New Spectrophone Designs Based on a Quartz Tuning Fork

invited

Lei Dong (Shanxi University); H. Zheng (Shanxi University); H. Wu (Shanxi University); Vincenzo Spagnolo (Technical University of Bari); S. Jia (Shanxi University); Frank K. Tittel (Rice University);

14:10 Broadband Quantum Cascade Laser Based Multi-heterodyne Spectroscopy for Chemical Detection

keynote

Gerard Wysocki (Princeton University);

 14:40 A QCL-based QEPAS Sensor for Sensitive C₂H₄ Detection

Zhen Wang (The Chinese University of Hong Kong); Wei Ren (The Chinese University of Hong Kong);

15:00 Insights into a Local Methane Measurement by Quantum Cascade Laser

invited

Rabih Maamary (Universite du Littoral Cote d'Opale); Eric Fertein (University of the Littoral Opal Coast); Patrick Augustin (Universite du Littoral Cote d'Opale); Marc Fourmentin (Universite du Littoral Cote d'Opale); Dorothee Dewaele (Universite du Littoral Cote d'Opale); Fabrice Cazier (Universite du Littoral Cote d'Opale); Wei Dong Chen (University of the Littoral Opal Coast);

 15:20 **Coffee Break**

15:40 THz Quantum Cascade Amplifier for Remote Sensing Applications

invited

Juraj Darmo (Technische Universitat Wien); D. Bachmann (Technische Universitat Wien); K. Unterrainer (Innsbruck University); M. Rosch (Eidgenossische Technische Hochschule); G. Scallari (Eidgenossische Technische Hochschule); M. Beck (Eidgenossische Technische Hochschule); J. Faist (Eidgenossische Technische Hochschule);

16:00 Recent Advances of Laser Absorption Spectroscopy Based Technologies for Sensing of Atmosphere

invited

Kun Liu (Anhui Institute of Optics & Fine Mechanics, Chinese Academy of Sciences); Tu Tan (Anhui Institute of Optics & Fine Mechanics, Chinese Academy of Sciences); Guishi Wang (Anhui Institute of Optics & Fine Mechanics, Chinese Academy of Sciences); Lei Wang (Anhui Institute of Optics & Fine Mechanics, Chinese Academy of Sciences); Weidong Chen (Universite du Littoral Cote d'Opale); Xiaoming Gao (Anhui Institute of Optics and Fine Mechanics, Chinese Academy of Sciences);

16:20 Exploration of the Short-wavelength Optical Properties of Particles Using Broadband Optical Cavity Spectroscopy

invited

Dean S. Venables (University College Cork); Donovan P. Fullam (University College Cork); Jun Chen (University of Shanghai for Science and Technology);

16:40 Development of Airborne/Satellite Lidars Using Non Linear Optics for Characterization of Greenhouse Gases

invited

Ajmal Khan Mohamed (ONERA — The French Aerospace Lab); Jean-Baptiste Dherbecourt (ONERA — The French Aerospace Lab); Myriam Raybaut (ONERA — The French Aerospace Lab); Jean-Michel Melkonian (ONERA — The French Aerospace Lab); Antoine Godard (ONERA — The French Aerospace Lab); Guillaume Gorju (ONERA — The French Aerospace Lab); Michel Lefebvre (ONERA — The French Aerospace Lab);

17:00 High Sensitive and Selective Detection of OH Radicals with Faraday Rotation Spectroscopy

Weixiong Zhao (Anhui Institute of Optics and Fine Mechanics, Chinese Academy Sciences); Bo Fang (Anhui Institute of Optics and Fine Mechanics, Chinese Academy Sciences); Weijun Zhang (Anhui Institute of Optics & Fine Mechanics, Chinese Academy of Sciences); Wei Dong Chen (University of the Littoral Opal Coast);

- 17:15 Sensing of the Atmospheric Water Vapor with Millimeter Wave Spectrometer — KUMODES
Osamu Tajima (High Energy Accelerator Research Organization (KEK)); K. Araki (Meteorological Research Institute); Hiroshi Ishimoto (Meteorological Research Institute); T. Nagasaki (High Energy Accelerator Research Organization (KEK));
- 17:30 Characterization of Soot Based on Variable Laser-induced Spectroscopy
Yanfeng Zhang (University of Shanghai for Science and Technology); Jun Chen (University of Shanghai for Science and Technology); Huinan Yang (University of Shanghai for Science and Technology); Mingxu Su (University of Shanghai for Science and Technology);

Session 3P_13

Electromagnetic Modeling and Inversion

Wednesday PM, August 10, 2016

Room 3I

Organized by Ganquan Xie, Jianhua Li

Chaired by Ganquan Xie, J. S. Luo

- 13:20 Millimeter-Wave (MMW) Characterization of Low-loss Dielectric Materials of Unknown Thickness from Free-space Measurements
Sung Kim (National Institute of Standards and Technology (NIST)); David R. Novotny (National Institute of Standards and Technology); Joshua A. Gordon (National Institute of Standards and Technology); Jeffrey R. Guerrieri (National Institute of Standards and Technology);
- 13:40 Modeling of Microwave Bistatic Scattering from a Rice Canopy
Yu Liu (Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences); Kun-Shan Chen (Institute of Remote Sensing and Digital Earth, Chinese Academy of Science); Peng Xu (Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences); Zhao-Liang Li (University of Strasbourg);
- 14:00 An Design of All-weather RFID Tag Antenna
Wenhui Shen (Shanghai University); Jiahong Lin (Shanghai University);
- 14:20 Suppression of Diffraction Effects on the Tips of the Mock-up
Andrey M. Lebedev (Institute for Theoretical and Applied Electromagnetics, Russian Academy of Sciences); T. A. Furmanova (Institute for Theoretical and Applied Electromagnetics, Russian Academy of Sciences);
- 14:40 Deepening of the Shadow and Narrowing of the Shadow Part of Scattering Diagram
Andrey M. Lebedev (Institute for Theoretical and Applied Electromagnetics, Russian Academy of Sciences); T. A. Furmanova (Institute for Theoretical and Applied Electromagnetics, Russian Academy of Sciences);
- 15:00 The Parallel Algorithm of Fast Multipole Expansion Method for Electric Field Integral Equation
Jiayu He (National University of Defense Technology); Feiran Chen (National University of Defense Technology); Xinglu Yu (National University of Defense Technology); Taige Cheng (National University of Defense Technology); Jinxin Xiao (National University of Defense Technology); Jianshu Luo (National University of Defence Technology, NUDT);
- 15:20 Coffee Break
- 15:40 Global and Local Field Method and Cloud Computation
Jianhua Li (GL Geophysical Laboratory); Lee Xie (Hunan Super Computational Sciences Center); Ganquan Xie (GL & Hunan Super Computational Sciences Center);
- 16:00 GLLH Invisible Electromagnetic Cloak and GL No Scattering Modeling and Inversion
Jianhua Li (GL Geophysical Laboratory); Feng Xie (GL Geophysical Laboratory); Lee Xie (GL Geophysical Laboratory); Ganquan Xie (GL & Hunan Super Computational Sciences Center);
- 16:20 Raytracing Based on the Symplectic Algorithm
Chuan Li (Central South University); Ya Sun (Central South University); Jian-Xin Liu (Central South University);
- 16:40 The Numerical Method of Integral Equation in the Electric Field Based on Gaussian Numerical Integral Method
Yang Cai (National University of Defense Technology); J. S. Luo (National University of Defence Technology, NUDT); Hong Lei (Aviation Key Laboratory of Science and Technology on Electromagnetic Environmental Effects);
- 17:00 A New Version of Advanced Global Integral and Local Differential AGILD Modeling and Inversion
Ganquan Xie (GL & Hunan Super Computational Sciences Center); Feng Xie (GL Geophysical Laboratory); Jianhua Li (GL Geophysical Laboratory); Lee Xie (Hunan Super Computational Sciences Center);

- 17:20 A Rapid and Accurate Algorithm for Numerical Simulation of Direct Current Fields with Arbitrary Conductivity Distribution
Qingrui Chen (Central South University); Longwei Chen (Central South University); Qianjiang Zhang (Central South University); Shikun Dai (Central South University);
- 17:40 Space-time Array Difference Magnetotelluric Method
Cong Zhou (Central South University); Jing-Tian Tang (Central South University); Yuan Yuan (Central South University); Zheng Yong Ren (Central South University); Xiao Xiao (Central South University); Zheng Li (Central South University);

Session 3P_14

Microwave Energy-driven Material Chemistry and Physics

Wednesday PM, August 10, 2016

Room 3J

Organized by Naoki Shinohara, Shuntaro Tsubaki

Chaired by Naoki Shinohara, Shuntaro Tsubaki

- 13:20 Michael Addition of Anilines or Phenols without Solvent under Microwave Irradiation
Hirokazu Iida (Kanto Gakuin University College of Science and Technology); Kie Takahashi (Kanto Gakuin University College of Science and Technology);
- 13:40 Study on Microwave Synthesis of Platinum Metal Complexes and the Dielectric Property of Their Reaction Media
Takeko Matsumura (Minerva Light Laboratory, L.L.C.); Yoshitaka Masuda (Minerva Light Laboratory, L.L.C.); Shozo Yanagida (Osaka University); Takashi Watanabe (Kyoto University); Tomohiko Mitani (Kyoto University);
- 14:00 Catalysis of Polyoxometalates under Microwave Irradiation and Their Dielectric Properties
Shuntaro Tsubaki (Tokyo Institute of Technology); Shogo Hayakawa (Tokyo Institute of Technology); Tadaharu Ueda (Kochi University); Tomohiko Mitani (Kyoto University); Satoshi Fujii (Tokyo Institute of Technology); Masato Maitani (Tokyo Institute of Technology); Eichi Suzuki (Tokyo Institute of Technology); Yuji Wada (Tokyo Institute of Technology);

- 14:20 Microwave Frequency Dependence of Thermal Distribution in the Production of Vanillin and Vanillic Acid from Lignocellulosic Biomass
Keiichiro Kashimura (Chubu University); Chen Qu (Kyoto University); Tomohiko Mitani (Kyoto University); Naoki Shinohara (Kyoto University); Takashi Watanabe (Kyoto University);
- 14:40 Study of Microwave Effects for Reactions; Microwave Affected Reaction Molecules Selectively for an Enzymatic Reaction
Izuru Nagashima (National Institute of Advanced Industrial Science and Technology (AIST)); Tomomi Sakuta (National Institute of Advanced Industrial Science and Technology (AIST)); Jun-Ichi Sugiyama (National Institute of Advanced Industrial Science and Technology (AIST)); Hiroki Shimizu (National Institute of Advanced Industrial Science and Technology (AIST));
- 15:00 Correlation of Microwave Power Dependence and Temperature Dependence on Enzymatic Reaction under Microwave Irradiation
Fujiko Aoki (Kyushu Institute of Technology); Ken-shi Haraguchi (Kyushu Institute of Technology); Shokichi Ohuchi (Kyushu Institute of Technology);

15:20 Coffee Break

- 15:40 Microwave Assisted Trypsin Digestion with Cavity Type Resonator Reactor as an Innovative Proteomics Technology
Fujiko Aoki (Kyushu Institute of Technology); Ken-shi Haraguchi (Kyushu Institute of Technology); Arata Shiraishi (Kyushu Institute of Technology); Takeo Yoshimura (Tokyo Institute of Technology); Shokichi Ohuchi (Kyushu Institute of Technology);
- 16:00 A Single-mode Microwave Heating for Essential Oil Extraction of *Perovskia Atriplicifolia*
Nazifa Faqeryar (Ochanomizu University); Y. Mori (Ochanomizu University); T. Matsumura (Minerva Light Lab.);
- 16:20 Mechanism on Bubble Size Formation by Two-stage Microwave Irradiation
Shunsuke Nishijima (Department of Chemical Engineering); Ryosuke Nakata (University of Hyogo); Shungo Matsumura (University of Hyogo); Yusuke Asakuma (University of Hyogo);

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| <p>16:40 Study on Metal Refining Process of Sc Metal Using by Microwave Irradiation
 <i>Satoshi Fujii (Tokyo Institute of Technology); Shuntaro Tsubaki (Tokyo Institute of Technology); Eichi Suzuki (Tokyo Institute of Technology); Satoshi Chonan (Oricon Energy Co. Ltd.); Miho Fukui (Oricon Energy Co. Ltd.); Yuji Wada (Tokyo Institute of Technology);</i></p> <p>17:00 Analytical Prediction of Runaway Occurrence and the Temperature Distribution Induced by Microwave Heating
 <i>Aki Fujita (Science and Technology Research Inst. Co.);</i></p> <p>17:20 Theoretical Verification of Microwave-induced Chemistry on the Basis of Density-functional-theory-based Molecular Modeling
 <i>Shozo Yanagida (Osaka University); Takeko Matsumura (Minerva Light Laboratory, L.L.C.);</i></p> | <p>3</p> <p>4</p> <p>5</p> | <p>A Novel Method of Eliminating Measurements with Significant Errors in the Multistatic Radar System
 <i>Kewei Wu (National University of Defense Technology); Chongyi Fan (National University of Defense Technology); Jun Zhang (National University of Defense Technology); Xiaotao Huang (National University of Defense Technology); Xiangyang Li (National University of Defense Technique);</i></p> <p>Optimal Power Allocation for Energy Efficiency Maximization in 5G Downlink Multiuser Systems
 <i>Yue Ma (National University of Defense Technology); Xin Wang (National University of Defense Technology); Yantao Guo (Science and Technology on Information Transmission and Dissemination in Communication Networks Laboratory); Meng Zhao (Xichang Satellite Launch Center);</i></p> <p>Quality of Service Measurements References Investigation for the Mobile Internet Services in the Context of Net Neutrality Framework
 <i>Elmars Lipenbergs (Riga Technical University); Vjaceslavs Bobrovs (Riga Technical University); Girts Ivanovs (Riga Technical University);</i></p> | <p>6</p> <p>7</p> <p>8</p> | <p>Evaluation of LTE 700 and DVB-T and DVB-T2 Electromagnetic Compatibility for Co-channel Case
 <i>Guntis Ancans (Riga Technical University); Evaldas Stankevicius (Vilnius Gediminas Technical University); Vjaceslavs Bobrovs (Riga Technical University);</i></p> <p>Antennas Utilized for Intra-vehicle 3–11 GHz and 55–65 GHz Channel Measurement
 <i>Tomas Mikulasek (Brno University of Technology); Jiri Blumenstein (Brno University of Technology); Ales Prokes (Brno University of Technology);</i></p> <p>Experimental Study on Antenna — IC Interconnections for Electro-textile RFID Tags
 <i>Johanna Virkki (Tampere University of Technology); Jun Tajima (Osaka University); Toni Bjorninen (Tampere University of Technology); Han He (Tampere University of Technology); Lauri Sydanheimo (Tampere University of Technology); Leena Ukkonen (Tampere University of Technology); Hiroshi Nishikawa (Osaka University);</i></p> |
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- Session 3P0**

Poster Session 6

Wednesday PM, August 10, 2016

14:00 PM - 17:00 PM

Room Poster Area

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| <p>1 Tunable Tri-band Bandpass Filter Using Varactor-tuned Stub-loaded Resonators
 <i>Xiang Zhang (Key Laboratory of Electromagnetic Space Information, Chinese Academy of Sciences, University of Science and Technology of China); Chang Chen (Key Laboratory of Electromagnetic Space Information, Chinese Academy of Sciences, University of Science and Technology of China); Mingkang Li (Key Laboratory of Electromagnetic Space Information, Chinese Academy of Sciences, University of Science and Technology of China); Weidong Chen (University of Science and Technology of China); Jian Cai (Institute of Microelectronics, Chinese Academy of Sciences);</i></p> <p>2 Rain Attenuation Prediction for Terrestrial Links at Microwave and Millimeter Bands over Rwanda
 <i>Djuma Sumbiri (University of KwaZulu-Natal); Thomas Joachim Odhiambo Afullo (University of KwaZulu-Natal (UKZN)); Akintunde Ayodeji Alonge (University of KwaZulu-Natal);</i></p> | <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> | <p>A Kind of Seeking-common and Testing Reverse Analysis Method Based on Set Theory
 <i>Wenhan Liu (National University of Defense Technology); Guangming Liang (National University of Defense Technology); Xingyu Li (National University of Defense Technology);</i></p> |
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- 10 Limited Factors and Calculation Method of VOLTE Capacity
Na Liu (China Mobile Design Institute); Nan Li (China Mobile Design Institute); Jiangbo Dong (China Mobile Design Institute); Yanlei Chen (China Mobile Design Institute); Wei Liu (China Mobile Design Institute); Yunbo Han (China Mobile Design Institute); Yebing Ren (China Mobile Design Institute);
- 11 MIMO OTA Testing on WiFi Devices and 3D Channel Modeling in Multi-probe Anechoic Chamber Systems
Xingfeng Wu (Academy of Broadcasting Planning, SARFT); Zheng Liu (China Academy of Information and Communication Technology); Zhihua Zhang (HWA-TECH, Co. Ltd.); Chao-Hsiang Liao (SGS Taiwan Ltd.); Zhi Quan (South University of Science and Technology of China);
- 12 Research of Time Domain Algorithm for UWB Radar ISAR Imaging
Xuqin Zhang (Zhejiang University); Liang Wang (Zhejiang University); Yongsheng Wang (Zhejiang University);
- 13 A Novel Method for Wideband Pulsed Electromagnetic Wave Propagation Characteristic Analysis in Layered Medium
Bin Wu (Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences); Kai Zhao (Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences); Ling-Jia Gu (Jilin University); Xiao-Feng Li (Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences); Xingming Zheng (Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences); Tao Jiang (Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences);
- 14 Multi-path Couplings Measurements and Simulations of Typical Objects in Complex Near-field Condition
Liangshuai Guo (Shanghai Key Laboratory of Electromagnetic Environmental Effects for Aerospace Vehicle Yangpu); Zichang Liang (Science and Technology on Electromagnetic Scattering Laboratory); Xiaobing Wang (Science and Technology on Electromagnetic Scattering Laboratory); JiaYong Dai (Science and Technology on Electromagnetic Scattering Laboratory);
- 15 A Singular Spectrum Analysis Based Human Life Signal Detection
Lei Qiu (National University of Defense Technology); Tian Jin (National University of Defense Technology); Jun Zhang (National University of Defense Technology); Bi Ying Lu (National University of Defense Technology); Zhimin Zhou (National University of Defense Technology);
- 16 Ground Penetrating Radar Inspection of Asphalt Pavement with an Off-ground Antenna Array
Hai Liu (Xiamen University); Yuxian Zhang (Xiamen University); Zhijun Long (Xiamen University); Yuanyou Xia (Wuhan University of Technology); Qing Huo Liu (Duke University);
- 17 Comparison among Three Bowtie Antennas for Sub-surface Imaging Using Ground Penetrating Radar
Hai Liu (Xiamen University); Jing Xue (Xiamen University); Tian Lan (Xiamen University); Qing Huo Liu (Duke University);
- 18 The Effects of Back Scattering from a Defect Zone on Guided Wave Dispersion in Coast Dykes
Shuangcheng Ge (Zhejiang Institute of Hydraulic and Estuary); Yonghui Zhao (Tongji University); Lanbo Liu (University of Connecticut);
- 19 Noncontact Detection of Static Humans Using Dual-channel SFCW Bioradar
Fulai Liang (The Fourth Military Medical University); Zhuo-Ran Zhang (The Fourth Military Medical University); Qiang An (The Fourth Military Medical University); Fu Gui Qi (The Fourth Military Medical University); Zhao Li (The Fourth Military Medical University); Hui Jun Xue (The Fourth Military Medical University); Jianqi Wang (The Fourth Military Medical University);
- 20 SAR Imaging Conditions of Topography-induced Current Front in a Tidal Channel
Xiaozhen Wang (Zhejiang University); Huaguo Zhang (Second Institute of Oceanography, State Oceanic Administration); Bin Fu (Second Institute of Oceanography, State Oceanic Administration); Weibing Guan (Second Institute of Oceanography, State Oceanic Administration); Aiqin Shi (Second Institute of Oceanography, State Oceanic Administration);
- 21 Data Fusion Analysis of Sea Surface Temperature from HY-2A Satellite Radiometer
Xiaohui Li (State Oceanic Administration); Jingsong Yang (Second Institute of Oceanography, State Oceanic Administration); Gang Zheng (Second Institute of Oceanography, State Oceanic Administration); Guoqi Han (State Oceanic Administration); Lin Ren (State Oceanic Administration); Juan Wang (State Oceanic Administration);

- 22 For Updated Monitoring of Natural Environment of African Equatorial Zone
Shigehisa Nakamura (Kyoto University);
- 23 Survey for Sustainability of Biological Living in African Equatorial Zone
Shigehisa Nakamura (Kyoto University);
- 24 Monitoring of the Rift Valley on African Plate in Elastic Creeping over Magma Motion
Shigehisa Nakamura (Kyoto University);
- 25 Polarimetric SAR Target Decomposition Based on Sparse NMF
Qian Song (Fudan University); Feng Xu (University of Shanghai for Science and Technology);
- 26 Real-time Orthogonal Vector Projection Algorithm Based on GPU
Meiping Song (Dalian Maritime University); Ping Wu (Dalian Maritime University); Jubai An (Dalian Maritime University); Chein-I Chang (University of Maryland);
- 27 Study on Modeling Electromagnetic Scattering from Near Sea Area
Jun Gu (Science and Technology on Electromagnetic Scattering Laboratory); Zichang Liang (Science and Technology on Electromagnetic Scattering Laboratory); Pengcheng Gao (Science and Technology on Electromagnetic Scattering Laboratory); Fei Dai (Science and Technology on Electromagnetic Scattering Laboratory);
- 28 Using Adaptive Cross Approximation to Accelerate Simulation of B-scan GPR for Detecting Underground Pipes
Zhiwei Liu (East China Jiaotong University); Zhanqiang Zhang (East China Jiaotong University); Yuying Gao (East China Jiaotong University); Yueyuan Zhang (East China Jiaotong University);
- 29 Millimetre Wave Scattering by Sea Foam Using Split-step Fourier Transform
Ayibapreye Kelvin Benjamin (University of Essex); David H. O. Bebbington (University of Essex);
- 30 Investigation on the Characteristics of Speckle Produced by Radially Polarized Vortex Beams through Scattering Medium
Zihao Wu (Huaqiao University); Jilin Liu (Huaqiao University); Ziyang Chen (Huaqiao University); Jixiong Pu (Huaqiao University);
- 31 Electromagnetic Scattering Modeling of Anisotropic Coating Target Based on Point Source Excitation
Jingjing He (Wuhan University); Jintao Xiang (Wuhan University); Guo-Qiang Zhu (Wuhan University);
- 32 Sparse Regularization Based Imaging Method for Inverse Synthetic Aperture Radar
Xiao-Zhen Ren (Henan University of Technology); Lihong Qiao (Henan University of Technology); Yao Qin (Henan University of Technology); Pengpeng Li (Henan University of Technology);
- 33 Research on Four Stage Reluctance Electromagnetic Launcher
Xuesong Jia (Anhui University); Tongqing Liao (Anhui University); Baomi Jing (Anhui University);
- 34 Machine and Inverter Loss Minimization of Hybrid Excited Permanent Magnet Synchronous Machines for Electric Vehicles
Ryszard Palka (West Pomeranian University of Technology); Michal Bonislawski (West Pomeranian University of Technology); Marcin Holub (West Pomeranian University of Technology);
- 35 Design of Life Test Method for Chip-type Metal Inductor
Soon-Mi Hwang (Korea Electronics Technology Institute (KETI)); Chul-Hee Kim (Korea Electronics Technology Institute (KETI)); Kwan-Hun Lee (Korea Electronics Technology Institute (KETI));
- 36 Design of Electronic Static Discharge Protection for Red-green-blue LED Control System in Automobiles
Guo Chun Wan (Tongji University); Quan Gu (Tongji University); Ke Xue (Tongji University); Mei Song Tong (Tongji University);
- 37 An ESD Protection Design for Camera Modules
Guo Chun Wan (Tongji University); Quan Gu (Tongji University); Ling Yi Tang (Tongji University); Xiao Dong Yu (Tongji University); Mei Song Tong (Tongji University);
- 38 Design of a Data Playback Module for Very Long Baseline Interferometry
Lan Chen (Shanghai Institute of Technology); Jian Tao Lai (Shanghai Institute of Technology); Zhi Jun Xu (Shanghai Astronomical Observatory, Chinese Academy of Science); Yun Jing Zhang (Tongji University); Mei Song Tong (Tongji University);
- 39 Microwave Absorbing Properties and Structural Design of a Double-layer Microwave Absorber Based on Auxiliary Absorbing of SiC for Microwave Drying
Jin Zhang (Kunming University of Science and Technology); Hua Chen (Kunming University of Science and Technology); Zebin Fan (Kunming University of Science and Technology);

- 40 A New Design of TEM Horn Antenna Based on Ultra-wide Band Broken Line
Shoulin Yin (Shenyang Normal University); Yang Sun (Shenyang Normal University); Peng Li (Shenyang Normal University);
- 41 Rotation Behavior of Dielectric Microsphere on Three Types of MicroRing Resonator
Lin Cheng (Lanzhou University); Pengfei Cao (Lanzhou University); Xiaodong He (Lanzhou University); Mingrui Yuan (Lanzhou University); Xiaofei Guo (Lanzhou University); Xu Li (Lanzhou University);
- 42 A Compact Highly Isolated Two Ports Microstrip Antenna Based on Defected Ground Structure for WLAN/WiMAX Applications
Sara Mahmoud Abd El Hamid (Arab Academy for Science, Technology and Maritime Transport); Wael Swelam (Egyptian Armed Forces); Mohamed Hassan Abd El-Azeem (Arab Academy for Science, Technology and Maritime Transport);
- 43 A Novel Triplexer Antenna with High Isolation for Frequency Diversity Used in 3G/4G Applications
Sara Mahmoud Abd El Hamid (Arab Academy for Science, Technology and Maritime Transport); Wael Swelam (Egyptian Armed Forces); Mohamed Hassan (Arab Academy for Science, Technology and Maritime Transport);
- 44 A Dual Notched Band Printed Monopole Antenna for Ultra-wide Band Applications
Muhammad Irshad Khan (Capital University of Science and Technology); Saeed Ur Rahman (Capital University of Science and Technology); Muhammad Kabir Khan (COMSATS Institute of Information Technology); Mohammad Saleem (KTH);
- 45 Design of a Printed Monopole Antenna with Ridged Ground for Ultra Wideband Applications
Muhammad Kabir Khan (COMSATS Institute of Information Technology); Muhammad Irshad Khan (Capital University of Science and Technology); Iftikhar Ahmad (Capital University of Science and Technology); Mohammad Saleem (KTH);
- 46 Planar Dipole Antenna for Tri-band PCS and WLAN Communications
Saeed Ur Rahman (Capital University of Science and Technology); Muhammad Irshad Khan (Capital University of Science and Technology); Nadeem Akhtar (Capital University of Science and Technology); Fahad Murad (Capital University of Science and Technology);
- 47 Recent Advances of the Multipactor RF Breakdown in RF Satellite Microwave Passive Devices
Daniel Gonzalez Iglesias (Val Space Consortium); A. M. Perez (Universidad Politecnica de Valencia); Oscar Moneris (Val Space Consortium); S. Anza (AUORASAT); J. Vague (Technical University of Valencia); Benito Gimeno Martinez (Universidad de Valencia); Vicente E. Boria (Universidad Politecnica de Valencia); Alvaro Gomez (Universidad de Cantabria); Angel Vegas (Universidad de Cantabria); E. Diaz (University of Valencia); David Raboso (European Space Agency, ESA, ESTEC); Angela Coves Soler (Universidad Miguel Hernandez de Elche);
- 48 EM Inverse Scattering Analysis of Plasma Frequency and Electron Collision Frequency Based on Genetic Algorithm
Haochuan Deng (Science and Technology on Electromagnetic Scattering Laboratory); Liang Man (Science and Technology on Electromagnetic Scattering Laboratory); Xiao Wei (Communication University of China); Hong-Cheng Yin (Science and Technology on Electromagnetic Scattering Laboratory);
- 49 Optical SAR Data Processor Based on DMD
Jie Zhang (Shanghai Jiao Tong University); Yesheng Gao (Shanghai Jiao Tong University); Kaizhi Wang (Shanghai Jiao Tong University); Xingzhao Liu (Shanghai Jiaotong University);
- 50 Microwave Sensor Based on Square Stereocomplementary Asymmetric Single Split Rectangular Resonator
Zheng Peng Xie (Yunnan University); Xi Ming Li (Yunnan University); Yong Xian Yao (Yunnan University); Jingjing Yang (Yunnan University); Ming Huang (Yunnan University);
- 51 Simulation and Analysis of a Micro Strip Sensor Based on Dual-D Shaped Complementary Split Resonator
Xi Ming Li (Yunnan University); Zheng Peng Xie (Yunnan University); Mei Xia Yang (Yunnan University); Jingjing Yang (Yunnan University); Ming Huang (Yunnan University);
- 52 The Study for WPT Using Silver Nano Particle
Takashi Yoshikawa (Kindai University Technical College); Arata Sakai (Kindai University Technical College);
- 53 Particle-in-Cell (PIC) Simulation of a 250 GHz Gyrotron
Rajanish Kumar Singh (Indian Institute Technology (BHU)); M. Thottappan (Indian Institute of Technology (Banaras Hindu University));

- 54 Integration of Microstrip Bandpass Filter with Inset-fed Antenna
Hanyue Xu (University of Ontario Institute of Technology); Ying Wang (University of Ontario Institute of Technology);
- 55 Shaping Microwave Field of Arbitrary Intensity Patterns in Bounded Area by Time Reversal Mirror
Deshuang Zhao (University of Electronic Science and Technology of China);
- 56 Solution Processable and Photopatternable Cadmium-free InZnP/ZnS Quantum Dots
Xue-Cheng Teng (Hannam University); Juhyoung Jung (Hannam University); Prem Prabhakaran (Hannam University); Kwang-Sup Lee (Hannam University);
- 57 Small Molecule Acceptors for Polymer Solar Cells
Jong Hun Hong (Hannam University); Eren Durkal (Hannam University); Prem Prabhakaran (Hannam University); Kwang-Sup Lee (Hannam University);
- 58 Optimizing Growth Parameters for Highly Luminescent Er:Al₂O₃ Thin Films That Act as a Base to Fabricate a PT Laser
Priyanka Nayar (Nanjing University); Xue-Yi Zhu (Nanjing University); Ming-Hui Lu (Nanjing University); Xiao-Ping Liu (Nanjing University);
- 59 A Novel Broadband Circularly Polarized Planar Antenna Based on Off-centered Coplanar Waveguide Feeding Method
Wang He (Zhejiang University); Bo Xu (KTH Royal Institute of Technology);
- 60 A High-temperature Narrowband Selective Emitter for Solar Thermophotovoltaic Systems
Zhipeng Hu (South China Normal University); Fen Liu (South China Normal University); Yuan Zhang (South China Normal University); Sailing He (Zhejiang University);
- 61 Neural Correlates of Stereoscopic Depth Perception: A fNIRS Study
Huilin Zhu (South China Normal University (SCNU)); Tingting Cai (South China Normal University (SCNU)); Jie Xu (South China Normal University (SCNU)); Shijing Wu (South China Normal University (SCNU)); Xinge Li (South China Normal University (SCNU)); Sailing He (Zhejiang University);
- 62 An H-shape Dielectric Resonator Antenna with U-slot on the Patch
Zhi Xu (East China Normal University); Shouzheng Zhu (East China Normal University); Rongwei Wang (East China Normal University); Rensheng Xie (East China Normal University);
- 63 Sensitive SERS Measurement with a Single Nanoshell-plane Junction under Radially Polarized Focused Excitation
Xiaodan Wang (Shanghai Jiao Tong University); Jing Long (Shanghai Jiao Tong University); Xiu-long Jin (Shanghai Jiao Tong University); Jian Ye (Shanghai Jiao Tong University); Tian Yang (Shanghai Jiao Tong University);
- 64 Investigation of Pulse Shortening Suppressions on the Coaxial Vircator
Yuchuan Zhang (Northwest Institute of Nuclear Technology); Hao Shao (Northwest Institute of Nuclear Technology); Jun Sun (Northwest Institute of Nuclear Technology); Zhimin Song (Northwest Institute of Nuclear Technology); Xiaowei Zhang (Northwest Institute of Nuclear Technology);
- 65 An X Band 5-way Multiplexer for High Power Microwave Combination
Jiawei Li (Northwest Institute of Nuclear Technology); Wenhua Huang (Northwest Institute of Nuclear Technology); Xiaolong Wu (Northwest Institute of Nuclear Technology); Qi Zhu (University of Science and Technology of China);
- 66 Analysis of Orbital Angular Momentum Modes for Low-frequency Radio Communications
Li-An Bian (National University of Defense Technology); Gaosheng Li (National University of Defense Technology); Peiguo Liu (National University of Defense Technology);
- 67 An Offset-fed Flat Reflectarray Antenna with Improved Bandwidth Property
Haotong Li (Science and Technology on Electromagnetic Scattering Laboratory); Xinyu Hou (Science and Technology on Electromagnetic Scattering Laboratory); Yongche Xin (Science and Technology on Electromagnetic Scattering Laboratory); Yongfeng Wang (Science and Technology on Electromagnetic Scattering Laboratory); Kainan Qi (Communication University of China);
- 68 A Method of Motion Compensation for High Resolution Airborne SAR
Zhiming Xu (Science and Technology on Electromagnetic Scattering Laboratory); Yong-Ge Lu (Science and Technology on Electromagnetic Scattering Laboratory); Jing-Ping Yao (Science and Technology on Electromagnetic Scattering Laboratory); Haotong Li (Science and Technology on Electromagnetic Scattering Laboratory);

- 69 A Method for Calibration of Airborne Polarimetric SAR
Yong-Ge Lu (*Science and Technology on Electromagnetic Scattering Laboratory*); Zhiming Xu (*Science and Technology on Electromagnetic Scattering Laboratory*); Jing-Ping Yao (*Science and Technology on Electromagnetic Scattering Laboratory*); Haotong Li (*Science and Technology on Electromagnetic Scattering Laboratory*);
- 70 Wide Band Cavity Filter Loaded Both Dielectric Pucks and Metallic Posts
Anil Kamma (*Indian Institute of Technology Bombay*); Jayanta Mukherjee (*Indian Institute of Technology (IIT) Bombay*); Stephen Bila (*Universite de Limoges*); Nicolas Delhote (*University of Limoges*);
- 71 Band Notch UWB Band Pass Filter with Additional GSM 1800 Band
Anil Kamma (*Indian Institute of Technology Bombay*); Gopi Shrikanth Reddy (*Indian Institute of Technology Bombay*); Jayanta Mukherjee (*Indian Institute of Technology (IIT) Bombay*);
- 72 Design of Dual Band-notch UWB Bandpass Filter Based on T-shaped Resonator
Xuemei Zheng (*Harbin Engineering University*); Wenqi Liu (*Harbin Engineering University*); Xiaowei Zhang (*Harbin Engineering University*); Tao Jiang (*Harbin Engineering University*);
- 73 Research on a Simplified Air-ground Propagation Model Based on ITU-R P.618 and P.676
Xianfeng Yang (*Harbin Engineering University*); Tao Jiang (*Harbin Engineering University*); Tianzhu Han (*No. 95899 of Chinese People's Liberation Army*);
- 74 A Novel Design of Quad-band Combination of Circularly Polarized Microstrip Antenna
Wei Wang (*Kunming University of Science and Technology*); Mengjiang Xing (*Kunming University of Science and Technology*); Xuyue Guo (*Kunming University of Science and Technology*);
- 75 Design of Multiple Electrode Implantable Leads Using Meshfree Methods
Elham Khosrowshahli (*McMaster University*); Aleksandar Jeremic (*McMaster University*);
- 76 A Confinement of Microplasmas in an Array of Polymeric Channels for Optical Amplification in Ar/Xe Gas Mixtures
Jimmy Heng Kan Ni (*University of Illinois*); Shengyuan Zhong (*Eden-Park Purification*); Sung-Jin Park (*University of Illinois*); James Gary Eden (*University of Illinois, Urbana*);
- 77 Analysis of Silane and Nitrous Oxide Produced Plasma Enhanced Chemical Vapor Deposition Simulation
Zhuwen Zhou (*Guizhou Educational College*); Yiyang Yang (*Guizhou Normal College*); Bo Kong (*Key Laboratory of Photoelectron Materials Design and Simulation in Guizhou Province*); Yue Luo (*Key Laboratory of Photoelectron Materials Design and Simulation in Guizhou Province*);
- 78 Wide Triple Band Microwave Filter Based on Edge Groove Cylindrical Capacitively-loaded Cavity Resonators
Anil Kamma (*Indian Institute of Technology Bombay*); Jayanta Mukherjee (*Indian Institute of Technology (IIT) Bombay*); Stephen Bila (*Universite de Limoges*); Nicolas Delhote (*University of Limoges*);
- 79 Assessment of the Optical and Solid State Properties of Manganese Sulphide (MnS) Thin Film; Theoretical Approach
Emmanuel Ifeanyi Ugwu (*Ebonyi State University*);
- 80 Synthesis Design of Metasurfaces Using Topology Optimization Design Method
Sai Sui (*Air Force Engineering University*); Hua Ma (*Xi'an Jiaotong University*); Jiafu Wang (*Air Force Engineering University*); Mingde Feng (*Air Force Engineering University*); Yongqiang Pang (*Air Force Engineering University*); Song Xia (*Xian Jiaotong University*); Zhuo Xu (*Xi'an Jiaotong University*); Shaobo Qu (*Air Force Engineering University*);
- 81 Impact on the Human Health by the ELF Radiations of Overhead Power Lines
Djalel Dib (*University Larbi Tebessi of Tebessa*); Abelhakim Bendakir (*University Larbi Tebessi of Tebessa*); Sihem Ghoudelbourk (*University Larbi Tebessi of Tebessa*);
- 82 Metal-insulator-metal Waveguides for Spoof Plasmon
Bo Huang (*Jinan University*); Zhi Luo (*Jinan University*); Xia Wu (*Jinan University*); Huidong Yang (*Jinan University*);
- 83 Some Aspects of the Microwave Radiometry and Spectroellipsometric Technologies for Monitoring Aquatic Systems
Ferdinand A. Mkrtchyan (*V. A. Kotelnikov's Institute of Radioengineering and Electronics, Russian Academy of Sciences*); V. F. Krapivin (*V. A. Kotelnikov's Institute of Radioengineering and Electronics, Russian Academy of Sciences*); V. V. Klimov (*V. A. Kotelnikov's Institute of Radioengineering and Electronics, Russian Academy of Sciences*);

- 84 Study of Nephelometer Correction Factors in Winter Shanghai
Yumei Gao (*University of Shanghai for Science and Technology*); Ravi Varma (*National Institute of Technology Calicut*); Jun Chen (*University of Shanghai for Science and Technology*); Shengrong Lou (*Shanghai Academy of Environmental Science*); Dean S. Venables (*University College Cork*);
- 85 Ammonia Monitoring in Exhaust Gas Based on Wavelength Modulated TDLAS near 1.5 μm
Jun Chen (*University of Shanghai for Science and Technology*); Zhengpeng Yang (*University of Shanghai for Science and Technology*); Yanfeng Zhang (*University of Shanghai for Science and Technology*);
- 86 Study on Energy Transfer Induced by Collisions between Rubidium and Cesium
Shunyan Wang (*Southwest Institute of Technical Physics*); You Wang (*Southwest Institute of Technical Physics*); He Cai (*Southwest Institute of Technical Physics*); Juhong Han (*Southwest Institute of Technical Physics*); Guofei An (*Southwest Institute of Technical Physics*); Zhigang Jiang (*Southwest Institute of Technical Physics*); Ming Gao (*Southwest Institute of Technical Physics*); Wei Zhang (*Southwest Institute of Technical Physics*); Liangping Xue (*Southwest Institute of Technical Physics*); Hongyuan Wang (*Southwest Institute of Technical Physics*); Jie Zhou (*Southwest Institute of Technical Physics*);
- 87 Modulated Compact-like Pulse Signals in a Nonlinear Electrical Transmission Line: A specific Case Studied
Hatou-Yvelin Donkeng (*University of Dschang*); Marinette G. Jeutho (*University of Dschang*); Fabien Kenmogne (*University of Yaounde I*); David Yemele (*Universit de Dschang*); William Mabou (*University of Yaounde I*);
- 88 Origin of the Open Circuit Voltage in Organic Solar Cells
Hui Li (*Institute of Chemistry, Chinese Academy of Sciences*); Jizheng Wang (*Institute of Chemistry, Chinese Academy of Sciences*);
- 89 Study on THz Wave Transmission Characteristics in the Rain
Rong-Rong Wang (*Xidian University*);
- 90 Sensor Design for Relative Permittivity Measuring of the Olive Oils
Walid Krimi (*Tunis El Manar University*); Fethi Mejri (*Ecole Nationale d'Ingenieurs de Tunis*); Taoufik Aguilu (*University of Tunis*);
- 91 Searching for a Method of the Upper Atmosphere Monitoring by ULF Emissions
Alexandr S. Potapov (*Institute of Solar-Terrestrial Physics SB RAS*); T. N. Polyushkina (*Institute of Solar-Terrestrial Physics SB RAS*); B. Tsegmed (*Institute of Astronomy and Geophysics MAS*); Alexey V. Oinats (*Institute of Solar-Terrestrial Physics SB RAS*); A. Yu. Pashinin (*Institute of Solar-Terrestrial Physics SB RAS*); Ilya K. Edemskiy (*Institute of Solar-Terrestrial Physics (ISTP), Siberian Branch of Russian Academy of Sciences*); Konstantin G. Ratovsky (*Institute of Solar-Terrestrial Physics SB RAS*);
- 92 Investigations of Spin Dynamics for ZnCr_2Se_4 and CoCr_2O_4 Chromium Spinel in Terahertz Region
Fuhai Su (*Institute of Solid State Physics, Chinese Academy of Sciences*); Peng Zhang (*Institute of Solid State Physics, Chinese Academy of Sciences*); Hongying Mei (*Institute of Solid State Physics, Chinese Academy of Sciences*); Shile Zhang (*High Magnetic Field Laboratory, Chinese Academy of Sciences*); Xuliang Chen (*Institute of Solid State Physics, Chinese Academy of Sciences*); Xuan Luo (*Institute of Solid State Physics, Chinese Academy of Sciences*); Zhaorong Yang (*Institute of Solid State Physics, Chinese Academy of Sciences*); Jianming Dai (*Institute of Solid State Physics, Chinese Academy of Sciences*); Li Pi (*High Magnetic Field Laboratory, Chinese Academy of Sciences*);
- 93 Detection of Faulty Sensors in Array Antenna Using Nature Inspired Darwinian Particle Swarm Optimization Algorithm
Shafqat Ullah Khan (*ISRA University*); Atta Ur Rahman (*Preston University*);
- 94 Compact Chipless RFID Tag Designs Based on Multi-resonators
Wazie Mohammed Ahmed Abdulkawi (*King Saud University*); Abdel-Fattah A. Sheta (*King Saud University*);
- 95 Design of Waveguide Slot Array to Generate Sum and Difference Pattern for Synthetic Aperture Radar
Hisham Khalil (*Capital University of Science and Technology*);
- 96 Near Field Focused Modes Carrying OAMs
Ju Yeon Hong (*ETRI*);

- 97 Simulative Study on the Temporal Evolution of the Axial Cathode Plasma Expansion Velocity in Pulsed Magnetically Insulated Coaxial Diode through Voltage-ampere Characteristics
Danni Zhu (National University of Defense Technology); Jun Zhang (National University of Defense Technology); Hui-Huang Zhong (National University of Defense Technology);
- 98 Spin Hall Effect in Subwavelength Gratings
Kedi Wu (Shenzhen University); Guo Ping Wang (Shenzhen University);
- 99 Linear Dependence of Absorbance of CdTe Quantum Dots on the Ratio of Te:Cd in the Aqueous Phase Synthesis
Chunlin Tan (South China Normal University); Jianxin Yang (South China Normal University); Debin Zhu (South China Normal University); Kezhang Shi (South China Normal University); Jiapeng Zheng (South China Normal University); Xiang Cai (Guangdong Polytechnic); Xiaobo Xing (South China Normal University); Sailing He (Zhejiang University);
- 100 An Improved One-pot Aqueous Phase Synthesis of CdTe QDs
Chunlin Tan (South China Normal University); Kezhang Shi (South China Normal University); Debin Zhu (South China Normal University); Jianxin Yang (South China Normal University); Xiang Cai (Guangdong Polytechnic); Sailing He (Zhejiang University); Xiaobo Xing (South China Normal University);
- 101 A Fully Constraint Abundance Estimation Algorithm with High Accurateness
Meiping Song (Dalian Maritime University); Yao Sun (Dalian Maritime University); Jubai An (Dalian Maritime University); Chein-I Chang (University of Maryland);
- 102 An Improved NMF Algorithm Based on Spatial and Abundance Constraints
Meiping Song (Dalian Maritime University); Qiaoli Ma (Dalian Maritime University); Jubai An (Dalian Maritime University); Chein-I Chang (University of Maryland);
- 103 Effect of SBS Fast Light on Stokes Pulse Power in Optical Fibers
Shanglin Hou (Lanzhou University of Technology); Yongkang Che (Lanzhou University of Technology); Yan-Jun Liu (Lanzhou University of Technology); Daobin Wang (Lanzhou University of Technology); Xiaoxiao Li (Lanzhou University of Technology);
- 104 Far-field Measurement of LTE Base Station-like Exposure in RF-shielded Environment
Hasliza Binti A. Rahim (Universiti Malaysia Perlis (UniMAP)); Mohamed Fareq Abdul Malek (University of Wollongong in Dubai); Ping Jack Soh (Universiti Malaysia Perlis (UniMAP)); Munirah Mostapa Kamal (Universiti Malaysia Perlis (UniMAP)); Md. Abdullah Al Humayun (University Malaysia Perlis); Khatijahhusna Abd Rani (Universiti Malaysia Perlis (UniMAP)); Mohd Hafizi Omar (Universiti Teknologi Malaysia); Mohd Hafizuddin Mat (Universiti Malaysia Perlis (UniMAP)); Muhammad Solihin Zulkefli (Universiti Malaysia Perlis); R. Badlishah Ahmad (Universiti Malaysia Perlis); Che Muhammad Nor Che Isa (Universiti Malaysia Perlis); Mohd Asmi Romli (Universiti Malaysia Perlis (UniMAP));
- 105 Shielding Effectiveness Measurement for Conductive Textile-based RF-shielded Environment
Hasliza Binti A. Rahim (Universiti Malaysia Perlis (UniMAP)); Mohamed Fareq Abdul Malek (University of Wollongong in Dubai); Ping Jack Soh (Universiti Malaysia Perlis (UniMAP)); Md. Abdullah Al Humayun (University Malaysia Perlis); Nurbaizatul Badrul Hisham (Universiti Malaysia Perlis); Khatijahhusna Abd Rani (Universiti Malaysia Perlis (UniMAP)); Mohd Hafizuddin Mat (Universiti Malaysia Perlis (UniMAP)); Muhammad Solihin Zulkefli (Universiti Malaysia Perlis); R. Badlishah Ahmad (Universiti Malaysia Perlis); Che Muhammad Nor Che Isa (Universiti Malaysia Perlis); Mohd Asmi Romli (Universiti Malaysia Perlis (UniMAP));
- 106 A Critical Evaluation of Possible Human Health Issues due to Radio Frequency Exposure from Wireless Communication System
Md. Abdullah Al Humayun (University Malaysia Perlis); Hasliza Binti A. Rahim (Universiti Malaysia Perlis (UniMAP)); Mohamed Fareq Abdul Malek (University of Wollongong in Dubai); Khatijahhusna Abd Rani (Universiti Malaysia Perlis (UniMAP)); Mohd Hafizi Omar (Universiti Teknologi Malaysia); R. Badlishah Ahmad (Universiti Malaysia Perlis);
- 107 Electromagnetic Modelling of Bundle of Single-walled Carbon Nanotubes with Circular Geometry for Antenna Applications
Yaseen Naser Jurn (Universiti Malaysia Perlis (UniMAP)); Mohamed Fareq Abdul Malek (University of Wollongong in Dubai); Wei Wen Liu (Universiti Malaysia Perlis (UniMAP)); Hasliza Binti A. Rahim (Universiti Malaysia Perlis (UniMAP));

- 108 The Design of Ultra High Frequency (UHF) Radio Frequency Identification (RFID) Reader Antenna
Fwen Hoon Wee (University Malaysia Perlis (UniMAP)); Hasliza Binti A. Rahim (Universiti Malaysia Perlis (UniMAP)); Mohamed-Fareq AbdulMalek (University of Wollongong in Dubai); Been Seok Yew (Universiti Sultan Zainal Abidin); Yasmin Sarah (Universiti Malaysia Perlis); Yeng Seng Lee (University Malaysia Perlis (UniMAP));
- 109 Potential of Nano Cellulose for Electromagnetic Shielding
N. F. N. Yah (Universiti Malaysia Perlis (UniMAP)); Hasliza Binti A. Rahim (Universiti Malaysia Perlis (UniMAP)); Mohamed Fareq Abdul Malek (University of Wollongong in Dubai);

Session 4A1

SC2: Recent Advances of Metamaterials for Novel Electromagnetic and Photonic Devices 2

Thursday AM, August 11, 2016

Room 5B/5C

Organized by Yungui Ma, Sailing He

Chaired by Yungui Ma, Sailing He

- 08:00 Experimental Realization of Three-dimensional Hyperbolic Cavities in the Microwave Regime
Huijie Guo (Fudan University); Xiaochaoran Tian (Fudan University); Xinwei Li (Fudan University); Qiong He (Fudan University); Meng Qiu (Fudan University); Shulin Sun (Fudan University); Lei Zhou (Fudan University);
- 08:20 An Ultra-thin Skin Cloak for Electromagnetic, Acoustic and Water Wave
Liqiao Jing (Zhejiang University); Yi Hao Yang (Zhejiang University); Hongsheng Chen (Zhejiang University);
- 08:40 Unusual Wave Phenomena in Zero-index Media
Jie Luo (Soochow University); Yun Lai (Soochow University);
- 09:00 A Broadband Cloaking Effect in Waveguides
Bo Hou (Soochow University);
- 09:20 Random Spread of SRR Resonance Frequencies
Jan Machac (Czech Technical University);

- 09:40 An Ultra-wideband Shielding Materials Based on Single Negative Metamaterial
Jiu Rong Huang (University of Electronic Science and Technology of China); Yongfang Bao (University of Electronic Science and Technology of China); Bo Chen (University of Electronic Science and Technology of China); Lei Xiao (University of Electronic Technology and Science of China);

10:00 Coffee Break

- 10:20 Diffractionless Subwavelength Routing of Electromagnetic Waves in Singular Metamaterials
Youming Zhang (Nanyang Technological University); Zhen Gao (Nanyang Technological University); Fei Gao (Nanyang Technological University); Baile Zhang (Nanyang Technological University);
- 10:40 In-plane Holography for Indefinite Plasmonic Beam Engineering
Tao Li (Nanjing University); Ji Chen (Nanjing University); Lin Li (Nanjing University); Shi-Ning Zhu (Nanjing University);
- 11:00 Tailor the Functionalities of Metasurfaces Based on a Complete Phase Diagram
Che Qu (Fudan University); Shaojie Ma (Fudan University); Jiaming Hao (Shanghai Institute of Technical Physics, CAS); Meng Qiu (Fudan University); Xin Li (Fudan University); Shiyi Xiao (Fudan University); Ziqi Miao (Fudan University); Ning Dai (Shanghai Institute of Technical Physics, CAS); Qiong He (Fudan University); Shulin Sun (Fudan University); Lei Zhou (Fudan University);
- 11:20 Reconfigurable Microwave Metamaterial Absorbers Using Split Loops with Varactors
Shuang Yan (Xiamen University); Jinfeng Zhu (Xiamen University); Delong Li (Xiamen University); Yanqiang Bai (Xiamen University); Qing Huo Liu (Duke University);
- 11:40 A Petal-shaped Left-handed Metamaterial Based on Split Ring and Semicircular Resonator
Baiqiang You (Xiamen University); Yuxuan Qi (Xiamen University); Wangqing Jin (Xiamen University); Jianhua Zhou (Xiamen University);

Session 4A2**SC3: Photonic Crystals and Subwavelength Structures****Thursday AM, August 11, 2016****Room 5E/5D**

Organized by Dingshan Gao, Dan Zhang

Chaired by Dingshan Gao, Dan Zhang

- 08:20 Modal Analysis of Wave Guidance by a Periodic Chain
invited of Circular Rods
Dan Zhang (Nanjing Forestry University); Vakhtang Jandieri (University of Duisburg-Essen); Kiyotoshi Yasumoto (Kyushu University);
- 08:40 Nonreciprocal Transmission of EM Waves by a Chain
invited of Ferrite Rods
Cheng Ju (Nanjing University); Chao Xiao (Nanjing University); Hui Ma (Nanjing University); Rui-Xin Wu (Nanjing University);
- 09:00 Defect Modes of One-dimensional Graphene Based Photonic Crystals
Yizhe Li (Beijing University of Posts and Telecommunications); Limei Qi (Qufu Normal University); Xiaobin Wang (Beijing University of Posts and Telecommunications); Junsheng Yu (Beijing University of Posts and Telecommunications); Yuan Yao (Beijing University of Posts and Telecommunications); Xiaoming Liu (Beijing University of Posts and Telecommunications); Zhijiao Chen (Beijing University of Posts and Telecommunication);
- 09:20 Hybrid States Formed by the Optical Tamm and Defect Modes in a One-dimensional Photonic Crystal
Pavel Sergeevich Pankin (Siberian Federal University); Stepan Yakovlevich Vetrov (Siberian Federal University); Ivan Vladimirovich Timofeev (Siberian Federal University);
- 09:40 Tunable Fano Filtering Based on Silicon One-
invited dimensional Photonic Crystal Cavities
Tingyu Li (Wuhan); Dingshan Gao (Huazhong University of Science and Technology);
- 10:00 **Coffee Break**
- 10:20 Photon Density of States of a Multilayer Heterostructure in a Rectangular Waveguide
Ruei-Fu Jao (Guangdong Industry Technical College); M. C. Lin (Hanyang University);
- 10:40 Analysis of 1-D Magnetized Plasma Photonic Crystal Band Gap Characteristic for Variable Plasma Parameters
Tanvi Mittal (Thapar University); Rana Pratap Yadav (Thapar University); Abhinav Jain (Thapar University);

- 11:00 Design and Simulation Studies of a Metal PBG Cavity for Millimetre Wave Gyrotrons
Rajanish Kumar Singh (Indian Institute Technology (BHU)); M. Thottappan (Indian Institute of Technology (Banaras Hindu University));
- 11:20 Fabry-Pérot-like Resonance of a Subwavelength Single Slit for Measurement of Permittivities of Microcrystalline Liquids/Gases
Yunping Qi (Northwest Normal University); Yulong Bai (Northwest Normal University); Bingzhou Mi (Northwest Normal University);
- 11:40 Binary Quasi-periodic Hole Array with the Completely Suppression of High Order Diffractions
Lina Shi (Institute of Microelectronics of Chinese Academy of Science); Hailiang Li (Institute of Microelectronics of Chinese Academy of Sciences); Nan Gao (Institute of Microelectronics of Chinese Academy of Sciences); Changqing Xie (Institute of Microelectronics, Chinese Academy of Sciences);

Session 4A3**Plasmonic Nanostructures for Spectral Modulation****Thursday AM, August 11, 2016****Room 5F**

Organized by Ting Xu, Wenqi Zhu

Chaired by Wenqi Zhu

- 08:20 Plasmonic Laser Printing for Ink-free Color Decoration
Xiaolong Zhu (Technical University of Denmark); Christoph Vannahme (Technical University of Denmark); E. Hojlund-Nielsen (Technical University of Denmark); N. A. Mortensen (Technical University of Denmark); A. Kristensen (Technical University of Denmark);
- 08:40 Geometry Dependence of Surface Lattice Resonances in Plasmonic Nanoparticle Arrays
Rui Guo (Aalto University); Tommi K. Hakala (Aalto University); Paivi Torma (Aalto University);
- 09:00 Angle-modulated Single-pixel Plasmonic Color Filter
M. S. Davis (Syracuse University); T. Xu (National Institute of Standards and Technology); W. Zhu (National Institute of Standards and Technology); Jay Kyoon Lee (Syracuse University); Henri J. Lezec (National Institute of Standards and Technology); Amit K. Agrawal (National Institute of Standards and Technology);

- 09:20 High-efficiency Optical Switching Using an Electrochromic Nanoplasmonic Device
Amit K. Agrawal (*National Institute of Standards and Technology*); T. Xu (*National Institute of Standards and Technology*); E. Walter (*National Institute of Standards and Technology*); W. Zhu (*National Institute of Standards and Technology*); C. Bohn (*National Institute of Standards and Technology*); J. Velmurugan (*National Institute of Standards and Technology*); A. Alec Talin (*National Institute of Standards and Technology*); Henri J. Lezec (*National Institute of Standards and Technology*);
- 09:40 Probing Quasi-dark Surface Plasmon Modes in Au Nanoring Cavities by Cathodoluminescence
Chenglin Du (*Nankai University*); Wei Cai (*Nankai University*); Wei Wu (*Nankai University*); Mengxin Ren (*Nankai University*); Xinzhen Zhang (*Nankai University*); Jingjun Xu (*Nankai University*);
- 10:00 **Coffee Break**
- 10:20 Lithography-free Spectrally Tunable Plasmonic Meta-surface
Nan Zhang (*The State University of New York at Buffalo*); Haomin Song (*The State University of New York at Buffalo*); Dengxin Ji (*The State University of New York at Buffalo*); Xie Zeng (*The State University of New York at Buffalo*); Qiaoqiang Gan (*The State University of New York at Buffalo*);
- 10:40 Graphene Plasmons, Quantum Emitters, and Light Modulation at the Nanoscale
F. Javier Garcia De Abajo (*ICFO Institut de Ciències Fotoniques, Mediterranean Technology Park*);
- 11:00 Vividly Colored Silicon Metasurface, with Applications in Sensing and Lighting
Wuzhou Song (*University of Melbourne*); Shiqiang Li (*University of Melbourne*); Kenneth B. Crozier (*University of Melbourne*);
- 08:20 Optical Response of Metal Nanostructures Controlled by Mode Coupling and Interference
Zhichao Ruan (*Zhejiang University*);
- 08:40 A Comprehensive Multiphysics Model for Organic Photovoltaics
Zi Shuai Wang (*The University of Hong Kong*); Wei E. I. Sha (*University of Hong Kong*); Wallace C. H. Choy (*The University of Hong Kong*);
- 09:00 Efficient Photoconversion within Ultra-thin and Atomically-thin Films: A Nanocavity Strategy
Haomin Song (*The State University of New York at Buffalo*); Zhejun Liu (*Fudan University*); Suhua Jiang (*Fudan University*); Qiaoqiang Gan (*The State University of New York at Buffalo*);
- 09:20 Simple Models for Complex Devices
Alexander V. Mellor (*Imperial College London*); A. Riverola (*University of Lleida*); Nicholas P. Hyllton (*Imperial College London*); D. Alonso-Alvarez (*Imperial College London*); D. Chemisana (*University of Lleida*); S. A. Maier (*Imperial College London*); Ned J. Ekins-Daukes (*Imperial College London*);
- 09:40 Plasmon Enhanced Solar Energy Conversion
Jia Zhu (*Nanjing University*);
- 10:00 **Coffee Break**
- 10:20 Strong Competition between Electromagnetic Enhancement and Surface-energy-transfer Induced Quenching in Plasmonic Dye-sensitized Solar Cells
Cho Tung Yip (*Harbin Institute of Technology Shenzhen Graduate School*); Xiaolin Liu (*The Hong Kong Polytechnic University*); Yidong Hou (*The Hong Kong Polytechnic University*); Wei Xie (*University of Duisburg-Essen*); Jijun He (*The Hong Kong Polytechnic University*); Sebastian Schlucker (*University of Duisburg-Essen*); Haitao Huang (*The Hong Kong Polytechnic University*); Dangyuan Lei (*The Hong Kong Polytechnic University*);
- 10:40 Optoelectronic and Thermodynamic Simulation of Solar Cells
Aixue Shang (*Soochow University*); Shaolong Wu (*Soochow University*); Yaohui Zhan (*Soochow University*); Xiaofeng Li (*Soochow University*);

Session 4A5

SC3&2: Optoelectronic Simulation Technologies for Photoconversion Devices

Thursday AM, August 11, 2016

Room 5H

Organized by Xiaofeng Li, Zongfu Yu

Chaired by Xiaofeng Li, Zongfu Yu

- 08:00 Using Simulations to Guide Experiments
invited
Jeremy N. Munday (*University of Maryland*);

- 11:00 Advanced Optoelectronic Simulations for Ultrathin
invited Crystalline Silicon Solar Cells with Rationally De-
signed Nanopatternings
Zhenhai Yang (Ningbo Institute of Material Technology and Engineering, Chinese Academy of Sciences); Pingqi Gao (Ningbo Institute of Material Technology and Engineering, Chinese Academy of Sciences); Jian He (Ningbo Institute of Material Technology and Engineering, Chinese Academy of Sciences); Sugiong Zhou (Ningbo Institute of Material Technology and Engineering, Chinese Academy of Sciences); Jichun Ye (Ningbo Institute of Material Technology and Engineering, Chinese Academy of Sciences);
- 11:20 Turn Highly-reflective Semiconductors and Metals
invited into Broadband Absorbers and Convert Their Absorp-
tions into Electricity
Liu Yang (Zhejiang University);
- 11:40 Linear and Nonlinear Electro-optic Modulations of
invited BaTiO₃-crystal Thin-film Waveguides for 100 GHz
Modulators
De Gui Sun (University of Ottawa/Changchun University of Science & Technology); Mengxi Luo (University of Ottawa/Changchun University of Science & Technology); Peng Liu (University of Ottawa); Trevor J. Hall (University of Ottawa);
- 09:20 Optical Spring Sensing of Single Molecules
Wenyan Yu (University of Victoria); Wei Jiang (University of Rochester); Qiang Lin (University of Rochester); Tao Lu (University of Victoria);
- 09:40 Photonic Crystals Bound by Light
Liyong Cui (Shandong University at Weihai); Xiao Li (Hong Kong Baptist University); Jun Chen (Hong Kong Baptist University); Gui-Qiang Du (Shandong University at Weihai); Jack Tsz Fai Ng (The Hong Kong University of Science and Technology);
- 10:00 **Coffee Break**
- 10:20 Calculating Gradient Force and Scattering Force in
Optical Tweezers Using Fourier Transform
Xiao Li (Hong Kong Baptist University); Junjie Du (East China Normal University); Chi-Hong Yuen (Hong Kong Baptist University); Liyong Cui (Hong Kong Baptist University); Jun Chen (Shanxi University); Yongyin Cao (Hong Kong Baptist University); Zhifang Lin (Fudan University); Che Ting Chan (The Hong Kong University of Science and Technology); Jack Tsz Fai Ng (The Hong Kong University of Science and Technology);
- 10:40 Optomechanical Devices Based on Traveling Wave Mi-
croresonators
Yan-Lei Zhang (University of Science and Technology of China); Chun-Hua Dong (University of Science and Technology of China); Xubo Zou (University of Science and Technology of China); Guangcan Guo (University of Science and Technology of China); Changling Zou (University of Science and Technology of China);

Session 4A6

SC3&2: Optical Forces and Optomechanics

Thursday AM, August 11, 2016

Room 5I

Organized by Xiankai Sun

Chaired by Xiankai Sun

- 08:20 Measurement of Photon Spin Angular Momentum and
invited Optical Torque in Integrated Silicon Waveguides
Li He (University of Minnesota); Huan Li (University of Minnesota); Mo Li (University of Minnesota);
- 08:40 Integrated Optomechanical Crystal Cavity
invited
Yidong Huang (Tsinghua University); Kaiyu Cui (Tsinghua University); Zhilei Huang (Tsinghua University); Guoren Bai (Tsinghua University);
- 09:00 Optical Torque Induced by Resonance Light Exchange
Jun Chen (Hong Kong Baptist University); Neng Wang (Fudan University); Liyong Cui (Shandong University at Weihai); Xiao Li (Hong Kong Baptist University); Zhifang Lin (Fudan University); Jack Tsz Fai Ng (The Hong Kong University of Science and Technology);
- 11:00 Stability of Optical Trapped Nonspherical Particles
Yongyin Cao (Hong Kong Baptist University); Liyong Cui (Hong Kong Baptist University); Xiao Li (Hong Kong Baptist University); Che Ting Chan (The Hong Kong University of Science and Technology); Jack Tsz Fai Ng (The Hong Kong University of Science and Technology);
- 11:20 Stability of Micro-particles Bound by Optical Forces
Yineng Liu (Hong Kong Baptist University); Xiao Li (Hong Kong Baptist University); Liyong Cui (Hong Kong Baptist University); Yongyin Cao (Hong Kong Baptist University); Zhifang Lin (Fudan University); Che Ting Chan (The Hong Kong University of Science and Technology); Jack Tsz Fai Ng (The Hong Kong University of Science and Technology);

Session 4A7a
Applications of EM Field in Medical
Diagnostics and Therapy

Thursday AM, August 11, 2016

Room 5J

Organized by Jan Vrba

Chaired by Jan Vrba

- 08:00 Comparison of a Bioradar and Piezoelectric Sensor in Estimation of Rodents' Respiration Variability
Lesya N. Anishchenko (Bauman Moscow State Technical University); A. B. Tataraidze (Bauman Moscow State Technical University); E. M. Rutskova (Bauman Moscow State Technical University);
- 08:20 Experimental Modeling of Breast Cancer Detection by Using Radar Aids
Irina L. Alborova (Bauman Moscow State Technical University); Lesya N. Anishchenko (Bauman Moscow State Technical University);
- 08:40 Microwave Imaging of Biological Tissue Phantom in Different Frequency Ranges
Lesya N. Anishchenko (Bauman Moscow State Technical University); Irina L. Alborova (Bauman Moscow State Technical University); Margarita A. Chizh (Bauman Moscow State Technical University); Andrey V. Zhuravlev (Bauman Moscow State Technical University);
- 09:00 Deep Transcranial Magnetic Stimulation Using the Semi-Halo Coil
Mai Lu (Lanzhou Jiaotong University); Shoogo Ueno (Kyushu University); Dong-Xu Wei (Lanzhou Jiaotong University);
- 09:20 Comparison of Three UWB Microwave Antennas Intended for Brain Stroke Detection System
Ondrej Fiser (Czech Technical University in Prague); Ilja Merunka (Czech Technical University in Prague); David Vrba (Czech Technical University in Prague); Jan Vrba, Jr. (Czech Technical University in Prague); Jan Vrba (Czech Technical University in Prague);
- 09:40 Virus Detection by Monitoring Its Radio Frequency Response versus Temperature
Mahmoud Al Ahmad (United Arab Emirates University); Tahir Risvi (United Arab Emirates University);
- 10:00 **Coffee Break**

Session 4A7b
Microwave and Millimeter Wave Circuits and
Devices, CAD

Thursday AM, August 11, 2016

Room 5J

Chaired by Jonathan M. Rigelsford

- 10:20 Novel Compact Broadband Rat-race Coupler Combined Fractal Geometry with Composite Right/Left Handed Transmission Line
Jian-Gang Liang (Air Force Engineering University); Tang-Jing Li (Air Force Engineering University); Ya-Qiao Liu (Air Force Engineering University);
- 10:40 A WR1.5 Frequency Multiplier Using CMOS Accumulation Mode Varactor Device
Seung Ho Choi (Korea University); C. Yi (Korea University); Moonil Kim (Korea University);
- 11:00 Development of 65-nm CMOS Switch Modulator for On-off Keying Communication Systems at 300 GHz
C. Yi (Korea University); K. M. Lee (Korea University); Moonil Kim (Korea University);
- 11:20 A Simplification Technique For S -parameter Calculations within Partially Loaded Resonant Cavities
Jonathan M. Rigelsford (The University of Sheffield); Michal Cervený (Czech Technical University);

Session 4A8
SC4: Antenna Arrays: Theory, Algorithms,
and Applications

Thursday AM, August 11, 2016

Room 3B

Organized by Yanhui Liu, Shiwen Yang

Chaired by Yanhui Liu

- 08:20 Design of an X-band Stripline-fed Co-aperture Microstrip Multilayer Transceiver Array Antenna
Senhang He (University of Electronic Science and Technology of China); Pu Tang (University of Electronic Science and Technology of China); Bo Chen (University of Electronic Science and Technology of China); Pingyou Wang (University of Electronic Science and Technology of China);

- 08:40 An Effective Hybrid Optimization Algorithm for the Synthesis of 4-D Linear Antenna Arrays
Feng Yang (University of Electronic Science and Technology of China); Shiwen Yang (University of Electronic Science and Technology of China); Jixin Guo (University of Electronic Science and Technology of China); Yikai Chen (University of Electronic Science and Technology of China);
- 09:00 Synthesis of a Sparse Linear Array with Multiple Simultaneous Frequency-invariant Focused Beams
Juan Cheng (Xiamen University); Yanhui Liu (Xiamen University); Qing Huo Liu (Duke University);
- 09:20 Sub-wavelength UWB Antenna Array Design for Super-resolution Focusing Based on Time Reversal Technique
Ran Zhang (University of Electronic Science and Technology of China); Wei Shao (University of Electronic Science and Technology of China); Xiao-Kun Wei (University of Electronic Science and Technology of China);
- 09:40 Design of a Rotated Feeding Wide-angle Scanning Phased Array with Circular Polarization
Jun-Ting Lu (University of Electronic Science and Technology of China); Wei Shao (University of Electronic Science and Technology of China); You-Feng Cheng (University of Electronic Science and Technology of China); Xiao-Kun Wei (University of Electronic Science and Technology of China); Xiao-Hua Wang (University of Electronic Science and Technology of China);
- 10:00 **Coffee Break**
- 10:20 3D Multi-band Fractal Beamforming Based on LMS Algorithm
Mohamed Mahmoud Mohamed Omar (AASTMT); Amira I. Zaki (Arab Academy for Science, Technology and Maritime Transport (AASTMT)); Wael Abd El-latif Ali (Arab Academy for Science, Technology and Maritime Transport (AASTMT)); Ashraf Mohamed Ahmed Fata (Arab Academy for Science and Technology (AASTMT));
- 10:40 Comparison of Beamforming Algorithms via Worst-case SINR Maximization
Jinbae Suh (KAIST); Joohwan Chun (Korea Advanced Institute of Science and Technology (KAIST));
- 11:00 A Single Layer Reflectarray with Octagonal-Ring Delay Line for X-band Applications
Tayyab Shabbir (University of Engineering and Technology); Rashid Saleem (The University of Manchester); Asim Quddus (University of Engineering and Technology); Mumammad Farhan Shafique (COM-SATS Institute of Information Technology);

- 11:20 Theoretical Analysis and Simulation of Inverted F Antennas on a Finite Ground Plane for Satellite Applications
T. Rajavardhan (IIT Madras); H. S. Ramachandran (IIT Madras);

Session 4A9a

SC1: Large-scale Simulation and Parallel Computing in Computational Electromagnetics

Thursday AM, August 11, 2016

Room 3C/3D

Organized by Zhen Peng

Chaired by Zhen Peng

- 08:00 A Discontinuous Galerkin Augmented Electric Field Integral Equation Method for Multiscale Structure Modeling
Kai-Jiang Xu (Beijing Institute of Technology); Xiao-Min Pan (Beijing Institute of Technology); Xin-Qing Sheng (Beijing Institute of Technology);
- 08:20 Large-scale Nanoplasmonic Modeling: Improving Convergence
Diego M. Solis (University of Vigo); Jose Manuel Taboada (University of Extremadura); Fernando Obelleiro (Universidade de Vigo); Luis Landesa (Universidad de Extremadura);
- 08:40 Development and Application of a Broadband Multi-level Fast Multipole Algorithm for Challenging Multiscale Problems
B. Karaosmanoglu (Middle East Technical University); A. Yilmaz (Middle East Technical University); Ozgur Ergul (Middle East Technical University);
- 09:00 Geometry-aware Domain Decomposition Preconditioning for Hybrid Finite Element-boundary Integral Method
Hong-Wei Gao (Beijing Institute of Technology); Zhen Peng (University of New Mexico); Xin-Qing Sheng (Beijing Institute of Technology);
- 09:20 A Paralleled Fast Multipole Algorithm Based on Nystrom Discretization
Zhi Guo Zhou (Tongji University); Qi Lin Li (Tongji University); Mei Song Tong (Tongji University);
- 09:40 FPGA Architecture for 3-D FDTD Acceleration Using OpenCL
H. M. Waidyasooriya (Tohoku University); M. Hariyama (Tohoku University); Yasuo Ohtera (Tohoku University);

10:00 Coffee Break

Session 4A9b
Advanced Mathematical and Computational
Methods in Electromagnetic Theory and
Their Applications 2

Thursday AM, August 11, 2016

Room 3C/3D

Organized by Georgi Nikolov Georgiev, Mariana
 Nikolova Georgieva-Grosse

Chaired by Mariana Nikolova Georgieva-Grosse

- 10:20 The Efficient Mixed FEM with ITBC for Computing Graphene Plasmonic Waveguide Modes
Na Liu (Xiamen University); Guoxiong Cai (Xiamen University); Qing Huo Liu (Duke University);
- 10:40 Research on FSV in Membership Function Credibility Verification — for System Performance Evaluation
Yifang Geng (Harbin Engineering University); Tao Jiang (Harbin Engineering University); Xi-aowei Zhang (Harbin Engineering University);
- 11:00 Application of the Rigged Hilbert Spaces into the Generalized Signals and Systems Theory: Practical Example
Juan Heredia-Jueas (Northeastern University); Emilio Gago-Ribas (University of Oviedo); Pablo Vidal-Garcia (University of Oviedo);
- 11:20 A Study of Electromagnetic Shielding Effectiveness on Multilayer Fabric
Zhen Pan (Zhongyuan University of Technology); Zhe Liu (Zhongyuan University of Technology); Ying Su (Zhongyuan University of Technology); Yaping Li (Zhongyuan University of Technology); Xi-uchen Wang (Zhongyuan University of Technology);
- 11:40 DCT Trigger for a Detection of Very Inclined Air-showers in AugerPrime with 120 MHz Sampling
Zbigniew Szadkowski (University of Lodz);
- 12:00 Study on the Electrical Conductivity of High Voltage Electromagnetic Shielding Clothing
Ying Su (Zhongyuan University of Technology); Xi-uchen Wang (Zhongyuan University of Technology); Yaping Li (Zhongyuan University of Technology); Zhen Pan (Zhongyuan University of Technology); Zhe Liu (Zhongyuan University of Technology);

Session 4A_10

Remote Sensing of the Atmosphere, Ocean,
Hydrology and Cryosphere

Thursday AM, August 11, 2016

Room 3E

Organized by Shuanggen Jin

Chaired by Shuanggen Jin, Andres Calabia

- 08:20 Cloud Ice Simulations Based on Millimeter Wave Limb Sounder
Jieying He (National Space Science Center, Chinese Academy of Sciences); Shengwei Zhang (National Space Science Center, Chinese Academy of Sciences);
- 08:40 Temperature and Texture Dependent Spectroscopic Dielectric Model for Frozen Mineral Soils at 0.1–15 GHz
Valery L. Mironov (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences); A. Y. Karavaysky (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences); I. P. Molostov (Altai State University); Yury I. Lukin (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences); Liudmila G. Kosolapova (Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences);
- 09:00 Pre-seismic Thermal Anomalies of the 2015 $M_w = 7.8$ Gorkha (Nepal) Earthquake from MODIS Surface Temperature
Munawar Shah (Shanghai Astronomical Observatory, Chinese Academy of Sciences); Shuanggen Jin (Shanghai Astronomical Observatory, Chinese Academy of Sciences);
- 09:20 Long-term Variations of Thermospheric Air Mass Density Derived from GRACE Accelerometers
Andres Calabia (Shanghai Astronomical Observatory, Chinese Academy of Sciences); Shuanggen Jin (Shanghai Astronomical Observatory, Chinese Academy of Sciences);
- 09:40 Study of Coastal Upwelling around Zhoushan Islands Based on Satellite Measurements and Numerical Model
Qingze Huang (Hohai University); Qing Xu (Hohai University); Shuangshang Zhang (Hohai University); Yongcun Cheng (Old Dominion University);
- 10:00 Coffee Break
- 10:20 Remote Sensing of Polycrystalline Media
Kenneth Morgan Golden (University of Utah);

- 10:40 Geological Characteristics of Hydrated Minerals on Mars from MRO CRISM Images
Yi Yang (Shanghai Astronomical Observatory, Chinese Academy of Science); Shuanggen Jin (Shanghai Astronomical Observatory, Chinese Academy of Sciences);
- 11:00 A Long-distance Sea Wave Height Measurement Based on 3D Image Measurement Technique
Hao Yi (Fukuoka Institute of Technology); Lei Yan (Fukuoka Institute of Technology); Kazuhiro Tsujino (Fukuoka Institute of Technology); Cunwei Lu (Fukuoka Institute of Technology);
- 11:20 Ice Mass Balance and GIA Effects in Tibet Estimated from GRACE and ICESat Measurements
Tengyu Zhang (Shanghai Astronomical Observatory, Chinese Academy of Sciences); Shuanggen Jin (Shanghai Astronomical Observatory, Chinese Academy of Sciences);

Session 4A_11

High Power Microwave Devices

Thursday AM, August 11, 2016

Room 3G

Organized by Chao Chang

Chaired by Chao Chang

- 08:00 Design and PIC Simulation of a Mega-Watt Class Gyro-Twystron
Anshu Sharan Singh (Indian Institute Technology (BHU)); M. Thottappan (Indian Institute of Technology (Banaras Hindu University));
- 08:20 A Novel Two-way TM₀₁ Mode Combiner for High Power Microwave Applications
Letian Guo (NINT); Wenhua Huang (Northwest Institute of Nuclear Technology); Han Shao (NINT); Yansheng Liu (NINT); Jiawei Li (Northwest Institute of Nuclear Technology); Tao Ba (NINT); Yue Jiang (NINT);
- 08:40 Reduction of Work Functions for High Current Density Cathode by Introducing Fractional Monolayer Adsorbate on Tungsten
Ruei-Fu Jao (Guangdong Industry Technical College); M. C. Lin (Hanyang University);
- 09:00 A Powerful Coaxial Relativistic Backward Wave Oscillator
Yibing Cao (Northwest Institute of Nuclear Technology); Jun Sun (Northwest Institute of Nuclear Technology); Ping Wu (Northwest Institute of Nuclear Technology); Zhimin Song (Northwest Institute of Nuclear Technology); Yan Teng (Northwest Institute of Nuclear Technology); Yuqun Deng (Northwest Institute of Nuclear Technology); Jialing Xie (Northwest Institute of Nuclear Technology);
- 09:20 Design of a Fast Tunable Polarized FEL Based on a Microwave Undulator
Jialing Xie (Northwest Institute of Nuclear Technology); Chao Chang (Northwest Institute of Nuclear Technology); Changhua Chen (Northwest Institute of Nuclear Technology); Letian Guo (NINT); Zhimin Song (Northwest Institute of Nuclear Technology); Yibing Cao (Northwest Institute of Nuclear Technology);
- 09:40 Efficiency-improved High Power Virtual Cathode Oscillator with Coaxial Waveguide
Jing Liu (National University of Defense Technology); Ting Shu (National University of Defense Technology); Zhi-Qiang Li (National University of Defense Technology);
- 10:00 **Coffee Break**
- 10:20 A High Efficiency Relativistic Traveling-wave Tube with Distributed Feedback Resonant
Yanchao Shi (Northwest Institute of Nuclear Technology); Wei Song (Northwest Institute of Nuclear Technology); Yuqun Deng (Northwest Institute of Nuclear Technology); Meng Zhu (Northwest Institute of Nuclear Technology);
- 10:40 Design and PIC Simulation a Stagger Tuned Gyro-twystron
Anshu Sharan Singh (Indian Institute Technology (BHU)); M. Thottappan (Indian Institute of Technology (Banaras Hindu University));
- 11:00 Investigation on Evolution of Cathode Plasma Expansion Velocity of a Magnetically Insulated Coaxial Diode
Danni Zhu (National University of Defense Technology); Jun Zhang (National University of Defense Technology); Hui-Huang Zhong (National University of Defense Technology); Dian Zhang (National University of Defense Technology);

- 11:20 Compact High-capacity Devices of Microwave Power Combination
Chao Chang (Xi'an Jiaotong University); Changhua Chen (Northwest Institute of Nuclear Technology); Jun Sun (Northwest Institute of Nuclear Technology);
- 11:40 Development of an Optical Resonator for X-ray Production
Pierre Favier (Universite Paris-Sud, CNRS/IN2P3); Kevin Cassou (Universite Paris-Sud); Ronic Chiche (Universite Paris-Sud); Didier Jehanno (Universite Paris-Sud); Xing Liu (University of Paris-Sud); Aurelien Martens (Universite Paris-Sud); Viktor Soskov (Universite Paris-Sud); Fabian Zomer (Universite Paris 11);

Session 4A_12

Recent Progress in Antenna Design and Propagation

Thursday AM, August 11, 2016

Room 3H

Organized by Qingsheng Zeng

Chaired by Qingsheng Zeng

- 08:20 The Full-wave Simulation of Phased-array Antenna with Radome and Electrically Very-large Platform
Xunya Jiang (Fudan University);
- 08:40 Full-wave RCS Simulation of Electrically Large/Very-large Objects, including Large Phased-array Antennas and FSS
Xunya Jiang (Fudan University);
- 09:00 On Propagation Prediction Based on Physical Optics
Qingsheng Zeng (University of Ottawa); Wenmei Zhang (Shanxi University); Rongcao Yang (Shanxi University); Jinjin Li (Shanxi University);
- 09:20 Propagation Loss over Spherical Earth Surface Can Be Predicted by Uniform Theory of Diffraction (UTD)?
Qingsheng Zeng (University of Ottawa); Wenmei Zhang (Shanxi University); Rongcao Yang (Shanxi University); Jinjin Li (Shanxi University);
- 09:40 Co-design of Dual-band Band-pass Filter and Antenna
Runbo Ma (Shanxi University); Xueliang Liang (Shanxi University); Jianguo Yan (Shanxi University); Xinwei Chen (Shanxi University); Qingsheng Zeng (University of Ottawa); Wenmei Zhang (Shanxi University);

10:00 Coffee Break

- 10:20 Design of Frequency and Pattern Reconfigurable Wideband Slot Antenna
Liping Han (Shanxi University); Caixia Wang (Shanxi University); Wenmei Zhang (Shanxi University); Qingsheng Zeng (University of Ottawa);
- 10:40 Beam-tilting Antenna with Metamaterial Loading
Jinjin Li (INRS-EMT); Tayeb Ahmed Denidni (INRS); Ruizhi Liu (Ecole Polytechnique); Qingsheng Zeng (University of Ottawa);
- 11:00 Autosoliton in Nonlinear Metamaterials under the Balance of Loss and Gain
Jinjin Li (Shanxi University); Rongcao Yang (Shanxi University); Heping Jia (Shanxi University); Qingsheng Zeng (University of Ottawa);
- 11:20 HOFMOPF — A General Framework to Design and Optimize Plasmonic Structures
Mengyu Wang (ETH Zurich); Botao Feng (Shenzhen University); A. Alparlan (ETH Zurich); Kersten Schmidt (INRIA Paris Rocquencourt); Christian Valentin Hafner (ETH Zurich);
- 11:40 Complementary Cumulative Distribution Function for Rain Rate and Rain Attenuation for Tropical Region: Malaysia
Kesavan Ulaganathan (Technology University of Malaysia); Tharek Bin Abdul Rahman (University Technology Malaysia (UTM)); Mohd Rafiqul Islam (International Islamic University Malaysia);

Session 4P1a

SC2: Recent Advances of Metamaterials for Novel Electromagnetic and Photonic Devices 3

Thursday PM, August 11, 2016

Room 5B/5C

Organized by Yungui Ma, Sailing He

Chaired by Yungui Ma, Sailing He

- 13:00 On the Macroscopic Description of Optical Stress in invited Metamaterials
Shubo Wang (The Hong Kong University of Science and Technology); Wujiong Sun (Fudan University); Jack Tsz Fai Ng (The Hong Kong University of Science and Technology); Che Ting Chan (The Hong Kong University of Science and Technology);

13:20 Water-based Metasurface for Wide-angle and Broad-band Absorption
invited

Q. H. Song (Universite Paris-Est, UPEM); W. Zhang (Nanyang Technological University); W. M. Zhu (Nanyang Technological University); Z. X. Shen (Nanyang Technological University); Peter Han Joo Chong (Nanyang Technological University); Q. X. Liang (Xi'an Jiaotong University); Z. C. Yang (Peking University); D. P. Tsai (Research Center for Applied Sciences, Academia Sinica); T. Bourouina (Universite Paris-Est, ES-IEE); Y. Leprince-Wang (Nanyang Technological University); Federico Capasso (Harvard University); Ai Qun Liu (Nanyang Technological University);

13:40 Experimental Demonstration of Flexible Plasmonic Spin-Hall Effect and Its Application on Coherent Control
invited

Shiyi Xiao (University of Birmingham); Fan Zhong (Nanjing University); Hui Liu (Nanjing University); Shi-Ning Zhu (Nanjing University); Jensen Li (University of Birmingham);

14:00 Nanoparticle-derived All-dielectric Metamaterial Superlens
invited

Bing Yan (Bangor University); Wen Fan (Fudan University); Liyang Yue (Bangor University); Zengbo Wang (Bangor University); Limin Wu (Fudan University);

14:20 New Methods for Designing Invisible and Reflectionless Materials
invited

Simon A. R. Horsley (University of Exeter); C. G. King (University of Exeter); Thomas G. Philbin (University of Exeter);

14:40 Controlling Excitation of Terahertz Surface Plasmons Using Metasurfaces
invited

Xueqian Zhang (Tianjin University); Quan Xu (Tianjin University); Yuehong Xu (Tianjin University); Jianqiang Gu (Tianjin University); Zhen Tian (Tianjin University); Chunmei Ouyang (Tianjin University); Jiaguang Han (Tianjin University); Weili Zhang (Oklahoma State University);

15:00 The Application of Plasmon Lasers

invited

Renmin Ma (Peking University);

15:20 **Coffee Break**

Session 4P2

FocusSession.SC3: Advances in Optical Communication and Networking

Thursday PM, August 11, 2016

Room 5E/5D

Organized by Jiajia Chen, Lilin Yi

Chaired by Jiajia Chen, Lilin Yi

13:00 Analytical Estimation in Differential Optical Trans-
mission Systems Influenced by Equalization Enhanced
invited Phase Noise

Tianhua Xu (University College London); Gunnar Jacobsen (Acreo Swedish ICT AB); Sergei Popov (Royal Institute of Technology (KTH)); Tiegen Liu (Tianjin University); Yimo Zhang (Tianjin University); Polina Bayvel (University College London);

13:20 Advanced Modulations and DSP Enabling High-speed
invited Coherent Communication Using Large Linewidth Lasers

Xiaodan Pang (Network and Transmission Laboratory, Acreo AB); Jaime Rodrigo Navarro (Network and Transmission Laboratory, Acreo AB); Aditya Kakkar (Network and Transmission Laboratory, Acreo AB); Miguel Iglesias Olmedo (Network and Transmission Laboratory, Acreo AB); Oskars Ozolins (Network and Transmission Laboratory, Acreo AB); Richard Schatz (Royal Institute of Technology (KTH)); Aleksejs Udalcovs (Royal Institute of Technology (KTH)); Sergei Popov (Royal Institute of Technology (KTH)); Gunnar Jacobsen (Acreo Swedish ICT AB);

13:40 A Multi-objective Optimization for Laying Optical
keynote Fiber Cables

Moshe Zukerman (City University of Hong Kong);

14:10 High Capacity Optical Communication Systems Us-
invited ing Mode Division Multiplexing

Cai Li (Wuhan Research Institute of Posts and Telecommunications); Qi Yang (Wuhan Research Institute of Posts and Telecommunications);

14:30 High Speed Next Generation Passive Optical Net-
invited works: Performance, Cost, and Power Dissipation

Jinlong Wei (ADVA Optical Networking SE); Klaus Grobe (ADVA Optical Networking SE); H. Griesser (ADVA Optical Networking SE);

14:50 Parameter Estimation for Linear Regression Models in
Powerline Communication Systems Noise Using Gen-
eralized Method of Moments (GMM)

Modisa Mosalaosi (University of KwaZulu-Natal); Thomas Joachim Odhiambo Afullo (University of Kwa-Zulu Natal (UKZN));

- 15:05 Simplified Volterra Series Based Nonlinear Equalization in Short Reach Optical Transmissions
Li Tao (China Ship Development and Design Centre); Hui Tan (China Ship Research & Design Centre); Chong-Hua Fang (China Ship Development and Design Center); Nan Chi (Fudan University);
- 15:20 **Coffee Break**
- 15:40 Experimental Observation of Intermittent Chaos in a
invited Three-section Monolithically Integrated Semiconductor Laser
Hui-Ping Wang (Southwest University); Xi Chen (Southwest University); Lingjuan Zhao (Institute of Semiconductors, Chinese Academy of Science); Dan Lu (Institute of Semiconductors, Chinese Academy of Science); Zheng-Mao Wu (Southwest University); Guang-Qiong Xia (Southwest University);
- 16:00 Millimeter-wave and Terahertz Reconfigurable Radio-
invited over-Fiber Systems
Juan Jose Vegas Olmos (Technical University of Denmark);
- 16:20 Hybrid Fiber and Microwave Protection for Enhanc-
invited ing Availability of Fiber-wireless Networks in Future 5G System
Hao Chen (Soochow University); Yao Zhang (Soochow University); Sanjay K. Bose (Indian Institute of Technology); Gangxiang Shen (Soochow University);
- 16:40 Spectrally Efficient Free-space Optical Communica-
invited tions Employing Orbital Angular Momentum Multiplexing
Fan Zhang (Peking University); Yixiao Zhu (Peking University);
- 17:00 DSP for High Speed Short Reach Transmission Sys-
invited tems
Kangping Zhong (The Hong Kong Polytechnic University); Xian Zhou (The Hong Kong Polytechnic University); Changyuan Yu (The Hong Kong Polytechnic University); Alan Pak Tao Lau (The Hong Kong Polytechnic University); Chao Lu (The Hong Kong Polytechnic University);
- 17:20 Optical Networking for Hybrid Computing Combining Cloud and Fog
Yongli Zhao (Beijing University of Posts and Telecommunications); Xinbo Wang (University of California); Jie Zhang (Beijing University of Posts and Telecommunications); Biswanath Mukherjee (University of California);

- 17:35 Prediction of Asynchronous Impulsive Noise Volatility for Indoor Powerline Communication Systems Using GARCH Models
Modisa Mosalaosi (University of KwaZulu-Natal); Thomas Joachim Odhiambo Afullo (University of Kwa-Zulu Natal (UKZN));
- 17:50 Post-processing-free 400 Gb/s True Random Number Generation
Anbang Wang (Ministry of Education and Shanxi Province); Longsheng Wang (Ministry of Education and Shanxi Province); Yuncai Wang (Taiyuan University of Technology);
- 18:05 A High Linearized Microwave Photonic Link under Dual-tone Modulation
Wei Jiang (CAST Xi'an); Qinggui Tan (CAST Xi'an); Dong Liang (CAST Xi'an); Xiaojun Li (CAST Xi'an); Zhong Bo Zhu (China Academy of Space Technology);

Session 4P3a

SC3: Fiber-based Devices and Applications for Mid-IR, Microwave and THz Wave

Thursday PM, August 11, 2016

Room 5F

Organized by Hongyan Fu, Zhengqian Luo

Chaired by Chengbo Mou

- 13:00 Electromagnetic Distribution of a Beam Outputted from a Terahertz Oscillator
Guofei An (Southwest Institute of Technical Physics); You Wang (Southwest Institute of Technical Physics); Kepeng Rong (Southwest Institute of Technical Physics); Haizhi Song (Southwest Institute of Technical Physics); Shunyan Wang (Southwest Institute of Technical Physics); Hang Yu (Southwest Institute of Technical Physics);
- 13:20 Huge Soliton Explosions in an Ultrafast Fiber Laser
Meng Liu (South China Normal University); Ai-Ping Luo (South China Normal University); Wen-Cheng Xu (South China Normal University); Zhi-Chao Luo (South China Normal University);
- 13:40 A Low Loss and High Birefringence Suspended Hollow-core THz Fiber
Yuan-Feng Zhu (Jiangxi Normal University); Hua Wang (Jiangxi Electric Power Corporation, State Grid);

- 14:00 Fiber-integrated Tungsten Disulfide Saturable Absorber Mirrors by Magnetron Sputtering Technique
Hao Chen (Shenzhen University); Shuang-Chen Ruan (Shenzhen University); Tuan Guo (Jinan University); Peiguang Yan (Shenzhen University);
- 14:20 A Constant-pressure Fiber Attenuated Total Reflection Probe for Infra-red Spectrum Analysis
Ruoyuan Qu (Shanghai Jiao Tong University); Ligang Wang (Shanghai Jiao Tong University); Xi-ang Feng (Shanghai Jiao Tong University); Kan Wu (Shanghai Jiao Tong University); Weiwen Zou (Shanghai Jiao Tong University); Jianping Chen (Shanghai Jiao Tong University);
- 14:40 Research of a Single-polarization Suspended-core Micro-structured Fiber
Hua Wang (Jiangxi Electric Power Corporation, State Grid); Yuan-Feng Zhu (Jiangxi Normal University); Pingping Fu (Jiangxi Electric Power Corporation, State Grid); Ning Zhou (Jiangxi Electric Power Corporation, State Grid);
- 16:00 Research on the Leakage Monitoring of Oil Pipeline Using BOTDR
Feng Wang (Nanjing University); Zhenqing Sun (Nanjing University); Feng Zhu (Sinopec Jiangsu Oilfield Company); Chenghao Zhu (Nanjing University); Yun Pan (Nanjing University); Jiayun Dong (Nanjing University); Xuping Zhang (Nanjing University); Li Gao (Sinopec Jiangsu Oilfield Company);
- 16:20 A Novel Cross-correlation OTDR with Record Performance
Zinan Wang (University of Electronic Science & Technology of China); Mengqiu Fan (University of Electronic Science & Technology of China); Han Wu (University of Electronic Science & Technology of China); Dmitry V. Churkin (Institute of Automation and Electrometry SB RAS); Yi Li (University of Electronic Science & Technology of China); Li Zhang (University of Electronic Science & Technology of China); Xi- anyang Qian (University of Electronic Science & Technology of China); Yun-Jiang Rao (University of Electronic Science and Technology of China);
- 16:40 Multi-point Detection for Polarization-sensitive Optical Time Domain Reflectometry and Its Applications in Electric Power Industry
Huijuan Wu (University of Electronic Science & Technology of China); Jingwu Luo (University of Electronic Science & Technology of China); Jiang Wu (University of Electronic Science & Technology of China); Jun Liu (University of Electronic Science & Technology of China); Yun-Jiang Rao (University of Electronic Science and Technology of China);

Session 4P3b

SC3: Distributed Fiber Sensors and Their Industrial Application

Thursday PM, August 11, 2016

Room 5F

Organized by Liyang Shao, Yongkang Dong

Chaired by Liyang Shao

- 15:00 Fiber Optical Distributed Wide-frequency Vibration Sensing Based on φ -OTDR
Tao Zhu (Chongqing University); Jingdong Zhang (Chongqing University); Huan Zhou (Chongqing University);
- 15:20 **Coffee Break**
- 15:40 Application Research of Distributed Optical Fiber Sensing Technology Used in Safety Monitoring of Coalbed Methane Pipelines
Baoquan Jin (Taiyuan University of Technology); Yu Wang (Taiyuan University of Technology); Yun- cai Wang (Taiyuan University of Technology); Dong Wang (Taiyuan University of Technology);
- 17:00 High-sensitivity Distributed Static Pressure Sensor Based on Brillouin Dynamic Grating
Teng Lei (Harbin Institute of Technology); Yongkang Dong (Harbin Institute of Technology); Hongying Zhang (Harbin University of Science and Technology); Taofei Jiang (Harbin Institute of Technology); Dengwang Zhou (Harbin Institute of Technology);
- 17:20 Recent Advances in Coherent BOTDA Sensor
Liyang Shao (Southwest Jiaotong University); Zong- lei Li (Southwest Jiaotong University); Lianshan Yan (Southwest Jiaotong University);

- 17:40 Femtosecond-pulse Inscription of Fiber Bragg Gratings with Special Characteristics and Their Characterization
Alexandr V. Dostovalov (Institute of Automation and Electroetry, SB, RAS); A. A. Wolf (Institute of Automation and Electroetry, SB, RAS); A. V. Parygin (Institute of Automation and Electroetry, SB, RAS); M. I. Skvortsov (Institute of Automation and Electroetry, SB, RAS); S. S. Yakushin (Novosibirsk State University); S. A. Babin (Institute of Automation and Electroetry, SB, RAS);

Session 4P5

Metamaterials and Plasmonics

Thursday PM, August 11, 2016

Room 5H

Chaired by Haitao Liu, F. Javier Garcia De Abajo

- 13:00 Symmetry and Energy Conservation Relations in the in-plane Transmission and Reflection of Surface Plasmon Polaritons
Haitao Liu (Nankai University);
- 13:20 Revealing Dispersive Phase Change in Plasmonic Nano-objects
Xie Zeng (The State University of New York at Buffalo); Zhejun Liu (Fudan University); Haifeng Hu (The State University of New York at Buffalo); Yongkang Gao (Alcatel-Lucent Bell Labs); Dengxin Ji (The State University of New York at Buffalo); Nan Zhang (The State University of New York at Buffalo); Haomin Song (The State University of New York at Buffalo); Suhua Jiang (Fudan University); Qiaoqiang Gan (The State University of New York at Buffalo);
- 13:40 Vector Beam Generation via Micrometer-scale Photonic Integrated Circuits and Plasmonic Nano-antenna Arrays
Yi-Zhi Sun (Institute of Physics, Chinese Academy of Sciences); Renaud Bachelot (The University of Technology of Troyes); Sylvain Blaize (Université de Technologie de Troyes); Wei Ding (Institute of Physics, Chinese Academy of Sciences);
- 14:00 Optimal Regimes of Thermochemical LIPPS Formation on Surfaces of Different Metals
Alexandr V. Dostovalov (Institute of Automation and Electroetry, SB, RAS); V. P. Korolkov (Institute of Automation and Electrometry, Siberian Branch, Russian Academy of Sciences); V. S. Terentyev (Institute of Automation and Electrometry, SB, RAS); K. A. Okotrub (Institute of Automation and Electrometry, SB, RAS); F. N. Dultsev (The Institute of Semiconductor Physics); S. A. Babin (Institute of Automation and Electroetry, SB, RAS);
- 14:20 Transmission of Plasmonic Waveguide Modulated by Side-coupled Resonators: Theoretical Analysis and Numerical Simulation
Zhen Zhen Liu (Harbin Institute of Technology); Jun Jun Xiao (Harbin Institute of Technology);
- 14:40 Light Radiating-manipulation in Toroidal Metamaterial by the Gain in Quantum Dots
Jie Li (Southeast University); Zheng-Gao Dong (Southeast University);
- 15:00 Polarization Insensitive Wide-angle Triple-band Metamaterial Bandpass Filter
Wenyue Fu (China University of Mining and Technology); Jiandong Li (China University of Mining and Technology); Haoshen Wang (China University of Mining and Technology); Xiaopeng Shen (Southeast University);
- 15:20 **Coffee Break**
- 15:40 A Broadband Mid-infrared Metamaterial Absorber with Multiple Dielectric Disks
Xiao Long Weng (University of Electronic Science and Technology of China); Li Wang (University of Electronic Science and Technology of China); Guorui Zhang (University of Electronic Science and Technology of China); Wenfen Du (University of Electronic Science and Technology of China); Guoshuai Zhen (University of Electronic Science and Technology of China); Nan Zhang (University of Electronic Science and Technology of China); Pei-Heng Zhou (University of Electronic Science and Technology of China); Hai-Yan Chen (University of Electronic Science and Technology of China); Long-Jiang Deng (University of Electronic Science and Technology of China);

- 16:00 Passive Cooling Effect of Infrared Metamaterial Absorber
Pei-Heng Zhou (University of Electronic Science and Technology of China); Nan Zhang (University of Electronic Science and Technology of China); Song Hao (University of Electronic Science and Technology of China); Xiao Long Weng (University of Electronic Science and Technology of China); Long-Jiang Deng (University of Electronic Science and Technology of China);
- 16:20 Modes Coupling Analysis of Surface-Plasmon-Polaritons in Infrared Metamaterial Absorber
Guoshuai Zhen (University of Electronic Science and Technology of China); Pei-Heng Zhou (University of Electronic Science and Technology of China); Hai-Yan Chen (University of Electronic Science and Technology of China); Jianliang Xie (University of Electronic Science and Technology of China); Long-Jiang Deng (University of Electronic Science and Technology of China);
- 16:40 A Broadband and High-gain Antenna Using Optimized Metamaterial Superstrates
Tianxu Yan (Shanghai Jiao Tong University); Dongying Li (Shanghai Jiao Tong University);
- 17:00 Perfect Lensing with Lossy Metamaterials: Maintaining a Singular Focus by Avoiding Feedback
Gilad Rosenblatt (Technion); Meir Orenstein (Technion Israel Institute of Technology);
- 17:20 Sum-rate Improved Interference Alignment in Low to Moderate SNR Environment
Yibing Li (Harbin Engineering University); Xueying Diao (Harbin Engineering University); Qianhui Dong (Harbin Engineering University);
- 17:40 Resonant Visible Light Modulation with Graphene
Renwen Yu (The Barcelona Institute of Science and Technology); Valerio Pruneri (The Barcelona Institute of Science and Technology); F. Javier Garcia De Abajo (ICFO Institut de Ciències Fotoniques, Mediterranean Technology Park);
- 13:00 Prediction of Long-range Dependence in Cyclostationary Noise in Low-voltage PLC Networks
Mike Omondi Asiyio (University of KwaZulu-Natal); Thomas Joachim Odhiambo Afullo (University of Kwa-Zulu Natal (UKZN));
- 13:20 WMSN Positioning Algorithm Based on Multi Plane Antennas
Yong Fu (Shandong Computer Science Center); Changying Chen (Information Research Institute of Shandong Academy of Sciences); Ruixia Liu (Shandong Computer Science Center); Liang Zhu (Shandong Academy of Sciences); Yinglong Wang (Shandong Academy of Sciences);
- 14:00 Analysis of Moving Object Wake Detection Based on Polarization Characteristics
Shuang Gao (Harbin Engineering University); Xiaojun Wang (Harbin Engineering University); Nan Bi (Harbin Engineering University); Tao Jiang (Harbin Engineering University);
- 14:20 Time Matching of Attenuation-Precipitation Events on a Slant Path Link
Babajide Olugbenga Afolayan (University of KwaZulu-Natal Howard Campus); Thomas Joachim Odhiambo Afullo (University of Kwa-Zulu Natal (UKZN)); Alonge Ayodeji Akintunde (University of KwaZulu-Natal);
- 14:40 An Improved Channel Estimation Algorithm Based on Compressed Sensing for LTE-A
Fang Ye (Harbin Engineering University); Han Yu (Harbin Engineering University); Ling Wang (Harbin Engineering University);
- 15:00 Thermospheric Mass Density Variations during the March 2015 Geomagnetic Storm from GRACE Accelerometers
Andres Calabia (Shanghai Astronomical Observatory, Chinese Academy of Sciences); Shuanggen Jin (Shanghai Astronomical Observatory, Chinese Academy of Sciences);
- 15:20 **Coffee Break**
- 15:40 An Improved Estimation Algorithm of the Source Number with Fewer Sensors Than Sources
Yibing Li (Harbin Engineering University); Chuang Liu (Harbin Engineering University);
- 16:00 Evaluation of 3-D Ionospheric Tomography from Denser GNSS Observations in Japan
Du Li (Shanghai University); Shuanggen Jin (Shanghai Astronomical Observatory, Chinese Academy of Sciences); Guoxin Zheng (Shanghai University); Andres Calabia (Shanghai Astronomical Observatory, Chinese Academy of Sciences);
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- Session 4P6**
Radio Propagation Modelling & Channel Estimation
-
- Thursday PM, August 11, 2016**
Room 5I
Organized by Tao Jiang, Qingsheng Zeng
Chaired by Tao Jiang
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- 16:20 Time Series Rainfall Spike Modelling from Markov Chains and Queueing Theory Approach for Rainfall Attenuation over Terrestrial and Earth-space Radio Wave Propagation in Jimma, Ethiopia
Feyisa Debo Diba (University of KwaZulu-Natal); Thomas Joachim Odhiambo Afullo (University of Kwa-Zulu Natal (UKZN)); Akintunde Ayodeji Alonge (University of KwaZulu-Natal);
- 16:40 A Blind Source Separation Algorithm of Non-stationary Signals Based on Local Polynomial Fourier Transform
Wei Nie (Harbin Engineering University); Yibing Li (Harbin Engineering University); Dandan Liu (Heilongjiang University of Science and Technology);
- 17:00 An Improved Zero-attracting Normalized Least Mean Square Algorithm for Sparse Channel Estimation
Yingsong Li (Harbin Engineering University); Yanyan Wang (Harbin Engineering University); Zhan Jin (Harbin Engineering University);
- 14:00 Food Flavor Engineering Using ELF Small Magnetic Field
Yoshiyuki Mohri (Meijo University); Kaneo Mohri (Nagoya Industrial Science Research Institute); Yuko Mohri (MI Institute); Shinsuke Nakayama (Nagoya University); Masanori Fukushima (Translational Research Informatics Center);
- 14:20 Age-dependent of Electromagnetic Absorption in Human Endocrine Glands for Using Mobile Phones
Mai Lu (Lanzhou Jiaotong University); Xiao-Yan Wu (The First Hospital of Lanzhou University);
- 14:40 Analysis of M-ary PSK Bio-degradable Tag
Baraa F. Al-Azzawi (The University of Sheffield); Jonathan M. Rigelsford (The University of Sheffield);
- 15:00 Impact of Electromagnetic Field Generated by Mobile Phone on Prooxidant-antioxidant Balance in Testes of Rats
Ewa Mazur (Medical University of Silesia); Karolina Sieron-Stoltny (Medical University of Silesia); Grzegorz Jan Cieslar (Medical University of Silesia); Aleksander Sieron (Medical University of Silesia); Pawel Sowa (Silesian University of Technology);

Session 4P7
Bioelectromagnetics

Thursday PM, August 11, 2016

Room 5J

Organized by Carlos F. Martino

Chaired by Carlos F. Martino

- 13:00 SARs Induced in Human Bodies Due to a LTE Femtocell in an Office
Hsing-Yi Chen (Yuan Ze University); Shu-Huan Wen (Yuan Ze University);
- 13:20 Arousal Effect of ELF Small Magnetic Field Stimulation on Car Driver's Spine for Prevention of Drowsy Driving without Sleep Rebound
Yoshiyuki Mohri (Meijo University); Muneo Yamada (Meijo University); Masato Kawaguchi (Meijo University); Shigeya Kojima (Meijo University); Tomoaki Nakano (Meijo University); Kaneo Mohri (Nagoya Industrial Science Research Institute (NISRI));
- 13:40 Magnetic Effect on Hysteresis Loop Area Reduction of Electric Conductivity Temperature Characteristics of Water and Ringer's Solution
Yoshiyuki Mohri (Meijo University); Muneo Yamada (Meijo University); Tomoaki Nakano (Meijo University); Kaneo Mohri (Nagoya Industrial Science Research Institute (NISRI));
- 15:20 **Coffee Break**
- 15:40 Childhood Acute Leukemia and Their Association with the High Voltage Network in Guadalajara, México
Leonardo Soto Sumuano (University of Guadalajara); Alberto Tlacuilo-Parra (UMAE Hospital de Pediatría CMNO, IMSS); Roberto Garibaldi-Covarrubias (UMAE Hospital de Pediatría CMNO, IMSS); Hugo Romo-Rubio (UMAE Hospital de Pediatría CMNO, IMSS); Jesus Arriaga-Davila (UMAE Hospital de Pediatría CMNO, IMSS);
- 16:00 The Role of Spin Biochemistry in Bioenergetics and Reactive Oxygen Species Product Channeling
Cristina Chavarriaga (Florida Institute of Technology); Ian McClure (Florida Institute of Technology); Pablo R. Castello (Universidad de Buenos Aires); Maria Procopio (University of California Irvine); Robert J. Usselman (National Institute of Standards and Technology); Carlos F. Martino (Florida Institute of Technology);

Session 4P8
Advanced Antenna and RF Circuits Design 2

Thursday PM, August 11, 2016
Room 3B

Organized by Malay Ranjan Tripathy, Yongchae Jeong

 Chaired by Malay Ranjan Tripathy, Yongchae Jeong

- 13:00 Design of Lange-Ferrite Circulator for X-band Radar
Desy Yusianor (Universitas Indonesia); Fitri Yuli Zulkifti (University of Indonesia); Eko Tjipto Rahardjo (Universitas Indonesia);
- 13:20 Dual Band Frequency Selective Surface for X-band Applications
Sarika (Amity University Uttar Pradesh); Malay Ranjan Tripathy (Amity University Uttar Pradesh); Daniel Ronnow (University of Gavle);
- 13:40 Gap Coupled Half Circular Disk Patch Antenna Using D.G.S for Dual-wideband Application
Nagendra Prasad Yadav (Nanjing University of Science and Technology); Xuefeng Liu (Nanjing University of Science and Technology); Malay Ranjan Tripathy (Amity University Uttar Pradesh);
- 14:00 Design of a High Gain and Low Noise CMOS Folded Mixer for 5 GHz with Low Power Consumption
Yi Li (Hunan University); Chunhua Wang (Hunan University);
- 14:20 Novel Single Layer Proximity Fed Microstrip Patch Array with Gap Coupled Resonators
Jacob Abraham (Mahatma Gandhi University Regional Center); Thomaskutty Mathew (Mahatma Gandhi University Regional Center);
- 14:40 Ultra Wideband Signal Detection with a Schottky Diode Based Envelope Detector
Simon Rommel (Technical University of Denmark); Bruno Cimoli (Technical University of Denmark); G. Silva Valdecasa (Technical University of Denmark); Jesper Bevensee Jensen (Technical University of Denmark); Tom Keinicke Johansen (Technical University of Denmark); Juan Jose Vegas Olmos (Technical University of Denmark); Idelfonso Tafur Monroy (Technical University of Denmark);
- 15:00 Reduction of Mutual Coupling between Closely Spaced Microstrip Antennas with H-shaped Isolation Wall
Chan-Hee Park (Chonbuk National University); Eun-Suk Yang (Chonbuk National University); Hae-Won Son (Chonbuk National University);
- 15:20 **Coffee Break**
- 15:40 Novel UWB Slotted I-shaped Flexible Microstrip Patch Antenna Design for Satellite Reconnaissance, Amateur Radio, Future Soil Moisture and Sea Surface Salinity Missions
Nitika (Punjabi University); Maninder Singh (Punjabi University); Aman Nag (Punjabi University); Avneet Kaur (Punjabi University); Aastha (Punjabi University); Simarjit Singh Saini (Punjabi University); Ekambir Sidhu (Punjabi University);
- 16:00 A Broadband Reflectarray Antenna Based on Perforated Dielectric Laminates
Yingran He (Zhejiang University); Zhiming Gao (The 54th Research Institute of China Electronic Technology Corporation); Biao Du (The 54th Research Institute of China Electronic Technology Corporation);
- 16:20 Applying **X**-parameter to the Design and Comparison of 24-GHz Fundamental and Subharmonic Quadrature Passive Mixers
Lai He (Fudan University); Wei Li (Fudan University);
- 16:40 Novel Stacked Patch Array Antenna with Embedded Defective Ground Structure for Wireless Applications
S. Sreenath Kashyap (Marwadi Education Foundation); Ved Vyas Dwivedi (Gujarat Technological University); Y. P. Kosta (Marwadi Education Foundation);
- 17:00 A Dual Polarization Reconfigurable Patch Antenna for Frequency Diversity
Xing Yun Zhang (Beijing Institute of Technology); Wu Ren (Beijing Institute of Technology); Wei-Ming Li (Beijing Institute of Technology); Zheng-Hui Xue (Beijing Institute of Technology);
- 17:20 A Dual Frequency Reconfigurable Patch Antenna for Polarization Diversity
Xing Yun Zhang (Beijing Institute of Technology); Wu Ren (Beijing Institute of Technology); Wei-Ming Li (Beijing Institute of Technology); Zheng Hui Xue (Beijing Institute of Technology);
- 17:40 A Mathematical Model for Energy Efficient SDN/NFV Using Autonomic Network Intelligence
Huned Materwala (Amity University); Varsha Jain (IIT Mandi); Priya Ranjan (Amity University Uttar Pradesh);
- 18:00 Elliptic Function Based Band Pass mm Wave Filter for Wireless Communication
Manish Sharma (Amity University Uttar Pradesh); Malay Ranjan Tripathy (Amity University Uttar Pradesh); Priya Ranjan (Amity University Uttar Pradesh); Yongchae Jeong (Chonbuk National University);

Session 4P9
**Advanced Numerical Techniques in
Computational Electromagnetics 2**

Thursday PM, August 11, 2016
Room 3C/3D

Organized by Rushan Chen, Mei Song Tong

 Chaired by Rushan Chen, Mei Song Tong

- 13:00 Two Dimensional Frequency-angle Domain Interpolation Method for Electromagnetic Scattering Analysis of Precipitation Particles
Jiaqi Chen (Hohai University); Zhiwei Liu (East China Jiaotong University); Ning Li (Institute of Electronics, Chinese Academy of Sciences); Shilin Zhang (Hohai University);
- 13:20 Analysis of the Electromagnetic Propagation Problems for Irregular Terrain by SSFT Algorithm
Q. H. Wang (Nanjing University of Science and Technology); Z. He (Nanjing University of Science and Technology); Dazhi Ding (Nanjing University of Science and Technology); Zhenhong Fan (Nanjing University of Science and Technology); Rushan Chen (Nanjing University of Science and Technology);
- 13:40 A High Order Time Domain Discontinuous Galerkin Method for Analysis of Transient Scattering Problems
Ying Zhao (Nanjing University of Science and Technology); Dazhi Ding (Nanjing University of Science and Technology); Zhenhong Fan (Nanjing University of Science and Technology); Rushan Chen (Nanjing University of Science and Technology);
- 14:00 The Application to Optimize Antennas by Combining the MOM with Space Mapping
Qi Zhu (Nanjing University of Science and Technology); Shitao Chen (Nanjing University of Science and Technology); Juan Xu (Nanjing University of Science and Technology); Mengmeng Li (Nanjing University of Science and Technology); Rushan Chen (Nanjing University of Science and Technology);
- 14:20 Efficient Analysis of Scattering from Dielectric Coated Bodies of Revolution
Shaoqing Guo (Nanjing University of Science and Technology); Lei Zhang (Nanjing University of Science and Technology); Zhenhong Fan (Nanjing University of Science and Technology); Rushan Chen (Nanjing University of Science and Technology);
- 14:40 A Hybrid Approach for Optimizations of Sparse Array Antennas
Han Chen (Nanjing University of Science and Technology); Pengfei Gu (Nanjing University of Science and Technology); Zhenhong Fan (Nanjing University of Science and Technology); Rushan Chen (Nanjing University of Science and Technology);
- 15:00 Simulation of a Submicron Ballistic Diode with Spectral-element Time-domain Method
Yujie Yan (Nanjing University of Science and Technology); Aiqiang Cheng (Nanjing University of Science and Technology); Dazhi Ding (Nanjing University of Science and Technology); Rushan Chen (Nanjing University of Science and Technology);
- 15:20 **Coffee Break**
- 15:40 Study on the Nonlocal Surface Plasmon Resonance Properties of Au Nanotubes
Lihua Wang (Anhui University); Zhi-Xiang Huang (Anhui University); Kaikun Niu (Anhui University); Ruo Sun (Anhui Institute of Metrology); Xianliang Wu (Anhui University);
- 16:00 A Hybrid FE-BI Method Based on Data-sparse Domain Decomposition Algorithm for Analyzing EM Scattering/Radiation
Ting Wan (Nanjing University of Posts and Telecommunications); Zhaoneng Jiang (Hefei University of Technology); Yunqin Hu (Nanjing University of Posts and Telecommunications); B. L. Tang (Nanjing University of Posts and Telecommunications);
- 16:20 Fast Computation of Composite Scattering from Multiple Objects above a Rough Surface by Single-source Equivalence Principle
Tao Song (East China Normal University); Lei Kuang (East China Normal University);
- 16:40 Self-Dual Basis Functions for Solving Surface Magnetic Field Integral Equation
Rui Nan Chang (Tongji University); Zhi Guo Zhou (Tongji University); Mei Song Tong (Tongji University);
- 17:00 Parallel Finite Element Electromagnetic Field Analysis Using Numerical Human Models in HPC
Amane Takei (University of Miyazaki);
- 17:20 Electromagnetic Scattering Analysis Using the Combination of MFIE and Normal EFIE
Xida Zhang (Nanjing University of Science and Technology); Ming Dong (Nanjing University of Science and Technology); Dazhi Ding (Nanjing University of Science and Technology); Zhenhong Fan (Nanjing University of Science and Technology); Rushan Chen (Nanjing University of Science and Technology);

Session 4P_10**Advances in Spaceborne SAR Imaging and Applications****Thursday PM, August 11, 2016****Room 3E**

Organized by Robert Wang

Chaired by Peifeng Ma, Timo Balz

- 13:20 InSAR Processing for Advanced SAR Mode Data
Timo Balz (Wuhan University);
- 13:40 POLSAR Terrain Classification Using Deep Convolutional Networks
Yu Zhou (Fudan University); Haipeng Wang (Fudan University); Feng Xu (University of Shanghai for Science and Technology);
- 14:00 Accurate Three Dimensional Deformation Retrieval in Geosynchronous SAR by Multi-aperture Interferometry Processing
Cheng Hu (Beijing Institute of Technology); Yuanhao Li (Beijing Institute of Technology); Xichao Dong (Beijing Institute of Technology); Teng Long (Beijing Institute of Technology);
- 14:20 The Polarimetric Calibration Method for Ground-based Circularly Polarized Synthetic Aperture Radar
Yuta Izumi (Chiba University); Sevet Demirci (Mersin University); Mohd Zafri Baharuddin (Chiba University); Josaphat Tetuko Sri Sumantyo (Chiba University);
- 14:40 System Design of Optronic Processing for Azimuth Signal Reconstruction in HRWS SAR Based on Filterbank Framework
Linjian Zhang (Shanghai Jiao Tong University); Ji Guo (Shanghai Jiaotong University); Yesheng Gao (Shanghai Jiao Tong University); Kaizhi Wang (Shanghai Jiao Tong University); Xingzhao Liu (Shanghai Jiaotong University);
- 15:00 Area Monitoring of Namco Lake in Summer by High-resolution TerraSAR-X Spotlight Mode
Jiaqi Chen (Nanjing University of Science and Technology); Ning Li (Institute of Electronics, Chinese Academy of Sciences); Zhongling Liu (Institute of Electronics, Chinese Academy of Sciences); Shilin Zhang (Hohai University);
- 15:20 **Coffee Break**

- 15:40 Infrastructural Health Monitoring with the Tomo-PSInSAR Method

Peifeng Ma (The Chinese University of Hong Kong); Hui Lin (The Chinese University of Hong Kong); Jie Chen (The Chinese University of Hong Kong); Mingzhou Wang (The Chinese University of Hong Kong); Guangen Ye (The Chinese University of Hong Kong); Yumei Zhao (The Chinese University of Hong Kong);

- 16:00 High Resolution ISAR Imaging Based on Block Sparse Signal Algorithm

Junjie Feng (Nanjing University of Aeronautics and Astronautics); Gong Zhang (Nanjing University of Aeronautics and Astronautics);

- 16:20 Three Dimensional ISAR Imaging Based on Multi Dimensional Sparse Signal Recovery Algorithm

Junjie Feng (Nanjing University of Aeronautics and Astronautics); Gong Zhang (Nanjing University of Aeronautics and Astronautics);

- 16:40 A Modified IIN Algorithm for DOA Estimation Based on Sparse Representation

Min Du (Harbin Engineering University); Qianhui Dong (Harbin Engineering University); Yibing Li (Harbin Engineering University);

Session 4P_11**SC4: Wireless Power Transfer****Thursday PM, August 11, 2016****Room 3G**

Organized by Elisenda Bou Balust, Qijun Deng

Chaired by Qijun Deng

- 13:00 Low Frequency (100 kHz–1 MHz) Permeability Measurement Method in Magnetic Material

Weijia Li (University of Electronic Science and Technology of China); Xin Wang (University of Electronic Science and Technology of China); Difei Liang (University of Electronic Science and Technology of China); Long-Jiang Deng (University of Electronic Science and Technology of China);

- 13:20 Wireless Power Transfer Using Arrays with Automatic Beam Steering

Mohammad Fairouz (The Public Authority for Applied Education and Training); Mohammad A. Saed (Texas Tech University);

- 13:40 Electromagnetic Properties of a WPT System Applied on Transmission Lines
Xingran Gao (Wuhan University); Qijun Deng (Wuhan University); Wenshan Hu (Wuhan University); Hong Zhou (Wuhan University); Huiqin Wang (Wuhan University);
- 14:00 Magnetic Field Distribution in a WPT System for Electric Vehicle Charging
Rui Feng (New York University); Nina Roscoe (University of Strathclyde); Layth Qaseer (New York University); Mariusz Bojarski (New York University); Jaegue Shin (New York University); Dariusz Czarkowski (New York University); Francisco De Leon (New York University); Stephen Finney (University of Strathclyde); Qijun Deng (Wuhan University);
- 14:20 A Novel EV Wireless Charging System with Two-coil/Three-coil Hybrid Application
Qijun Deng (Wuhan University); Huiqin Wang (Wuhan University); Xingran Gao (Wuhan University); Hong Zhou (Wuhan University); Wenshan Hu (Wuhan University);
- 14:40 A Cooperative Control Method for Inductive Power Transfer System with Multiple Pickups
Yanling Li (Chongqing University); Qichang Duan (Chongqing University); Xin Dai (Chongqing University);
- 15:00 A New Design of Wireless Power Transfer Using Cubic Magnetically-coupled Resonant
Xiao-Yan Zhang (East China Jiaotong University); Xiaoping Chen (East China Jiaotong University); Zhiwei Liu (East China Jiaotong University);
- 15:20 **Coffee Break**
- 15:40 Rhombic Split Ring Resonator (R-SRR) RFID Tag for UHF Band
K. K. Aju John (M. G. University Regional Center); Thomaskutty Mathew (Mahatma Gandhi University Regional Center);
- 16:00 Application of a New Spread Spectrum Method Based on M-sequence in Airborne Data-link
Yuan Jun Zuo (Beijing Institute of Technology); Jian Ming Zhou (Beijing Institute of Technology); Xing Yun Zhang (Beijing Institute of Technology);
- 16:20 Wireless Power Transfer for Microchip Implants
Yuan Yang (University of Electronic Science and Technology of China); Zai-Ping Nie (University of Electronic Science and Technology of China); Xin Qi (University of Electronic Science and Technology of China); Jun Tan (University of Electronic Science and Technology of China);
- 16:40 Insensitive Design for Wireless Power Transfer System Using LLC Resonant Converter
Xin Dai (Chongqing University); Ning Qiu (Chongqing University);
- 17:00 Design and Optimization of Wireless Powered Brain Photodynamic Therapy
Siyuan Jiang (Tianjin Polytechnic University); Xian Zhang (Tianjin Polytechnic University); Zhaoyang Yuan (Tianjin Polytechnic University); Xiaokang Wu (Tianjin Polytechnic University);
- 17:20 High Efficiency and Scalable Injection-locked Oscillator Array for Wireless Power Transmission
Ce Zhang (University of Washington); Bingnan Wang (Mitsubishi Electric Research Laboratories); Koon Hoo Teo (Mitsubishi Electric Research Laboratories);
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- Session 4P_12**
SC3: Nonlinear Optics
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- Thursday PM, August 11, 2016**
Room 3H
Organized by Xianfeng Chen, Wenjie Wan
Chaired by Wenjie Wan
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- 13:00 Nonlinear Absorption Effects in 2D Semiconductors
Jun Wang (Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences);
- 13:20 Optical Limiting of Laser Radiation in Semiconductor Monocrystals, Quantum Dots and Multilayer Microresonators in the Visible and Near Infrared Spectral Range
Inna M. Belousova (ITMO University); Anton A. Ryzhov (ITMO University); Ivan M. Kislyakov (S. I. Vavilov State Optical Institute); Vladimir V. Danilov (St. Petersburg State Transport University); Anastasia S. Panfutova (ITMO University); Sergey K. Evstropiev (ITMO University);
- 13:40 Nonlinear and Electro-optical Properties of Fluid Organo/Inorganic Matrices with Supra-molecular Organization, Containing Nano-sized and Molecular Anisometric Moieties
Andrey Yu. Vlasov (St. Petersburg State University); Inna M. Belousova (ITMO University); Ivan M. Kislyakov (S. I. Vavilov State Optical Institute);
- 14:00 Cherenkov Type High-order Harmonic Processes on Nonlinear Crystal Surface
Huaijin Ren (Institute of Applied Electronics, China Academy of Engineering Physics);

- 14:20 Research on Optical Harmonic Modulation by Generalized Nonlinear Interface
Xuewei Deng (Laser Fusion Research Center, China Academy of Engineering Physics);
- 14:40 Problem of Optical Absorption Coefficients Change in Periodically Poled Nonlinear-optical Crystals
Tatyana E. Borisenko ("IRE-Polus" Ltd. (IPG Photonics Russian Department)); Aleksander A. Surin ("IRE-Polus" Ltd. (IPG Photonics Russian Department)); Oleg A. Ryabushkin (State University);
- 15:00 Deep-imaging Nanoscope by Using Bessel Beam STED
Kebin Shi (Peking University);
- 15:20 **Coffee Break**
- 15:40 Generation of Stochastic Electromagnetic Beams with Controllable Coherence
Chengcheng Chang (Huaqiao University); Xudong Chen (Huaqiao University); Ziyang Chen (Huaqiao University); Jixiong Pu (Huaqiao University);
- 16:00 Realization of Nonlinear Cherenkov Frequency Down-conversion by Phase Velocity Modulation
R. Ni (Nanjing University); L. Du (Nanjing University); Y. F. Niu (Nanjing University); Xiao Peng Hu (Nanjing University);
- 16:20 Unveiling Microscopic Structures of Charged Water Interfaces by Surface-specific Vibrational Spectroscopy
Chuanshan Tian (Fudan University);

	MONDAY AM 8:00 August 8	MONDAY PM 13:00 August 8	TUESDAY AM 8:00 August 9	TUESDAY PM 13:00 August 9
ROOM 5B/5C	1A1 - Transformation Optics 1	1P1 - Dynamic Metamaterial Devices and Applications	2A1 - Recent Advances of Metamaterials for Novel Electromagnetic and Photonic Devices 1	2P1a - Controlling Optical Nonlinearity with Metamaterials 2P1b - Optical Metamaterials and Applications
ROOM 5D/5E	1A2 - Plasmonic Nanolasers and Active Metamaterials	1P2 - Micro-/nano-manipulations: Fundamentals and Applications	2A2 - Casimir Effect and Heat Transfer 1	2P2a - Casimir Effect and Heat Transfer 2 2P2b - Ultrafast Nonlinear Imaging and Biophotonic Applications
ROOM 5F	1A3 - Thermal and Acoustic Metamaterials	1P3 - Advanced Fabrication Methods for Plasmonics and Metamaterials	2A3 - Advances in Metasurfaces 1	2P3 - Advances in Metasurfaces 2
ROOM 5G	1A4 - Advanced Photonic Materials and Devices, Part 1	1P4 - Advanced Photonic Materials and Devices, Part 2	2A4a - Advanced Photonic Materials and Devices, Part 3 2A4b - Oral Presentations for Best Student Paper Awards - -- Optics and Photonics	2P4 - Optical Switching and Routing
ROOM 5H	1A5 - Nanophotonics and Integration Part 1	1P5 - Nanophotonics and Integration Part 2	2A5 - Nanophotonics and Integration Part 3	2P5a - THz Plasmonics 2P5b - THz Metamaterials and Plasmonic-enhanced THz Technology
ROOM 5I	1A6 - Integrated Photonics for Microwave Signal Processing	1P6 - Topological Effects in Electromagnetic Waves	2A6 - Nonlinear Fiber Effects for Sensing and Signal Processing	2P6 - Nano-photonic Devices for Optical Interconnects and Optical Sensing
ROOM 5J	1A7 - Effective Medium Theories	1P7 - Nano-plasmonics for Sensing	2A7 - Wave Propagation and Interaction in Layered Media	2P7 - Modeling and Laser-material Processing
ROOM 3B	1A8 - Compact Wideband and Multi-band Antennas and Their Novel Applications	1P8a - Novel Techniques in the Analysis and Design for Antennas 1P8b - Compact Antenna Designs for Portable Terminals	2A8a - Design of Radio Astronomy Antennas, New Challenges 2A8b - Metasurface Antenna	2P8a - High-gain Antennas 2P8b - Antenna and EM Challenges in 5G Technologies

	MONDAY AM 8:00 August 8	MONDAY PM 13:00 August 8	TUESDAY AM 8:00 August 9		TUESDAY PM 13:00 August 9	
ROOM 3C/3D	1A9 - Recent Advances on Electromagnetics Simulation Techniques	1P9 - Multiscale and Multiphysics Computation and Applications	2A9a - Plasmonics for Energy	2A9b - Fiber Lasers and 2-D Materials for Fiber Lasers 2	2P9a - Novel Numerical Techniques for Solving Electromagnetic Problems	2P9b - Innovative Techniques for Solving Multiphysics Electromagnetic Problems
ROOM 3E	1A10 - Inverse Scattering and Imaging Part 1	1P10 - Inverse Scattering and Imaging Part 2	2A10a - Oral Presentations for Best Student Paper Awards - -- Metamaterials, Plasmonics	2A10b - Oral Presentations for Best Student Paper Awards - -- Remote Sensing, etc.	2P10a - Microwave Remote Sensing of Soil Moisture	2P10b - Microwave Remote Sensing Part 1: Land
ROOM 3G	1A11 - Light Harvesting, Photovoltaics, Optoelectronics in Energy, Part 1	1P11 - Light Harvesting, Photovoltaics, Optoelectronics in Energy, Part 2	2A11 - Light Harvesting, Photovoltaics, Optoelectronics in Energy, Part 3		2P11 - Solid-state Quantum Photonics	
ROOM 3H	1A12 - New Frontiers in Quantum Photonics	1P12 - Spin Orbit Interaction of Light and Topological Photonics	2A12 - Design and Simulation of Electromagnetic and Optical Devices		2P12a - EM Modeling Methodologies for Millimeter Wave, Terahertz and Nano Technologies	2P12b - Computational Nanoelectronics & Nanoelectromagnetics Methods and Their Applications
ROOM 3I	1A13 - Novel Mathematical Methods in Electromagnetics	1P13 - Advanced Optofluidics: Optical Control and Photonics with Fluid Matter	2A13a - Extended/Unconventional EM Theory, EHD/EMHD, and Electro-biology	2A13b - Coherent Perfect Absorption in Electromagnetic and Acoustic Waves	2P13 - Optical Microcavities	
ROOM 3J	1A14 - Novel Optical Fibers and Fiber Laser	1P14 - Antennas, Sensors and EMC Problems	2A14 - Electromagnetic and Optical Properties of Photonic Materials, Structures, and Crystals		2P14 - Fast Methods in Computational Electromagnetics	
ROOM 5A	1A15 - Parity-time Symmetry Synthetic Metamaterials 1	1P15a - Parity-time Symmetry Synthetic Metamaterials 2	1P15b - Oral Presentations for Best Student Paper Awards - -- Antennas and Microwave Technologies	2A15 - Unconventional Fabrication and Novel Applications of Deep Sub-wavelength Nanophotonic Structures 1	2P15a - Fabrication and Applications of Deep Sub-wavelength Nanophotonic 2	2P15b - Optical Sensors for Industrial Applications
ROOM 3F	1A16 - Oral Presentations for Best Student Paper Awards --- SC1: CEM, EMC, Scattering & EM Theory	1P16 - Ultra-thin Metal-dielectric Structured Surfaces and Thin Films for Antireflection, Light Trapping, and Perfect Absorption				
ROOM Poster Area	1A0 - Poster Session 1	1P0 - Poster Session 2		2A0 - Poster Session 3		2P0 - Poster Session 4

	WEDNESDAY AM 8:00 August 10	WEDNESDAY PM 13:00 August 10	THURSDAY AM 8:00 August 11	THURSDAY PM 13:00 August 11
ROOM 5B/5C	3A1 - Novel Dispersions and Applications of Zero-index Materials	3P1 - Transformation Optics 2	4A1 - Recent Advances of Metamaterials for Novel Electromagnetic and Photonic Devices 2	4P1a - Recent Advances of Metamaterials for Novel EM and Photonic Devices 3
ROOM 5D/5E	3A2 - Plasmonics Based on Graphene and other 2D Materials 1	3P2 - Plasmonics Based on Graphene and Other 2D Materials 2	4A2 - Photonic Crystals and Subwavelength Structures	4P2 - Advances in Optical Communication and Networking
ROOM 5F	3A3 - Advanced Metasurface-enabled Devices: From RF to Optical	3P3 - Nonlinear Optics in Photonic Nanostructures and 2D Nanomaterials	4A3 - Plasmonic Nanostructures for Spectral Modulation	4P3a - Fiber-based Devices and Applications for Mid-IR, Microwave and THz Wave
ROOM 5G	3A4 - Silicon-plus Photonics for High Density Optical Interconnects	3P4 - Photonics-enabled Millimeter and Terahertz-wave Technologies		4P3b - Distributed Fiber Sensors and Their Industrial Application
ROOM 5H	3A5 - Fiber Lasers and 2-D Materials for Fiber Lasers 1	3P5 - Micro-/Nano-scale Chemical and Physical Sensing and Imaging, and Their Early Adaptations in Translational Medicine	4A5 - Optoelectronic Simulation Technologies for Photoconversion Devices	4P5 - Metamaterials and Plasmonics
ROOM 5I	3A6 - Novel Phenomena in Engineered Photonic Structures	3P6 - Inverse Scattering and Applications	4A6 - Optical Forces and Optomechanics	4P6 - Radio Propagation Modelling & Channel Estimation
ROOM 5J	3A7 - Interaction of Electromagnetic Wave with Complex Media	3P7 - Atom-light Interaction and Applications	4A7a - Applications of EM Field in Medical Diagnostics and Therapy	4A7b - Microwave and Millimeter Wave Circuits and Devices, CAD
ROOM 3B	3A8 - Advanced Antenna and RF Circuits Design 1	3P8 - Microstrip and Printed Antenna, Array Antenna	4A8 - Antenna Arrays: Theory, Algorithms, and Applications	4P7 - Bioelectromagnetics
				4P8 - Advanced Antenna and RF Circuits Design 2

	WEDNESDAY AM 8:00 August 10		WEDNESDAY PM 13:00 August 10		THURSDAY AM 8:00 August 11		THURSDAY PM 13:00 August 11
ROOM 3C/3D	3A9 - Advanced Mathematical and Computational Methods in Electromagnetic Theory and Their Applications 1		3P9a - Advanced Numerical Techniques in Computational Electromagnetics 1	3P9b - Computational Electromagnetics	4A9a - Large-scale Simulation and Parallel Computing in Computational EMs	4A9b - Advanced Mathematical and Computational Methods in EM Theory and Their Applications 2	4P9 - Advanced Numerical Techniques in Computational Electromagnetics 2
ROOM 3E	3A10a - Advance in Optical Remote Sensing of Atmosphere and Ocean	3A10b - Microwave Remote Sensing Part 2: Ocean	3P10a - SAR Imaging of Random Media	3P10b - Remote Sensing of Terrestrial Snow	4A10 - Remote Sensing of the Atmosphere, Ocean, Hydrology and Cryosphere		4P10 - Advances in Spaceborne SAR Imaging and Applications
ROOM 3G	3A11 - Novel Frequency Selective Structures		3P11 - Design and Applications of Frequency Selective Surfaces and Metasurfaces		4A11 - High Power Microwave Devices		4P11 - Wireless Power Transfer
ROOM 3H	3A12 - Terahertz Near-field Optics		3P12 - Advanced Photonic Technologies for Spectroscopic Sensing of the Atmosphere		4A12 - Recent Progress in Antenna Design and Propagation		4P12 - Nonlinear Optics
ROOM 3I	3A13a - Nanostructured Optoelectronic Devices	3A13b - Modeling and Inversion in Geophysical and Borehole EMs	3P13 - Electromagnetic Modeling and Inversion				
ROOM 3J	3A14a - Optical Switches and Modulators, Basic Elements and Integrated Chips	3A14b - Optics in 3-D Display, 3D Cutting & Printing	3P14 - Microwave Energy-driven Material Chemistry and Physics				
ROOM 5A							
ROOM 3F							
ROOM Poster Area	3A0 - Poster Session 5		3P0 - Poster Session 6				