PIERS 2017 St Petersburg

Progress In Electromagnetics Research Symposium

Preliminary Program

May 22–25, 2017
St Petersburg, RUSSIA

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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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President of The Electromagnetics Academy:

Professor Leung Tsang, University of Michigan, USA

JOURNAL: PROGRESS IN ELECTROMAGNETICS RESEARCH

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

PIER is a non-profit organization.

WWW.JPIER.ORG

Contact Email: work@jpier.org

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Progress In Electromagnetics Research Symposium
May 22–25, 2017
St Petersburg, RUSSIA

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SYMPOSIUM VENUE

The 2017 Progress in Electromagnetics Research Symposium will be held in St Petersburg during May 22–25, 2017, in Park Inn by Radisson <Pribaltiyskaya> hotel (Address: 14 Korablestoiteley street, St Petersburg, Russia).

REGISTRATION

The PIERS technical sessions will begin at 9:00 on Monday, May 22, 2017. You're encouraged to register during 10:00-19:00, Sunday, May 21, 2017, at the registration desk/room located in Park Inn by Radisson <Pribaltiyskaya>. Registration is also possible in Park Inn by Radisson <Pribaltiyskaya> from 08:00 to 18:00 during the Symposium, May 22–25, 2017.

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, May 21, 2017, 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 May 5.

Symposium Banquet

On Wednesday evening, May 24, 2017, 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 70 or RUB 4000 per person. Please make reservation and pay by credit card (USD) in advance for the banquet by May 5.

PIERS ONLINE

Information on PIERS 2017 St Petersburg 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 9:00–13:00 and 14:00–19:00, and all presenters are suggested to be present at least during 11:00–11:20 and 16:00–16:20.

One panel (about 76(W) x 118(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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- Tomsk Polytechnic University
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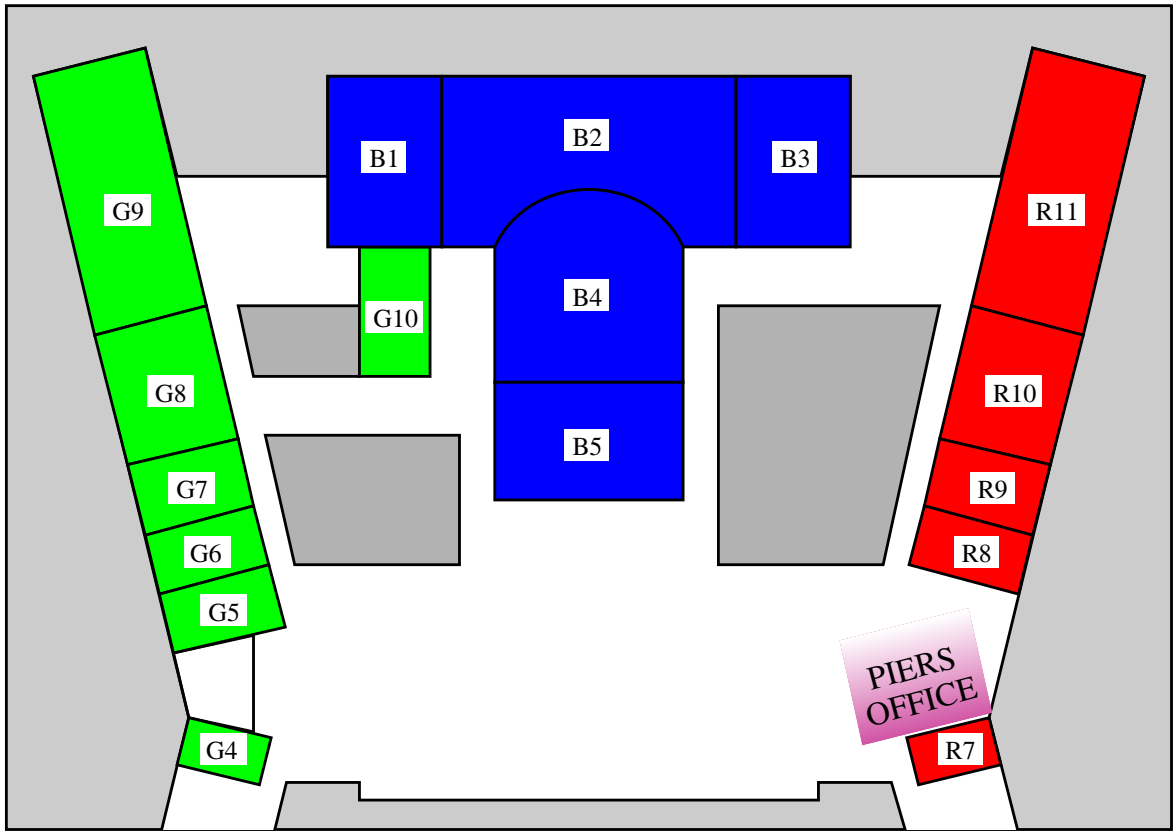
- The Swedish Institute
- Institute of Electrical and Electronics Engineers (IEEE)
- IEEE Geoscience and Remote Sensing Society
- College of Information Science & Electronic Engineering, Zhejiang University
- JORCEP (Sino-Swedish Joint Research Center of Photonics)
- The Electromagnetics Academy at Zhejiang University, China
- The Electromagnetics Academy

PIERS 2017 ST PETERSBURG EXHIBITOR

- TYDEX, LLC.

MAP OF CONFERENCE SITE



1st Floor

Plan of Halls in Pribaltiyskaya

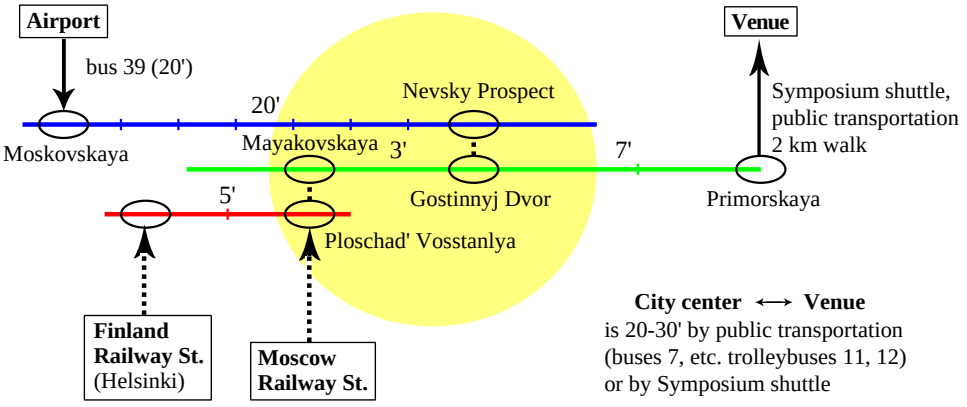
ARRIVAL GUIDE

By air: The airport is located 23 km to the south of the city center and is connected to St Petersburg by bus number 39 and Minivan Taxi number K39. See local transportation scheme below.

Alternatively you can take a taxi at the airport, which should cost about 1000 rubles to the Symposium venue. You can pay either in cash to the driver or at the Taxi counter in the airport with your credit card.

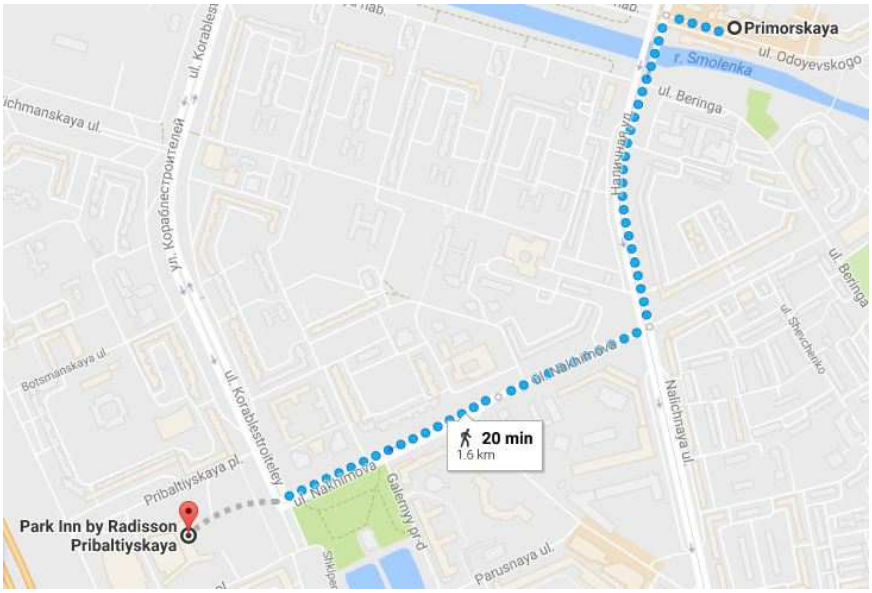
By train: Trains from Moscow (4 hours by fast train) and many other cities of Russia arrive to **Moscow** railway station, trains from Helsinki (3.5 hours by fast train) arrive to **Finland** railway station, where from it is easy to reach the symposium venue. See local transportation scheme.

By Ferry: From ferry station take bus number 152 or trolleybus 11. It takes about 10 min and costs 40 rubles to reach the symposium venue.



Local Transportation Scheme

The path from the metro station "Primorskaya" to the hotel Park Inn by Radisson <Pribaltiyskaya> is shown. It is 1.6 km.



GENERAL INFORMATION

LANGUAGE

The official language for the Symposium is English.

CURRENCY AND CREDIT CARDS

The local currency is the Russian Rouble (RUB) and the exchange rate is 1 USD for about 60 Roubles. Credit cards and cash are acceptable for payments. International credit cards are acceptable in almost all shops, restaurants etc..

TAX AND TIP

All the shopping is free of tax. In Russia tips are not necessary but it is possible to tip a waiter/waitress or a taxi driver and other persons who provides regular service. Bargaining is necessary on buying merchandise especially from markets.

TAXI

Usually, a taxi is available along the roadsides, while you wave for it or right in front of a hotel.

BUSINESS OPENING HOURS

- **Post Office**
  Opening hours: usually 8:00 – 20:00, from Monday to Friday.
  May vary dependently on the office. There is 24 h service in the central post office.
- **Bank**
  Opening hours: depend on the bank, usually 10:00 – 18:00, from Monday to Friday.
- **Store**
  Opening hours: usually 9:00 – 21:00, but the large shopping center serves till 22:00, from Monday to Sunday. There are 24 h service shops also.
- **Public Transportation**
  Operating hours: generally 5:30 – 24:00
  Price: 40 RUB payable in cash inside the bus, trolleybus or tram; metro 45 RUB. Prices do not depend on the distance.

ELECTRICITY

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

PIERS 2017 ST PETERSBURG TECHNICAL PROGRAM

Session 1A1
SC3: Novel Optical Fibers and Fiber-based Devices

Monday AM, May 22, 2017

Room G5

Organized by Xinyong Dong

00:00 Optical Comb Characterization of an All-fiber Mode-locked Erbium-doped Ring Laser with a Highly-nonlinear Resonator
Dmitriy A. Dvoretskiy (*Bauman Moscow State Technical University*); *Stanislav Grigorievich Sazonkin* (*Bauman Moscow State Technical University*); *I. O. Orekhov* (*Bauman Moscow State Technical University*); *I. S. Kudelin* (*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*); *L. K. Denisov* (*Bauman Moscow State Technical University*);

00:00 Simulation of z-dependent Dispersion Coefficients in Tapered Photonic Crystal Fibers
Hassan Pakarzadeh (*Shiraz University of Technology*); *Omid Nasiri* (*Shiraz University of Technology*);

00:00 Atomically Transition Metal Dischalcogenides Heterostructures for Pulsed Fiber Lasers
Hao Chen (*Shenzhen University*); *Peiguang Yan* (*Shenzhen University*);

00:00 Design of Optical Microresonators for Fiber-optic Sensor Networks Transparent in Mid-IR
Elena A. Romanova (*Saratov NG Chernyshevskii State University*); *Daniil Sergeevich Zhivotkov* (*Saratov State University*); *Davor Ristic* (*Institut Ruder Boskovic*); *Mile Ivanda* (*Ruder Boskovic Institute*); *Vladimir S. Shiryaev* (*Institute of Chemistry of High Purity Substances of the RAS*);

00:00 Point-by-point Inscription of Phase-shifted Fiber Bragg Gratings by Femtosecond IR Radiation in Passive and Active Rare-earth Doped Optical Fibers
Alexandr V. Dostovalov (*Novosibirsk National Research State University*); *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*); *K. S. Raspopin* (*Institute of Automation and Electrometry SB RAS*); *S. A. Babin* (*Institute of Automation and Electroetry, SB, RAS*);

00:00 Real-time Characterization of the Phase-shift Formed in a Helical Long-period Fiber Grating
Peng Wang (*Shizuoka University*); *Ramanathan Subramanian* (*Shizuoka University*); *Chengliang Zhu* (*Shizuoka University*); *Hua Zhao* (*Nanjing Normal University*); *Hongpu Li* (*Shizuoka University*);

00:00 Hybrid Optofluidics and Three-dimensional Manipulation Based on Hybrid Photothermal Waveguides
Jiapeng Zheng (*South China Normal University*); *Xiaobo Xing* (*South China Normal University*); *Jianxin Yang* (*South China Normal University*); *Kezhang Shi* (*South China Normal University*); *Sailing He* (*Zhejiang University*);

00:00 The Mechanism of Light Localization in Hollow Core Negative Curvature Fibers
Andrey D. Pryamikov (*Fiber Optics Research Center of the Russian Academy of Sciences*); *Grigory K. Alagashev* (*Fiber Optics Research Center of the Russian Academy of Sciences*); *Alexander S. Biriukov* (*Fiber Optics Research Center of Russian Academy of Sciences*);

00:00 Brillouin Optical Spectrum Analyzer Based on Self-sweeping Fiber Laser
Alina Yu. Tkachenko (*Institute of Automation and Electrometry of SB RAS*); *Ivan A. Lobach* (*Institute of Automation and Electrometry SB RAS*); *S. I. Kablukov* (*Institute of Automation and Electroetry, SB, RAS*);

00:00 Advanced Fiber Bragg Gratings Designed and Fabri-
Invited cated for Spectral Tailoring of Optical Signals
Xuewen Shu (*Huazhong University of Science and Technology*);

Session 1A2
Electromagnetic Signal Processing, Wavelets, Neural Network

Monday AM, May 22, 2017

Room G6

Organized by Zbigniew Szadkowski

Chaired by Zbigniew Szadkowski

00:00 Classification of Interference Signals Using Advanced Baseband Statistics in pi/4-DQPSK Systems
Maximilian Wolfel (*Laboratory for Circuit Design, Hochschule Aschaffenburg*); *Ulrich Bochtler* (*University of Applied Sciences Aschaffenburg*); *Thomas F. Eibert* (*Technical University of Munich*); *Christoph Schmitt* (*KaiTec GmbH*);

00:00 Analysis of Radar Detection Performance for Anti-ship Missile with Various Heights
Yong Yang (*National University of Defense Technology*); *Lu-Yi Liu* (*National University of Defense Technology*); *Biao Xiong* (*National University of Defense Technology*); *Fu-Chun Tao* (*National University of Defense Technology*); *Jia-Wei Zhang* (*National University of Defense Technology*); *Bao-Yue Guo* (*National University of Defense Technology*);

00:00 Reduced-complexity ML Method for Monostatic MIMO Radar
Jun Tan (*University of Electronic Science and Technology of China*); *Zai-Ping Nie* (*University of Electronic Science and Technology of China*); *Dingbang Wen* (*University of Electronic Science and Technology of China*); *Zijian Liu* (*University of Electronic Science and Technology of China*);

00:00 Improved Design of Wideband Digital Channelized Structure Using Frequency Response Masking Technology
Xinzhuo Liu (*Harbin Engineering University*); *Yang Sheng* (*Harbin Engineering University*); *Weijian Si* (*Harbin Engineering University*);

00:00 Analog Optical Computing Using Resonant Nanophotonic Structures
Dmitry Alexandrovich Bykov (*Image Processing Systems Institute of RAS and Samara State Aerospace University*); *Leonid Leonidovich Doskolovich* (*Image Processing Systems Institute of the Russian Academy of Sciences*); *V. A. Soifer* (*Image Processing Systems Institute of the Russian Academy of Sciences*);

00:00 An Improved Algorithm for LFM Signal Frequency Modulation Slope Estimation
Fuxin Qu (*Harbin Engineering University*); *Zhiyu Qu* (*Harbin Engineering University*); *Jiawei Wang* (*Harbin Engineering University*);

00:00 Performance of Double Threshold Energy Detection in Cooperative-cognitive Network by Using AF Relaying Scheme over Rician Fading Channel
Muhammad Zeeshan (*Beijing Institute of Technology*); *Zhongjian Dai* (*Beijing Institute of Technology*);

00:00 Cooperative-cognitive Radio Networks: Performance Analysis of Energy Detection
Muhammad Zeeshan (*Beijing Institute of Technology*); *Asad Khan* (*Southeast University*); *Zhongjian Dai* (*Beijing Institute of Technology*);

00:00 RFI Filtering in AERA Radio-detection of Cosmic Rays
Zbigniew Szadkowski (*University of Lodz*);

00:00 Optimization of the Neural Network Trigger for a Detection of Cosmic Rays in Surface Detectors of the Pierre Auger Observatory
Zbigniew Szadkowski (*University of Lodz*); *Dariusz Glas* (*University of Lodz*); *Krzysztof Pytel* (*University of Lodz*); *M. Wiedenski* (*University of Lodz*);

00:00 Two-dimensional Multiplier-less Wavelet Trigger for a Radio-detection of Cosmic Rays
Zbigniew Szadkowski (*University of Lodz*); *Anna Szadkowska* (*Lodz University of Technology*);

Session 1A3
Nonlinear and Inverse Problems in Electromagnetics

Monday AM, May 22, 2017

Room G7

Organized by Yury G. Smirnov, Larisa Beilina

Chaired by Yury G. Smirnov

00:00 The Azimuthal Symmetric Hybrid Waves in Nonlinear Cylindrical Waveguide
Eugene Yu. Smolkin (*Penza State University*);

00:00 $\bar{\partial}$-method for Inverse Two-dimensional Schrodinger and Dirac Equations
Evgeny Lakshtanov (*Aveiro University*); *Boris Vainberg* (*University of North Carolina at Charlotte*);

00:00 Control Approach in Inverse Problems for Time-harmonic Maxwell Equations under Mixed Boundary Conditions
Gennady V. Alekseev (*Institute of Applied Mathematics FEB RAS*); *Roman V. Brizitskii* (*Institute of Applied Mathematics FEB RAS*); *Yuliya E. Spivak* (*Far Eastern Federal University*);

00:00 Inverse Problem of Reconstruction of Inhomogeneous Body Parameters
R. O. Evstigneev (*Penza State University*); *Mikhail Yu. Medvedik* (*Penza State University*); *Yury G. Smirnov* (*Penza State University*);

00:00 Diffraction of TE Polarised Electromagnetic Waves by a Nonlinear Layer
Anna E. Demchenko (*Penza State University*); *Dmitry V. Valovik* (*Penza State University*);

00:00 Transverse Patterns in Broad-area Lasers with Anisotropy
Anton A. Krents (*Samara State Aerospace University*); *Nonna E. Molevich* (*Samara State Aerospace University*); *Dmitry A. Anchikov* (*Samara State Aerospace University*);

00:00 On Well-posed Formulation of Inverse Scattering Problem in Focusing Media
Vladimir Okhmatovski (*University of Manitoba*);

00:00 Microwave Imaging with Contrast Source Inversion Method in the Presence of Focusing Media
Anton Menshov (*University of Manitoba*); *Vladimir Okhmatovski* (*University of Manitoba*);

00:00 Reliability-based Low Torque Ripple Design of Permanent Magnet Machine
Piotr A. Putek (*Bergische Universitat Wuppertal*); *E. J. W. Ter Maten* (*Bergische Universitat Wuppertal*); *M. Gunther* (*Bergische Universitat Wuppertal*);

00:00 Electromagnetic Wave Propagation in Nonlinear Media with Saturation
Valeria Yu. Kurseeva (*Penza State University*); *Dmitry V. Valovik* (*Penza State University*);

Session 1A4
Computational Electromagnetics 1

Monday AM, May 22, 2017

Room G8

Organized by Alexander B. Samokhin

Chaired by Alexander B. Samokhin

00:00 Analysis of Radiated Fields of Moving Dipole Source with Lorentz-FDTD
Kuisong Zheng (*Northwestern Polytechnical University*); *Xiangpeng Liu* (*Northwestern Polytechnical University*); *Zongmin Mu* (*Northwestern Polytechnical University*); *Gao Wei* (*Northwestern Polytechnical University*);

00:00 Methods and Fast Algorithms for the Solution of Volume Singular Integral Equations
Alexander B. Samokhin (*Moscow State Institute of Radio Engineering, Electronics and Automatics*); *Anna S. Samokhina* (*Institute of Control Sciences*);

00:00 Design of Reconfigurable Antenna Using RF MEMS Switch for Cognitive Radio Applications
Ahmed A. Ibrahim (*El-Minia University*); *Anatoliy Batmanov* (*University of Magdeburg*); *Edmund P. Burte* (*University of Magdeburg*);

00:00 An Analysis of Eigenmodes Propagating on a Holey Fiber with the Multipole Method and the Sakurai-Sugiura Method
Yasuo Tsushima (*Muroran Institute of Technology*); *Shingo Sato* (*Muroran Institure of Technology*); *Koji Hasegawa* (*Muroran Institute of Technology*);

00:00 Modeling of Excitation Source for Time-domain EM Solvers
Ishfaq Hussain (*Nanjing University of Aeronautics and Astronautics*); *Huiping Li* (*Henan University*); *Yi Wang* (*Nanjing University of Aeronautics and Astronautics*); *Qunsheng Cao* (*Nanjing University of Aeronautics and Astronautics*);

00:00 Modeling of Light-emitting Diode with Mesh-like Top Electrode: Finite-radius Wire Approximation against Mesh Strips with Rectangular Crossection
Irina Khmyrova (*The University of Aizu*); *Y. Nishidate* (*University of Aizu*); *Julia Kholopova* (*IMT RAS*); *E. Polushkin* (*IMT RAS*); *V. Zemlyakov* (*NRUET*); *S. Shapoval* (*IMT RAS*);

00:00 Modeling of Structures Using Adaptive Mesh in DGTD Method for EM Solver
Ishfaq Hussain (*Nanjing University of Aeronautics and Astronautics*); *Huiping Li* (*Henan University*); *Yi Wang* (*Nanjing University of Aeronautics and Astronautics*); *Qunsheng Cao* (*Nanjing University of Aeronautics and Astronautics*);

00:00 Numerical Solution of 3D Problems of Electromagnetic Wave Diffraction on a System of Piecewise Homogeneous Objects by the Method of Hypersingular Boundary Integral Equations
Aleksey Viktorovich Setukha (*Air Force Academy*);

00:00 Numerical Green's Function Based Augmented Electric Field Integral Equation for Inhomogeneous Media
H. U. Gan (*University of Illinois at Urbana-Champaign*); *Q. Dai* (*University of Illinois at Urbana-Champaign*); *T. Xia* (*University of Illinois at Urbana-Champaign*); *Y. Li* (*University of Hong Kong*); *Weng Cho Chew* (*University of Illinois*);

00:00 Analysis of the Multipactor Effect by Means of the 3D BI-RME Method
Angel-Antonio San-Blas (*University Miguel Hernandez of Elche*); *Benito Gimeno Martinez* (*Universidad de Valencia*); *Vicente E. Boria* (*Universidad Politecnica de Valencia*); *Enrique Bronchalo* (*Universidad Miguel Hernandez de Elche*);

00:00 Strip-line StF4 Antenna Excited by Step-like Pulsed Voltage as Radiator of Calibrated UWB Electromagnetic Delta-like Impulses
Vladimir M. Fedorov (*Institute for High Energy Densities of JIHT of RAS*); *Vasily Ye. Ostashev* (*Joint Institute for High Temperatures of RAS*); *Vladimir P. Tarakanov* (*Joint Institute for High Temperatures of Russian Academy of Sciences (JIHT of RAS)*); *Alekxander V. Ul'yanov* (*Joint Institute for High Temperatures of Russian Academy of Sciences (JIHT of RAS)*);

Session 1A5
Lasers and Applications in Information Technology

Monday AM, May 22, 2017

Room G9

Organized by Oleg E. Nanii, Alexander P. Smirnov

Chaired by Oleg E. Nanii

00:00 About the Phase Sensors in the Receiving-transmission Paths of Laser Systems
Aleksandr Vladimirovich Averchenko (*Lomonosov Moscow State University*); *Alexei Mikhailovich Zotov* (*Lomonosov Moscow State University*); *Pavel Vasil'evich Korolenko* (*Lomonosov Moscow State University*);

00:00 Surface Fitting Filtering of LiDAR Point Cloud with Waveform Information
Shuai Xing (*Zhengzhou Institute of Surveying and Mapping*); *Pengcheng Li* (*Zhengzhou Institute of Surveying and Mapping*); *Qing Xu* (*Zhengzhou Institute of Surveying and Mapping*);

00:00 Building Detection Based on Airborne Full-waveform LiDAR Using LDA Model
Pengcheng Li (*Zhengzhou Institute of Surveying and Mapping*); *Shuai Xing* (*Zhengzhou Institute of Surveying and Mapping*); *Qing Xu* (*Zhengzhou Institute of Surveying and Mapping*);

00:00 Second-harmonic-generation of Continuous-wave Optical Vortices in Telecommunication Wavelength
Junichi Hamazaki (*National Institute of Information and Communications Technology*); *Guo-Wei Lu* (*Tokai University*); *Keizo Inagaki* (*National Institute of Information and Communications Technology*); *Tadashi Kishimoto* (*National Institute of Information and Communications Technology*); *Yoh Ogawa* (*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*); *Naoukatu Yamamoto* (*National Institute of Information and Communications Technology*); *Shigeru Yamaguchi* (*Tokai University*); *Iwao Hosako* (*National Institute of Information and Communications Technology*);

00:00 Laser Visualization Systems Based on Metal Vapor Active Elements for High Speed Imaging of Plasma, Beam and Discharge Processes
Maxim Viktorovich Trigub (*Tomsk Polytechnic University*); *Gennadiy Sergeevich Evtushenko* (*Tomsk Polytechnic University*);

00:00 Generation of Regular Optical Pulses in Asymmetrically Modulated VCSEL with External Small Optical Injection
Anton A. Krents (*Samara State Aerospace University*); *Nonna E. Molevich* (*Samara State Aerospace University*); *Dmitry A. Anchikov* (*Samara State Aerospace University*);

00:00 A Mechanism of QML Lasing in Solid-state Laser with an Acousto-optic Travelling Wave Modulator
Oleg E. Nanii (*M. V. Lomonosov Moscow State University*); *A. I. Fedoseev* (*M. V. Lomonosov Moscow State University*); *A. I. Odintsov* (*M. V. Lomonosov Moscow State University*); *Aleksander P. Smirnov* (*M. V. Lomonosov Moscow State University*);

00:00 Temporal Stability of a Multi-wavelength Fiber Laser
Oleg E. Nanii (*M. V. Lomonosov Moscow State University*); *A. I. Kuzmenkov* (*Science-Technology Center T8*); *S. N. Lukinykh* (*M. V. Lomonosov Moscow State University*); *A. I. Fedoseev* (*M. V. Lomonosov Moscow State University*); *Aleksander P. Smirnov* (*M. V. Lomonosov Moscow State University*); *V. N. Treshikov* (*Science-Technology Center T8*);

00:00 High-power Narrowband Raman Fiber Laser Based on Random FBG
M. I. Skvortsov (*Institute of Automation and Electroetry, SB, RAS*); *S. R. Abdullina* (*Institute of Automation and Electrometry SB RAS*); *Aleksandr A. Vlasov* (*Institute of Automation and Electrometry*); *E. A. Zlobina* (*Institute of Automation and Electroetry, SB, RAS*); *Ivan A. Lobach* (*Institute of Automation and Electrometry, SB, RAS*); *V. S. Terentyev* (*Institute of Automation and Electrometry, SB, RAS*); *Sergey A. Babin* (*Institute of Automation and Electrometry SB RAS*);

00:00 Efficient Pumping Scheme of Er-doped DFB Fiber Laser with Suppressed Relaxation Oscillations
Vladimir A. Akulov (*Inversion Fiber Co. Ltd.*); *Aleksandr A. Vlasov* (*Institute of Automation and Electrometry*); *Sergey A. Babin* (*Institute of Automation and Electrometry SB RAS*);

Session 1A6
Theory and Methods of Digital Signal Processing in the Problems of Remote Sensing, Radar, and Radiometry 1

Monday AM, May 22, 2017

Room G10

Organized by Victor Filippovich Kravchenko, Boris Georgievich Kutuza

Chaired by Victor Filippovich Kravchenko, Boris Georgievich Kutuza

00:00 Investigation of the Features of Long-term Global Atmospheric Circulation via Satellite Radiothermovision
Dmitry M. Ermakov (*Kotel'nikov Institute of Radioengineering and Electronics of RAS*);

00:00 Super-resolution SAR Imaging: Optimal Algorithm Synthesis and Simulation Results
Victor Filippovich Kravchenko (*Kotel'nikov Institute of Radio Engineering and Electronics, Russian Academy of Sciences*); *Boris Georgievich Kutuza* (*Kotel'nikov Institute of Radio Engineering and Electronics, Russian Academy of Sciences*); *Valeriy K. Volosyuk* (*National Aerospace University Named after N. Ye. Zhukovsky ("Kharkov Aviation Institute")*); *Vladimir V. Pavlikov* (*National Aerospace University Named after N. Ye. Zhukovsky ("Kharkov Aviation Institute")*); *Simeon Sergiyovich Zhyla* (*National Aerospace University Named After N. Ye. Zhukovsky ("Kharkov Aviation Institute")*);

00:00 Multiantenna Radiometric Complex for High Resolution Imaging: Synthesis of Algorithm for Optimal UWB Signal Processing and Development of Functional Flow Block Diagram
Victor Filippovich Kravchenko (*Kotel'nikov Institute of Radio Engineering and Electronics, Russian Academy of Sciences*); *Boris Georgievich Kutuza* (*Kotel'nikov Institute of Radio Engineering and Electronics, Russian Academy of Sciences*); *Valeriy K. Volosyuk* (*National Aerospace University*); *Vladimir V. Pavlikov* (*National Aerospace University*); *Kiem Nguyen Van* (*National Aerospace University Named after N. Ye. Zhukovsky ("Kharkov Aviation Institute")*);

00:00 Chopper Radiometer of New Type: Synthesis Algorithm and Development of Functional Flow Block Diagram
Victor Filippovich Kravchenko (*Kotel'nikov Institute of Radio Engineering and Electronics, Russian Academy of Sciences*); *Boris Georgievich Kutuza* (*Kotel'nikov Institute of Radio Engineering and Electronics, Russian Academy of Sciences*); *Valeriy K. Volosyuk* (*National Aerospace University Named after N. Ye. Zhukovsky ("Kharkov Aviation Institute")*); *Vladimir V. Pavlikov* (*National Aerospace University Named after N. Ye. Zhukovsky ("Kharkov Aviation Institute")*); *Simeon S. Zhyla* (*National Aerospace University Named after N. Ye. Zhukovsky ("Kharkov Aviation Institute")*);

00:00 Internal Calibration Algorithm for Digital Beamforming SAR and the Experimental Demonstration
Yang Gao (*Institute of Radar technology, China Academy of Space Technology*); *Wei Yan* (*Northwestern Polytechnical University*); *Hu Xie* (*Institute of Radar technology, China Academy of Space Technology*); *Hongxing Dang* (*Institute of Radar technology, China Academy of Space Technology*); *Xiaomin Tan* (*Institute of Radar technology, China Academy of Space Technology*);

00:00 Digital Beamforming Based on FPGA for Phased Array Radar
Wenjing Shang (*Harbin Engineering University*); *Zheng Dou* (*Harbin Engineering University*); *Wei Xue* (*Harbin Engineering University*); *Yingsong Li* (*Harbin Engineering University*);

00:00 A Robust Adaptive Beamforming Algorithm with Low Complexity
Wenjing Shang (*Harbin Engineering University*); *Zheng Dou* (*Harbin Engineering University*); *Wei Xue* (*Harbin Engineering University*); *Yingsong Li* (*Harbin Engineering University*);

00:00 Application of Atomic and R-functions in Numerical Methods for Inversion of the Radon Transform
K. A. Budunova (*Bauman Moscow State Technical University*); *Yaroslav Yu. Konovalov* (*Bauman Moscow State Technical University*); *Oleg V. Kravchenko* (*Scientific and Technological Center, Unique Instrumentation, RAS*);

00:00 SAR Polarimetry Techniques in Remote Sensing of Arctic Region
Alexander Zakharov (*Kotelnikov IRE RAS*); *Ludmila Zakharova* (*Kotelnikov IRE RAS*);

00:00 Development and Study of Demodulators for Frequency-hopping Spread Spectrum Signals
D. I. Kaplun (*SPbETU "LETI"*); *Dmitry M. Klionskiy* (*Saint Petersburg Electrotechnical University "LETI"*); *V. V. Gulvanskiy* (*SPbETU "LETI"*); *D. V. Bogaevskiy* (*SPbETU "LETI"*); *M. S. Kupriyanov* (*Saint Petersburg Electrotechnical University "LETI"*);

00:00 Data Representation in the Modular Code
A. V. Veligosha (*Military Academy after Peter the Great*); *N. Yu. Bratchenko* (*North Caucasus Federal University*); *D. I. Kaplun* (*SPbETU "LETI"*); *Dmitry M. Klionskiy* (*Saint Petersburg Electrotechnical University "LETI"*); *V. V. Gulvanskiy* (*SPbETU "LETI"*); *D. V. Bogaevskiy* (*SPbETU "LETI"*);

Session 1A7
High-frequency/Speed Circuits in Electromagnetics and Optics

Monday AM, May 22, 2017

Room B1

Organized by Chien-Nan Kuo

Chaired by Chien-Nan Kuo, Hong-Yi Huang

00:00 Design and Implementation of Timing Skew Calibration for High-speed Analog-to-digital Converters
Po-Chiang Tung (*National Chung Cheng University*); *Tsung-Heng Tsai* (*National Chung Cheng University*);

00:00 A 5–11 GHz Wideband Low Noise Amplifier Using Transformer Feedback Technique
Chung-Ying Li (*National Central University*); *Kuan-Hsiu Chien* (*National Central University*); *Hsu-Liang Yen* (*National Central University*); *Hwann-Kaeo Chiou* (*National Central University*);

00:00 Chip Design of Wireless Power Transfer Using Frequency Variation
Shih-Chang Hsia (*National Yunlin University of Science and Technology*); *Po-Yu Kuo* (*National Yunlin University of Science and Technology*); *Jui-His Liu* (*National Yunlin University of Science and Technology*);

00:00 System on Programmable Chip Design for FMCW Radar Signal Processing
Min-Xiang Huang (*National Yunlin University of Science & Technology*); *Ho-En Liao* (*Feng Chia University*); *Yun-Ruei Lee* (*National Yunlin University of Science & Technology*); *Ming-Hwa Sheu* (*National Yunlin University of Science & Technology*);

00:00 Integrated 330 GHz CMOS Power Detector with Built-in Chopper and Digital Output for THz Imaging Application
Wei-Cheng Chen (*National Chiao-Tung University*); *Tzu-Chao Yan* (*National Chiao-Tung University*); *Hao-Chiao Hong* (*National Chiao-Tung University*); *Chien-Nan Kuo* (*National Chiao-Tung University*);

00:00 Analysis for the Optimal Designs of Two-coil Inductive Coupling Wireless Power Transfer Systems
Hao-Chiao Hong (*National Chiao-Tung University*);

00:00 Jitter Tolerance and Jitter Transfer Enhancing Technique for High-speed Clock and Data Recovery Circuits
Yo-Hao Tu (*National Central University*); *Ting-Tsung Chen* (*National Central University*); *Kuo-Hsing Cheng* (*Nation Center University*);

00:00 Determination of Planar Transmission Line Characteristic Impedances on Lossy/Dispersive Substrates with Three Unknown Calibration Standards up to 110 GHz
Chien-Chang Huang (*Yuan Ze University*);

00:00 Wireless Intraocular Pressure Sensing System — Reader Chip
Hong-Yi Huang (*National Taipei University*); *Ping-Che Hsieh* (*National Taipei University*); *Bing-Yu Liu* (*National Taipei University*); *Tzuen-Hsi Huang* (*National Cheng Kung University*); *Ching-Hsing Luo* (*National Cheng-Kung University*); *Jin-Chern Chiou* (*National Chiao-Tung University*); *Tsung-Han Tsai* (*National Central University*);

00:00 Wireless Intraocular Pressure Sensing System — Sensor Chip
Hong-Yi Huang (*National Taipei University*); *Ting-Chia Yeh* (*National Taipei University*); *Chun Yi* (*National Taipei University*); *Tzuen-Hsi Huang* (*National Cheng Kung University*); *Ching-Hsing Luo* (*National Cheng-Kung University*); *Jin-Chern Chiou* (*National Chiao-Tung University*);

00:00 A PAM-4 Transmitter with Active Back Termination for High Speed Interconnect
Kai-Yi Su (*National Chiao-Tung University*); *Wei-Zen Chen* (*National Chiao-Tung University*);

Session 1A8
FocusSession.SC1: Casimir Effect and Heat Transfer 1

Monday AM, May 22, 2017

Room B5

Organized by Mauro Antezza, Brahim Guizal

Chaired by Mauro Antezza, Brahim Guizal

00:00 Invited Negative Casimir Entropies for Nanoparticles and Surfaces
Kimball A. Milton (*University of Oklahoma*); *Li Yang* (*Norwegian University of Science and Technology*); *Pushpa Kalauni* (*University of Oklahoma*); *Prachi Parashar* (*University of Oklahoma*);

00:00 Invited Theoretical Prediction of Levitation Due to Casimir Force in Dielectric Plane-parallel Systems
Victoria Esteso Carrizo (*Consejo Superior de Investigaciones Cientificas — University of Seville*); *Sol Carretero-Palacios* (*Consejo Superior de Investigaciones Cientificas — University of Seville*); *Hernan Miguez Garcia* (*Spanish National Research Council*);

00:00 Invited Global Consequences of a Local Casimir Force
Vitaly B. Svetovoy (*University of Groningen*); *George Palasantzas* (*University of Groningen*);

00:00 Invited The Casimir Force in Experiments with Si Gratings
Valery N. Marachevsky (*Saint Petersburg State University*); *Alexandra D. Nelson* (*Saint Petersburg State University*);

00:00 Invited Casimir Forces for Systems with Gratings
Alexandra D. Nelson (*Saint Petersburg State University*);

00:00 Invited Logic Gates with Thermal Photons
Philippe Ben-Abdallah (*Universite Paris-Sud 11*); *Svend-Age Biehs* (*Carl von Ossietzky Universitat*);

00:00 Invited Non-equilibrium Heat Transfer and Casimir Interactions in Arbitrary N-body Planar Systems
Ivan Latella (*Universite Paris-Saclay*); *Riccardo Messina* (*Institut d'Optique, CNRS, Universite Paris-Sud 11*); *Svend-Age Biehs* (*Carl von Ossietzky Universitat*); *Mauro Antezza* (*Universite de Montpellier*); *Philippe Ben-Abdallah* (*Universite Paris-Sud 11*);

00:00 Invited Nano Antenna Arrays for Tailored Infrared Thermal Emission
Marco Centini (*Universita di Roma, La Sapienza*); *Alessio Benedetti* (*Universita di Roma, La Sapienza*); *M. C. Larciprete* (*Sapienza Universita di Roma*); *Alessandro Belardini* (*Universita di Roma, La Sapienza*); *Roberto Li Voti* (*Sapienza University of Rome*); *M. Bertolotti* (*Universita di Roma, La Sapienza*); *Concita Sibilia* (*Universita di Roma, La Sapienza*);

00:00 Invited Casimir-polder Potential for Atoms Driven by a Laser Field
Sebastian Fuchs (*Freiburg University*); *Robert Bennett* (*Freiburg University*); *Stefan Yoshi Buhmann* (*University of Freiburg*);

00:00 Invited Casimir Effect and Heat Transfer for Non-reciprocal Media
Stefan Yoshi Buhmann (*University of Freiburg*); *S. Fuchs* (*University of Freiburg*); *F. Lindel* (*University of Freiburg*); *M. Antezza* (*Universite de Montpellier*);

00:00 Invited Sphere-plate Heat Transfer: An Analytic Approach
Robert Bennett (*Albert-Ludwigs-Universitat Freiburg*); *Stefan Yoshi Buhmann* (*University of Freiburg*);

00:00 Fluctuational Electrodynamics for Nonlinear Materi-
Invited als
Heino Soo (*Universitat Stuttgart*); *Matthias Kruger* (*University of Stuttgart & Max Planck Institute for Intelligent Systems*);

Session 1A9
New Trends in Antenna, Dynamic Networks and Communication Signal Processing 1

Monday AM, May 22, 2017

Room B3

Organized by Malay Ranjan Tripathy, Boris A. Lagovsky

Chaired by Malay Ranjan Tripathy, Boris A. Lagovsky

00:00 Superresolution in Signal Processing Using Smart Antenna
Boris A. Lagovsky (*Moscow State Institute of Radio Engineering and Automation (Technical University)*);

00:00 Shape Optimization of UWB Pulses
Boris A. Lagovsky (*Moscow State Institute of Radio Engineering and Automation (Technical University)*); *A. G. Chikina* (*Moscow State Institute of Radio Engineering and Automation (Technical University)*);

00:00 Backfire Helix Antennas for mm Precision of Satellite Positioning in Real Time
Dmitry V. Tatarnikov (*Topcon Positioning Systems, Moscow Aviation Institute (Technical University)*); *Anton P. Stepanenko* (*Topcon Positioning Systems, Moscow Aviation Institute (Technical University)*); *Andrey V. Astakhov* (*Topcon Positioning Systems, Moscow Aviation Institute (Technical University)*);

00:00 A S-shaped Millimeter Wave Antenna for UWB Applications
Shrutika Channa (*Indian Institute of Technology Hyderabad*); *Lakhan Panwar* (*Indian Institute of Technology Hyderabad*); *Siva Rama Krishna Vanjari* (*Indian Institute of Technology Hyderabad*); *Mohammed Zafar Ali Khan* (*Indian Institute of Technology*);

00:00 Evaluation of the Influence of Directivity Factor of Directive Elements of Conformal Antenna Arrays on the Performances of Azimuth-elevation DOA Estimation
Yuri Nechaev (*Voronezh State University*); *Ilia Peshkov* (*Elets State University*);

00:00 Wavelet-based Method for Nonlinear Inverse Scattering Problem Using Least Mean Square Estimation
Manisha Khulbe (*Ambedkar Institute of Advanced Communication Technology and Research*); *Malay Ranjan Tripathy* (*Amity University Uttar Pradesh*); *Harish Parthasarthy* (*University of Delhi*);

00:00 Performance Analysis of Conductive Patch Materials for the Design and Fabrication of Microstrip Patch Antennas
Gurleen Kaur (*Punjabi University*); *Amarveer Singh* (*Punjabi University*); *Divesh Mittal* (*Punjabi University*); *Prince* (*Punjabi University*); *Avneet Kaur* (*Punjabi University*); *Parth Panday* (*College of Technology*); *Ekambir Sidhu* (*Punjabi University*);

00:00 Understanding Rate Allocation Mechanism in Strategic and Structural Communication Network via Dynamic Adjacency
Saumay Pushp (*KAIST*); *Priya Ranjan* (*Amity University Uttar Pradesh*); *Malay Ranjan Tripathy* (*Amity University Uttar Pradesh*);

00:00 Design and Performance Analysis of Rectangular Textile Microstrip Patch Antennas Employing Different Textile Materials for Ku Band Applications
Amarveer Singh (*Punjabi University*); *Gurleen Kaur* (*Punjabi University*); *Payal Kalra* (*Punjabi University*); *Avneet Kaur* (*Punjabi University*); *Jaspreet Singh* (*Punjabi University*); *Parth Pandey* (*College of Technology*); *Ekambir Sidhu* (*Punjabi University*);

00:00 NS-3 Simulations of $\mathbf{4}\times\mathbf{4}$ MIMO Integrated with LTE Module
Sunil Kumar (*Amity University*); *Malay Ranjan Tripathy* (*Amity University Uttar Pradesh*); *Priya Ranjan* (*Amity University Uttar Pradesh*);

00:00 Bandwidth and Efficiency Enhanced Miniaturized Antenna for WLAN 802.11ac Applications
Emre Aydin (*AirTies Wireless Networks*); *Mehmet Ali Yesil* (*AirTies Wireless Networks*); *Erdem Ulukan* (*AirTies Wireless Networks*); *Cafer Uyanik* (*Istanbul Technical University*);

Session 1A_10
FocusSession.SC2: Metamaterials and Transformation Optics 1

Monday AM, May 22, 2017

Room R11

Organized by Hongsheng Chen, Yu Luo

Chaired by Bin Zheng

00:00 Hidden Symmetries in Plasmonic Gratings
Invited
Paloma Arroyo Huidobro (*Imperial College London*); *Stefan A. Maier* (*Imperial College London*); *John B. Pendry* (*Imperial College London*);

00:00 High-efficiency and Wideband Linear Polarization
Invited Converter Based on Double U-shaped Metasurface
Xue Man Ma (*Lanzhou University*); *Zhong-Lei Mei* (*Lanzhou University*);

00:00 Cloaking by Metasurfaces in the Transmission Geom-
Invited etry
Hong Chen Chu (*Soochow University*); *Qi Li* (*Fudan University*); *Bingbing Liu* (*Soochow University*); *Jie Luo* (*Soochow University*); *Zhi Hong Hang* (*Soochow University*); *Shulin Sun* (*Fudan University*); *Lei Zhou* (*Fudan University*); *Yun Lai* (*Soochow University*);

00:00 Three-dimensional Quasi-static Magnetic Cloak at
Invited Room Temperature
Wei Jiang (*Zhejiang University*); *Sailing He* (*Zhejiang University*); *Yungui Ma* (*Zhejiang University*);

00:00 Realization of Conformal Mapping Cloak for Surface
Invited Wave
Rongrong Zhu (*Zhejiang University*); *Bin Zheng* (*Zhejiang University*); *Huaping Wang* (*Zhejiang University*); *Shahram Dehdashti* (*Zhejiang University*); *Hongsheng Chen* (*Zhejiang University*);

00:00 Influence of Permittivity and Substrate Thickness for Miniaturization of Artificial Magnetic Conductor
Welyson Tiano dos Santos Ramos (*University of Minas Gerais*); *Renato Cardoso Mesquita* (*University of Minas Gerais*); *Elson Jose Da Silva* (*Universidade Federal de Minas Gerais*);

00:00 Analysis of Electric Field Distribution on Artificial Magnetic Conductor: Miniaturization Via Bowtie Shape
Welyson Tiano dos Santos Ramos (*University of Minas Gerais*); *Renato Cardoso Mesquita* (*University of Minas Gerais*); *Elson Jose Da Silva* (*Universidade Federal de Minas Gerais*);

00:00 Electromagnetic Beams in 1D Photonic Crystals
Maria Perel (*St. Petersburg State University*); *Mikhail Sidorenko* (*St. Petersburg State University*);

00:00 Microwave Dielectric Properties of Nanocomposites Based on Opal Matrices with Particles of Spinels
Anatoly B. Rinkevich (*Institute of Metal Physics*); *D. V. Perov* (*Institute of Metal Physics Ural Division of Russian Academy of Sciences*); *Ya. A. Pakhomov* (*M.N. Miheev Institute of Metal Physics Ural Branch of RAS*); *M. I. Samoylovich* (*Central Research Technological Institute "TECHNOMASH"*); *E. A. Kuznetsov* (*Nizhny Tagil Branch of the Ekaterinburg State Social-Pedagogical University*);

00:00 Plasmonic Resonances in Sub-Terahertz Fishnet Metamaterial Based on Complementary Hexagonal Resonator
Y. Yuksek (*Middle East Technical University-Northern Cyprus Campus*); *S. M. Demir* (*Middle East Technical University-Northern Cyprus Campus*); *Cumali Sabah* (*Middle East Technical University-Northern Cyprus Campus*);

00:00 Bianisotropic Metamaterials Made of Planar Split-
ring Resonators
Xiaoxiao Zheng (*Hangzhou Dianzi University*); *Liang Peng* (*Hangzhou Dianzi University*); *Kewen Wang* (*Hangzhou Dianzi University*); *Shuaifei Sang* (*Hangzhou Dianzi University*); *Kuiwen Xu* (*Hangzhou Dianzi University*); *Gaofeng Wang* (*Hangzhou Dianzi University*);

Session 1A_11
FocusSession.SC2: New Principles and Applications of Photonic/Phononic Crystals 1

Monday AM, May 22, 2017

Room R10

Organized by Yun Lai, Lei Shi

00:00 An Electrically Tunable Plasmonic Optical Modula-
Invited tor with High Modulation Depth Based on Graphene-wrapped Silver Nanowire
Chi Zhang (*Nanjing University*); *Peng Zhan* (*Nanjing University*); *Cheng Sun* (*Northwestern University*); *Zhenlin Wang* (*Nanjing University*);

00:00 Electrically Tunable Optical Switching in One-dimensional Photonic Crystal
Kazem Jamshidi-Ghaleh (*Islamic Azad University*); *Fatemeh Moslemi* (*Azarbaijan Shahid Madani University*);

00:00 The Colloidal Systems on Semiconductor Nanoparticles
Alexey O. Kucherik (*Stoletovs' Vladimir State University*); *Stella V. Kutrovskaya* (*Stoletovs' Vladimir State University*); *Igor O. Scrybin* (*Stoletovs' Vladimir State University*); *Sergey M. Arakelyan* (*Stoletovs Vladimir State University*); *E. Shamanskaya* (*Stoletovs' Vladimir State University*); *S. Zhirnova* (*Stoletovs' Vladimir State University*);

00:00 Invited Valley-dependent Transportation and Pseudomagnetic Field in Photonic Graphene
Hong Chen (*Tongji University*);

00:00 Invited Topological Phase Transition and Interface States in Hybrid Plasmonic-photonic Systems
Dezhuan Han (*Chongqing University*);

00:00 Photonic Crystal Waveguides for Particle Acceleration
Andrea Locatelli (*Universita degli Studi di Brescia*); *Gino Sorbello* (*Universita di Catania*); *Giuseppe Torrisi* (*Istituto Nazionale di Fisica Nucleare (INFN)*); *Luigi Celona* (*Istituto Nazionale di Fisica Nucleare (INFN)*); *Costantino De Angelis* (*Universita degli Studi di Brescia*);

00:00 Digital Image Processing for Studying the Colloidal Systems
Nikita Pavlovich Kryuchkov (*Bauman Moscow State Technical University*); *Egor Viktorovich Yakovlev* (*Bauman Moscow Technical University (BMSTU)*); *Pavel Vasilievich Ovcharov* (*Bauman Moscow Technical University (BMSTU)*); *Arsen Karenovich Zotov* (*Bauman Moscow Technical University (BMSTU)*); *Kirill Igorevich Zaytsev* (*Bauman Moscow State Technical University*); *Stanislav Olegovich Yurchenko* (*Bauman Moscow State Technical University*);

00:00 Hollow-core Electromagnetic Band Gap Waveguide as DC-break for Ion Sources
O. Leonardi (*Istituto Nazionale di Fisica Nucleare*); *Giuseppe Torrisi* (*Istituto Nazionale di Fisica Nucleare*); *Loreto Di Donato* (*University Mediterranea of Reggio Calabria*); *Andrea Locatelli* (*Universita degli Studi di Brescia*); *Luigi Celona* (*Istituto Nazionale di Fisica Nucleare (INFN)*); *Costantino De Angelis* (*Universita degli Studi di Brescia*); *Gino Sorbello* (*Istituto Nazionale di Fisica Nucleare*);

00:00 Invited Coalescence of Exceptional Points and Phase Diagrams of PT-symmetric Polariton Crystal
Zhen-Zhen Liu (*Harbin Institute of Technology*); *Jun Jun Xiao* (*Harbin Institute of Technology*);

00:00 Invited Topological Bound State in Continuum
Guancong Ma (*Hong Kong University of Science and Technology*); *Yixin Xiao* (*The Hong Kong University of Science and Technology*); *Zhao-Qing Zhang* (*The Hong Kong University of Science and Technology*); *C. T. Chan* (*The Hong Kong University of Science and Technology*);

00:00 Enhanced and Tunable Magneto-optics via Fano Lattice Surface Modes in Arrays of Anisotropic Magnetic Nanoantennas
Luca Bergamini (*University of the Basque Country UPV-EHU*); *Nicolo Maccaferri* (*CIC NanoGUNE*); *M. Pancaldi* (*CIC NanoGUNE*); *M. K. Schmidt* (*CSIC-UPV/EHU and DIPC*); *M. Kataja* (*Aalto University*); *S. van Dijken* (*Aalto University*); *Nerea Zabala* (*University of the Basque Country UPV-EHU*); *J. Aizpurua* (*Donostia International Physics Center (DIPC)*); *P. Vavassori* (*CIC NanoGUNE*);

Session 1A_12
SC3&2: Nanostructured Photoconversion Technologies and Devices

Monday AM, May 22, 2017

Room R9

Organized by Xiaofeng Li, Liang Li

Chaired by Xiaofeng Li, Liang Li

00:00 Invited Unconventional Thermal Engineering of Photoconversion Nanomaterials
Hongqiang Wang (*Northwestern Polytechnical University*);

00:00 Invited Applications of Atomic Layer Deposition in Energy Devices
Liang Li (*Soochow University*);

00:00 Invited Conversion from Chaotic Dynamics of Semiconductor Laser to Random Numbers
Anbang Wang (*Taiyuan University of Technology*); *Longsheng Wang* (*Ministry of Education and Shanxi Province*); *Yuncai Wang* (*Ministry of Education and Shanxi Province*);

00:00 Invited Opto-electro-thermal Simulation of Photovoltaic Devices
Xiaofeng Li (*Soochow University*); *Aixue Shang* (*Soochow University*);

00:00 Photoresponse in Hybrid Single Walled Carbon Nanotube — Quantum Dot Phototransistors
Simas Rackauskas (*CCS — UNICAMP*); *Yulia A. Gromova* (*ITMO University*); *Tatiana Rackauskas* (*CCS — UNICAMP*); *Andrei V. Alaferdov* (*CCS — UNICAMP*); *Raluca Savu* (*CCS — UNICAMP*); *Esko I. Kauppinen* (*Aalto University*); *Albert G. Nasibulin* (*Aalto University*); *Stanislav A. Moshkalev* (*UNICAMP*);

00:00 Annealing Effect of Sputtered Crystalline MoO_3 Films on Hole Transporting in Inverted Type Perovskite Solar Cells
Lung-Chien Chen (*National Taipei University of Technology*); *Zong-Liang Tseng* (*National Taipei University of Technology*); *Jian-Hong Chen* (*National Taipei University of Technology*); *Kuan-Lin Lee* (*National Taipei University of Technology*);

00:00 Interface Engineering in Inorganic Hybrid Structures
Invited towards Improved Photocatalysis
Yujie Xiong (*University of Science and Technology of China*);

00:00 Plasmonic Metal Core-dielectric Shell Nanoparticles
Invited Enhancing the Power Conversion Efficiencies of Organic Thin Film and Dye-sensitized Solar Cells
Dangyuan Lei (*The Hong Kong Polytechnic University*);

00:00 Prospects of Epitaxy of GaAs/Si(001) Structures for High-performance Tandem Solar Cells
Oleg Petrovitch Pchelyakov (*Rzhanov Institute of Semiconductors Physics SB RAS*); *N. A. Pakhanov* (*Rzhanov Institute of Semiconductors Physics SB RAS*); *Valeriy V. Preobrazhenskiy* (*Rzhanov Institute of Semiconductor Physics*); *Michael A. Putyato* (*Rzhanov Institute of Semiconductor Physics*); *A. I. Nikiforov* (*Rzhanov Institute of Semiconductors Physics SB RAS*);

Session 1A_13a
Biophotonics, Optical Sensors and Environmental Monitoring

Monday AM, May 22, 2017

Room R8

00:00 The Laser-induced Synthesis of Linear Carbon Chains
Anton V. Osipov (*Stoletovs' Vladimir State University*); *Sergey M. Arakelyan* (*Stoletovs Vladimir State University*); *Stella V. Kutrovskaya* (*Stoletovs' Vladimir State University*); *V. Samyshkin* (*Vladimir State University*);

00:00 Color Digital Holographic Microscopy for In-flow Observation of Plankton Microorganisms
Jerome Dohet-Eraly (*Universite Libre de Bruxelles*); *Catherine Yourassowsky* (*Universite Libre de Bruxelles*); *Frank Dubois* (*Universite Libre de Bruxelles*);

00:00 Intergrated Polymeric Interferometer with Slot Waveguide for Photonics Sensing
Jozef Chovan (*International Laser Centre*); *Frantisek Uherek* (*Slovak University of Technology in Bratislava*); *Anton Kuzma* (*Slovak University of Technology in Bratislava*);

00:00 Dielectric Waveguides with Aperiodic Fibonacci Nanostructure for Point-of-care Biosensing Applications
Moritz Paulsen (*Christian-Albrechts-Universitat zu Kiel*); *Sabrina Jahns* (*Christian-Albrechts-Universitat zu Kiel*); *Martina Gerken* (*Christian-Albrechts-Universitat zu Kiel*);

00:00 Polymer Resonators for Glucose Sensing and Milk Sphingomyelin Gel/Fluid Phase Transition Detection
Q. Li (*Universite Rennes 1*); *V. Vie* (*Universite de Rennes 1*); *R. Castro-Beltran* (*Universite Rennes 1*); *H. Lhermite* (*Universite de Rennes 1*); *E. Gaviot* (*Universite Le Mans*); *A. Moreac* (*Universite Rennes 1*); *C. Bourlieu* (*Science et Technologie du Lait et de l'Oeuf*); *D. Dupont* (*Science et Technologie du Lait et de l'Oeuf*); *L. Frein* (*Universite Rennes 1*); *Bruno Beche* (*Universite Rennes 1*);

Session 1A_13b
Photonics and Optoelectronics with Two-dimensional Materials

Monday AM, May 22, 2017

Room R8

Organized by Anna Baldycheva, Monica Craciun

Chaired by Anna Baldycheva

00:00 Photon- and Plasmon-assisted Resonant Tunneling in Graphene-based Heterostructures
Andrey Bylinkin (*Moscow Institute of Physics and Technology*); *Dmitry Svintsov* (*Moscow Institute of Physics and Technology*); *Victor Ryzhii* (*Tohoku University*); *Taiichi Otsuji* (*Tohoku University*);

00:00 Enhanced Polariton Propagation through Isotopic Enrichment
Alexander J. Giles (*United States Naval Research Laboratory*); *Siyuan Dai* (*University of California San Diego*); *Igor Vurgaftman* (*United States Naval Research Laboratory*); *Timothy Hoffman* (*Kansas State University*); *Song Liu* (*Kansas State University*); *Lucas Lindsay* (*Materials Science and Technology Division, Oak Ridge National Laboratory*); *Chase Ellis* (*United States Naval Research Laboratory*); *Nathanael Assefa* (*NREIP Summer Student residing at NRL*); *Ioannis Chatzakis* (*ASEE Postdoctoral Fellow residing at NRL*); *Thomas L. Reinecke* (*United States Naval Research Laboratory*); *Joseph Tischler* (*United States Naval Research Laboratory*); *Michael Fogler* (*University of California, San Diego*); *J. H. Edgar* (*Kansas State University*); *D. N. Basov* (*University of California San Diego*); *Joshua D. Caldwell* (*US Naval Research Lab*);

00:00 Optical Diffraction from Photonic-graphene Metasurfaces
A. D. Sinelnik (*ITMO University*); *Mikhail V. Rybin* (*National Research University for Information Technology, Mechanics and Optics*); *M. F. Limonov* (*ITMO University*); *Yuri S. Kivshar* (*Australian National University*); *K. B. Samusev* (*Loffe Physics-Technical Institute of the Russian Academy of Science*);

00:00 Monolayer Graphene Based Perfect Absorption Structures
Chu-Cai Guo (*National University of Defense Technology*); *Zhihong Zhu* (*National University of Defense Technology*); *Ken Liu* (*National University of Defense Technology*); *Xiao-Dong Yuan* (*National University of Defense Technology*); *Shiqiao Qin* (*National University of Defense Technology*);

00:00 Chip-integrated Nearly Perfect Graphene Absorber
Wei Xu (*National University of Defense Technology*); *Zhihong Zhu* (*National University of Defense Technology*); *Ken Liu* (*National University of Defense Technology*); *Jianfa Zhang* (*National University of Defense Technology*); *Chu-Cai Guo* (*National University of Defense Technology*);

00:00 $Hg_{1-x}Cd_xTe$ Based ***p-i-n*** IR Photodetector for Free Space Optical Communication
Shonak Bansal (*PEC University of Technology*); *Kuldeep Sharma* (*PEC University of Technology*); *Khushboo Soni* (*Institute of Nano Science and Technology*); *Neena Gupta* (*PEC University of Technology*); *Kaushik Ghosh* (*PEC University of Technology*); *Arun Kumar Singh* (*PEC University of Technology*);

Session 1A0
Poster Session 1

Monday AM, May 22, 2017
9:00 AM - 13:00 AM
Room B2

00:00 Experimental Study of Microwave Permittivity of Composites Filled with SiC Powders as a Function of Temperature
Alexey D. Mishin (*Institute for Theoretical and Applied Electromagnetics*); *Konstantin N. Rozanov* (*Institute for Theoretical and Applied Electromagnetics, RAS*); *Sergey N. Starostenko* (*Institute for Theoretical and Applied Electromagnetics RAS*);

00:00 Kinetics of Structuring of Protein Solutions in Magnetic Fields in Dehydration
M. A. Baranov (*Peter the Great Saint Petersburg Polytechnic University*); *E. N. Velichko* (*Peter the Great Saint Petersburg Polytechnic University*); *Elina K. Nepomnyashchaya* (*Peter the Great Saint Petersburg Polytechnic University*); *Evgenii T. Aksenov* (*Peter the Great Saint Petersburg Polytechnic University*);

00:00 Exploiting the Goos-Hänchen and Imbert-Fedorov Effects in a Magneto-electric Liquid-crystal-based System for Applications to Tunable Chemical Vapor Detection
Yuliya S. Dadoenkova (*Novgorod State University*); *Florian F. L. Bentivegna* (*ENIB*); *Viacheslav V. Svetukhin* (*Ulyanovsk State University*); *Roman Valer'evich Petrov* (*Novgorod State University*); *Alexander Sergeevich Tatarenko* (*Novgorod State University*); *Mirza Imamovich Bichurin* (*Novgorod State University*);

00:00 High-resolution Fiber Plasmon Sensor
Kirill A. Tomyshev (*Kotel'nikov Institute of Radio Engineering and Electronics of RAS*); *D. K. Tazhetdinova* (*Kotel'nikov Institute of Radio Engineering and Electronics of RAS*); *Oleg V. Butov* (*Kotel'nikov Institute of Radio Engineering and Electronics of RAS*);

00:00 Efficient Combination of Interference and Plasmon Resonance Raman Amplification by Optimized Heterostructures for Optical Microscopy and Molecule Detection
Leo Alvarez-Fraga (*Instituto de Ciencia de Materiales de Madrid*); *Esteban Climent-Pascual* (*Instituto de Ciencia de Materiales de Madrid*); *Montserrat Aguilar-Pujol* (*Instituto de Ciencia de Materiales de Madrid*); *Rafael Ramirez-Jimenez* (*Universidad Carlos III de Madrid*); *Felix Jimenez-Villacorta* (*Instituto de Ciencia de Materiales de Madrid*); *Carlos Prieto* (*Instituto de Ciencia de Materiales de Madrid*); *Alicia de Andres* (*Instituto de Ciencia de Materiales de Madrid*);

00:00 An LP-DOAS Instrument with a Laser Driven Light Source for Open-path Measurement of Atmospheric NO_2 in Shanghai
Mingzhi Li (*University of Shanghai for Science and Technology*); *Jun Chen* (*University of Shanghai for Science and Technology*); *Mingxu Su* (*University of Shanghai for Science and Technology*); *Huinan Yang* (*University of Shanghai for Science and Technology*); *Arun Ramachandran* (*National Institute of Technology Calicut*); *Ravi Varma* (*National Institute of Technology Calicut*);

00:00 Laser Induced Cell Death Stages Investigation by Raman Spectroscopy
Andrey Yurievich Zubin (*Immanuel Kant Baltic Federal University*); *Igor V. Alekseenko* (*Immanuel Kant Baltic Federal University*); *Ilya Samusev* (*Immanuel Kant Baltic Federal University*); *Svetlana Babak* (*Immanuel Kant Baltic Federal University*); *Maksim Demin* (*Immanuel Kant Baltic Federal University*); *Valery Bryukhanov* (*Immanuel Kant Baltic Federal University*);

00:00 Interaction between Quantum Dots Cdse/ZnS Adsorbed on Silver Roughness Surface with Human Serum Albumin
Andrey Yurievich Zubin (*Immanuel Kant Baltic Federal University*); *Elizaveta I. Konstantinova* (*Immanuel Kant Baltic Federal University*); *Ekaterina Moiseeva* (*Immanuel Kant Baltic Federal University*); *Vasiliy A. Slezhkin* (*Immanuel Kant Baltic Federal University*); *Valery V. Bryukhanov* (*Immanuel Kant Baltic Federal University*);

00:00 Augmented Combined Field Integral Equation for Low Frequency Problems
Dingbang Wen (*University of Electronic Science and Technology of China*); *Zai-Ping Nie* (*University of Electronic Science and Technology of China*); *Lu Liu* (*University of Electronic Science and Technology of China*); *Zijian Liu* (*University of Electronic Science and Technology of China*); *Jun Tan* (*University of Electronic Science and Technology of China*);

00:00 Non-conforming and Non-overlapping DDM for Solving Scattering from PEC Objects
Kui Han (*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*); *Xiaofeng Que* (*University of Electronic Science and Technology of China*); *Shiquan He* (*University of Electronic Science and Technology of China*);

00:00 Heating of Metal Powders in the External High-frequency Field
Alexander V. Vodopyanov (*Federal State Budgetary Scientific Institution "Federal Research Center The Institute of Applied Physics of the Russian Academy of Sciences"*); *Igor D. Dubinov* (*Federal State Budgetary Scientific Institution "Federal Research Center The Institute of Applied Physics of the Russian Academy of Sciences"*); *Vladimir E. Semenov* (*Federal State Budgetary Scientific Institution "Federal Research Center The Institute of Applied Physics of the Russian Academy of Sciences"*);

00:00 Loop-star Decomposition for Any Higher-order Elements for the Surface Integral Equation
Jose M. Gil (*Universidad Politecnica de Madrid*); *Miguel Angel Gonzalez* (*Universidad Politecnica de Madrid*); *Rafael Gomez-Alcala* (*Universidad de Extremadura*); *Jesus Garcia-Jimenez* (*Universidad Politecnica de Madrid*);

00:00 Optimal Design and Modeling of the Multi-stage Saturable Magnetically Controlled Reactor
Xuxuan Chen (*Wuhan University of Science and Technology*); *Bin Wang* (*Wuhan University of Science and Technology*);

00:00 Mini- and Microgenerators Magnetic Circuits Design
Pavel Fiala (*Brno University of Technology*); *Zoltan Szabo* (*Brno University of Technology*); *Petr Marcon* (*Brno University of Technology*); *Zdenek Roubal* (*Brno University of Technology*); *Tomas Kriz* (*Brno University of Technology*);

00:00 Electrical Impedance Tomography in the Testing of Material Defects
Tomas Kriz (*Brno University of Technology*); *Jan Dusek* (*Brno University of Technology*);

00:00 An Improved High Angular Resolution Method by Using Four-channel Jointed Monopulse Radar
Huanyao Dai (*State Key Laboratory of Complex Electromagnetic Environment Effects on Electronics and Information*); *Hui Han* (*State Key Laboratory of Complex Electromagnetic Environment Effects on Electronics and Information*); *Jianlu Wang* (*State Key Laboratory of Complex Electromagnetic Environment Effects on Electronics and Information*); *Xiong Xu* (*State Key Laboratory of Complex Electromagnetic Environment Effects on Electronics and Information*); *Huidong Qiao* (*State Key Laboratory of Complex Electromagnetic Environment Effects on Electronics and Information*);

00:00 THz Symmetrical Polarization Conversion in Asymmetrical Chiral Metasurface
Feng Lan (*University of Electronic Science and Technology of China*); *Ziqiang Yang* (*University of Electronic Science and Technology of China*); *Xiaofang Wu* (*University of Electronic Science and Technology of China*); *Zongjun Shi* (*University of Electronic Science and Technology of China*); *Hongxin Zeng* (*University of Electronic Science and Technology of China*); *Ting Zhang* (*University of Electronic Science and Technology of China*); *Feng Luo* (*University of Electronic Science and Technology of China*); *Meng Li* (*University of Electronic Science and Technology of China*);

00:00 Switchable Terahertz Polarization Conversion via Phase-change Metasurface
Xiaofang Wu (*University of Electronic Science and Technology of China*); *Ziqiang Yang* (*University of Electronic Science and Technology of China*); *Feng Lan* (*University of Electronic Science and Technology of China*); *Zongjun Shi* (*University of Electronic Science and Technology of China*);

00:00 Modulation of the Plasmonic Modes in Dielectric-graphene-dielectric Superlattice
J. Madrigal-Melchor (*Escuela de Fisica de la Universidad Autonoma de Zacatecas*); *Isaac Rodriguez-Vargas* (*Universidad Autonoma de Zacatecas*); *J. R. Suarez-Lopez* (*Universidad Autonoma de Zacatecas*); *I. A. Sustaita-Torres* (*Universidad Autonoma de Zacatecas*); *C. Sifuentes-Gallardo* (*Universidad Autonoma de Zacatecas*);

00:00 Subwavelength Focusing of Laser Light Using Zone Plates with Silver and Chromium Rings
Elena Sergeevna Kozlova (*Samara National Research University*); *Victor V. Kotlyar* (*Image Processing Systems Institute of the Russian Academy of Sciences*); *Anton G. Nalimov* (*Image Processing Systems Institute — Branch of the Federal Scientific Research Centre "Crystallography and Photonics" of Russian Academy of Scienc*); *Sergey S. Stafeev* (*Image Processing Systems Institute — Branch of the Federal Scientific Research Centre "Crystallography and Photonics" of Russian Academy of Scienc*); *Maria V. Kotlyar* (*Samara National Research University*); *Liam O'Faolain* (*School of Physics and Astronomy of the University of St. Andrews*);

00:00 A Metalens for Subwavelength Focus of Light
Victor V. Kotlyar (*Image Processing Systems Institute of the Russian Academy of Sciences*); *Anton G. Nalimov* (*Image Processing Systems Institute — Branch of the Federal Scientific Research Centre "Crystallography and Photonics" of Russian Academy of Sciences*); *Sergey S. Stafeev* (*Image Processing Systems Institute — Branch of the Federal Scientific Research Centre "Crystallography and Photonics" of Russian Academy of Sciences*); *Liam O'Faolain* (*School of Physics and Astronomy of the University of St. Andrews*); *Elena Sergeevna Kozlova* (*Samara National Research University*); *Elena Sergeevna Kozlova* (*Samara National Research University*);

00:00 On NV Centers Properties in Aggregates of Detonation Nanodiamonds
Stepan V. Bolshedvorskii (*PN Lebedev Institute, RAS*); *Vadim V. Vorobyov* (*PN Lebedev Institute, RAS*); *Vladimir V. Soshenko* (*PN Lebedev Institute, RAS*); *Vladimir A. Shershulin* (*Prokhorov General Physics Institute, RAS*); *Anton Zeleneev* (*Moscow Institute of Physics and Technology*); *Javid Javadzade* (*Moscow Institute of Physics and Technology*); *Olga Rubinas* (*Moscow Institute of Physics and Technology*); *Vadim N. Sorokin* (*PN Lebedev Institute, RAS*); *Andrey N. Smolyaninov* (*Photonic Nano-Meta Technologies*); *Alexey V. Akimov* (*Texas A&M University*);

00:00 Topological Edge Solitons in Polaritonic Lattice
Dmitry R. Gulevich (*ITMO University*); *D. Yudin* (*ITMO University*); *Dmitry V. Skryabin* (*University of Bath*); *Ivan V. Iorsh* (*National Research University for Information Technology, Mechanics and Optics*); *I. A. Shelykh* (*ITMO University*);

00:00 Zero Phonon Line Enhancement by Mie-type Resonances of Nanodiamonds with Nitrogen-vacancy Centers
Anastasiia S. Zalogina (*ITMO University*); *G. P. Zograf* (*ITMO University*); *S. V. Makarov* (*ITMO University*); *R. S. Savelev* (*ITMO University*); *S. I. Kudryashov* (*ITMO University*); *E. Y. Tiguntseva* (*ITMO University*); *Ilya V. Shadrivov* (*Australian National University*); *D. A. Zuev* (*ITMO University*); *D. A. Zuev* (*ITMO University*); *Pavel A. Belov* (*ITMO University*);

00:00 Purcell Factor Enhancement by Dielectric Nanoantennas for Nanodiamonds with NV-centers
Anastasiia S. Zalogina (*ITMO University*); *R. S. Saveliev* (*ITMO University*); *Ilya V. Shadrivov* (*Australian National University*); *D. A. Zuev* (*ITMO University*); *Pavel A. Belov* (*ITMO University*);

00:00 Approach for Fine-tuning of Hybrid Dimer Nanoantennas via Laser Melting
Stanislav A. Kolodny (*ITMO University*); *Yali Sun* (*Huazhong University of Science and Technology*); *Dmitry A. Zuev* (*ITMO University*); *Pavel A. Belov* (*ITMO University*); *Alexandr E. Krasnok* (*National Research University of Information Technologies, Mechanics and Optics (ITMO)*);

00:00 Experimental Demonstration of Fine-tunable Fano Resonance in Hybrid Oligomers
Sergey Igorevich Lepeshov (*ITMO University*); *A. E. Krasnok* (*ITMO University*); *V. A. Milichko* (*ITMO University*); *Dmitry A. Zuev* (*ITMO University*); *I. S. Mukhin* (*ITMO University*); *Pavel A. Belov* (*ITMO University*); *Andrey E. Miroshnichenko* (*Australian National University*);

00:00 Soliton Dual Comb in Crystalline Microresonators
Nikolay G. Pavlov (*Moscow Institute of Physics and Technology*); *G. Likhachev* (*Russian Quantum Center*); *S. Koptyev* (*Samsung R&D Institute Russia, SAIT-Russia Laboratory*); *N. M. Kondratiev* (*Russian Quantum Center*); *V. E. Lobanov* (*Russian Quantum Center*); *A. S. Voloshin* (*Russian Quantum Center*); *A. D. Ostapchenko* (*Moscow Institute of Physics and Technology*); *A. S. Gorodnitskii* (*Moscow Institute of Physics and Technology*); *I. A. Bilenko* (*Russian Quantum Center*); *M. L. Gorodetsky* (*Russian Quantum Center*);

00:00 A Calibration Method for Phase-only Spatial Light Modulator
Bingzhi Zhang (*Guangzhou University*); *Yujie Chen* (*Sun Yat-sen University*); *Raohui Feng* (*Sun Yat-sen University*);

00:00 Optimal Phase Element for Generating an Elliptic Perfect Optical Vortex
Alexey A. Kovalev (*Samara State Aerospace University, Image Processing Systems Institute of the Russian Academy of Science*); *Victor V. Kotlyar* (*Image Processing Systems Institute of the Russian Academy of Sciences*); *Alexey P. Porfirev* (*Image Processing Systems Institute of the Russian Academy of Sciences*); *Elena Sergeevna Kozlova* (*Samara National Research University*);

00:00 On the Bi-elliptical Toroidal Helical Antenna Problem
Hisham Abubakar Muhammed (*University of Lagos*); *Sulaiman Adeniyi Adekola* (*University of Lagos*); *Alex Ike Mowete* (*University of Lagos*);

00:00 A Low Frequency Forward Looking Antenna Array for LWD and MWD
Zijian Liu (*University of Electronic Science and Technology of China*); *Zai-Ping Nie* (*University of Electronic Science and Technology of China*); *Xiang Yang Sun* (*University of Electronic Science and Technology of China*); *Dingbang Wen* (*University of Electronic Science and Technology of China*); *Jun Tan* (*University of Electronic Science and Technology of China*);

00:00 Design of Slot Arrays for the Generation of Stair-step Patterns
Alapati Sudhakar (*RVR & JC College of Engineering*); *Devabhaktuni Madhavi* (*RVR & JC College of Engineering*);

00:00 Analysis and Measurement of Attenuation Constants of Ultra Wideband Signal through Commonly Used Building Materials
Alapati Sudhakar (*RVR & JC College of Engineering*); *Devabhaktuni Madhavi* (*RVR & JC College of Engineering*);

00:00 Concerning the Influence of Edge and Corner Feeds on the Radiation Fields of a Square-loop Antenna
Ayotunde Abimbola Ayorinde (*University of Lagos*); *Sulaiman Adeniyi Adekola* (*University of Lagos*); *Alex Ike Mowete* (*University of Lagos*);

00:00 Analysis of a Circular-loop Antenna Backed by a Circular Ground-plane of Finite Extent
Ayotunde Abimbola Ayorinde (*University of Lagos*); *Sulaiman Adeniyi Adekola* (*University of Lagos*); *Alex Ike Mowete* (*University of Lagos*);

00:00 Design of Ring-shaped Circular Microstrp Antenna for ULB Application
Chafai Abdel Hamid (*ENIG*); *Chafaa Hamrouni* (*University of Gabes*); *Hedi Sakli* (*Institut Superieur d'Informatique de Medenine*); *Abdennacer Kachouri* (*University of Gabes*); *Mohamed Naceur Abdelkrim* (*Ecole Nationale d'Ineenieurs de Gabes*);

00:00 Compact Coplanar Epsilon-negative Antenna with Ultra-wide Band Character
Jun Tao (*Southwest Jiaotong University*); *Quanyuan Feng* (*Southwest Jiaotong University*);

00:00 A Zeroth-order Resonant Antenna with Bandwidth Extended by Merging the Zeroth-order Mode with the First-negative Mode
Yonghao Xin (*Southwest Jiaotong University*); *Quanyuan Feng* (*Southwest Jiaotong University*); *Jun Tao* (*Southwest Jiaotong University*);

00:00 Compensation of Pointing for the Parabolic Antenna of a Radio Telescope
Huan Yu (*Shanghai Institute of Technology*);

00:00 Synthesis of Plane Wave Applied to 5G Communication Antenna Measurement
Rensheng Xie (*East China Normal University*); *Xi Wang* (*East China Normal University*); *Rongwei Wang* (*East China Normal University*); *Tailei Wang* (*East China Normal University*); *Dong Chen* (*East China Normal University*); *Tao Song* (*East China Normal University*); *Lei Kuang* (*East China Normal University*); *Shouzheng Zhu* (*East China Normal University*);

00:00 Design of Semi-active RFID Antenna
Rongwei Wang (*East China Normal University*); *Rensheng Xie* (*East China Normal University*); *Tailei Wang* (*East China Normal University*); *Dong Chen* (*East China Normal University*); *Tao Song* (*East China Normal University*); *Lei Kuang* (*East China Normal University*); *Shouzheng Zhu* (*East China Normal University*);

00:00 Frequency Transformation to Design Single Band Rectangular Patch MMW Antennas
Mayar Raafat Wageeh Elsebai (*Misr International University (MIU)*); *Tamer Mostafa Abdelfadl* (*Cairo University*); *Fawzy Ibrahim* (*Misr International University (MIU)*);

00:00 Asymmetric Coplanar Waveguide Fed Monopole Antenna with Perturbed Ground Plane
L. Meenu (*Amrita University*); *S. Aiswarya* (*Amrita University*); *Sreedevi K. Menon* (*Amrita University*);

00:00 Triple-band Planar Unidirectional Broadside Slot Antenna
Ming-Sheng Siao (*National Changhua University of Education*); *Wanchu Hong* (*National Changhua University of Education*); *Min-Hua Ho* (*National Changhua University of Education*);

00:00 Investigation on the Circularly Polarized Ferrite Antenna in Different Designs
Haiqing Deng (*Southwest Jiaotong University*); *Quanyuan Feng* (*Southwest Jiaotong University*); *Jinyan Liu* (*Southwest Jiaotong University*); *Zongliang Zheng* (*Southwest Jiaotong University*);

00:00 A Wideband Dual Circular Polarization Feed Chain for Satellite Antennas at K/Ka Bands
Jin-Gang Gong (*Xidian University*); *Qiao Li* (*Xidian University*); *Ming-Tao Zhang* (*Xi'an Institute of Space Radio Technology*); *Jian Hou* (*Academy of Space Electronic Information Technology*); *Yang Wang* (*Academy of Space Electronic Information Technology*); *Zhi Xu* (*Academy of Space Electronic Information Technology*);

00:00 Design of Waveguide Slot Array to Generate Sum and Difference Pattern for Synthetic Aperture Radar
Hisham Khalil (*Capital University of Science and Technology*); *Saeed Ur Rahman* (*Nanjing University of Aeronautics and Astronautics (NUAA)*); *Muhammad Mansoor Ahmed* (*Mohammad Ali Jinnah University*); *Qunsheng Cao* (*Nanjing University of Aeronautics and Astronautics*); *Ishfaq Hussain* (*Nanjing University of Aeronautics and Astronautics*);

00:00 Detection of Vulnerable Road Users in Blind Spots through Bluetooth Low Energy
Jo Verhaevert (*Ghent University*);

00:00 Multitarget Track-before-detect from Image Observations Based on Multi-object Particle PHD Filter
Ran Zhu (*National University of Defense Technology*); *Yunli Long* (*National University of Defense Technology*); *Zhichao Sha* (*National University of Defense Technology*); *Wei An* (*National University of Defense Technology*);

00:00 Multi-sensor Multi-object Joint Detection and Tracking from Image Observations Using Labeled Multi-Bernoulli Densities
Ran Zhu (*National University of Defense Technology*); *Yunli Long* (*National University of Defense Technology*); *Jungang Yang* (*National University of Defence Technology*); *Wei An* (*National University of Defense Technology*);

00:00 Effects of the Acoustic Gravity Waves on Altitudinal Atmospheric Profiles for Radio Occultation Experiments
Askar Khamidullin Faritovich (*M. V. Lomonosov Moscow State University (MSU)*); *M. E. Gorbunov* (*A. M. Obukhov Institute of Atmospheric Physics, Russian Academy of Sciences*); *V. I. Zakharov* (*M. V. Lomonosov Moscow State University (MSU)*);

00:00 Analytic Modeling and Optimization of the SSD Performance in Remote Sensing Systems
Qiyou Xie (*National University of Defense Technology*); *Hui Xu* (*National University of Defense Technology*);

00:00 A Hybrid Integration Method for Uniformly Accelerated Target
Ruiqi Tian (*National University of Defense Technology*); *Caiyong Lin* (*National University of Defense Technology*); *Qinglong Bao* (*National University of Defense Technology*); *Zengping Chen* (*National University of Defense Technology*);

00:00 A Wavelet Based Denoising Method for Weak Target Detection of Pulse Compression Radar
Caiyong Lin (*National University of Defense Technology*); *Ruiqi Tian* (*National University of Defense Technology*); *Qinglong Bao* (*National University of Defense Technology*); *Zengping Chen* (*National University of Defense Technology*);

00:00 Doppler Spectrums Based Translational Motion Compensation for Narrowband Radar Imaging
Yuling Liu (*National University of Defense Technology*); *Xizhang Wei* (*National University of Defense Technology*); *Bo Peng* (*National University of Defense Technology*); *Zhen Liu* (*National University of Defense Technology*); *Dongping Liao* (*National University of Defense Technology*); *Shuhong Wang* (*National University of Defense Technology*);

00:00 Electrophysical Properties of Textured Anisotropic Composite Materials Based on Micro Structures in the EHF Range
Alexander V. Badin (*Tomsk State University*); *Vasiliy U. Vigovskiy* (*Tomsk State University*); *Alexander I. Berdugin* (*Tomsk State University*); *Grigorij E. Kuleshov* (*Tomsk State University*); *Valentin I. Suslyaev* (*Tomsk State University*);

00:00 The Growth Conduction of Nanomaterials Layers by Laser Radiation
Levan P. Ichkitidze (*National Research University of Electronic Technology "MIET"*); *A. Yu. Gerasimenko* (*National Research University of Electronic Technology "MIET"*); *V. M. Podgaetsky* (*National Research University of Electronic Technology "MIET"*); *S. V. Selishchev* (*National Research University of Electronic Technology "MIET"*); *A. A. Pavlov* (*Institute of Nanotechnology of Microelectronics of the RAS*); *A. A. Dudin* (*Institute of Nanotechnology of Microelectronics of the RAS*);

00:00 Rectifying Characteristics, Photoelectric Properties and Magnetoresistance in Heterojunctions Composed of $La_{0.9}Hf_{0.1}MnO_3$/0.05%Nb-doped $SrTiO_3$
Yaping Qi (*The University of Hong Kong*); *Ju Gao* (*The University of Hong Kong*);

00:00 Spectroscopy and Dynamics of Laser Breakdown in Ultrasonic Field
Bulanov Alexey (*V.I. Il'ichev Pacific Oceanological Institute*);

00:00 Curvature Sensitivity Enhancement of Fused Fiber Taper
Clenilson Rodrigues Da Silveira (*Federal University of Para*); *Maria Thereza Miranda Rocco Giraldi* (*Military Institute of Engineering*); *Pedro Alberto Da Silva Jorge* (*INESC Porto*); *Joao Crisostomo Weyl Albuquerque Costa* (*Federal University of Para*); *Ricardo Silva* (*INESC Porto*); *Marcos Antonio Ruggieri Franco* (*Instituto de Estudos Avancados — IEAv*); *Orlando Frazao* (*INESC Porto*);

00:00 Reflective All-fiber Lyot Filter and Its Application for Twist Sensing
Xuewen Shu (*Huazhong University of Science and Technology*); *Bo Huang* (*Huazhong University of Science and Technology*); *Yueqing Du* (*Huazhong University of Science and Technology*);

00:00 Rectangular Antenna Array Optimization Using Wind Driven Optimization
Abdelmadjid Recioui (*University of Boumerdes*);

00:00 A Selection Scheme of Synthetic Functions for Synthetic Basis Functions Method
Yanlin Xu (*National University of Defense Technology*); *Hu Yang* (*National University of Defense Technology*); *Weikang Yu* (*National University of Defense Technology*);

00:00 Comparison of Space- and Time-propagation Approaches to Simulation of Few-cycle Pulses in Optical Fiber
Leonid S. Konev (*National Research University of Information Technologies, Mechanics and Optics*); *Solveyga Edvardo Azbite* (*ITMO University*); *Yu. A. Shpolyanskiy* (*ITMO University*);

00:00 Modeling and Detection of Demagnetization Fault in Permanent Magnet Synchronous Motors
Oussama Guellout (*Jijel University*); *Ali Rezig* (*University of Jijel*); *Abdoul N'diaye* (*University of Belfort-Montbéliard*); *Abdesslem Djerdir* (*University of Technology Belfort-Montbeliard*);

00:00 Efficient Model to Analyze the Frequency Selective Surfaces
Yi-Ling Wang (*University of Electronic Science and Technology of China (UESTC)*); *Zaiping Nie* (*University of Electronic Science and Technology of China*);

00:00 Modeling of the Energy Flux Density in the Circular Waveguide with a Layer of LHM Metamaterial
Vladimir A. Meshcheryakov (*Tomsk State University*); *Victor A. Zhuravlev* (*Tomsk State University*);

00:00 Versatile Biomimetic Haze Films for Efficiency En-
Invited hancement of Photovoltaic Devices
Zijian Zheng (*Hong Kong Polytechnic University*);

00:00 Tailoring Poly-layer Spherical Microcapsules for Optimal Light Absorption
Yurii E. Geints (*Zuev Institute of Atmospheric Optics, SB RAS*); *Ekaterina K. Panina* (*Zuev Institute of Atmospheric Optics, SB RAS*); *Alexander A. Zemlyanov* (*Zuev Institute of Atmospheric Optics, SB RAS*);

00:00 Optimizing Photonic Nanojets Produced by Axisymmetric Nonspherical Microparticles
Yurii E. Geints (*Zuev Institute of Atmospheric Optics SB RAS*); *Ekaterina K. Panina* (*Zuev Institute of Atmospheric Optics SB RAS*); *Alexander A. Zemlyanov* (*Zuev Institute of Atmospheric Optics SB RAS*);

00:00 Transparent Glass-ceramics Based on ZnO Nanocrystals Doped with Rare-earth Ions
Irina Alekseeva (*NITIOM S.I. Vavilov State Optical Institute*); *Olga S. Dymshits* (*NITIOM S. I. Vavilov State Optical Institute*); *Aleksandr A. Zhilin* (*NITIOM S. I. Vavilov State Optical Institute*); *Daria V. Shemchuk* (*NITIOM S. I. Vavilov State Optical Institute*); *Svetlana Zapalova* (*NITIOM S.I. Vavilov State Optical Institute*); *Marina Tsenter* (*NITIOM S.I. Vavilov State Optical Institute*); *Anastasiya Vasilevskaya* (*NITIOM S.I. Vavilov State Optical Institute*); *Pavel Loiko* (*ITMO University*); *Anna Volokitina* (*ITMO University*); *Kirill Bogdanov* (*ITMO University*); *Alexander V. Baranov* (*ITMO University*); *Grigory Arzumanyan* (*Joint Institute for Nuclear Research*); *Evgeny Kuznetsov* (*Joint Institute for Nuclear Research*); *Alexander Mudry* (*Scientific-Practical Material Research Centre of the National Academy of Sciences of Belarus*); *Xavier Mateos* (*Universitat Rovira i Virgili (URV)*);

00:00 Study of the Optical Properties of Silver Nanoparticle Layers and c-Si-based Nanostructure Layers
Vladimir A. Tolmacheva (*Ioffe Physical Technical Institute*); *Yuliya A. Zharova* (*Ioffe Physical Technical Institute*); *Sergey I. Pavlov* (*Centre of Nanoheterostructure Physics and the Joint Research Centre "Materials Science and Characterization in Advanced Technologies" at Ioffe Instit*); *Anastasiya I. Bednaya* (*ITMO University*);

00:00 The Main Scattering Mechanisms in Novel pHEMT Heterostructures with Donor-acceptor Doping
D. Yu. Protasov (*Rzhanov Institute of Semiconductor Physics, Siberian Branch of Russian Academy of Sciences*); *A. K. Bakarov* (*Rzhanov Institute of Semiconductor Physics, Siberian Branch of Russian Academy of Sciences*); *A. I. Toropov* (*Rzhanov Institute of Semiconductor Physics, Siberian Branch, Russian Academy of Science*); *K. S. Zhuravlev* (*Rzhanov Institute of Semiconductor Physics, Siberian Branch, Russian Academy of Science*);

00:00 Surface Modeling for Cross Polarization Reduction and Increased Isolation for Dual Polarized Doppler Radar's Antenna
Zar Khitab (*National University of Sciences and Technology*); *Farooq Ahmed Bhatti* (*National University of Sciences and Technology*); *Adnan Ahmed Khan* (*National University of Sciences and Technology*); *Adil Masood Siddiqui* (*National University of Sciences and Technology*); *Imran Rashid* (*National University of Sciences and Technology*);

00:00 UWB Antenna with WiMAX and WLAN Band Notched Performance
Nagwa S. Abd El-Hamed (*Minia University*); *Moataza Abdel-Hameed Hindy* (*Electronics Research Institute*); *Hesham F. A. Hamed* (*Minia University*);

00:00 Design Tunable Filter-antennas for Cognitive Radio Applications
Yahya Salameh Hassan Khraisat (*Al-Balqa' Applied University/Al-Huson University College*); *Huthaifa Al-Issa* (*Al-Balqa' Applied University/Al-Huson University College*);

00:00 Analysis and Design of a Compact Ultra-wideband and Unidirectional Quazi-Yagi Array Antenna with Parasitic Slots for Indoor Wireless Applications
Ali Houssein Harmouch (*Lebanese University*); *Ahmed El Sayed Ahmed* (*Arts, Sciences and Technology University in Lebanon*); *Wissam Harmouch* (*Lebanese University*); *Rayane Mourad* (*Al Manar University of Tripoli*);

00:00 A Novel Method to Improve the Omnidirectionality of the Omnidirectional Antenna Array
Tao Lin Liu (*National University of Defense Technology*); *Hu Yang* (*National University of Defense Technology*); *Yan He* (*Tsinghua University*); *Fei Zhao* (*Southwest Electronics and Telecommunication Technology Research Institute*);

00:00 A Compact Antenna for LTE Mobile Handsets
Andrey D. Grigoryev (*Saint-Petersburg State Electrotechnical University "LETI"*); *Bakhromjon Djalilov* (*Saint Petersburg Electrotechnical University "LETI"*);

00:00 Exact Formulas of Radio Wave Propagation from a Vertical Magnetic Dipole in Planar Stratified Media
Hanan Shehata Shoeib (*Ain Shams University*);

00:00 The Design, Simulation, and Improvement of Characteristics of a Graphene-based Rectangular Patch Antenna at Near Infrared Frequency
Seyyed Sajjsd Mirshafie (*Islamic Azad University*); *Saeed Saebipour* (*Telecommunication Company of Iran*); *Ramezan Ali Sadeghzadeh* (*K. N. Toosi University of Technology*);

00:00 Gain-improved Broadband Circularly Polarized Antenna Array with Parasitic Patches
De-Xin Qu (*PLA University of Science and Technology*); *Kang Ding* (*PLA University of Science and Technology*);

00:00 A Novel Decoupling and Matching Network with Parallel Combination of Open and Short Stubs for Dual-band MIMO Antennas
Limin Che (*University of Electronic Science*);

00:00 A Compact Tri-band MIMO Antenna with a Bilayer L-shaped Branch for WLAN Application
Limin Che (*University of Electronic Science and Technology of China*);

00:00 A 5.8 GHz Reconfigurable Sensor Microstrip Array Antenna Design
Isa Atas (*Dicle University*);

00:00 Compact and Wideband Modified Wilkinson Power Divider
Nadera Najib (*Universiti Teknologi Malaysia*); *Kok Yeow You* (*University Teknologi Malaysia*); *Chia Yew Lee* (*Universiti Teknologi Malaysia*);

00:00 Echo Analysis for Ultra-high Resolution Spaceborne SAR without "Stop-and-Go" Assumption
Fan Feng (*China Academy of Space Technology, Xi'an Branch*); *Hongxing Dang* (*Institute of Radar Technology, China Academy of Space Technology*); *Xiaomin Tan* (*China Academy of Space Technology, Xi'an Branch*); *Xuanmin Zhang* (*China Academy of Space Technology, Xi'an Branch*); *Juanjuan Yang* (*China Academy of Space Technology, Xi'an Branch*);

00:00 A Global Nearest Neighbor Method for Radar Data Association Based on Extended Munkres Algorithm
Shengsen Pan (*National University of Defense Technology*); *Weibing Hou* (*National University of Defense Technology*); *Qinglong Bao* (*National University of Defense Technology*); *Zengping Chen* (*National University of Defense Technology*);

00:00 Analysis and Synthesis of Fractal Radar Detectors of Low-contrast Targets against the Background of High Intensity Noise as a New Branch of Radiolocation and the Statistical Decision Theory
Alexander Alekseevich Potapov (*Kotel'nikov Institute of Radio Engineering and Electronics, Russian Academy of Sciences*);

00:00 Magnetoelectric Effects in Compositionally-stepped Multilayers of Lead-free Piezoelectric and Magnetostrictive Components
Vladimir Mikhailovich Petrov (*Novgorod State University*); *M. I. Bichurin* (*Novgorod State University*); *D. V. Kovalenko* (*Novgorod State University*);

00:00 Intrusion Detection and Defensive System in Wireless Sensor Network for Active Attacks
Aitizaz Ali (*UOG SIALKOT*);

00:00 Microwave Imaging with Spatial-domain Indirect Holography
Sandra Costanzo (*University of Calabria*); *Giuseppe Di Massa* (*Universita della Calabria*);

00:00 Numerical Study of the Exciton-light Coupling in Quantum Wells
P. A. Belov (*St. Petersburg State University*); *E. S. Khramtsov* (*St. Petersburg State University*); *P. S. Grigoryev* (*St. Petersburg State University*); *Ivan V. Ignatiev* (*St. Petersburg State University*);

Session 1P1
SC3: Advanced Optofluidics: Optical Control and Photonics with Fluid Matter 1

Monday PM, May 22, 2017

Room G5

Organized by Francesco Simoni, Luigino Criante

Chaired by Francesco Simoni, Luigino Criante

00:00 Invited Generation of High Speed Liquid Jets for Needle Free Injections
Carla Berrospe-Rodriguez (*Instituto Nacional de Astrofísica, Optica y Electronica*); *Claas Willem Visser* (*University of Twente*); *Stefan Schlautmann* (*University of Twente*); *David Fernandez-Rivas* (*University of Twente*); *Ruben Ramos-Garcia* (*Instituto Nacional de Astrofísica, Optica y Electronica*);

00:00 Invited What's Matter of Gold-nanoparticles Sorting Using Optofluidic Chip
Zhengchuan Yang (*Peking University*); *Ai Qun Liu* (*Nanyang Technological University*);

00:00 Invited Optofluidics in Microstructured Optical Fibers
Stavros Pissadakis (*Institute of Electronic Structure and Laser (IESL)*);

00:00 Invited Optical Mapping of the Pulsatile Blood Flow ***in-vivo***
Alexei A. Kamshilin (*ITMO University*); *Oleg V. Mamontov* (*Almazov Federal Heart, Blood and Endocrinology Center*);

00:00 Invited High Aspect-ratio Microchannels on Diamond Surface for Versatile Microfluidic and Sensing Applications
Ottavia Jedrkiewicz (*CNR and CNISM UdR Com*); *Sanjeev Kumar* (*Universita dell'Insubria*); *Belen Sotillo* (*Politecnico di Milano*); *Monica Bollani* (*IFN-CNR*); *Andrea Chiappini* (*IFN-CNR CSMFO Lab.*); *Maurizio Ferrari* (*IFN-CNR CSMFO Lab.*); *Roberta Ramponi* (*Institute of Photonics and Nanotechnology (IFN) — CNR*); *Paolo Di Trapani* (*University of Insubria and CNISM UdR Como*); *Shane Michael Eaton* (*Politecnico di Milano*);

00:00 Invited Tuning Topological Defects in Anisotropic Fluids for Nano-objects Structuring
D. Kasyanyuk (*Institute of Physics, National Academy of Sciences of Ukraine*); *C. Provenzano* (*University of Calabria*); *A. Mazzulla* (*CNR-NANOTEC*); *P. Pagliusi* (*CNR-IMIP*); *Yu. Reznikov* (*National Academy of Sciences of Ukraine*); *Gabriella Cipparrone* (*University of Calabria*);

00:00 Invited Tunable Optofluidic Microcavities Obtained with Optically Trapped Liquid Crystal Microdroplets
Alexandr Jonas (*Istanbul Technical University*); *Zdenek Pilat* (*Institute of Scientific Instruments of the CAS*); *Jan Jezek* (*Institute of Scientific Instruments of the CAS*); *Silvie Bernatova* (*Institute of Scientific Instruments of the CAS*); *Pavel Zemanek* (*Institute of Scientific Instruments of the ASCR, v.v.i.*); *Mehdi Aas* (*Koc University*); *Alper Kiraz* (*Koc University*);

00:00 Invited Trapping and Manipulating of Gas Bubbles with the Help of Marangoni Effect
Andrzej Miniewicz (*Wroclaw University of Science and Technology*); *Clement Quintard* (*Wroclaw University of Science and Technology*); *Stanislaw Bartkiewicz* (*Wroclaw University of Science and Technology*); *Hanna Orlikowska* (*Wroclaw University of Science and Technology*);

00:00 Invited Optical Phase Induced by Electrically Tunable Surface Free Energy on a Liquid Crystal and Polymer Composite Film
Chia-Ming Chang (*National Chiao Tung University*); *Yi-Hsin Lin* (*National Chiao Tung University*);

00:00 Many-sided Investigation of a Liquid Droplet Lying on a Substrate by Different Optical Techniques
Ilia Nikolayevich Pavlov (*National Research University "Moscow Power Engineering Institute"*); *I. L. Raskovskaya* (*National Research University "Moscow Power Engineering Institute"*); *Bronyus S. Rinkevichyus* (*National Research University "Moscow Power Engineering Institute"*); *A. V. Tolkachev* (*National Research University "Moscow Power Engineering Institute"*);

00:00 All Optical Controlled Phase Shifter for Optofluidic Platforms Based on Hybrid Lithium Niobate/Liquid Crystal Cells
Invited
Liana Lucchetti (*Universita Politecnica delle Marche*); *K. Kushnir* (*Kyiv National Taras Shevchenko University*); *V. Reshetnyak* (*Kyiv National Taras Shevchenko University*); *Annamaria Zaltron* (*University of Padova*); *Cinzia Sada* (*University of Padova*); *Francesco Simoni* (*Universita Politecnica delle Marche*);

00:00 Laser Radiation Caustics Method for Quantitative Diagnostic of Transparent Inhomogeneous Media
Anastasia V. Vedyashkina (*National Research University "Moscow Power Engineering Institute"*); *Bronyus S. Rinkevichyus* (*Moscow Power Engineering Institute*); *I. L. Raskovskaya* (*National Research University "Moscow Power Engineering Institute"*); *Ilia Nikolayevich Pavlov* (*National Research University "Moscow Power Engineering Institute"*);

00:00 Miniaturized Optical Microfiber Microfluidic Devices
Invited
Fei Xu (*Nanjing University*);

00:00 Diagnostics of Fluids by Methods of the Hilbert Optics
Yuriy N. Dubnishchev (*Kutateladze Institute of Thermophysics, Siberian Branch, Russian Academy of Sciences*); *V. A. Arbuzov* (*Kutateladze Institute of Thermophysics, Siberian Branch, Russian Academy of Sciences*); *E. V. Arbuzov* (*Kutateladze Institute of Thermophysics, Siberian Branch, Russian Academy of Sciences*); *V. S. Berdnikov* (*Kutateladze Institute of Thermophysics, Siberian Branch, Russian Academy of Sciences*); *O. S. Melekhina* (*Novosibirsk State Technical University*); *A. A. Shibaev* (*Novosibirsk State Technical University*);

Session 1P2a
Oral Presentations for Best Student Paper Awards — SC5: Remote Sensing, Inverse Problems, Imaging, Radar and Sensing

Monday PM, May 22, 2017

Room G6

Session 1P2b
Extended/Unconventional Electromagnetic Theory, EHD(Electro-hydrodynamics)/EMHD(Electro-magneto-hydrodynamics), and Electro-biology

Monday PM, May 22, 2017

Room G6

Organized by Eva Gescheidtova

Chaired by Eva Gescheidtova

00:00 Modeling the Propagation of a Modulated Ultrasonic Wave in a Nonlinear Medium
David Hladky (*Brno University of Technology*); *Jan Mikulka* (*Brno University of Technology*);

00:00 The Optimization of Electrical Tomography Algorithms
Jan Mikulka (*Brno University of Technology*); *David Hladky* (*Brno University of Technology*); *Jan Dusek* (*Brno University of Technology*); *Tomas Kriz* (*Brno University of Technology*);

00:00 Highly Accurate Image Reconstruction Using Electrical Impedance Tomography
Tomas Kriz (*Brno University of Technology*); *Jan Dusek* (*Brno University of Technology*);

00:00 Comparison of Switch Controlling Alternatives
Vladislav Skorpil (*Brno University of Technology*); *Petr Cika* (*Brno University of Technology*); *L. Mojzis* (*Brno University of Technology*);

00:00 Subjective Comparison of Modern Video Codecs
Petr Cika (*Brno University of Technology*); *D. Kovac* (*Brno University of Technology*); *Vladislav Skorpil* (*Brno University of Technology*); *T. Srnec* (*Brno University of Technology*);

00:00 Scintillation Studies of Scattered Radio Waves in the Ionosphere
George Vakhtang Jandieri (*Georgian Technical University*); *Zhuzhuna Diasamidze* (*Batumi Shota Rustaveli State University*); *Mzia Resan Diasamidze* (*Batumi State Maritime Academy*); *Irma Takidze* (*Batumi State Maritime Academy*);

00:00 Bio-electricity during Wound Healing and Regeneration: The Origin and Biological Significance
Min Zhao (*University of California Davis*); *Brian Reid* (*University of California Davis*); *Guillaume Luxardi* (*University of California Davis*); *Fernando Ferreira* (*University of California Davis*);

00:00 Numerical Analysis of Nanoscale Resonators Using Material Parameters at THz Frequencies
Petr Drexler (*Brno University of Technology*); *Dusan Nespor* (*Brno University of Technology*); *Radim Kadlec* (*Brno University of Technology*); *Eva Gescheidtova* (*Brno University of Technology*);

Session 1P3
Electromagnetic Modeling and Inversion and Applications

Monday PM, May 22, 2017

Room G7

Organized by Jianhua Li, Ganquan Xie

Chaired by Ganquan Xie

00:00 Compact Dual-mode Microstrip Band Reject Filter Based on Koch Fractal Geometry
Hayder S. Ahmed (*Home 8, Street 36, Site 409, Utaifiyya*); *Ali J. Salim* (*University of Technology*); *Jawad K. Ali* (*University of Technology*);

00:00 Electrical Shielding Effectiveness of Metallic Enclosures; Effect of Source Orientation and Aperture Dimension
Ibrahim Bahadir Basyigit (*Suleyman Demirel University*); *Abdullah Genc* (*Suleyman Demirel University*); *Selcuk Helhel* (*Akdeniz University*);

00:00 Semitransparent Screen for Cutoff of the Far Fields in the Shadow Domain
Dmitry V. Tatarnikov (*Topcon Positioning Systems, Moscow Aviation Institute (Technical University)*); *Alexey A. Generalov* (*Topcon Positioning Systems, Moscow Aviation Institute (Technical University)*);

00:00 Novel GLHUA EM Invisible Cloak and EM Wave Propagation in It
Jianhua Li (*GL Geophysical Laboratory*); *Feng Xie* (*GL Geophysical Laboratory*); *Lee Xie* (*GL Geophysical Laboratory*); *Ganquan Xie* (*GL & Hunan Super Computational Sciences Center*);

00:00 The Application of the Boundary Element Method in BEM++ to the Study of Two-dimensional Scattering by Small Extreme Chebyshev ice Particles
Anthony J. Baran (*Met Office*); *Samuel P. Groth* (*University of Reading*);

00:00 Recent Progress in the National University of Defense Technology Magnetically Insulated Transmission Line Oscillator
Yu-Wei Fan (*National University of Defense Technology*); *Xiao-Yu Wang* (*National University of Defense Technology*); *An-Kun Li* (*National University of Defense Technology*); *Jin-Chuan Ju* (*National University of Defense Technology*); *Zhi-Qiang Li* (*National University of Defense Technology*); *Xiao-Ping Zhang* (*National University of Defense Technology*); *Tao Jiang* (*National University of Defense Technology*);

00:00 Critical Dimension Metrology of Two-dimensional Photonic Crystal Based on Inversion of Angle-resolved Spectroscopic Ellipsometry
Jean-Philippe Banon (*Norwegian University of Science and Technology*); *Thomas Brakstad* (*Norwegian University of Science and Technology*); *Brage S. Boe* (*Norwegian University of Science and Technology*); *Morten Kildemo* (*Norwegian University of Science and Technology*); *Ingve Simonsen* (*Norwegian University of Science and Technology*);

00:00 GLC Cloud Computing Method and Simulations of GLHUA Outer Layer Cloak
Lee Xie (*Hunan Super Computational Sciences Center*); *Ganquan Xie* (*GL & Hunan Super Computational Sciences Center*); *Jianhua Li* (*GL Geophysical Laboratory*); *Feng Xie* (*GL Geophysical Laboratory*); *Shigu Cao* (*Chinese Dayuling Supercomputational Sciences Center*);

00:00 GL MagLev Modeling and Inversion for Magnetic Levitation
Ganquan Xie (*GL & Hunan Super Computational Sciences Center*); *Jianhua Li* (*GL Geophysical Laboratory*); *Feng Xie* (*GL Geophysical Laboratory*); *Lee Xie* (*GL Geophysical Laboratory*); *Michael Oristaglio* (*Yale University*); *Shigu Cao* (*Chinese Dayuling Supercomputational Sciences Center*);

00:00 A Round-trip Model for Understanding the Physics of High-contrast Gratings
Alireza Taghizadeh (*Technical University of Denmark*); *I.-S. Chung* (*Technical University of Denmark*);

00:00 The Numerical Solution of Electromagnetic Integral Equation in Frequency Domain Based on Higher-order Basis Functions
Hua Wang (*National University of Defense Technology*); *Jianshu Luo* (*National University of Defense Technology*); *Shigu Cao* (*Chinese Dayuling Supercomputational Sciences Center*);

00:00 How to Make a Machine via a 3D Printing
Shigu Cao (*Chinese Dayuling Supercomputational Sciences Center*); *Lee Xie* (*Hunan Super Computational Sciences Center*); *Ganquan Xie* (*GL & Hunan Super Computational Sciences Center*);

00:00 Iterative Non-ambiguous Estimation of Dielectric Permittivity from Broadband Transmission/Reflection Measurements
Marco Degiorgi (*Universita di Pisa*); *Filippo Costa* (*University of Pisa*); *Agostino Monorchio* (*Universita di Pisa*); *Giuliano Manara* (*University of Pisa*);

00:00 Microstrip Bandstop Filter Using G-shaped Defected Microstrip Structure
Xuemei Zheng (*Harbin Engineering University*); *Yanjie Sun* (*Harbin Engineering University*); *Hengxu Wang* (*Harbin Engineering University*); *Jiahe Mei* (*Harbin Engineering University*); *Tao Jiang* (*Harbin Engineering University*);

00:00 A Modeling Method of Lossy Transmission-line Using Step-response Obtained by Slow Rising Waveform
Yuto Matsushita (*Gifu University*); *Toshikazu Sekine* (*Gifu University*); *Yasuhiro Takahashi* (*Gifu University*);

00:00 3D Stochastic Electromagnetic Elastic Joint Finite Element Method and SGILD Method
Ganquan Xie (*GL & Hunan Super Computational Sciences Center*); *Jianhua Li* (*GL Geophysical Laboratory*); *Lee Xie* (*Hunan Super Computational Sciences Center*); *Feng Xie* (*GL Geophysical Laboratory*); *Shigu Cao* (*Chinese Dayuling Supercomputational Sciences Center*);

Session 1P4
Advanced Mathematical and Computational Methods in Electromagnetic Theory and Their Applications 1

Monday PM, May 22, 2017

Room G8

Organized by Georgi Nikolov Georgiev, Mariana Nikolova Georgieva-Grosse

Chaired by Mariana Nikolova Georgieva-Grosse

00:00 Comparing the Calderón and A-$\boldsymbol{\Phi}$ Formulation for Lossy Dielectric Simulation at Low Frequency
Michael Wei (*University of Illinois*); *Qin S. Liu* (*University of Hong Kong*); *Weng Cho Chew* (*University of Illinois*);

00:00 Recent Developments of Implicit Finite-difference Time-domain Schemes
Eng Leong Tan (*Nanyang Technological University*); *Ding Yu Heh* (*Nanyang Technological University*); *Zaifeng Yang* (*Nanyang Technological University*);

00:00 The Peculiarities of Resonant Interaction of Transition Radiation of a Charged Particle in a Waveguide with Periodically Modulated Anisotropic Magnetodielectric Filling
Eduard A. Gevorkyan (*Plekhanov Russian Economic University*);

00:00 Nonstandard Description of the Electromagnetic Field
George Meshveliani (*Ivane Javakhishvili Tbilisi State University*); *Baia Gelashvili* (*Ivane Javakhishvili Tbilisi State University*);

00:00 A New Method for Constructing an Orthogonal System of Eigenwaves of an Open Cylindrical Waveguide Surrounded by an Isotropic Medium
Vasiliy Alekseevich Es'kin (*University of Nizhny Novgorod*); *Alexander V. Kudrin* (*University of Nizhny Novgorod*);

00:00 The Effects of Electromagnetic Radiation on the Structure and Dynamics of Amyloidogenic Peptides
Nevena Todorova (*RMIT University*); *A. Bentvelzen* (*RMIT University*); *N. J. English* (*University College Dublin*); *Irene Yarovsky* (*RMIT University*);

00:00 Theorem for the $\hat{\boldsymbol{G}}_{\mathbf{1}}(\hat{\boldsymbol{c}},\ \hat{\boldsymbol{n}})$ Numbers
Mariana Nikolova Georgieva-Grosse (*Consulting and Researcher in Physics and Computer Sciences*); *Georgi Nikolov Georgiev* (*University of Veliko Tirnovo "St. St. Cyril and Methodius"*);

00:00 Influence of Damping Resistance in Electromagnetic Transients Using Alternate Structures of $\boldsymbol{\pi}$ Circuits
Melissa De Oliveira Santos (*Sao Paulo State University (UNESP)*); *Luis Henrique Jus* (*Sao Paulo State University (UNESP)*); *Afonso Jose Do Prado* (*UNESP — Universidade Estadual Paulista*); *Elmer Mateus Gennaro* (*UNESP — Universidade Estadual Paulista*); *Jose Pissolato Filho* (*UNICAMP — State University of Campinas*);

00:00 Comparative Analysis of the Effectiveness of Some Algorithms in the Method of Auxiliary Sources
Anastasia V. Korobkina (*Moscow Institute of Physics and Technology*); *Sergei P. Skobelev* (*Joint Stock Co Radiophyzika*);

00:00 Whistler Wave Radiation from a Loop Antenna Located in an Enhanced Density Duct in a Nonresonant Magnetoplasma
Alexander V. Kudrin (*University of Nizhny Novgorod*); *Oleg M. Ostafiychuk* (*University of Nizhny Novgorod*); *Tatyana M. Zaboronkova* (*Technical University of Nizhny Novgorod*);

00:00 Computation of Electromagnetic Field and Complex Materials Interaction
Rongshan Qin (*The Open University*);

Session 1P5
Integrated Optical Devices for Low-power Information Processing

Monday PM, May 22, 2017

Room G9

Organized by Linjie Zhou, Shaoqi Feng

00:00 Low Loss Magneto-optical Oxide Thin Films for Silicon Integrated Nonreciprocal Photonic and Magnetoplasmonic Device Applications
Jun Qin (*University of Electronic Science and Technology of China*); *Yan Zhang* (*University of Electronic Science and Technology of China*); *Keyi Shui* (*University of Electronic Science and Technology of China*); *Xiao Liang* (*University of Electronic Science and Technology of China*); *Tongtong Kang* (*University of Electronic Science and Technology of China*); *Liu Chuan* (*University of Electronic Science and Technology of China*); *Longjiang Deng* (*University of Electronic Science and Technology of China*); *Lei Bi* (*University of Electronic Science and Engineering of China*);

00:00 Fano-like Resonance Based on an Add-drop Microring Resonator and an Asymmetric Mach-Zehnder Interferometer
Simin Li (*Nanjing University of Aeronautics and Astronautics*); *Lei Zhao* (*Nanjing University of Aeronautics and Astronautics*); *Shilong Pan* (*Nanjing University of Aeronautics and Astronautics*);

00:00 Recent Progress in Low-power Information Processing Using 1D and 2D Integrated Optical Devices
Jian Wang (*Huazhong University of Science and Technology*);

00:00 2D and 3D Heterogeneous Integrated Circuits for Energy-efficient Information Processing
S. J. Ben Yoo (*University of California*);

00:00 Efficient Modulation with Coupled Microring Resonators
Mario Cesar Mendes Machado de Souza (*Universidade Estadual de Campinas*); *Luis A. M. Barea* (*Federal University of Sao Carlos*); *Newton C. Frateschi* (*Universidade Estadual de Campinas*);

00:00 Ultrashort and Low-loss Si Based Multiplexing Devices
Xingjun Wang (*Peking University*); *Mei Yin* (*Peking University*); *Qingzhong Deng* (*Peking University*); *Yanping Li* (*Peking University*);

00:00 Reduced Thermal Hysteresis in Hf-doped VO_2 Films for Low-power Reconfigurable Silicon Photonic Device Applications
Taixing Huang (*University of Electronic Science and Technology of China*); *Qingyang Du* (*MIT*); *Tongtong Kang* (*University of Electronic Science and Technology of China*); *Jianliang Xie* (*University of Electronic Science and Technology of China*); *Longjiang Deng* (*University of Electronic Science and Technology of China*); *Juejun Hu* (*Massachusetts Institute of Technology*); *Lei Bi* (*University of Electronic Science and Engineering of China*);

00:00 Monolithic Silicon DP-IQ Modulator Operating with Low Driving Voltage
Kazuhiro Goi (*Fujikura Ltd.*); *Norihiro Ishikura* (*Fujikura Ltd.*); *Haike Zhu* (*Fujikura Ltd.*); *Kensuke Ogawa* (*Fujikura Ltd.*); *Yuki Yoshida* (*National Institute of Information and Communications Technology (NICT)*); *Ken-ichi Kitayama* (*Graduate School for the Creation of New Photonics Industries*); *Tsung-Yang Liow* (*A*STAR*); *Xiaoguang Tu* (*A*STAR*); *Guo-Qiang Lo* (*A*STAR*); *Dim-Lee Kwong* (*Institute of Microelectronics*);

00:00 Nanophotonic Structures Based on Dielectric-nanoposts-array for On-chip Beam Steering
Aimin Wu (*Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences*); *Chao Qiu* (*Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences*); *Haiyang Huang* (*Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences*); *Yingxuan Zhao* (*Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences*); *Zhongying Xue* (*Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences*); *Zhen Sheng* (*Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences*); *Fuwan Gan* (*Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences*); *Xi Wang* (*Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences*);

00:00 Graphene-on-Silicon Slot Waveguides and Applications
Zhenzhou Cheng (*The University of Tokyo*); *Jiaqi Wang* (*The Chinese University of Hong Kong*); *Zefeng Chen* (*The Chinese University of Hong Kong*); *Tinghui Xiao* (*The University of Tokyo*); *Hon Ki Tsang* (*The Chinese University of Hong Kong*); *Chester Shu* (*The Chinese University of Hong Kong*); *Jian-Bin Xu* (*The Chinese University of Hong Kong*); *Keisuke Goda* (*The University of Tokyo*);

00:00 SOI-based Devices by Inverse Design
Jifang Qiu (*Beijing University of Posts and Telecommunications*); *Chong Meng* (*Beijing University of Posts and Telecommunications*); *Ye Tian* (*Beijing University of Posts and Telecommunications*); *Zi Ye* (*Beijing University of Posts and Telecommunications*); *Li Zheng* (*Beijing University of Posts and Telecommunications*); *Jian Wu* (*Beijing University of Posts and Telecommunications*);

00:00 Highly Efficient Two-dimensional Silicon Photonic Grating Coupler with Bonded Metal Mirror
Zhichao Nong (*Sun Yat-sen University*); *Yannong Luo* (*Sun Yat-sen University*); *Shengqian Gao* (*Sun Yat-sen University*); *Xinlun Cai* (*Sun Yat-Sen University*);

00:00 Resonant and Slow-light $\mathbf{2} \times \mathbf{2}$ Switches Enabled by Nanobeams and Grating-coupled Waveguides
Richard Soref (*University of Massachusetts Boston*);

00:00 Coupled Waveguide Lasers and LEDs by Parity-time Symmetry
Ruizhe Yao (*University of Massachusetts Lowell*); *Chi-Sen Lee* (*University of Massachusetts Lowell*); *Viktor A. Podolskiy* (*Oregon State University*); *Wei Guo* (*University of Massachusetts Lowell*);

00:00 Slow Light Enhanced Graphene Micro-heater for Silicon Photonics
Jianji Dong (*Huazhong University of Science and Technology*); *Siqi Yan* (*Huazhong University of Science and Technology*); *Xinliang Zhang* (*Huazhong University of Science and Technology*);

00:00 Continuously Tunable Silicon Optical Delay Line Built on Ultra-thin Silicon Waveguides
Linjie Zhou (*Shanghai Jiao Tong University*); *Xinyi Wang* (*Shanghai Jiao Tong University*); *Liangjun Lu* (*Shanghai Jiao Tong University*); *Jianping Chen* (*Shanghai Jiao Tong University*);

Session 1P6
Theory and Methods of Digital Signal Processing in the Problems of Remote Sensing, Radar, and Radiometry 2

Monday PM, May 22, 2017

Room G10

Organized by Victor Filippovich Kravchenko, Boris Georgievich Kutuza

Chaired by Victor Filippovich Kravchenko, Boris Georgievich Kutuza

00:00 Spectral Variability of the Atmosphere Downwelling Radiation Measured by Microwave Radiometer-spectrometer in the Range of 18–27 GHz
M. T. Smirnov (*Kotelnikov Institute of Radioengineering and Electronics, RAS*); *V. P. Savorsky* (*Kotelnikov Institute of Radioengineering and Electronics, RAS*); *D. M. Ermakov* (*Kotelnikov Institute of Radioengineering and Electronics, RAS*); *B. G. Kutuza* (*Kotelnikov Institute of Radioengineering and Electronics, RAS*); *S. Yu. Turygin* (*Kotelnikov Institute of Radioengineering and Electronics, RAS*);

00:00 An Influence of Meteorological Conditions on the Accuracy of PS Interferometry Measurements
Alexander Zakharov (*Kotelnikov IRE RAS*); *Alexey Feoktistov* (*Research Center for Earth Operative Monitoring*); *Pavel Denisov* (*Research Center for Earth Operative Monitoring*); *Maxim Gusev* (*Research Center for Earth Operative Monitoring*);

00:00 Radar Effects of the LEO Spacecraft Engines
Valentin P. Lebedev (*Institute of Solar-Terrestrial Physics, Siberian Branch, Russian Academy of Sciences*); *Vitaliy Victorovich Khakhinov* (*Institute of Solar-Terrestrial Physics, Siberian Branch, Russian Academy of Sciences*); *Dmitry S. Kushnarev* (*Institute of Solar-Terrestrial Physics of Siberian Branch, Russian Academy of Sciences*);

00:00 Simulation Tools for Satellite Observations of Radiobrightness Characteristics of the Anomalies in Lower Troposphere
Victor P. Savorskiy (*Kotel'nikov Institute of Radioengineering and Electronics, RAS*); *Dmitry M. Ermakov* (*Kotel'nikov Institute of Radioengineering and Electronics of RAS*); *O. G. Shagimuratov* (*Kotel'nikov Institute of Radioengineering and Electronics, RAS*); *M. T. Smirnov* (*Kotel'nikov Institute of Radioengineering and Electronics, RAS*); *S. Yu. Turygin* (*Kotel'nikov Institute of Radioengineering and Electronics, RAS*); *A. P. Chernushich* (*Kotel'nikov Institute of Radioengineering and Electronics of RAS*); *I. N. Kibardina* (*Kotel'nikov Institute of Radioengineering and Electronics of RAS*); *M. V. Danilychev* (*Kotel'nikov Institute of Radioengineering and Electronics of RAS*);

00:00 Observation of Earthquake Swarm Consequences in the Baikal Rift System with ALOS-2 Interferometry
Marina Lebedeva (*Institute of the Earth's Crust, Siberian Branch of Russian Academy of Sciences*); *Vladimir Sankov* (*Institute of the Earth's Crust, Siberian Branch of Russian Academy of Sciences*); *Alexander Zakharov* (*Kotelnikov IRE RAS*); *Ludmila Zakharova* (*Kotelnikov IRE RAS*);

00:00 PolSAR Image Fast Classification Based on Random Similarity
Dong Li (*National Space Science Center, Chinese Academy of Sciences*); *Yunhua Zhang* (*National Space Science Center, Chinese Academy of Sciences*); *Feiya Zhu* (*National Space Science Center, Chinese Academy of Sciences*);

00:00 Reconstruction of Water Vapor Profile in the Lower Troposphere by Differential Radiometric Measurements from Satellites
Victor V. Sterlyadkin (*Space Research Institute*); *Evgenii V. Pashinov* (*Space Research Institute*); *Alexey V. Kuzmin* (*Space Research Institute, Russian Academy of Sciences*); *Evgenii A. Sharkov* (*Space Research Institute, Russian Academy of Sciences*);

00:00 Multi-threshold Fuzzy Clustering Sorting Algorithm
Jiawei Wang (*Harbin Engineering University*); *Changbo Hou* (*Harbin Engineering University*); *Fuxin Qu* (*Harbin Engineering University*);

00:00 Improving the Efficiency of Radar Functioning in Conditions of Unpredictable Factors
Y. A. Gelozhe (*Southern Federal University*); *Pavel P. Klimenko* (*Southern Federal University*); *A. V. Maksimov* (*Southern Federal University*);

00:00 Multi-static Radar Multi-target Projection Localization Based on Compressed Sensing
Ling Fan (*Leshan Normal University*);

00:00 Multichannel Scanning Imager-Sounder MTVZA-GY on Russian Weather Satellite Meteor-MN2: The Simulated and Measured Brightness Temperatures in the Range of 10–190 GHz
Leonid M. Mitnik (*V. I. Il'ichev Pacific Oceanological Institute FEB RAS*); *V. P. Kuleshov* (*V. I. Il'ichev Pacific Oceanological Institute FEB RAS*); *Maia L. Mitnik* (*V. I. Il'ichev Pacific Oceanological Institute FEB RAS*); *I. A. Barsukov* (*JSC "Russian Space Systems"*); *I. V. Cherny* (*JSC "Russian Space Systems"*); *G. M. Chernyavsky* (*JSC "Russian Space Systems"*);

00:00 Statistics of Surface and Atmospheric Microwave Properties at Summit Station, Greenland from MTVZA-GY Observations in the Range 10–190 GHz
Leonid M. Mitnik (*V. I. Il'ichev Pacific Oceanological Institute FEB RAS*); *V. P. Kuleshov* (*V. I. Il'ichev Pacific Oceanological Institute FEB RAS*); *Maia L. Mitnik* (*V. I. Il'ichev Pacific Oceanological Institute FEB RAS*); *I. V. Cherny* (*JSC "Russian Space Systems"*);

00:00 Field Measurements of the Wind Profile Using Millimeter Doppler Radar
Victor V. Sterlyadkin (*Space Research Institute*); *Andrei G. Gorelik* (*Central Design Bureau of Apparatus*); *Konstantin V. Kulikovskii* (*Moscow Technology University*); *Viktor M. Kalmykov* (*Central Design Bureau of Apparatus*); *Dmitrii V. Ermilov* (*Central Design Bureau of Apparatus*); *Alexandr V. Khomyakov* (*Central Design Bureau of Apparatus*);

00:00 Space-temporal Stochastic Characteristics of Complex Amplitude for the Sounding Vector Optical Beam
Eugene Aleksandrovich Babanin (*Moscow State M. V. Lomonosov University*); *Vitaly Vladimirovich Kapranov* (*S. P. Korolev Rocket and Space Corporation "Energia"*); *Natalia A. Soukhareva* (*Moscow M. V. Lomonosov State University*); *Vyacheslav Yuryevich Tugaenko* (*S. P. Korolev Rocket and Space Corporation "Energia"*); *Olga Mikhailovna Vokhnik* (*Moscow State M. V. Lomonosov University*);

00:00 Detection of Embedded Objects in Saline Water
Merve Sunel (*Akdeniz University*); *Atalay Kocakusak* (*Akdeniz University*); *Ibrahim Bahadir Basyigit* (*Akdeniz University*); *Sukru Ozen* (*Akdeniz University*); *Selcuk Helhel* (*Akdeniz University*);

Session 1P7a
Computational Cubism

Monday PM, May 22, 2017

Room B1

Organized by Athanasios G. Polimeridis, Jacob K. White

00:00 Vico-Greengard-Ferrando Quadratures in the Tensor Solver for Integral Equations
Valentin Khrulkov (*Skolkovo Institute of Science and Technology*); *M. Rakhuba* (*Skolkovo Institute of Science and Technology*); *Ivan V. Oseledets* (*Institute for Numerial Mathematics RAS*);

00:00 Volumetric Conductive Absorbers in Volume Integral Equation Formulations for Modeling Nanophotonic Structures
Alexandra A. Tambova (*Skolkovo Institute of Science and Technology*); *Jacob K. White* (*Massachusetts Institute of Technology*); *Athanasios G. Polimeridis* (*Skolkovo Institute of Science and Technology*);

00:00 VoxHenry: FFT-Accelerated Inductance Extraction for Voxelized Geometries
Abdulkadir C. Yucel (*Massachusetts Institute of Technology*); *Ioannis P. Georgakis* (*Center for Computational Data-Intensive Science and Engineering*); *Athanasios G. Polimeridis* (*Skolkovo Institute of Science and Technology*); *Hakan Bagci* (*King Abdullah University of Science and Technology (KAUST)*); *Jacob K. White* (*Massachusetts Institute of Technology*);

00:00 Current-based Volume Integral Equation Solver with Piecewise Linear Basis Functions for Modelling Highly Inhomogeneous Objects
Ioannis P. Georgakis (*Center for Computational Data-Intensive Science and Engineering*); *Jacob K. White* (*Massachusetts Institute of Technology*); *Athanasios G. Polimeridis* (*Skolkovo Institute of Science and Technology*);

00:00 Towards Solving Lippmann-Schwinger Integral Equation in 2D with Polylogarithmic Complexity with Quantized Tensor Train Decomposition
Alexey I. Boyko (*Skolkovo Institute of Science and Technology*); *Ivan V. Oseledets* (*Institute for Numerial Mathematics RAS*); *Nikolai A. Gippius* (*Skolkovo Institute of Science and Technology*);

00:00 Computational Photonics with the Volume Integral Equation Method
Samuel P. Groth (*University of Reading*); *Alexandra A. Tambova* (*Skolkovo Institute of Science and Technology*); *Athanasios G. Polimeridis* (*Skolkovo Institute of Science and Technology*); *Jacob K. White* (*Massachusetts Institute of Technology*);

Session 1P7b
CEM, Spectra, Time, and Frequency Domain Techniques

Monday PM, May 22, 2017

Room B1

00:00 Finite Element Modeling of Thermal Noises in Whispering-gallery Mode Cavities
Nikita M. Kondratyev (*Russian Quantum Center*); *M. L. Gorodetsky* (*Russian Quantum Center*);

00:00 High Order FDTD Computations Using Mesh Thickening
Zhanna O. Dombrovskaya (*Lomonosov Moscow State University*); *Alexander Nikolaevich Bogolyubov* (*Lomonosov Moscow State University*);

00:00 A New Search Method for Costas Arrays by Using Difference Triangle Analysis
Erkan Afacan (*Gazi University*);

00:00 Spectral Problem in a Generalized Theory of Electromagnetic Waves
G. G. Islamov (*Udmurt State University*); *Aleksandr K. Tomilin* (*National Research Tomsk Polytechnic University*);

00:00 Numerical Modeling Whit FDTD Method for Optoelectronic Sensor to Evaluate Water Amount in Heavy Oil Using One-dimensional Photonic Crystals
Ehsan Amiri (*Shiraz University of Technology*);

Session 1P8
FocusSession.SC1: Casimir Effect and Heat Transfer 2

Monday PM, May 22, 2017

Room B5

Organized by Mauro Antezza, Brahim Guizal

Chaired by Mauro Antezza, Brahim Guizal

00:00 Invited Body-induced Dipole-dipole Interaction of Excited Atoms near Surfaces
Stefan Scheel (*University of Rostock*); *Johannes Block* (*University of Rostock*); *Helge Dobbertin* (*University of Rostock*);

00:00 Material Dependence of the Heat Transfer at the
Invited Transition between Conduction and Radiation
Achim Kittel (*University of Oldenburg*); *Svend-Age Biehs* (*Carl von Ossietzky Universitat*); *David Hellmann* (*University of Oldenburg*); *Konstantin Kloppstech* (*University of Oldenburg*); *Nils Konne* (*University of Oldenburg*); *Ludwig Worbes* (*University of Oldenburg*); *Alejandro W. Rodriguez* (*Princeton University*);

00:00 Energy Exchange between Two Solids Separated by a
Invited Nanoscale Vacuum Gap: The Role of Phonons
Samy Merabia (*Universite de Lyon*); *Ali Alkurdi* (*Universite de Lyon*);

00:00 Spontaneous Emission of an Atom in a Modulated
Invited Photonic Bandgap Environment
Guseppe Calajo (*Institute of Atomic and Subatomic Physics, TU Wien*); *Roberto Passante* (*Universita degli Studi di Palermo and CNISM*); *Lucia Rizzuto* (*Universita degli Studi di Palermo and CNISM*);

00:00 Time-dependent Resonance Interaction between Cor-
Invited related Atoms under Non-equilibrium Conditions
Roberta Palacino (*Universita degli Studi di Palermo*); *Roberto Passante* (*Universita degli Studi di Palermo*); *Lucia Rizzuto* (*Universita degli Studi di Palermo and CNISM*); *Salvatore Spagnolo* (*Universita degli Studi di Palermo*); *Wenting Zhou* (*Universita degli Studi di Palermo*);

00:00 Thermal van der Waals Interactions between Two
Invited Molecules in Generic Environments
Pablo Barcellona (*University of Freiburg*); *Helge Dobbertin* (*University of Rostock*); *Stefan Scheel* (*University of Rostock*); *Manuel Donaire* (*Laboratoire Kastler-Brossel, ENS-PSL-CNRS-UPMC*); *Stefan Yoshi Buhmann* (*University of Freiburg*);

00:00 Coherence Generation, Irreversible Entropy Produc-
Invited tion and Non-adiabaticity in Quantum Processes
G. Francica (*Universita'della Calabria*); *John Goold* (*The Abdus Salam International Centre for Theoretical Physics (ICTP)*); *Francesco Plastina* (*Universita'della Calabria*);

00:00 Radiative Heat Transfer between Metallic Gratings
Invited Using Adaptive Spatial Resolution
Brahim Guizal (*University of Montpellier*); *Riccardo Messina* (*University of Montpellier*); *Antonio Noto* (*Universite de Montpellier*); *Mauro Antezza* (*Universite de Montpellier*);

00:00 Casimir Forces in Realistic Plasmonic Systems
Invited
T. V. Raziman (*Swiss Federal Institute of Technology Lausanne (EPFL)*); *Olivier J. F. Martin* (*Swiss Federal Institute of Technology Lausanne (EPFL)*);

00:00 Atom-surface Interactions in Quantum Systems
Invited
T. Mark Fromhold (*University of Nottingham*);

00:00 Sub-wavelength Thermal Radiation and Thermopho-
Invited tovoltaics
Pierre-Olivier Chapuis (*CNRS, National Institute of Applied Physics (INSA) Lyon*); *Etienne Blandre* (*Université de Lyon, CNRS, INSA-Lyon, Universite Claude Bernard Lyon 1*); *Khac Long Nguyen* (*Université de Lyon, CNRS, INSA-Lyon, Universite Claude Bernard Lyon 1*); *Jerome Sarr* (*Université de Lyon, CNRS, INSA-Lyon, Universite Claude Bernard Lyon 1*); *Makoto Shimizu* (*Université de Lyon, CNRS, INSA-Lyon, Universite Claude Bernard Lyon 1*); *Olivier Merchiers* (*Université de Lyon, CNRS, INSA-Lyon, Universite Claude Bernard Lyon 1*); *Rodolphe Vaillon* (*Universite de Lyon*);

00:00 Recent Experimental Developments in the Measure-
Invited ment of the Casimir Interaction from 0.2 to 8 Microns
Ricardo S. Decca (*Indiana University — Purdue University Indianapolis*);

Session 1P9
New Trends in Antenna, Dynamic Networks and Communication Signal Processing 2

Monday PM, May 22, 2017

Room B3

Organized by Malay Ranjan Tripathy, Boris A. Lagovsky

Chaired by Malay Ranjan Tripathy, Boris A. Lagovsky

00:00 High Gain Reduced Ground Terahertz Microstrip Patch Antenna Design for the Detection of Trinitrotoluene (TNT) Explosives Material
Simarjit Singh Saini (*Punjabi University*); *Gurleen Kaur* (*Punjabi University*); *Nitika Rani* (*Punjabi University*); *Jasleen Kaur* (*Punjabi University*); *Ekambir Sidhu* (*Punjabi University*);

00:00 Multi-band Frequency Tunable LTE Antenna for Mobile Phone Applications
Basak Ozbakis (*Izmir Institute of Technology*); *Serdar Okuyucu* (*Yasar University*); *Mustafa Secmen* (*Yasar University*); *Korkut Yegin* (*Ege University*);

00:00 Superresolution in Signal Processing Using a Priori Information
Boris A. Lagovsky (*Moscow State Institute of Radio Engineering and Automation (Technical University)*); *A. G. Chikhina* (*Moscow State Institute of Radio Engineering and Automation (Technical University)*);

00:00 Design and Performance Analysis of High Gain Flexible Yagi Microstrip Patch Antenna for Fixed-satellite, Radio Location and Amateur-satellite Service Applications
Jasleen Kaur (*Punjabi University*); *Nitika Rani* (*Punjabi University*); *Amarveer Singh* (*Punjabi University*); *Vatanjeet Singh* (*Punjabi University*); *Ranjeet Kaur* (*Punjabi University*); *Ekambir Sidhu* (*Punjabi University*);

00:00 Multiphysics Simulation of InP NWT for High Speed Digital Applications
Neel Chatterjee (*Amity University Uttar Pradesh*); *Pradeep Kumar* (*Amity University Uttar Pradesh*); *Hemender Pal Singh* (*Amity University*); *Malay Ranjan Tripathy* (*Amity University Uttar Pradesh*); *Sujata Pandey* (*Amity University*);

00:00 Analysis of Schottky Barrier Indium Arsenide Nanowire MOSFET for High Frequency Application
Neel Chatterjee (*Amity University Uttar Pradesh*); *Pradeep Kumar* (*Amity University Uttar Pradesh*); *Hemender Pal Singh* (*Amity University*); *Malay Ranjan Tripathy* (*Amity University Uttar Pradesh*); *Sujata Pandey* (*Amity University*);

00:00 Thermal Analysis of III-V Transistor at High Frequencies
Neel Chatterjee (*Amity University Uttar Pradesh*); *Pradeep Kumar* (*Amity University Uttar Pradesh*); *Hemender Pal Singh* (*Amity University*); *Malay Ranjan Tripathy* (*Amity University Uttar Pradesh*); *Sujata Pandey* (*Amity University*);

00:00 Flexible Microstrip Patch Antenna Designs for Bluetooth, IMT, WLAN and WiMAX Applications
Ekambir Sidhu (*Punjabi University*); *Divesh Mittal* (*Punjabi University*); *Simarjit Singh Saini* (*Punjabi University*); *Charanjit Singh* (*Punjabi University*); *Ranjit Kaur* (*Punjabi University*);

00:00 Parabolic Reflector Near-field to Far-field Transformation Using FDTDM and Pocklington Equation
Jorge R. Sosa-Pedroza (*Instituto Politecnico Nacional*); *Sergio Pena-Ruiz* (*Instituto Politecnico Nacional*); *Fabiola Martinez-Zuniga* (*Instituto Politecnico Nacional*);

00:00 Experimental Wireless Ultra Wideband Sensor Network for Data Collection
Sergey V. Volvenko (*Peter the Great St. Petersburg Polytechnic University*); *Dong Ge* (*Tsinghua University*); *Sergey V. Zavjalov* (*Peter the Great St. Petersburg Polytechnic University*); *Alexander S. Gruzdev* (*Peter the Great St. Petersburg Polytechnic University*); *Andrey V. Rashich* (*Peter the Great St. Petersburg Polytechnic University*); *Evgeniy L. Svechnikov* (*Peter the Great St. Petersburg Polytechnic University*);

00:00 Group Delay Equalizer for Ku Band Block-up Converters
Nuri Saydam (*Ege University*); *Mustafa Pehlivan* (*Ege University*); *Korkut Yegin* (*Ege University*);

00:00 An Investigation of Pattern and Frequency Reconfigurable Microstrip Slot Antenna Using PIN Diodes
Nibash Kumar Sahu (*Veer Surendra Sai University of Technology Burla*); *Ashish Kumar Sharma* (*Birla Institute of Technology and Science Pilani*);

00:00 Mode Analysis of the Tree-like Networks of Nonlinear Oscillators
Olga Stanislavovna Katkova (*National Research University "MPEI"*); *Ansar R. Safin* (*National Research University "Moscow Power Engineering Institute"*); *M. Kapranov* (*National Research University "MPEI"*); *Elena D. Surovyatkina* (*Space Research Institute of Russian Academy of Sciences*); *J. Kurths* (*University of Potsdam*);

00:00 Magneto-dielectric Properties of Composite Ferrite Based Substrate for UHF Band Microstrip Antenna
P. Jain (*PEC University of Technology*); *Shonak Bansal* (*PEC University of Technology*); *N. Kumar* (*PEC University of Technology*); *Sanjeev Kumar* (*PEC University of Technology*); *N. Gupta* (*PEC University of Technology*); *Arun Kumar Singh* (*PEC University of Technology*);

00:00 An Assisted Driving System for Vehicular ad hoc Networks
Rui Zhang (*Southeast University*); *Feng Yan* (*Southeast University*); *Lianfeng Shen* (*Southeast University*);

Session 1P_10
FocusSession.SC2: Metamaterials and Transformation Optics 2

Monday PM, May 22, 2017

Room R11

Organized by Hongsheng Chen, Yu Luo

Chaired by Bin Zheng

00:00 Extraordinary Transient Nonlinear-optical Processes on the Spatially Dispersive Metasurfaces (Invited)
Alexander K. Popov (*University of Wisconsin-Stevens Point*); *V. V. Slabko* (*Siberian Federal University*); *V. A. Tkachenko* (*Siberian Federal University*); *S. A. Myslivets* (*Institute of Physics of Russian Academy of Sciences*);

00:00 Multipolar Interference Effects in Nanophotonics (Invited)
Wei Liu (*National University of Defense Technology*);

00:00 Rotational Doppler Effect and Nonlinear Geometry Berry Phase (Invited)
Guixin Li (*Southern University of Science and Technology*); *Thomas Zentgraf* (*University of Paderborn*); *Shuang Zhang* (*University of Birmingham*);

00:00 Hot-electron Photodetection Based on Tamm Plasmons from One-dimensional Photonic Structure (Invited)
Cheng Zhang (*Soochow University*); *Runfeng Li* (*Soochow University*); *Xiaofeng Li* (*Soochow University*);

00:00 Conformal Talbot Effect (Invited)
Xiang Yang Wang (*Nanjing University*); *Huanyang Chen* (*Xiamen University*); *Hui Liu* (*Nanjing University*); *Lin Xu* (*Xiamen University*); *Shi-Ning Zhu* (*Nanjing University*);

00:00 Nanofocusing with Full Impedance-matched Hyperlenses (Invited)
Lian Shen (*Zhejiang University*); *Ludmila J. Prokopeva* (*Purdue University*); *Hongsheng Chen* (*Zhejiang University*); *Alexander V. Kildishev* (*Purdue University*);

00:00 Transformation-optics Description of Fano Resonances
Jing Jiang (*Nanyang Technological University*); *Yu Luo* (*Nanyang Technological University*); *Baile Zhang* (*Nanyang Technological University*);

00:00 Design and Optimization of Artificial Magnetic Conductor for Aperture Coupled SatCom Antenna
Yavuz Asci (*Ege University*); *Mustafa Pehlivan* (*Ege University*); *Olcay Yigit* (*Ege University*); *Korkut Yegin* (*Ege University*);

00:00 All-band GNSS Antenna with Artificial Magnetic Conductor
Olcay Yigit (*Ege University*); *Korkut Yegin* (*Ege University*);

00:00 Metasurface Holograms Based on Multi-layered Chiral Nanostructures
Fei Fei Qin (*Harbin Institute of Technology*); *Jun Jun Xiao* (*Harbin Institute of Technology*);

00:00 Criterion Intensification of Micro-strip Patch Antenna by Proving Metamaterial
Ranjeet Pratap Singh Bhadoriya (*Madhav Institute of Technology & Science*); *Neha Sharma* (*IPS College of Tech. & Mgmt.*); *Deeksha Gupta* (*IPS College of Tech. & Mgmt.*);

00:00 Hierarchical Metacomposites Built-on Carbon Nanotube-ferromagnetic Microwire Hybrid Fibers
D. Estevez (*Zhejiang University*); *Faxiang Qin* (*Zhejiang University*); *H. Wang* (*Zhejiang University*); *H. X. Peng* (*Zhejiang University*);

00:00 Anderson Transition in Metamaterials (Invited)
Kenneth Morgan Golden (*University of Utah*);

00:00 Time-varying Metamaterials for RFID Applications (Invited)
D. Filonov (*Tel Aviv University*); *Amir Boag* (*Tel Aviv University*); *Pavel B. Ginzburg* (*ITMO University*);

Session 1P_11
FocusSession.SC2: New Principles and Applications of Photonic/Phononic Crystals 2

Monday PM, May 22, 2017

Room R10

Organized by Yun Lai, Lei Shi

00:00 Ultratransparency Effect of Photonic Crystals (Invited)
Jie Luo (*Soochow University*); *Zhi Hong Hang* (*Soochow University*); *Yun Lai* (*Soochow University*);

00:00 Novel Nanophotonic Light Source (Keynote)
Marin Soljacic (*Massachusetts Institute of Technology*);

00:00 Surface Acoustic Zitterbewegung Oscillation and Acoustic Topological Insulator (Invited)
Yan-Feng Chen (*Nanjing University*); *Ming-Hui Lu* (*Nanjing University*); *Cheng He* (*Nanjing University*); *Si-Yuan Yu* (*Nanjing University*);

00:00 Road towards Building Nonreciprocal Optical Devices
Invited
Zhi-Yuan Li (*South China University of Technology*);

00:00 Superluminal Propagation in Non-Hermitian Systems
Invited
Kazuaki Sakoda (*National Institute for Materials Science*);

00:00 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*);

00:00 Metamaterials and Photonic Crystals Based Photonic
Keynote Nanostructures
Francisco J. Meseguer (*Universidad Politecnica de Valencia*);

00:00 Produce Non-iridescent Structural Colors of High
Invited Color Visibility
Yafeng Zhang (*Fudan University*); *Biqin Dong* (*Fudan University*); *Lei Shi* (*Fudan University*); *Xiaohan Liu* (*Fudan University*); *Jian Zi* (*Fudan University*);

00:00 Measuring Field- and Time-Dependent Acoustic Phonon Phase and Implicating Those in Anharmonic Decay
Young-Dahl Jho (*Gwangju Institute of Science and Technology*); *Hoonil Jeong* (*Gwangju Institute of Science and Technology*); *Austin J. Minnich* (*California Institute of Technology*);

00:00 Parametric Study for TiO_2 Nanostructure Arrays
Shih-Wen Chen (*National Taipei University of Technology*); *Chung-Kuang Yang* (*National Taipei University of Technology*); *Weesiong Chiu* (*University of Malaya*); *Choonyian Haw* (*University of Malaya*); *Guanting Pan* (*National Taipei University of Technology*);

00:00 Tunable Topological Photonic Crystals
Invited
Zeguo Chen (*King Abdullah University of Science and Technology*); *Jun Mei* (*South China University of Technology*); *Ying Wu* (*King Abdullah University of Science and Technology (KAUST)*);

00:00 Role of Thermal Annealing in Phonon Transfer between Graphene and GaN
Sanghyuk Park (*Gwangju Institute of Science and Technology*); *Hoonil Jeong* (*Gwangju Institute of Science and Technology*); *Minyeo Kim* (*Gwangju Institute of Science and Technology*); *Hyeong Yong Hwang* (*Gwangju Institute of Science and Technology*); *Young-Dahl Jho* (*Gwangju Institute of Science and Technology*);

00:00 Magnetoplasmon Propagation in Layered Heterostructures with Ultra-high Quality Factor Resonances
Daria O. Ignatyeva (*Lomonosov Moscow State University*); *Sergey K. Sekatskii* (*Ecole Polytechnique Federale de Lausanne*); *Pavel O. Kapralov* (*Russian Quantum Center*); *Grigory A. Knyazev* (*Lomonosov Moscow State University*); *Alexei N. Kuzmichev* (*Russian Quantum Center*); *Mohammad Nur-E-Alam* (*Edith Cowan University*); *Mikhail Vasiliev* (*Edith Cowan University*); *Kamal E. Alameh* (*Edith Cowan University*); *Vladimir I. Belotelov* (*Russian Quantum Center*);

00:00 Casimir-like Interactions of Dirac Fields under External Boundary Conditions: A Model for Graphene
Manuel Donaire (*Universidad de Valladolid*); *Jose Ma Munoz-Castaneda* (*Universidad Politecnica de Madrid*); *Luis Miguel Nieto* (*Universidad de Valladolid*);

Session 1P_12
FocusSession.SC3: Advanced Solutions in Ultra-high Capacity Optical Communication

Monday PM, May 22, 2017

Room R9

Organized by Sergei Popov, Sergei K. Turitsyn

00:00 Noise Modification by Fabry-Perot Filter and Its Influence on the Throughput of the Optical Telecommunication Channels
Z. V. Gorelova (*Peter the Great St. Petersburg Polytechnic University*); *Victor M. Petrov* (*St. Petersburg State Polytechnical University*);

00:00 Ultrafast [Femtoseconds-Picoseconds] Nonlinear Op-
Keynote tics with Extraordinarily Large Nonlinearities of Liquid Crystalline Photonic Crystals
Iam-Choon Khoo (*Pennsylvania State University*); *Chun-Wei Chen* (*Pennsylvania State University*); *Yizhu Chen* (*Pennsylvania State University*); *Zhiwen Liu* (*Pennsylvania State University*);

00:00 Physical-layer Network Coding over Passive Optical
Invited Interconnect in Datacenter Network
Rui Lin (*Royal Institute of Technology KTH*); *Yuxin Cheng* (*Royal Institute of Technology KTH*); *Jiajia Chen* (*KTH Royal Institute of Technology*);

00:00 Invited Out-of-band Nonlinear Spectral Filtering for Nonlinear Fourier Inverse Synthesis Communication
Morteza Kamalian Kopae (*Aston University*); *Jaroslaw E. Prilepsky* (*Aston University*); *Stanislav A. Derevyanko* (*Aston University*); *S. T. Le* (*Nokia Bell Labs*);

00:00 Photonic Interferometry Based Optical Carrier Cancellation for Optical Interference Noise Reduction
S. M. Kang (*Yonsei University*); *S. M. Jung* (*Yonsei University*); *K. H. Mun* (*Yonsei University*); *Sang-Kook Han* (*Yonsei University*);

00:00 Invited Raman-amplified DWDM Transmission in Links with Symmetry-optimised Optical Phase Conjugation
Juan Diego Ania Castanon (*Consejo Superior de Investigaciones Científicas*); *Pawel Rosa* (*Consejo Superior de Investigaciones Científicas*); *Giuseppe Rizzelli* (*Instituto de Óptica CSIC*);

00:00 DMGD Reducing in Few-mode Fiber Optic Links by Special Refractive Index Profile and Selective Mode Excitation Provided by Designed MDM Channels Placement Scheme over Fiber Core End
Anton Bourdine (*Povolzhskiy State University of Telecommunications and Informatics (PSUTI)*); *Vladimir A. Burdin* (*Povolzhskiy State University of Telecommunications and Informatics (PSUTI)*);

00:00 Invited On the Characterization, Modeling and Mitigation of Nonlinear Interference Noise
Andre Richter (*VPIphotonics GmbH*); *Stefanos Dris* (*VPIphotonics*); *Kseniia Goroshko* (*VPIphotonics*); *Hadrien Louchet* (*VPIphotonics*);

00:00 Invited Signal Detection for Communication over the Nonlinear Fibre-optic Channel
Darko Zibar (*Technical University of Denmark*);

00:00 Invited Precompensation and Windowing for Nonlinear Frequency-division Multiplexing
S. Civelli (*TeCIP Institute, Scuola Superiore Sant'Anna*); *E. Forestieri* (*TeCIP Institute, Scuola Superiore Sant'Anna*); *Marco Secondini* (*TeCIP Institute, Scuola Superiore Sant'Anna*);

00:00 Invited Polarisation and Stochastic Properties of Fibre Raman Amplifiers
Vladimir Kalashnikov (*Aston University*); *Sergey V. Sergeyev* (*Aston University*); *Juan Diego Ania-Castanon* (*Instituto de Optica "Daza de Valdes", CSIC*); *Sergei Popov* (*Royal Institute of Technology (KTH)*); *Gunnar Jacobsen* (*Acreo Swedish ICT AB*);

00:00 Invited 64-QAM Coherent Optical Systems with Semiconductor Lasers
Jaime Rodrigo Navarro (*Network and Transmission Laboratory, Acreo AB*); *Aditya Kakkar* (*Network and Transmission Laboratory, Acreo AB*); *Xiaodan Pang* (*Network and Transmission Laboratory, Acreo AB*); *Oskars Ozolins* (*Network and Transmission Laboratory, Acreo AB*); *Aleksejs Udalcovs* (*Royal Institute of Technology (KTH)*); *Richard Schatz* (*Royal Institute of Technology (KTH)*); *Gunnar Jacobsen* (*Acreo Swedish ICT AB*); *Sergei Popov* (*Royal Institute of Technology (KTH)*);

00:00 Invited Modeling Linear and Nonlinear Coupling in Few Mode Fibers
A. Trichili (*University of Carthage*); *Mourad Zghal* (*University of Carthage*); *L. Palmieri* (*Universita di Padova*); *A. Galtarossa* (*Universita di Padova*); *Marco Santagiustina* (*Universita di Padova*);

Session 1P_13a
Oral Presentations for Best Student Paper Awards — SC3: Optics and Photonics

Monday PM, May 22, 2017

Room R8

Session 1P_13b
Oral Presentations for Best Student Paper Awards — SC4: Antennas and Microwave Technologies

Monday PM, May 22, 2017

Room R8

Session 1P0
Poster Session 2

Monday PM, May 22, 2017

14:00 PM - 19:00 PM

Room B2

00:00 A Trefftz Method Formulation for Eigenmode Analysis of Cylindrical Optical Fibers
Shingo Sato (*Muroran Institure of Technology*); *Koji Hasegawa* (*Muroran Institure of Technology*);

00:00 Hybrid Numerical Method Associating a Conformal Transformation of the Complex Plane with a Matrix Formulation for the Calculation of the Eigenvalues and Eigenvectors in Bended Waveguides
L. Garnier (*Universite de Rennes 1*); *C. Saavedra* (*Universidad de Guanajuato*); *R. Castro-Beltran* (*Universite Rennes 1*); *G. A. Cirino* (*Federal University of Sao Carlos*); *J. L. M. Lucio* (*Universidad de Guanajuato*); *Bruno Beche* (*Universite Rennes 1*);

00:00 Analysis of Spoke-type Brushless DC Motor Considering Rotor Overhang and Demagnetization
Jung-Moo Seo (*Korea Electronics Technology Institute*); *Jeong-Jong Lee* (*Korea Electronics Technology Institute*); *Se-Hyun Rhyu* (*Korea Electronics Technology Institute*); *Bon-Gwan Gu* (*Kyungpook National University*);

00:00 Research on the Influence of Dielectric Material Surface Fidelity and Finish on Scattering Characteristics
Jun Gu (*Science and Technology on Electromagnetic Scattering Laboratory*); *Xiao-Bing Wang* (*Xidian University*); *Zichang Liang* (*Science and Technology on Electromagnetic Scattering Laboratory*);

00:00 The Freshness Analysis of an Apple and a Potato Using Dielectric Properties at the Microwave Frequency Region
Kayhan Ates (*Akdeniz University*); *Hamza Feza Carlak* (*Akdeniz University*); *Sukru Ozen* (*Akdeniz University*);

00:00 Optimization of Electronically Scanned Conformal Cylindrical Phased Array Antenna Synthesis Using Artificial Neural Network Model
Chiraz Larbi Aguili (*University of Tunis*); *Bilel Hamdi* (*University of Tunis*); *Taoufik Aguili* (*University of Tunis*);

00:00 A New Signal Processing Algorithm for Ultra-wideband Radar Life Detection
Liang Wang (*Zhejiang University*); *Yong Wang* (*Zhejiang University*);

00:00 Joint Cumulative Detection Probability and Cost Functions Optimization for Guided Search of Phased Array Radar
Qihua Wu (*National University of Defense Technology*); *Jin Liu* (*National University of Defense Technology*); *Feng Zhao* (*National University of Defence Technology*); *Jianhua Yang* (*National University of Defence Technology*); *Xiao Shun-ping* (*National University of Defence Technology*);

00:00 Waveform Design and Imaging Method of MIMO ISAR Based on Orthogonal LFM Signal
Xiaobin Liu (*National University of Defense Technology*); *Jin Liu* (*National University of Defense Technology*); *Feng Zhao* (*National University of Defence Technology*); *Jianhua Yang* (*National University of Defence Technology*); *Guoyu Wang* (*National University of Defense Technology*);

00:00 Estimation of Micro-Doppler Parameter Based on Adaptive PWV-Hough Transform
Jin Liu (*National University of Defense Technology*); *Xiaobin Liu* (*National University of Defense Technology*); *Qihua Wu* (*National University of Defense Technology*); *Jianhua Yang* (*National University of Defence Technology*); *Feng Zhao* (*National University of Defence Technology*);

00:00 A Sparse Signal Perspective for Blind User Identification in Multiuser DS-CDMA
Jianghai Liang (*National University of Defence Technology*); *Feng-Hua Wang* (*National University of Defense Technology*); *Xiang Wang* (*National University of Defense Technology*); *Zhitao Huang* (*National University of Defense Technology*);

00:00 Analysis of Multi-loop Retrodirective Cross-eye Jamming System for Large Platform
Jianrong Lu (*National University of Defense Technology*); *Tianpeng Liu* (*National University of Defense Technology*); *Zhen Liu* (*National University of Defense Technology*); *Xizhang Wei* (*National University of Defense Technology*); *Dongping Liao* (*National University of Defense Technology*);

00:00 Micro-motion False Target Identification in Random Pulse Initial Phase Radar Based on Compressed Sensing
Jinping Sui (*National University of Defense Technology*); *Zhen Liu* (*National University of Defense Technology*); *Xiang Li* (*National University of Defense Technology*); *Xizhang Wei* (*National University of Defense Technology*); *Shuhong Wang* (*National University of Defense Technology*);

00:00 Design of Simulation System for Multi-function Radar Behaviour Analysis
Jian Ou (*National University of Defence Technology*); *Yongguang Chen* (*Beijing Institute of Tracking & Telecommunications Technology*); *Feng Zhao* (*National University of Defence Technology*); *Jianhua Yang* (*National University of Defence Technology*); *Shun-Ping Xiao* (*National University of Defence Technology*);

00:00 Research on Extension of Hierarchical Structure for Multi-function Radar Signals
Jian Ou (*National University of Defence Technology*); *Yongguang Chen* (*Beijing Institute of Tracking & Telecommunications Technology*); *Feng Zhao* (*National University of Defence Technology*); *Xiaofeng Ai* (*National University of Defense Technology*); *Jianhua Yang* (*National University of Defence Technology*);

00:00 Detection of Thin Ferromagnetic Layers Based on Faraday Effect
Alexander Y. Zherdev (*Bauman Moscow State Technical University*); *Stepan A. Baryshev* (*Bauman Moscow State Technical University*); *Sergey B. Odinokov* (*Moscow Bauman State Technical University*); *Alexey S. Kuznetsov* (*Bauman Moscow State Technical University*);

00:00 Optical Binding near a Planar Interface
N. A. Kostina (*ITMO University*); *Mihail I. Petrov* (*ITMO University*); *Aliaksandra N. Ivinskaya* (*ITMO University*); *Andrey A. Bogdanov* (*ITMO University*); *Alexander Sergeevich Shalin* (*Ulyanovsk Branch of the Institute of Radio Engineering and Electronics, Russian Academy of Sciences*); *Pavel B. Ginzburg* (*ITMO University*);

00:00 Improving the Sensitivity of Magnetic Sensors by Field Concentration with 3D Metamaterials
Rosa Mach-Batlle (*Universitat Autonoma de Barcelona*); *Carles Navau* (*Universitat Autonoma de Barcelona*); *Albert Parra* (*Universitat Autonoma de Barcelona*); *Jordi Prat-Camps* (*University of Innsbruck*); *Nuria Del-Valle* (*Universitat Autonoma de Barcelona*); *Alvaro Sanchez* (*Universitat Autonoma de Barcelona*);

00:00 Linear Momentum Transfer from Swift Electrons to Plasmonic Small Nanoparticles: Dipole Approximation
Carlos Maciel Escudero (*Universidad Nacional Autonoma de Mexico*); *Alejandro Reyes Coronado* (*Universidad Nacional Autonoma de Mexico*);

00:00 Propagation Modeling of Vortex Generalized Airy Beams in Parabolic Fiber
Eugene Olegovich Monin (*Samara National Research University*); *A. V. Ustinov* (*Image Processing Systems Institute of RAS — Branch of the FSRC "Crystallography and Photonics" RAS*); *Svetlana N. Khonina* (*Samara State Aerospace University*);

00:00 Study of Conservation of the Topological Charge of Vortex Beams Transferring in a Random Media
Eugene Olegovich Monin (*Samara National Research University*); *Mikhail S. Kirilenko* (*Samara State Aerospace University*); *Svetlana N. Khonina* (*Samara State Aerospace University*);

00:00 Diffraction of the Focused Pulsed Laser Beam on a Binary Phase Plates
Eugene Olegovich Monin (*Samara National Research University*); *S. V. Krasnov* (*Samara National Research University*); *A. V. Ignatyev* (*Samara National Research University*);

00:00 Generation of Spectral Supercontinuum of More than 2.5 Octaves in a Deuterium Oxide D_2O Jet
Anna A. Borimova (*ITMO University*); *Anton N. Tcypkin* (*ITMO University*); *Sergey E. Putilin* (*ITMO University*); *Victor G. Bespalov* (*ITMO University*); *Sergey A. Kozlov* (*ITMO University*);

00:00 Application of Digital Holography in Jamin-Rozhdestvenskiy Interferometer
Sergey Pul'kin (*St.-Petersburg State University*); *Vladislav Shoev* (*St.-Petersburg State University*); *Alexander Sevryugin* (*St.-Petersburg Electrotechnical University*); *Ibrohim Tursunov* (*St.-Petersburg Electrotechnical University*); *Dmtrii Venediktov* (*St.-Petersburg State University*); *Vladimir Yu. Venediktov* (*St.-Petersburg Electrotechnical University and St.-Petersburg State University*);

00:00 Digital Holographic Interferometry for the Nanodisplacement Measurement
Igor V. Alekseenko (*Immanuel Kant Baltic Federal University*); *M. E. Gusev* (*"Alorithm-Opto Ltd"*); *V. I. Redkorechev* (*R&D Company "Akadempribor", Acadeny of Science*); *Andrey Yurievich Zyubin* (*Immanuel Kant Baltic Federal University*); *I. G. Samusev* (*Immanuel Kant Baltic Federal University*);

00:00 Characterization of $Cu_2ZnSnSe_4$ Solar Cells Fabricated by Sputtering with Se Powder Post-selenization
Shou-Yi Kuo (*Chang Gung University*); *Fang-I. Lai* (*Yuan Ze University*);

00:00 Structural Analysis into $Cu_2ZnSnSe_4$ Solar Cell with Short-circuit Current of 42 mA/cm^2 Prepared by Sequential Evaporation
Fang-I. Lai (*Yuan Ze University*); *Shou-Yi Kuo* (*Chang Gung University*);

00:00 Utilization of Nanojet Effect for Light-trapping in Solar Cells
Kseniia V. Baryshnikova (*ITMO University*); *Alaudi Khozbaudievich Denisultanov* (*ITMO University*); *A. E. Kovrov* (*ITMO University*); *Pavel A. Belov* (*ITMO University*); *A. S. Shalin* (*ITMO University*);

00:00 Broadband Near-perfect Absorption Based on Single-layered and Nonstructured Graphene
Fei Gao (*National University of Defense Technology*); *Zhihong Zhu* (*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*); *Wei Xu* (*National University of Defense Technology*); *Xiao-Dong Yuan* (*National University of Defense Technology*); *Shiqiao Qin* (*National University of Defense Technology*);

00:00 Sensing in the Shortwave Infrared Using Carbon Nanotube
Lian-Mao Peng (*Peking University*);

00:00 Wide Bandwidth Left-handed Circularly Polarized Printed Antenna with Crescent Slot
Farohaji Kurniawan (*Chiba University*); *Josaphat Tetuko Sri Sumantyo* (*Chiba University*); *Gunawan Setyo Prabowo* (*National Institute of Aeronautics and Space*); *Achmad Munir* (*Institut Teknologi Bandung*);

00:00 A Dual Circularly Polarized Omnidirectional Receiver Antenna for Satellite Communication
Serdar Okuyucu (*Yasar University*); *Ceyhan Turkmen* (*Yasar University*); *Mustafa Secmen* (*Yasar University*);

00:00 Effects of Printed Circuit Board on the Performance of Tag Antennas for Passive RFID
Luiz Fernando Taboada Gomes Amaral (*Federal University of Bahia*); *Marcela Silva Novo* (*UFBA — Federal University of Bahia*);

00:00 Substrate Integrated Waveguide Monopulse Patch Antenna Array
Bijan Abbasi-Arand (*Tarbiat Modarres University*); *Mohammad Soleimani* (*Iran University of Science and Technology*); *Saeed Kamalzadeh* (*Iran University of Science and Technology*); *Amir Zahedi* (*Tarbiat Modarres University*);

00:00 Design and Implementation of Leaky Wave Antenna with Adjusted Placement of Meandering Long Slot on the Broad Wall of SIW
Mahdieh Ghaderi (*Tarbiat Modarres University*); *Bijan Abbasi-Arand* (*Tarbiat Modarres University*);

00:00 Generalized Design Technique for Fast Waveguide Ferrite Phase Shifters
Andrey Budkin (*Bauman Moscow State Technical University*); *Maxim Golubtsov* (*Bauman Moscow State Technical University*); *Vladimir Litun* (*Bauman Moscow State Technical University*); *Gennady Slukin* (*Bauman Moscow State Technical University*);

00:00 Modeling of Microwave Antenna Array with Magnetoelectric Effect Control
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*);

00:00 Hybrid Microstrip Patch Antenna for Dual Frequency of Operation
Rahul Kumar Garg (*The LNM Institute of Information Technology*); *Smrity Dwivedi* (*Banaras Hindu University*); *Raghuvir S. Tomar* (*The LNM Institute of Information Technology*);

00:00 A Double T-shaped Decoupling Array Antenna with Spiral Shape
Yanjie Sun (*Harbin Engineering University*); *Jiahe Mei* (*Harbin Engineering University*); *Tao Jiang* (*Harbin Engineering University*);

00:00 Antenna Array Receiver for Television by Satellite
Tchanguiz Razban-Haghighi (*LUNAM, IETR UMR 6164*); *Amal Harrabi* (*ENAC*); *Yann Mahe* (*LUNAM, IETR UMR 6164*);

00:00 New Electrical Equivalent Circuit Model of the Inset Fed Rectangular Patch Antenna
Wissem Chouchene (*University of Tunis El Manar (UTM)*); *Chiraz Larbi* (*University of Tunis El Manar (UTM)*); *Taoufik Aguili* (*University of Tunis El Manar (UTM)*);

00:00 Two Types of Printed Monopoles for Integration into Small Terminals
Raul Ribeiro (*University of Lisbon*); *Custodio Peixeiro* (*Instituto Superior Tecnico — Technical University of Lisbon*);

00:00 Textile Yagi Antenna at 1.8 GHz
Raul Fernandez-Garcia (*Universitat Politecnica de Catalunya*); *Ignacio Gil* (*Universitat Politecnica de Catalunya (UPC)*);

00:00 Wearable Embroidered GPS Textile Antenna
Ignacio Gil (*Universitat Politecnica de Catalunya (UPC)*); *Raul Fernandez-Garcia* (*Universitat Politecnica de Catalunya*);

00:00 A Low Mutual Coupling MIMO Antenna Using EBG Structures
Xiaochao Jiang (*Harbin Engineering University*); *Hengxu Wang* (*Harbin Engineering University*); *Tao Jiang* (*Harbin Engineering University*);

00:00 A Novel Compact Tri-band Antenna for WLAN Application
Hengxu Wang (*Harbin Engineering University*); *Jiahe Mei* (*Harbin Engineering University*); *Tao Jiang* (*Harbin Engineering University*);

00:00 A Low Mutual Coupling Array Antenna Based on E-shaped Structure with Spiral
Jiahe Mei (*Harbin Engineering University*); *Xiaochao Jiang* (*Harbin Engineering University*); *Tao Jiang* (*Harbin Engineering University*);

00:00 A Compact Dual-band Slot Antenna Based on Koch Fractal Snowflake Annular Ring
Mahmood T. Yassen (*University of Technology*); *Mohammed R. Hussan* (*University of Technology*); *Hussain A. Hammas* (*University of Technology*); *Hussam Al-Saedi* (*University of Waterloo (UW)*); *Jawad K. Ali* (*University of Technology*);

00:00 An Improved Track Segment Association Algorithm Using MM-GNN Method
Shengsen Pan (*National University of Defense Technology*); *Qinglong Bao* (*National University of Defense Technology*); *Weibing Hou* (*National University of Defense Technology*); *Zengping Chen* (*National University of Defense Technology*);

00:00 Parameter Estimation of Radar Target in Fractional Fourier Domain Based on Compressed Sensing
Panhe Hu (*National University of Defense Technology*); *Qinglong Bao* (*National University of Defense Technology*); *Zengping Chen* (*National University of Defense Technology*);

00:00 High Performance Sampling Sub-system Design for Different Applications
Qinglong Bao (*National University of Defense Technology*); *Yuting Qiao* (*National University of Defense Technology*); *Zengping Chen* (*National University of Defense Technology*);

00:00 Some Results on Natural Background Radiation in Proximity of Large-scale Earth's Mechanical Strain
Karl F. Kaspareck (*Energy & Engineering Consultant (CTE)*);

00:00 Radar Observations of Small Space Objects of Natural and Artificial Origin with Extended Antenna Fields
A. I. Baskakov (*National Research University "Moscow Power Engineering Institute"*); *Aleksey Aleksandrovich Komarov* (*National Research University "Moscow Power Engineering Institute"*);

00:00 The Problem the Frozen Soil Mapping of the Steppe Zone
Alexandr Sergeevich Yashchenko (*Omsk State Pedagogical University*);

00:00 On the Possibility Use Microwave Radiometers Data for Remote Retrieval of the Evaporation from the Soil Surface
Alexandr Sergeevich Yashchenko (*Omsk State Pedagogical University*); *Pavel Petrovich Bobrov* (*Omsk State Pedagogical University*); *Krivaltsevitsh Sergey Victorovich* (*Joint-Stock Company "Omskiy Nauchno Issledovatelskiy Institut Priborostroeniya"*);

00:00 The Method to Use GPS Observations for Statistical Evaluation of the Diagnostic Slips Level of Total Electron Content at Different Latitudes
Victor Ivanovich Zakharov (*Lomonosov Moscow State University*); *Yury Vladimirovich Yasyukevich* (*Institute of Solar-Terrestrial Physics (ISTP), Siberian Branch of Russian Academy of Sciences*); *Vladimir Evgenievich Pronin* (*M. V. Lomonosov Moscow State University*);

00:00 Stability Analysis of a Three-coleader Formation with Measurement Error in the Plane
Yanmei Jiang (*Southeast University*);

00:00 Grid Computing Technologies and the Impact on the Design of Super Computer
Aitizaz Ali (*UOG SIALKOT*); *Sadaf Mehmood* (*University of Gujrat Sialkot*);

00:00 Electromagnetic Property Extraction of Weakly Coupled Bianisotropic Metamaterials
Ugur Cem Hasar (*University of Gaziantep*); *Musa Bute* (*University of Gaziantep*); *Tolga Ulas Gurbuz* (*Gaziantep University*); *Joaquim Jose Barroso* (*Technological Institute of Aeronautics*);

00:00 Geophysical Prospecting by Electromagnetic Data Analysis
Sunjay (*Banaras Hindu University*);

00:00 Constrained Weighted Least Squares Algorithm for Single-observer TDOA Location Estimation Using Illuminators of Opportunity
Jiayang Liang (*PLA Information Engineering University*); *Yongjun Zhao* (*PLA Information Engineering University*); *Chuang Zhao* (*PLA Information Engineering University*);

00:00 Image Restoration Based on Improved Continuous Hopfield Network algorithm
Zhimin Zhang (*Nanjing University of Posts and Telecommunications*); *Yun Zhang* (*Nanjing University of Posts and Telecommunications*); *Shujuan Yu* (*Nanjing University of Posts and Telecommunications*);

00:00 Investigation of the Continuous Wavelet Transform for Use with Late Time Response of Concealed on Body Threat Objects
Ali Saied Atiah (*Manchester Metropolitan University*); *N. Browing* (*Manchester Metropolitan University*);

00:00 Range Migration Compensation for Moving Targets with Stepped Frequency in Chirp Radars
Sen Wang (*National University of Defense Technology*); *Qinglong Bao* (*National University of Defense Technology*); *Zengping Chen* (*National University of Defense Technology*);

00:00 Importance of the Bioradar Signal Preprocessing in Fall Detection
Maria K. Dremina (*Bauman Moscow State Technical University*); *Alborova L. Irina* (*Bauman Moscow State Technical University*); *Lesya N. Anishchenko* (*Bauman Moscow State Technical University*);

00:00 The Finite Difference Time-domain Method for Inverse Coefficient Problem of Electrodynamics
K. Iskakov (*L.N. Gumilyov Eurasian National University*); *Ainur Kussainova* (*L.N. Gumilyov Eurasian National University*); *Z. Khasenova* (*L.N. Gumilyov Eurasian National University*); *M. Turarova* (*L.N. Gumilyov Eurasian National University*);

00:00 Field Effects on Heterojunctions Composed with Electron Doped $La_{1-x}Hf_xMnO_3$ and Nb-$SrTiO_3$ Perovskites
Ju Gao (*The University of Hong Kong*); *Zhu Xia* (*Suzhou University of Science and Technology*); *Y. P. Qi* (*The University of Hong Kong*); *L. Wan* (*The University of Hong Kong*); *W. Y. Huang* (*The University of Hong Kong*);

00:00 Enhanced Magneto-optical Activity at Waveguide Modes in All-dielectric Photonic Structures
Nikolai Evgenyevich Khokhlov (*Lomonosov Moscow State University*); *S. A. Dagesyan* (*Lomonosov Moscow State University*); *A. K. Zvezdin* (*Russian Quantum Center*); *V. I. Belotelov* (*Lomonosov Moscow State University*);

00:00 Nonreciprocal Effects in Plasmonic Structures with Magnetoelectrics
Daria O. Ignatyeva (*Lomonosov Moscow State University*); *Andrey N. Kalish* (*A. M. Prokhorov General Physics Institute of RAS*); *Alexei N. Kuzmichev* (*Russian Quantum Center*); *Anatoliy K. Zvezdin* (*Prokhorov General Physics Institute of the Russian Academy of Sciences*); *Vladimir I. Belotelov* (*Russian Quantum Center*);

00:00 The Thickness Dependence of the Dielectric Functions and Critical Points of Crystalline WS_2 Ultrathin Films
Da-Hai Li (*Fudan University*); *Rongjun Zhang* (*Fudan University*); *Yu-Xiang Zheng* (*Fudan University*); *Songyou Wang* (*Fudan University*); *Liangyao Chen* (*Fudan University*);

00:00 Knee Structure in Double Ionization of Noble Atoms in Circularly Polarized Laser Fields
Jingtao Zhang (*Shanghai Normal University*);

00:00 Novel Nonstationary Nonlinear Optical Processes in Quasi-three-level Solid Systems
Evgeny Yu. Perlin (*ITMO University*); *Andrey V. Ivanov* (*ITMO University*); *Rouslan S. Levitskii* (*ITMO University*); *Mikhail A. Bondarev* (*ITMO University*); *Kirill A. Eliseev* (*ITMO University*); *Alexey A. Popov* (*ITMO University*);

00:00 The Excitation of Level-Band System by Strong Laser Pulse
P. A. Golovinski (*Moscow Institute of Physics and Technology*); *V. A. Astapenko* (*Moscow Institute of Physics and Technology*); *Andrey V. Yakovets* (*Moscow Institute of Physics and Technology*);

00:00 The Ball Lightning. A Model and Experimental Opportunities
Filipp V. Ignatovich (*Joint Institute for Nuclear Research*); *Vladimir K. Ignatovich* (*Joint Institute for Nuclear Research*);

00:00 All-optical $\mathbf{1 \times N}$ Beam-splitter Using Microring Coupled Resonator Structures
Yaw-Dong Wu (*National Kaohsiung University of Applied Sciences*); *Tien-Tsorng Shih* (*National Kaohsiung University of Applied Sciences*);

00:00 EBG Based Planer UWB Antenna with Band Rejection Features
Kumaresh Sarmah (*Gauhati University*); *Angana Sarma* (*Gauhati University*); *Sivaranjan Goswami* (*Gauhati University*); *Kandarpa Kumar Sarma* (*Gauhati University*); *Sunandan Baruah* (*Assam Don Bosco University*);

00:00 A Conformal Multibeam Slot Array Antenna on Cylinder
Yi Liu (*National University of Defense Technology*); *Hu Yang* (*National University of Defense Technology*); *Zusheng Jin* (*EMC Research and Measurement Center of Navy*); *Jiang Zhu* (*National University of Defense Technology*);

00:00 Analysis of Microstrip Bandstop Filter Characteristic Based on Defected Microstrip Structure
Xuemei Zheng (*Harbin Engineering University*);

00:00 UWB Triple Band-notched Antenna with Defected Ground Structure
Asim Quddus (*University of Engineering and Technology*); *Rashid Saleem* (*The University of Manchester*); *Muhammad Bilal* (*University of Engineering and Technology*); *Tayyab Shabbir* (*University of Engineering and Technology*); *M. Arif Khan* (*Charles Sturt University*);

00:00 Numerical Simulation of Open and Short Microstrip Line Using 3D FDTD-UPML
Samir Labiod (*Universite de Skikda*); *Saida Latreche* (*Universite Freres Mentouri Constantine*); *Sara Hammour* (*Universite Freres Mentouri Constantine*);

00:00 A Microstrip Patch Antenna Design for Millimeter-wave (mmW) Massive MIMO Applications
Cheng-Nan Hu (*Oriental Institute of Technology*);

00:00 Multi-band Dual-element Circular Polarized MIMO Antenna with Band Stop Filter and Defected Ground for High Performance
Adel Mohammad Abdin (*Yanbu Industrial College (YIC)*); *Raed Althomali* (*Yanbu Industrial College (YIC)*); *Azzeddine Djaiz* (*Yanbu Industrial College (YIC)*); *Sayer Yousef Alyousef* (*Transmission and Distribution Power Dispatch Department*); *Abdulmoin Bakr Al-Barnawi* (*Transmission and Distribution Power Dispatch Department*);

00:00 A Novel Dual Band Patch Antenna Using Parasitic Composite Right/Left Handed (CRLH) Unit Cell Coupling
Alyna Ali Chaudhry (*National University of Sciences and Technology*); *Javeria Khanum Arif* (*National University of Sciences and Technology*); *Zubair Ahmed* (*National University of Sciences and Technology*); *Muhammad Anis Chaudhary* (*National University of Sciences and Technology*); *Mojeeb Bin Ihsan* (*National University of Sciences and Technology*);

00:00 Modeling of Compact Stacked-patch Antennas on LTCC Technology
Hamed E. A. Mahyoub (*Southern Federal University*); *Natalya N. Kisel* (*Southern Federal University*);

00:00 Design and Simulation of Semi Circular Microstrip Antenna with $\mho$ Shaped Slot for WiBro/WLAN/WiMAX and UWB Applications
Praveen Vummadisetty Naidu (*Velagapudi Ramakrishna Siddhartha Engineering College*); *K. Rohini* (*Velagapudi Ramakrishna Siddhartha Engineering College*); *Arvind Kumar* (*Kautilya Institute of Technology and Engineering*);

00:00 A Compact Modified Rectangular Shaped Microstrip Antenna for WLAN/WiMAX and UWB Applications
Praveen Vummadisetty Naidu (*Velagapudi Ramakrishna Siddhartha Engineering College*); *V. Ravi* (*Velagapudi Ramakrishna Siddhartha Engineering College*); *Arvind Kumar* (*Kautilya Institute of Technology and Engineering*);

00:00 Design of Triple Band ACS Fed Antenna with M and Rectangular Shaped Radiating Branches for WLAN and WiMAX Applications
Praveen Vummadisetty Naidu (*Velagapudi Ramakrishna Siddhartha Engineering College*); *Arvind Kumar* (*Kautilya Institute of Technology and Engineering*);

00:00 A Random Fiber Laser with Enhanced Rayleigh Feedback
Jingxuan Song (*China Jiliang University*); *Ziyang Guo* (*China Jiliang University*); *Yiming Liu* (*China Jiliang University*); *Xinyong Dong* (*China Jiliang University*);

00:00 A Novel Application of Spotlight Bistatic Forward-looking SAR
Dong Feng (*National University of Defense Technology*); *Dao Xiang An* (*National University of Defense Technology*); *Xiaotao Huang* (*National University of Defense Technology*);

00:00 Automatic Vehicle Detection Using Circular Synthetic Aperture Radar Image
Dao Xiang An (*National University of Defense Technology*); *Leping Chen* (*National University of Defense Technology*); *Xiaotao Huang* (*National University of Defense Technology*);

00:00 Vehicles Detection Experiments with Ka Band FMCW ISAR
Xiangkun Zhang (*National Space Science Center, Chinese Academy of Sciences*); *Jiawei Ren* (*National Space Science Center, Chinese Academy of Sciences*); *Zelong Shao* (*National Space Science Center, Chinese Academy of Sciences*); *Jingshan Jiang* (*Center for Space Science and Applied Research, Chinese Academy of Sciences*);

00:00 Feasibility Analysis for Space-borne Implementation of Circular Synthetic Aperture Radar
Hai-Ying Cui (*Key Laboratory of Microwave Remote Sensing, Chinese Academy of Sciences*); *Xiangkun Zhang* (*National Space Science Center, Chinese Academy of Sciences*);

00:00 An Efficient Analysis and Correction Method for Antenna Pattern of Sliding Spotlight SAR
Jiwei Hu (*China Academy of Space Technology (Xi'an)*); *Hongxing Dang* (*Institute of Radar Technology, China Academy of Space Technology*); *Xiaomin Tan* (*Institute of Radar Technology, China Academy of Space Technology*);

00:00 Variation of Quality Factors and Bandwidth of a Conically Depressed Microstrip Patch Antenna in Plasma Medium
Ayman Al-Sawalha (*Jerash University*);

Session 2A1
SC3: Advanced Optofluidics: Optical Control and Photonics with Fluid Matter 2

Tuesday AM, May 23, 2017

Room G5

Organized by Francesco Simoni, Luigino Criante

Chaired by Francesco Simoni, Luigino Criante

00:00 Invited — Bio-integrated Lasers

Matjaz Humar (*Jozef Stefan Institute*);

00:00 Invited — Optofluidics for Artificial Photosynthesis of Glucose Using Sunlight

Xuming Zhang (*Hong Kong Polytechnic University*); *Yujiao Zhu* (*Hong Kong Polytechnic University*); *Yang Liu* (*Hong Kong Polytechnic University*); *Huan Lin* (*Hong Kong Polytechnic University*); *Xiaowen Huang* (*Hong Kong Polytechnic University*);

00:00 Invited — Single-cell Bacterium Identification with a SOI Microcavity

M. Tardif (*University of Grenoble Alpes*); *J.-B. Jager* (*CEA & University of Grenoble Alpes*); *P. R. Marcoux* (*CEA, LETI-DTBS-SBSC-LCMI/LBAM*); *B. Cluzel* (*Laboratoire ICB — Universite de Bourgogne Franche-Comte*); *E. Picard* (*CEA & University of Grenoble Alpes*); *E. Hadji* (*CEA & University of Grenoble Alpes*); *David Peyrade* (*CNRS*);

00:00 Invited — Refractometric Imaging with Photonic Crystal Slab Sensors

Kristian Tolbol Sorensen (*Technical University of Denmark*); *Chen Zhou* (*Technical University of Denmark*); *Xiaolong Zhu* (*Technical University of Denmark*); *Anders Kristensen* (*Technical University of Denmark*);

00:00 Invited — Glass-embedded Optofluidic Lasers

Paolo Spegni (*Universita Politecnicadelle Marche*); *D. Tricarico* (*Universita Politecnica delle Marche*); *Silvio Bonfadini* (*Istituto Italiano di Tecnologia*); *Sara Lo Turco* (*Istituto Italiano di Tecnologia*); *Luigino Criante* (*Istituto Italiano di Tecnologia*); *Francesco Simoni* (*Universita Politecnica delle Marche*);

00:00 Dermis as a Distributed 2D Sensor for Optical Monitoring of Blood Flow in Deep Vessels

Valery V. Zaitsev (*ITMO University*); *Oleg V. Mamontov* (*Almazov Federal Heart, Blood and Endocrinology Center*); *Alexei A. Kamshilin* (*ITMO University*);

00:00 Invited — Laser Fabrication of Advanced Microfluidic and Optofluidic Devices and Their Applications

Hong-Bo Sun (*Jilin University*); *Huan Wang* (*Jilin University*); *Yong-Lai Zhang* (*Jilin University*);

00:00 Invited — Recent Advances in Light Driven Phenomena for Applications in Opto-microfluidics Lab-on-chip Platforms

Cinzia Sada (*University of Padova*); *Annamaria Zaltron* (*University of Padova*); *Giacomo Bettella* (*University of Padova*); *Gianluca Pozza* (*University of Padova*); *Riccardo Zamboni* (*University of Padova*); *Mathieu Chauvet* (*Universite de Franche-Comte*);

00:00 Invited — Lab on a Chip Light Control: 3D in-plane Optofluidic Tunable Microlenses

M. Natile (*Istituto Italiano di Tecnologia*); *Roberta Ramponi* (*Institute of Photonics and Nanotechnology (IFN) — CNR*); *Luigino Criante* (*Istituto Italiano di Tecnologia*);

00:00 Laser Refractography Methods for Investigation of Diffusion Layer of Liquid Media

Bronyus S. Rinkevichyus (*Moscow Power Engineering Institute*); *Anastasia V. Vedyashkina* (*National Research University "Moscow Power Engineering Institute"*); *Ilia Nikolayevich Pavlov* (*National Research University "Moscow Power Engineering Institute"*); *I. L. Raskovskaya* (*National Research University "Moscow Power Engineering Institute"*);

00:00 Optofluidic Lab-on-chip Platform for Realtime Sensing Applications

Aleksandr V. Zverev (*BMSTU*); *Anton I. Ivanov* (*VNIIA*); *Anastasiia A. Pishchimova* (*BMSTU*); *Mikhail Andronik* (*BMSTU*); *Vladimir V. Echeistov* (*BMSTU*); *Stanislav A. Mikhailov* (*BMSTU*); *Ilya A. Ryzhikov* (*VNIIA*); *Ilya A. Rodionov* (*All-Russian Research Institute of Automatics*);

Session 2A2
Fundamental Aspects in the Problems of the EM High-frequency Wave Propagation in the Ionosphere 1

Tuesday AM, May 23, 2017

Room G6

Organized by Nikolay N. Zernov

Chaired by Nikolay N. Zernov, Nikolay Y. Zaalov

00:00 Applying the DWFT Method for Describing Scattered Wave Fields in an Inhomogeneous Plasma

Sergei I. Knizhin (*Irkutsk State University*); *M. V. Tinin* (*Irkutsk State University*);

00:00 On Radio Wave Propagation in Multiscale Randomly Invited Inhomogeneous Ionosphere
M. V. Tinin (*Irkutsk State University*); *Sergei I. Knizhin* (*Irkutsk State University*);

00:00 Recent Developments of the Hybrid Scintillation Propagation Model of Transionospheric Stochastic Channel
Vadim E. Gherm (*University of St. Petersburg*); *Nikolay N. Zernov* (*Saint Petersburg State University*); *M. Z. Zakaryayeva* (*University of St. Petersburg*);

00:00 Ionosphere Scintillations at Low and High Latitudes Invited Analysis of Data Recorded in the Frame of ESA Monitor Project
Yannick Beniguel (*IEEA*);

00:00 Advanced Model of HF Radio Waves Propagation Based on Normal Wave Method
Maksim Sergeevich Penzin (*Institute of Solar-Terrestrial Physics SB RAS*); *Nikolay V. Ilyin* (*Institute of Solar-Terrestrial Physics of Siberian Branch of Russian Academy of Sciences*); *Sergey N. Ponomarchuk* (*Institute of Solar-Terrestrial Physics SB RAS*);

00:00 Exploring the Ionospheric Structures by Radio Tomo- Invited graphic Methods under Different Space Weather Conditions
Elena S. Andreeva (*M. V. Lomonosov Moscow State University*); *E. D. Tereshchenko* (*Polar Geophysical Institute RAS*); *M. O. Nazarenko* (*M. V. Lomonosov Moscow State University*); *I. A. Nesterov* (*M. V. Lomonosov Moscow State University*); *Artem M. Padokhin* (*M. V. Lomonosov Moscow State University*); *Yulia S. Tumanova* (*Lomonosov Moscow State University*);

00:00 Formation of Ray Trajectories of HF Radiowaves in Artificially and Naturally Disturbed Ionosphere according to Radiotomography and IRI Model Data
Elena S. Andreeva (*M. V. Lomonosov Moscow State University*); *Vladimir L. Frolov* (*Radio Physical Research Institute (NIRFI NNSU)*); *M. A. Annenkov* (*M. V. Lomonosov Moscow State University*); *Artem M. Padokhin* (*M. V. Lomonosov Moscow State University*); *Yulia S. Tumanova* (*Lomonosov Moscow State University*);

00:00 Investigation of Direct Variational Approach for the High and Low Ray Finding
Igor A. Nosikov (*Immanuel Kant Baltic Federal University*); *M. V. Klimenko* (*Immanuel Kant Baltic Federal University*); *P. F. Bessarab* (*Science Institute of the University of Iceland*);

00:00 The Research of Backscatter Ionosphere Sounding Features on the Base of Chirp Ionosonde
Sergey N. Ponomarchuk (*Institute of Solar-Terrestrial Physics SB RAS*); *Vladimir Ivanovich Kurkin* (*Institute of Solar-Terrestrial Physics, Siberian Branch, Russian Academy of Sciences*); *Maksim S. Pensin* (*Institute of Solar-Terrestrial Physics SB RAS*);

00:00 Large-scale Traveling Ionospheric Disturbances Registered Using Oblique-incidence Sounding over North-Eastern Region of Russian Federation
Vera A. Ivanova (*Institute of Solar-Terrestrial Physics SB RAS*); *Vladimir Ivanovich Kurkin* (*Institute of Solar-Terrestrial Physics, Siberian Branch, Russian Academy of Sciences*); *Aleksey V. Podlesnyi* (*Institute of Solar — Terrestrial Physics, Siberian Branch, Russian Academy of Sciences*); *Sergey N. Ponomarchuk* (*Institute of Solar-Terrestrial Physics SB RAS*); *Viktor P. Grozov* (*Institute of Solar-Terrestrial Physics SB RAS*); *A. G. Kim* (*Institute of Solar-Terrestrial Physics SB RAS*); *Z. P. Dumbrava* (*Institute of Cosmophysical Researches and Radio Wave Propagation, FEB RAS*); *Igor N. Poddelsky* (*Institute of Cosmophysical Researches and Radio Wave Propagation, FEB RAS*); *Aleksey I. Poddelsky* (*Institute of Cosmophysical Researches and Radio Wave Propagation, FEB RAS*);

00:00 Searching for an Alternative Method of the Ionosphere Monitoring
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*); *Anna A. Mylnikova* (*Institute of Solar-Terrestrial Physics (ISTP), Siberian Branch of Russian Academy of Sciences*); *Konstantin G. Ratovsky* (*Institute of Solar-Terrestrial Physics SB RAS*);

Session 2A3
Inverse Design Methods in Detection and Cloaking Problems

Tuesday AM, May 23, 2017

Room G7

Organized by Gennady V. Alekseev, Yury V. Shestopalov

Chaired by Gennady V. Alekseev, Yury V. Shestopalov

00:00 Inverse Design Method in 3D Electromagnetic Cloaking Problems
Gennady V. Alekseev (*Institute of Applied Mathematics FEB RAS*);

00:00 Optimization Method in Static Magnetic Cloaking Problems
Yuliya E. Spivak (*Far Eastern Federal University*);

00:00 Design of the Boundary Reflection Properties to Minimize the Energy Flows
Alyona A. Astrakhantseva (*Far Eastern Federal University*); *Alexander Yu. Chebotarev* (*Far Eastern Federal University*); *Andrey E. Kovtanyuk* (*Far Eastern Federal University*);

00:00 Numerical Analysis of 3D Multilayered Cloaking in Static Fields
Dmitry A. Tereshko (*Institute of Applied Mathematics FEB RAS*);

00:00 Mathematical Modeling of Multilayered Radar Absorbing Coating
E. D. Derevyanchuk (*Penza State University*); *A. S. Ilyinsky* (*Moscow State University*); *A. S. Shutkov* (*Penza State University*); *Yury G. Smirnov* (*Penza State University*);

00:00 Inverse Coefficient Problems for Static Maxwell Equations
Roman V. Brizitskii (*Institute of Applied Mathematics FEB RAS*); *Zhanna Yu. Saritskaya* (*Far Eastern Federal University*);

00:00 Analysis of the Radiative-conductive Heat Transfer Equations with Unknown Intensity of Heat Sources
Alyona A. Astrakhantseva (*Far Eastern Federal University*); *Alexander Yu. Chebotarev* (*Far Eastern Federal University*); *Andrey E. Kovtanyuk* (*Institute for Applied Mathematics FEB RAS*);

00:00 Optimization Method in Problems of Manipulating DC Currents
Gennady V. Alekseev (*Institute of Applied Mathematics FEB RAS*); *Dmitry A. Tereshko* (*Institute of Applied Mathematics FEB RAS*); *Tim Seleznev* (*Far Eastern Federal University*); *Mikhail Shepelov* (*Far Eastern Federal University*);

00:00 Inverse Design Method for the 2D Problems of Thermal Cloaking
Gennady V. Alekseev (*Institute of Applied Mathematics FEB RAS*); *O. V. Soboleva* (*Far Eastern Federal University*); *I. V. Piskun* (*Far Eastern Federal University*);

00:00 Numerical Analysis of Problem of Designing Magnetic Bilayer Cloak
Aleksey V. Lobanov (*Institute of Applied Mathematics FEB RAS*); *Yuliya E. Spivak* (*Far Eastern Federal University*);

00:00 Boundary Value and Extremum Problems for the Nonlinear Acoustic Model
Zhanna Yu. Saritskaya (*Far Eastern Federal University*); *Roman V. Brizitskii* (*Institute of Applied Mathematics FEB RAS*);

Session 2A4
Advanced Mathematical and Computational Methods in Electromagnetic Theory and Their Applications 2

Tuesday AM, May 23, 2017

Room G8

Organized by Georgi Nikolov Georgiev, Mariana Nikolova Georgieva-Grosse

Chaired by Mariana Nikolova Georgieva-Grosse

00:00 Electromagnetic Wave Scattering from a Randomly Rough Interface at Low Grazing Incidence
Gerard Berginc (*Thales Optronique*);

00:00 Diffraction of an Electromagnetic Vortex Bessel Beam by the End of a Semi-infinite Magnetized Plasma Cylinder
Vasiliy Alekseevich Es'kin (*University of Nizhny Novgorod*); *Alexander V. Kudrin* (*University of Nizhny Novgorod*);

00:00 Laboratorial Tests with Transmission Line Model Based on Modified π Circuits
Thaina Guimaraes Pereira (*Sao Paulo State University (UNESP), Campus of Sao Joao da Boa Vista*); *Aghatta Cioquetta Moreira* (*Sao Paulo State University (UNESP), Campus of Sao Joao da Boa Vista*); *Afonso Jose Do Prado* (*UNESP — Universidade Estadual Paulista*); *Andre Alves Ferreira* (*Sao Paulo State University (UNESP), Campus of Sao Joao da Boa Vista*); *Jose Pissolato Filho* (*UNICAMP — State University of Campinas*);

00:00 Scattering of a TM Plane Wave from a Periodic Surface between Different Dielectrics at Low Grazing Incidence
Akira Komiyama (*Osaka Electro-Communication University*);

00:00 Radiation of a Charge Intersecting the Boundary between Area with Dielectric Layer and Vacuum Area inside a Cylindrical Waveguide
Aleksandra Andreevna Grigoreva (*St. Petersburg State University*); *Sergey Nikolaevich Galyamin* (*St. Petersburg State University*); *Andrey Victorovich Tyukhtin* (*St. Petersburg State University*); *Viktor Viktorovich Vorobev* (*St. Petersburg State University*);

00:00 CICT Phased Generator in Nanoscale EM and BEM Modeling for Stronger Bioengineering Simulation Solutions
Rodolfo A. Fiorini (*Politecnico di Milano University*);

00:00 Calculation of the Frequency-dependent Dielectric Tensor of a Two-dimensional Periodic Composite
Yuri A. Godin (*University of North Carolina at Charlotte*); *Boris Vainberg* (*University of North Carolina at Charlotte*);

00:00 Propagation of Guided Waves in Moving Media with Application to the Theory of Small-scale Electromagnetic Waves in the Solar Wind Plasma
A. V. Guglielmi (*Institute of Physics of the Earth RAS*); *Alexandr S. Potapov* (*Institute of Solar-Terrestrial Physics SB RAS*);

00:00 The TRIZ-based Tool for the Electrical Machine Development
Nikolai Efimov-Soini (*Lappeenranta University of Technology*); *Nikita Uzhegov* (*SpinDrive*);

00:00 General Analysis of the Indispensable Effects of Nonuniform Gain and Loss in Coupled Waveguides System
Zhen Zhen Liu (*Harbin Institute of Technology*); *Jun Jun Xiao* (*Harbin Institute of Technology*);

00:00 Probabilistic Framework for Electromagnetic Inverse Scattering
Lianlin Li (*Peking University*); *Tie Jun Cui* (*Southeast University*);

00:00 Instantaneous Spatial Variation of Green's Tensor in Complex Nanostructures via Eigenmode Expansion
Parry Yu Chen (*Tel Aviv University*); *David J. Bergman* (*Tel Aviv University*); *Yonatan Sivan* (*Ben-Gurion University*);

00:00 Machine Learning Based Numerical Computation of $\boldsymbol{E}$-field
Yashasvi Agrawal (*Indian Institute of Technology Hyderabad*); *Bharath Sridharan* (*Indian Institute of Technology Hyderabad*); *Mohammed Zafar Ali Khan* (*Indian Institute of Technology*);

00:00 Integral Method with Impedance Boundary Condition for Scattering Electromagnetic Problem
Christian Daveau (*University of Cergy-Pontoise*); *S. Oueslati* (*University of Cergy-Pontoise*); *I. Balloumi* (*University of Cergy-Pontoise*); *B. Naisseline* (*University of Cergy-Pontoise*);

00:00 Complete Integrability of the Generalized Tavis-Cummings Model and Quantum Information
Igor Vladimirovich Ermakov (*ITMO University*); *N. Bogoliubov* (*V. A. Steklov Mathematical Institute, RAS*); *C. Radhakrishnan* (*New York University Shanghai*); *T. Byrnes* (*New York University Shanghai*);

Session 2A5
Focus Session: Education for Electromagnetics

Tuesday AM, May 23, 2017

Room G9

Organized by Ari Sihvola

Chaired by Ari Sihvola

00:00 Keynote How Philosophy Could Enrich Physics Teaching: Linking Kuhn's Scientific Revolutions to Threshold Concepts and Transformative Learning
Stefan Yoshi Buhmann (*University of Freiburg*);

00:00 Analogy and Historical Approaches to Undergraduate Electromagnetic Education
Kok Yeow You (*University Teknologi Malaysia*); *Nadera Najib* (*Universiti Teknologi Malaysia*);

00:00 Teaching of Antennas Using 3D Electromagnetic Modelling and Simulation Tool
Markus Berg (*Centre for Wireless Communications — Radio Technology Research Unit*); *Tommi Tuovinen* (*Centre for Wireless Communications — Radio Technology Research Unit*);

00:00 Invited Interactive Electromagnetic and Microwave Transmission Line Educational Courseware on iPad
Eng Leong Tan (*Nanyang Technological University*); *Ding Yu Heh* (*Nanyang Technological University*); *Zaifeng Yang* (*Nanyang Technological University*);

00:00 Measurement of Ferrofluid Dynamics in Undergraduate Physics Laboratory
Maria Bondani (*Institute for Photonics and Nanotechnology — National Research Council (CNR)*); *Andrea Bassi* (*University of Insubria*); *Alessandro Tucci Bronzuoli* (*University of Insubria*); *Giovanni Caiazzo* (*University of Insubria*); *Riccardo Carlucci* (*University of Insubria*); *Simone Pengue* (*University of Insubria*);

00:00 Electromagnetic Waves in Anisotropic Media. A Breakthrough after 170 Years From Fresnel
Filipp V. Ignatovich (*Joint Institute for Nuclear Research*); *Vladimir K. Ignatovich* (*Joint Institute for Nuclear Research*);

00:00 Four-dimensional Electromagnetic Field Theory
Aleksandr K. Tomilin (*National Research Tomsk Polytechnic University*);

00:00 Modelling the Behaviour of an Open-ended Coaxial Probe to Assess the Permittivity of Heterogeneous Dielectrics Solids
Vincent Guihard (*EDF R&D*); *Frederic Taillade* (*EDF R&D*); *Jean-Paul Balayssac* (*Universite de Toulouse*); *Barthelemy Steck* (*EDF R&D*); *Julien Sanahuja* (*EDF R&D*); *Fabrice Deby* (*LMDC Toulouse*);

00:00 Integrate Low Frequency Wave Particle Interaction Analyzer
Tao Chen (*National Space Science Center, Chinese Academy of Science*);

00:00 Skin Layer as a Tool for Probing Strongly Absorbing Media
Vladimir P. Yakubov (*National Research Tomsk State University*); *Vicktor P. Belichenko* (*National Research Tomsk State University*); *Kseniya V. Zavyalova* (*Tomsk State University*); *Sergey E. Shipilov* (*National Research Tomsk State University*);

00:00 Challenges for Non-destructive Control Methods' Training
Radda A. Iureva (*ITMO University*); *Nadezhda K. Maltseva* (*ITMO University*); *Aleksandr V. Ilinski* (*S.I. Vavilov State Optical Institute*);

Session 2A6
Remote Sensing Techniques of Earth System Related Components 1

Tuesday AM, May 23, 2017

Room G10

Organized by Jian-Cheng Shi

Chaired by Jian-Cheng Shi

00:00 Microwave Remote Sensing of Snow on Sea Ice with Numerical Simulation of Maxwell's Equation in 3D (NMM3D)
Shurun Tan (*University of Michigan*); *Jiyue Zhu* (*University of Michigan*); *Leung Tsang* (*University of Michigan*); *Son V. Nghiem* (*California Institute of Technology*);

00:00 Analysis of a Long-term Temporal Series of Microwave Emission over Snow Using a Multi-layer Electromagnetic Model
E. Santi (*National Research Council*); *Marco Brogioni* (*Consiglio Nazionale delle Ricerche*); *Simonetta Paloscia* (*CNR-IFAC*); *Paolo Pampaloni* (*CNR-IFAC*); *Simone Pettinato* (*Consiglio Nazionale delle Ricerche*); *C. Xiong* (*Institute of Remote Sensing Applications, Chinese Academy of Sciences*); *A. Crepaz* (*Avalanche Center*);

00:00 First Use of the Meteor-M No. 2/MTVZA-GYa Radiometer for Remote Sensing of Moisture and Temperature in the Arctic Region
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*); *M. G. Zahvatov* (*SRC "Planeta"*); *Igor V. Savin* (*Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences*); *A. Y. Karavaysky* (*Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences*);

00:00 Physical Modelling of Vegetation Canopy in Microwave Remote Sensing Using Numerical 3D Solutions of Maxwell Equations
Huanting Huang (*University of Michigan*); *Leung Tsang* (*University of Michigan*); *Tien-Hao Liao* (*California Institute of Technology*); *Eni Gerald Njoku* (*California Institute of Technology*); *Andreas Colliander* (*California Institute of Technology*); *Kung-Hau Ding* (*Air Force Research Laboratory, Wright-Patterson AFB*);

00:00 Refractive Attenuation of Radio Waves in a Spherical Symmetric Medium and Radio Occultation Remote Sensing of the Atmosphere from Space
Alexey Pavelev (*Kotelnikov Institute of Radio Engineering and Electronics of the RAS (Fryazino Branch)*);

00:00 Microwave Band Radiative Transfer in the Rain Medium: Implications for Radar Sounding and Radiometry
Yaroslaw A. Ilyushin (*Moscow State University*); *Boris Georgievich Kutuza* (*Kotel'nikov Institute of Radio Engineering and Electronics, Russian Academy of Sciences*);

00:00 P-band Signals of Opportunity for Remote Sensing of Snow and Root Zone Soil Moisture
Simon H. Yueh (*California Institute of Technology*); *Rashmi Shah* (*California Institute of Technology*); *Xiaolan Xu* (*California Institute of Technology*); *Kelly Elder* (*Rocky Mountain Research Station, Forest Service, USDA*); *Chun-Sik Chae* (*California Institute of Technology*);

00:00 Soil Moisture Retrieval Using Dual-frequency Radiometer Observations from WCOM
Jian-Cheng Shi (*Institute of Remote Sensing Applications, Chinese Academy of Sciences*); *Tianjie Zhao* (*Jointly Sponsored by Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Panpan Yao* (*Institute of Remote Sensing Applications, Chinese Academy of Sciences*); *Qian Cui* (*National Space Science Center*);

00:00 High-resolution Mapping and Scaling Behavior of Passive L-band Measurements and Soil Moisture Retrieval in Complex Terrain
Masih Eghdami (*Duke University*); *Edward J. Kim* (*NASA Goddard Space Flight Center*); *Ana P. Barros* (*Duke University*);

00:00 Soil Moisture Retrieval in the North Slope of Alaska From GCOM-W1/AMSR2 and Meteor-M No. 2/MTVZA-GYa Radiometers Data
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*); *M. G. Zahvatov* (*SRC "Planeta"*); *R. R. Muskett* (*University of Alaska*); *Sergey Viktorovich Fomin* (*Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences*);

00:00 Evaluation of the SMAP, SMOS and AMSR2 Retrievals against Observations from Two Soil Moisture Networks on the Tibetan Plateau
Yingying Chen (*Institute of Tibetan Plateau Research, Chinese Academy of Sciences*); *Kun Yang* (*Institute of Tibetan Plateau Research, Chinese Academy of Sciences*);

Session 2A7
High Frequency Methods

Tuesday AM, May 23, 2017

Room B1

Organized by Frederic Molinet, Ivan V. Andronov

Chaired by Frederic Molinet, Ivan V. Andronov

00:00 Effect of Multiple Reflections in High-frequency Diffraction by an Elongated Spheroid
Ivan V. Andronov (*St. Petersburg State University*);

00:00 Asymptotic Currents on an Elliptic Cylinder with a Truncated Strongly Elongated Cross-section
Frederic Molinet (*MOTHESIM*);

00:00 Method of the Boundary Integral Equation for the Parabolic Equation on a Curved Surface
A. V. Shanin (*Moscow State University*); *Andery Igorevich Korolkov* (*Moscow State University*);

00:00 Resonance Scattering of a Plane Electromagnetic Wave by Fabry-Perot Antenna Resonator Formed by Two Parallel Disks with a Dipole inside (GTD Analysis)
Victor Zalipaev (*Krylov State Research Centre*); *Stanislav Glybovski* (*ITMO University*);

00:00 The Method of Parabolic Equation in Application to Weinstein's Problems
A. V. Shanin (*Moscow State University*); *Andery Igorevich Korolkov* (*Moscow State University*);

00:00 Influence of the Longitudinal Inhomogeneity of the Coated Graded-index Planar Waveguide on the Nonlinear Modulated Pulse Propagation
Michael A. Bisyarin (*Saint-Petersburg State University*); *V. A. Yurkin* (*Saint-Petersburg State University*);

00:00 Decompositions in Gaussian Beams by Wavelet Methods
Evgeny Gorodnitskiy (*St. Petersburg State University*); *Maria Perel* (*St. Petersburg State University*);

00:00 Complex-Source Beam Diffraction from a Perfectly Conducting Wedge
Giuliano Manara (*University of Pisa*); *Ludger Klinkenbusch* (*Christian-Albrechts-Universitat zu Kiel*);

Session 2A8
FocusSession.SC3: Photonic Topological Materials and Quantum Optics

Tuesday AM, May 23, 2017

Room B5

Organized by Mauro Antezza, George W. Hanson

Chaired by Mauro Antezza, George W. Hanson

00:00 Optical Spin Hall Effect in Spatially Inhomogeneous
Invited Tellegen Media
Ruo-Yang Zhang (*The Hong Kong University of Science and Technology*); *Mo-Lin Ge* (*Beijing Institute Technology*); *Che Ting Chan* (*The Hong Kong University of Science and Technology*);

00:00 Ultrafast and Quantum Phenomena with Graphene
Keynote Plasmons
Javier Garcia De Abajo (*ICFO-Institut de Ciencies Fotoniques, The Barcelona Institute of Science and Technology*);

00:00 Edge States of Bound Photon Pairs: Topology and Interactions
Maxim A. Gorlach (*ITMO University*); *Alexander N. Poddubny* (*National Research University for Information Technology, Mechanics and Optics*);

00:00 Robust Qubit Entanglement in Photonic Topological
Invited Insulator Environments
Seyyed Ali Hassani Gangaraj (*Iran University of Science & Technology*); *George W. Hanson* (*University of Wisconsin-Milwaukee*); *Mauro Antezza* (*Universite de Montpellier*);

00:00 Combining One-dimensional Nanoscale Waveguide
Invited and Cold Atoms
N. V. Corzo (*ENS-PSL Research University, College de France*); *B. Gouraud* (*ENS-PSL Research University, College de France*); *A. Chandra* (*ENS-PSL Research University, College de France*); *J. Raskop* (*ENS-PSL Research University, College de France*); *D. Kupriyanov* (*ENS-PSL Research University, College de France*); *A. S. Sheremet* (*ENS-PSL Research University, College de France*); *Julien Laurat* (*ENS-PSL Research University, College de France*);

00:00 Implementation of Photonic Anomalous Floquet Topological Insulators
Julia M. Zeuner (*Friedrich-Schiller-Universitat Jena*); *Lukas J. Maczewsky* (*Friedrich-Schiller-Universitat Jena*); *Stefan Nolte* (*Friedrich-Schiller-Universitat Jena*); *Alexander Szameit* (*Friedrich-Schiller-Universitat Jena*);

00:00 Coupling Spin Excitons to an Anisotropic Nanopho-
Keynote tonic Vacuum
Stephen Hughes (*Queen's University*);

00:00 Two-dimensional Topological Plasmonics
Keynote
Thomas Christensen (*Massachusetts Institute of Technology*); *D. Jin* (*University of California*); *Nicholas X. Fang* (*Massachusetts Institute of Technology*); *X. Zhang* (*University of California*); *L. Lu* (*Institute of Physics, Chinese Academy of Sciences*); *M. Soljacic* (*Massachusetts Institute of Technology*);

00:00 Quantum Electrodynamics of Topological Insulators:
Invited From Rotating Dipole Moments to CP Violation
Stefan Yoshi Buhmann (*University of Freiburg*); *S. Fuchs* (*University of Freiburg*); *J. A. Crosse* (*New York University Shanghai & New York University*); *Valery N. Marachevsky* (*Saint Petersburg State University*); *S. Scheel* (*University of Rostock*);

00:00 Observation of Topological Edge States in One-, Two-, and Three-dimensional Electromagnetic Structures
Alexey P. Slobozhanyuk (*ITMO University*); *Alexander N. Poddubny* (*ITMO University*); *Alexander B. Khanikaev* (*ITMO University*); *Yuri S. Kivshar* (*Australian National University*);

00:00 Dissipative and Dispersive Quantum Electromagnet-
Invited ics: A Novel Approach
Wei E. I. Sha (*The University of Hong Kong*); *Aiyin Y. Liu* (*University of Illinois*); *Weng Cho Chew* (*University of Illinois*);

00:00 Experiment Realization of Synthetic Weyl Points in
Invited Optical Regime
Qiang Wang (*Nanjing University*); *Meng Xiao* (*Stanford University*); *Hui Liu* (*Nanjing University*); *Shi-Ning Zhu* (*Nanjing University*); *C. T. Chan* (*The Hong Kong University of Science and Technology*);

Session 2A9
Antennas and Front-end Systems for Radio Astronomy Instrumentation

Tuesday AM, May 23, 2017

Room B3

Organized by Nima Razavi-Ghods

Chaired by Nima Razavi-Ghods

00:00 Phased Arrays Feed Implemented with Analogue Beamforming and True Time Delay Lines
Keith Grainge (*The University of Manchester*); *Lei Liu* (*The University of Manchester*);

00:00 Micromachined Terahertz Rectangular Waveguide Bandpass Filters with Circular Resonant Cavities
Li Li (*University of Electronic Science and Technology of China*); *He Yue* (*Institute of Electronic Engineering, China Academy of Engineering Physics*); *Huang Kun* (*Institute of Electronic Engineering, China Academy of Engineering Physics*); *Xianjin Deng* (*Institute of Electronic Engineering, China Academy of Engineering Physics*); *Fengjun Chen* (*Institute of Electronic Engineering, China Academy of Engineering Physics*);

00:00 Crossed Ring Antenna for Dense Aperture Arrays
Yongwei Zhang (*The University of Manchester*); *Ahmed El-Makadema* (*The University of Manchester*); *Ming Yang* (*The University of Manchester*); *Anthony Keith Brown* (*The University of Manchester*);

00:00 Improved CDS Interleaved Linear Array
Bambang Dewandaru (*University of Indonesia*); *Fitri Yuli Zulkifli* (*University of Indonesia*); *Eko Tjipto Rahardjo* (*Universitas Indonesia*);

00:00 Sparse-regular Aperture Array SKA Telescope Concept
Jan Geralt Bij De Vaate (*R&D, ASTRON*); *David Bruce Davidson* (*University of Stellenbosch*); *Nima Razavi-Ghods* (*University of Cambridge*);

00:00 HERA RF and Calibration System Design
Nima Razavi-Ghods (*University of Cambridge*); *Steve H. Carey* (*University of Cambridge*); *John A. Ely* (*University of Cambridge*); *Paul F. Scott* (*University of Cambridge*);

00:00 SKALA-3; Design Optimization to Reduce the Chromatic Effects on SKA1-Low Observations
Eloy De Lera Acedo (*University of Cambridge*); *Brett Wakley* (*Cambridge Consultants*);

00:00 Inclusion of Signal and Noise Coupling in Sparse Wideband Array Synthesis
Ha Bui Van (*Universite Catholique de Louvain*); *Christophe Craeye* (*Universite Catholique de Louvain*); *Nima Razavi-Ghods* (*University of Cambridge*);

00:00 The Comparison of the Characteristics of the Double-ridged Horn Antennas Depending the Geometry of Ridge Profiles for Wideband Application
Abdullah Genc (*Suleyman Demirel University*); *Ibrahim Bahadir Basyigit* (*Suleyman Demirel University*); *Tuna Goksu* (*Suleyman Demirel University*); *Selcuk Helhel* (*Akdeniz University*);

00:00 Design of Rectangular Patch Antenna Array for 5G Wireless Communication
Saeed Ur Rahman (*Nanjing University of Aeronautics and Astronautics (NUAA)*); *Qunsheng Cao* (*Nanjing University of Aeronautics and Astronautics*); *Ishfaq Hussain* (*Nanjing University of Aeronautics and Astronautics*); *Hisham Khalil* (*Capital University of Science and Technology*); *Muhammad Zeeshan* (*Beijing Institute of Technology*);

Session 2A_10
SC2: Recent Advances of Metamaterials for Novel Electromagnetic and Photonic Devices

Tuesday AM, May 23, 2017

Room R11

Organized by Yungui Ma, Sailing He

00:00 Negative Permeability in Magnetostatics: Theory and Experimental Realization
Rosa Mach-Batlle (*Universitat Autonoma de Barcelona*); *Albert Parra* (*Universitat Autonoma de Barcelona*); *Carles Navau* (*Universitat Autonoma de Barcelona*); *Nuria Del-Valle* (*Universitat Autonoma de Barcelona*); *Alvaro Sanchez* (*Universitat Autonoma de Barcelona*);

00:00 Interference between Multipolar Modes in Spoof Plasmonic Metadimer
Fei Gao (*Nanyang Technological University*); *Zhen Gao* (*Nanyang Technological University*); *Yu Luo* (*Nanyang Technological University*); *Baile Zhang* (*Nanyang Technological University*);

00:00 Dynamic and Broadband Metamaterials with Dispersion Engineering
Xiangang Luo (*Institute of Optics and Electronics, Chinese Academy of Sciences*);

00:00 High Performance Organic Optoelectronic Devices Enabled by Electrode Micronanostructurings
Hong-Bo Sun (*Jilin University*); *Xu-Lin Zhang* (*Jilin University*); *Jing Feng* (*Jilin University*);

00:00 Electromagnetic and Acoustic Lenses Designed with Metamaterials
Bin Zheng (*Zhejiang University*); *Rongrong Zhu* (*Zhejiang University*); *Yangyang Deng* (*Zhejiang University*); *Huaping Wang* (*Zhejiang University*); *Tianhang Chen* (*Zhejiang University*); *Shahram Dehdashti* (*Zhejiang University*); *Hongsheng Chen* (*Zhejiang University*);

00:00 Unidirectional Single Photon Generation Via Matched Zero-index Metamaterials
Jing-Ping Xu (*Zhejiang University*); *Ge Song* (*Tongji University*); *Zhenqing Zhang* (*Tongji University*); *Yaping Yang* (*Tongji University*); *Hong Chen* (*Tongji University*); *M. Suhail Zubairy* (*Texas A&M University*); *Shiyao Zhu* (*Zhejiang University*);

00:00 Frequency Tunable Directive Antenna by Ferromagnetic Photonic Crystals
Zhong-Hao Sa (*Nanjing University*); *Qun Lou* (*Nanjing University*); *Qing-Bo Li* (*Nanjing University*); *Chao Xiao* (*Nanjing University*); *Rui-Xin Wu* (*Nanjing University*);

00:00 Ultra-wide Tuning Frequency Range of a Ferrite-based Metamaterial Microwave Absorber
Wei Li (*Wuhan University of Technology*); *Jia Wei* (*Wuhan University of Technology*); *Tianlong Wu* (*Wuhan University of Technology*); *Dawei Hu* (*Wuhan University of Technology*); *Yukun Li* (*Wuhan University of Technology*); *Jie Cao* (*Wuhan University of Technology*); *Jianguo Guan* (*Wuhan University of Technology*);

00:00 Fano Resonance Rabi Splitting of Surface Plasmons in 3D Metamaterials
Zhiguang Liu (*Institute of Physics, Chinese Academy of Sciences*); *Jiafang Li* (*Institute of Physics, Chinese Academy of Sciences*); *Zhi-Yuan Li* (*South China University of Technology*);

00:00 Lossy and Gain Metasurfaces for Applications of Antireflection Coatings and Parity-time-symmetric Systems
Jie Luo (*Suzhou University*); *Jensen Li* (*University of Brimingham*); *Yun Lai* (*Soochow University*);

00:00 Mimicking General Relativity through Plasmonic Spin Hall Effect
Fan Zhong (*Nanjing Univeristy*); *Hui Liu* (*Nanjing University*); *Shi-Ning Zhu* (*Nanjing University*); *Jensen Li* (*University of Brimingham*);

00:00 High Temperature Hyperbolic Metamaterial for Selective Thermal Emission
Alexander Yu. Petrov (*Hamburg University of Technology*); *Pavel N. Dyachenko* (*Hamburg University of Technology*); *Sean Molesky* (*University of Alberta*); *Slawa Lang* (*Hamburg University of Technology*); *Michael Stormer* (*Helmholtz-Zentrum Geesthacht*); *T. Krekeler* (*Electron Microscopy Unit*); *M. Ritter* (*Electron Microscopy Unit*); *Jacob Zubin* (*University of Alberta*); *Manfred Eich* (*Hamburg University of Technology*);

Session 2A_11
FocusSession.SC3: Nanolasers: Physics, Technology, Applications 1

Tuesday AM, May 23, 2017

Room R10

Organized by Eli Kapon

Chaired by Eli Kapon

00:00 Invited Nanolasers: Physics, Technology and Applications: An Introduction
Eli Kapon (*Ecole Polytechnique Federale de Lausanne (EPFL)*);

00:00 Invited Noise in Nanocavity Lasers and the Role of the Purcell Effect
Jesper Mork (*Technical University of Denmark*);

00:00 Invited Non-classical Light Emission and Superradiant Emitter Coupling in Semiconductor Nanolasers
Frank Jahnke (*University of Bremen*);

00:00 Invited Collective Effects in Nanolasers: Beyond the Rate Equation Approach
Igor E. Protsenko (*Lebedev Physical Institute*); *Emil Cortes Andre* (*Technical University of Denmark*); *Martijn Wubs* (*Technical University of Denmark*); *Alexander V. Uskov* (*Lebedev Physical Institute*); *Jesper Mork* (*Technical University of Denmark*);

00:00 Invited Coherence and Photon Dynamics in Meso- and Nanolasers
Tao Wang (*INRS-EMT*); *D. Aktas* (*Universite Cote Azur*); *G. P. Puccioni* (*Istituto Sistemi Complessi, CNR*); *O. Alibart* (*Universite Cote Azur*); *Jesper Mork* (*Technical University of Denmark*); *E. Picholle* (*Universite Cote Azur*); *S. Tanzilli* (*Universite Cote Azur*); *Gian Luca Lippi* (*Universite Cote Azur*);

00:00 Collective Effects in Nanolasers: An Analytical Fourier Approach
Emil Cortes Andre (*Technical University of Denmark*); *Igor E. Protsenko* (*Lebedev Physical Institute*); *Jesper Mork* (*Technical University of Denmark*); *Martijn Wubs* (*Technical University of Denmark*);

00:00 Radiative and Nonradiative Recombination in
Invited NanoLEDs and Nanolasers

Andrea Fiore (*Eindhoven University of Technology*); *B. Romeira* (*Eindhoven University of Technology*); *V. Dolores-Calzadilla* (*Eindhoven University of Technology*); *Aura Higuera-Rodriguez* (*Eindhoven University of Technology*); *S. Birindelli* (*Eindhoven University of Technology*); *F. Pagliano* (*Eindhoven University of Technology*); *Peter J. van Veldhoven* (*Eindhoven University of Technology*); *E. Smalbrugge* (*Eindhoven University of Technology*); *L. Black* (*Eindhoven University of Technology*); *W. M. M. Kessels* (*Eindhoven University of Technology*); *D. Heiss* (*Eindhoven University of Technology*); *Meint K. Smit* (*Technical University of Eindhoven*);

00:00 Single Quantum Dot Lasing Effects in the Strong Cou-
Invited pling Regime

F. Gericke (*Technische Universitat Berlin*); *Christopher Gies* (*Universitat Bremen*); *P. Gartner* (*Universitat Bremen*); *S. Holzinger* (*Technische Universitat Berlin*); *C. Hopfmann* (*Technische Universitat Berlin*); *T. Heindel* (*Technische Universitat Berlin*); *J. Wolters* (*Technische Universitat Berlin*); *C. Schneider* (*Universitat Wurzburg*); *M. Florian* (*Universitat Bremen*); *F. Jahnke* (*Universitat Bremen*); *Sven Hofling* (*Universitat Wurzburg*); *Martin Kamp* (*University of Wurzburg*); *Stephan Reitzenstein* (*Technische Universitat Berlin*);

00:00 Photon Statistics at the Mesoscale Laser Threshold

T. Wang (*INRS-EMT*); *G. P. Puccioni* (*Istituto Sistemi Complessi, CNR*); *Gian Luca Lippi* (*Universite Cote Azur*);

00:00 Coherence Properties of High-β Metallic Nanolasers
Invited

Mercedeh Khajavikhan (*University of Central Florida*); *William Hayenga* (*University of Central Florida*); *Hipolito Garcia-Gracia* (*University of Central Florida*); *Hossein Hodaei* (*University of Central Florida*); *Christian Reimer* (*INRS-EMT*); *Roberto Morandotti* (*INRS-EMT*); *Patrick LiKamWa* (*University of Central Florida*);

00:00 High-beta GaN Nanobeam Lasers: Fabrication, Char-
Invited acterization and Coherence Properties

Raphael Butte (*Ecole Polytechnique Federale de Lausanne*); *Ian M. Rousseau* (*Ecole Polytechnique Federale de Lausanne*); *Noelia Vico Trivino* (*Ecole Polytechnique Federale de Lausanne*); *Stefan T. Jagsch* (*Technische Universitat Berlin*); *Gordon Callsen* (*Technische Universitat Berlin*); *Stefan Kalinowski* (*Technische Universitat Berlin*); *Irene Sanchez-Arribas* (*Ecole Polytechnique Federale de Lausanne*); *Jean-Francois Carlin* (*Ecole Polytechnique Federale de Lausanne*); *Axel Hoffmann* (*Technische Universitat Berlin*); *Stephan Reitzenstein* (*Technische Universitat Berlin*); *Nicolas Grandjean* (*Ecole Polytechnique Federale de Lausanne*);

Session 2A_12
Integrated and Fiber-based Photonic Circuits and Devices

Tuesday AM, May 23, 2017

Room R9

Organized by Alexander S. Sigov

Chaired by Alexander S. Sigov

00:00 Optical Fibres with Arrays of FBG: Properties and Application

Sergei M. Popov (*Kotel'nikov Institute of Radio-Engineering and Electronics of RAS*); *Oleg V. Butov* (*Kotel'nikov Institute of Radio-Engineering and Electronics of RAS*); *Alexander O. Kolosovskiy* (*Kotel'nikov Institute of Radio-Engineering and Electronics of RAS*); *Victor V. Voloshin* (*Kotel'nikov Institute of Radio-Engineering and Electronics of RAS*); *Igor L. Vorob'ev* (*Kotel'nikov Institute of Radio-Engineering and Electronics of RAS*); *Mikhail Yu. Vyatkin* (*Kotel'nikov Institute of Radio-Engineering and Electronics of RAS*); *Andrei A. Fotiadi* (*University of Mons*); *Yuri K. Chamorovskiy* (*Kotel'nikov Institute of Radio-Engineering and Electronics of RAS*);

00:00 300 Mbps Photonic QPSK Modulator for Space Applications

Jognes Panasiewicz Junior (*National Institute for Space Research — INPE*); *Larissa Aguiar Dantas de Britto* (*Sao Jose dos Campos*); *Gefeson Mendes Pacheco* (*Aeronautics Technical Institute*);

00:00 Optoelectronic Oscillator with Delay Elements in the Optical and Radio Frequency Domains
Larissa Aguiar Dantas de Britto (*Sao Jose dos Campos*); *Jognes Panasiewicz* (*National Institute for Space Research — INPE*); *Gefeson Mendes Pacheco* (*Aeronautics Technical Institute*);

00:00 The Minimisation of Phase Errors in MMI Devices
Laurence Walter Cahill (*La Trobe University*);

00:00 An Integrated Multi-wavelength Tunable Ultra-narrow Bandwidth Filter Based on Lithium Niobate
Yao Yuan (*Tianjin University of Technology*); *Ailing Zhang* (*Tianjin University of Technology*);

00:00 Tunable Microwave Optoelectronic Oscillator with Spin-wave Filter for Spurious Tone Suppression
Vitaliy V. Vitko (*Saint Petersburg Electrotechnical University "LETI"*); *Andrey A. Nikitin* (*Saint Petersburg Electrotechnical University "LETI"*); *Alexey B. Ustinov* (*Saint Petersburg Electrotechnical University "LETI"*); *Boris A. Kalinikos* (*Saint Petersburg Electrotechnical University "LETI"*);

00:00 Model of an Active Optoelectronic Switchable Element for Integrated Photonics Based Optical Beamforming Network
Mikhail E. Belkin (*Moscow State Technical University of Radio-Engineering, Electronics and Automation*); *Vladislav Golovin* (*Sevastopol State University (SevSU)*); *Yuri Tyschuk* (*Sevastopol State University (SevSU)*); *Dmitri Klyushnik* (*Moscow State Technological University (MIREA)*);

00:00 Characterization of X-band Analog-to-digital Converter Based on High-order Harmonic-repetition-rate Passively Mode-locked Fiber Laser and Photonic Subsampling Techniques
Mikhail E. Belkin (*Moscow State Technical University of Radio-Engineering, Electronics and Automation*); *Alexey V. Andrianov* (*Russian Academy of Sciences*); *I. V. Gladyshev* (*Moscow State Technical University of Radio-Engineering, Electronics and Automation*); *Arkady V. Kim* (*Institute of Applied Physics, Russian Academy of Sciences*);

00:00 Self-generation of Chaotic and Noise Signals in Microwave Photonic Oscillator
Alexander V. Kondrashov (*St. Petersburg Electrotechnical University*); *Alexey B. Ustinov* (*Saint Petersburg Electrotechnical University "LETI"*); *Boris A. Kalinikos* (*Saint Petersburg Electrotechnical University "LETI"*);

00:00 Short-cavity DFB Fiber Lasers
Oleg V. Butov (*Kotel'nikov Institute of Radio Engineering and Electronics of RAS*); *A. A. Rybaltovsky* (*Kotel'nikov Institute of Radio Engineering and Electronics of RAS*); *M. Yu. Vyatkin* (*Kotel'nikov Institute of Radio Engineering and Electronics of RAS*); *A. P. Bazakutsa* (*Kotel'nikov Institute of Radio Engineering and Electronics of RAS*); *Sergei M. Popov* (*Kotel'nikov Institute of Radio-Engineering and Electronics of RAS*); *Yu. K. Chamorovskiy* (*Kotel'nikov Institute of Radio Engineering and Electronics of RAS*); *K. M. Golant* (*Kotel'nikov Institute of Radio Engineering and Electronics of RAS*);

00:00 Electro-optical Composite Polymer Study for High Speed Radiophotonics Modulators
Viktor I. Sokolov (*Crystallography and Photonics Federal Research Center, Russian Academy of Sciences*); *Maxim M. Nazarov* (*Crystallography and Photonics Federal Research Center, Russian Academy of Sciences*); *Ivan O. Goriachuk* (*Crystallography and Photonics Federal Research Center, Russian Academy of Sciences*); *Evgeny V. Polunin* (*Crystallography and Photonics Federal Research Center, Russian Academy of Sciences*);

Session 2A_13a
Oral Presentations for Best Student Paper Awards — SC1: CEM, EMC, Scattering & EM Theory

Tuesday AM, May 23, 2017

Room R8

Session 2A_13b
Oral Presentations for Best Student Paper Awards — SC2: Metamaterials, Plasmonics and Complex Media

Tuesday AM, May 23, 2017

Room R8

Session 2A0
Poster Session 3

Tuesday AM, May 23, 2017

9:00 AM - 13:00 AM

Room B2

00:00 GLR Test for Minimum Detectable Velocity Indication in OFDM Radar
Jiahua Zhu (*National University of Defense Technology*); *Chongyi Fan* (*National University of Defense Technology*); *Pengzheng Lei* (*National University of Defense Technology*); *Xiaotao Huang* (*National University of Defense Technology*); *Zhi-Min Zhou* (*National University of Defense Technology*);

00:00 Strange Nonchaotic Attractor of Hunt and OTT Type in a System with Ring Geometry
Valentina M. Doroshenko (*Saratov State Ubiversity*);

00:00 Ultra Small Satellite Based on KickSat Model: FemtoSat Feasibility Study and Service
Chafaa Hamrouni (*University of Gabes*); *Abdessalem Bsissa* (*University of Gabes*); *Rached Hamza* (*University of AL MANAR*); *Abdelkarim Naceur* (*University of Gabes*);

00:00 Radiation of a Charge Exiting Open-ended Waveguide with Dielectric Filling
Sergey Nikolaevich Galyamin (*St. Petersburg State University*); *Viktor Viktorovich Vorobev* (*St. Petersburg State University*); *A. M. Altmark* (*Saint Petersburg Electrotechnical University "LETI"*); *Aleksandra Andreevna Grigoreva* (*St. Petersburg State University*); *Andrey Victorovich Tyukhtin* (*St. Petersburg State University*); *Sergey Antipov* (*Argonne National Laboratory*);

00:00 Relativity and the Doppler Effect
Sara Liyuba Vesely (*I.T.B. — C.N.R.*); *Alessandro Alberto Vesely* (*Via L. Anelli 13*);

00:00 Experimental Verification of Quadrupole Model of the Electric Field of a Rotating Magnet
Vladimir Borisovich Timofeev (*North-Eastern Federal University*); *Tamara E. Timofeeva* (*North-Eastern Federal University*);

00:00 Hypothesis of the Electromagnetic Nature of Inertia and Gravity
Aleksandr K. Tomilin (*National Research Tomsk Polytechnic University*); *I. L. Misiucenko* (*Research Center "Algorithm"*); *V. S. Vikulin* (*"MacroGroup" Company*);

00:00 Scattered Fields by a Subwavelength Circular Aperture in a Conducting Infinite Screen
Marios Andreas Christou (*University of Nicosia*); *Anastasis C. Polycarpou* (*University of Nicosia*);

00:00 Fast Correction of Analytical Reconstructions in Sparse View X-ray Computed Tomography
Dragos Trinca (*Universidad de Valladolid*); *Y. Zhong* (*Tomsk Polytechnic University*); *J. Royuela-del-Val* (*Universidad de Valladolid*);

00:00 A New Method for SSD Black-box Performance Test
Qiyou Xie (*National University of Defense Technology*);

00:00 Radiation and Control of Coupled Charged Inverted Pendulums
Mikhail E. Semenov (*Zhukovsky-Gagarin Air Force Academy*); *Peter A. Meleshenko* (*Voronezh State University*); *Alexander F. Klinskikh* (*Voronezh State University*); *Igor N. Ischuk* (*Zhukovsky-Gagarin Air Force Academy*); *Hang T. T. Nguyen* (*Vietnam National University*); *Vladimir A. Gorlov* (*Zhukovsky-Gagarin Air Force Academy*); *Andrey M. Solovyov* (*Voronezh State University*); *Zainib Hatif Abbas* (*Voronezh State University of Architecture and Civil Engineering*); *Mikhail A. Popov* (*Voronezh State University of Architecture and Civil Engineering*); *Olga O. Reshetova* (*Voronezh State University*);

00:00 Fine Adjustment of the Optical Axes of the Convex-concave Lenses by Laser Beams Interference
Sergey Borisovich Ryzhikov (*Lomonosov Moscow State University*); *Yuliya Vladimirovna Ryzhikova* (*Lomonosov Moscow State University*);

00:00 An Efficient Dimming Scheme for a Plasma Lighting System Using Solid-state Power Amplifier
Wonshil Kang (*Konkuk University*); *Hyunchul Ku* (*Konkuk University*);

00:00 Dual Comb Mode-locked Laser: Design and Stabilization
Anton V. Kovalev (*ITMO University*); *Alexander V. Uskov* (*Lebedev Physical Institute*); *Vladimir V. Vitkin* (*ITMO University*); *A. A. Mak* (*ITMO University*); *Vadim M. Polyakov* (*ITMO University*);

00:00 Radiofrequency Impedance Spectroscopy of Fiber Optics Polymers
Renata I. Ismagilova (*Moscow Institute of Physics and Technology*); *R. I. Shaidullin* (*Moscow Institute of Physics and Technology*); *O. A. Ryabushkin* (*Moscow Institute of Physics and Technology*);

00:00 Plasma Photonic Crystal as a Frequency Filter for High-power Microwaves
Alexander V. Vodopyanov (*Federal State Budgetary Scientific Institution "Federal Research Center The Institute of Applied Physics of the Russian Academy of Sciences"*); *Dmitry Mansfeld* (*Federal State Budgetary Scientific Institution "Federal Research Center The Institute of Applied Physics of the Russian Academy of Sciences"*); *Mikhail Viktorov* (*Federal State Budgetary Scientific Institution "Federal Research Center The Institute of Applied Physics of the Russian Academy of Sciences"*); *Sergey Sintsov* (*Federal State Budgetary Scientific Institution "Federal Research Center The Institute of Applied Physics of the Russian Academy of Sciences"*);

00:00 Design of Wide-band Electromagnetic Wave Absorbers Using Inductance and Capacitance of Split Square Loop Frequency Selective Surface Calculated from Equivalent Circuit Model
Tian Liu (*Chungbuk National University*); *Sung-Soo Kim* (*Chungbuk National University*);

00:00 A Design of a Broadband Single Layer Polarization Beam Splitting Reflectarray Using Varying-sized Cross Dipoles
Shaojie Yu (*Nanjing University of Aeronautics and Astronautics*); *Hai Feng Zhang* (*Nanjing University of Aeronautics and Astronautics*); *Shaobin Liu* (*Nanjing University of Aeronautics and Astronautics*); *Bo-Rui Bian* (*Nanjing University of Aeronautics and Astronautics*);

00:00 Basic Examination of the THz-wave Imaging with Heterodyne Detection Technique
Dai Aoki (*Yamagata University*); *Yoshiaki Sasaki* (*RIKEN*); *Tetsuya Yuasa* (*Yamagata University*); *Chiko Otani* (*RIKEN*);

00:00 Compact THz Imaging System Consisted of a Quantum Cascade Laser and a High Sensitive THz Bolometer
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*);

00:00 Design and Analysis of a Tunable Microwave Photonic Delay Line in X Band
S. Kaviani D. (*Isfahan University of Technology*); *Gholamreza H. Askari* (*Isfahan University of Technology (IUT)*); *R. Safian* (*Isfahan University of Technology*); *H. Mir-Mohammad Sadeghi* (*Isfahan University of Technology*);

00:00 Fusion of 5G Mobile Wireless and Passive Optical Networks with OFDM Data Format
Yu-Chieh Chi (*National Taiwan University*); *Zu-Kai Weng* (*National Taiwan University*); *Chung-Yu Lin* (*National Taiwan University*); *Hsiang-Yu Chen* (*National Taiwan University*); *Gong-Ru Lin* (*National Taiwan University*);

00:00 Art Painting Testing with Terahertz Pulse and Frequency Modulated Continuous Wave
Jean-Paul Guillet (*Bordeaux University*); *M. Roux* (*L'atelier des Renaissances*); *K. Wang* (*Huazhong University of Science and Technology*); *X. Ma* (*Bordeaux University*); *F. Fauquet* (*Bordeaux University*); *F. Darracq* (*Bordeaux University*); *P. Mounaix* (*Bordeaux University*);

00:00 Novel Design of a Diamond-core Photonic Crystal Fiber for Terahertz Wave Transmission
Runqi Ding (*Lanzhou University of Technology*); *Shanglin Hou* (*Lanzhou University of Technology*); *Daobin Wang* (*Lanzhou University of Technology*); *Jingli Lei* (*Lanzhou University of Technology*); *Xiaoxiao Li* (*Lanzhou University of Technology*); *Yuanyuan Ma* (*Lanzhou University of Technology*);

00:00 Enhancement of Terahertz Generation in Log-periodic Photoconductive Antenna by Silver Nanoantennas
Sergey Igorevich Lepeshov (*ITMO University*); *A. A. Gorodetsky* (*Aston University*); *N. A. Toropov* (*ITMO University*); *T. A. Vartanyan* (*ITMO University*); *E. U. Rafailov* (*Aston University*); *A. E. Krasnok* (*ITMO University*);

00:00 Tunable Impedance Microwave Matching of Laser Diodes
Roman Andreevich Platonov (*Saint Petersburg Electrotechnical University "LETI"*); *Andrey G. Altynnikov* (*Saint Petersburg Electrotechnical University "LETI"*); *Anatoly Konstantinovich Mikhailov* (*Saint-Petersburg State Electrotechnical University (LETI)*); *Alexander V. Yastrebov* (*Saint-Petersburg Electrotechnical University*); *N. V. Mukhin* (*Saint Petersburg Electrotechnical University "LETI"*); *S. Hirsch* (*University of Applied Sciences Brandenburg*); *Andrey Borisovich Kozyrev* (*Saint-Petersburg Electrotechnical University*);

00:00 Mutual Phase Locking of the Magnetoelectric Spin-torque Nanooscillators
Ansar R. Safin (*National Research University "Moscow Power Engineering Institute"*); *N. Udalov* (*National Research University "MPEI"*); *Mirza Imamovich Bichurin* (*Novgorod State University*); *Roman Valer'evich Petrov* (*Novgorod State University*); *Alexander Sergeevich Tatarenko* (*Novgorod State University*);

00:00 Theoretical Analysis of the Propagation of Surface Plasmon Waves in Multilayer Surface Plasmon Resonance Biosensor
Md. Saiful Islam (*Military Technological College*); *Abbas Z. Kouzani* (*Deakin University*); *E. D. Coyle* (*Military Technological College*);

00:00 Development of an Efficient Design Procedure for Multilayer Surface Plasmon Resonance Biosensor through Numerical Analysis
Md. Saiful Islam (*Military Technological College*); *Abbas Z. Kouzani* (*Deakin University*); *E. D. Coyle* (*Military Technological College*);

00:00 A Novel Metasurface-based Low-RCS Fabry-Pérot Cavity Antenna
Bo-Rui Bian (*Nanjing University of Aeronautics and Astronautics*); *Hai Feng Zhang* (*Nanjing University of Aeronautics and Astronautics*); *Shaobin Liu* (*Nanjing University of Aeronautics and Astronautics*);

00:00 Broadband X-band Circularly Polarized Microstrip Antenna with Elliptical Patch Ring-slotted for Airborne SAR System
Cahya Edi Santosa (*Chiba University*); *Josaphat Tetuko Sri Sumantyo* (*Chiba University*); *Achmad Munir* (*Bandung Institute of Technology*); *Ari Sugeng Budiyanta* (*National Institute of Aeronautics and Space-LAPAN*);

00:00 Radiation Pattern Analysis of Rectangular Curved Patch Antenna
Hirokazu Kobayashi (*Osaka Institute of Technology*); *Takeru Oka* (*Osaka Institute of Technology*);

00:00 Novel Miniaturized UWB Antenna Based on EBG Structure
M. G. Wahab (*Electronics and Communications Engineering, AAST*); *A. S. Abd El-Hameed* (*Egypt-Japan University of Science and Technology*); *Wael Swelam* (*Egyptian Armed Forces*); *Mohamed Hassan Abd El-Azeem* (*Arab Academy for Science, Technology and Maritime Transport*);

00:00 Novel Miniaturized UWB Antenna with Triple Band-notched Characteristics Utilizing SRR and Folded U-shaped Slot
M. G. Wahab (*Electronics and Communications Engineering, AAST*); *Wael Swelam* (*Egyptian Armed Forces*); *Mohamed Hassan Abd El-Azeem* (*Arab Academy for Science, Technology and Maritime Transport*);

00:00 On the Design of Wideband, Circularly Polarized Patch Antennas for RFID Applications in the FCC/ETSI Bands
Marios Nestoros (*University of Nicosia*); *Marios Andreas Christou* (*University of Nicosia*); *Anastasis C. Polycarpou* (*University of Nicosia*);

00:00 A Study of an Antenna with Mesh Structure for a Stretchable Device
Jong-In Ryu (*Korea Electronics Technology Institute*); *Se-Hoon Park* (*Korea Electronics Technology Institute*); *Sehwan Choi* (*Korea Electronics Technology Institute*);

00:00 Fast and Accurate Technique for CAD of Ridge Waveguide Polarizers
Mikhail B. Manuilov (*Southern Federal University*); *Konstantin V. Kobrin* (*Southern Federal University*);

00:00 Millimeter- and Submillimeter-wave Radiation Detection Using Ultra-thin Metasurface Absorbers
Andrey Georgievich Paulish (*Novosibirsk State University*); *Victor Nikolaevich Fedorinin* (*Institute of Semiconductor Physics, SB RAS*); *Alexander Vitalievich Gelfand* (*Institute of Semiconductor Physics, SB RAS*); *Peter S. Zagubisalo* (*Institute of Semiconductor Physics, SB RAS*); *Sergei Alexandrovich Kuznetsov* (*Novosibirsk State University*); *Andrey V. Arzhannikov* (*Novosibirsk State University*);

00:00 Unequal Bagley Power Divider Using Uniform Transmission Lines
Youngchul Yoon (*Catholic Kwandong University*); *Young Kim* (*Kumoh National Institute of Technology*);

00:00 The Heating System of Metal Particles in the Microwave Field with a Frequency of 24 GHz
Alexander Vodopyanov (*Institute of Applied Physics of Russian Academy of Sciences*); *Igor Dubinov* (*Institute of Applied Physics of Russian Academy of Sciences*);

00:00 UWB Sixport Aanalysis and Design in mm-Wave for 5G Applications
Gholamreza Askari (*Isfahan University of Technology (IUT)*); *Mahmoud Kamarei* (*University of Tehran*); *Maziar Hedayati* (*Iran University of Science and Technology*);

00:00 Design and Analysis of a High Power Controllable Phase Shifter Based on SIW in X-band
B. Rashidi (*Isfahan University of Technology*); *Abolghasem Zeidaabadi-Nezhad* (*Isfahan University of Technology*); *Gholamreza Askari* (*Isfahan University of Technology (IUT)*); *H. Mir-Mohammad Sadeghi* (*Isfahan University of Technology*);

00:00 Tolerance Analyses for Metal EBG Waveguides
Wei Hong (*Nanjing University of Science and Technology*); *Nin Feng Bo* (*Southeast University*);

00:00 A Compact Three-way Power Divider with Third-harmonic Suppression
Qiao Li (*Academy of Space Electronic Information Technology*); *Jin-Gang Gong* (*Academy of Space Electronic Information Technology*); *Xiang-Ke Deng* (*Academy of Space Electronic Information Technology*); *Hui Xu* (*Academy of Space Electronic Information Technology*); *Yi Wang* (*Academy of Space Electronic Information Technology*);

00:00 Mode Converters in Overmoded Circular Waveguide for a 250 GHz CARM Source
Gian Luca Ravera (*ENEA*); *Silvio Ceccuzzi* (*"Roma Tre" University*); *G. Dattoli* (*ENEA*); *E. Di Palma* (*ENEA*); *A. Doria* (*ENEA*); *G. P. Gallerano* (*ENEA*); *E. Giovenale* (*ENEA*); *F. Mirizzi* (*Consorzio Create*); *Giuseppe Schettini* (*"Roma Tre" University*); *Ivan Spassovsky* (*ENEA Centro Ricerche Frascati*); *A. A. Tuccillo* (*ENEA*);

00:00 Resonance Method for Measurement of Absorbing Magnetodielectric EM-parameters
Victor Nikolaevich Egorov (*Eastern-Siberian Branch of FSUE "VNIIFTRI"*); *Elena Yu. Tokareva* (*East-Siberian Branch of FSUE "VNIIFTRI"*);

00:00 Phaseless Arrays Diagnostic by Phaselift in Near Zone: Numerical Experiments
Maria Antonia Maisto (*Universita degli studi della Campania Luigi Vanvitelli*); *Raffaele Moretta* (*Universita degli studi della Campania Luigi Vanvitelli*); *Raffaele Solimene* (*Second University of Naples*); *Rocco Pierri* (*Universita degli studi della Campania Luigi Vanvitelli*);

00:00 Closely Spaced Multi-band MIMO Antenna for Mobile Terminals
Yaohui Yang (*University of Electronic Science and Technology of China*); *Zhiqin Zhao* (*University of Electronic Science and Technology of China*); *Zaiping Nie* (*University of Electronic Science and Technology of China*);

00:00 The Use of Navigation Satellites Signals for Measurement the Absorbance of the Forest Canopy
Alexandr Sergeevich Yashchenko (*Omsk State Pedagogical University*); *Pavel Petrovich Bobrov* (*Omsk State Pedagogical University*); *Valery L. Mironov* (*Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences*);

00:00 SAR Target Recognition via Linear t-stochastic Neighbor Embedding and Sparse Representation
Meiting Yu (*National University of Defense Technology*); *Lingjun Zhao* (*National University of Defense Technology*); *Siqian Zhang* (*National University of Defense Technology*); *Gangyao Kuang* (*National University of Defense Technology*);

00:00 Super-resolution Imaging for Fully Polarimetric Radar Based on Efficient Analysis of EM Scattering from Objects within a Half-space
Yue 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*); *Dongwei Lu* (*University of Electronic Science and Technology of China*); *Xiaofeng Que* (*University of Electronic Science and Technology of China*);

00:00 Monostatic ISAR Coherent 3-D Imaging of Space Target Based on Sparse Constraint
Libing Jiang (*National University of Defense Technology*); *Peng Yang* (*National University of Defense Technology*); *Zhuang Wang* (*National University of Defense Technology*);

00:00 SAR Imaging for Targets within a Half-space Using Efficient Numerical Simulation of Maxwell's Equation
Xin Qi (*University of Electronic Science and Technology of China*); *Zaiping Nie* (*University of Electronic Science and Technology of China*); *Dongwei Lu* (*University of Electronic Science and Technology of China*); *Yue Wang* (*University of Electronic Science and Technology of China*); *Xiaofeng Que* (*University of Electronic Science and Technology of China*); *Jun Hu* (*University of Electronic Science and Technology of China*);

00:00 3D Print X-band Horn Antenna for Ground-based SAR Application
Yohandri (*Universitas Negeri Padang*); *Rahmad Arif Syafrindo* (*Universitas Negeri Padang*); *Josaphat Tetuko Sri Sumantyo* (*Chiba University*); *Cahya Edi Santosa* (*Chiba University*); *Achmad Munir* (*Institut Teknologi Bandung*);

00:00 Road Shape Imaging System Using Monopulse FMCW Radar
Tae-Yun Lee (*Yonsei University*); *Vladimir Skvortsov* (*Yonsei University*); *Young-Gu Kang* (*Yonsei University*); *Min-Ho Ka* (*Yonsei University*);

00:00 Fractal X-shaped FSS Employed Electromagnetic Shield for SATCOM Applications
Muhammad Bilal (*University of Engineering and Technology*); *Rashid Saleem* (*The University of Manchester*); *Tayyab Shabbir* (*University of Engineering and Technology*); *Asim Quddus* (*University of Engineering and Technology*); *M. Arif Khan* (*Charles Sturt University*);

00:00 Accurate Electromagnetic Modeling of Reconfigurable Graphene-based THz Parametric Amplifiers
Galina S. Makeeva (*Penza State University*); *Oleg A. Golovanov* (*Penza State University*); *Anatoly B. Rinkevich* (*Institute of Metal Physics*);

00:00 Theoretical Evaluation of EMI Shielding Effectiveness for Graphene-Polymer Composites Based on Experimental Dielectric Characteristics in Medium Frequency Range
Rahim Jan (*National University of Sciences and Technology*); *Abdul Saboor* (*National University of Sciences & Technology (NUST)*); *Akbar Ali* (*Centres of Excellence in Sciences & Applied Technologies (CESAT)*); *Akhtar Hussain* (*Centres of Excellence in Sciences & Applied Technologies (CESAT)*);

00:00 Structural Distortion and Magnetic Properties for $LaPbMnSbO_6$ Compounds
Yijia Bai (*Changchun Institute of Applied Chemistry, Chinese Academy of Sciences*); *Lin Han* (*Changchun Institute of Applied Chemistry, Chinese Academy of Sciences*); *Xiaojuan Liu* (*Changchun Institute of Applied Chemistry, Chinese Academy of Sciences*); *Xiaojie Wu* (*Changchun Institute of Applied Chemistry, Chinese Academy of Sciences*); *Junling Meng* (*Changchun Institute of Applied Chemistry, Chinese Academy of Sciences*); *Jian Meng* (*Changchun Institute of Applied Chemistry, Chinese Academy of Sciences*);

00:00 The Monopole Antenna for Magnetic Resonace Imaging of Cardiovascular Walls
H. Y. Yuan (*Peking University*); *H. Zhang* (*Peking University*); *J. Zhang* (*Peking University*); *Jing Fang* (*Peking University*);

00:00 Static Magnetic Field Exposure Alters the Expression of DNA Repair Genes along Doxorubicin Treatment
Behnam Hajipour Verdom (*Tarbiat Modares University*); *Parviz Abdolmaleki* (*Tarbiat Modares University*); *Mozhgan Alipour* (*Tarbiat Modares University*); *Mehrdad Behmanesh* (*Tarbiat Modares University*);

00:00 A Synergistic Effects of Magnetic Fields on Cell Cycle and Apoptosis in Bone Marrow Stem Cells
Mozhgan Alipour (*Tarbiat Modares University*); *Parviz Abdolmaleki* (*Tarbiat Modares University*); *Behnam Hajipour Verdom* (*Tarbiat Modares University*);

00:00 Electromagnetic Field and Nitric Oxide Influenced on the Gene Expression of Neuronal Differentiation Pathway in the Rat Bone Marrow Mesenchymal Stem Cells
Nazanin Haghighat (*Tarbiat Modares University (TMU)*); *Parviz Abdolmaleki* (*Tarbiat Modares University*); *Mehrdad Behmanesh* (*Tarbiat Modares University*);

00:00 Planar Microwave Resonator for Bio-sensing and Material Characterisation
Ayodunni Oloyo (*The University of Manchester*); *Zhirun Hu* (*University of Manchester*);

00:00 Combination of Static Magnetic Field and Cispaltin in Order to Reduce Toxicity of Drug and Resistance in Cancer Cell Lines
Jaber Zafari (*Ahvaz Jundishapur University of Medical Sciences*); *Fatemeh Javanijouni* (*Tarbiat Modares University*); *Mohammad Satari* (*Tarbiat Modares University*); *Parviz Abdolmaleki* (*Tarbiat Modares University*); *Nazanin Abdolmaleki* (*Islamic Azad University*);

00:00 Effects of Extremely Low Frequency (50 Hz) Magnetic Field and Superparamagnetic Nanoparticles on Cell Viability, Apoptosis and Cell Cycle Progression
Mohammad Satari (*Tarbiat Modares University*); *Parviz Abdolmaleki* (*Tarbiat Modares University*); *Jaber Zafari* (*Ahvaz Jundishapur University of Medical Sciences*); *Fatemeh Javani Jouni* (*Tarbiat Modares University*); *Nazanin Haghighat* (*Tarbiat Modares University (TMU)*);

00:00 Diffractals at Frequency 36 GHz Which Are Observed at Radar Scattering of an Electromagnetic Wave by a Fractal Surface
Alexander Alekseevich Potapov (*Kotel'nikov Institute of Radio Engineering and Electronics, Russian Academy of Sciences*);

00:00 The Study of Radar cross Section Reduction of Flexible 2 bit Coding Metasurfaces
Xiaojun Pei (*Huazhong University of Science and Technology*); *Jiaji Yang* (*Huazhong University of Science and Technology*); *Yongzhi Cheng* (*Wuhan University of Science and Technology*); *Chenjun Wu* (*Huazhong University of Science and Technology*); *Chenchen Ge* (*Huazhong University of Science and Technology*); *Rong Zhou Gong* (*Huazhong University of Science and Technology*); *Yan Nie* (*Huazhong University of Science & Technology*);

00:00 Inorganic Semiconductor Nanoparticles Doped Polymer Laser
Parva Chhantyal (*Laser Zentrum Hannover e.V.*); *Laszlo Sajti* (*Laser Zentrum Hannover e.V.*); *Carsten Reinhardt* (*Laser Zentrum Hannover e.V.*); *Suraj Naskar* (*Leibniz University Hannover*); *Dirk Dorfs* (*Leibniz University Hannover*); *Nadja Bigall* (*Leibniz University Hannover*); *Boris N. Chichkov* (*Laser Zentrum Hannover e.V.*);

00:00 Power and Spectral Characteristics of the Ion Metal Vapor Lasers with Pumping in Transverse-type Gas Discharges
I. G. Ivanov (*Southern Federal University*); *S. P. Zinchenko* (*Southern Scientific Center of the Russian Academy of Sciences*);

00:00 Fabrication and Photoluminescence Properties of Doped Nanocrystals
Guoying Feng (*Sichuan University*);

00:00 Kinetic Model of the Copper Bromide Vapor Brightness Amplifier
Stanislav Nikolaevich Torgaev (*Tomsk Polytechnic University*);

00:00 Complex Photonic Films Used as External Diffractive 3D Photonic Crystals to Improve Blue OLEDs
Michal Mruczkiewicz (*Adam Mickiewicz University*); *F. Dumur* (*University of Bordeaux*); *Mathias Perrin* (*Laboratoire Ondes et Matiere d'Aquitaine*); *A. Bertrand* (*Universite de Pau et des Pays de l'Adour*); *Stephane Reculusa* (*Université Bordeaux 1*); *C. Dagron-Lartigau* (*Universite de Pau et des Pays de l'Adour*); *A. Bousquet* (*Universite de Pau et des Pays de l'Adour*); *L. Vignau* (*University of Bordeaux*); *L. Billon* (*Universite de Pau et des Pays de l'Adour*); *Sophie Fasquel* (*University of Bordeaux*);

00:00 The Role of Exciton on Light Amplification in Lead Halide Perovskites
Quan Lyu (*Harbin Institute of Technology*); *Haohan Wei* (*Harbin Institute of Technology*); *Wenzhao Sun* (*Harbin Institute of Technology*); *Kaiyang Wang* (*Harbin Institute of Technology*); *Zhiyuan Gu* (*Harbin Institute of Technology*); *Jiankai Li* (*Harbin Institute of Technology*); *Shuai Liu* (*Harbin Institute of Technology*); *Shumin Xiao* (*Harbin Institute of Technology*); *Qinghai Song* (*Harbin Institute of Technology*);

00:00 CPT Atomic Clock Stabilization via Modulation Technique
E. A. Tsygankov (*National Research Nuclear University MEPhI*); *S. V. Petropavlovsky* (*Financial University under the Government of the Russian Federation*); *M. I. Vaskovskaya* (*Advanced Energy Technologies Ltd.*); *S. A. Zibrov* (*Advanced Energy Technologies Ltd.*); *V. L. Velichansky* (*National Research Nuclear University MEPhI*); *V. P. Yakovlev* (*National Research Nuclear University MEPhI*);

00:00 Design of 1.33 µm and 1.55 µm Wavelengths Quantum Cascade Photodetector
Saba Khosravi (*University of Tabriz*); *Ali Rostami* (*University of Tabriz*); *M. Dolatyari* (*Industrial Park of Advanced Technologies*);

00:00 Low-profile Planar Multiport Elliptical Patch Antenna for Wireless Communication Applications
Sara Mahmoud Abd El Hamid (*Arab Academy for Science, Technology and Maritime Transport*); *Wael Swelam* (*Egyptian Armed Forces*);

00:00 **16 × 8** Wideband Microstrip Planar Array Antenna for E-band Millimeter-wave 5G High Speed WLAN and Broadband Internet Applications
Ahmed Hassanien Aashhab (*Misr University for Science and Technology*); *Wael Swelam* (*Egyptian Armed Forces*); *Mohamed Hassan Abd El-Azeem* (*Arab Academy for Science, Technology and Maritime Transport*);

00:00 Low-RCS Wideband Dual-band Shared-aperture Antenna Based on FSS
Jiamin Wei (*Beijing Institute of Technology*); *Qingyun Zeng* (*Beijing Institute of Technology*); *Wu Ren* (*Beijing Institute of Technology*);

00:00 An L-band Coaxial Transit-time Oscillator Introduced a Smooth Inner Conductor with Mechanical Frequency Tunability
Lili Song (*National University of Defense Technology*); *Juntao He* (*National University of Defense Technology*); *Junpu Ling* (*National University of Defense Technology*); *Bingfang Deng* (*National University of Defense Technology*);

00:00 K-band Strontium Hexaferrite Microwave Absorbers and Their Absorption Characterization
Sukhleen Bindra Narang (*Guru Nanak Dev University*); *Dalveer Kaur* (*Guru Nanak Dev University*); *Kunal Pubby* (*Guru Nanak Dev University*); *S. K. Chawla* (*Guru Nanak Dev University*); *Prabhjyot Kaur* (*Guru Nanak Dev University*);

00:00 Relativistic Magnetron with Linearly Polarized TE_{11} Coaxial Waveguide Mode
Di-Fu Shi (*National University of Defense Technology*); *Bao-Liang Qian* (*National University of Defense Technology*); *Hong-Gang Wang* (*National University of Defense Technology*); *Wei Li* (*National University of Defense Technology*); *Guang-Xing Du* (*National University of Defense Technology*);

00:00 Waveform Engineered Design of High-efficiency Doherty Power Amplifier
Zhang Yang (*China Academy of Space Technology*); *Xinyang He* (*China Academy of Space Technology*); *Fei Yang* (*China Academy of Space Technology*);

00:00 Hyper-chaos Mode in the Mutual Coupled End Partial Stable Microwave Oscillators System
Sergey S. Novikov (*Tomsk State University*);

00:00 Design of a Compact Full Ka-band Low Loss Waveguide-based Spatial Power Divider/Combiner
Lei Tan (*Southeast University*); *Kang Yin* (*Southeast University*); *Jinping Xu* (*Southeast University*);

00:00 Fractal Radioelement's, Devices and Systems for Radar and Future Telecommunications: Capacitor, Memristor, Smart 2D Frequency-selective Surfaces and Masking Screens, Antennas, Labyrinths and Other Fractal Metamaterials
Alexander Alekseevich Potapov (*Kotel'nikov Institute of Radio Engineering and Electronics, Russian Academy of Sciences*); *Alexey A. Potapov* (*Kotel'nikov Institute of Radio Engineering and Electronics, Russian Academy of Sciences*); *Viktor A. Potapov* (*V.A. Kotelnikov Institute of Radio Engineering and Electronics, Russia Academy of Science*);

00:00 Dual UWB Bandstop Filter Based on M-shaped Defected Microstrip Structure
Xuemei Zheng (*Harbin Engineering University*);

00:00 Airport Extraction of SAR Image Based on Multiresolution Analysis
Jiameng Pan (*National University of Defense Technology*); *Zhaodong Niu* (*National University of Defense Technology*); *Zengping Chen* (*National University of Defense Technology*);

00:00 Performance Verification and Testing for Micro Deformation Detection Radar
Xiangkun Zhang (*National Space Science Center, Chinese Academy of Sciences*); *Zelong Shao* (*National Space Science Center, Chinese Academy of Sciences*); *Jiawei Ren* (*National Space Science Center, Chinese Academy of Sciences*); *Jingshan Jiang* (*Center for Space Science and Applied Research, Chinese Academy of Sciences*);

00:00 High Resolution ISAR Imaging for FPGA Based 94 GHz W-band Radar
Sumin Kim (*Yonsei University*); *Tae-Yun Lee* (*Yonsei University*); *Se-Yeon Jeon* (*Yonsei University*); *Jeongbae Kim* (*Yonsei University*); *Min-Ho Ka* (*Yonsei University*);

00:00 A Power Allocation Algorithm of Distributed Interference in Global Positioning System
Fang Ye (*Harbin Engineering University*); *Hongbo Tian* (*Harbin Engineering University*); *Fei Che* (*Harbin Engineering University*);

00:00 The Mesosphere and the Lower Thermosphere Diagnostics by the Method of the Resonant Scattering of Radio Waves on Artificial Periodic Irregularities of the Ionospheric Plasma
Nataliya V. Bakhmetieva (*Nizhniy Novgorod State University (NIRFI UNN)*);

00:00 Light Trapping and Perfect Absorption in Gold Nanogroves
Junpeng Guo (*University of Alabama in Huntsville*); *Zhitong Li* (*University of Alabama in Huntsville*); *Hong Guo* (*University of Alabama in Huntsville*);

Session 2P1
Optical Manipulation by Nano-scale Objects

Tuesday PM, May 23, 2017

Room G5

Organized by Robert A. Suris, Andrey A. Bogdanov

Chaired by Andrey A. Bogdanov

00:00 Topological Edge States in Honeycomb Plasmonic Lattices
Ruo-Yang Zhang (*The Hong Kong University of Science and Technology*); *Li Wang* (*The Hong Kong University of Science and Technology*); *Che Ting Chan* (*The Hong Kong University of Science and Technology*);

00:00 Optical Trapping of Non-spherical Plasmonic Nanoparticles
Oto Brzobohaty (*Institute of Scientific Instruments of the ASCR, v.v.i.*); *V. Karasek* (*Institute of Scientific Instruments of the ASCR, v.v.i.*); *M. Siler* (*Institute of Scientific Instruments of the ASCR, v.v.i.*); *L. Chvatal* (*Institute of Scientific Instruments of the ASCR, v.v.i.*); *Pavel Zemanek* (*Institute of Scientific Instruments of the ASCR, v.v.i.*);

00:00 Optical Antitrapping of Nanoparticles in Gaussian Beam Due to Surface Modes of a Substrate
Aliaksandra Ivinskaya (*ITMO University*); *Mihail I. Petrov* (*ITMO University*); *Andrey A. Bogdanov* (*ITMO University*); *I. Shishkin* (*Tel Aviv University*); *Pavel Ginzburg* (*ITMO University*); *Alexander Sergeevich Shalin* (*Ulyanovsk Branch of the Institute of Radio Engineering and Electronics, Russian Academy of Sciences*);

00:00 Spectral Signatures of Axially Rotating Scatterers
D. Filonov (*Tel Aviv University*); *V. Kozlov* (*Tel Aviv University*); *Pavel Ginzburg* (*Tel Aviv University*);

00:00 Particle Trapping and Manipulation Using Near-field Optics
Sile Nic Chormaic (*Okinawa Institute of Science and Technology Graduate University*); *Mark Daly* (*OIST Graduate University*); *Aili Maimaiti* (*OIST Graduate University*); *Xue Han* (*OIST Graduate University*); *Aysen Gurkan* (*OIST Graduate University*); *Cindy Esporlas* (*OIST Graduate University*); *Viet Giang Truong* (*OIST Graduate University*);

00:00 Applications of Integrated Optomechanical Devices
Lei Shi (*Huazhong University of Science and Technology*);

00:00 Optomechanics of Fabry-Perot Resonator with Movable Mirrors
Almas F. Sadreev (*L. V. Kirensky Institute of Physics*); *E. Ya. Sherman* (*Universidad del Pais Vasco UPV-EHU*);

00:00 Structured Light for Manipulating Anisotropic Nanoparticles
Alexander A. Zharov (*Institute for Physics of Microstructures of the Russian Academy of Sciences*); *Alexander A. Zharov, Jr.* (*Institute for Physics of Microstructures of the Russian Academy of Sciences*); *Ilya V. Shadrivov* (*Australian National University*); *Nina A. Zharova* (*The Australian National University*);

00:00 Electromagnetic Forces in Negatively Refracting Photonic Crystals
Angeleene S. Ang (*ITMO University*); *Sergey Vladimirovich Sukhov* (*Institute of Radio Engineering and Electronics of Russian Academy of Sciences*); *Aristide Dogariu* (*University of Central Florida*); *Alexander Sergeevich Shalin* (*Ulyanovsk Branch of the Institute of Radio Engineering and Electronics, Russian Academy of Sciences*);

00:00 Particle Dynamics in an Unstable Optical Potential
Oto Brzobohaty (*Institute of Scientific Instruments of the ASCR, v.v.i.*); *P. Jakl* (*Institute of Scientific Instruments of the ASCR, v.v.i.*); *M. Siler* (*Institute of Scientific Instruments of the ASCR, v.v.i.*); *V. Svak* (*Institute of Scientific Instruments of the ASCR, v.v.i.*); *S. Simpson* (*Institute of Scientific Instruments of the ASCR, v.v.i.,*); *A. Ryabov* (*Charles University in Prague*); *R. Filip* (*Palacky University*); *Pavel Zemanek* (*Institute of Scientific Instruments of the ASCR, v.v.i.*);

00:00 Cavity Optomechanics with Optically Trapped Nanoobjects
Pau Mestres (*The Barcelona Institute of Science and Technology*); *Johann Berthelot* (*Institut Fresnel - UMR 7249*); *Srdjan S. Acimovic* (*Chalmers University of Technology*); *Romain Quidant* (*The Barcelona Institute of Science and Technology*);

00:00 Advanced Light Manipulation Techniques with Monolayers of Colloidal Particles: Generation of Non-diffracting Beam Lattices and Control over Individual Photonic Jets for Surface Patterning
Nikolai Mitin (*Institute of Applied Physics RAS*); *Alexander Pikulin* (*Institute of Applied Physics RAS*);

00:00 Lateral and Repulsive Optical Forces on Particles near Surfaces
Francisco J. Rodriguez Fortuno (*King's College London*);

00:00 Plasmon Drag Effect in Metal Nanostructures and Effects of Plasmonic Spin
Maxim Durach (*Georgia Southern University*); *Natalia Noginova* (*Norfolk State University*);

00:00 Recoil Force of Surface Plasmon Polariton
Andrey A. Bogdanov (*ITMO University*); *Mihail I. Petrov* (*ITMO University*); *S. V. Sukhov* (*University of Central Florida*); *A. S. Shalin* (*ITMO University*); *Aristide Dogariu* (*University of Central Florida*);

Session 2P2
Fundamental Aspects in the Problems of the EM High-frequency Wave Propagation in the Ionosphere 2

Tuesday PM, May 23, 2017

Room G6

Organized by Nikolay N. Zernov

Chaired by Nikolay N. Zernov, Vadim E. Gherm

00:00 Invited — Developments in HF Propagation Predictions to Support Communications with Aircraft on Trans-polar Routes
E. M. Warrington (*University of Leicester*); *N. C. Rogers* (*Lancaster University*); *A. J. Stocker* (*University of Leicester*); *D. R. Siddle* (*University of Leicester*); *H. A. H. Al-Behadili* (*University of Leicester*); *Nikolay Y. Zaalov* (*Saint Petersburg State University*); *F. Honary* (*Lancaster University*); *M. J. Beharrell* (*Lancaster University*); *D. H. Boteler* (*Natural Resources Canada*); *D. W. Danskin* (*Natural Resources Canada*);

00:00 Ionospheric Providing of HF Propagation in High Latitudinal Regions
Olga A. Maltseva (*Southern Federal University*); *M. M. Anishin* (*Southern Federal University*);

00:00 Invited — Observations of Traveling Ionospheric Disturbances on the Basis of Vertical and Near-vertical Sounding Data
Vladimir Ivanovich Kurkin (*Institute of Solar — Terrestrial Physics, Siberian Branch, Russian Academy of Sciences*); *O. A. Laryunin* (*Irkutsk State University*); *A. V. Podlesnyi* (*Institute of Solar — Terrestrial Physics, Siberian Branch, Russian Academy of Sciences*); *M. D. Pezhemskaya* (*Institute of Solar — Terrestrial Physics, Siberian Branch, Russian Academy of Sciences*); *L. V. Chistyakova* (*Institute of Solar — Terrestrial Physics, Siberian Branch, Russian Academy of Sciences*);

00:00 Geophysical Conditions for Round-the-World Propagation of HF Radio Signals
Vera Ivanova (*Institute of Solar-Terrestrial Physics SB RAS*); *Vladimir Ivanovich Kurkin* (*Institute of Solar-Terrestrial Physics, Siberian Branch, Russian Academy of Sciences*); *Igor Poddelsky* (*Institute of Cosmophysical Researches and Radio Wave Propagation, FEB RAS*);

00:00 The Real-time Forecast of HF Radio Channel on the Base of Backscatter Sounding Data
Sergey N. Ponomarchuk (*Institute of Solar-Terrestrial Physics SB RAS*); *V. P. Grozov* (*Institute of Solar-Terrestrial Physics SB RAS*); *G. V. Kotovich* (*Institute of Solar-Terrestrial Physics SB RAS*); *Vladimir Ivanovich Kurkin* (*Institute of Solar-Terrestrial Physics SB RAS*); *Maksim Sergeevich Penzin* (*Institute of Solar-Terrestrial Physics of the Siberian Branch of the RAS*);

00:00 Peculiarities of Decameter Radio Wave Propagation over High-latitude Paths Using Data of LFM-ionosondes Network
Vera A. Ivanova (*Institute of Solar-Terrestrial Physics SB RAS*); *Vladimir Ivanovich Kurkin* (*Institute of Solar-Terrestrial Physics, Siberian Branch, Russian Academy of Sciences*); *Lidiya V. Chistyakova* (*Institute of Solar — Terrestrial Physics, Siberian Branch, Russian Academy of Sciences*); *Aleksey V. Podlesnyi* (*Institute of Solar — Terrestrial Physics, Siberian Branch, Russian Academy of Sciences*); *Sergey N. Ponomarchuk* (*Institute of Solar-Terrestrial Physics SB RAS*); *Igor N. Poddelsky* (*Institute of Cosmophysical Researches and Radio Wave Propagation, FEB RAS*); *Aleksey I. Poddelsky* (*Institute of Cosmophysical Researches and Radio Wave Propagation, FEB RAS*);

00:00 Invited — Features of Plasma Perturbations HF-induced in the Outer Ionosphere
Vladimir L. Frolov (*Radio Physical Research Institute (NIRFI NNSU)*);

00:00 The Study of HF and VLF Artificial Emission at High Latitudes in the Heating Experiments on EISCAT and SPEAR Facilities
Roman Yu. Yurik (*Polar Geophysical Institute RAS*); *E. D. Tereshchenko* (*Polar Geophysical Institute RAS*);

00:00 Ionospheric Disturbances during 17–19 March 2015 Magnetic Storm over Northern Region of Russia
Vladimir Ivanovich Kurkin (*Institute of Solar — Terrestrial Physics, Siberian Branch, Russian Academy of Sciences*); *N. A. Zolotukhina* (*Institute of Solar-Terrestrial Physics SB RAS*); *N. M. Polekh* (*Institute of Solar-Terrestrial Physics SD RAS*); *Denis D. Rogov* (*Arctic and Antarctic Research Institute*); *E. B. Romanova* (*Institute of Solar-Terrestrial Physics SD RAS*); *M. Chelpanov* (*Institute of Solar — Terrestrial Physics, Siberian Branch, Russian Academy of Sciences*);

00:00 Sources of Longitudinal Variations in High-middle
Invited Latitude Ionosphere over Eurasia
Boris G. Shpynev (*Institute of Solar-Terrestrial Physics of Siberian Branch of Russian Academy of Sciences*); *Marina A. Chernigovskaya* (*Institute of Solar-Terrestrial Physics of Siberian Branch of Russian Academy of Sciences*);

00:00 Expanding the Diagnostic Capabilities of Incoherent Scatter Radar Technique
Boris G. Shpynev (*Institute of Solar-Terrestrial Physics of Siberian Branch of Russian Academy of Sciences*); *Geliy A. Zherebtsov* (*Institute of Solar-Terrestrial Physics, SB RAS*); *Dmitry S. Kushnarev* (*Institute of Solar-Terrestrial Physics of Siberian Branch of Russian Academy of Sciences*); *Sergey S. Alsatkin* (*Institute of Solar-Terrestrial Physics SB RAS*); *Denis S. Khabituev* (*Institute of Solar Terrestrial Physics*); *Alexander L. Voronov* (*Institute of Solar-Terrestrial Physics, SB RAS*);

00:00 Study on Plasma Blob to Result in Radio Signal Scintillations in Low Latitude Ionosphere
Jiankui Shi (*National Space Science Center, CAS*); *Zheng Wang* (*National Space Science Center, CAS*); *K. Torkar* (*Space Research Institute, AAS*); *G. Zherebtsov* (*Institute of Solar Terrestrial Space Physics, RAS/SB*); *K. Ratovsky* (*Institute of Solar Terrestrial Space Physics, RAS/SB*); *E. Nomanova* (*Institute of Solar Terrestrial Space Physics, RAS/SB*);

00:00 The Use of GNSS Data for Constructing the Indices of Electron Density Perturbation in the Ionosphere
I. A. Nesterov (*M. V. Lomonosov Moscow State University*); *Elena S. Andreeva* (*M. V. Lomonosov Moscow State University*); *M. O. Nazarenko* (*M. V. Lomonosov Moscow State University*); *Artem M. Padokhin* (*M. V. Lomonosov Moscow State University*); *Yulia S. Tumanova* (*M. V. Lomonosov Moscow State University*);

00:00 Seasonal and Helio-geomagnetic Activity Pattern of the Ionospheric Variability over Russia's Eastern Siberia and Far East Region from the GPS/GLONASS Data
Anna S. Yasyukevich (*Institute of Solar-Terrestrial Physics of Siberian Branch of Russian Academy of Sciences*); *Marina A. Chernigovskaya* (*Institute of Solar-Terrestrial Physics of Siberian Branch of Russian Academy of Sciences*); *Anna A. Mylnikova* (*Institute of Solar-Terrestrial Physics (ISTP), Siberian Branch of Russian Academy of Sciences*); *Boris G. Shpynev* (*Institute of Solar-Terrestrial Physics of Siberian Branch of Russian Academy of Sciences*); *Denis S. Khabituev* (*Institute of Solar Terrestrial Physics*);

00:00 Regular TEC Variations in Mid-latitude and Polar Regions
Anna S. Yasyukevich (*Institute of Solar-Terrestrial Physics of Siberian Branch of Russian Academy of Sciences*); *Yury Vladimirovich Yasyukevich* (*Institute of Solar-Terrestrial Physics (ISTP), Siberian Branch of Russian Academy of Sciences*); *Anna A. Mylnikova* (*Institute of Solar-Terrestrial Physics (ISTP), Siberian Branch of Russian Academy of Sciences*);

Session 2P3
Radar Cross Section and Inverse Problems in Electromagnetics

Tuesday PM, May 23, 2017

Room G7

Organized by Yury Vladimirovich Yukhanov

Chaired by Yury Vladimirovich Yukhanov

00:00 Broadband THz Time Domain Bistatic Radar Cross Section Measurements
Bo Wang (*Science and Technology on Electromagnetic Scattering Laboratory*); *Yajun Wu* (*Science and Technology on Electromagnetic Scattering Laboratory*); *Xiao-Bing Wang* (*Xidian University*);

00:00 Radiation and Scattering Characteristics of a Conformal Magnetic Antenna of a Large Aircraft
Andrey I. Semenikhin (*Southern Federal University*); *A. I. Chernokolpakov* (*Southern Federal University*); *Diana V. Semenikhina* (*Southern Federal University*);

00:00 Transformation of Boundary-value Problems on Scattering of Electromagnetic Waves from Objects
Boris M. Petrov (*Southern Federal University*); *Daria Titova* (*Southern Federal University*);

00:00 Cross-eye Monopulse Jammer Located on UAV
Imren Kalinbacak (*Ege University*); *Mustafa Pehlivan* (*Ege University*); *Korkut Yegin* (*Yeditepe University*);

00:00 Scattering of Radio Waves from HF-induced Ionospheric Irregularities
Vladimir L. Frolov (*Radio Physical Research Institute (NIRFI NNSU)*);

00:00 Wideband Quad-ridged TEM-horn with Switched Polarization
Igor Alexandrovich Suhov (*AO "NII" Vector*); *Yuliya Dmitriyevna Gavrilova* (*AO "NII" Vector*); *Aleksandr Sergeevich Suslov* (*AO "NII" Vector*); *A. N. Veselov* (*AO "NII" Vector*);

00:00 Reducing Radar Cross Section of TEM Horn Antenna Component with Predetermined Radiation Characteristics
Yuliya Dmitriyevna Gavrilova (*AO "NII" Vector*); *A. Suslov* (*AO "NII" Vector*); *Sukhov Igor Alexandrovich* (*AO "NII" Vector*);

00:00 Synthesis of Anisotropic Plane with an Array of Randomly Oriented Impedance Strips
Yury V. Yukhanov (*Southern Federal University*); *T. Yu. Privalova* (*Southern Federal University*); *E. E. Privalov* (*Southern Federal University*);

00:00 Damping of the Scattered Field of a Plane Object by a Waveguide Array
Yury Vladimirovich Yukhanov (*Southern Federal University*); *Tatyana Yurievna Privalova* (*Southern Federal University*); *A. V. Gevorkyan* (*Southern Federal University*);

00:00 VHF-UHF Radio Monitoring Antenna with a Small Radar Cross Section for UAV Applications
Aleksandr Sergeevich Suslov (*AO "NII" Vector*); *Igor Alexandrovich Suhov* (*AO "NII" Vector*); *Julia Dmitrievna Gavrilova* (*AO "NII" Vector*);

00:00 Surface Synthesis of the Reflector Antenna with Radiation Pattern of Special Form
Aleksandr N. Veselov (*AO "NII" Vector*); *Yuliya Dmitriyevna Gavrilova* (*AO "NII" Vector*);

00:00 Controlling Van-Atta Array Scattering Characteristics with HITTITE HMC247 Phase Shifter
Feruz Setmerovich Topalov (*Southern Federal University*); *Yury Vladimirovich Yukhanov* (*Southern Federal University*); *Igor Vasilyevich Ilin* (*Southern Federal University*); *Tatyana Yurievna Privalova* (*Southern Federal University*);

00:00 High Efficiency Horn with Hexagonal Aperture for Antenna Arrays
Yury V. Krivosheev (*JSC Radiofizika*); *A. V. Shishlov* (*Moscow Institute of Physics and Technology*);

00:00 Estimation of the Groove's and the Through-thickness Gap's RCS
Andrey M. Lebedev (*Institute for Theoretical and Applied Electromagnetics, Russian Academy of Sciences*); *I. I. Krasnolobov* (*Institute for Theoretical and Applied Electromagnetics, Russian Academy of Sciences*); *Anatoli I. Fedorenko* (*Institute for Theoretical and Applied Electromagnetics, Russian Academy of Sciences*); *T. A. Furmanova* (*Institute for Theoretical and Applied Electromagnetics, Russian Academy of Sciences*);

Session 2P4
The Modern Hybrid Methods in the Problems of Computational Electromagnetics 1

Tuesday PM, May 23, 2017

Room G8

Organized by Victor Filippovich Kravchenko, Alexander Nikolaevich Bogolyubov

Chaired by Victor Filippovich Kravchenko

00:00 The Novel Waveguide Filters on Complex Multilayered Metal-dielectric Structures
Viacheslav V. Zemlyakov (*Southern Federal University*); *Sergey V. Krutiev* (*Southern Federal University*); *Daria V. Lonkina* (*Southern Federal University*);

00:00 Electrodynamic Analysis of Electromagnetic Fields in the Ridge Waveguides with Piecewise-layered Dielectric Filling
Alexey V. Donchenko (*Southern Federal University*); *Gennady F. Zargano* (*Southern Federal University*); *Viacheslav V. Zemlyakov* (*Southern Federal University*);

00:00 Wave Propagation of Induced Soft X-ray Radiation (VUV) though $\boldsymbol{\mu}$-capillary Holes of Ordered Structures of Glass Micro-Channel Plate: Comparison among Theoretical and Experimental Data
Mikhail I. Mazuritskiy (*Southern Federal University*); *Alexander M. Lerer* (*Southern Federal University*); *Viacheslav V. Zemlyakov* (*Southern Federal University*);

00:00 Investigation of Algorithms Utilizing Wavelets to Solve Various Partial Differential Equations
Oleg V. Kravchenko (*Scientific and Technological Center of Unique Instrumentation of RAS*); *K. P. Mredula* (*Sardar Vallabhbhai Patel Institute of Technology*); *D. C. Vakaskar* (*The Maharaja Sayajirao University of Baroda*);

00:00 Numerical Investigation of Ion Drag Force Influence on Dusty Plasma Void Formation
Oleg V. Kravchenko (*Scientific and Technological Center of Unique Instrumentation of RAS*); *J. K. Atul* (*Institute for Plasma Research*);

00:00 Incorporation of Non-local Optical Response into the Discrete Sources Method to Solve 3D Scattering Problems of Nanoplasmonics
Ivan V. Lopushenko (*Lomonosov Moscow State Univesity*);

00:00 Solution of Boundary Problems for Elliptic Equation in Domains with Conical or Corner Points
Vladimir V. Rovenko (*Lomonosov Moscow State University*); *Ilya E. Mogilevsky* (*M. V. Lomonosov Moscow State University*);

00:00 Mathematical Modeling of Mirror Collimator with Impedance Rolled Edges
Fedor B. Khlebnikov (*Lomonosov Moscow State University*); *Denis A. Konyaev* (*Lomonosov Moscow State University*); *Natalya E. Shapkina* (*Lomonosov Moscow State University*); *Vladimir V. Rovenko* (*Lomonosov Moscow State University*);

00:00 Mathematical Problems of the Diffraction Theory on Bodies with Irregularly Boundary
Alexander Nikolaevich Bogolyubov (*Lomonosov Moscow State University*); *Ilya E. Mogilevskiy* (*Moscow State University*); *Vladimir V. Rovenko* (*Lomonosov Moscow State University*);

00:00 Modeling of Periodic Rectangular Ladder-type Waveguide Systems
Mikhail I. Svetkin (*Lomonosov Moscow State University*); *Alexander Igorevich Erokhin* (*M.V. Lomonosov Moscow State University*);

00:00 Synthesis of Layered Waveguiding Systems Based on Metamaterials
Nikolay A. Bogolyubov (*Lomonosov Moscow State University*); *Ivan A. Butkarev* (*Lomonosov Moscow State University*); *Yulia V. Mukhartova* (*Moscow State University*); *Mikhail I. Svetkin* (*Lomonosov Moscow State University*);

00:00 Conservative Algorithms for the Quantitative Design of the Millimeter-wave Klystrons
Alexey A. Bykov (*Lomonosov Moscow State University*); *Alexander Nikolaevich Bogolyubov* (*Lomonosov Moscow State University*); *Alexey G. Sveshnikov* (*Lomonosov Moscow State University*); *Ivan V. Lopushenko* (*Lomonosov Moscow State Univesity*);

00:00 The Galerkin-Homotopy Exact Electromagnetic Design of the Waveguide-ladder Structure for the Terahertz Electronics
Alexey A. Bykov (*Lomonosov Moscow State University*); *Ivan V. Lopushenko* (*Lomonosov Moscow State Univesity*);

00:00 Effects of Cavities RF Field Radial Non-uniformity on Multiple-beam Klystron Efficiency
Vladimir E. Rodyakin (*Lomonosov Moscow State University*); *Alexander Nikolaevich Bogolyubov* (*Lomonosov Moscow State University*); *Viktor M. Pikunov* (*Lomonosov Moscow State University*); *Mikhail I. Svetkin* (*Lomonosov Moscow State University*);

Session 2P5
Semiconductor Quantum Structures, Microcavities and Polariton Lasers

Tuesday PM, May 23, 2017

Room G9

Organized by Alexey V. Kavokin, Ivan V. Ignatiev

Chaired by Ivan V. Ignatiev

00:00 Evaluation of Multi-channel Amplification for Highly Stacked Quantum Dot Semiconductor Optical Amplifiers
Kouichi Akahane (*National Institute of Information and Communications Technology*); *Naoya Yoshida* (*Aoyama Gakuin University*); *Yu Fukae* (*Aoyama Gakuin University*); *Atsushi Matsumoto* (*National Institute of Information and Communications Technology*); *Toshimasa Umezawa* (*National Institute of Information and Communications Technology*); *Atsushi Kanno* (*National Institute of Information and Communications Technology*); *Hideyuki Sotobayashi* (*Aoyama Gakuin University*); *Naokatsu Yamamoto* (*National Institute of Information and Communications Technology*);

00:00 Non-linear Regimes of Exciton-polariton Rabi Oscil-
Invited lations
Nina Voronova (*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute) & Russian Quantum Center*); *Andrei Elistratov* (*N. L. Dukhov All-Russia Research Institute of Automatics*); *Yurii E. Lozovik* (*Institute of Spectroscopy of the Russian Academy of Sciences*);

00:00 Coupled Exciton-photon Bose Condensate in an Open System: ***ab Initio*** Approach
Andrei A. Elistratov (*N. L. Dukhov All-Russia Research Institute of Automatics*); *Yurii E. Lozovik* (*Institute of Spectroscopy of the Russian Academy of Sciences*);

00:00 Light-matter Interaction in Microcavities Filled with
Invited Fluorescent Proteins
C. P. Dietrich (*Universitat Wurzburg*); *S. Betzold* (*Universitat Wurzburg*); *M. Dusel* (*Universitat Wurzburg*); *M. Emmerling* (*Universitat Wurzburg*); *J. Ohmer* (*University of Wurzburg*); *U. Fischer* (*University of Wurzburg*); *M. C. Gather* (*University of St Andrews*); *Sven Hofling* (*Universitat Wurzburg*);

00:00 Dynamics of Excitonic Polaritons in Semiconductor Heterostructures with Quantum Wells
A. V. Trifonov (*St. Petersburg State University*); *Yu. P. Efimov* (*St. Petersburg State University*); *S. A. Eliseev* (*St. Petersburg State University*); *V. A. Lovtcius* (*St. Petersburg State University*); *P. Yu. Shapochkin* (*St. Petersburg State University*); *Ivan V. Ignatiev* (*St. Petersburg State University*);

00:00 Exciton-assisted Enhancement of TMOKE in the Semiconductor Structures
Olga Borovkova (*Russian Quantum Center*); *Nikolai Evgenyevich Khokhlov* (*Lomonosov Moscow State University*); *Felix Spitzer* (*Technische Universitat Dortmund*); *Ilya A. Akimov* (*University of Dortmund*); *Vladimir I. Belotelov* (*Russian Quantum Center*); *Maciej Wiater* (*Institute of Physics, Polish Academy of Sciences*); *Tomasz Wojtowicz* (*Institute of Physics, Polish Academy of Sciences*); *Grzegorz Karczewski* (*Institute of Physics, Polish Academy of Sciences*); *Dmitri Yakovlev* (*University of Dortmund*); *Manfred Bayer* (*Technische Universitat Dortmund*);

00:00 Photoluminescence Enhancement by Coupling of Localized Surface Plasmons to Excitons in Self-organized InAs Quantum Dots
Alexander Nikolaevich Kosarev (*Ioffe Institute*); *Vladimir V. Chaldyshev* (*Ioffe Institute*); *Nikita Toropov* (*ITMO University*); *Igor Gladskikh* (*ITMO University*); *Polina Gladskikh* (*ITMO University*); *Valeriy Preobrazhenskiy* (*Rzhanov Institute of Semiconductor Physics*); *Michael Putyato* (*Rzhanov Institute of Semiconductor Physics*); *Boris Semyagin* (*Rzhanov Institute of Semiconductor Physics*); *Alexey Kondikov* (*Peter the Great St. Petersburg Polytechnic University*); *Tigran Vartanyan* (*ITMO University*);

00:00 Room Temperature Exciton-polariton Resonant Reflection and Suppressed Absorption in Periodic Systems of InGaN Quantum Wells
Vladimir V. Chaldyshev (*The Ioffe Institute*); *A. S. Bolshakov* (*The Ioffe Institute*); *E. E. Zavarin* (*The Ioffe Institute*); *A. V. Sakharov* (*The Ioffe Institute*); *W. V. Lundin* (*The Ioffe Institute*); *A. F. Tsatsulnikov* (*The Ioffe Institute*); *M. A. Yagovkina* (*The Ioffe Institute*);

00:00 Adiabatic Design of Micropillar Cavities for 1.55-μm
Invited Quantum-dot Single-photon Sources
Haizhi Song (*Southwest Institute of Technical Physics*); *Libo Yu* (*Southwest Institute of Technical Physics*); *Zhiming M. Wang* (*Southwest Institute of Technical Physics*);

00:00 Spin Noise in Quantum Dot Microcavities in Strong Coupling Regime
Dmitry S. Smirnov (*Ioffe Institute*); *Bogdan Reznychenko* (*Institut Neel-CNRS*); *Alexia Auffeves* (*Institut Neel, CNRS, Universie Joseph Fourier*); *Loic Lanco* (*CNRS*);

00:00 The Polarizedradiation Characteristics of an Optofluidic Ring Resonator Laser Based on Evanescent-wave-coupled Gain
Yuanxian Zhang (*Yunnan University*); *Yufei Chu* (*Yunnan University*); *Dongyang Li* (*Yunnan University*); *Xiao-Yun Pu* (*Yunnan University*);

00:00 Terahertz Emission from Multiple-microcavity
Invited Exciton-polariton Lasers
S. Huppert (*PSL Research University*); *O. Lafont* (*PSL Research University*); *E. Baudin* (*PSL Research University*); *Jerome Tignon* (*PSL Research University*); *R. Ferreira* (*PSL Research University*);

00:00 Optical Spin Control of a Single Spin in a Zero-
Invited dimensional Microcavity
E. L. Ivchenko (*Ioffe Physical-Technical Institute*); *M. M. Glazov* (*Ioffe Physical-Technical Institute of the RAS*);

00:00 Weak Lasing in Polariton Superlattices
Long Zhang (*Fudan University*); *Wei Xie* (*Fudan University*); *Jian Wang* (*Fudan University*); *Alexander Poddubny* (*Ioffe Physical-Technical Institute of the Russian Academy of Sciences*); *Jian Lu* (*Fudan University*); *Yinglei Wang* (*Fudan University*); *Jie Gu* (*Fudan University*); *Wenhui Liu* (*Fudan University*); *Dan Xu* (*Fudan University*); *Xuechu Shen* (*Fudan University*); *Yuriy Rubo* (*Universidad Nacional Autonoma de Mexico*); *Boris Altshuler* (*Columbia University*); *Alexey V. Kavokin* (*University of Southampton (GB)*); *Zhanghai Chen* (*Fudan University*);

00:00 Impact Ionization in Semiconducting Single Wall Carbon Nanotubes Using the Ensemble Monte Carlo (EMC) Simulation
Tingyue Lan (*The State University of New York at Buffalo*); *Cemal Basaran* (*The State University of New York at Buffalo*); *Tarek Ragab* (*Arkansas State University*);

Session 2P6
Remote Sensing Techniques of Earth System Related Components 2

Tuesday PM, May 23, 2017

Room G10

Organized by Jian-Cheng Shi

Chaired by Jian-Cheng Shi

00:00 Estimation of Solar and Geomagnetic Activity Contribution in Solar Cycle Variations of Median Peak Electron Density NmF2
Konstantin G. Ratovsky (*Institute of Solar-Terrestrial Physics, SB RAS*); *M. V. Klimenko* (*Immanuel Kant Baltic Federal University*); *A. R. Abdullaev* (*Immanuel Kant Baltic Federal University*); *A. V. Markov* (*Immanuel Kant Baltic Federal University*); *Nina A. Korenkova* (*Ionosphere and Radio wave Propagation RAS*);

00:00 Solar and Geomagnetic Activity Dependence of Midlatitude F-spread Occurrence
Konstantin G. Ratovsky (*Institute of Solar-Terrestrial Physics, SB RAS*); *Jiankui Shi* (*National Space Science Center, CAS*); *Guojun Wang* (*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*);

00:00 Space Radio-holography as a Tool for Remote Sensing and Investigation of Radio Wave Propagation Effects
Alexander G. Pavelyev (*Institute of Radio Engineering and Electronics, Russian Academy of Sciences (IRE RAS)*); *Yuei-An Liou* (*National Central University*); *Stanislav Matyugov* (*Institute of Radio Engineering and Electronics, Russian Academy of Sciences (IRE RAS)*); *Vladimir M. Smirnov* (*Fryazino Branch, Kotel'nikov Institute of Radio Engineering and Electronics, Russian Academy of Sciences*); *Alexey Pavelev* (*Kotelnikov Institute of Radio Engineering and Electronics of the RAS (Fryazino Branch)*); *O. I. Yakovlev* (*Institute of Radio Engineering and Electronics, Russian Academy of Sciences (IRE RAS)*);

00:00 On the Effect of Refractive Index Perturbations on Propagation of Radio Waves in the Evaporation Duct
A. M. Makhalov (*National Research University*); *Mikhail Sergeyevich Mikhailov* (*National Research University "Moscow Power Engineering Institute"*); *Valery A. Permyakov* (*Moscow Power Engineering Institute (Technical University)*);

00:00 Global Changes Studies Using the Global Land Surface Satellite (GLASS) Products
Shunlin Liang (*University of Maryland*);

00:00 Estimation of Annual Daily Averaged Evapotranspiration across China during 1996–2015 Using Passive Microwave Observations
Xiao-Jing Han (*Ministry of Agriculture/Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences*); *Si-Bo Duan* (*Ministry of Agriculture/Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences*); *Pei Leng* (*Ministry of Agriculture/Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences*); *Zhao-Liang Li* (*Ministry of Agriculture/Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences*);

00:00 Estimation of Atmospheric Water Vapor Content from CE-318 Sun-photometer Measurements in Nanning of South China
Cheng Li (*Guangxi Teachers Education University*); *Qiuyan Huang* (*Guangxi Teachers Education University*); *Zhihao Qin* (*Institute of Agro-Resources and Regional Planning, Chinese Academy of Agricultural Sciences*); *Zhaoliang Li* (*Institute of Natural Resources and Regional Planning, Chinese Academy of Agricultural Sciences*);

00:00 Daily Mapping of Global Surface Water by Long-term Modis Time Series
Peng Gong (*Tsinghua University*); *Luyan Ji* (*Tsinghua University*);

00:00 Convolutional Neural Network for Multi-source Deep Learning Land Use Mapping in the Three Gorges Reservoir Area
Xin Zhang (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Liang Zhu* (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Fuyou Tian* (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Zonghan Ma* (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Bingfang Wu* (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*);

00:00 Single-frequency Dielectric Model of Frozen Mineral Soils for Frequencies of the Basic Satellites
Valery L. Mironov (*Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences*); *Sergey Viktorovich Fomin* (*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. Karavaysky* (*Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences*); *I. P. Molostov* (*Altai State University*);

00:00 A General Dielectric Model for Organic Soils at a Frequency of 1.4 GHz
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*); *Igor V. Savin* (*Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences*); *Sergey Viktorovich Fomin* (*Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences*);

00:00 High Resolution Near-surface Freeze/Thaw State Estimation over China by Integration Use of Microwave and Thermal Infrared Remote Sensing Data
Tianjie Zhao (*Jointly Sponsored by Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Tongxi Hu* (*The Ohio State University*); *Jian-Cheng Shi* (*Institute of Remote Sensing Applications, Chinese Academy of Sciences*); *Tianxing Wang* (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Dabin Ji* (*Jointly Sponsored by Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Rui Li* (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Pingkai Wang* (*Jointly Sponsored by Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*);

00:00 Comparison of Mass Change Estimation of the Mountain Glaciers from the C and L Band SAR Data
Zhen Li (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Jianmin Zhou* (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Ping Zhang* (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*);

00:00 On the Use of Satellite Remote Sensing for Detecting Surface Effects Due to Subsurface Processes
Salvatore Stramondo (*Istituto Nazionale di Geofisica e Vulcanologia*); *M. Albano* (*Istituto Nazionale di Geofisica e Vulcanologia*); *C. Bignami* (*Istituto Nazionale di Geofisica e Vulcanologia*); *A. Montuori* (*Istituto Nazionale di Geofisica e Vulcanologia*); *M. Moro* (*Istituto Nazionale di Geofisica e Vulcanologia*); *A. Piscini* (*Istituto Nazionale di Geofisica e Vulcanologia*); *M. Polcari* (*Istituto Nazionale di Geofisica e Vulcanologia*); *V. Romaniello* (*Istituto Nazionale di Geofisica e Vulcanologia*); *M. Saroli* (*Universita degli Studi di Cassino e del L. M.*); *E. Trasatti* (*Istituto Nazionale di Geofisica e Vulcanologia*);

00:00 Landslide Mapping in the Kaikoura Earthquake Using Multisource Remote Sensing Data
Liwei Li (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Xianfeng Zhou* (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Linyi Liu* (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Yunxia Wen* (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Liping Lei* (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Wenjiang Huang* (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Bing Zhang* (*Institute of Remote Sensing and Digital Earth, CAS*);

Session 2P7
Method of Integral Equations in Computational Electromagnetics

Tuesday PM, May 23, 2017

Room B1

Organized by Vladimir Okhmatovski, Weng Cho Chew

Chaired by Vladimir Okhmatovski, Weng Cho Chew

00:00 Spectral Effects of Layered Media on the Mode Analysis of Photonic Waveguides
Aytac Alparslan (*ETH Zurich*);

00:00 A Direct Multi-scale Integral Formulation of Computational Electromagnetics
Derek Y. C. Chan (*University of Melbourne*); *Evert Klaseboer* (*Institute of High Performance Computing*); *Qiang Sun* (*University of Melbourne*);

00:00 Second Harmonic Generation in Plasmonic and Dielectric Nanostructures with Vortex Beams
Xiaoyan Y. Z. Xiong (*University of Hong Kong*); *Ahmed Al-Jarro* (*University College London*); *Li Jun Jiang* (*University of Hong Kong*); *Nicolae-Coriolan Panoiu* (*University College London*); *Wei E. I. Sha* (*University of Hong Kong*);

00:00 Electromagnetic Propagation Characteristics in K-layered Dissipative Media with Rough Surface
Yidong Xu (*Harbin Engineering University*); *Lili Guo* (*Harbin Engineering University*); *Wei Xue* (*Harbin Engineering University*); *Yingsong Li* (*Harbin Engineering University*);

00:00 Electromagnetic Wave Diffraction by a System of Arbitrarily Located 1D, 2D, and 3D Scatterers
M. A. Moskaleva (*Penza State University*); *Yury G. Smirnov* (*Penza State University*); *Aleksei A. Tsupak* (*Penza State University*);

00:00 Integral Equation Based Field Transformation with Effective Echo Suppression in the Near-field by Virtual Beam Forming and Field Synthesis
Josef Knapp (*Technical University of Munich*); *Thomas F. Eibert* (*Technical University of Munich*);

00:00 Numerical Solving of Three-dimensional Scalar Diffraction Problems and Application the Mosaic-skeleton Method
Aleksey A. Kashirin (*Far Eastern Branch of the Russian Academy of Sciences*); *Sergey I. Smagin* (*Far Eastern Branch of the Russian Academy of Sciences*); *Maria Y. Timofeenko* (*Far Eastern Branch of the Russian Academy of Sciences*);

00:00 Scaling of a Spatial Spectral Integral-equation Method for EM Scattering in a Stratified Medium to Large, Finite Objects
Roeland J. Dilz (*Eindhoven University of Technology*); *Martijn C. van Beurden* (*Eindhoven University of Technology*);

00:00 An Efficient Numerical Model for Analysis of Microstrip Antenna
Lu Liu (*University of Electronic Science and Technology of China*); *Zai-Ping Nie* (*University of Electronic Science and Technology of China*);

00:00 New Single Source Integral Equations for Solution of Scattering Problems
Vladimir Okhmatovski (*University of Manitoba*); *F. S. L. Hosseini* (*University of Manitoba*); *S. Zheng* (*University of Manitoba*); *Anton Menshov* (*University of Manitoba*); *S. Hossen* (*University of Manitoba*);

00:00 Analysis and Triggering of Dark Modes in Plasmonic Nanostructures with Surface Integral Equations and Theory of Characteristic Modes
Pasi Yla-Oijala (*Aalto University*); *Dimitrios C. Tzarouchis* (*Aalto University*); *Ari Sihvola* (*Aalto University*);

00:00 Discrete Quasi-Helmholtz Decomposition for High Contrast and Lossy Dielectric Problems
Xin Qi (*University of Electronic Science and Technology of China*); *Zai-Ping Nie* (*University of Electronic Science and Technology of China*); *Yue Wang* (*University of Electronic Science and Technology of China*); *Xiaofeng Que* (*University of Electronic Science and Technology of China*); *Jun Hu* (*University of Electronic Science and Technology of China*);

00:00 Accuracy of the Surface Integral-equation Formulations for Large Negative Permittivity Values
Bariscan Karaosmanoglu (*Middle East Technical University*); *Ozgur Ergul* (*Middle East Technical University*);

00:00 Green's Function for Inhomogeneous Waveguides Using the Method of Broadband Green's Functions
Tien-Hao Liao (*California Institute of Technology*); *Kung-Hau Ding* (*Air Force Research Laboratory, Wright-Patterson AFB*); *Leung Tsang* (*University of Michigan*);

00:00 Hybrid DBA-BCGS-FFT Algorithm for Arbitrary 3D Fracture Detection and Mapping in Through-casing Measurements
Yuan Fang (*Duke University*); *Yunyun Hu* (*Duke University*); *Qing Huo Liu* (*Duke University*);

Session 2P8
Advanced Photonic Technologies for Energy Harvesting

Tuesday PM, May 23, 2017

Room B5

Organized by Feng Yan, Zhiyong Fan

00:00 Interface and Tandem Design for Polymer and Perovskite Solar Cells
Hin-Lap Yip (*South China University of Technology*);

00:00 Transition Metal Phosphides for Harvesting Light Energy
Invited
Jingqi Tian (*Nanyang Technological University*); *Peng Chen* (*Nanyang Technological University*);

00:00 Thermal Stable Hole-conductor Free Perovskite Solar Cells with Carbon Counter Electrode
Invited
Xing-Zhong Zhao (*Wuhan University*);

00:00 High Performance Planner Perovskite Solar Cells with Oxide Electron Transport Layer
Weihai Zhang (*Hubei University*); *Xiong Juan* (*Hubei University*); *Jinhua Li* (*Hubei University*);

00:00 Self-assembly of Crystalline, Large-area and Regular TiO_2 Nanotube Arrays on Different Substrates
Invited
Xiaoguang Liang (*City University of Hong Kong*); *Dapan Li* (*City University of Hong Kong*); *Sen Po Yip* (*City University of Hong Kong*); *Johnny Chung Ho* (*City University of Hong Kong*);

00:00 Efficient Semitransparent Perovskite Solar Cells with Graphene Electrodes
Peng You (*The Hong Kong Polytechnic University*); *Zhike Liu* (*The Hong Kong Polytechnic University*); *Qidong Tai* (*The Hong Kong Polytechnic University*); *Shenghua Liu* (*The Hong Kong Polytechnic University*); *Feng Yan* (*The Hong Kong Polytechnic University*);

00:00 Perovskite Nanowire Arrays with Improved Stability and Optoelectronic Devices
Zhiyong Fan (*The Hong Kong University of Science and Technology*); *Aashir Waleed* (*The Hong Kong University of Science and Technology*); *Leilei Gu* (*The Hong Kong University of Science and Technology*); *Mohammad Mahdi Tavakoli* (*The Hong Kong University of Science and Technology*); *Daquan Zhang* (*The Hong Kong University of Science and Technology*); *Qianpeng Zhang* (*The Hong Kong University of Science and Technology*);

00:00 Plasmonic Black Absorbers for Photocurrent Enhancement under Visible Light
Invited
Furui Tan (*Hong Kong Polytechnic University*); *Ning Wang* (*Hong Kong Polytechnic University*); *Yang Liu* (*Hong Kong Polytechnic University*); *Xuming Zhang* (*Hong Kong Polytechnic University*);

00:00 Photocatalytic Activity Enhancement of WS2 Film by Laser Treatment
Sainan Ma (*The Hong Kong Polytechnic University*); *Longhui Zeng* (*The Hong Kong Polytechnic University*); *Lili Tao* (*The Hong Kong Polytechnic University*); *Chun Yin Tang* (*The Hong Kong Polytechnic University*); *Hui Long* (*The Hong Kong Polytechnic University*); *Ping Kwong Cheng* (*The Hong Kong Polytechnic University*); *Yang Chai* (*The Hong Kong Polytechnic University*); *Xuming Zhang* (*The Hong Kong Polytechnic University*); *Yuen Hong Tsang* (*The Hong Kong Polytechnic University*);

00:00 Optical Buffer in Waveguide Lattices Using Discrete Harmonic Oscillation Effect
Invited
Tenghao Li (*The Hong Kong Polytechnic University*); *Xuming Zhang* (*Hong Kong Polytechnic University*);

00:00 Design and Performance Analysis of Cockroft-Walton Voltage Multiplier (CWVM) Energy Harvesting for Low Power Applications
Nitika Rani (*Punjabi University*); *Jasleen Kaur* (*Punjabi University*); *Hemant Bhatia* (*Punjabi University*); *Simarjit Singh Saini* (*Punjabi University*); *Ranjit Kaur* (*Punjabi University*); *Ekambir Sidhu* (*Punjabi University*);

00:00 $CH_3NH_3PbI_3$ Perovskite Bulk Single Crystal: Growth and Photodetectors
Zhipeng Lian (*Tsinghua University*); *Jie Ding* (*Tsinghua University*); *Huajing Fang* (*The Hong Kong Polytechnic University*); *Qianrui Lv* (*Tsinghua University*); *Qingfeng Yan* (*Tsinghua University*);

00:00 Van der Waals Multilayers for Photovoltaic Applications
Dawei He (*Beijing Jiaotong University*); *Yongsheng Wang* (*Beijing Jiaotong University*); *Hui Zhao* (*University of Kansas*);

00:00 Low-voltage Resistive Switching of Organic-inorganic Hybrid Perovskite Film
Lutao Li (*Southwest University*); *Ting Zhang* (*Southwest University*); *Minglong Wei* (*Southwest University*); *Xiangshen Meng* (*Southwest University*); *Xiaoyan Qiu* (*Southwest University*);

Session 2P9
Novel Frequency Selective Structures and Antennas

Tuesday PM, May 23, 2017

Room B3

Organized by Zhongxiang Shen

Chaired by Zhongxiang Shen

00:00 FE Design of a 3D Periodic Structure to measure the Temperature of the Objects in Microwave Cavity
Ali Bostani (*American University of the Middle East*);

00:00 RCS Enhancement of Cylindrical Objects Based on Metasurfaces
Yuping Shang (*Nanyang Technological University*); *Zhongxiang Shen* (*Nanyang Technological University*);

00:00 Power Combining in THz Band by Quasi Optical Technique
L. H. Huang (*Southeast University*); *Wen-Bin Dou* (*Southeast University*);

00:00 A Novel Tunable Dual-band Bandstop Filter (DBBSF) Using Spurlines with a Stepped Impedance Resonator
Hamad G. Alrwuili (*University of Colorado Colorado Springs*); *Thottam S. Kalkur* (*University of Colorado Colorado Springs*);

00:00 Finite Element Simulation of Switchable and Tunable Resonators with BST
Daw Asderah (*University of Colorado Colorado Springs*); *Thottam S. Kalkur* (*University of Colorado Colorado Springs*);

00:00 Far-infrared Single-band and Dual-band Absorbers Based on Metal-insulator-metal Microcavities with Arrays of Joint Cross Holes
Pei-Kang Chung (*National Chiao Tung University*); *Shun-Tung Yen* (*National Chiao Tung University*);

00:00 Stop-band Frequency-selective Structures for Controlling Back-scattering Pattern of L-band Linear Antenna Arrays
A. Yu. Grinev (*Moscow Aviation Institute*); *Alexander P. Volkov* (*Moscow Aviation Institute, JSC Corporation "Vega"*); *I. I. Krasnolobov* (*Institute for Theoretical and Applied Electromagnetics of The Russian Academy of Sciences*); *K. M. Baskov* (*Institute for Theoretical and Applied Electromagnetics of The Russian Academy of Sciences*); *V. V. Kakshin* (*JSC Corporation "Vega"*);

00:00 Coupled EM Modes Helps to Promote the Electrically Small Antennas
Peiwei Chen (*Hangzhou Dianzi University*); *Liang Peng* (*Hangzhou Dianzi University*); *Gaofeng Wang* (*Hangzhou Dianzi University*);

00:00 An Offset-fed Cavity Backed Reflectarray for X-band Applications
Tayyab Shabbir (*University of Engineering and Technology*); *Rashid Saleem* (*The University of Manchester*); *Muhammad Bilal* (*University of Engineering and Technology*); *Asim Quddus* (*University of Engineering and Technology*); *Arif Khan* (*Charles Sturt University*);

00:00 Power Characteristics of Varactor-controlled Tunable Bandpass Filters on Lumped Elements
Alexandra Baskakova (*St. Petersburg Electrotechnical University "LETI"*); *Viacheslav Turgaliev* (*St. Petersburg Electrotechnical University "LETI"*); *Dmitry V. Kholodnyak* (*St. Petersburg Electrotechnical University "LETI"*);

00:00 Adaptive Impedance-matching Network for Wireless Power Transfer System with Off-center Receiver
Vladimir N. Yashchenko (*St. Petersburg Electrotechnical University "LETI"*); *Viacheslav M. Turgaliev* (*St. Petersburg Electrotechnical University "LETI"*); *Dmitry S. Kozlov* (*St. Petersburg Electrotechnical University "LETI"*); *Irina Vendik* (*Saint Petersburg Electrotechnical University*); *Alexandr Katsay* (*High-Tech Ltd.*);

00:00 Dual-band Dual-polarized Hybrid Cylindrical Dielectric Resonator Antenna for Wireless Applications
Anand Sharma (*Indian School of Mines*); *Gourab Das* (*Indian School of Mines*); *Ravi Kumar Gangwar* (*Indian School of Mines*);

00:00 Experimental Investigation on Probe Feed Equilateral Triangular Dielectric Resonator Antenna for 5.8 GHz ISM Band (IEEE 802.11) Applications
Pinku Ranjan (*Indian Institute of Technology (Indian School of Mines)*); *Anand Sharma* (*Indian School of Mines*); *Ravi Kumar Gangwar* (*Indian School of Mines*);

00:00 Enhancing Diamond Fluorescence via Optimized Single and Dimer Nanorod Configurations
Andras Szenes (*University of Szeged*); *Balazs Banhelyi* (*University of Szeged*); *Tibor Csendes* (*University of Szeged*); *Maria Csete* (*University of Szeged*);

Session 2P_10
MS-1: Mini-symposium on Nanophotonics and Metamaterials 1

Tuesday PM, May 23, 2017

Room R11

Organized by Pavel A. Belov, Andrey A. Bogdanov

Chaired by Andrey A. Bogdanov

00:00 Controlled Spatio-temporal Dynamics of Strong Coupling in Plasmonic Nanocavities
Ortwin Hess (*Imperial College London*);

00:00 Tunable Extraordinary Transmission of Graphene Supported Asymmetrical Hole Arrays
Xiao-Yong He (*Shanghai Normal University*);

00:00 Effect of Selective Doping on Characteristics of Graphene-van der Waals Heterostructure Terahertz and Infrared Detectors
Victor Ryzhii (*Tohoku University*); *Taiichi Otsuji* (*Tohoku University*); *Maxim Ryzhii* (*The University of Aizu*); *Vladimir G. Leiman* (*Moscow Institute of Physics and Technology (State University)*); *Dmitry Svintsov* (*Moscow Institute of Physics and Technology*); *Vladimir Mitin* (*University at Buffalo, The State University of New York*); *Michael S. Shur* (*Rensselaer Polytechnic Institute*);

00:00 New Approaches to Electrically Driven Nanoantennas
Invited
Alexander V. Uskov (*Lebedev Physical Institute*); *Jacob B. Khurgin* (*Johns Hopkins University*); *Igor V. Smetanin* (*Lebedev Physical Institute*); *Igor E. Protsenko* (*Lebedev Physical Institute*); *Ivan S. Mukhin* (*National Research University for Information Technology, Mechanics and Optics*); *A. O. Goludok* (*ITMO University*); *M. Buret* (*Universite Bourgogne Franche-Comte*); *Alexandre Bouhelier* (*Universite Bourgogne Franche-Comte*);

00:00 Tamm Plasmon/Surface Plasmon Mode Beating for Spatially Controlled Plasmon Generation
Clementine Symonds (*Universite de Lyon*); *Stefano Azzini* (*Universite de Lyon, Universite Claude Bernard Lyon 1, CNRS, Institut Lumiere Matiere*); *Guillaume Lheureux* (*Universite de Lyon, Universite Claude Bernard Lyon 1, CNRS, Institut Lumiere Matiere*); *Pascale Senellart* (*LPN/CNRS*); *Aristide Lemaitre* (*LPN/CNRS*); *Jean-Jacques Greffet* (*Ecole Centrale Paris*); *Christophe Sauvan* (*Universite Paris-Sud 11*); *Cedric Blanchard* (*Universite Paris-Sud*); *Joel Bellessa* (*Universite de Lyon*);

00:00 Thin Metasurfaces for Magnetic Resonance Imaging Incorporating High Permittivity Materials
Andrew Webb (*Leiden University Medical Center*); *Rita Schmidt* (*Leiden University Medical Center*); *Alexey Slobozhanyuk* (*ITMO University*); *Pavel A. Belov* (*ITMO University*);

00:00 In Vivo Magnetic Resonance Imaging of Human Knee with Metasurface
Alena Shchelokova (*ITMO University*); *Alexey Slobozhanyuk* (*ITMO University*); *Shimul Chandra Saha* (*MediWise — Medical Wireless Sensing Ltd*); *Ioannis Sotiriou* (*MediWise — Medical Wireless Sensing Ltd*); *Maria Koutsoupidou* (*MediWise — Medical Wireless Sensing Ltd*); *George Palikaras* (*MediWise — Medical Wireless Sensing Ltd*); *Efthymios Kallos* (*MediWise — Medical Wireless Sensing Ltd*); *Pavel A. Belov* (*ITMO University*); *Andrew Webb* (*Leiden University Medical Center*);

00:00 Tunable Hybrid Metasurfaces for Magnetic Resonance Imaging
Alena Shchelokova (*ITMO University*); *Alexey Slobozhanyuk* (*ITMO University*); *Stanislav Glybovski* (*ITMO University*); *Irina Melchakova* (*ITMO University*); *Andrew Webb* (*Leiden University Medical Center*); *Yuri S. Kivshar* (*Australian National University*); *Pavel A. Belov* (*ITMO University*);

00:00 Mie Bands in All-dielectric High-index Metamaterials
M. F. Limonov (*ITMO University*); *A. V. Nikulin* (*ITMO University*); *S. V. Li* (*ITMO University*); *K. B. Samusev* (*ITMO University*); *Yuri S. Kivshar* (*Australian National University*); *Mikhail V. Rybin* (*National Research University for Information Technology, Mechanics and Optics*);

00:00 Invisibility Cloaking of a High-index Dielectric Cylinder via Fano Resonances
Mikhail V. Rybin (*National Research University for Information Technology, Mechanics and Optics*); *Dmitry S. Filonov* (*National Research University of Information Technologies, Mechanics and Optics (ITMO)*); *K. B. Samusev* (*Loffe Physics-Technical Institute of the Russian Academy of Science*);

00:00 Laser Direct Writing of Electronic and Electro-optical Devices
Ioanna Zergioti (*National Technical University of Athens*);

00:00 Optimizing the Drude-Lorentz Model for Material Permittivity: Examples for Semiconductors
Hame Singh Sehmi (*Cardiff University*); *Wolfgang W. Langbein* (*Cardiff University*); *Egor A. Muljarov* (*Cardiff University*);

00:00 Surface-enhanced Second Harmonic Generation and Fluorescence Using Effectively Lossless GaP Nanoantennas in the Visible Regime
Gustavo Grinblat (*Imperial College London*); *J. Cambiasso* (*Imperial College London*); *Y. Li* (*Imperial College London*); *A. Rakovich* (*Imperial College London*); *E. Cortes* (*Imperial College London*); *Stefan Alexander Maier* (*Imperial College London*);

00:00 Atomic-force Lithography for Photonic Applications
Alexey O. Kucherik (*Stoletovs' Vladimir State University*); *Stella V. Kutrovskaya* (*Stoletovs' Vladimir State University*); *Igor O. Skryabin* (*Stoletovs' Vladimir State University*); *Anastasia Yu. Shagurina* (*Stoletovs' Vladimir State University*); *Anton V. Osipov* (*Stoletovs' Vladimir State University*); *I. Chesnov* (*A.G. and N.G. Stoletov Vladimir State University (VSU)*);

Session 2P_11a
FocusSession.SC3: Nanolasers: Physics, Technology, Applications 2

Tuesday PM, May 23, 2017

Room R10

Organized by Eli Kapon

Chaired by Eli Kapon

00:00 Exploration of Pulse Generation at the Meso- and Nanolaser Threshold
T. Wang (*INRS-EMT*); *H. Vergnet* (*Ecole Normale Superieure de Lyon*); *Gian Luca Lippi* (*Universite Cote Azur*);

00:00 Organic Microlasers with Tunable Output
Yongli Yan (*Institute of Chemistry, Chinese Academy of Sciences*); *Yong Sheng Zhao* (*Institute of Chemistry, Chinese Academy of Sciences*);

00:00 Lasing in Dark and Bright Modes of a Finite-sized Plasmonic Lattice at Visible Wavelengths
Tommi K. Hakala (*Aalto University*); *H. T. Rekola* (*Aalto University*); *Aaro I. Vakevainen* (*Aalto University*); *J.-P. Martikainen* (*Aalto University*); *Marek Necada* (*Aalto University*); *A. J. Moilanen* (*Aalto University*); *Paivi Torma* (*Aalto University*);

00:00 Hybrid Polariton Bands in Organic-dye-doped Nanostructures
Ru-Wen Peng (*Nanjing University*); *Kun Zhang* (*Nanjing University*); *Wen-Bo Shi* (*Nanjing University*); *Yue Xu* (*Nanjing University*); *Ren-Hao Fan* (*Nanjing University*); *Mu Wang* (*Nanjing University*);

00:00 2D Materials Based Nanolasers
Invited
Yongzhuo Li (*Tsinghua University*); *Jianxing Zhang* (*Tsinghua University*); *Dandan Huang* (*Tsinghua University*); *Hao Sun* (*Tsinghua University*); *Fan Fan* (*Tsinghua University*); *Jiabin Feng* (*Tsinghua University*); *Zhen Wang* (*Tsinghua University*); *Cun-Zheng Ning* (*Arizona State University*);

00:00 Photon Statistics and Non-equilibrium Dynamics in
Invited Photonic Crystal Coupled Nanolasers
M. Marconi (*Universite Paris-Sud*); *J. Javaloyes* (*Universitat de les Illes Baleares*); *F. Raineri* (*Universite Paris-Sud*); *Ariel Levenson* (*Laboratoire de Photonique et de Nanostructures (CNRS UPR20)*); *A. M. Yacomotti* (*Laboratoire de Photonique et de Nanostructures (CNRS UPR20)*);

00:00 Spontaneous Emission and Lasing Dynamics
Invited of Buried-heterostructure and Sub-$\boldsymbol{\lambda}$ Nanowire Nanolasers in Photonic Crystal Platform
Masaya Notomi (*NTT Corporation*);

00:00 Nanoscale Light Emitters and Their Dynamics for Chip-scale Integration
Yeshaiahu Shaya Fainman (*University of California at San Diego*);

Session 2P_11b
Microwave Filters and Resonators 1

Tuesday PM, May 23, 2017

Room R10

00:00 Dual UWB Bandstop Filter Based on T-shaped Resonator and L-shaped Defected Microstrip Structure
Xuemei Zheng (*Harbin Engineering University*); *Xiaowei Zhang* (*Harbin Engineering University*); *Lingfei Guo* (*Harbin Engineering University*); *Tao Jiang* (*Harbin Engineering University*);

00:00 Dual-mode Bandpass Filter with Tunable Transmission Zeros Based on Liquid Crystal Technology
Zhihui Cao (*Chinese Academy of Sciences, University of Science and Technology of China*); *Chang Chen* (*Chinese Academy of Sciences, University of Science and Technology of China*); *Mingkang Li* (*Chinese Academy of Sciences, University of Science and Technology of China*); *Zhiping Yin* (*Hefei University of Technology*); *Lingyun Zhou* (*Chinese Academy of Sciences, University of Science and Technology of China*); *Weidong Chen* (*University of Science and Technology of China*);

00:00 Lossy Acoustic Filter Synthesis by Gradient-based Optimization Technique
Iuliia Evdokimova (*Universitat Autonoma de Barcelona*); *Jordi Verdu* (*Universitat Autonoma de Barcelona*); *Pedro de Paco* (*Universitat Autonoma de Barcelona*);

00:00 Switchable and Tunable Band Stop Filter
Abdulhamid Matoug (*University of Colorado Colorado Springs*); *Thottam S. Kalkur* (*University of Colorado Colorado Springs*);

00:00 Design of SHF 3-bit Reconfigurable Band Rejection Filter
Yusuke Imai (*The University of Electro-Communications*); *Yuki Kada* (*The University of Electro-Communications*); *Yasushi Yamao* (*The University of Electro-Communications*);

00:00 A Narrowband Absorptive Band-stop Filter Based on a Resistor-loaded Compact Resonator
Gang Liu (*Southeast University*); *Jinping Xu* (*Southeast University*); *Zhiqiang Liu* (*Southeast University*);

Session 2P_12a
Integrated and Fiber-based Photonic Circuits and Devices 2

Tuesday PM, May 23, 2017

Room R9

Organized by Alexander S. Sigov

Chaired by Alexander S. Sigov

00:00 Electrically Driven Magnetic Domain Wall as a Magneto-optical Nanodevice for Radiophotonics
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*); *A. V. Nikolaev* (*Lomonosov Moscow State University*); *Alexander Pavlovich Pyatakov* (*Lomonosov Moscow State University*); *V. I. Belotelov* (*Lomonosov Moscow State University*);

00:00 Design of Millimeter-wave Band Electro-optical Modulators Using Off-the-shelf Microwave Electronic CAD Tool NI AWRDE
Mikhail E. Belkin (*Moscow State Technical University of Radio-Engineering, Electronics and Automation*); *V. Golovin* (*Sevastopol State University (SevSU)*); *Y. Tyschuk* (*Sevastopol State University (SevSU)*); *Alexander S. Sigov* (*Moscow Technological University (MIREA)*);

00:00 Asymmetric Waveguide Design of Laser Diodes for Pico- and Nanosecond Pulse Generation in the Eye Safe Spectral Range: Linear and Nonlinear Electromagnetic Effects
Eugene A. Avrutin (*University of York*); *Boris S. Ryvkin* (*University of Oulu*); *Juha T. Kostamovaara* (*University of Oulu*);

00:00 Analysis of Fast Electro-optical Modulation of Vertically Integrated Coupled-cavity VCSELs
Naser F. Albugami (*University of York*); *Eugene A. Avrutin* (*University of York*);

00:00 Characterization of the Au/Ti/n-InAlAs Schottky Barrier Used in Microwave Photodiodes
K. S. Zhuravlev (*Rzhanov Institute of Semiconductor Physics, Siberian Branch, Russian Academy of Science*); *Maxim Sergeevich Aksenov* (*A. V. Rzhanov Institute of Semiconductor Physics, SB RAS*); *I. B. Chistokhin* (*A. V. Rzhanov Institute of Semiconductor Physics, SB RAS*); *N. A. Valisheva* (*A. V. Rzhanov Institute of Semiconductor Physics, SB RAS*); *Dmitriy Vladimirovich Dmitriev* (*Rzhanov Institute of Semiconductor Physics, Siberian Branch, Russian Academy of Science*);

00:00 Optical RF Self-interference Cancellation for Full-duplex Communication Using an Integrated DP-MZM
Xiuyou Han (*Dalian University of Technology*); *Bofan Huo* (*Dalian University of Technology*); *Yuchen Shao* (*Dalian University of Technology*); *Mingshan Zhao* (*Dalian University of Technology*);

00:00 Efficient on Chip Single Photon Sources Using Slow Light and Site Controlled QDs
Bruno Rigal (*Ecole Polytechnique Federale de Lausanne*); *T. Produit* (*Ecole Polytechnique Federale de Lausanne*); *C. Jarlov* (*Ecole Polytechnique Federale de Lausanne*); *Benjamin Dwir* (*Ecole Polytechnique Federale de Lausanne (EPFL)*); *Alok Rudra* (*Ecole Polytechnique Federale de Lausanne (EPFL)*); *A. Delgoffe* (*Ecole Polytechnique Federale de Lausanne*); *Alexey Lyasota* (*Ecole Polytechnique Federale de Lausanne*); *Eli Kapon* (*Ecole Polytechnique Federale de Lausanne (EPFL)*);

00:00 Long Optical Path on Chip with Photonic Crystal Based 2D Integrating Cell
Alexander Yu. Petrov (*Hamburg University of Technology*); *Lena Simone Fohrmann* (*Hamburg University of Technology*); *Gerrit Sommer* (*Hamburg University of Technology*); *Giampaolo Pitruzzello* (*University of York*); *Thomas F. Krauss* (*University of York*); *Manfred Eich* (*Hamburg University of Technology*);

Session 2P_12b
SC3: Optical Fiber Sensors

Tuesday PM, May 23, 2017

Room R9

Organized by Xuewen Shu

00:00 Brillouin Fiber Lasers Used in Optical Fiber Sensing
Invited
Junqiang Sun (*Huazhong University of Science and Technology*);

00:00 The Design and Performance of a Fully Distributed
Invited Optical Fiber Acoustic Field Sensor
Xuping Zhang (*Nanjing University*); *Feng Wang* (*Nanjing University*); *Yixin Zhang* (*Nanjing University*); *Yanzhu Hu* (*Beijing University of Posts and Telecommunications*);

00:00 Wavelength Dependence of Gamma-ray Radiation Sensitivity of Co/Fe Co-doped Alumino-silicate Glass Optical Fiber for Dosimeter Application
Seongmin Ju (*Gwangju Institute of Science and Technology*); *Ju Hyun Lee* (*EXATTO Co. Ltd.*); *Seung Ho Lee* (*Gwangju Institute of Science and Technology*); *Yuseung Lee* (*Gwangju Institute of Science and Technology*); *Jihoon Kim* (*Gwangju Institute of Science and Technology*); *Yong-Tak Ryu* (*Gwangju Institute of Science and Technology*); *Won-Taek Han* (*Gwangju Institute of Science and Technology*);

00:00 Surface Plasmon Resonance Based Refractometery Using Whispering Gallery Modes in Bent Metallized Single-mode Optical Fibers
Anton V. Dyshlyuk (*Far Eastern Federal University*); *Evgeniy V. Mitsai* (*Institute of Automation and Control Processes FEB RAS*); *Oleg B. Vitrik* (*Far Eastern Federal University*);

00:00 A Distributed Fiber-optic Vibration Sensor for Power-frequency Electric-field Sensing
Lutang Wang (*Shanghai University*); *Nian Fang* (*Shanghai University*);

00:00 Distributed Optical Fiber Sensing System Based on Active Interference in a Semiconductor Optical Amplifier
Nian Fang (*Shanghai University*); *Sujie Guo* (*Shanghai University*); *Lutang Wang* (*Shanghai University*); *Zhaoming Huang* (*Shanghai University*);

00:00 Phase-sensitive Optical Time-domain Reflectometry with Pulse Mode EDFA: Probe Pulse Preparation
Anton O. Chernutsky (*Bauman Moscow State Technical University*); *A. A. Zhirnov* (*Bauman Moscow State Technical University*); *A. K. Fedorov* (*Bauman Moscow State Technical University*); *E. T. Nesterov* (*Bauman Moscow State Technical University*); *K. V. Stepanov* (*Bauman Moscow State Technical University*); *Ya. A. Tezadov* (*Scientific and Technological Enterprise IRE-Polyus*); *E. V. Kondrashin* (*Scientific and Technological Enterprise IRE-Polyus*); *V. E. Karasik* (*Bauman Moscow State Technical University*); *A. B. Pnev* (*Bauman Moscow State Technical University*);

Session 2P_13
SC3: Ultrafast Nonlinear Optics

Tuesday PM, May 23, 2017

Room R8

Organized by Michelle Y. Sander, Zhiwen Liu

Chaired by Michelle Y. Sander

00:00 New Developments in Passively Mode-locked Fibre
Invited Lasers
Neil G. R. Borderick (*The University of Auckland*); *John D. Harvey* (*The University of Auckland*); *Julie Kho* (*The University of Auckland*); *Richard Provo* (*Auckland Univeristy/Southern Photonics Ltd.*); *Patrick G. Bowen* (*The University of Auckland*);

00:00 Hybrid Mode-locked Erbium-doped All-fiber Ring Laser with High-density Well-aligned Single-walled Carbon Nanotubes
Dmitriy A. Dvoretskiy (*Bauman Moscow State Technical University*); *Stanislav Grigorievich Sazonkin* (*Bauman Moscow State Technical University*); *I. O. Orekhov* (*Bauman Moscow State Technical University*); *I. S. Kudelin* (*Bauman Moscow State Technical University*); *A. B. Pnev* (*Bauman Moscow State Technical University*); *V. E. Karasik* (*Bauman Moscow State Technical University*); *L. K. Denisov* (*Bauman Moscow State Technical University*); *S. G. Lyapin* (*Institute for High Pressure Physics of the Russian Academy of Sciences*); *V. A. Davydov* (*Institute for High Pressure Physics of the Russian Academy of Sciences*);

00:00 Theoretical Aspects of a Pulse Repetition Rate Stabilization in the Er-doped All-fiber Hybridly Mode-locked Similariton-like Ring Laser
S. O. Leonov (*Bauman Moscow State Technical University*); *V. A. Lazarev* (*Bauman Moscow State Technical University*); *Vasilii S. Voropaev* (*Bauman Moscow State Technical University*); *M. K. Tarabrin* (*Bauman Moscow State Technical University*); *Valeriy E. Karasik* (*Bauman Moscow State Technical University*); *A. A. Krylov* (*Fiber Optics Research Center of the Russian Academy of Sciences*);

00:00 Invited Generation of Highly-chirped Dissipative Solitons in Er-doped All-fiber Oscillator
Innokentiy S. Zhdanov (*Novosibirsk State University*); *Denis S. Kharenko* (*Institute of Automation and Electrometry, SB, RAS*); *E. V. Podivilov* (*Institute of Automation and Electrometry, Siberian Branch, Russian Academy of Sciences*); *Sergey A. Babin* (*Institute of Automation and Electrometry SB RAS*); *A. A. Apolonski* (*Ludwig-Maximilians-Universitaet Muenchen and Max-Planck-Institut fuer Quantenoptik*); *A. E. Bednyakova* (*Novosibirsk State University*); *Mikhail P. Fedoruk* (*Novosibirsk State University*); *S. K. Turitsyn* (*Aston University*);

00:00 Invited Exploration of Unique Mode-locked States in Femtosecond Tm/Ho Co-doped Soliton Fiber Lasers
Michelle Y. Sander (*Boston University*);

00:00 Invited Fiber-loop Optical-microwave Phase Detector (FLOM-PD) and Its Applications in Ultrafast Science and Microwave Photonics
Jungwon Kim (*KAIST*);

00:00 Invited Superresolved and Spectroscopic Nonlinear Imaging Using Space-time Illumination Light Modulation
Randy A. Bartels (*Colorado State University*); *Keith Wernsing* (*University of Colorado at Boulder*); *Patrick Stockton* (*Colorado State University*); *Dave Smith* (*Colorado State University*); *Jeff Field* (*Colorado State University*); *Jeff A. Squier* (*Colorado School of Mines*);

00:00 Invited Ultrafast [Femtoseconds-Picoseconds] Nonlinear Optics with Extraordinarily Large Nonlinearities of Liquid Crystalline Photonic Crystals
Iam-Choon Khoo (*Pennsylvania State University*); *Chun-Wei Chen* (*Pennsylvania State University*); *Yizhu Chen* (*Pennsylvania State University*); *Zhiwen Liu* (*Pennsylvania State University*);

00:00 Invited Measuring the Electro-optic Kerr Effect in Air via the Carrier-envelope Phase
T. Feng (*Max-Born-Institut*); *N. Raabe* (*Max-Born-Institut*); *P. Rustige* (*Max-Born-Institut*); *Guenter Steinmeyer* (*Max-Born-Institut fur Nichtlineare Optik und Kurzzeitspektroskopie*);

00:00 Invited Nonlinear Chalcogenide Materials and Devices
Juliet T. Gopinath (*University of Colorado Boulder*);

00:00 Superresonant Parametric Generation in Nonlinear Photonic Crystals
Ottavia Jedrkiewicz (*CNR and CNISM UdR Com*); *Alessandra Gatti* (*CNR and CNISM UdR Com*); *Enrico Brambilla* (*Universita dell'Insubria*); *Gintaras Tamosauskas* (*Vilnius University*); *Paolo Di Trapani* (*University of Insubria and CNISM UdR Como*); *Katia Gallo* (*KTH — Royal Institute of Technology*);

00:00 Giant Red-shift of a Supercontinuum under Filamentation of near-IR Femtosecond Radiation in Pure and Neodymium Doped YAG Crystals
F. V. Potemkin (*M.V.Lomonosov Moscow State University*); *E. A. Migal* (*M.V.Lomonosov Moscow State University*); *Kirill Vyacheslavovich Lvov* (*M.V.Lomonosov Moscow State University*);

00:00 Elliptically-polarized High Harmonics Generation in Bichromatic Circular-polarized Laser Fields
Andrey A. Yakovlev (*M.V. Lomonosov Moscow State University*); *A. V. Andreev* (*M.V. Lomonosov Moscow State University*); *Sergey Yurievich Stremoukhov* (*M. V. Lomonosov Moscow State University*);

00:00 High Optical Harmonics in Noble Gases Atoms: The Fundamental Aspects of the Problem
Anatloli V. Andreev (*M. V. Lomonosov Moscow State University*); *Sergey Yurievich Stremoukhov* (*M. V. Lomonosov Moscow State University*); *Olga A. Shoutova* (*M. V. Lomonosov Moscow State University*);

00:00 Invited Strategies for High Efficiency, High Energy, Multicycle THz-wave Generation
Michael Hemmer (*Deutsches Elektronen Synchrotron*); *Giovanni Cirmi* (*Deutsches Elektronen-Synchrotron DESY*); *K. Ravi* (*Deutsches Elektronen Synchrotron*); *F. Reichert* (*University of Hamburg*); *F. Ahr* (*Deutsches Elektronen Synchrotron*); *Anne-Laure Calendron* (*DESY*); *Huseyin Cankaya* (*Deutsches Elektronen Synchrotron*); *Damian N. Schimpf* (*DESY*); *Luis E. Zapata* (*Deutsches Elektronen Synchrotron*); *Oliver D. Mucke* (*Deutsches Elektronen-Synchrotron DESY, Center for Free-Electron Laser Science (CFEL)*); *N. H. Matlis* (*Deutsches Elektronen Synchrotron*); *Franz X. Kartner* (*Deutsches Elektronen-Synchrotron DESY*);

00:00 Resonant Processes of Quantum Electrodynamics in a Pulsed Laser Field
Sergei P. Roshchupkin (*Peter the Great St. Petersburg Polytechnic University*); *Viktor V. Dubov* (*Peter the Great St. Petersburg Polytechnic University*);

00:00 Nonlinear Laser Lithography: From Basic Science to Applications
Invited
Onur Tokel (*Bilkent University*);

Session 2P0
Poster Session 4

Tuesday PM, May 23, 2017
14:00 PM - 19:00 PM
Room B2

00:00 Investigation of Interaction Femtosecond Laser on Chicken Skin
Pavel Yu. Rogov (*ITMO University*); *Victor G. Bespalov* (*ITMO University*); *Sergey E. Putilin* (*ITMO University*); *S. S. Nalegaev* (*ITMO University*);

00:00 Communication Technology for Industry 4.0
Petr Marcon (*Brno University of Technology*); *Frantisek Zezulka* (*Brno University of Technology*); *Ivo Vesely* (*Brno University of Technology*); *Zoltan Szabo* (*Brno University of Technology*); *Zdenek Roubal* (*Brno University of Technology*); *Ondrej Sajdl* (*Brno University of Technology*); *Eva Gescheidtova* (*Brno University of Technology*); *Premysl Dohnal* (*Brno University of Technology*);

00:00 Periodical Structures and Multiscale Modelling
Pavel Fiala (*Brno University of Technology*); *P. Werner* (*Brno University of Technology*); *Pavel Osmera* (*Brno University of Technology*); *Eva Gescheidtova* (*Brno University of Technology*); *Petr Drexler* (*Brno University of Technology*); *Tomas Kriz* (*Brno University of Technology*);

00:00 Electronic Transmission of Ethynyl-oestradiol in Menopausal Women
Ida Ferrara (*Clinical Biophysics International Research Group*); *Alberto Foletti* (*University of Applied Sciences of Southern Switzerland — SUPSI*);

00:00 Towards a Biophysical Management of Neck Pain and Disability
Alberto Foletti (*Clinical Biophysics International Research Group*); *Paolo Baron* (*Clinical Biophysics International Research Group*);

00:00 Electrical Impedance Tomography Methods and Algorithms Processed with a GPU
Jan Dusek (*Brno University of Technology*); *David Hladky* (*Brno University of Technology*); *Jan Mikulka* (*Brno University of Technology*);

00:00 Digital Signal Processing of the Doppler Blood Flow Meter Using the Methods of Nonlinear Dynamics
Mikhail A. Basarab (*Bauman Moscow State Technical University*); *Natalia Konnova* (*Bauman Moscow State Technical University*); *Dmitrii Basarab* (*St. Ioasaf's Belgorod Regional Hospital*); *Dmitrii D. Matsievskiy* (*Institute of General Pathology and Pathophysiology*);

00:00 Vital Signs Detection via Dopper Radar and CFAR in Complex Environment
Fengbo Yang (*National University of Defense Technology*); *Yi Su* (*National University Of Defense Technology*);

00:00 Combined Effect of Millimeter Waves and Cadmium Ions at the Growth and Antioxidant System Activity of Wheat Seedlings
Gayane H. Poghosyan (*Yerevan State University*); *Poghos O. Vardevanyan* (*Yerevan State University*); *Zhanna H. Mukhaelyan* (*Yerevan State University*); *Anahit V. Nerkararyan* (*Yerevan State University*);

00:00 Wearable Wireless ECG Sensor
Vladimir Pleskachev (*St. Petersburg Electrotechnical University*);

00:00 Optimization of Microwave Hyperthermia Applicator System for Deep Placed Tumors Treatment in Head and Neck Area
Ondrej Fiser (*Czech Technical University in Prague*); *Ilja Merunka* (*Czech Technical University in Prague*); *Jan Vrba* (*Czech Technical University in Prague*);

00:00 Pulse Sensing Using Flipped-phase Frequency of the Reflection Coefficient of a Radiator
Yao-Chiang Kan (*Yuan Ze University*); *Huey-Ru Chuang* (*National Cheng Kung University*); *H.-C. Lin* (*China Medical University*);

00:00 Noise Related with Size of Sensing Volume of Open Ended Coaxial Probe for Complex Permittivity Measurement
Ilja Merunka (*Czech Technical University in Prague*); *Ondrej Fiser* (*Czech Technical University in Prague*); *Jan Vrba* (*Czech Technical University in Prague*);

00:00 Effects of 2G Mobile Phone Exposure on Both Behavioural Performance and Levels of Enzyme from NMDA-dependent Pathway
Cigdem Gokcek-Sarac (*Akdeniz University*); *Sukru Ozen* (*Akdeniz University*); *Narin Derin* (*Akdeniz University*);

00:00 Magnetic Field Risk Analysis for Employees and Patients Due to Power Transformers in Hospital Buildings
Sukru Ozen (*Akdeniz University*); *Hamza Feza Carlak* (*Akdeniz University*); *Omer H. Colak* (*Akdeniz University*); *Selcuk Helhel* (*Akdeniz University*);

00:00 An Ultra-thin Polarization-insensitive Wide-angle Metamaterial Absorber
Zhiming Liu (*Nanjing University of Aeronautics and Astronautics*); *Hai Feng Zhang* (*Nanjing University of Aeronautics and Astronautics*); *Shaobin Liu* (*Nanjing University of Aeronautics and Astronautics*); *Bo-Rui Bian* (*Nanjing University of Aeronautics and Astronautics*);

00:00 Optical Properties of Nanostructured Cerium Dioxide-on-aluminium Films for SERS-active Substrates
A. D. Brozhek (*A. M. Prokhorov General Physics Institute, Russian Academy of Sciences*); *V. I. Fabelinskii* (*A. M. Prokhorov General Physics Institute, Russian Academy of Sciences*); *Dimitrii N. Kozlov* (*A. M. Prokhorov General Physics Institute, Russian Academy of Sciences*); *S. N. Orlov* (*A. M. Prokhorov General Physics Institute, Russian Academy of Sciences*); *Yu. N. Polivanov* (*A. M. Prokhorov General Physics Institute, Russian Academy of Sciences*); *I. A. Shcherbakov* (*A. M. Prokhorov General Physics Institute, Russian Academy of Sciences*); *V. V. Smirnov* (*A. M. Prokhorov General Physics Institute, Russian Academy of Sciences*); *K. A. Vereshchagin* (*A. M. Prokhorov General Physics Institute, Russian Academy of Sciences*); *K. N. Afanasiev* (*Institute for Theoretical and Applied Electromagnetics, Russian Academy of Sciences*); *Andrey N. Lagarkov* (*Institute for Theoretical and Applied Electromagnetics, Russian Academy of Sciences*); *Alexander M. Merzlikin* (*Institute for Theoretical and Applied Electromagnetics of the Russian Academy of Sciences*); *Ilya A. Ryzhikov* (*VNIIA*); *Andrey K. Sarychev* (*Institute for Theoretical and Applied Electrodynamics*);

00:00 Waveguide Plasmon Resonance of Arrayed Metallic Nanostructures Patterned on a Soft Substrate by Direct Contact Printing Lithography
Wei-Xiang Su (*National Cheng-Kung University*); *Chun-Ying Wu* (*National Cheng-Kung University*); *Yung-Chun Lee* (*National Cheng-Kung University*);

00:00 A Novel Reconfigurable Electromagnetically Induced Transparency Based on Solid State Plasma
Xue Feng (*Nanjing University of Aeronautics and Astronautics*); *Shaobin Liu* (*Nanjing University of Aeronautics and Astronautics*); *Hai Feng Zhang* (*Nanjing University of Aeronautics and Astronautics*); *Yong-Diao Wen* (*Nanjing University of Aeronautics and Astronautics*); *Xiang-Kun Kong* (*Nanjing University of Aeronautics and Astronautics*); *Ling-Ling Wang* (*Nanjing University of Aeronautics and Astronautics*);

00:00 Suppression of CC-FWM Inter-channel Crosstalk Using Unequal Channel Spacing in an 8-channel WDM Transmission System with Parametric Amplification
Sergejs Olonkins (*Riga Technical University*); *Igors Stankunovs* (*Riga Technical University*); *Dmitrijs Pilats* (*Riga Technical University*); *Vjaceslavs Bobrovs* (*Riga Technical University*);

00:00 Investigation of Amplification Span Length Impact on the Quality of the Signal in WDM Transmission Systems with Erbium-doped Fiber Amplifiers
Julija Putrina (*Riga Technical University*); *Sergejs Olonkins* (*Riga Technical University*); *Vjaceslavs Bobrovs* (*Riga Technical University*);

00:00 High-sensitivity Fabry-Pérot Strain Senor Based on Splicing Collapse at the PCF-SMF Joint
Haifeng Liu (*Nankai University*); *Bo Liu* (*Nankai University*);

00:00 Influence of Structure and Doping Concentration on SBS Fast Light in Photonic Crystal Fibers
Shuaibin Niu (*Lanzhou University of Technology*); *Shanglin Hou* (*Lanzhou University of Technology*); *Daobin Wang* (*Lanzhou University of Technology*); *Jingli Lei* (*Lanzhou University of Technology*); *Xiaoxiao Li* (*Lanzhou University of Technology*); *Yuanyuan Ma* (*Lanzhou University of Technology*);

00:00 Effects of Power and Shape of Pump Light on Pulse Compression Based on Stimulated Brillouin Scattering
Yuanyuan Ma (*Lanzhou University of Technology*); *Shanglin Hou* (*Lanzhou University of Technology*); *Daobin Wang* (*Lanzhou University of Technology*); *Jingli Lei* (*Lanzhou University of Technology*); *Xiaoxiao Li* (*Lanzhou University of Technology*);

00:00 Radiofrequency Fiber-optic Probe for Surface Temperature Measurement with High Spatial Resolution
Dmitrii V. Protasenya (*Moscow Institute of Physics and Technology (State University)*); *Georgy A. Aloyan* (*Moscow Institute of Physics and Technology (State University)*); *Anastasia S. Alexahina* (*Moscow Institute of Physics and Technology (State University)*); *Oleg A. Ryabushkin* (*State University*);

00:00 Measurements of Value and Location of Multiple Spots of Thermal Impacts on Long FBG
Sergey S. Yakushin (*Novosibirsk State University*); *Alexandr V. Dostovalov* (*Novosibirsk National Research State University*); *A. A. Wolf* (*Novosibirsk State University*); *A. V. Parygin* (*Institute of Automation and Electroetry, SB, RAS*); *S. A. Babin* (*Institute of Automation and Electroetry, SB, RAS*);

00:00 Indoor Pedestrian Navigation System Based on Extend Kalman Filter
Xufei Cui (*Harbin Engineering University*); *Guo Zheng* (*Harbin Engineering University*); *Minghui Zhang* (*Harbin Engineering University*); *Qiuying Wang* (*Harbin Engineering University*);

00:00 Spectral Effective Solutions for Mixed Line Rate WDM-PON Systems
Inna Kurbatska (*Riga Technical University*); *Vjaceslavs Bobrovs* (*Riga Technical University*); *Anita Alsevska* (*Riga Technical University*); *Ilya Lyashuk* (*Riga Technical University*); *Lilita Gegere* (*Riga Technical University*);

00:00 An ACO-OFDM Receiver Design and Implementation for Optical Wireless Communications
Muh-Tian Shiue (*National Central University*); *Syu-Siang Long* (*National Central University*); *Yang-Chieh Ou* (*National Central University*);

00:00 A Compact Dual-band MIMO WLAN and Bluetooth Antenna
Mehmet Abbak (*Vestel Elektronik Sanayi ve Ticaret*); *Hakan Falakalioglu* (*Vestel Elektronik Sanayi ve Ticaret*); *Mehmet Akif Bakirli* (*Vestel Elektronik Sanayi ve Ticaret*); *Ali Bas* (*Vestel Elektronik Sanayi ve Ticaret*);

00:00 Ferroelectric Film mm-wave Tripler for Elevated Power Applications
Valentina V. Medvedeva (*Saint Petersburg Electrotechnical University "LETI"*); *Tatyana Borisovna Samoilova* (*Saint Petersburg Electrotechnical University "LETI"*); *Anatoly Konstantinovich Mikhailov* (*Saint-Petersburg State Electrotechnical University (LETI)*); *Roman Andreevich Platonov* (*Saint Petersburg Electrotechnical University "LETI"*); *Andrey Borisovich Kozyrev* (*Saint-Petersburg Electrotechnical University*);

00:00 A New MEM-DOA Proposal for DSM in a Grid Connected Smart Microgrid
Chafaa Hamrouni (*University of Gabes*); *Abdessalem Bsissa* (*University of Gabes*); *Rached Hamza* (*University of AL MANAR*); *Mohamed Naceur Abdelkrim* (*Ecole Nationale d'Ineenieurs de Gabes*);

00:00 Development of the Concept and the Layout of the Spacecraft Docking Station Based on Bulk High-temperature Superconductors
Mikhail A. Basarab (*Bauman Moscow State Technical University*); *Vladimir N. Gerdy* (*Bauman Moscow State Technical University*); *Boris S. Lumin* (*MSU named after M.V. Lomonosov*); *Valerii A. Matveev* (*Bauman MSTU*); *Nikolay A. Nizhelsky* (*Bauman Moscow State Technical University*); *Mikhail A. Sysoev* (*Bauman Moscow State Technical University*);

00:00 Implement the Digitally Controlled Current-mode DC-DC Buck Converter with Wide-load Regulation
Muh-Tian Shiue (*National Central University*); *Yang-Chieh Ou* (*National Central University*); *Syu-Siang Long* (*National Central University*);

00:00 Equipment for Power Line Communication Based on Single-carrier System for Home Automation System
Jan Slacik (*Brno University of Technology*); *Petr Mlynek* (*Brno University of Technology*); *Radek Fujdiak* (*Brno University of Technology*); *Jiri Misurec* (*Brno University of Technology*);

00:00 Analyze Punch-through and Reach-through Breakdown Voltage in N+PN+ and N+P+NN+ Sandwich Structures
Lei Zhao (*Southwest Jiaotong University*); *Quanyuan Feng* (*Southwest Jiaotong University*); *Jinyan Liu* (*Southwest Jiaotong University*); *Zhixiong Di* (*Southwest Jiaotong University*); *Qianyin Xiang* (*Southwest Jiaotong University*);

00:00 Influence of SiO_2/Si Interface Charge on Performance of UMOS
Sijie Zeng (*Southwest Jiaotong University*); *Quanyuan Feng* (*Southwest Jiaotong University*); *Xiaopei Chen* (*Southwest Jiaotong University*); *Tao Jin* (*Southwest Jiaotong University*); *Zhengxi Zhao* (*Southwest Jiaotong University*);

00:00 The Research of Threshold Voltage between Theoretical Computation and Simulation
Xiaopei Chen (*Southwest Jiaotong University*); *Quanyuan Feng* (*Southwest Jiaotong University*); *Tao Jin* (*Southwest Jiaotong University*); *Sijie Zeng* (*Southwest Jiaotong University*); *Zhengxi Zhao* (*Southwest Jiaotong University*);

00:00 Buried-Oxide-In-Drift-Region Technique for Breakdown Voltage of Trench Power MOSFETs
Zhengxi Zhao (*Southwest Jiaotong University*); *Quanyuan Feng* (*Southwest Jiaotong University*); *Xiaopei Chen* (*Southwest Jiaotong University*); *Sijie Zeng* (*Southwest Jiaotong University*);

00:00 A Compact S-band GaN Quasi-MMIC Power Amplifier Using Silicon IPDs
Dongsu Kim (*Korea Electronics Technology Institute*); *Hyeok Kim* (*Korea Electronics Technology Institute*); *Hongsun Yoon* (*Korea Electronics Technology Institute*); *Jong Min Yook* (*Korea Electronics Technology Institute*); *Jun-Chul Kim* (*Korea Electronics Technology Institute*); *Youngcheol Park* (*Hankuk University of Foreign Studies*);

00:00 A GaN X-band Power Amplifier with Internal Capacitor Array Matching Networks
Hyeok Kim (*Korea Electronics Technology Institute*); *Dongsu Kim* (*Korea Electronics Technology Institute*); *Jong Min Yook* (*Korea Electronics Technology Institute*); *Jae-Woong Park* (*RFHIC Corporation*); *Byoung-Gon Han* (*RFHIC Corporation*); *Samuel Cho* (*RFHIC Corporation*);

00:00 Electrical and Thermal Modeling of through Glass Vias in 2.5D Integration
Libo Qian (*Ningbo University*); *Ge Shi* (*Ningbo University*); *Yidie Ye* (*Ningbo University*);

00:00 Compact Dual-band Microstrip Band Pass Filter Design Based on Stub Loaded Resonator for Wireless Applications
Mohammed Fadhel Hasan (*University of Technology*); *Ali Sadeq Abdulhadi Jalal* (*Al-Nahrain University*); *Emad Shehab Ahmed* (*University of Technology*);

00:00 Compact Dual-band Bandpass Filter Based on Fractal Stub-loaded Resonator
Hadi T. Ziboon (*University of Technology*); *Jawad K. Ali* (*University of Technology*);

00:00 Modeling of a Novel Microstrip Ring Resonator for Wireless Applications
Seyi Stephen Olokede (*University of Johannesburg*); *Babu Sena Paul* (*University of Johannesburg*);

00:00 Equivalent Circuit Characterization of a Novel Microstrip Ring Resonator Bandpass Filter
Seyi Stephen Olokede (*University of Johannesburg*); *Babu Sena Paul* (*University of Johannesburg*);

00:00 Design of a Narrow-band Microstrip Ring Resonator Bandpass Filter
Seyi Stephen Olokede (*University of Johannesburg*); *Babu Sena Paul* (*University of Johannesburg*);

00:00 Broadband Eight-way Coaxial Waveguide High Power Combiner/Divider
Mohsen Abdolahi (*Isfahan University of Technology (IUT)*); *Mohammad Mahdi Sabahi* (*Isfahan University of Technology (IUT)*); *Hamid Mirmohammad Sadeghi* (*Isfahan University of Technology (IUT)*);

00:00 Development and Application of the Multifractal Model of Ionospheric Turbulence for Characterization of Fluctuations of Transionospheric Signals
Vadim E. Gherm (*University of St. Petersburg*); *E. V. Makarenkova* (*University of St. Petersburg*);

00:00 Study on Dual-threshold Detection Method for Dual-polarization Receiving Radar
Longfei Shi (*National University of Defense Technology*); *Chuqiao Mao* (*National University of Defense Technology*); *Gang Cui* (*National University of Defense Technology*); *Jiazhi Ma* (*National University of Defense Technology*); *Yongzhen Li* (*National University of Defense Technology*);

00:00 Ionosphere Effect Estimation in Micro-Doppler Signature Extraction for P-band Radar Targets
Wenjue Yue (*National University of Defense Technology*); *Bo Peng* (*National University of Defense Technology*); *Xizhang Wei* (*National University of Defense Technology*); *Xiang Li* (*National University of Defense Technology*);

00:00 The Troposcatter Channel Fading and Diffusion Modeling for Multi-beamforming in Receiving Antennas
Mengnan Wang (*National University of Defense Technology*); *Zhuang Wang* (*National University of Defense Technology*); *Cheng Zhu* (*National University of Defense Technology*);

00:00 Possible Enhancements of TEC and Their Effects on Radio Propagation in Mexican Region
Olga A. Maltseva (*Southern Federal University*); *M. A. Sergeeva* (*Universidad Nacional Autonoma de Mexico*); *J. A. Gonzalez-Esparza* (*Universidad Nacional Autonoma de Mexico*); *V. De la Luz* (*Universidad Nacional Autonoma de Mexico*);

00:00 The Response of the Ionospheric TEC on Travelling Convection Vortices
Vladimir Evgenievich Pronin (*M. V. Lomonosov Moscow State University*); *V. A. Pilipenko* (*Institute of Physics of the Earth*); *V. I. Zakharov* (*M. V. Lomonosov Moscow State University*); *D. L. Murr* (*Augsburg College*);

00:00 Strong Range SF Observed in Low Latitude Ionosphere over Acsension IS in Atlantic Ocean
Zheng Wang (*National Space Science Center, CAS*); *Jiankui Shi* (*National Space Science Center, CAS*); *Guojun Wang* (*Center for Space Science and Applied Research, CAS*); *Xiao Wang* (*National Space Science Center, CAS*); *Konstantin G. Ratovsky* (*Institute of Solar-Terrestrial Physics, SB RAS*); *Elena B. Romanova* (*Institute of Solar-Terrestrial Physics, SB RAS*);

00:00 Static Magnetic Field in Moderate Intensity Enhanced Transfection Efficiency of Polyethyleniminebased Non-viral Vector
Mohammad Satari (*Tarbiat Modares University*); *Parviz Abdolmaleki* (*Tarbiat Modares University*); *Saman Hosseinkhani* (*Tarbiat Modares University*); *Mohsen Alipour* (*Tarbiat Modares University*); *Behnam Hajipoor* (*Tarbiat Modares University*);

00:00 Coupling Medium for Stroke Imaging in a Human Brain Model
Mehmet Nuri Akinci (*Istanbul Technical University*); *C. Uyanik* (*Istanbul Technical University*); *Mehmet Cayoren* (*Istanbul Technical University*); *Ibrahim Akduman* (*Istanbul Technical University*); *Hulya Sahinturk* (*Yildiz Technical University*);

00:00 The Effects of Nanoparticles of Chitosan and Gamma Rays on Cell Viability and Expression of BAX in MCF7 Cell Line
Nazanin Abdolmaleki (*Islamic Azad University*); *Parviz Abdolmaleki* (*Tarbiat Modares University*); *Fatemeh Javani Jouni* (*Tarbiat Modares University*);

00:00 Microwave Radio Radiation — Modern Threat to the Life of Humanity
Victor A. Ovsyannikov (*Ioffe Institute*);

00:00 The Effect of Weak Magnetic Fields on the Production of Reactive Oxygen Species in Neutrophils and in Mammalian Blood
Vadim V. Novikov (*Institute of Cell Biophysics, Russian Academy of Sciences*); *Elena V. Yablokova* (*Institute of Cell Biophysics, Russian Academy of Sciences*); *Evgeny E. Fesenko* (*Institute of Cell Biophysics, Russian Academy of Sciences*);

00:00 Comparison between the Effect of Continuous and Intermittent Exposure of the Low Intensity Electromagnetic Fields on the Viability of Breast Cancer Cells
Nastaran Masoudi-Khoram (*Tarbiat Modares University (TMU)*); *Parviz Abdolmaleki* (*Tarbiat Modares University*);

00:00 Effect of Millimeter Range Electromagnetic Waves on Thermostability of Both DNA and Albumin
Poghos O. Vardevanyan (*Yerevan State University*); *Mariam A. Shahinyan* (*Yerevan State University*); *Ara P. Antonyan* (*Yerevan State University*); *Marine A. Parsadanyan* (*Yerevan State University*); *Marieta S. Mikaelyan* (*Yerevan State University*);

00:00 Effect of Millimeter Range Electromagnetic Irradiation on Fluorescence and Thermostability of Watersaline Solutions of Human Albumin
Poghos O. Vardevanyan (*Yerevan State University*); *Ara P. Antonyan* (*Yerevan State University*); *Marine A. Parsadanyan* (*Yerevan State University*); *Mariam A. Shahinyan* (*Yerevan State University*); *Marieta S. Mikaelyan* (*Yerevan State University*); *Gayane H. Poghosyan* (*Yerevan State University*);

00:00 A Low Profile Antenna on an EBG Substrate with Considering Human Body Effect
Ho-Jun Lee (*Korea Electronics Technology Institute*); *In Su Yeom* (*Korea Electronics Technology Institute*);

00:00 Whole Body Extremely High Frequency Electromagnetic Irradiation Exposure Effect on Lipid Peroxidation in Rats
Gayane H. Poghosyan (*Yerevan State University*); *Anahit V. Nerkararyan* (*Yerevan State University*); *Marieta S. Mikaelyan* (*Yerevan State University*);

00:00 Researches and Applications of Medical Piezoelectrical Ultrasonic Transducer Materials and the Transducers
Quanlu Li (*Shaanxi Normal University*); *Jing Wu* (*Shaanxi Normal University*);

00:00 Multi-target Flight Scene Simulation Based on STK/X
Rui Zhang (*National University of Defense Technology*); *Shiyou Xu* (*National University of Defense Technology*); *Zengping Chen* (*National University of Defense Technology*);

00:00 Computer-aided Design and Simulation of TiO_2 Micro-ring Resonator
Payal Verma (*R. V. College of Engineering*); *T. V. Andreeva* (*Samara National Research University (Samara University)*); *V. S. Pavelyev* (*Samara National Research University (Samara University)*); *S. A. Degtyarev* (*Samara National Research University (Samara University)*); *Svetlana N. Khonina* (*Samara State Aerospace University*); *B. V. Uma* (*R. V. College of Engineering*);

00:00 A Nonlinear Structured Radome Design Used for Adaptive Protection against High Intensity Field Radiation
Bo Yi (*National University of Defense Technology*);

00:00 Density Functional Theory Studies on Electronic and Photocatalytic Properties of Some Heavy-metal Containing Compounds
Kechen Wu (*Fujian Institute of Research on the Structure of Matter, Chinese Academy of Sciences*); *Z. Ma* (*Fujian Institute of Research on the Structure of Matter, Chinese Academy of Sciences*);

00:00 UV to THz Photo-detection with Ferroelectric Single Crystals Using MoS_2 and Ag Nanowire Electrodes
Invited
Huajing Fang (*The Hong Kong Polytechnic University*); *Qingfeng Yan* (*Tsinghua University*); *Jiyan Dai* (*The Hong Kong Polytechnic University*);

00:00 Study on Hybrid Harvesting System of Solar Energy and Piezoelectric Vibration Energy
Ge Shi (*China Jiliang University*); *Yin-Shui Xia* (*Ningbo University*); *Libo Qian* (*Ningbo University*); *Yidie Ye* (*Ningbo University*); *Qing Li* (*China Jiliang University*);

00:00 Analysis of Serum from Multiple Myeloma Patients Using Infrared and Terahertz Spectroscopy
Ludmila Plotnikova (*ITMO University*); *A. Polyanichko* (*Saint Petersburg State University*); *M. Uspenskaya* (*ITMO University*); *E. L. Odlyanitskiy* (*ITMO University*); *P. Demchenko* (*ITMO University*); *Mikhail Konstantinovich Khodzitsky* (*ITMO University*); *A. Garifullin* (*Russian Scientific Research Institute of Hematology and Transfusiology*); *S. Voloshin* (*Russian Scientific Research Institute of Hematology and Transfusiology*);

00:00 Structural Properties of Serum Albumins Revealed by THz, FTIR and Calorimetric Approaches
E. L. Odlyanitskiy (*ITMO University*); *O. A. Smolyanskaya* (*National Research University of Information Technologies, Mechanics and Optics*); *Mikhail Konstantinovich Khodzitsky* (*ITMO University*); *O. V. Kravtsenyuk* (*ITMO University*); *Ludmila V. Plotnikova* (*ITMO University*); *A. M. Polyanichko* (*Saint Petersburg State University*); *M. V. Uspenskaya* (*ITMO University*);

00:00 Design of Invisibility Cloak for Dual Color at THz Frequency Band Based on Nanoparticles
Saba Khosravi (*University of Tabriz*); *Ali Rostami* (*University of Tabriz*); *M. Dolatyari* (*Industrial Park of Advanced Technologies*); *G. Rostami* (*Industrial Park of Advanced Technologies*);

00:00 Design of 12 to 20 GHz Carpet Cloak Based on Nanocomposite Materials
Saba Khosravi (*University of Tabriz*); *Ali Rostami* (*University of Tabriz*); *M. Dolatyari* (*Industrial Park of Advanced Technologies*); *G. Rostami* (*Industrial Park of Advanced Technologies*);

00:00 A Novel Approach of Optical Fiber's Brillouin Spectra Observation
S. V. Zyrianov (*Perm Scientific Center Urals Branch, Russian Academy of Science*); *Yu. Al. Konstantinov* (*Perm Scientific Center Urals Branch, Russian Academy of Science*); *Ivan A. Lobach* (*Institute of Automation and Electrometry, SB, RAS*); *A. S. Smirnov* (*Perm Scientific Center Urals Branch, Russian Academy of Science*); *V. V. Burdin* (*Perm Scientific Center Urals Branch, Russian Academy of Science*); *F. L. Barkov* (*Perm Scientific Center Urals Branch, Russian Academy of Science*); *M. V. Remennikova* (*Perm Scientific Center Urals Branch, Russian Academy of Science*); *K. P. Latkin* (*Perm Scientific Center Urals Branch, Russian Academy of Science*);

00:00 A Comparative Analysis of Rectangular Waveguide Mode Converter Designs
Yogesh M. Jain (*IPR*); *Promod K. Sharma* (*Institute for Plasma Research*); *Harish V. Dixit* (*Veermata Jijabai Technological Institute*); *Kirankumar Ambulkar* (*Institute for Plasma Research*); *Jagabandhu Kumar* (*Institute for Plasma Research*); *Aviraj R. Jadhav* (*V.J.T.I.*);

00:00 On the Formation of Higher Harmonic Components in Power Spectrum of the Output Radiation of Microwave Generator with Turbulent Electron Beam
Yurii Alexandrovich Kalinin (*Saratov State University*); *Andrei Victorovich Starodubov* (*Saratov State University*);

00:00 Superconducting Thin-film Magnetic Field Concentrator
Levan P. Ichkitidze (*National Research University of Electronic Technology "MIET"*); *D. V. Telyshev* (*National Research University of Electronic Technology "MIET"*); *Sergey Vasilyevich Selishchev* (*National Research University of Electronic Technology*);

00:00 The Flow of the DC Current through the High-temperature Superconducting Ceramics Wires
Mikhail V. Belodedov (*General Physics Institute, Russian Academy of Sciences*); *Levan P. Ichkitidze* (*National Research University of Electronic Technology "MIET"*);

00:00 Topological Superconductor of $Cu_{0.10}Bi_2Se_3$: Single Crystal Growth, Structure, Electronic and Magnetic Properties
G. Y. Zhang (*Max Planck Institute for Solid State Research*); *Chengtian Lin* (*Max Planck Institute for Solid State Research*);

00:00 Numerical Modelling of a Helical Resonator for Ion Traps
Laura Pedrosa-Rodriguez (*OHB System AG*); *David Alvarez Outerelo* (*University of Vigo*); *Francisco Javier Díaz-Otero* (*Universidad de Vigo*); *F. Isasi De Vicente* (*University of Vigo*); *Rafael Gomez-Alcala* (*Universidad de Extremadura*);

00:00 A Second Order Capacitance Coupling Band-pass Filter Enabling Center Frequency Tunable
Xiaodong Yang (*Kunming University of Science and Technology*); *Mengjiang Xing* (*Kunming University of Science and Technology*); *Erfan Wang* (*Kunming University of Science and Technology*);

00:00 A Highly-integrated RF S-Band Switched Filter Bank
Xiaodong Yang (*Kunming University of Science and Technology*); *Mengjiang Xing* (*Kunming University of Science and Technology*); *Erfan Wang* (*Kunming University of Science and Technology*);

00:00 A Second Order Inductive Coupling Bandpass Filter Enabling Tunable Center Frequency
Erfan Wang (*Kunming University of Science and Technology*); *Mengjiang Xing* (*Kunming University of Science and Technology*); *Xiaodong Yang* (*Kunming University of Science and Technology*);

00:00 A Novel Fractal Folded-slot Antenna and Its Application
Yang Zhou (*China Electronics Technology Group Corporation No. 38 Research Institute*); *Liang Tang* (*China Electronics Technology Group Corporation No. 38 Research Institute*); *Kang Yang* (*Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Sciences (CAS)*);

00:00 An Accurate High Frequency Full Wave Mathematical Model for Silicon PIN Diode
Sara Hammour (*Universite Freres Mentouri Constantine*); *Samir Labiod* (*Universite de Skikda*); *Saida Latreche* (*Universite Freres Mentouri Constantine*); *Christian Gontrand* (*Universite de Lyon*);

00:00 Simulation Analysis of Automobile Logo Printed UWB Monopole Antennas
Dongming Zhou (*National University of Defense Technology*); *Yujian Qin* (*National University of Defense Technology*); *Zhong-Hao Lu* (*National University of Defense Technology*);

00:00 Numerical Synthesis of Ionograms Using Compound Parabolic Layer Model
Oleg A. Laryunin (*Irkutsk State University*);

00:00 Numerical Simulation of the Backscattered Signal Correlation Function during HF Sounding of the Ionosphere by EKB ISTP SB RAS Radar
Konstantin A. Kutelev (*Institute of Solar-Terrestrial Physics, SB RAS*); *Oleg I. Berngardt* (*Institute of Solar-Terrestrial Physics, SB RAS*);

00:00 Calibrated Power Measurements at the Irkutsk Incoherent Scatter Radar
Artem Gennadievich Setov (*Institute of Solar-Terrestrial Physics*); *Andrey V. Medvedev* (*Institute of Solar-Terrestrial Physics of Siberian Branch of Russian Academy of Sciences*); *Valentin P. Lebedev* (*Institute of Solar-Terrestrial Physics, Siberian Branch, Russian Academy of Sciences*); *Dmitry S. Kushnarev* (*Institute of Solar-Terrestrial Physics of Siberian Branch, Russian Academy of Sciences*); *Sergey S. Alsatkin* (*Institute of Solar-Terrestrial Physics SB RAS*); *V. P. Tashlykov* (*Institute of Solar-Terrestrial Physics*);

00:00 Research on the OFDM Passive Radar System for Low-altitude Target Detecting
Xiaoqi Yang (*National University of Defense Technology*); *Weidong Jiang* (*National University of Defense Technology*); *Kai Huo* (*National University of Defense Technology*); *Jingjing Zhao* (*National University of Defense Technology*);

00:00 On the Problem of the HF Radio Wave Transionosphere Propagation
Yu. I. Belov (*Radio Physics Research Institute of Nizhny Novgorod State University*); *Yuri V. Tokarev* (*Radio Physics Research Institute of Nizhny Novgorod State University*);

Session 3A1
SC3: Optical Materials: Fundamentals and Applications

Wednesday AM, May 24, 2017

Room G5

Organized by Cees Ronda

00:00 SiN_x-based Hybrid Integrated Photonic Devices
Yujie Chen (*Sun Yat-sen University*); *Zengkai Shao* (*Sun Yat-sen University*); *Zeru Wu* (*Sun Yat-sen University*); *Pengfei Xu* (*Sun Yat-sen University*); *Tianyou Zhang* (*Sun Yat-sen University*); *Zeming Fan* (*Sun Yat-sen University*); *Yuanhui Wen* (*Sun Yat-sen University*); *Zhuohui Yang* (*Sun Yat-sen University*); *Lin Liu* (*Sun Yat-sen University*); *Lidan Zhou* (*Sun Yat-sen University*); *Chunchuan Yang* (*Sun Yat-sen University*); *Zhiren Qiu* (*Sun Yat-sen University*); *Yanfeng Zhang* (*Sun Yat-sen University*); *Siyuan Yu* (*Sun Yat-sen University*);

00:00 Structural, Optical and Luminescent Properties of
Invited **ZnO** : **Ga** and **ZnO** : **In** Ceramics
Piotr A. Rodnyi (*Peter the Great Saint-Petersburg Polytechnic University*); *E. I. Gorokhova* (*Research and Technological Institute of Optical Materials All-Russia Scientific Center "S.I.Vavilov State Optical Institute"*); *Kirill A. Chernenko* (*Saint-Petersburg State Polytechnic University*); *I. D. Venevtsev* (*Peter the Great Saint-Petersburg Polytechnic University*);

00:00 The Effect of Band Bending on Luminescence Properties of Zinc Oxide Ceramics
Kirill A. Chernenko (*Peter the Great Saint-Petersburg State Polytechnic University*); *E. I. Gorokhova* (*Research and Technological Institute of Optical Materials All-Russia Scientific Center "S.I.Vavilov State Optical Institute"*); *Herfried Wieczorek* (*Philips Research Eindhoven*); *D. Buettner* (*Philips Research Eindhoven*); *W. Keur* (*Philips Research Eindhoven*); *Piotr A. Rodnyi* (*Peter the Great Saint-Petersburg Polytechnic University*);

00:00 Temperature Dependence of Photo- and Radioluminescence of $(Gd,Y)_3Al_5O_{12}:Ce^{3+}$ Mixed Oxide Garnet Ceramics
Ivan D. Venevtsev (*Peter the Great Saint-Petersburg Polytechnic University*); *Vasilii Khanin* (*Peter the Great Saint-Petersburg Polytechnic University*); *Piotr A. Rodnyi* (*Peter the Great Saint-Petersburg Polytechnic University*); *Herfried Wieczorek* (*Philips Research Eindhoven*); *Cees Ronda* (*Philips Research Eindhoven*);

00:00 Optical Properties of Hybrid Photonic Crystals $Ge_2Sb_2Te_5$/opal: Theory and Experiment
Sergey A. Dyakov (*Skolkovo Institute of Science and Technology*); *M. M. Voronov* (*Physical-Technical Institute*); *S. A. Yakovlev* (*Ioffe Physical-Technical Institute of the Russian Academy of Sciences*); *I. A. Akimov* (*University of Dortmund*); *A. B. Pevtsov* (*Ioffe Physical-Technical Institute of the Russian Academy of Sciences*); *S. G. Tikhodeev* (*A. M. Prokhorov General Physics Institute, RAS*); *N. A. Gippius* (*Skolkovo Institute of Science and Technology*);

00:00 Lithium Aluminosilicate Transparent Glass-ceramics with Rare Earth Orthoniobate Nanocrystals — Novel Promising Luminescent Materials
Irina Alekseeva (*NITIOM S.I. Vavilov State Optical Institute*); *Olga S. Dymshits* (*NITIOM S. I. Vavilov State Optical Institute*); *Marina Tsenter* (*NITIOM S.I. Vavilov State Optical Institute*); *Anastasiya Vasilevskaya* (*NITIOM S.I. Vavilov State Optical Institute*); *Aleksandr A. Zhilin* (*NITIOM S.I. Vavilov State Optical Institute*); *Svetlana Zapalova* (*NITIOM S.I. Vavilov State Optical Institute*); *Pavel Loiko* (*ITMO University*); *Anna Volokitina* (*ITMO University*); *Alexander V. Baranov* (*ITMO University*); *Elena Vilejshikova* (*Belarusian National Technical University*); *Nikolai Skoptsov* (*Belarusian National Technical University*); *Konstantin V. Yumashev* (*Belarusian National Technical University*); *Xavier Mateos* (*Universitat Rovira i Virgili (URV)*);

00:00 Enhanced Luminescence and Application of Nd^{3+} Sensitized Upconversion Nanoparticles
Bing Xu (*Huazhong University of Science and Technology (HUST)*); *Zhanjun Gu* (*National Center for Nanosciences and Technology, Chinese Academy of Sciences*); *Ying Ma* (*Huazhong University of Science and Technology (HUST)*);

00:00 Liquid Crystal Display and Photonics Devices: Recent Overview
Vladimir G. Chigrinov (*Hong Kong University of Science and Technology*);

00:00 Multi-photon Phosphors
Invited
Andries Meijerink (*Utrecht University*); *T. Senden* (*Utrecht University*); *D. Yu* (*Utrecht University*); *Q.-Y. Zhang* (*Utrecht University*); *M. De Jong* (*Utrecht University*); *Freddy T. Rabouw* (*Utrecht University*);

00:00 Influence of Traps on Afterglow Properties in Mixed Oxide Garnet Scintillators
Vasilii Khanin (*Peter the Great Saint-Petersburg Polytechnic University*); *Ivan D. Venevtsev* (*Peter the Great Saint-Petersburg Polytechnic University*); *Kirill A. Chernenko* (*Peter the Great Saint-Petersburg State Polytechnic University*); *Piotr A. Rodnyi* (*Peter the Great Saint-Petersburg Polytechnic University*); *Jack Boerekamp* (*Philips Research Eindhoven*); *Sandra Spoor* (*Philips Research Eindhoven*); *Daniela Buettner* (*Philips Research Eindhoven*); *Anne-Marie Van Dongen* (*Philips Research Eindhoven*); *Herfried Wieczorek* (*Philips Research Eindhoven*); *Cees Ronda* (*Philips Research Eindhoven*);

00:00 3D Printing of Polymer Structures by Two-photon Polymerization Using Q-switched Microchip Laser
D. Perevoznik (*Laser Zentrum Hannover e.V.*); *Kestutis Kurselis* (*Laser Zentrum Hannover e.V.*); *R. Kiyan* (*Laser Zentrum Hannover e.V.*); *Elina K. Nepomnyashchaya* (*Peter the Great Saint Petersburg Polytechnic University*); *Evgenii T. Aksenov* (*St. Petersburg State Polytechnical University*); *E. N. Velichko* (*Peter the Great Saint Petersburg Polytechnic University*); *Boris N. Chichkov* (*Laser Zentrum Hannover e.V.*);

Session 3A2
Chaotic Signals: Generation, Emission, Propagation and Reception 1

Wednesday AM, May 24, 2017

Room G6

Organized by Alexander S. Dmitriev

Chaired by Alexander S. Dmitriev

00:00 Chaotic Synchronous Response in Multipath Channel
Lev V. Kuzmin (*Institute of Radio Engineering and Electronics of the RAS*); *Yuri V. Andreyev* (*Moscow Institute of Physics and Technology*);

00:00 The Interaction between Ultrawideband Chaotic Radio Pulses and Medium within Living Organisms
Anton Igorevich Ryzhov (*Institute of Radio Engineering and Electronics of RAS*); *Maxim G. Popov* (*Institute of Radio Engineering and Electronics of RAS*);

00:00 Multipath Propagation of Ultrawideband Chaotic Radio Pulses in Wireless Local Area Networks
Lev V. Kuzmin (*Institute of Radio Engineering and Electronics of the RAS*); *Vadim Lazarev* (*Moscow Institute of Physics and Technology (State University)*); *Maxim Popov* (*Institute of Radio Engineering and Electronics of the RAS*);

00:00 Radiation Characteristics of Ensemble of UWB Chaotic Sources
Yuri V. Andreyev (*Moscow Institute of Physics and Technology*);

00:00 Topological Properties of Networks of Microwave Oscillators
Ansar R. Safin (*National Research University "Moscow Power Engineering Institute"*); *N. Udalov* (*National Research University "MPEI"*); *M. Kapranov* (*National Research University "MPEI"*); *Elena D. Surovyatkina* (*Space Research Institute of Russian Academy of Sciences*); *J. Kurths* (*University of Potsdam*);

00:00 Chaotic Communications for the Internet of Things
Alexander S. Dmitriev (*Kotel'nikov Institute of Radio Engineering and Electronics of RAS*);

00:00 Identification System Based on Ultrawideband Direct Chaotic Communication System
Maxim G. Popov (*Institute of Radio Engineering and Electronics of RAS*); *V. A. Lazarev* (*Kotel'nikov Institute of Radio-engineering and Electronics of RAS*); *Mark Yu. Gerasimov* (*Kotel'nikov Institute of Radio Engineering and Electronics of RAS*);

00:00 Chaos, Nonlinear Waves and Structure of Decisions Nonlinear Differential Equation
Roman I. Dzerzhinskiy (*Moscow Technological University (MIREA)*); *S. V. Sidorov* (*Moscow State Academy of Water Transport*);

00:00 Designing a Printed Miniature Antenna for 3–5 GHz Range Integrated on PCB with UWB Direct Chaotic Transceiver Module
Anton V. Uvarov (*Moscow Institute of Physics and Technology (State University)*); *Mark Yu. Gerasimov* (*Kotel'nikov Institute of Radio Engineering and Electronics of RAS*); *Andrey V. Uvarov* (*Moscow Institute of Physics and Technology (State University)*);

00:00 The Symmetric Control of Thomas's Oscillators in Parametric Methods of Chaotic Labyrinth Modulation
L. V. Savkin (*Kotel'nikov Institute of Radio-Engineering and Electronics of RAS*);

00:00 Remote Wireless Control of Modeling Parameters of Interacting Dynamical Systems in Active Ultrawideband Wireless Networks
Ruslan Yemelyanov (*Institute of Radio Engineering and Electronics of RAS*); *Mark Gerasimov* (*Institute of Radio Engineering and Electronics of RAS*); *Alexander S. Dmitriev* (*Kotel'nikov Institute of Radio Engineering and Electronics of RAS*); *Yuri V. Andreyev* (*Moscow Institute of Physics and Technology*);

Session 3A3
Noninvasive Examination Techniques in Industry and Biomedicine 1

Wednesday AM, May 24, 2017

Room G7

Organized by Fedor Alexandrovich Gubarev

00:00 Invited Feature-enhanced Guided Ultrasonic Waves: New Paradigms for NDE & SHM
Prabhu Rajagopal (*Indian Institute of Technology-Madras*);

00:00 Interaction of Guided Ultrasonic Waves with Transverse Cracks in Laminated Composite Plate Structures
Saurabh Gupta (*Indian Institute of Technology-Madras*); *Prabhu Rajagopal* (*Indian Institute of Technology-Madras*);

00:00 Topographic Metamaterials for Ultrasonic Nondestructive Evaluation
C. T. Manjunath (*IIT Madras*); *Prabhu Rajagopal* (*Indian Institute of Technology-Madras*);

00:00 Digital Focused Acoustic Imaging of Polyurethane Materials
Vadim Y. Zhvyrblia (*National Research Tomsk Polytechnic University*); *D. O. Dolmatov* (*National Research Tomsk Polytechnic University*); *G. A. Filippov* (*National Research Tomsk Polytechnic University*); *D. A. Sednev* (*National Research Tomsk Polytechnic University*); *Y. A. Salchak* (*National Research Tomsk Polytechnic University*);

00:00 Enhancing Reliability of the Detection of Hidden Defects in Building Envelopes by Combining Infrared Thermography and the Blower Door Method
A. A. Popov (*Omsk Centre of Standardization and Metrology*); *R. N. Ivanov* (*Omsk State Technical University*); *Vladimir P. Vavilov* (*National Research Tomsk Polytechnic University*); *A. A. Nitievsky* (*IRBest*);

00:00 Aluminum Nanopowder Combustion Monitoring Using an Optical System with Brightness Amplification
Fedor Alexandrovich Gubarev (*Tomsk Polytechnic University*); *Andrei Vladimirovich Mostovshchikov* (*Tomsk Polytechnic University*); *Alexander Petrovich Il'in* (*Tomsk Polytechnic University*); *Lin Li* (*Tomsk Polytechnic University*);

00:00 The Assessment of Crack Formation Processes in Reinforced Concrete under Uniaxial Compression by Parameters of the Electric Response to Mechanical Impact
Tatyana V. Fursa (*National Research Tomsk Polytechnic University*); *Maxim V. Petrov* (*National Research Tomsk Polytechnic University*); *Denis D. Dann* (*National Research Tomsk Polytechnic University*);

00:00 Subwavelength Imaging of Cracks in Metallic Materials
Kiran Kumar Amireddy (*Indian Institute of Technology-Madras*); *Krishnan Balasubramaniam* (*Indian Institute of Technology*); *Prabhu Rajagopal* (*Indian Institute of Technology-Madras*);

00:00 Terahertz Spectroscopy of Polymerization Process: Prospectives in Terahertz Non-destructive Evaluations of Polymer Composite Materials Manufacturing
Egor V. Yakovlev (*Bauman Moscow Technical University (BMSTU)*); *Kirill I. Zaytsev* (*Bauman Moscow State Technical University*); *Arseniy A. Gavdush* (*Bauman Moscow Technical University (BMSTU)*); *Arsen K. Zotov* (*Bauman Moscow Technical University (BMSTU)*); *Nikita V. Chernomyrdin* (*Bauman Moscow State Technical University*); *Stanislav O. Yurchenko* (*Bauman Moscow State Technical University*);

00:00 Spectral Characteristics of Magnetic Fluid with Particles of Different Dimensions in the Terahertz Frequency Range
Denis Olegovich Zyatkov (*National Research Tomsk Polytechnic University*); *Alexey Vasilievich Yurchenko* (*National Research Tomsk Polytechnic University*); *Vladimir Borisovich Balashov* (*Research Institute of Semiconductor Devices*); *Basil Yurchenko* (*Research Institute of Semiconductor Devices*); *Alexey Borisov* (*National Research Tomsk Polytechnic University*);

00:00 Fluctuations in the Values of the Activity Parameters of Micron Iron Powder after Microwave Irradiation
Andrei Vladimirovich Mostovshchikov (*Tomsk Polytechnic University*); *Alexander Petrovich Il'in* (*Tomsk Polytechnic University*); *P. Yu. Chumerin* (*Tomsk Polytechnic University*); *I. K. Kalinich* (*Tomsk Polytechnic University*); *A. S. Tsibanev* (*Tomsk Polytechnic University*); *Fedor Alexandrovich Gubarev* (*Tomsk Polytechnic University*);

Session 3A4a
The Modern Hybrid Methods in the Problems of Computational Electromagnetics 2

Wednesday AM, May 24, 2017

Room G8

Organized by Victor Filippovich Kravchenko, Alexander Nikolaevich Bogolyubov

Chaired by Victor Filippovich Kravchenko

00:00 Effective FDTD Modeling of Microwave Ceramics
Zhanna O. Dombrovskaya (*Lomonosov Moscow State University*); *Alexander Nikolaevich Bogolyubov* (*Lomonosov Moscow State University*);

00:00 Error Estimations for the Regularized Double Period Method
Alexander A. Belov (*Lomonosov Moscow State University*); *Nikolay N. Kalitkin* (*Keldysh Insitute of Applied Mathematics*);

00:00 Joint Application of the Finite Element Method and the Scattering Matrix Method for Solving Diffraction Problems on Multilayer Reflection Gratings
Alexey V. Smirnov (*M. V. Lomonosov Moscow State University*); *Andrey A. Petukhov* (*Moscow State University*); *D. A. Konyaev* (*M. V. Lomonosov Moscow State University*);

00:00 Stability of the Optical Characteristics of Approximant Structures with Fractal Properties
Yuliya Vladimirovna Ryzhikova (*Lomonosov Moscow State University*); *Pavel Vasil'evich Korolenko* (*Lomonosov Moscow State University*); *Sergey Borisovich Ryzhikov* (*Lomonosov Moscow State University*);

00:00 Non-linear Dynamics of Positional Parameters of the Collimated Coherent Beam at the End of the Long Atmospheric Path
Arkadiy Viktorovich Blank (*Moscow State M. V. Lomonosov University*); *Vitaly Vladimirovich Kapranov* (*S. P. Korolev Rocket and Space Corporation "Energia"*); *Ruslan Vitalievich Mikhailov* (*Moscow State M. V. Lomonosov University*); *Natalia A. Soukhareva* (*Moscow M. V. Lomonosov State University*); *Vyacheslav Yuryevich Tugaenko* (*S. P. Korolev Rocket and Space Corporation "Energia"*);

00:00 Resonances in Scattering. I. Basic Equations and Main Approximations
S. Pozdneev (*P.N.Lebedev Physical Institute, Russian Academy of Sciences*);

Session 3A4b
Plasmas, Nonlinear Media, Fractal, Chiral Media

Wednesday AM, May 24, 2017

Room G8

00:00 Wide Range Plasma Equation of State
Alexander A. Belov (*Lomonosov Moscow State University*); *Nikolay N. Kalitkin* (*Keldysh Insitute of Applied Mathematics*); *Ivan A. Kozlitin* (*Lomonosov Moscow State University*); *Konstantin I. Lutskiy* (*National Research University of Electronic Technology*);

00:00 Numerical Blow-up Diagnostics for Differential Equation Solutions
Alexander A. Belov (*Lomonosov Moscow State University*); *Maxim O. Korpusov* (*Lomonosov Moscow State University*);

00:00 Substorm Onset: A Switch on the Sequence of Transport from Decreasing Entropy to Increasing Entropy
Chuxin Chen (*University of Science and Technology of China*);

00:00 Reconfiguration of Plasma Antenna Using 3D FDTD Method
Selcuk Alparslan Avci (*Gazi University*); *Erkan Afacan* (*Gazi University*);

00:00 Study on Application of Closed Cavity ICP in Inlet Stealth
Jun Lin Chen (*Air Force Engineering University*); *Hao Jun Xu* (*Air Force Engineering University*); *Xiao Long Wei* (*Air Force Engineering University*); *Zhi Jie Song* (*Air Force Engineering University*);

Session 3A5
Terahertz Photonics 1

Wednesday AM, May 24, 2017
Room G9
Organized by Mikhail Konstantinovich Khodzitsky
Chaired by Mikhail Konstantinovich Khodzitsky

00:00 The Extraction and Identification of Absorption Peaks in Terahertz Spectrum for Neuron Mixture
Yan Peng (*University of Shanghai for Science and Technology*); *Yiming Zhu* (*University of Shanghai for Science and Technology*);

00:00 Terahertz Waveguiding in Sapphire Shaped Photonic Crystal
Gleb M. Katyba (*Institute of the Solid State Physics of Russian Academy of Sciences*); *Kirill I. Zaytsev* (*Bauman Moscow State Technical University*); *Irina A. Shikunova* (*Institute of Solid State Physics of Russian Academy of Sciences*); *Stanislav O. Yurchenko* (*Bauman Moscow State Technical University*); *Vladimir N. Kurlov* (*Institute of Solid State Physics of Russian Academy of Sciences*);

00:00 High-resolution Terahertz Imaging and Spectroscopy
Nikita V. Chernomyrdin (*Bauman Moscow State Technical University*); *Sergey P. Lebedev* (*A. M. Prokhorov General Physics Institute of the Russian Academy of Sciences*); *Igor E. Spektor* (*A. M. Prokhorov General Physics Institute of the Russian Academy of Sciences*); *Stanislav O. Yurchenko* (*Bauman Moscow State Technical University*); *Vladimir N. Kurlov* (*Institute of Solid State Physics of Russian Academy of Sciences*); *Kirill I. Zaytsev* (*Bauman Moscow State Technical University*);

00:00 Terahertz Plasmonics in Photonic Quasicrystls Containing Graphene
Abdolrahman Namdar (*University of Tabriz*); *R. Feizollahi Onsoroudi* (*University of Tabriz*); *Habib Khoshsima* (*University of Tabriz*); *Mostafa Sahrai* (*University of Tabriz*);

00:00 Experimental Study and Characterization of BWO THz Continuous-wave Imaging
Irina N. Dolganova (*Bauman Moscow State Technical University*); *Kirill I. Zaytsev* (*Bauman Moscow State Technical University*); *Stanislav O. Yurchenko* (*Bauman Moscow State Technical University*); *Valeriy E. Karasik* (*Bauman Moscow State Technical University*);

00:00 Local Excitation of Resonance Modes in the Sub-THz Planar Resonators by AC Josephson Effect
Alexander Snezhko (*Kotelnikov Institute of Radio Engineering and Electronics of RAS*); *Irina Gundareva* (*Kotelnikov Institute of Radio Engineering and Electronics of RAS*); *Yuriy Y. Divin* (*Kotel'nikov Institute of Radio Engineering and Electronics of Russian Academy of Sciences*); *Valery Pavlovsky* (*Kotelnikov Institute of Radio Engineering and Electronics of RAS*); *Vadim Pokalyakin* (*Kotelnikov Institute of Radio Engineering and Electronics of RAS*);

00:00 Antenna Radiation Imitation out Its Real Location Using Hyperbolic Metamaterial Lens via Transformation Optics
Viktoriia Vladimirovna Gill (*ITMO University*); *Anna V. Vozianova* (*ITMO University*); *M. K. Khodzitsky* (*ITMO University*);

00:00 Terahertz Plasmon Instabilities in High Mobility Transistors with Grating Gate
Aleksandr S. Petrov (*Moscow Institute of Physics and Technology*); *Dmitry Svintsov* (*Moscow Institute of Physics and Technology*); *Victor Ryzhii* (*Tohoku University*); *Michael Shur* (*Rensselaer Polytechnic Institute*);

00:00 Terahertz Biomedical Imaging: From Multivariate Analysis and Detection to Material Parameter Extraction
A. Al-Ibadi (*Bordeaux University*); *J. Bou Sleiman* (*Bordeaux University*); *Q. Cassar* (*Bordeaux University*); *G. Macgrogan* (*Institut Bergonie*); *H. Balacey* (*Bordeaux University*); *T. Zimmer* (*Bordeaux University*); *P. Mounaix* (*Bordeaux University*); *Jean-Paul Guillet* (*Bordeaux University*);

00:00 Optically Switchable THz Ultrafast Modulator Based on Cross-shaped Resonators Graphene Metasurface
Alexander N. Grebenchukov (*ITMO University*); *A. D. Zaitsev* (*ITMO University*); *V. Y. Soboleva* (*ITMO University*); *M. G. Novoselov* (*ITMO University*); *E. V. Kornilov* (*ITMO University*); *M. K. Khodzitsky* (*ITMO University*);

00:00 Investigation of Artificial Dielectric Periodical Structures for Formation of Terajets
Alexander Vladimirovich Chernyadiev (*ITMO University*); *A. N. Grebenchukov* (*ITMO University*); *Anna V. Vozianova* (*ITMO University*); *Mikhail Konstantinovich Khodzitsky* (*ITMO University*);

Session 3A6
Remote Sensing Techniques of Earth System Related Components 3

Wednesday AM, May 24, 2017
Room G10
Organized by Jian-Cheng Shi
Chaired by Jian-Cheng Shi

00:00 Estimation of Downward Surface Solar Radiation in All Sky Conditions Based on Remote Sensing
Lili Tu (*Nanjing University*); *Zhihao Qin* (*Institute of Agro-Resources and Regional Planning, Chinese Academy of Agricultural Sciences*); *Wenjuan Li* (*Institute of Agro-Resources and Regional Planning, Chinese Academy of Agricultural Sciences*); *Fei Wang* (*Nanjing University*); *Lechan Yang* (*Nanjing University*);

00:00 A Generalized Split-window Algorithm for Retrieving Land Surface Temperature from GF-5 Thermal Infrared Data
Yu-Ze Zhang (*University of Chinese Academy of Sciences*); *Xiaoguang Jiang* (*University of Chinese Academy of Sciences*); *Hua Wu* (*Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences*);

00:00 On Estimation of Land Surface Longwave Radiation under All-sky Conditions by Combining Multiple Satellite Data of A-train
Tianxing Wang (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Jian-Cheng Shi* (*Institute of Remote Sensing Applications, Chinese Academy of Sciences*); *Tianjie Zhao* (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Dabin Ji* (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Chuan Xiong* (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Rui Li* (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*);

00:00 Improving Satellite-derived Land Surface Temperature for Agro-drought Monitoring
Zhihao Qin (*Institute of Agro-Resources and Regional Planning, Chinese Academy of Agricultural Sciences*); *Zhao-Liang Li* (*Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences*); *Qiuyan Huang* (*Guangxi Teachers Education University*); *Shuhe Zhao* (*Nanjing University*); *Bin Xu* (*Institute of Agro-Resources and Regional Planning, Chinese Academy of Agricultural Sciences*);

00:00 Remote Sensing Method for Drought Monitoring of Sugarcane Farming in Guangxi of South China
Qiuyan Huang (*Guangxi Teachers Education University*); *Zhihao Qin* (*Institute of Agro-Resources and Regional Planning, Chinese Academy of Agricultural Sciences*); *Baoqing Hu* (*Guangxi Teachers Education University*); *Yong Zou* (*Chongzuo Municipal Government*); *Wenjuan Li* (*Institute of Agro-Resources and Regional Planning, Chinese Academy of Agricultural Sciences*);

00:00 The Empirical Method of Soil Temperature Retrieval Based on Radiometer Data MTVZA-GYa on Aboard Russian Satellite Meteor-M No. 2
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*); *Igor V. Savin* (*Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences*); *M. G. Zahvatov* (*SRC "Planeta"*);

00:00 Internal-Blackbody Calibration (IBBC) Approach and Its Operational Application in FY-2 Meteorological Satellites
Qiang Guo (*National Satellite Meteorological Center*);

00:00 A Method of Floor Area Ratio Calculation Based on Remote Sensing Data
Zhengchao Chen (*Institute of Remote Sensing and Digital Earth, CAS*); *Bing Zhang* (*Institute of Remote Sensing and Digital Earth, CAS*); *Junjie Zhu* (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Baipeng Li* (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Jianwei Gao* (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*);

00:00 A Robust DBF Method for Spaceborne SAR
Hu Xie (*Institute of Radar Technology, China Academy of Space Technology*); *Hongxing Dang* (*Institute of Radar Technology, China Academy of Space Technology*); *Wei Yan* (*Institute of Radar Technology, China Academy of Space Technology*); *Yang Gao* (*Institute of Radar Technology, China Academy of Space Technology*);

00:00 Land-cover Classification of Suburban Areas Based on Multi-polarized Airborne SAR Data Using Texture Measures
Fumio Yamazaki (*Chiba University*); *Natsuki Samuta* (*Chiba University*); *Wen Liu* (*Chiba University*);

00:00 A New Geometric Correction Method Based GCPs for High Resolution Airborne SAR Data
Ping Zhang (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *S. T. Fu* (*Institute of Electrical Engineering, Chinese Academy of Sciences*); *Z. Li* (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*);

Session 3A7
Numerical Methods and Simulations in Meta-materials and Photonics

Wednesday AM, May 24, 2017

Room B1

Organized by Wei Cai, Qing Huo Liu

00:00 A 3D Discontinuous Galerkin Time-domain Method for Nano Plasmonics with a Nonlocal Dispersion Model
Nikolai Schmitt (*CNRS*); *Jonathan Viquerat* (*INRIA Sophia Antipolis*); *Claire Scheid* (*Cote d'Azur University, CNRS*); *Stephane Lanteri* (*INRIA Sophia Antipolis*); *M. Moeferdt* (*Humboldt-Universitat zu Berlin*); *Kurt Busch* (*Humboldt Universitat zu Berlin*);

00:00 Maxwell-hydrodynamic Model for Characterizing Nonlinear Plasmonics
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* (*University of Hong Kong*); *Zhi-Xiang Huang* (*Anhui University*);

00:00 Wide-angle Boundary Models for Metasurfaces
Ya Yan Lu (*City University of Hong Kong*);

00:00 I-shaped Metamaterial Antenna for X-band Applications
P. Jain (*PEC University of Technology*); *A. Thourwal* (*PEC University of Technology*); *N. Sardana* (*Institute of Nano Science and Technology*); *S. Kumar* (*PEC University of Technology*); *N. Gupta* (*PEC University of Technology*); *Arun Kumar Singh* (*PEC University of Technology*);

00:00 Numerical Methods for Computing Electromagnetic Properties from Nano-particles to Meta-atoms
Wei Cai (*University of North Carolina at Charlotte*);

00:00 Scattering from Finite Periodic Arrays Using Broadband Green's Function of Periodic Scatterers with Low Wavenumber Extraction (BBGFL)
Shurun Tan (*University of Michigan*); *Leung Tsang* (*University of Michigan*);

00:00 Spectral Element Method for Electromagnetic and Elastic Metamaterials and Periodic Structures
Qing Huo Liu (*Duke University*); *Jun Niu* (*Duke University*); *Linlin Shi* (*Xiamen University*); *Na Liu* (*Xiamen University*);

00:00 Electromagnetic Parameters of Chiral Metamaterials Involving Boundary Effects
Musa Bute (*University of Gaziantep*); *Ugur Cem Hasar* (*University of Gaziantep*);

00:00 The Mixed Finite Element Method for Maxwell's Equations in Metamaterials
Ying Cao (*Xiamen University*); *Na Liu* (*Xiamen University*); *Qing Huo Liu* (*Duke University*);

00:00 Numerical Study of Position Effect of Partitions on Magneto-convection inside an Enclosure
Mohsen Pirmohammadi (*University of Tehran*); *Mohsen Hamedi* (*University of Tehran*);

Session 3A8
MS-2: BRICS Mini-symposium on Nonlinear Photonics and Photonic Assisted Technologies 1

Wednesday AM, May 24, 2017

Room B5

Organized by Alexander. P. Alodjants, Yikun Liu

Chaired by Alexander. P. Alodjants

00:00 Cholic Acid Optical Sensor Based on Liquid Crystal Droplets
Dan Luo (*South University of Science and Technology of China*);

00:00 Orbital Angular Momentum Mode Analyzer for Few-mode Fiber Characterization
Jianji Dong (*Huazhong University of Science and Technology*); *Hailong Zhou* (*Huazhong University of Science and Technology*); *Xinliang Zhang* (*Huazhong University of Science and Technology*);

00:00 Beam shaping via Photopatterned Liquid Crystals
Wei Hu (*Nanjing University*);

00:00 Dielectric and Metallic Nanostructures for Photon Control
Emiliano Rezende Martins (*University of Sao Paulo*);

00:00 Lateral Oxide-refilled Textured Design on High-performance GaN-based Micro-LEDs
Shen-Che Huang (*National Chiao Tung University*); *Heng Li* (*National Chiao Tung University*); *Zhe-Han Zhang* (*National Chiao Tung University*); *Hsiang Chen* (*National Chi Nan University*); *Tien-Chang Lu* (*National Chiao Tung University*);

00:00 Electrically Pumped III-N Microcavity Light Emitters Incorporating an Oxide Confinement Aperture
Ying-Yu Lai (*National Chiao Tung University*); *Tsu-Chi Chang* (*National Chiao Tung University*); *Ya-Chen Li* (*National Chiao Tung University*); *Tien-Chang Lu* (*National Chiao Tung University*); *Shing-Chung Wang* (*National Chiao Tung University*);

00:00 Superresolution Optics Based on Beam Engineering
Xiangping Li (*Jinan University*); *Sicong Wang* (*Jinan University*);

00:00 Stabilization of Multidimensional Matter-wave and Optical Solitons by Spin-orbit Coupling
Boris A. Malomed (*Tel Aviv University*);

00:00 Magnetic vs Electric Nonlinear Response in Nanophotonics
Sergey S. Kruk (*Australian National University*); *Dragomir N. Neshev* (*Australian National University*); *Yuri S. Kivshar* (*Australian National University*);

00:00 Formation and Dynamics of Exciton Polariton Condensate in a One-dimensional Periodic Lattices
Alexander. P. Alodjants (*ITMO University*); *I. Yu. Chestnov* (*Vladimir State University named after A. G. and N. G. Stoletovs*); *A. V. Yulin* (*ITMO University*); *O. A. Egorov* (*Friedrich-Schiller-Universitat Jena*);

00:00 Harnessing the Point-spread Function for High-resolution Far-field Optical Microscopy
Xiangsheng Xie (*Sun Yat-Sen University*); *Guorong Guan* (*Sun Yat-Sen University*);

Session 3A9a
Advances in Chipless RFID Tags and Sensors

Wednesday AM, May 24, 2017

Room B3

Organized by Filippo Costa, Simone Genovesi

Chaired by Filippo Costa, Simone Genovesi

00:00 Erroneous Reading of Information in Chipless RFID Tags
A. Boussada (*Izmir Ekonomi Universitesi*); *Jan Machac* (*Czech Technical University*); *Milan Svanda* (*Czech Technical University in Prague*); *J. Havlicek* (*Czech Technical University*); *Milan Polivka* (*Czech Technical University in Prague*);

00:00 Near-field Chipless RFID Tags for Identification and Authentication Applications
Cristian Herrojo (*Universitat Autònoma de Barcelona*); *J. Mata-Contreras* (*Universitat Autònoma de Barcelona*); *Ferran Paredes* (*Niversitat Autònoma de Barcelona*); *F. Martín* (*Universitat Autònoma de Barcelona*);

00:00 Design of Wireless Sensors by Using Chipless RFID Technology
Filippo Costa (*University of Pisa*); *Simone Genovesi* (*University of Pisa*); *Michele Borgese* (*University of Pisa*); *Alessio Dicandia* (*University of Pisa*); *Giuliano Manara* (*University of Pisa*); *Smail Tedjini* (*Grenoble INP/LCIS*); *Etienne Perret* (*University Grenoble-Alpes*); *David Girbau* (*Universitat Rovira i Virgili*); *Antonio Lazaro* (*Universitat Rovira i Virgili (URV)*); *Ramon Villarino* (*Universitat Rovira i Virgili (URV)*);

00:00 Detuned Dipole Array Backed by Rectangular Plate Applied as Chipless RFID Tag
Milan Polivka (*Czech Technical University in Prague*); *Milan Svanda* (*Czech Technical University in Prague*); *J. Havlicek* (*Czech Technical University*); *Jan Machac* (*Czech Technical University*);

00:00 Two-port Tags RFID Sensor for Detection of Formaldehyde
Ziyan Zeng (*Shanghai Normal University*); *Ling Dang* (*Shanghai Normal University*); *Wangzhou Shi* (*Shanghai Normal University*); *Lei Huang* (*Shanghai Normal University*);

00:00 Two-part Stretchable Passive UHF RFID Textile Tags
Xiaochen Chen (*Tampere University of Technology*); *Han He* (*Tampere University of Technology*); *Liquan Chen* (*Southeast University*); *Pasi Raumonen* (*Tampere University of Technology*); *Leena Ukkonen* (*Tampere University of Technology*); *Johanna Virkki* (*Tampere University of Technology*);

00:00 Fabrication and Performance Evaluation of 3D-printed Graphene Passive UHF RFID Tags on Cardboard
Han He (*Tampere University of Technology*); *Mitra Akbari* (*Tampere University of Technology*); *Xiaochen Chen* (*Tampere University of Technology*); *Amy Nommeots-Nomm* (*Tampere University of Technology*); *Liquan Chen* (*Southeast University*); *Leena Ukkonen* (*Tampere University of Technology*); *Johanna Virkki* (*Tampere University of Technology*);

Session 3A9b
Antenna Array, Phased Array and Reconfigurable Array 1

Wednesday AM, May 24, 2017

Room B3

00:00 Realization of Desired Shaped Beam Array of Helical Antennas
Alapati Sudhakar (*RVR & JC College of Engineering*); *J. Ravindranadh* (*RVR & JC College of Engineering*);

00:00 Slot Antenna Array on Substrate Integrated Waveguide for W-band Radar Applications
Aulia Dewantari (*Yonsei University*); *Jaeheung Kim* (*Yonsei University*); *Se-Yeon Jeon* (*Yonsei University*); *Eunhye Kim* (*Yonsei University*); *Min-Ho Ka* (*Yonsei University*);

00:00 A New Technique to Suppress Grating Lobes beyond Full Wavelength Element Spacing for Linear Arrays
Jacob Adopley (*Ghana Technology University College*);

00:00 Independent Control of the Beamwidth and Sidelobe Level of Taylor One-parameter Arrays
Mohammed Al-Husseini (*American University of Beirut*); *Elias Yaacoub* (*Arab Open University*); *Mohammed Baydoun* (*Lebanese Center for Studies and Research*); *Hassan Ghaziri* (*Lebanese Center for Studies and Research*);

Session 3A_10
MS-1: Mini-symposium on Nanophotonics and Metamaterials 2

Wednesday AM, May 24, 2017

Room R11

Organized by Pavel A. Belov, Andrey A. Bogdanov

Chaired by Andrey A. Bogdanov

00:00 Multipole Scattering of Light by Arbitrary Shaped Nanoparticles and Optical Theorem
Andrey B. Evlyukhin (*Laser Zentrum Hannover e.V.*);

00:00 On the Thresholds of Nanovoid Formation in Glasses by Femtosecond Laser
Anton Rudenko (*Lyon University*); *Jean-Philippe Colombier* (*Lyon University*); *Tatiana E. Itina* (*University of Lyon*);

00:00 Resonant-state Expansion — A New Tool in Physics
Egor A. Muljarov (*Cardiff University*);

00:00 Toroidal Dipole Associated Resonant Forward Scattering of Light by Silicon Nanoparticles
Pavel D. Terekhov (*ITMO University*); *Kseniia V. Baryshnikova* (*ITMO University*); *Alexander Sergeevich Shalin* (*Ulyanovsk Branch of the Institute of Radio Engineering and Electronics, Russian Academy of Sciences*); *Alina Karabchevsky* (*Ben-Gurion University of the Negev*); *Andrey B. Evlyukhin* (*Laser Zentrum Hannover e.V.*);

00:00 Spectral Behavior of Radially Anisotropic Plasmonic Nanospheres
Ari Sihvola (*Aalto University*); *Dimitrios C. Tzarouchis* (*Aalto University*); *Pasi Yla-Oijala* (*Aalto University*); *Henrik Wallen* (*Aalto University*);

00:00 Resonant Optical Properties of AlGaAs/GaAs Multiple-quantum-well Based Bragg Structure at the Second Quantum State
V. V. Chaldyshev (*Ioffe Institute*); *E. V. Kundelev* (*Ioffe Institute*); *Alexander N. Poddubny* (*National Research University for Information Technology, Mechanics and Optics*); *Y. Chen* (*City University of New York*); *M. L. Nakarmi* (*City University of New York*); *N. M. Shakya* (*New York University-Tandon School of Engineering*);

00:00 Integration of MoS2 Monolayers with Dielectric Nanoantennas
Tobias Bucher (*Friedrich-Schiller-Universitat Jena*); *Franz J. F. Lochner* (*Friedrich-Schiller-Universitat Jena*); *Stefan Fasold* (*Friedrich Schiller University*); *Aleksandr Vaskin* (*Friedrich Schiller University Jena*); *Paul D. Harrison* (*Friedrich-Schiller-Universitat Jena*); *Katie E. Chong* (*Australian National University*); *Antony George* (*Friedrich-Schiller-Universitat Jena*); *Falk Eilenberger* (*Friedrich Schiller University*); *Yuri S. Kivshar* (*Australian National University*); *Andrey Turchanin* (*University of Bielefeld*); *Thomas Pertsch* (*Friedrich-Schiller-Universitat*); *Frank Setzpfandt* (*Friedrich-Schiller-Universitat Jena*); *Isabelle Staude* (*Friedrich-Schiller-Universitat Jena*);

00:00 Landau Damping in the THz Optic Response of Dielectric-metal Metamaterials
D. A. Iakushev (*A. Ya. Usikov Institute for Radiophysics and Electronics, Ukrainian Academy of Sciences*); *Nykolay M. Makarov* (*Benemerita Universidad Autonoma de Puebla*); *Felipe Perez-Rodriguez* (*Benemerita Universidad Autonoma de Puebla*);

00:00 Josephson Plasma Waves in Layered Superconductors Subjected to DC Magnetic Field
S. S. Apostolov (*A. Ya. Usikov Institute for Radiophysics and Electronics, Ukrainian Academy of Sciences*); *Z. A. Maizelis* (*A. Ya. Usikov Institute for Radiophysics and Electronics, Ukrainian Academy of Sciences*); *Nykolay M. Makarov* (*Benemerita Universidad Autonoma de Puebla*); *T. N. Rokhmanova* (*A. Ya. Usikov Institute for Radiophysics and Electronics, Ukrainian Academy of Sciences*); *Felipe Perez-Rodriguez* (*Benemerita Universidad Autonoma de Puebla*); *Valery A. Yampol'skii* (*Ukrainian Academy of Science*);

00:00 Optimization for Spatial Separation of Optical Fields' Components in All-dielectric Structures
Kseniia V. Baryshnikova (*ITMO University*); *Dmitry S. Filonov* (*National Research University of Information Technologies, Mechanics and Optics (ITMO)*); *C. R. Simovski* (*St. Petersburg Institute of Fine Mechanics and Optics*); *Andrey B. Evlyukhin* (*Laser Zentrum Hannover e.V.*); *A. S. Shalin* (*ITMO University*);

00:00 New Metadevices Based on Multi-channel Metasurfaces
Ana Diaz-Rubio (*Aalto University*); *Viktar S. Asadchy* (*Aalto University*); *Sergei A. Tretyakov* (*Aalto University*);

Session 3A_11
FocusSession.SC3: Advanced Photonic Technologies for Spectroscopic Applications 1

Wednesday AM, May 24, 2017

Room R10

Organized by Wei Dong Chen, Vincenzo Spagnolo

Chaired by Wei Dong Chen, Vincenzo Spagnolo

00:00 Invited GaSb-based Interband Cascade Lasers Emitting beyond 6 µm
Sven Hoefling (*Universitat Wurzburg*); *Anne Schade* (*Universitat Wurzburg*); *Robert Weih* (*Universitat Wurzburg*); *Matthias Dallner* (*Universitat Wurzburg*); *Martin Kamp* (*University of Wurzburg*);

00:00 Invited Recent Advances in Quartz Enhanced Photoacoustic Sensors Exploiting Custom Tuning Forks
Vincenzo Spagnolo (*Technical University of Bari*); *P. Patimisco* (*Universita degli Studi di Bari and Politecnico di Bari*); *A. Sampaolo* (*Technical University of Bari*); *M. Giglio* (*Technical University of Bari*); *H. Zheng* (*Rice University*); *L. Dong* (*Shanxi University*); *F. K. Tittel* (*Rice University*);

00:00 Invited Development of GaSb Superluminescent LEDs for Integrated Sensing Light Sources
Soile Suomalainen (*Tampere University of Technology*); *J. Viheriala* (*Tampere University of Technology*); *N. Zia* (*Tampere University of Technology*); *R. Koskinen* (*Tampere University of Technology*); *A. T. Aho* (*Tampere University of Technology*); *M. Guina* (*Tampere University of Technology*);

00:00 Invited Photoacoustic Spectroscopy in Gas Mixtures
Ulrike Willer (*Clausthal University of Technology*); *Mario Mordmuller* (*Clausthal University of Technology*); *Wolfgang Schade* (*Clausthal University of Technology*);

00:00 Flame Temperature Measurements in CI Engines Using an Emission Spectroscopy Sensor System
Fabian Feldhaus (*University of Siegen*); *Ingo Schmitz* (*University of Siegen*); *Thomas Seeger* (*University of Siegen*);

00:00 Invited Industrial Gas Sensing Applications for Cascade Lasers
Peter Geiser (*Norsk Elektro Optikk A/S*);

00:00 Invited Frequency-Stabilized Cavity Ring-Down Spectroscopy for Traceable Measurements of Amount of Substance: Application to Water Vapor
Antonio Castrillo (*Universita della Campania "Luigi Vanvitelli"*); *Eugenio Fasci* (*Universita della Campania*); *Livio Gianfrani* (*Universita della Campania "Luigi Vanvitelli"*);

00:00 Invited Quartz-enhanced Photoacoustic Sensing Operating in Pure Amplitude and Wavelength Modulation with a 3-section Quantum Cascade Laser
Pietro Patimisco (*Universita degli Studi di Bari and Politecnico di Bari*); *Angelo Sampaolo* (*Universita degli Studi di Bari and Politecnico di Bari*); *Yves Bidaux* (*Alpes Lasers SA*); *Alfredo Bismuto* (*Alpes Lasers SA*); *Marshall Scott* (*Thorlabs Inc.*); *James Jiang* (*Thorlabs Inc.*); *Frank K. Tittel* (*Rice University*); *Vincenzo Spagnolo* (*Technical University of Bari*);

00:00 Optimization of the Evanescent Wave Fiber Sensors for Mid-infrared Spectroscopy
Svetlana V. Korsakova (*Saratov State University*); *Elena A. Romanova* (*Saratov State University*); *Andrei G. Rozhnev* (*Saratov State University*); *Alexander P. Velmuzhov* (*Institute of Chemistry of High Purity Substances of the RAS*); *Tatyana V. Kotereva* (*Institute of Chemistry of High Purity Substances of the RAS*); *Maxim V. Sukhanov* (*Institute of Chemistry of High Purity Substances of the RAS*); *Vladimir S. Shiryaev* (*Institute of Chemistry of High Purity Substances of the RAS*);

00:00 Mid-infrared Photothermal Spectroscopy: Linear and Nonlinear Techniques for High Resolution Sensing
Atcha Totachawattana (*Boston University*); *Shyamsunder Erramilli* (*Boston University*); *Michelle Y. Sander* (*Boston University*);

00:00 Identification of Pure Rotational CARS Spectra Influenced by High Temperature Gradients
Christian Meibner (*University of Siegen*); *Thomas Seeger* (*University of Siegen*);

00:00 Near-infrared Cavity-enhanced Absorption Spectroscopy for Detection of Natural Gases
Neeraj Prakash (*University of Calgary*); *Ke Du* (*University of Calgary*); *Arun Ramachandran* (*National Institute of Technology Calicut*); *Ravi Varma* (*National Institute of Technology Calicut*); *Jun Chen* (*University of Shanghai for Science and Technology*); *Shuaishuai Yu* (*University of Shanghai for Science and Technology*); *Claudio Mazzoleni* (*Michigan Technological University*);

Session 3A_12
Nonlinear and Extreme Nanophotonics 1

Wednesday AM, May 24, 2017

Room R9

Organized by Andrey A. Fedyanin, Yuri S. Kivshar

Chaired by Yuri S. Kivshar

00:00 Multipolar and Multimodal Nonlinear Nanophotonics
Daria A. Smirnova (*Australian National University*); *Yuri S. Kivshar* (*Australian National University*);

00:00 Chip-based Optical Isolator with Parametric Amplification in a High-Q Microcavity System
Min Xiao (*Nanjing University*); *Xiaoshun Jiang* (*Nanjing University*); *Shiyue Hua* (*Nanjing University*); *Jianming Wen* (*Yale University*); *Liang Jiang* (*Yale University*);

00:00 Third-order Optical Nonlinearity in Metallic Nanostructures: Experiments and Modeling
Giuseppe Della Valle (*Politecnico di Milano*); *Stefano Longhi* (*Politecnico di Milano*); *Giulio Cerullo* (*Politecnico di Milano*);

00:00 Efficient Third Harmonic Generation in All-dielectric and Dielectric-metallic Nanoantennas Excited at Anapole Modes
Gustavo Grinblat (*Imperial College London*); *Y. Li* (*Imperial College London*); *T. Shibanuma* (*Imperial College London*); *Michael P. Nielsen* (*Imperial College London*); *Pablo Albella* (*Imperial College London*); *Rupert Francis Oulton* (*Imperial College London*); *Stefan Alexander Maier* (*Imperial College London*);

00:00 Nonlinear Optical Imaging and Spectroscopy of Gap Plasmons in Single Metal Particle-on-film Nanocavities
Dangyuan Lei (*The Hong Kong Polytechnic University*);

00:00 Controlling Second-harmonic Generation at the Nanoscale with Monolithic AlGaAs-on-AlOx Antennas
Costantino De Angelis (*University of Brescia*); *L. Carletti* (*University of Brescia*); *D. Rocco* (*University of Brescia*); *Andrea Locatelli* (*Universita degli Studi di Brescia*); *V. F. Gili* (*Université Paris Diderot-CNRS*); *M. Ravaro* (*Université Paris Diderot-CNRS*); *Ivan Favero* (*Université Paris Diderot, UMR7162, CNRS*); *Giuseppe Leo* (*Universite Paris Diderot*); *Marco Finazzi* (*Politecnico di Milano*); *L. Ghirardini* (*Politecnico di Milano*); *M. Celebrano* (*Politecnico di Milano*); *Giuseppe Marino* (*King's College London*); *Anatoly V. Zayats* (*King's College London*);

00:00 Nonlinear Optics and Spectroscopy of Single Plasmonic Nanostructure
Pavel N. Melentiev (*Institute for Spectroscopy Russian Academy of Sciences*); *V. I. Balykin* (*Institute for Spectroscopy Russian Academy of Sciences*);

00:00 Plasmonic Structure Based on Low-temperature GaAs as Generator and Detector THz-radiation
Vladislav Romanovich Bilyk (*Federal State Budget Institution of Higher Education "Moscow Technological University" "MIREA"*); *Arseniy M. Buryakov* (*Moscow State Technical University of Radioengineering, Electronics and Automation (MSTU-MIREA)*); *Elena D. Mishina* (*Moscow State Technical University of Radioengineering, Electronics and Automation (MSTU-MIREA)*); *Galib Galiev* (*Institute of Ultra High Frequency Semiconductor Electronics RAS*); *Evgeniy Klimov* (*Institute of Ultra High Frequency Semiconductor Electronics RAS*); *Sergey Pushkarev* (*Institute of Ultra High Frequency Semiconductor Electronics RAS*); *Petr Maltsev* (*Institute of Ultra High Frequency Semiconductor Electronics RAS*);

00:00 THz Electric Field-induced Second Harmonic Generation in Ferroelectric Thin Film $BaSrTiO_3$
Kirill Grishunin (*Moscow Technological University (MIREA)*); *Nikita A. Ilyin* (*Moscow State Technical University MIREA*); *Natalia E. Sherstyuk* (*Moscow State Institute of Radioengineereing, Electronics and Automation (MSTU-MIREA)*); *Elena D. Mishina* (*Moscow State Technical University of Radioengineering, Electronics and Automation (MSTU-MIREA)*); *Alexey Kimel* (*Moscow Technological University (MIREA)*); *Vladimir Mukhortov* (*Southern Federal University*); *Andrey Ovchinnikov* (*Joint Institute for High Temperatures of the Russian Academy of Sciences (JIHT RAS)*); *Oleg Chefonov* (*Joint Institute for High Temperatures of the Russian Academy of Sciences (JIHT RAS)*); *Mikhail B. Agranat* (*Joint Institute for High Temperatures of the Russian Academy of Sciences (JIHT RAS)*);

00:00 Highly Sensitive Photodetector Based on Transition Metal Dichalcogenides Monolayer
Anastasia Pavlovna Shestakova (*Moscow Technological University (MIREA)*); *Sergey Lavrov* (*Moscow Technological University (MIREA)*); *Elena D. Mishina* (*Moscow State Technical University of Radioengineering, Electronics and Automation (MSTU-MIREA)*); *Yurii Efimenkov* (*NPP "PULSAR"*);

Session 3A_13
Plasmon-assisted Effects in Nanoparticles and Nanostructures: from Field Enhancement to Material Modifictions 1

Wednesday AM, May 24, 2017

Room R8

Organized by Tatiana E. Itina

Chaired by Tatiana E. Itina

00:00 Invited Combined SPR, Electrochemistry, and Fluorescence Spectroscopy Approach for Biomarkers Detection
Lang Zhou (*Auburn University*); *Bryan A. Chin* (*Auburn University*); *Aleksandr L. Simonian* (*National Science Foundation*);

00:00 Invited Plasmon Resonances Metal Nanoparticle Arrays with Quadrupole Coupling
Andrey B. Evlyukhin (*Laser Zentrum Hannover e.V.*);

00:00 Picosecond Control of Plasmonic Nanoantennas Driven by Hot-spot Induced Phase-transition in VO_2
Luca Bergamini (*University of the Basque Country UPV-EHU*); *Y. Wang* (*University of Southampton*); *J. M. Gaskell* (*University of Salford*); *Nerea Zabala* (*University of the Basque Country UPV-EHU*); *C. H. de Groot* (*University of Southampton*); *David W. Sheel* (*Salford University*); *J. Aizpurua* (*Donostia International Physics Center DIPC*); *Otto L. Muskens* (*University of Southampton*);

00:00 Invited The Development of Hybrid Plasmonic Nanostructures for Medical Application
Alexey V. Povolotskiy (*Saint-Petersburg State University*); *Ilya Kolesnikov* (*Saint-Petersburg State University*); *Anastasia Povolotckaia* (*Saint-Petersburg State University*); *Alexander Konev* (*Saint-Petersburg State University*); *Alexey Kurochkin* (*Saint-Petersburg State University*);

00:00 Hot-electron Dynamics and Thermalization in Small Metallic Nanoparticles
Jose Ramon Martinez Saavedra (*ICFO Institut de Ciencies Fotoniques, The Barcelona Institute of Science and Technology*); *A. Asenjo-Garcia* (*ICFO Institut de Ciencies Fotoniques, The Barcelona Institute of Science and Technology*); *F. Javier Garcia De Abajo* (*ICFO Institut de Ciencies Fotoniques, The Barcelona Institute of Science and Technology*);

00:00 Metal-carbyne Clusters for SERS Realization
Invited
Alexey O. Kucherik (*Stoletovs' Vladimir State University*); *Alexandre A. Antipov* (*Stoletovs' Vladimir State University*); *Stella V. Kutrovskaya* (*Stoletovs' Vladimir State University*); *Anton Osipov* (*Stoletovs Vladimir State University*); *Sergey M. Arakelyan* (*Stoletovs Vladimir State University*);

00:00 White Light Generation in Gold Films near Percolation Threshold
Sergey M. Novikov (*University of Southern Denmark*); *Christian Frydendahl* (*Technical University of Denmark*); *Jonas Beermann* (*University of Southern Denmark*); *Vladimir A. Zenin* (*University of Southern Denmark*); *Nicolas Stenger* (*Technical University of Denmark*); *Victor Coello* (*CICESE Monterrey*); *N. Asger Mortensen* (*Technical University of Denmark*); *Sergey I. Bozhevolnyi* (*University of Southern Denmark*);

00:00 Plasmon Modes of Vertically Aligned Superlattices
Konstantin Filonenko (*Syddansk Universitet*); *Lars Duggen* (*Syddansk Universitet*); *Morten Willatzen* (*University of Southern Denmark*);

00:00 Plasmon Assisted Selection of Optical Properties of Nanoparticles for Their Effective Absorption of Solar Radiation
Victor K. Pustovalov (*Belarusian National Technical University*);

00:00 Bulk Photoemission from Plasmonic Nanoparticles: Physical Models and Software Tools
Renat Sh. Ikhsanov (*National Research University Higher School of Economics*); *A. V. Novitsky* (*Technical University of Denmark*); *Igor E. Protsenko* (*Lebedev Physical Institute*); *Alexander V. Uskov* (*Lebedev Physical Institute*);

00:00 2D-plasmons in a Random Impedance Network Model of Disordered Nanocomposites
Nikita A. Olekhno (*Ioffe Institute*); *Y. M. Beltukov* (*Ioffe Institute*);

Session 3A0
Poster Session 5

Wednesday AM, May 24, 2017
9:00 AM - 13:00 AM
Room B2

00:00 Breast Cancer Detection Using Sequential Likelihood Test and Frechet Mean Estimation
Aleksandar Jeremic (*McMaster University*);

00:00 A Study of the Dielectric Properties of Biological Tissues: Ex-vivo vs Preserved Samples
Irina L. Alborova (*Bauman Moscow State Technical University*); *Julian Bonello* (*University of Malta*); *Lourdes Farrugia* (*University of Malta*); *Charles V. Sammut* (*University of Malta*); *Lesya N. Anishchenko* (*Bauman Moscow State Technical University*);

00:00 Speed of Light in Vacuum Revisited
Namik Yener (*Kocaeli University*);

00:00 A Novel Menu Interaction Method Using Head-mounted Display for Smartphone-based Virtual Reality
Changchong Sheng (*Ational University of Defense Technology*); *Libing Jiang* (*National University of Defense Technology*); *Bo Tang* (*Ational University of Defense Technology*); *Xiao-An Tang* (*National University of Defense Technology*);

00:00 Image Enhancement and Denoising for Fringe Projection Patterns
Chung-Hsin Huang (*Taipei College of Maritime Technology*); *Ching-Huang Hsieh* (*Chinese Culture University*); *Wei-Chih Hsu* (*Chinese Culture University*); *Ssu-Chia He* (*Chinese Culture University*); *Chen-Chia Chu* (*Taipei College of Maritime Technology*); *Han-Yen Tu* (*Chinese Culture University*);

00:00 Crosstalk Distortion Reduction in Color Fringe Projection Profilometry
Chung-Hsin Huang (*Taipei College of Maritime Technology*); *Ching-Huang Hsieh* (*Chinese Culture University*); *Chih-Wei Hsu* (*Chinese Culture University*); *Wen-Ling Hsieh* (*Chinese Culture University*); *Chen-Chia Chu* (*Taipei College of Maritime Technology*); *Han-Yen Tu* (*Chinese Culture University*);

00:00 Point-like Source of Extreme Ultraviolet Radiation Based on the Plasma of THz Gas Discharge in a Focused Beam
Dmitry Sidorov (*Federal State Budgetary Scientific Institution "Federal Research Center The Institute of Applied Physics of the Russian Academy of Sciences"*); *Alexander Vodopyanov* (*Federal State Budgetary Scientific Institution "Federal Research Center The Institute of Applied Physics of the Russian Academy of Sciences"*); *Alexander Sidorov* (*Federal State Budgetary Scientific Institution "Federal Research Center The Institute of Applied Physics of the Russian Academy of Sciences"*); *Alexey Luchinin* (*Federal State Budgetary Scientific Institution "Federal Research Center The Institute of Applied Physics of the Russian Academy of Sciences"*); *Mikhail Yu Glyavin* (*Federal State Budgetary Scientific Institution "Federal Research Center The Institute of Applied Physics of the Russian Academy of Sciences"*); *Sergey Razin* (*Federal State Budgetary Scientific Institution "Federal Research Center The Institute of Applied Physics of the Russian Academy of Sciences"*); *Sergey Golubev* (*Federal State Budgetary Scientific Institution "Federal Research Center The Institute of Applied Physics of the Russian Academy of Sciences"*);

00:00 Quantitative Relations between Modulational Instability and Several Well-known Nonlinear Excitations
Li-Chen Zhao (*Northwest University*); *Liming Ling* (*South China University of Technology*);

00:00 Role of Resonance Radiation Trapping in the Mechanisms of Constriction of the Glow Discharge
Yuri Golubovskii (*St. Petersburg State University*); *Aleksei Siasko* (*St. Petersburg State University*);

00:00 Two Methods of Plasma Activation of Nitrogen for Nitride Compounds Growth
Alexander Vodopyanov (*Federal State Budgetary Scientific Institution 'Federal Research Center The Institute of Applied Physics of the Russian Academy of Sciences'*); *Dmitry Mansfeld* (*Federal State Budgetary Scientific Institution 'Federal Research Center The Institute of Applied Physics of the Russian Academy of Sciences'*); *Mikhail Viktorov* (*Federal State Budgetary Scientific Institution 'Federal Research Center The Institute of Applied Physics of the Russian Academy of Sciences'*); *Sergey Sintsov* (*Federal State Budgetary Scientific Institution 'Federal Research Center The Institute of Applied Physics of the Russian Academy of Sciences'*);

00:00 New Discrete Method for Solving the Problem of Radiation Trapping in Arbitrarily Shaped Plasmas
Dmitry Kalanov (*Saint-Petersburg State University*); *Yuri Golubovskii* (*St. Petersburg State University*); *S. Gortschakow* (*Leibniz Institute for Plasma Science and Technology*); *D. Uhrlandt* (*Leibniz Institute for Plasma Science and Technology*);

00:00 On the Impact of Motion of Strongly Magnetized Plasma to the Radiation of Traveling-wave Antenna at Frequency Lower than Plasma Frequency
D. D. Bareev (*Lobachevsky State University of Nizhni Novgorod*); *Vladimir G. Gavrilenko* (*Nizhniy Novgorod State University*); *V. D. Pikulin* (*Lobachevsky State University of Nizhni Novgorod*);

00:00 Simulation of SiH_4 and N_2O PECVD Process for Preparing SiO_2 Thin Film
Zhuwen Zhou (*Key Laboratory of Photoelectron Materials Design and Simulation in Guizhou Province*); *Yiyan Yang* (*Key Laboratory of Photoelectron Materials Design and Simulation in Guizhou Province*); *Bo Kong* (*Key Laboratory of Photoelectron Materials Design and Simulation in Guizhou Province*); *Chen Lu* (*Key Laboratory of Photoelectron Materials Design and Simulation in Guizhou Province*);

00:00 Research on Electromagnetic Scattering and Plasma Stealth Design of S-shaped Inlet
Zhi Jie Song (*Air Force Engineering University*); *Hao Jun Xu* (*Air Force Engineering University*); *Xiao Long Wei* (*Air Force Engineering University*); *Zeng Hui Chen* (*Air Force Engineering University*);

00:00 A Classification Technique for Condensed Matter Phases Using a Combination of PCA and SVM
Waleed Kamal Badawi (*Arab Academy for Science and Technology (AASTMT)*); *Ziad M. Osman* (*Arab Academy for Science and Technology (AASTMT)*); *Maha A. Sharkas* (*Arab Academy for Science and Technology (AASTMT)*); *Mohamed E. Tamazin* (*Arab Academy for Science, Technology and Maritime Transport Alexandria*);

00:00 A Broadband Polarization Insensitive Metamaterial Absorber Based on Three-dimensional Structure
Ling-Ling Wang (*Nanjing University of Aeronautics and Astronautics*); *Shaobin Liu* (*Nanjing University of Aeronautics and Astronautics*); *Hai Feng Zhang* (*Nanjing University of Aeronautics and Astronautics*); *Yong-Diao Wen* (*Nanjing University of Aeronautics and Astronautics*); *Bo-Rui Bian* (*Nanjing University of Aeronautics and Astronautics*); *Xue Feng* (*Nanjing University of Aeronautics and Astronautics*);

00:00 A Tunable Microwave Metamaterial Absorber/Cross-polarization Reflector
Yong-Diao Wen (*Nanjing University of Aeronautics and Astronautics*); *Shaobin Liu* (*Nanjing University of Aeronautics and Astronautics*); *Hai Feng Zhang* (*Nanjing University of Aeronautics and Astronautics*); *Xue Feng* (*Nanjing University of Aeronautics and Astronautics*);

00:00 Metasandwich Ferrite Plate/Wire Grating/Longitudinal Copper Strip with Varactor to Achieving Controlled Microwave Nonreciprocal Absorption
Galina A. Kraftmakher (*Kotelnikov Institute of Radioengineering & Electronics, RAS*); *Valery S. Butylkin* (*Kotelnikov Institute of Radioengineering & Electronics, RAS*); *Yuri N. Kazantsev* (*Kotelnikov Institute of Radioengineering & Electronics, RAS*); *Valeriy P. Mal'tsev* (*Kotelnikov Institute of Radioengineering & Electronics, RAS*);

00:00 Demonstration of Scalable Spectrum-sliced Optical WDM-PON Access System
Kristaps Dravnieks (*Riga Technical University*); *Sandis Spolitis* (*Riga Technical University*);

00:00 Comparison of Dispersion Compensation Methods for 40 Gbit/s WDM-PON Transmission Systems
Valts Dilendorfs (*Riga Technical University*); *Sandis Spolitis* (*Riga Technical University*); *Vjaceslavs Bobrovs* (*Riga Technical University*);

00:00 Performance Investigation of Dispersion Compensation Methods for WDM-PON Transmission Systems
Marina Aleksejeva (*Riga Technical University*); *Sandis Spolitis* (*Riga Technical University*);

00:00 Hybrid Single and Multi-path Routing and Distance Adaptive Modulation Level Spectrum Allocation in OFDM-based Elastic Optical Networks
Kiarash Malekzadeh (*Iran University of Science and Technology*); *Sadegh Abbasi Shahkooh* (*Iran Telecommunication Research Center*);

00:00 Investigation of 4-PAM Modulation Format for Use in WDM-PON Optical Access Systems
Toms Salgals (*Riga Technical University*); *Sandis Spolitis* (*Riga Technical University*); *Sergejs Olonkins* (*Riga Technical University*); *Vjaceslavs Bobrovs* (*Riga Technical University*);

00:00 Algorithm of Objects Classification by Optoelectronic Systems of Unmanned Aerial Vehicles
Igor N. Ischuk (*Zhukovsky-Gagarin Air Force Academy*); *Evgeny A. Stepanov* (*Zhukovsky-Gagarin Air Force*); *Andrey A. Bebenin* (*Zhukovsky-Gagarin Air Force*); *Mikhail E. Semenov* (*Zhukovsky-Gagarin Air Force Academy*); *Evgeniya G. Kabulova* (*National University of Science and Technology "MISIS"*); *Olesya I. Kanishcheva* (*Zhukovsky-Gagarin Air Force Academy*); *Alexander F. Klinskikh* (*Voronezh State University*); *Peter A. Meleshenko* (*Voronezh State University*);

00:00 Development of Y-type Receiver for Atmospheric Optical Communication
Changqi Yang (*Xi'an Shiyou University*);

00:00 Portable Atmospheric Optical Communication System
Changqi Yang (*Xi'an Shiyou University*);

00:00 A Low-cost, Compact OEIC without Equalizer for 5 Gb/s Application
Rong Wang (*Southeast University*); *Chen Fan* (*Southeast University*); *Zhigong Wang* (*Southeast University*);

00:00 Modeling of a Straight Channel and Y-splitter Waveguides by Loading SiO_2 Planar Waveguide with MgF_2
Muhammad Ali Butt (*Samara National Research University*); *Elena Sergeevna Kozlova* (*Samara National Research University*); *Svetlana N. Khonina* (*Samara State Aerospace University*);

00:00 Polarization Switchings across Phase Boundary in Vertical-cavity Surface-emitting Lasers
Tsu-Chiang Yen (*National Sun Yat-sen University*);

00:00 Tunable Frequency Selective Radome with Broadband Absorbing Properties
Hong Zhu (*National University of Defense Technology*); *Jingjian Huang* (*National University of Defense Technology*); *Nai-Chang Yuan* (*National University of Defense Technology*); *Bo Yi* (*National University of Defense Technology*);

00:00 Design of Edge Coupled Open Loop Metamaterial Filters
Betsy George (*Amrita University*); *Nair S. Bhuvana* (*Amrita Center for Wireless Networks and Applications*); *Sreedevi K. Menon* (*Amrita University*);

00:00 Fully Reconfigurable Evanescent Mode Bandpass Filter Embedded with Metallic Grid
Shang Yu Hung (*University of California*); *G. P. Li* (*University of California*);

00:00 A Broadband Vertical Transition of Multichip Modules Based on Anisotropic Conductive Adhesives Design
Weihong Liu (*Xi'an University of Posts and Telecommunications*); *Fan Wang* (*Xi'an University of Posts and Telecommunications*);

00:00 Implementation of a Wide Band VHF High Power Tubular Band Pass Filter
Zohre Pourgholamhossein (*Isfahan University of Technology (IUT)*); *Gholamreza Askari* (*Isfahan University of Technology (IUT)*); *Hamid Mirmohammad Sadeghi* (*Isfahan University of Technology (IUT)*); *Mehdi Fadaei* (*Isfahan University of Technology (IUT)*);

00:00 Liquid Crystal WDM Filter in Si Photonic Crystal Technology with Individual Channel Fine-tuning Capability
Joaquin Faneca Ruedas (*University of Exeter*); *Tatiana S. Perova* (*The University of Dublin & ITMO University*); *Vladimir A. Tolmacheva* (*Ioffe Physical Technical Institute*); *Geoffrey Richard Nash* (*University of Exeter*); *Anna Baldycheva* (*University of Exeter*);

00:00 Optimization of RF Chains of Smart Mobile Unit for Secure and Reliable Communication in Indoor Environment
Asad Husnain Baqar (*Harbin Engineering University*); *Tao Jiang* (*Harbin Engineering University*);

00:00 Cognitive Radio for Next Generation Cellular Network and Its Challenges
Al Smadi Takialddin (*Jerash University*);

00:00 Architecture and Research of M2M Wireless Mesh Networks
Vladislavs Nazarovs (*Riga Technical University*); *Jans Jelinskis* (*Riga Technical University*); *Jurgis Porins* (*Riga Technical University*); *Ingrida Lavrinovica* (*Riga Technical University*); *Andis Supe* (*Riga Technical University*); *Vitalijs Aispurs* (*Riga Technical University*);

00:00 Simulation Analysis of Microwave Propagation Channel Based on Stochastic Modeling in Sea Environment
Lingfei Guo (*Harbin Engineering University*); *Yanjie Sun* (*Harbin Engineering University*); *Shuang Gao* (*Harbin Engineering University*); *Tao Jiang* (*Harbin Engineering University*);

00:00 A Novel Multi-corridor Path-Loss Model for Indoor Communications
Antonio Sorin Tasu (*Constanta Maritime University*); *Ana Dumitrascu* (*Constanta Maritime University*); *Lilana Anchidin* (*Constanta Maritime University*); *Razvan Tamas* (*Maritime University of Constanta*); *Teodor Petrescu* (*University Politehnica of Bucharest*);

00:00 Electromagnetic Compatibility Assessment of LTE 700 Networks for Co-channel Case
Guntis Ancans (*Riga Technical University*); *Tamara Sharashidze* (*Riga Technical University*); *Vjaceslavs Bobrovs* (*Riga Technical University*);

00:00 Simulation of Intelligent Public Light System in Smart City
Radek Fujdiak (*Brno University of Technology*); *Petr Mlynek* (*Brno University of Technology*); *Jiri Misurec* (*Brno University of Technology*); *Jan Slacik* (*Brno University of Technology*);

00:00 A Blocking Collision Tracking Tree Algorithm in Mobile RFID Systems
Jinyan Liu (*Southwest Jiaotong University*); *Quanyuan Feng* (*Southwest Jiaotong University*);

00:00 Quality of Service Measurements and Service Mapping for the Mobile Internet Access
Elmars Lipenbergs (*Riga Technical University*); *Alina Stafecka* (*Riga Technical University*); *Girts Ivanovs* (*Riga Technical University*); *Inga Smirnova* (*Public Utilities Commission*);

00:00 Single-satellite Positioning Algorithm Based on Direction-finding
Chunjing Wang (*National University of Defense Technology*); *Weihua Wang* (*National University of Defense Technology*); *Zengping Chen* (*National University of Defense Technology*);

00:00 Fast Algorithm for Suppressing Sidelobes at Specified Intervals
Liang Tang (*National University of Defense Technology*); *Yongfeng Zhu* (*National University of Defense Technology*); *Qiang Fu* (*National University of Defense Technology*);

00:00 Strange Non-chaotic Self-oscillations
A. Yu. Jalnine (*Institute of Radio-Engineering and Electronics of RAS*); *Sergey P. Kuznetsov* (*Institute of Radio-Engineering and Electronics of RAS*);

00:00 Design and Analysis Performance of a New Patch Array Antenna for SSR
Mohsen Abdolahi (*Isfahan University of Technology (IUT)*); *Zohre Pourgholamhossein* (*Isfahan University of Technology (IUT)*); *Gholamreza Askari* (*Isfahan University of Technology (IUT)*); *Hamid Mirmohammad Sadeghi* (*Isfahan University of Technology (IUT)*);

00:00 Implementation of the IRI Model into the NIM-RT Software with Optimization of the Ionosphere Parameters to Day-to-day Variation
Nikolay Y. Zaalov (*Saint Petersburg State University*); *E. V. Moskaleva* (*University of Saint Petersburg*); *T. S. Burmakina* (*University of Saint Petersburg*);

00:00 Frequency-, Temperature-, and Texture-dependent Dielectric Model for Frozen and Thawed Arctic Mineral Soils
Valery L. Mironov (*Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences*); *Ilya Molostov* (*Altai State University*); *Yury I. Lukin* (*Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences*); *A. Y. Karavaysky* (*Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences*); *Sergey Viktorovich Fomin* (*Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences*);

00:00 Compensation of Turbulent Distortions in Multiaperture Imaging
Anna S. Eremina (*V.E. Zuev Institute of Atmospheric Optics, SB RAS*); *V. V. Dudorov* (*V.E. Zuev Institute of Atmospheric Optics, SB RAS*);

00:00 Evaluation of an Attenuation Correction Method for X-band Dual Polarization Weather Radars
Sanghun Lim (*Korea Institute of Civil Engineering and Building Technology*); *Won Kim* (*Korea Institute of Civil Engineering and Building Technology*); *V. Chandrasekar* (*Colorado State University*); *Bong-Joo Jang* (*Korea Institute of Civil Engineering and Building Technology*); *Hyunjung Kim* (*Korea Institute of Civil Engineering and Building Technology*); *Jeongho Choi* (*JCOMS Co. Ltd.*);

00:00 An Improved PCA-SIFT Algorithm Application in Light Small UAV Image Registration
Xin Yang (*National University of Defense Technology*); *Libing Jiang* (*National University of Defense Technology*); *Xiao-An Tang* (*National University of Defense Technology*); *Xiaoyuan Ren* (*National University of Defense Technology*);

00:00 Simultaneous Radar and Video Observations of the Sea Surface in Field Conditions
Yury Yu Yurovsky (*FSBSI Marine Hydrophysical Institute RAS*); *V. N. Kudryavtsev* (*FSBSI Marine Hydrophysical Institute RAS*); *Bertrand Chapron* (*IFREMER*);

00:00 An Adaptive Information-Modeling System (AIMS) for Monitoring Aquatic Ecosystems
Ferdenant 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*);

00:00 Relativistic One and Two Spin 1/2 Particles Systems
H. Moradpour (*Research Institute for Astronomy and Astrophysics of Maragha (RIAAM)*); *Mahdi Bahadoran* (*Shiraz University of Technology*);

00:00 Criteria for Choosing the Best Substation Protection Scheme
Mozhgan Salehi (*Amirkabir University of Technology*); *Hamid Danaei* (*Niroo Research Institute*); *Mehran Soleymanifar* (*Niroo Research Institute*);

00:00 Study on the Microwave Attenuation Characteristics of Solid Rocket Exhausts
Hui Li (*China Research Institute of Radio wave Propagation (CRIRP)*); *Jian Wu* (*China Research Institute of Radiowave Propagation*); *Zhongxiang Zhou* (*Harbin Institute of Technology*);

00:00 The Influence of Electric Field of Co-rotation onto Process of Long Orbital Holding of Micro-particles of Space Debris in the Earth's Plasmasphere
E. K. Kolesnikov (*St. Petersburg State University*); *S. V. Chernov* (*St. Petersburg State University*); *Andrey Borisovich Yakovlev* (*St. Petersburg State University*);

00:00 Spatial Solitons with Complicated Structure in Nonlocal Nonlinear Media
Guo Liang (*Shangqiu Normal University*); *Weiyi Hong* (*South China Normal University*); *Qi Guo* (*South China Normal University*);

00:00 Hermite-Gaussian Stationary Solutions in Strongly Nonlocal Nonlinear Media
Lanhua Zhong (*South China Normal University*); *Zhanmei Ren* (*South China Normal University*); *Qi Guo* (*South China Normal University*);

00:00 Gas Breakdown by a Focused Beam of CW THz Radiation
Alexander V. Sidorov (*Federal Research Center "Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)"*); *Sergey V. Razin* (*Federal State Budgetary Scientific Institution "Federal Research Center The Institute of Applied Physics of the Russian Academy of Sciences"*); *Alexander I. Tsvetkov* (*Federal Research Center "Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)"*); *Andrey P. Fokin* (*Federal Research Center "Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)"*); *Alexey P. Veselov* (*Federal Research Center "Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)"*); *Sergey V. Golubev* (*Federal Research Center "Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)"*); *Alexander V. Vodopyanov* (*Federal Research Center "Institute of Applied Physics of the Russian Academy of Sciences (IAP RAS)"*); *Mikhail Yu Glyavin* (*Federal State Budgetary Scientific Institution "Federal Research Center The Institute of Applied Physics of the Russian Academy of Sciences"*);

00:00 Quantum Hydrodynamics in the Rotating Reference Frame
Mariya Iv. Trukhanova (*Lomonosov Moscow State University*); *Serg Usmanov* (*Lomonosov Moscow State University*);

00:00 Symmetric and Asymmetric Optical Multi-peak Solitons on a Continuous Wave Background in the Femtosecond Regime
Chong Liu (*Northwest University*); *Zhanying Yang* (*Northwest University*); *Li-Chen Zhao* (*Northwest University*); *Liang Duan* (*Northwest University*); *Guangye Yang* (*Shanxi Medical University*); *Wen-Li Yang* (*Shaanxi Key Laboratory for Theoretical Physics Frontiers*);

00:00 Energies, Fine Structures, and Hyperfine Structures of the $\mathbf{1}s^{\mathbf{2}}\mathbf{2}s\mathbf{2}p\ ^{\mathbf{3}}\boldsymbol{P}^{\circ}$ State of Be-like Ions with $\boldsymbol{Z} = \mathbf{15}$–18
Bingcong Gou (*Beijing Institute of Technology*); *Kai Kai Li* (*People's Public Security University of China*);

00:00 Electromagnetic Scattering from a Loaded Corrugated Cylinder
Samuel Garcia (*Florida Atlantic University*); *Jonathan S. Bagby* (*Florida Atlantic University*);

00:00 Determining the Bottom Surface in the Randomly Inhomogeneous Media
V. A. Kan (*Far Eastern Federal University*); *I. V. Prokhorov* (*Far Eastern Federal University*); *Andrei A. Sushchenko* (*Far Eastern Federal University*); *E. O. Kovalenko* (*Far Eastern Federal University*);

00:00 Interactive Effects of Challenge — Hindrance Stressors and Core Self Evaluations on In-role and Extra Role Performance
Khansa Hayat (*SZABIST*);

00:00 Invited Plasmon-enhanced Polarized Nonlinear Upconversion Emissions in Lanthanide-doped Upconversion Nanocrystals
Dangyuan Lei (*The Hong Kong Polytechnic University*);

00:00 Microstructured Fiber with Metallic Inclusions — Guidance Features for Sensing Applications at THz Spectrum
Markos Paulo Cardoso (*Federal University of Para*); *Anderson Oliveira Silva* (*University of Sao Paulo*); *Joao C. W. A. Costa* (*Federal University of Para*);

00:00 Investigation of Chiral Metasurface Characteristics Dependence on Chiral Unit Element Curvature in Teraherz Frequency Range
M. S. Masyukov (*ITMO University*); *Anna V. Vozianova* (*ITMO University*); *Alexander N. Grebenchukov* (*ITMO University*); *M. K. Khodzitsky* (*ITMO University*);

00:00 Analysis of Artificial Media to Control Phase Characteristics of Electromagnetic Wave in Terahertz Frequency Range
E. A. Litvinov (*ITMO University*); *Alexander Vladimirovich Chernyadiev* (*ITMO University*); *Anna V. Vozianova* (*ITMO University*); *M. K. Khodzidsky* (*ITMO University*);

00:00 Changing Simulation of Carbon Nanotube after Implantation of Hydrogen Ion Or Atom through Binary Collision
Diyar Bajalan (*St. Polten*);

00:00 Investigations on Sr Doping on Ferroelectric and Magnetic Properties of $BiFeO_3$-$PbTiO_3$ Multiferroic System
N. Kumar (*PEC University of Technology*); *N. Bastola* (*Indian Institute of Science*); *P. Jain* (*PEC University of Technology*); *Sanjeev Kumar* (*PEC University of Technology*); *A. K. Singh* (*PEC University of Technology*); *R. Ranjan* (*Indian Institute of Science*);

00:00 Boundary Conditions for Surface Second Harmonic Generation at a Metal-dielectric Interface Revisited
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*);

00:00 Fiber-optic Fabry-Perot Interferometer with an Open Cavity for Fast Refractive Index and Magnetic Field Measurement
Yangzi Zheng (*Nanyang Technological University*); *Chi Chiu Chan* (*Nanyang Technological University*); *Xinyong Dong* (*China Jiliang University*);

00:00 Properties of Carbon Nanotubes and Applications
Diyar Bajalan (*St. Polten*);

00:00 Influence of the Losses on the Q-factor of a Rotating Coaxial Spherical Resonator
Daria Titova (*Southern Federal University*); *Boris M. Petrov* (*Southern Federal University*);

00:00 Buffer Layer Effects on Magnetic Resonance in Ferrite-piezoelectric Bilayer
Vladimir M. Petrov (*Novgorod State University*); *A. F. Saplev* (*Novgorod State University*);

00:00 Design of Reconfigurable Dielectric Resonator Antenna for Microwave Applications
Shaymaa. M. Gaber (*Cairo Higher Institute of Engineering*); *Noha Ahmed Al-Shalaby* (*Kafer Elshekh University*);

00:00 Frequency Approach for Parameter Extraction in Implicit Space Mapping Exploiting LTCC Filter Optimization Design
Yali Qin (*Zhejiang Key Research Lab of Fiber-Optic Communication Technology*);

00:00 Electronics Significant Improvements for Mini Disk Dedicated Oven
Mikhail Zarubin (*CNRS, UMR 6174, Laboratoire Associe au Laboratoire National de Metrologie et d'essais (LNE)*); *Patrice Salzenstein* (*Centre National de la Recherche Scientifique (CNRS), FEMTO-ST*);

00:00 Radio Communication System Based on Nondeterministic Radio Signals
Anton V. Ubaychin (*Tomsk State University of Radio Electronics and Control System*); *Gregory G. Zhuk* (*Tomsk State University of Radio Electronics and Control System*); *Egor V. Alekseev* (*Tomsk State University of Radio Electronics and Control System*); *Tilekbek Abdirasul* (*Tomsk State University of Radio Electronics and Control System*);

00:00 Monitoring of Normal and Tumor Breast Tissues Using Six-port Reflectometer-coaxial Probe System
Chia Yew Lee (*Universiti Teknologi Malaysia*); *Kok Yeow You* (*University Teknologi Malaysia*); *Nadera Najib* (*Universiti Teknologi Malaysia*); *Kim Yee Lee* (*Universiti Tunku Abdul Rahman*); *Zulkifly Abbas* (*University Putra Malaysia*); *Ee Meng Cheng* (*Universiti Malaysia Perlis (UniMAP)*); *Yeng Seng Lee* (*Universiti Malaysia Perlis (UniMAP)*); *Li Ling You* (*Mahsa University*);

00:00 An Improvement Method about ITU-R. P1546 Model for Radiowave Prediction on Complex Environments
Zhi Cao (*Communication University of China*); *Guizhen Lu* (*Communication University of China*); *Ruidong Wang* (*Academy of Broadcasting Planning SARFT*);

00:00 An Investigation of Beamwidth Adjusting for Improving SSPE Prediction Accuracy in Electromagnetic Wave Propagation
Ruidong Wang (*Communication University of China (CUC)*); *Guizhen Lu* (*Communication University of China*); *Dongdong Zeng* (*Communication University of China*); *Rongshu Zhang* (*Communication University of China (CUC)*);

00:00 Analysis of the Test Zone by Throughput in the Multiprobe Anechoic Chamber system
Xianhui Liu (*China Academy of Information and Communication Technology*); *Bo Lu* (*China Academy of Information and Communication Technology*); *Zheng Liu* (*China Academy of Information and Communication Technology*); *Huaizhi Yang* (*Keysight Technologies China, Co. Ltd.*); *Jin Wang* (*Keysight Technologies China, Co. Ltd.*); *Wei Li* (*Ministry of Industry and Information Technology*); *Xun Dai* (*China Academy of Information and Communication Technology*);

00:00 Design and Implementation of Autonomous Selective Jammer for Communication Data Link
Fang Ye (*Harbin Engineering University*); *Shijia Shao* (*Harbin Engineering University*);

00:00 Compensating Memory Effects in Polynomial Power Amplifier for OFDM Systems
Maryam Sajedin (*Islamic Azad University*);

00:00 A New Six-way Broadband Spatial Power Combiner/Divider Based on Conical Cavity
Mohsen Abdolahi (*Isfahan University of Technology (IUT)*); *Zohre Pourgholamhossein* (*Isfahan University of Technology (IUT)*); *Hamid Mirmohammad Sadeghi* (*Isfahan University of Technology (IUT)*);

00:00 Registration of Ionospheric Response to Operation of the Engine of Spacecraft "Progress" According to GNSS Data
Artem Borisovich Ishin (*Institute of Solar-Terrestrial Physics, SB RAS*); *Sergey Victorovich Voeykov* (*Institute of Solar-Terrestrial Physics (ISTP), Siberian Branch of Russian Academy of Sciences*); *Nataly Petrovna Perevalova* (*Institute of Solar-Terrestrial Physics (ISTP) SB RAS*); *Oleg I. Berngardt* (*Institute of Solar-Terrestrial Physics, SB RAS*);

00:00 Studying of the Permittivity in Early Process Stages
Nurgul Uzakkyzy (*L.N. Gumilyov Eurasian National University*); *Kazizat Iskakov* (*L.N. Gumilyov Eurasian National University*);

00:00 Spectroscopic Dielectric Model for the Different Thawed and Frozen Organic Soils in the MHz and GHz Frequency Ranges
Valery L. Mironov (*Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences*); *Igor V. Savin* (*Kirensky Institute of Physics, Siberian Branch, Russian Academy of Sciences*);

00:00 Design and Development for a Fine Spectral Microwave Radiometer
Jieying He (*National Space Science Center, Chinese Academy of Sciences*); *Shengwei Zhang* (*National Space Science Center, Chinese Academy of Sciences*);

00:00 First Results of Analysis of Fine Structure of Backscattered Ionospheric Signals Obtained at Decameter EKB ISTP SB RAS Radar
I. A. Lavygin (*Institute of Solar-Terrestrial Physics SB RAS*); *Valentin P. Lebedev* (*Institute of Solar-Terrestrial Physics, Siberian Branch, Russian Academy of Sciences*); *K. V. Grkovich* (*Institute of Solar-Terrestrial Physics, SB RAS*); *Oleg I. Berngardt* (*Institute of Solar-Terrestrial Physics, SB RAS*);

00:00 In-Building Solutions Using Distributed Antenna System Based on Fractal Array
Ashraf Mohamed Ahmed Fata (*Arab Academy for Science and Technology (AASTMT)*); *Mirehan M. M. Aboulila* (*Arab Academy for Science and Technology*);

00:00 Modeling the Interaction of Material Bodies with Fields of Quantum Electrodynamics
Yury M. Pismak (*State University of Saint-Petersburg*);

Session 3P1a
SC3: Optical Sensors for Industrial and Consumer Applications

Wednesday PM, May 24, 2017

Room G5

Organized by Cees Ronda

00:00 Future Gyros on the Base of Whispering Gallery Mode Resonators
Yuri V. Filatov (*St.-Petersburg Electrotechnical University*); *Alexander S. Kukaev* (*St.-Petersburg State Electrotechnical University*); *Egor V. Shalymov* (*St.-Petersburg Electrotechnical University*); *Vladimir Yu. Venediktov* (*St.-Petersburg Electrotechnical University and St.-Petersburg State University*);

00:00 Invited High Confinement InP Nanophotonic Circuits for Optical Sensing Opportunities
Yuqing Jiao (*Eindhoven University of Technology*); *Jos J. G. M. Van der Tol* (*Eindhoven University of Technology*); *Longfei Shen* (*Eindhoven University of Technology*); *Alonso Millan Mejia* (*Eindhoven University of Technology*); *Huub P. M. M. Ambrosius* (*Eindhoven University of Technology*); *Meint K. Smit* (*Technical University of Eindhoven*); *Kevin A. Williams* (*Eindhoven University of Technology*);

00:00 Photonic Jets Produced by Dielectric Microparticles for Optical Sensor Systems
Aleksandr A. Sergeev (*Institute of Automation and Control Processes, FEB, RAS*); *K. A. Sergeeva* (*Far Eastern Federal University*); *S. S. Voznesenskiy* (*Institute of Automation and Control Processes, FEB, RAS*); *Yu. N. Kulchin* (*Institute of Automation and Control Processes, Far Eastern Branch, Russian Academy of Science*);

00:00 Invited Overtone Spectroscopy with Reconfigurable Microfibers
Alina Karabchevsky (*Ben-Gurion University of the Negev*);

00:00 Rectangular Parallelepiped-shaped Optical Cell for Sensing Particular Matter with Ultra-low Concentration by Mid-infrared Absorption
Seung-Gol Lee (*Inha University*); *Beom-Hoan O* (*Inha University*); *Se-Gun Park* (*Inha University*);

00:00 Optical Biosensing Based on Graphene and Graphene Oxide Linking Layers
Yury V. Stebunov (*Moscow Institute of Physics and Technology (State University)*);

00:00 Biological Object Determination by Raman Scattering Enhancement Supported on the Multilayer Dielectric Thin Film
Irina A. Boginskaya (*Institute of Theoretical and Applied Electrodynamics RAS (Russian Academy of Sciences)*); *Konstantin N. Afanasyev* (*All-Russian Research Institute of Automatics*); *Igor V. Bykov* (*All-Russian Research Institute of Automatics*); *I. A. Budashov* (*Moscow State University*); *I. N. Kurochkin* (*Moscow State University*); *Alexander V. Dorofeenko* (*Institute for Theoretical and Applied Electromagnetics of the Russian Academy of Sciences*); *Alexey P. Vinogradov* (*Institute for Theoretical and Applied Electromagnetics of the Russian Academy of Sciences*); *I. . Nechepurenko* (*All-Russia Research Institute of Automatics*); *Ilya A. Ryzhykov* (*All-Russian Research Institute of Automatics*); *R. A. Sirazov* (*Moscow Institute for Physics and Technology (State University)*);

00:00 Photonic Integration: The Fundament of the Next Industrial Revolution
Ton Backx (*Technical University Eindhoven*);

Session 3P1b
Microwave Filters and Resonators 2

Wednesday PM, May 24, 2017
Room G5

00:00 Compact Dual-band Power Divider with Highly Selective Bandpass Response
Chi-Feng Chen (*Tunghai University*); *Guo-Yun Wang* (*Tunghai University*); *Jhong-Jhen Li* (*Tunghai University*);

00:00 Compact Ezy Array Reconfiguration for Filter Design
Hayder S. Ahmed (*Home 8, Street 36, Site 409, Utaifiyya*);

00:00 A Novel Dual-band Bandpass Filter Using Nested Quarter-mode Substrate Integrated Waveguides
Mingkang Li (*Chinese Academy of Sciences, University of Science and Technology of China*); *Chang Chen* (*Chinese Academy of Sciences, University of Science and Technology of China*); *Xiang Zhang* (*Chinese Academy of Sciences, University of Science and Technology of China*); *Zhihui Cao* (*Chinese Academy of Sciences, University of Science and Technology of China*); *Weidong Chen* (*University of Science and Technology of China*);

00:00 Circuit Analysis of Coupled Lines and Open Stubs Based UWB Microstrip BPF
Achmad Munir (*Institut Teknologi Bandung*);

Session 3P2
Chaotic Signals: Generation, Emission, Propagation and Reception 2

Wednesday PM, May 24, 2017
Room G6
Organized by Alexander S. Dmitriev
Chaired by Alexander S. Dmitriev

00:00 Hyperbolic Chaos and Quasiperiodic Dynamics in Experimental Nonautonomous Systems of Coupled Oscillators
Olga B. Isaeva (*Kotel'nikov's Institute of Radio-Engineering and Electronics of RAS*); *Dmitry V. Savin* (*Chernyshevsky Saratov State University*); *Evgeniy P. Seleznev* (*Saratov Branch Institute of Radio-Engineering and Electronics of RAS*); *Nataliya V. Stankevich* (*University of Jyvaskyla*);

00:00 Synchronization of Hidden Chaotic Attractors on the Example of Radiophysical Oscillators
Nikolay V. Kuznetsov (*St. Petersburg State University*); *Gennadiy A. Leonov* (*St. Petersburg State University*); *Nataliya V. Stankevich* (*University of Jyvaskyla*);

00:00 Generation of Chaotic and Quasi-periodic Oscillations in Multi-contour Self-generator
Nataliya V. Stankevich (*University of Jyvaskyla*); *Oleg V. Astakhov* (*Chernyshevsky Saratov State University*); *Evgeniy P. Seleznev* (*Saratov Branch Institute of Radio-Engineering and Electronics of RAS*);

00:00 Robust Chaos in Systems of Circular Geometry
Valentina M. Doroshenko (*Saratov State Ubiversity*); *V. P. Kruglov* (*The Kotel'nikov Institute of Radio-Engineering and Electronics of RAS*); *M. V. Pozdnyakov* (*Saratov State Medical University*);

00:00 Generators of Robust Chaos Based on Hyperbolic Dynamics
Sergey P. Kuznetsov (*Institute of Radio-Engineering and Electronics of RAS*);

00:00 Chaotic Communication with Robust Hyperbolic Transmitter and Receiver
Olga B. Isaeva (*Kotelnikov's Institute of Radio-Engineering and Electronics of RAS*); *A. Yu. Jalnine* (*Institute of Radio-Engineering and Electronics of RAS*); *Sergey P. Kuznetsov* (*Institute of Radio-Engineering and Electronics of RAS*);

00:00 Chaotic Flux Flow in T-junction Josephson Oscillator
Dmitry R. Gulevich (*ITMO University*); *Valery P. Koshelets* (*Kotel'nikov Institute of Radio Engineering and Electronics*); *Feodor V. Kusmartsev* (*Loughborough University*);

00:00 Integrated Ultrawideband Microwave 30–60 GHz Chaotic Oscillator Model
Elena V. Efremova (*Kotel'nikov Institute of Radio Engineering and Electronics of RAS*); *Alexander S. Dmitriev* (*Kotel'nikov Institute of Radio Engineering and Electronics of RAS*);

00:00 A Phenomenon of Turbulence in Vacuum Microwave Electronics (Some Theoretical Approaches and Experimental Results)
Dmitrii I. Trubetskov (*Saratov State University*); *Yurii A. Kalinin* (*Saratov State University*); *Andrei Victorovich Starodubov* (*Saratov State University*);

00:00 The Unit Cell of Radiolight Receiver
Alexander S. Dmitriev (*Kotel'nikov Institute of Radio Engineering and Electronics of RAS*); *Vadim V. Itskov* (*Kotel'nikov Institute of Radio-engineering and Electronics of RAS*); *Anton Igorevich Ryzhov* (*Institute of Radio Engineering and Electronics of RAS*); *Mark Gerasimov* (*Institute of Radio Engineering and Electronics of RAS*); *Manvel Petrosyan* (*Moscow Institute of Physics and Technology (State University)*);

Session 3P3
Noninvasive Examination Techniques in Industry and Biomedicine 2

Wednesday PM, May 24, 2017

Room G7

Organized by Fedor Alexandrovich Gubarev

00:00 Invited Comparative Analysis for Effectiveness of Musical and Ultrasound PWD Mode Signal to Stimulate the Fetal Response
Samreen Amir (*Dawood University of Engineering & Technology*); *Bhawani Shankar Chowdhry* (*Mehran University of Engineering & Technology*); *Adnan Waqar* (*Dawood University of Engineering & Technology*);

00:00 Invited Numerical Feasibility Study for Electrical Impedance Tomography Based Fixated-bone Imaging
Jampu Bharani Bharadwaj (*Indian Institute of Technology Kanpur*); *Naren Naik* (*Indian Institute of Technology*);

00:00 Microwave Imaging of Concealed Objects Beneath Clothing by Creating Synthetic Aperture due to Natural Motion of the Subject
Andrey V. Zhuravlev (*Bauman Moscow State Technical University*); *Vladimir V. Razevig* (*Bauman Moscow State Technical University*); *T. Tataraidze* (*Bauman Moscow State Technical University*); *Margarita A. Chizh* (*Bauman Moscow State Technical University*); *Sergey I. Ivashov* (*Bauman Moscow State Technical University*);

00:00 Objects Detection and Recognition in Biomedical Microscopic Images for the Purpose of Non-invasive and More Precise Diagnostic
Zuzana Loncova (*University of Zilina*); *Libor Hargas* (*University of Zilina*); *Dusan Koniar* (*University of Zilina*); *Anna Simonova* (*University of Zilina*); *Boris Kozacek* (*University of Zilina*);

00:00 Optimization of a Method of a Polysectional Wideband Bioelectrical Impedance Analysis of Complex Biological Structures for Screening Purposes in Rehabilitation Medicine
Vladimir Kuznetsov (*National Research Tomsk Polytechnic University*); *Aleksey Novikov* (*Omsk State Technical University*); *Alexandr Rogachev* (*Francisk Skorina Gomel State University*); *Olga Galtseva* (*National Research Tomsk Polytechnic University*); *Inna Plotnikova* (*National Research Tomsk Polytechnic University*); *Anastasia Nikitina* (*National Research Tomsk Polytechnic University*);

00:00 Liquid Transparency Changing Dynamics Estimation by Means of Digital Speckle Correlation
Lin Li (*Tomsk Polytechnic University*); *Fedor Alexandrovich Gubarev* (*Tomsk Polytechnic University*);

00:00 Automatic Insulin Pump
V. A. Rybin (*LLC LEMZ-T*); *Galina Vladislavona Arysheva* (*National Research Tomsk Polytechnic University*); *A. A. Averkiev* (*National Research Tomsk Polytechnic University*); *K. D. Paigin* (*Lyceum at TPU*); *Tsai Tszinchjun* (*National Research Tomsk Polytechnic University*); *Jan Chennin* (*National Research Tomsk Polytechnic University*); *I. S. Leonova* (*National Research Tomsk Polytechnic University*); *V. V. Nazarenko* (*National Research Tomsk Polytechnic University*);

00:00 Automated Optical Scanning of Complex Shaped Objects
German A. Filippov (*National Research Tomsk Polytechnic University*); *Vadim Y. Zhvyrblia* (*National Research Tomsk Polytechnic University*); *D. A. Sednev* (*National Research Tomsk Polytechnic University*); *Y. A. Salchak* (*National Research Tomsk Polytechnic University*);

00:00 Capacitive Sensor of Weak Magnetic Field on the Basis of Feromagnetic Fluid with Micro- and Nanoscale Particles
Zyatkov Denis Olegovich (*National Research Tomsk Polytechnic University*); *Yurchenko Alexey Vasilievich* (*National Research Tomsk Polytechnic University*);

00:00 Quantitative Aspects of Active Infrared Thermographic Nondestructive Testing of Composite Materials
Vladimir P. Vavilov (*National Research Tomsk Polytechnic University*); *A. O. Chulkov* (*National Research Tomsk Polytechnic University*); *D. A. Derusova* (*National Research Tomsk Polytechnic University*); *A. I. Moskovchenko* (*National Research Tomsk Polytechnic University*); *Y.-Y. Pan* (*National Research Tomsk Polytechnic University*);

Session 3P4
Novel Mathematical Methods in Electromagnetics 1

Wednesday PM, May 24, 2017

Room G8

Organized by Yury V. Shestopalov, Kazuya Kobayashi

Chaired by Yury V. Shestopalov, Kazuya Kobayashi

00:00 Factorizing Physical Dimensions of the Quantities Ingressed in Maxwell's Equations in SI Units
Oleg A. Tretyakov (*Gebze Technical University*);

00:00 A Theoretical Study of Line Intensities in Emission Spectra of Rare Gas Atoms in an Alternating Electric Field
Elena Vladimirovna Koryukina (*National Research Tomsk State University*);

00:00 Mechanical Properties of the Waveguide Modal Fields in the Time Domain
Fatih Erden (*Turkish Naval Academy*); *Oleg A. Tretyakov* (*Gebze Technical University*);

00:00 FDTD Solution of Reconstructing Permittivity of a Dielectric Inclusion in a Waveguide Taking into Account Measurement Inaccuracy
E. A. Sheina (*Lomonosov Moscow State University*); *Yury V. Shestopalov* (*University of Gavle*); *Aleksander P. Smirnov* (*Lomonosov Moscow State University*); *M. V. Ufimtsev* (*Lomonosov Moscow State University*);

00:00 Recent Progress in the Study of Electric Signals Prior to Major Earthquakes
Nicholas V. Sarlis (*National and Kapodistrian University of Athens*); *Efthimios S. Skordas* (*National and Kapodistrian University of Athens*); *Panayiotis A. Varotsos* (*University of Athens*);

00:00 Diffraction by a Narrow Circular Cone in Parabolic Equation Approximation
Ivan V. Andronov (*St. Petersburg State University*);

00:00 Dzyaloshinskii-Moriya Chiral Magnets and Boundary Conditions in Skyrmion Electronics
Peter Robert Kotiuga (*Boston University*);

00:00 Numerical Method for Electromagnetic Wave Propagation Problem in a Cylindrical Anisotropic Inhomogeneous Metal-dielectric Waveguide
Eugene Yu. Smolkin (*Penza State University*);

00:00 On the Problem of TE Wave Propagation in a Lossless Cubic-quintic Nonlinear Waveguide
Dmitry V. Valovik (*Penza State University*);

00:00 Wiener-Hopf Analysis of the Diffraction by a Finite Parallel-plate Waveguide with Sinusoidal Wall Corrugation
Toru Eizawa (*Chuo University*); *Kazuya Kobayashi* (*Chuo University*);

00:00 A Quantification of the Changes in the Far-field Pattern Induced by Rounding the Corners of a Scatterer Illuminated by a Plane Wave Electromagnetic Field
A. J. Markowskei (*Macquarie University*); *Paul D. Smith* (*Macquarie University*);

00:00 Accurate Investigation of a Finite Sinusoidal Grating Excited by an $\boldsymbol{E}$-polarized Plane Wave
Toru Eizawa (*Chuo University*); *Elena D. Vinogradova* (*Macquarie University*); *Kazuya Kobayashi* (*Chuo University*);

Session 3P5
Terahertz Photonics 2

Wednesday PM, May 24, 2017

Room G9

Organized by Mikhail Konstantinovich Khodzitsky

Chaired by Mikhail Konstantinovich Khodzitsky

00:00 Narrow-band Terahertz Emission from an Ultrashort Laser Pulse in a Bulk Lithium Niobate Crystal
E. A. Mashkovich (*University of Nizhny Novgorod*); *Sergey Alexandrovich Sychugin* (*University of Nizhny Novgorod*); *Michael I. Bakunov* (*University of Nizhni Novgorod*);

00:00 Phase Diagram Method for Frequency-resolved Orbital Angular Momentum Spectrum Characterization of Broadband Terahertz Vortices
Varvara A. Semenova (*ITMO University*); *Maksim S. Kulya* (*ITMO University*); *Nikolay V. Petrov* (*ITMO University*); *Victor G. Bespalov* (*ITMO University*);

00:00 Loss Impact on Super-resolution Photonic Jet Produced by a Teflon Sphere
Liyang Yue (*Bangor University*); *Bing Yan* (*Bangor University*); *James Norman Monks* (*Bangor University*); *Zengbo Wang* (*Bangor University*); *Igor V. Minin* (*Siberian State Geodesy Academy*); *Oleg V. Minin* (*Novosibirsk State Technical University*);

00:00 Metal Grating Terahertz Polarizers on Substrate
Alexey Dmitrievich Trofimov (*ITMO University*); *V. S. Chebotarev* (*ITMO University*); *Mikhail Konstantinovich Khodzitsky* (*ITMO University*);

00:00 Impact of Chiral Unit Element Curvature on Chiral Metasurface Optical Properties in Teraherz Frequency Range
M. S. Masyukov (*ITMO University*); *Anna V. Vozianova* (*ITMO University*); *Alexander N. Grebenchukov* (*ITMO University*); *Mikhail Konstantinovich Khodzitsky* (*ITMO University*);

00:00 Investigation of Terahertz Radiation Influence on Rat Glial Cells
Mariia A. Borovkova (*University of Oulu*); *M. K. Serebriakova* (*ITMO University*); *V. I. Fedorov* (*ITMO University*); *E. A. Sedykh* (*ITMO University*); *V. L. Vaks* (*ITMO University*); *A. K. Lichutin* (*ITMO University*); *A. V. Salnikova* (*ITMO University*); *Mikhail Konstantinovich Khodzitsky* (*ITMO University*);

00:00 Numerical Model of On-chip Mode-locked Lasers for Millimeter Wave Generation
Carlos Diego Gordon Gallegos (*Universidad Tecnica de Ambato*); *Vicente Morales* (*Universidad Tecnica de Ambato*); *Guillermo Carpintero del Barrio* (*Universidad Carlos III de Madrid*); *Julien Javaloyes* (*Universitat de les Illes Balears*);

00:00 Analysis of Artificial Media to Control Phase Characteristics of Electromagnetic Wave in Terahertz Frequency Range
E. A. Litvinov (*ITMO University*); *Alexander Vladimirovich Chernyadiev* (*ITMO University*); *Anna V. Vozianova* (*ITMO University*); *Mikhail Konstantinovich Khodzitsky* (*ITMO University*);

00:00 Terahertz Pulsed Spectroscopy is a Promising Diagnostic Method of Diabetes Mellitus
Olga P. Cherkasova (*Institute of Laser Physics of SB RAS*);

00:00 Application of Terahertz Pulsed Spectroscopy for the Development of Non-invasive Glucose Measuring Method
Svyatoslav Igorevich Gusev (*ITMO University*); *V. A. Guseva* (*ITMO University*); *A. A. Simonova* (*ITMO University*); *P. S. Demchenko* (*ITMO University*); *E. A. Sedykh* (*ITMO University*); *Olga P. Cherkasova* (*Institute of Laser Physics of SB RAS*); *M. K. Khodzitsky* (*ITMO University*);

00:00 Terahertz Time-domain Spectroscopy of Oil and Fuel in Frequency Range of 0.2–0.8 THz
Anna A. Simonova (*ITMO University*); *P. S. Demchenko* (*ITMO University*); *R. Grigorev* (*ITMO University*); *Yu. Komarova* (*ITMO University*); *M. Selichev* (*ITMO University*); *R. Orlov* (*ITMO University*); *Mikhail Konstantinovich Khodzitsky* (*ITMO University*);

00:00 Combined THz-IR Spectroscopy of Breath and Biological Liquids for Noninvasive Medical Diagnostics
Vladimir L. Vaks (*Institute for Physics of Microstructures, RAS*);

Session 3P6
Remote Sensing Techniques of Earth System Related Components 4

Wednesday PM, May 24, 2017

Room G10

Organized by Jian-Cheng Shi

Chaired by Jian-Cheng Shi

00:00 Sentinel-1 SAR Imaging the Dynamic Ocean
Xiaofeng Li (*National Oceanic and Atmospheric Administration (NOAA)*);

00:00 Synthetis Aperture Radar Backscattering from Hurricane Wind and Rain Roughened Ocean Surface
Xiaofeng Li (*National Oceanic and Atmospheric Administration (NOAA)*); *Guosheng Zhang* (*Bedford Institute of Oceanography*);

00:00 Millimeterwave Clutter Measurements at the Mediterranean Sea at Low Grazing Angles
Andreas Danklmayer (*Fraunhofer Institute for High Frequency Physics and Radar Techniques (FHR)*); *Joerg Foerster* (*Fed Armed Forces Underwater & Marine Geophys Res*); *Vincent Fabbro* (*ONERA*); *Gregor Biegel* (*Fraunhofer Institute for High Frequency Physics and Radar Techniques*); *Thorsten Brehm* (*Fraunhofer FHR*); *Laurent Castanet* (*ONERA*); *J.-P. Marcellin* (*ONERA*); *Y. Hurtaud* (*DGA MI/CGN2/SDO*);

00:00 Normalized Radar Backscattering Cross-section and Doppler Shifts of the Sea Surface in Ka-band
Yury Yu Yurovsky (*FSBSI Marine Hydrophysical Institute RAS*); *V. N. Kudryavtsev* (*FSBSI Marine Hydrophysical Institute RAS*); *S. A. Grodsky* (*University of Maryland*); *Bertrand Chapron* (*IFREMER*);

00:00 Interferometric Product Processing
Dayalan Prajith Kasilingam (*University of Massachusetts Dartmouth*);

00:00 Determination of the Nature of Unprepared Landing Strip Relief with the Helicopter Radar Interferometer
A. I. Baskakov (*National Research University "Moscow Power Engineering Institute"*); *Aleksey Aleksandrovich Komarov* (*National Research University "Moscow Power Engineering Institute"*); *M. S. Mikhailov* (*National Research University "Moscow Power Engineering Institute"*);

00:00 Modeling of the Methodical Errors of High-precision Aircraft Radar Altimeter Operating above the Sea Surface at Low Altitudes
A. I. Baskakov (*National Research University "Moscow Power Engineering Institute"*); *Aleksey Aleksandrovich Komarov* (*National Research University "Moscow Power Engineering Institute"*); *Mikhail Sergeyevich Mikhailov* (*National Research University "Moscow Power Engineering Institute"*); *A. V. Ruban* (*National Research University*);

00:00 The Concept Design of a Fore-field Camera for the Intelligent Hyperspectral Remote Sensing Satellite
Hao Zhang (*Institute of Remote Sensing and Digital Earth, CAS*); *Zhihua Huang* (*China University of Mining & Technology*); *Bing Zhang* (*Institute of Remote Sensing and Digital Earth, CAS*); *Zhengchao Chen* (*Institute of Remote Sensing and Digital Earth, CAS*);

00:00 Approximate Computing of Kernel RX-algorithm for Hyperspectral Anomaly Detection
Yuanfeng Wu (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Sebastian Lopez* (*Institute for Applied Microelectronics*); *Lianru Gao* (*Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences*); *Fei Qiao* (*Tsinghua University*); *Bing Zhang* (*Institute of Remote Sensing and Digital Earth, CAS*);

00:00 Generation of Land Surface Temperature Products from Remote Sensing Data for Agro-Drouhgt Monitoring in China
Zhihao Qin (*Institute of Agro-Resources and Regional Planning, Chinese Academy of Agricultural Sciences*); *Bin Xu* (*Institute of Agro-Resources and Regional Planning, Chinese Academy of Agricultural Sciences*); *Qiuyan Huang* (*Guangxi Teachers Education University*); *Shuhe Zhao* (*Nanjing University*); *Zhaoliang Li* (*Institute of Agro-Resources and Regional Planning, Chinese Academy of Agricultural Sciences*);

00:00 Using Big Data to Improve Remote Sensing
Bing Zhang (*Institute of Remote Sensing and Digital Earth, CAS*);

Session 3P7
SC1: Computational Techniques in Electromagnetics and Applications

Wednesday PM, May 24, 2017

Room B1

Organized by Tsuneki Yamasaki, Yoichi Okuno

Chaired by Tsuneki Yamasaki

00:00 Numerical Implementation of Efficient Cross-section Method for the Analysis of Arbitrarily Shaped Dielectric Obstacles in Rectangular Waveguide
Karlis Kimsis (*Riga Technical University*); *Janis Semenjako* (*Riga Technical University*); *Roman Kushnin* (*Riga Technical University*);

00:00 Comparative Analysis of Techniques for Source Radiation in Cylindrical EBG with and without Periodic Discontinuities
Guga Burduli (*Free University of Tbilisi*); *Vakhtang Jandieri* (*University of Duisburg-Essen*); *Kiyotoshi Yasumoto* (*Kyushu University*); *Daniel Erni* (*University of Duisburg-Essen, Campus Duisburg*);

00:00 Accelerated Boundary Integral Method for Solving the Problem of Scattering by Multiple Multilayered Circular Cylindrical Posts in a Rectangular Waveguide
Roman Kushnin (*Riga Technical University*); *Janis Semenjako* (*Riga Technical University*); *Yury V. Shestopalov* (*University of Gavle*);

00:00 Simple Methods for Extracting Far-infrared Optical Constants of Dielectric Slabs from Fringing Reflectance Spectra
Pei-Kang Chung (*National Chiao Tung University*); *Shun-Tung Yen* (*National Chiao Tung University*);

00:00 Application of Feature Selective Validation to the Design of Microstrip Antenna
Ping Xu (*Harbin Engineering University*); *Xiaochao Jiang* (*Harbin Engineering University*); *Tao Jiang* (*Harbin Engineering University*);

00:00 Effective Combined Method for Calculation of Circular Excitation Dielectric Cylinder with a Heterogeneous Object
Natalya N. Kisel (*Southern Federal University*); *Vitaliy A. Cheremisov* (*Southern Federal University*); *Dmitriy V. Kisel* (*Moscow State University*);

00:00 Computational Power Conservation Technique Using Mobility Adaptation Method in MANET
Lawal Bello (*University of Greenwich*); *Panos Bakalis* (*University of Greenwich*); *Predrag Rapajic* (*University of Greenwich*);

00:00 Analysis of Pulse Reflection Response from Periodic Perfect Conductor in Two Dispersion Media
Ryosuke Ozaki (*Nihon University*); *Tsuneki Yamasaki* (*Nihon University*);

00:00 Geo-referential Application of Patients, Neoplasms and Telecom Infrastructure Associated with Radiation Non-ionizing Electromagnetic
Jesus Leonardo Soto Sumuano (*University of Guadalajara*); *Francisco Javier Olivera Guerrero* (*Systems Developer and Professor*); *Jose Alberto Tlacuilo Parra* (*Pediatric Hospital, IMSS National Medical Center*); *Roberto Covarrrubias Garibaldi* (*Pediatric Hospital, IMSS National Medical Center*); *Hugo Romo Rubio* (*Pediatric Hospital, IMSS National Medical Center*); *Emmanuel Abundis Gutierrez* (*Mexican Society for Non-Ionizing Radiation Protection*);

00:00 Numerical Calculation of Magnetic Dipole Fields by Three-dimensional QS-FDTD Method
Mehmet Burak Ozakin (*Gebze Technical University*); *Serkan Aksoy* (*Gebze Institute of Technology*);

00:00 Analysis of Shielded Ring Waveguide
Ken'ichiro Yashiro (*Chiba University*); *Ning Guan* (*Fujikura Ltd.*);

00:00 Modelling GNSS Propagation Channel Using Ray Tracing Technics
Gregory Moura (*OKTAL Synthetic Environment*);

00:00 Open Area Concealed Weapon Detection with Novel Post Processor
Martin J. N. Sibley (*University of Huddersfield*);

00:00 Electromagnetically Coupled Notches Loaded Patch Antenna for Tumor Detection
B. Deeksha (*Raghu Engineering College*); *A. Sai Ravi Teja* (*Raghu Engineering College*); *E. Sai Lakshmi* (*Raghu Engineering College*); *M. Nikhil Eswar* (*Raghu Engineering College*); *Ashish Singh* (*University of Allahabad*);

00:00 Detection Mechanism and Magnetic Field Distribution Characteristics for Plate Remote-field Eddy-current Testing
Peihua Chen (*Wenzhou Medical University*); *Pingjie Huang* (*Zhejiang University*);

Session 3P8
MS-2: BRICS Mini-symposium on Nonlinear Photonics and Photonic Assisted Technologies 2

Wednesday PM, May 24, 2017

Room B5

Organized by Alexander. P. Alodjants, Yikun Liu

Chaired by Alexander. P. Alodjants

00:00 3D Visualization of Nano Materials Structure by Electron Tomography
Yinyin Li (*Sun Yat-sen University*); *Hongmei Li* (*Sun Yat-sen University*); *Xudong Jia* (*Sun Yat-sen University*); *Juntao Li* (*Sun Yat-sen University*); *Qinfen Zhang* (*Sun Yat-sen University*);

00:00 Visible Wavelength Meatsurfaces by Crystals Silicon
Yinyin Li (*Sun Yat-sen University*); *Zhenpeng Zhou* (*Sun Yat-Sen University*); *Juntao Li* (*Sun Yat-sen University*);

00:00 Optimization of Electrical Properties of Quantum Dot Surface Emitting DFB Lasers with ITO Transparent Claddings
Ting-Yuan Chang (*National Chiao Tung University*); *Wen-Zheng Xu* (*National Chiao Tung University*); *Kuo-Bin Hong* (*National Chiao Tung University*); *Tien-Chang Lu* (*National Chiao Tung University*);

00:00 Effects of Nanoscale V-shaped Pits on GaN Based Light Emitting Diodes
Heng Li (*National Chiao Tung University*); *Shuo-Wei Chen* (*National Chiao Tung University*); *Chia-Jui Chang* (*National Chiao Tung University*); *Tien-Chang Lu* (*National Chiao Tung University*);

00:00 Broad-band Circular Bragg Grating for High Efficient Single-photon Extraction
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*);

00:00 Ultra-short Laser Interactions for Advanced Photonic Technologies
Anton Rudenko (*Lyon University*); *Hongfeng Ma* (*Lyon University*); *Roman Zakoldaev* (*ITMO University*); *Vadim P. Veiko* (*ITMO University*); *Tatiana E. Itina* (*University of Lyon*);

00:00 Manipulation of Femtosecond Pulse by Using Cholesteric Liquid Crystals
Yikun Liu (*Sun Yat-sen University*); *Tsung-Hsien Lin* (*National Sun Yat-Sen University*); *Jianying Zhou* (*Sun Yat-sen University*); *Iam-Choon Khoo* (*Pennsylvania State University*);

00:00 Optical Properties of Solution-processed Perovskite with Randomly Distributed Nanocrystals
Kuo-Bin Hong (*National Chiao Tung University*); *Yu-Hsun Chou* (*National Chiao Tung University*); *Jiong-Fu Huang* (*National Chiao Tung University*); *Tsung Sheng Kao* (*National University of Singapore*); *Fang-Chung Chen* (*National Chiao Tung University*); *Tien-Chang Lu* (*National Chiao Tung University*);

00:00 One-dimentional Photonic Crystals Based on Porous Anodic Aluminum Oxide Films
Sergey O. Klimonsky (*M. V. Lomonosov Moscow State University*); *V. S. Gorelik* (*P. N. Lebedev Physical Institute, Russian Academy of Sciences*); *K. S. Napolskii* (*M. V. Lomonosov Moscow State University*);

00:00 Optical Forces in Metamaterials and Graphene Plasmonic Nanostructures
Jianfa Zhang (*National University of Defense Technology*);

00:00 Spin-polarization Dynamics of Exciton Polaritons under the Artificial Gravitation Effect in Wedged Microcavities
Evgeny S. Sedov (*University of Southampton*); *A. P. Alodjants* (*Vladimir State University Named after A. G. and N. G. Stoletovs*); *R.-K. Lee* (*National Tsing-Hua University*); *Alexey V. Kavokin* (*University of Southampton (GB)*);

00:00 Manipulate the Flexible Microcavity for Lasing and Sensing
Rui Chen (*Southern University of Science and Technology*);

Session 3P9
SC2: Wave Manipulations by Metasurfaces

Wednesday PM, May 24, 2017

Room B3

Organized by Shulin Sun

Chaired by Shulin Sun

00:00 Generation of Isocratic Coherent Optical Beams by Binary Geometrical Phase on Metasurface
Xiang Xiong (*Nanjing University*); *Z. H. Wang* (*Nanjing University*); *S. C. Jiang* (*Nanjing University*); *M. Wang* (*Nanjing University*); *Ru-Wen Peng* (*Nanjing University*);

00:00 Limitation of the Caustic Method in Tailoring Accelerating Beams
Yuanhui Wen (*Sun Yat-sen University*); *Yujie Chen* (*Sun Yat-sen University*); *Siyuan Yu* (*Sun Yat-sen University*);

00:00 Wavefront Shaping to Enhance RF Energy Harvesting in Reverberating Environments
Philipp Del Hougne (*ESPCI Paris & CNRS*); *Geoffroy Lerosey* (*ESPCI Paris and CNRS*);

00:00 Design of Carbon Nanotube/Piezoelectric/Magnetite-based Radar Absorber for Ka-band Frequency Range
Dzmitry Bychanok (*Research Institute for Nuclear Problems Belarusian State University*); *Gleb Gorokhov* (*Research Institute for Nuclear Problems Belarusian State University*); *Darya Meisak* (*Research Institute for Nuclear Problems Belarusian State University*); *Artyom Plyushch* (*Research Institute for Nuclear Problems Belarusian State University*); *Polina Kuzhir* (*Belarusian State University*); *A. Sokol* (*Belarusian State University*); *Konstantin Lapko* (*Research Institute for Physical Chemical Problems of the Belarusian State University*); *Angela Sanchez-Sanchez* (*Institut Jean Lamour — UMR Universite de Lorraine*); *Vanessa Fierro* (*Institut Jean Lamour — UMR Universite de Lorraine*); *Alain Celzard* (*Institut Jean Lamour — UMR Universite de Lorraine*); *C. P. Gallagher* (*University of Exeter*); *Alastair P. Hibbins* (*University of Exeter*); *Feodor Y. Ogrin* (*University of Exeter*); *Christian Brosseau* (*Universite de Bretagne Occidentale*);

00:00 Magnetic Light in HRI Metafilms through an Electric and Magnetic Dipole Formulation
Diego Romero Abujetas (*Consejo Superior de Investigaciones Cientificas (CSIC)*); *J. J. Saenz* (*Donostia International Physics Center (DIPC)*); *Jose A. Sanchez-Gil* (*CSIC*);

00:00 Water-based Metasurfaces — Numerical and Experimental Characterization
Rasmus E. Jacobsen (*Technical University of Denmark*); *Andrei V. Lavrinenko* (*Technical University of Denmark*); *Samel Arslanagic* (*Technical University of Denmark*);

00:00 Metamaterials Based on Microstrip Lines: A Physically Reasonable Circuit Model and Its Application
Tianlong Wu (*Wuhan University of Technology*); *Jin Yang* (*Wuhan University of Technology*); *Wei Li* (*Wuhan University of Technology*); *Jie Cao* (*Wuhan University of Technology*); *Dawei Hu* (*Wuhan University of Technology*); *Yukun Li* (*Wuhan University of Technology*); *Jianguo Guan* (*Wuhan University of Technology*);

00:00 All-dielectric Metasurface Devices at Visible Wavelengths
Qing Zhang (*Research Center of Laser Fusion, China Academy of Engineering Physics*); *Gongwen Gan* (*University of Electronic Science and Technology of China*); *Xudong Cui* (*Research Center of Laser Fusion, China Academy of Engineering Physics*);

00:00 Manipulation of Waves Using Meta-structures
Santosh Kumar Maurya (*Indian Institute of Technology Bombay*); *Saurabh Awasthi* (*Indian Institute of Technology Bombay*); *Shobha Shukla* (*Indian Institute of Technology Bombay*); *Sumit Saxena* (*Indian Institute of Technology Bombay*);

00:00 Invisibility Cloak Scheme with Composite Plasmonic Waveguides and Metsurface Overlayers
Y. Galutin (*Ben-Gurion University of the Negev*); *E. Falek* (*Ben-Gurion University of the Negev*); *Alina Karabchevsky* (*Ben-Gurion University of the Negev*);

00:00 Pancharatnam-Berry Metasurfaces to Achieve High-efficiency Spoof Surface Plasmon Excitations
Jingwen Duan (*Fudan University*); *Huijie Guo* (*Fudan University*); *Shaohua Dong* (*Fudan University*); *Tong Cai* (*Fudan University*); *Weijie Luo* (*Fudann University*); *Qiong He* (*Fudan University*); *Lei Zhou* (*Fudan University*); *Shulin Sun* (*Fudan University*);

00:00 Single Metasurface for Vector Vortex Beam Generation
Xianzhong Chen (*Heriot-Watt University*); *Fuyong Yue* (*Heriot-Watt University*); *Dandan Wen* (*Heriot-Watt University*); *Jingtao Xin* (*Beijing Information Science and Technology University*); *Brain D. Gerardot* (*Heriot-Watt University*); *Jensen Li* (*University of Brimingham*);

Session 3P_10
MS-1: Mini-symposium on Nanophotonics and Metamaterials 3

Wednesday PM, May 24, 2017

Room R11

Organized by Pavel A. Belov, Andrey A. Bogdanov

Chaired by Andrey A. Bogdanov

00:00 Nanoimprinted Hybrid Perovskite Metasurfaces
Sergey Makarov (*ITMO University*); *V. A. Milichko* (*ITMO University*); *E. Ushakova* (*ITMO University*); *Yuri S. Kivshar* (*Australian National University*); *A. Zakhidov* (*ITMO University*);

00:00 Highly Efficient Optical Heating of Non-plasmonic Nananoparticles
G. P. Zograf (*ITMO University*); *Mihail I. Petrov* (*ITMO University*); *Dmitry A. Zuev* (*ITMO University*); *V. A. Milichko* (*ITMO University*); *Sergey Makarov* (*ITMO University*);

00:00 Directional and Polarized Light Emission at the Nanoscale through Semiconductor Nanowires
Diego Romero Abujetas (*Consejo Superior de Investigaciones Científicas (CSIC)*); *D. Van Dam* (*Dutch Institute for Fundamental Energy Research, DIFFER*); *J. Gomez-Rivas* (*Dutch Institute for Fundamental Energy Research, DIFFER*); *Jose A. Sanchez-Gil* (*CSIC*);

00:00 Resonant Bragg Diffraction in AsSb-AlGaAs Metamaterial Structures
Vitalii Ushanov (*Ioffe Institute*); *Vladimir V. Chaldyshev* (*Ioffe Institute*); *Valeriy Preobrazhenskiy* (*Rzhanov Institute of Semiconductor Physics*); *Michael Putyato* (*Rzhanov Institute of Semiconductor Physics*); *Boris Semyagin* (*Rzhanov Institute of Semiconductor Physics*);

00:00 Hybridized Eigenmodes of Periodic Wire Arrays and Their Application in Radiofrequency Coils for Preclinical MRI
Anna A. Hurshkainen (*ITMO University*); *A. Nikulin* (*ITMO University*); *Stanislav Glybovski* (*ITMO University*); *Irina Melchakova* (*ITMO University*); *Pavel A. Belov* (*ITMO University*); *B. Larrat* (*ITMO University*); *E. Georget* (*CEA-NeuroSpin*); *Stefan Enoch* (*Institut Fresnel*); *Ana Luisa Antunes Neves* (*Aix-Marseille Université, Ecole Centrale Marseille, Campus de Saint-Jérôme*); *Pierre Sabouroux* (*Aix-Marseille Universite*); *Redha Abdeddaim* (*ESPCI Paris Tech.*);

00:00 Metasurface Decoupling Structure for MRI Applications Based on Split-loop Resonators
Anna A. Hurshkainen (*ITMO University*); *S. Kurdjumov* (*ITMO University*); *Stanislav Glybovski* (*ITMO University*); *Irina Melchakova* (*ITMO University*); *Pavel A. Belov* (*ITMO University*); *Constantin R. Simovski* (*Aalto University*); *Cornelis A. T. van den Berg* (*University Medical Center Utrecht*); *A. Raajmakers* (*UMC Utrecht*);

00:00 Nonlocal Bianisotropic Response of Homogenized 3D Photonic Crystals
Anatolii Konovalenko (*Benemerita Universidad Autonoma de Puebla*); *F. Perez-Rodriguez* (*Benemerita Universidad Autonoma de Puebla*);

00:00 Photonic Crystal Fano Lasers
Jesper Mork (*Technical University of Denmark*); *Yi Yu* (*Technical University of Denmark*); *Elizaveta Semenova* (*Technical University of Denmark*); *Thorsten S. Rasmussen* (*Technical University of Denmark*); *Kresten Yvind* (*Technical University of Denmark*);

00:00 Truncation Effects on the Resonant Properties of Active Coated Nano Particles — From 2D to 3D Active Nano-pills
Rasmus E. Jacobsen (*Technical University of Denmark*); *Samel Arslanagic* (*Technical University of Denmark*);

00:00 Wireless Power Transfer through Multipole Coupling in Dielectric Resonators
Mingzhao Song (*ITMO University*); *Pavel A. Belov* (*ITMO University*); *Polina V. Kapitanova* (*ITMO University*); *Constantin R. Simovski* (*Aalto University*);

00:00 Deposition of Gold Multilayers for Hyperbolic Metamaterials Fabrication
Johneph Sukham (*Technical University of Denmark*); *Radu Malureanu* (*Technical University of Denmark*); *Andrei V. Lavrinenko* (*Technical University of Denmark*);

00:00 Energy Harvesting with Conjugate-impedance Matched Metamaterials
Stanislav I. Maslovski (*University of Coimbra*); *T. Fernandes* (*IT-Leiria*); *N. B. Bras* (*IT-Lisboa*); *Henrique A. Silva* (*IT-Coimbra*); *Antonio L. Topa* (*Technical Universtity of Lisbon*);

Session 3P_11a
FocusSession.SC3: Advanced Photonic Technologies for Spectroscopic Applications 2

Wednesday PM, May 24, 2017

Room R10

Organized by Wei Dong Chen, Vincenzo Spagnolo

Chaired by Wei Dong Chen, Vincenzo Spagnolo

00:00 Invited Advancing Oceanographic Sensing with Laser Spectroscopy
Anna P. M. Michel (*Woods Hole Oceanographic Institution*);

00:00 Invited Sensitive Detection of OH, HO_2, and RO_2 Radicals with Advanced Spectroscopy
Weixiong Zhao (*Hefei Institutes of Physical Science, Chinese Academy Sciences*); *Bo Fang* (*Anhui Institute of Optics and Fine Mechanics, Chinese Academy Sciences*); *Yanbo Gai* (*Anhui Institute of Optics and Fine Mechanics, Chinese Academy Sciences*); *Xiaoxiao Lin* (*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* (*Universite du Littoral Cote d'Opale*);

00:00 Atmospheric Measurements Using Dual Frequency Comb Spectroscopy
Invited
Kevin C. Cossel (*National Institute of Standards and Technology*); *E. M. Waxman* (*National Institute of Standards and Technology*); *G.-W. Truong* (*National Institute of Standards and Technology*); *F. Giorgetta* (*National Institute of Standards and Technology*); *R. J. Wright* (*University of Colorado*); *S. Coburn* (*University of Colorado*); *G. B. Rieker* (*University of Colorado*); *Ian Coddington* (*National Institute of Standards and Technology*); *Nathan R. Newbury* (*National Institute of Standards and Technology*);

00:00 Laser-based Sensing of Short-lived Climate Pollutants
Invited
Gaoxuan Wang (*Université du Littoral Côte d'Opale*); *Fengjiao Shen* (*Université du Littoral Côte d'Opale*); *Dong Chen* (*Université du Littoral Côte d'Opale*); *Hongming Yi* (*Universite du Littoral Cote d'Opale*); *Rabih Maamary* (*Universite du Littoral Cote d'Opale*); *Patrice Hubert* (*Université de Lille1*); *Alexandre Deguine* (*Université de Lille1*); *Denis Petitprez* (*Université de Lille1*); *Eric Fertein* (*Université du Littoral Côte d'Opale*); *Markus W. Sigrist* (*ETH Zurich*); *Wei Dong Chen* (*Université du Littoral Côte d'Opale*);

00:00 Better Understanding of Photoacoustic Signal Generation Helps to Develop Better Photoacoustic Systems for Practical Applications
Invited
Zoltán Bozóki (*University of Szeged*); *Tibor Ajtai* (*MTA-SZTE Research Group on Photoacoustic Spectroscopy*); *Attila Varga* (*Hobre Laser Technology Ltd.*); *Gergely Kiss-Albert* (*University of Szeged*); *Gabor Szabo* (*University of Szeged*);

00:00 A Multi-wavelength Integrating Nephelometer for Aerosol Light Scattering Measurements
Arun Ramachandran (*National Institute of Technology Calicut*); *Jun Chen* (*University of Shanghai for Science and Technology*); *Ravi Varma* (*National Institute of Technology Calicut*); *Shuaishuai Yu* (*University of Shanghai for Science and Technology*); *Mingzhi Li* (*University of Shanghai for Science and Technology*);

Session 3P_11b
Electromagnetic Theory

Wednesday PM, May 24, 2017

Room R10

00:00 The Riemann-Silberstein Vectors Theory and Vector Spherical Expansion
Igor V. Belkovich (*Moscow Power Engineering Institute*); *Boris L. Kogan* (*National Research University "Moscow Power Engineering Institute"*);

00:00 Characteristic Mode Analysis Using Reduced Modal Representation of Numerical Green's Function
Q. I. Dai (*University of Illinois at Urbana-Champaign*); *H. Gan* (*University of Illinois at Urbana-Champaign*); *Weng Cho Chew* (*University of Illinois*);

00:00 Prescriptions for Identifying the Definition of Complex-referenced $\boldsymbol{S}$-parameters in Commercial EM Simulators
Yuya Kobayashi (*Hiroshima University*); *Shuhei Amakawa* (*Tokyo Institute of Technology*);

00:00 What Mechanism Makes EM Radiation Quantized. Photon Structure and Size
Sen Nian Chen (*(National) Hua Qiao University*);

00:00 Electron's Helical Structure, Mass Radius Relation and Inner Coherent Force
Sen Nian Chen (*(National) Hua Qiao University*);

00:00 Influence of a Strong Electromagnetic Wave on the Hall Coefficient and Hall Conductivity in Cylindrical Quantum Wires with In-plane Magnetic Field
Nguyen Thu Huong (*Hanoi University of Science, Vietnam National University*); *Hoang Dinh Trien* (*Hanoi University of Science, Vietnam National University*); *Nguyen Quang Bau* (*Hanoi National University*);

Session 3P_12
Nonlinear and Extreme Nanophotonics 2

Wednesday PM, May 24, 2017

Room R9

Organized by Andrey A. Fedyanin, Yuri S. Kivshar

Chaired by Yuri S. Kivshar

00:00 Tailoring Light Emission with Monolithic Nanoantenna Arrays Based on III-V Semiconductors
Aleksandr Vaskin (*Friedrich Schiller University Jena*); *Franz J. F. Lochner* (*Friedrich-Schiller-Universitat Jena*); *Sheng Liu* (*Sandia National Laboratories*); *Matthias Zilk* (*Friedrich-Schiller-Universitat Jena*); *Anna Fedotova* (*Friedrich Schiller University Jena*); *Sina Saravi* (*Friedrich-Schiller-Universitat Jena*); *Frank Setzpfandt* (*Friedrich-Schiller-Universitat Jena*); *Isabelle Staude* (*Friedrich-Schiller-Universitat Jena*); *Igal Brener* (*Sandia National Laboratories*); *Thomas Pertsch* (*Friedrich-Schiller-Universitat*);

00:00 Nanocrystalline Resonant Silicon Nanoparticle for Highly Efficient Second Harmonic Generation
Sergey Makarov (*ITMO University*); *Mihail I. Petrov* (*ITMO University*); *Urs Zywietz* (*Laser Zentrum Hannover e.V.*); *T. Fischer* (*Laser Zentrum Hannover e.V.*); *V. A. Milichko* (*ITMO University*); *Dmitry A. Zuev* (*ITMO University*); *G. P. Zograf* (*ITMO University*); *Daria A. Smirnova* (*Australian National University*); *S. Starikov* (*Joint Institute for High Temperatures, Russian Academy of Sciences*); *Boris N. Chichkov* (*Laser Zentrum Hannover e.V.*); *Yuri S. Kivshar* (*Australian National University*);

00:00 Ultrafast Carrier Dynamic in Lt-gaas, Doped by $\boldsymbol{\delta}$-si
Dinar Ilgamovich Khusyinov (*Moscow Technical University*); *C. Dekeyser* (*Moscow Technical University*); *Arseniy M. Buryakov* (*Moscow State Technical University of Radioengineering, Electronics and Automation (MSTU-MIREA)*); *Elena D. Mishina* (*Moscow State Technical University of Radioengineering, Electronics and Automation (MSTU-MIREA)*);

00:00 Kinetics of Photoexcited Carriers in WSe2 Monolayer under High Excitation
Elena D. Mishina (*Moscow State Technical University of Radioengineering, Electronics and Automation (MSTU-MIREA)*); *Sergey Lavrov* (*Moscow Technological University (MIREA)*); *Anastasia Shestakova* (*Moscow Technological University (MIREA)*); *Nikita A. Ilyin* (*Moscow State Technical University MIREA*); *Andrey Kudryavtsev* (*Moscow State Institute of Radioengineering, Electronics and Automation*);

00:00 Direct Gap Semiconductor Metasurfaces for Efficient and Low-power All-optical Modulation
Maxim R. Shcherbakov (*Lomonosov Moscow State University*); *Sheng Liu* (*Sandia National Laboratories*); *V. V. Zubyuk* (*Lomonosov Moscow State University*); *Aleksandr Vaskin* (*Friedrich Schiller University Jena*); *P. P. Vabishchevich* (*Lomonosov Moscow State University*); *G. Keeler* (*Sandia National Laboratories*); *Thomas Pertsch* (*Friedrich-Schiller-Universitat*); *T. V. Dolgova* (*Lomonosov Moscow State University*); *Isabelle Staude* (*Friedrich-Schiller-Universitat Jena*); *Igal Brener* (*Sandia National Laboratories*); *Andrey A. Fedyanin* (*Lomonosov Moscow State University*);

00:00 Nonlinear Localization of Chirped Femtosecond Pulse in Layered Photonic Structure
Vyacheslav A. Trofimov (*Lomonosov Moscow State University*); *I. G. Zakharova* (*Lomonosov Moscow State University*); *Pavel Yu. Shestakov* (*Lomonosov Moscow State University*);

00:00 Optimization of THG in 2D Crystals via Resonant Metal Plasmonic Nanostructures
Alvaro Rodriguez (*The Barcelona Institute of Science and Technology*); *Joel D. Cox* (*The Barcelona Institute of Science and Technology*); *Andrea Marini* (*The Barcelona Institute of Science and Technology*); *F. Javier Garcia De Abajo* (*The Barcelona Institute of Science and Technology*);

00:00 Plasmon-driven High-harmonic Generation in Metal Nanowires
Alvaro Rodriguez (*The Barcelona Institute of Science and Technology*); *Joel D. Cox* (*The Barcelona Institute of Science and Technology*); *F. Javier Garcia De Abajo* (*The Barcelona Institute of Science and Technology*); *Fernando Sols* (*Universidad Complutense de Madrid*);

00:00 Cross-focusing of Coaxial Twisted Laser Beams in Plasma
Mohammad Vaziri (*Kerman BranchIslamic Azad University*); *Sozha Sohaily* (*Shahid Bahonar University of Kerman*);

00:00 Investigation of the Effect of Artificially Created Stress in the Buffer Layer of the Structure with Active Layer In0.38Ga0.62As on the THz Generation by Ultrashort Laser Pulses
Vladislav Romanovich Bilyk (*Federal State Budget Institution of Higher Education "Moscow Technological University" "MIREA"*); *Arseniy M. Buryakov* (*Moscow State Technical University of Radioengineering, Electronics and Automation (MSTU-MIREA)*); *Elena D. Mishina* (*Moscow State Technical University of Radioengineering, Electronics and Automation (MSTU-MIREA)*);

Session 3P_13a
Plasmon-assisted Effects in Nanoparticles and Nanostructures: From Field Enhancement to Material Modifictions 2

Wednesday PM, May 24, 2017

Room R8

Organized by Tatiana E. Itina

Chaired by Tatiana E. Itina

00:00 Eigenmode Study of Coupled Plasmonic Nanostructures: Hetero Dimer and Dolmen Structures
Gabriel David Bernasconi (*Swiss Federal Institute of Technology Lausanne (EPFL)*); *Valentin Flauraud* (*Swiss Federal Institute of Technology Lausanne (EPFL)*); *Jeremy Butet* (*Swiss Federal Institute of Technology Lausanne (EPFL)*); *Duncan T. L. Alexander* (*Swiss Federal Institute of Technology Lausanne (EPFL)*); *Jurgen Brugger* (*Swiss Federal Institute of Technology Lausanne (EPFL)*); *Olivier J. F. Martin* (*Swiss Federal Institute of Technology Lausanne (EPFL)*);

00:00 Evolution of Plasmonic Response of a Semiconducting Particle: Transition from Surface to Bulk Phenomena
Zhijing Hu (*Illinois Institute of Technology*); *Tao Shen* (*Kunming University of Science and Technology*); *Thomas T. Y. Wong* (*Illinois Institute of Technology*);

00:00 Fractal Bimetallic Thin Films Obtained by Laser Deposition of Colloidal Nanoparticles
Alexandre A. Antipov (*Stoletovs' Vladimir State University*); *Dmitriy N. Bukharov* (*Stoletovs' Vladimir State University*); *Sergey M. Arakelyan* (*Stoletovs Vladimir State University*); *Stella V. Kutrovskaya* (*Stoletovs' Vladimir State University*); *Alexey O. Kucherik* (*Stoletovs' Vladimir State University*); *Anton V. Osipov* (*Stoletovs' Vladimir State University*); *Alexandre V. Istratov* (*Stoletovs' Vladimir State University*); *Tigran A. Vartanyan* (*ITMO University*); *Tatiana E. Itina* (*University of Lyon*);

00:00 The CW-laser Ablation of Resonant Silicon NPs in Liquid
Anton V. Osipov (*Vladimir State University*); *Sergey M. Arakelyan* (*Stoletovs Vladimir State University*); *A. B. Evlukhin* (*Laser Zentrum Hannover e.V.*); *Stella V. Kutrovskaya* (*Stoletovs Vladimir State University*);

00:00 Invited Self-consistent Modeling of Photoionization-induced Field Distributions in Nanoparticles by Ultrashort Laser
Anton Rudenko (*Lyon University*); *Tatiana E. Itina* (*University of Lyon*); *Konstantin S. Ladutenko* (*St. Petersburg National Research University of Information Technologies, Mechanics and Optics*); *Sergey Makarov* (*ITMO University*);

00:00 Plasmonic Nano-oven
Lijun Meng (*The Barcelona Institute of Science and Technology*); *Renwen Yu* (*The Barcelona Institute of Science and Technology*); *Min Qiu* (*Zhejiang University*); *F. Javier Garcia De Abajo* (*ICFO Institut de Ciencies Fotoniques, Mediterranean Technology Park*);

00:00 A Cavity-concept Based Model for Understanding the Photoluminescence of Single Gold Nanorods
Keyu Xia (*Macquarie University*); *Guowei Lu* (*Peking University*);

Session 3P_13b
Medical Electromagnetics, Biological Effects, Bioimaging 1

Wednesday PM, May 24, 2017

Room R8

00:00 Safe High-field MRI in the Presence of Medical Implants
Syed Ali Mohsin (*National University of Computer and Emerging Sciences*);

00:00 Quasi Real-time Measurement of MCG Using Off-diagonal GMI Gradiometer
Tsuyoshi Uchiyama (*Nagoya University*); *Shinsuke Nakayama* (*Nagoya University*);

00:00 Exposition of Saccharomyces Cerevisiae Culture in an Electromagnetic Field at Different Frequencies
Modesto Sosa Aquino (*University of Guanajuato, Campus Leon*); *Erandeni Rodriguez-Perez* (*University of Guanajuato, Campus Leon*); *Veronica Mondragon-Jaimes* (*Autonomous University of Nayarit*); *Julio C. Villagomez-Castro* (*University of Guanajuato, Campus Guanajuato*);

00:00 A Range of Fields over the Spectrum in a Cell Colony May Control the Timing of Its Cell Cycle
Anthony H. J. Fleming (*Biophotonics Research Institute*);

00:00 Far-Infrared (FIR) Frequencies and Bio-physical Parameters Related
Eugenio Sclauzero (*Regione Friuli Venezia Giulia*); *Enrico Poddighe* (*O.S.T.E.M.D.A. srl*); *Martina Sclauzero* (*O.S.T.E.M.D.A. srl*);

Session 3P0
Poster Session 6

Wednesday PM, May 24, 2017
14:00 PM - 19:00 PM
Room B2

00:00 Entanglement Dynamics of Two Electrons in Noisy Quantum Walks
Alexey A. Melnikov (*University of Innsbruck*); *L. E. Fedichkin* (*Institute of Physics and Technology, Russian Academy of Sciences*);

00:00 Maehly Approximation and Phase Extraction Hybrid Method for Fast Analysis of Wideband Electromagnetic Scattering from a Rough Surface
Tao Song (*East China Normal University*); *Lei Kuang* (*East China Normal University*); *Qing Huo Liu* (*Duke University*);

00:00 Numerical Studies of the Transmission of Light through a Two-dimensional Randomly Rough Interface
Oeyvind Storesund Hetland (*NTNU Norwegian University of Science and Technology*); *Alexei A. Maradudin* (*University of California*); *Tor Nordam* (*NTNU Norwegian University of Science and Technology*); *Paul Anton Letnes* (*NTNU Norwegian University of Science and Technology*); *Ingve Simonsen* (*Norwegian University of Science and Technology*);

00:00 Application of MUSIC to Microwave Imaging for Detection of Dielectric Anomalies
Won-Kwang Park (*Kookmin University*); *Kwang-Jae Lee* (*Electronics and Telecommunications Research Institute*); *Hwa Pyung Kim* (*Yonsei University*); *Seong-Ho Son* (*ETRI*);

00:00 On the Reconstruction of Perfectly Conducing Crack in Transverse Electric Case
Won-Kwang Park (*Kookmin University*);

00:00 Least Condition of the Topological Derivative for Imaging of Thin, Flat Dielectric Inhomogeneity
Won-Kwang Park (*Kookmin University*);

00:00 Shape Identification of Extended Dielectric Targets in an Inhomogeneous Medium Using Kirchhoff Migration
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*);

00:00 Application of Linear Sampling Method for Identifying Location of Small Dielectric Inhomogeneities in a Half-space
Sangwoo Kang (*GeePs*); *Won-Kwang Park* (*Kookmin University*);

00:00 Analysis of Micro-motion Model for Radar Target
Wenchao Li (*National University of Defense Technology*); *Boli Xiong* (*National University of Defense Technology*); *Gangyao Kuang* (*National University of Defense Technology*);

00:00 A Direct Method of Solving the Inverse Problem of Transmission Spectroscopy
Myroslav I. Kozak (*Uzhgorod National University*);

00:00 A Novel Method Based on the Vondrak-Cepek Algorithm for Correction of TWSTFT Diurnal
Yucen Liu (*National University of Defense Technology*); *Hang Gong* (*National University of Defense Technology*); *Zengjun Liu* (*National University of Defense Technology*); *Xiangwei Zhu* (*National University of Defense Technology*);

00:00 A Novel High-speed Parallel Sampling Technique by Analog and Digital Twice Mixing
Tao Li (*National University of Defense Technology*); *Shaoying Su* (*National University of Defense Technology*); *Zengping Chen* (*National University of Defense Technology*);

00:00 Modified Superformula Contours Optimized via Genetic Algorithms for Exponentially Converging 2D Solutions of MFIE
Sadri Guler (*Middle East Technical University*); *Can Onol* (*Middle East Technical University*); *Ozgur Ergul* (*Middle East Technical University*); *Emrah Sever* (*Gebze Technical University*); *Fatih Dikmen* (*Gebze Institute of Technology*); *Yury A. Tuchkin* (*Institute of Radiophysics and Electronics of National Academy of Sciences of Ukraine*);

00:00 On Electromagnetic Forces and Works Done by Them
Igor Pavlovich Krasnov (*Krylov State Research Centre*);

00:00 Absorption Mechanism of Electromagnetic Wave Absorbers Using Frequency Selective Surface
Takahiko Yoshida (*Doshisha University*); *Masato Matsushita* (*Nitta Corporation*); *Takumi Kubota* (*Doshisha University*); *Shinzo Yoshikado* (*Doshisha University*);

00:00 Non-planar Metamaterial with Simultaneous Broadband Microwave Absorption and High Optical Transparency
Jie Cao (*Wuhan University of Technology*); *Dawei Hu* (*Wuhan University of Technology*); *Wei Li* (*Wuhan University of Technology*); *Tianlong Wu* (*Wuhan University of Technology*); *Jianguo Guan* (*Wuhan University of Technology*);

00:00 Nonlocal Homogenization of Coated Wire Medium
Andrey A. Bogdanov (*ITMO University*); *Maxim A. Gorlach* (*ITMO University*); *M. Song* (*ITMO University*); *Alexey P. Slobozhanyuk* (*ITMO University*); *Pavel A. Belov* (*ITMO University*);

00:00 Investigation of the Electrical and Magnetic Properties of Combined Metamaterials
Musayev Maksud Muradoglu Muradoglu (*Rostov-on-Don Research Institute of Radio*); *Natalya N. Kisel* (*Southern Federal University*);

00:00 Manipulator to Extract Foreign Objects from the Hot Chamber of the Mine
Radda A. Iureva (*ITMO University*); *Nadezhda K. Maltseva* (*ITMO University*); *Andrey Talan* (*AO "Diakont"*);

00:00 Lighting Systems for the Control of the Processes, Occurring in the Pressurized-water Reactor
Radda A. Iureva (*ITMO University*); *Nadezhda K. Maltseva* (*ITMO University*); *Denis Kustov* (*ITMO University*);

00:00 Optical Position Encoder Based on Four-section Diffraction Grating
Alexander Y. Zherdev (*Bauman Moscow State Technical University*); *Sergey B. Odinokov* (*Bauman Moscow State Technical University*); *Dmitrii S. Lushnikov* (*Bauman Moscow State Technical University*); *Vladimir V. Markin* (*Bauman Moscow State Technical University*); *Maria V. Shishova* (*Bauman Moscow State Technical University*); *Oleg A. Gurylev* (*Bauman Moscow State Technical University*);

00:00 Laser Media Temperature and Low Absorption Coefficient Measurement Using Piezoelectric Probe Crystal
Andrei E. Korolkov (*Moscow Institute of Physics and Technology*); *Oleg A. Ryabushkin* (*State University*); *Aleskey Viktorovich Konyashkin* (*Moscow Institute of Physics and Technology*);

00:00 Using 3D Printing Technology to Develop the Unmanned Aerial Vehicle Electro-optical Pod for Free-space Optical Communication
Changqi Yang (*Xi'an Shiyou University*);

00:00 Surface and Volume Equivalent Temperature of Crystals in Arbitrary Shape for Piezoelectric Resonance Laser Calorimetry
Georgii A. Aloian (*Moscow Institute of Physics and Technology*); *N. V. Kovalenko* (*Moscow Institute of Physics and Technology*); *E. M. Khabushev* (*Moscow Institute of Physics and Technology*); *Oleg A. Ryabushkin* (*State University*);

00:00 Analysis of Gain Longitudinal Dependence in Non-homogeneously Doped Multi-core Fibers
Juan A. Valles (*University of Zaragoza*); *David Benedicto* (*University of Zaragoza*);

00:00 Measurements of Light Absorption by Black Carbon Using Filter-free Photoacoustic Spectroscopy
Gaoxuan Wang (*Universite du Littoral Cote d'Opale*); *Hongming Yi* (*Universite du Littoral Cote d'Opale*); *Patrice Hubert* (*Université de Lille1*); *Alexandre Deguine* (*Université de Lille1*); *Denis Petitprez* (*Université de Lille1*); *Eric Fertein* (*University of the Littoral Opal Coast*); *Julien M. Rey* (*IQE-ETH Zurich*); *Markus W. Sigrist* (*ETH Zurich*); *Wei Dong Chen* (*University of the Littoral Opal Coast*);

00:00 Monitoring of Short-lived Nitrous Acid (HONO) by Quantum Cascade Laser-based Off-beam Quartz-enhanced Photoacoustic Spectroscopy (QEPAS)
Hongming Yi (*Universite du Littoral Cote d'Opale*); *Rabih Maamary* (*Universite du Littoral Cote d'Opale*); *Xiaoming Gao* (*Anhui Institute of Optics and Fine Mechanics, Chinese Academy of Sciences*); *Markus W. Sigrist* (*ETH Zurich*); *Eric Fertein* (*University of the Littoral Opal Coast*); *Wei Dong Chen* (*Universite du Littoral Cote d'Opale*);

00:00 Radio-frequency Spectroscopy of Nonlinear-optical Crystal Boule Interacting with Laser Radiation
Eldar M. Khabushev (*Moscow Institute of Physics and Technology*); *Georgii A. Aloian* (*Moscow Institute of Physics and Technology*); *N. V. Kovalenko* (*Moscow Institute of Physics and Technology*); *Oleg A. Ryabushkin* (*State University*);

00:00 Determination of Low Optical Absorption Coefficient of Laser Materials Using Acoustic Resonances Induced by Laser Radiation
Alexei Alexandrovitch Molkov (*Moscow Institute of Physics and Technology*); *Oleg A. Ryabushkin* (*State University*); *Aleskey Viktorovich Konyashkin* (*Moscow Institute of Physics and Technology*);

00:00 Design of a Flexible Miniaturized Frequency Selective Surface Using a Screen Printing Technique
Sung-Sil Cho (*Kongju National University*); *Sun-Hong Yoon* (*Korea Electronics Technology Institute*); *Ic-Pyo Hong* (*Kongju National University*);

00:00 Calibration of Electromagnetic Field Sensors in the Time-domain
Joo-Gwang Lee (*Korea Research Institute of Standard and Science*);

00:00 Application of a Magnetic Sensor for Determining the Mass Imbalance of the Coriolis Vibratory Gyroscope with Cylindrical Metallic Resonator
Mikhail A. Basarab (*Bauman Moscow State Technical University*); *Evgenii A. Chumankin* (*JSC ANPP "TEMP-AVIA"*); *Boris S. Lunin* (*MSU named after M. V. Lomonosov*); *Valerii A. Matveev* (*Bauman MSTU*);

00:00 Investigation of Transmission Line Response to Random Plane Waves through Stochastic Reduced Order Modeling
Diego Bellan (*Politecnico di Milano*); *Sergio A. Pignari* (*Politecnico di Milano*);

00:00 Design and Implementation of a High-speed, Large-capacity, Multi-type Data Recording System Used in Wideband Phased-array Radar
Yingxiao Zhao (*National University of Defense Technology*); *Yue Zhang* (*National University of Defense Technology*); *Qianqiang Lin* (*National University of Defense Technology*); *Tao Li* (*National University of Defense Technology*); *Zengping Chen* (*National University of Defense Technology*);

00:00 Experimental Control of One-dimensional Electromagnetic Environments in the UHF Range
Maxime Spirlet (*University of Liege*); *Christophe Geuzaine* (*University of Liege*); *V. Beauvois* (*University of Liege*);

00:00 The Impact of Signal Regeneration on the DWDM System's Power Efficiency Using 10 Gbps NRZ-OOK
Deniss Pavlovs (*Riga Technical University*); *Vjaceslavs Bobrovs* (*Riga Technical University*); *Girts Ivanovs* (*Riga Technical University*); *Peteris Gavars* (*Riga Technical University*);

00:00 The Modeling of Power Line for PLC in Smart Grids
Jiri Misurec (*Brno University of Technology*); *Petr Mlynek* (*Brno University of Technology*); *S. Bezzateev* (*Saint Petersburg State University of Aerospace Instrumentation*);

00:00 Circular Microstrip Patch Assisted Planar Crossover for GPS Application
V. M. Jayakrishnan (*Amrita University*); *Sreedevi K. Menon* (*Amrita University*);

00:00 Determination of Critical Paths for Multipath Propagation in Broadband Powerline Communication Networks
Modisa Mosalaosi (*University of KwaZulu-Natal*); *Thomas Joachim Odhiambo Afullo* (*University of KwaZulu-Natal (UKZN)*);

00:00 The Analysis of Transient Phenomena on Power Transmission Lines Due to Lightning Electromagnetic Pulses
Turan Cakil (*Akdeniz University*); *Hamza Feza Carlak* (*Akdeniz University*); *Sukru Ozen* (*Akdeniz University*);

00:00 Reduction of Leakage Magnetic Fields in Wireless Power Transmission System Using Expanded Graphite
In-Gon Lee (*Kongju National University*); *Kee-Sun Lee* (*Kongju National University*); *Ic-Pyo Hong* (*Kongju National University*);

00:00 Analysis of Discrete-time Energy-harvesting DF Relay in Rician Fading Channel
Ning Cao (*Hohai University*); *Yifan Hu* (*Hohai University*); *Feng Wu* (*Hohai University*); *Muchen Chen* (*CAAC, Changle Airprot*);

00:00 A Coil-arrayed Wireless Charging Platform
Jwo-Shiun Sun (*National Taipei University of Technology*); *Guan-Pu Pan* (*National Taipei University of Technology*); *Pei-Hua Jiang* (*National Taipei University of Technology*); *Tsung-Lin Li* (*National Taipei University of Technology*);

00:00 3D Numerical Simulations of Implantable Cardiac Pacemaker EMI Triggered by Electric Vehicle Charging Wireless Power Transfer System
Takashi Hikage (*Hokkaido University*); *Toshio Nojima* (*Hokkaido University*);

00:00 Evaluation of Coupling Factors between Human Body and Resonant Wireless Power Transfer Systems
Kyu-Jin Jung (*Soongsil University*); *Jae-Hoon Shim* (*Soongsil University*); *Min-Soo Choi* (*Soongsil University*); *Jin-Kyu Byun* (*Soongsil University*);

00:00 Miniaturized Cavity-backed Slot Antenna Loaded with Magneto-dielectric Ferrite for RFID Tag Reader
Zhong Du (*Southwest Jiaotong University*); *Quanyuan Feng* (*Southwest Jiaotong University*); *Jun Tao* (*Southwest Jiaotong University*); *Zongliang Zheng* (*Southwest Jiaotong University*);

00:00 Design of a 60-GHz GIPD Unbalanced-fed Bandpass-filtering On-chip Yagi Antenna
Y.-H. Chuang (*National Cheng Kung University*); *C.-C. Chou* (*National Cheng Kung University*); *Huey-Ru Chuang* (*National Cheng Kung University*); *Yao-Chiang Kan* (*Yuan Ze University*);

00:00 Peculiarities of Salt Marshes Microwave Radiation in South of Western Siberia
A. N. Romanov (*Institute for Water and Environmental Problems SB RAS*); *Ilya V. Khvostov* (*Institute for Water and Environmental Problems SB RAS*);

00:00 Seasonal Variations of Microwave Radiation of Saline Soils in the Kulunda Steppe on Evidence Derived from SMOS
A. N. Romanov (*Institute for Water and Environmental Problems SB RAS*); *Ilya V. Khvostov* (*Institute for Water and Environmental Problems SB RAS*); *A. Yu. Sukovatova* (*Institute for Water and Environmental Problems SB RAS*);

00:00 On Possible Effect of Mineralized Water Bodies on Microclimate
A. N. Romanov (*Institute for Water and Environmental Problems SB RAS*); *Ilya V. Khvostov* (*Institute for Water and Environmental Problems SB RAS*);

00:00 Estimating the Absolute Total Electron Content from the Single-frequency GPS/GLONASS Data
Anna A. Mylnikova (*Institute of Solar-Terrestrial Physics (ISTP), Siberian Branch of Russian Academy of Sciences*); *Yury Vladimirovich Yasyukevich* (*Institute of Solar-Terrestrial Physics (ISTP), Siberian Branch of Russian Academy of Sciences*); *Vsevolod Borisovich Ivanov* (*Irkutsk State University*); *Anna S. Yasyukevich* (*Institute of Solar-Terrestrial Physics of Siberian Branch of Russian Academy of Sciences*);

00:00 Relaxation Model of Complex Relative Permittivity of Sandstones for the Frequency Range from 10 kHz to 1 GHz
Pavel Petrovich Bobrov (*Omsk State Pedagogical University*); *E. S. Kroshka* (*Omsk State University*); *Anastasiya Sergeevna Lapina* (*Omsk State Pedagogical University*); *Andrey V. Repin* (*Omsk State Pedagogical University*);

00:00 Complex Dielectric Permittivity of Saline Soils and Rocks at Frequencies from 10 kHz to 8 GHz
T. A. Belyaeva (*Omsk State Pedagogical University*); *Pavel Petrovich Bobrov* (*Omsk State Pedagogical University*); *E. S. Kroshka* (*Omsk State University*); *Andrey V. Repin* (*Omsk State Pedagogical University*);

00:00 On-orbit Spectral Calibration of Geostationary Interferometric Infrared Sounder (GIIRS)
Feng Xuan (*Wuhan University*);

00:00 Hand-held Radar with Video Positioning System for Microwave Imaging
Vladimir V. Razevig (*Bauman Moscow State Technical University*); *Andrey V. Zhuravlev* (*Bauman Moscow State Technical University*); *Margarita A. Chizh* (*Bauman Moscow State Technical University*); *Sergey I. Ivashov* (*Bauman Moscow State Technical University*); *Alexander S. Bugaev* (*Moscow Institute of Physics and Technology*);

00:00 Energy Conservation Law for Light Diffraction by Biperiodic Gratings and Randomly Rough Surfaces
Leonid I. Goray (*Saint Petersburg Academic University*);

00:00 Scattering of a Scalar Relativistic Particle by the Hyperbolic Tangent Potential
Clara Rojas (*IVIC*);

00:00 Applicability of Waterman's Approach to Homogeneous and Layered Non-spherical Scatterers
Victor G. Farafonov (*St. Petersburg University of Aerospace Instrumentation*); *V. B. Il'in* (*St. Petersburg University of Aerospace Instrumentation*); *V. I. Ustimov* (*St. Petersburg University of Aerospace Instrumentation*);

00:00 The Broadband Pulse Diffraction on a Half-plane Screen and Caustic
P. A. Golovinsky (*Voronezh State Architecture and Engineering University*); *V. A. Astapenko* (*Moscow Institute of Physics and Technology*); *Nadezhda N. Moroz* (*Moscow Institute of Physics and Technology (State University)*);

00:00 Detection of Troposcatter Signal with Cohen's Class Distribution Based on an Equal-slope Hough Transform
Mengnan Wang (*National University of Defense Technology*); *Zhuang Wang* (*National University of Defense Technology*); *Cheng Zhu* (*National University of Defense Technology*);

00:00 Linear Motion Blur Parameters Estimation of Noisy Images Using Curve Fitting and Discrete Cosine Transform
Jimmy Alexander Cortes Osorio (*Universidad Tecnológica de Pereira*); *Ivan Dario Arellano Ramirez* (*Technological University of Pereira*);

00:00 Experimental Study of Green Single-frequency Lasers Based on Periodically Poled Lithium Niobate Crystal
Wanguo Liang (*Fujian Institute of Research on the Structure of Matter, Chinese Academy of Sciences*); *Liyuan Chen* (*Fujian Institute of Research on the Structure of Matter, Chinese Academy of Sciences*); *Huang Zhou* (*Fujian Institute of Research on the Structure of Matter, Chinese Academy of Sciences*); *Xinkai Feng* (*Fujian Institute of Research on the Structure of Matter, Chinese Academy of Sciences*); *Yuliang Liu* (*Fujian Institute of Research on the Structure of Matter, Chinese Academy of Sciences*); *Guozhi Lu* (*Fujian Institute of Research on the Structure of Matter, Chinese Academy of Sciences*); *Long Miu* (*Fujian Institute of Research on the Structure of Matter, Chinese Academy of Sciences*); *Xiaolin Zou* (*Fujian Institute of Research on the Structure of Matter, Chinese Academy of Sciences*);

00:00 A Comparison of Radio Frequency Electrical Properties of Geological Materials from Ewekoro Quarry, Nigerian Sector of the Eastern Dahomey Basin
Olawale Babatunde Olatinsu (*University of Lagos*);

00:00 Ultrasonic Measurements of the Elastic Moduli of Hybrid Natural Short Fiber Reinforced Green Composites
Kiran Kumar Amireddy (*Indian Institute of Technology-Madras*); *Sharath Chandra Garikapati* (*Kakatiya Institute of Technology and Science*);

00:00 The Effect of Cisplatin and Static Magnetic Field Cotreatment on Cervical Cancer Cell Line
Samaneh Kamalipooya (*Arak University of Medical Science*); *Homa Soleimani* (*Arak University of Medical Science*); *Parviz Abdolmaleki* (*Tarbiat Modares University*);

00:00 Fast and Efficacious Forward Computational Technique for Branched Cable Modeling
Hamza Boudjefdjouf (*University of Freres Mentouri Constantine*);

00:00 Radio-chemical Physics of the Earth's Atmosphere
G. V. Golubkov (*Semenov Institute of Chemical Physics of the Russian Academy of Sciences*); *M. I. Manzhelii* (*Semenov Institute of Chemical Physics of the Russian Academy of Sciences*); *A. A. Berlin* (*Semenov Institute of Chemical Physics of the Russian Academy of Sciences*); *Alex A. Lushnikov* (*Geophysical Center of Russian Academy of Science*); *L. V. Eppelbaum* (*Tel Aviv University*);

00:00 Enhanced Luminescence of Quantum Dots CdSe/ZnS by Gold Nanoparticles Plasmon Resonance
Margarita A. Kurochkina (*ITMO University*); *E. A. Konshina* (*ITMO University*); *A. Oseev* (*Otto-von-Guericke-University Magdeburg*); *S. Hirsch* (*University of Applied Sciences Brandenburg*);

00:00 The Nonlocal Nature of the Ultrafast Nonlinear Response of Metals
Marat Spector (*Ben-Gurion University*); *Yonatan Sivan* (*Ben-Gurion University*);

00:00 Fiber Optic Liquid Filled Fabry-Perot Hydrophone
Yangzi Zheng (*Nanyang Technological University*); *Chi Chiu Chan* (*Nanyang Technological University*); *Xinyong Dong* (*China Jiliang University*);

00:00 The Use of Optical Fiber to Control the Sudden Arch Collapse of the Mine Working
Aleksey Vasilievich Yurchenko (*National Research Tomsk Polytechnic University*); *Ali D. Mekhtiev* (*Tomsk Polytechnic University*); *Aliya D. Alkina* (*TPU Graduate Student*); *Elena G. Neshina* (*TPU Graduate Student*);

00:00 Experimental Evaluation of Intelligent Transport System with VLC Vehicle-to-Vehicle Communication
Fahim Aziz Umrani (*Mehran University of Engineering and Technology*); *Faisal Ahmed Dahri* (*Mehran University of Engineering & Technology*); *Hyder Bux Mangrio* (*Mehran University of Engineering & Technology*); *Jawaid Ali* (*Mehran University of Engineering & Technology*); *Attiya Baqai* (*Mehran University of Engineering & Technology*);

00:00 High-resolution Optical Corellometer for the Information Processing Device
V. A. Glukhov (*Saint-Petersburg State University*); *Yu. A. Tolmachev* (*Institute of Oceanology*);

00:00 Design and Performance of WDM Systems for High Speed Optical Communications on Different Modulation Formats
Rudrabhatla Srinivas (*Raghu Engineering College*); *Korikana Sowjanya* (*Raghu Engineering College*); *Pyla Nagesh* (*Raghu Engineering College*); *Ashish Singh* (*University of Allahabad*);

00:00 Thermally Tunable Optical Switching in Semiconductor Photonic Crystal Heterostructure
Robab Tanavar (*Islamic Azad University*); *Kazem Jamshidi-Ghaleh* (*Islamic Azad University*);

00:00 Experimental Study of White LEDs Degradation and Shifts of Their Characteristics in Dependence with the Ambient Temperature
Svetlana N. Markova (*Moscow State University*); *Igor S. Mateshev* (*Moscow State University*); *Yurij Timonin* (*MSU Physics Faculty*); *Andrey N. Turkin* (*Moscow State University*);

00:00 Magnetic Nano Structures Studies
Diyar Bajalan (*St. Polten*);

00:00 A Novel Strong Electromagnetic Pulse Protection Method for RF Front-end
Zhonghao Lu (*National University of Defense Technology*); *Dongming Zhou* (*National University of Defense Technology*); *Peiguo Liu* (*National University of Defense Technology*); *Yujian Qin* (*National University of Defense Technology*);

00:00 The Radar Absorption Properties of the Hollow Fe_3O_4 Microspheres Synthesized by the Plasma Dynamic Method
Ivan Shanenkov (*Jilin University*); *Alexander Sivkov* (*National Research Tomsk Polytechnic University*); *Alexander Ivashutenko* (*National Research Tomsk Polytechnic University*); *Victor A. Zhuravlev* (*Tomsk State University*); *Guodong Wei* (*Jilin University*); *Guangshe Li* (*Jilin University*); *Wei Han* (*Jilin University*);

00:00 Improving the Efficiency of the Transformer Rectifier Unit for the Aerospace Area
Flur R. Ismagilov (*Ufa State Aviation Technical University*); *Vyacheslav E. Vavilov* (*Ufa State Aviation Technical University*); *Denis V. Gusakov* (*Ufa State Aviation Technical University*); *Z. I. Yalalova* (*Ufa State Aviation Technical University*); *A. S. Mednov* (*Ufa State Aviation Technical University*);

00:00 Modulation of the SAR Distribution inside a Three-layerd Head Model in Presence of a Dipole Antenna Using MoM/GEC
Hafawa Messaoudi (*University of Tunis El Manar*); *Mourad Aidi* (*National Engineering School of Tunis*); *Taoufik Aguili* (*University of Tunis*);

00:00 The Electromagnetic Characteristics of the Composites Based on Hexaferrites and MCNT at Gigahertz and Terahertz Frequency Bands
Eugene Korovin (*National Research Tomsk State University*); *Valentin I. Suslyaev* (*Tomsk State University*); *Victor A. Zhuravlev* (*Tomsk State University*); *Alexandra Pavlova* (*Tomsk State University*);

00:00 Systematic Integrated Methodology for the Conducted Emissions Analysis in Switch Mode Power Supplies
Diego Ivan Porras Pinzon (*Escola Politecnica da Universidade de Sao Paulo*); *Carlos Antonio Franca Sartori* (*Escola Politecnica da Universidade de Sao Paulo*);

00:00 Investigation Hyperfine of Structure of the Eigenmodes of the THzth Range Spectrum for Planar Multilayer Superconducting Lattice (PMSL)
Valery E. Grishin (*Australian National University*); *A. Romanenkov* (*RSTU*); *L. Muravey* (*RSTU*);

00:00 Study of Non-uniformities in Cooper Cable for Broadband Applications
Aline A. Ohashi (*Federal University of Para*); *Gilvan S. Borges* (*Federal University of Para*); *R. M. Rodrigues* (*Federal University of Para*); *Joao W. C. A. Costa* (*Federal University of Para*);

00:00 Simulations of a Few-mode Fiber Optic Link
Vladimir A. Burdin (*Povolzhskiy State University of Telecommunications and Informatics (PSUTI)*); *Anton V. Bourdine* (*Povolzhskiy State University of Telecommunications and Informatics (PSUTI)*);

00:00 Design of a Lightweight Polarization Insensitive 3D Radar Absorber with Extreme Ultra-wide Band
Fei-Fei Li (*Nanjing University*); *Qun Lou* (*Nanjing University*); *Yin Poo* (*Nanjing University*);

00:00 Application of Strip Lines for Magnetoelectric Device Design
Vladimir Mikhailovich Petrov (*Novgorod State University*); *Alexander Sergeevich Tatarenko* (*Novgorod State University*); *G. A. Semenov* (*Novgorod State University*);

00:00 Model of Electromobile Charger Based on Contactless Power Transfer Modeled in FEM Analysis Software
Radek Fajtl (*Czech Technical University in Prague*); *Karel Buhr* (*Czech Technical University in Prague*);

00:00 A New Method for Removing Radiation Noise from CCD Space-based Observed Images
Qian Zhu (*National University of Defense Technology*); *Zhaodong Niu* (*National University of Defense Technology*); *Jiameng Pan* (*National University of Defense Technology*); *Zengping Chen* (*National University of Defense Technology*);

00:00 Peculiarities of the Radio Wave Propagation from the Interkosmos-19 Satellite
Alexander T. Karpachev (*Pushkov Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation (IZMIRAN), Russian Academy of Sciences*);

00:00 Coherent Change Detection Based on Spaceborne SAR Video Product
Wei Yang (*Beihang University*);

00:00 The Deformation of the Cylindrical Sample Heating at Quasi-static Tensile
Alexander E. Moyseychik (*Belarusian National Technical University*);

00:00 Dual Polarization Doppler RADAR Technology Evolution in Time Line
Zar Khitab (*National University of Sciences and Technology*); *Farooq Ahmed Bhatti* (*National University of Sciences and Technology*); *Adnan Ahmed Khan* (*National University of Sciences and Technology*); *Adil Masood Siddiqui* (*National University of Sciences and Technology*); *Imran Rashid* (*National University of Sciences and Technology*);

00:00 The Problems of Remote Sensing of Earth Surface
G. V. Golubkov (*Semenov Institute of Chemical Physics of the Russian Academy of Sciences*); *M. I. Manzhelii* (*Semenov Institute of Chemical Physics of the Russian Academy of Sciences*); *A. A. Berlin* (*Semenov Institute of Chemical Physics of the Russian Academy of Sciences*); *Alex A. Lushnikov* (*Geophysical Center of Russian Academy of Science*); *L. V. Eppelbaum* (*Tel Aviv University*);

Session 4A1
Application of EM Field in Medical Diagnostics and Therapy 1

Thursday AM, May 25, 2017

Room G5

Organized by Jan Vrba

Chaired by Jan Vrba

00:00 Impact of Histology Region Size on Measured Dielectric Properties of Biological Tissues
Emily Porter (*National University of Ireland Galway*); *Alessandra La Gioia* (*National University of Ireland Galway*); *Martin O'Halloran* (*National University of Ireland Galway*);

00:00 Porphyrinic Photodiagnosis Agents: Comparative Studies in Aqueous, Buffer and Albumin-containing Solutions
Elena V. Kriukova (*ITMO University*); *Inna M. Belousova* (*ITMO University*); *Antonina V. Dadeko* (*S. I. Vavilov State Optical Institute*); *Tatyana K. Krisko* (*S. I. Vavilov State Optical Institute*); *Irina V. Martynenko* (*ITMO University*); *Maria R. Savchenko* (*ITMO University*);

00:00 Optical-physical Aspects of Fractal Art Therapy
Aleksandr Vladimirovich Averchenko (*Lomonosov Moscow State University*); *Pavel Vasil'evich Korolenko* (*M. V. Lomonosov Moscow State University*); *Alexey Yurevich Mishin* (*M. V. Lomonosov Moscow State University*);

00:00 A Feasibility Study for Circadian Rhythm Monitoring via a Continuous-wave Radar
Lesya N. Anishchenko (*Bauman Moscow State Technical University*); *Irina L. Alborova* (*Bauman Moscow State Technical University*); *Elizaveta M. Rutskova* (*Bauman Moscow State Technical University*);

00:00 Sapphire Shaped Crystals Allow Combining Surgery with Optical Medical Diagnostics and Exposure
Vladimir N. Kurlov (*Institute of Solid State Physics of Russian Academy of Sciences (ISSP RAS)*); *Irina A. Shikunova* (*Institute of Solid State Physics of Russian Academy of Sciences*); *Gleb M. Katyba* (*Institute of the Solid State Physics of Russian Academy of Sciences*); *Kirill I. Zaytsev* (*Bauman Moscow State Technical University*); *Igor V. Reshetov* (*I. M. Sechenov First Moscow State Medical University*);

00:00 Analysis and Comparison of an Inductive Powering Unit Control Methods
Arseny Anatolevich Danilov (*National Research University of Electronic Technology*); *Eduard Adipovich Mindubaev* (*National Research University of Electronic Technology*); *Sergey Vasilyevich Selishchev* (*National Research University of Electronic Technology*);

00:00 Through the Wall Detection of Heartbeat and Breathing Using SFCW Radar
Mustafa Pehlivan (*Ege University*); *Korkut Yegin* (*Ege University*);

00:00 Investigation of Distribution of Electromagnetic Fields Inner Biological Objects
Natalya N. Kisel (*Southern Federal University*); *Vitaliy A. Cheremisov* (*Southern Federal University*); *Dmitriy V. Kisel* (*Moscow State University*);

00:00 A Flexible Silver-printed Array Coil for Magnetic Resonace at 7T
A. Melis (*University of Cagliari*); *S. Casu* (*University of Cagliari*); *C. Puddu* (*University of Cagliari*); *Alessandro Fanti* (*University of Cagliari*); *Nikola Djuric* (*University of Novi Sad*); *Giuseppe Mazzarella* (*University of Cagliari*);

00:00 Overview of Prospective Applications of Microwaves in Medicine and Biology
Jan Vrba (*Czech Technical University in Prague*); *Jiri Kubes* (*Institute of Radiation Oncology in Prague*); *Ferdinand Trebicky* (*Institute of Radiation Oncology*); *Frantisek Vozeh* (*Charles University*); *Jan Barcal* (*Charles University in Prague*); *Luca Vannucci* (*Institute of Microbiology, Czech Academy of Sciences*); *Jan Vrba, Jr.* (*Czech Technical University in Prague*); *David Vrba* (*Czech Technical University in Prague*); *Ladislav Oppl* (*Czech Technical University in Prague*); *Ondrej Fiser* (*Czech Technical University in Prague*); *Ilja Merunka* (*Czech Technical University in Prague*); *Jesus Cumana* (*Institute of Microbiology, Czech Academy of Sciences*);

00:00 MTM Applicators for Microwave Hyperthermia in Cancer Treatment
David Vrba (*Czech Technical University in Prague*); *Jan Vrba, Jr.* (*Czech Technical University in Prague*); *Jesus Cumana* (*Institute of Microbiology, Czech Academy of Sciences*);

Session 4A2
Radio Wave Propagation and Wireless Channel Modeling 1

Thursday AM, May 25, 2017

Room G6

Organized by Tao Jiang

Chaired by Tao Jiang

00:00 Sparse Normalized Maximum Correntropy Criterion Algorithm with $\boldsymbol{l_1}$-norm Penalties for Channel Estimation
Yingsong Li (*Harbin Engineering University*); *Zhan Jin* (*Harbin Engineering University*); *Yanyan Wang* (*Harbin Engineering University*); *Rui Yang* (*Huazhong Agricultural University*);

00:00 Analytical Approach to Critical Diameters in Raindrop Size Distribution
Oluwumi Adetan (*Ekiti State University*);

00:00 An Enhanced Mixed Norm Error Criterion Adaptive Filtering Algorithm for Sparse Channel Estimation
Yanyan Wang (*Harbin Engineering University*); *Yingsong Li* (*Harbin Engineering University*); *Ming Diao* (*Harbin Engineering University*);

00:00 A Novel RMS Delay Spread Model for VHF/UHF Bands
Sridhar Bolli (*Indian Institute of Technology*); *Mohammed Zafar Ali Khan* (*Indian Institute of Technology*);

00:00 Anomalous Radio Propagation Occurrence and Characteristics for Tropical Zone Using ECMWF Data
Israel Emmanuel (*Federal University of Technology*); *Babatunde Adeyemi* (*Federal University of Technology*); *E. O. Ogolo* (*Federal University of Technology*); *Adekunle Titus Adediji* (*Federal University of Technology*);

00:00 An Improved Mechanical Fault Diagnosis Algorithm Based on Weighted Entropy Fusion and Modified DS Theory
Jie Chen (*Harbin Engineering University*); *Fang Ye* (*Harbin Engineering University*); *Yibing Li* (*Harbin Engineering University*);

00:00 Rain Height Variation from Attenuation-precipitation Time Delay over Earth-satellite Microwave Links
Babajide Olugbenga Afolayan (*University of KwaZulu-Natal, Howard Campus*); *Thomas Joachim Odhiambo Afullo* (*University of KwaZulu-Natal (UKZN)*); *Alonge Ayodeji Akintunde* (*University of KwaZulu-Natal*);

00:00 Application of Feature Selective Validation to Radio Scattering Models for Sea Surface Propagation
Jialin Shi (*Ocean Research Centre of China*); *Xiaochao Jiang* (*Harbin Engineering University*); *Shuang Gao* (*Harbin Engineering University*); *Tao Jiang* (*Harbin Engineering University*);

00:00 Prediction Error for Antennas and Scattering Characteristics of MIMO Channel over Sea
Ming Diao (*Harbin Engineering University*); *Xiaochao Jiang* (*Harbin Engineering University*); *Tao Jiang* (*Harbin Engineering University*);

Session 4A3
Inverse Problems and Imaging

Thursday AM, May 25, 2017

Room G7

Organized by Rocco Pierri

00:00 Fast DBIM Solutions on Supercomputers with Frequency-hopping for Imaging of Large and High-contrast Objects
Mert Hidayetoglu (*University of Illinois at Urbana-Champaign*); *Anthony Podkowa* (*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*);

00:00 Analytical Representation of the Sensitivity Functions for High-resolution Image Reconstruction in Parallel-plate Time-domain Diffuse Optical Tomography
Alexander B. Konovalov (*Zababakhin Institute of Applied Physics*); *Vitaly V. Vlasov* (*Zababakhin Institute of Applied Physics*);

00:00 Multi-frequency Reconstruction and Quality-enhancing Processing of Microwave Images Acquired with a Compact Radar
Margarita A. Chizh (*Bauman Moscow State Technical University*); *Andrey V. Zhuravlev* (*Bauman Moscow State Technical University*); *Vladimir V. Razevig* (*Bauman Moscow State Technical University*); *Sergey I. Ivashov* (*Bauman Moscow State Technical University*);

00:00 Newton-Kantorovich Method Applied to the Reconstruction of Surface Profiles under Tikhonov's Regularization with Domain Constraint
Slimane Arhab (*Universite d'Avignon et des Pays de Vaucluse*); *Maminirina Joelson* (*Universite d'Avignon et des Pays de Vaucluse*); *G. Micolau* (*Universite d'Avignon et des Pays de Vaucluse*);

00:00 Kolmogorov Entropy of Near Field: Numerical Results
Maria Antonia Maisto (*Universita degli studi della Campania Luigi Vanvitelli*); *Raffaele Solimene* (*Universita degli studi della Campania Luigi Vanvitelli*); *Rocco Pierri* (*Universita degli studi della Campania Luigi Vanvitelli*);

00:00 Investigation of Measurement Errors in Microwave Imaging System for Brain Stroke Monitoring
Christian Pichot (*University of Nice Sophia Antipolis, CNRS*); *Ibtissam El Kanfoud* (*Universite Cote d'Azur*); *Ioannis Aliferis* (*Universite de Nice*); *Claire Migliaccio* (*Universita de Nice Sophia-antipolis*); *Victorita Dolean* (*Universite Cote d'Azur*); *Marcella Bonazzoli* (*Universite Cote d'Azur*); *Francesca Rapetti* (*University of Nice*); *P.-H. Tournier* (*LJLL*); *Frederic Nataf* (*UPMC Univ Paris 06*); *Serguei Semenov* (*EMTensor GmbH*);

00:00 Implementation and Evaluation of the Utilization of Partial Knowledge of Phase Differences in Magnitude Only Near-field Far-field Transformation
Josef Knapp (*Technical University of Munich*); *Alexander Paulus* (*Technical University of Munich*); *Thomas F. Eibert* (*Technische Univeritat Munchen*);

00:00 Passive Crosswind Profiling Based on the Analysis of Turbulent Distortions Evolution in Incoherent Images
Anna S. Eremina (*V.E. Zuev Institute of Atmospheric Optics, SB RAS*); *V. V. Dudorov* (*V.E. Zuev Institute of Atmospheric Optics, SB RAS*);

00:00 SVD Computation for Singular Value Optimization in Inverse Problems
Amedeo Capozzoli (*Universita di Napoli Federico II*); *Claudio Curcio* (*Universita di Napoli Federico II*); *Angelo Liseno* (*Universita di Napoli Federico II*);

00:00 An Inverse Problem for Angularly Varying Sources: Preliminary Results
Giovanni Leone (*Seconda Universita di Napoli*); *Maria Antonia Maisto* (*Universita degli studi della Campania Luigi Vanvitelli*); *Rocco Pierri* (*Seconda Universita di Napoli*);

00:00 Joint Electromagnetic and Acoustic Inversion for Objects in a Layered Medium Host
Tian Lan (*Xiamen University*); *Qing Huo Liu* (*Duke University*);

00:00 A Novel Two Green Functions Method for the Identification of Sources Located in a Hemisphere
Ali Alkumru (*Gebze Technical University*); *H. Arda Ulku* (*Gebze Technical University*); *Gokhan Cinar* (*Eskisehir Osmangazi University, Meselik Campus*); *Sevda Vatansever* (*Gebze Technical University*); *Hakan Sertlek* (*Gebze Technical University*);

00:00 Application of Compressive Sensing to High-resolution Weather Observations with Imaging Radar
Serkan Ozturk (*University of Oklahoma*); *Tian-You Yu* (*University of Oklahoma*); *Lei Ding* (*University of Oklahoma*);

00:00 Reflective Tomography and 3D Visualization for Concealed Objects
Gerard Berginc (*Thales Optronique*); *Jean-Baptiste Bellet* (*Universite de Lorraine*); *Ion Berechet* (*SISPIA*); *Stefan Berechet* (*SISPIA*);

Session 4A4
Novel Mathematical Methods in Electromagnetics 2

Thursday AM, May 25, 2017

Room G8

Organized by Yury V. Shestopalov, Kazuya Kobayashi

Chaired by Yury V. Shestopalov, Kazuya Kobayashi

00:00 A Semi-analytical Solution for TE Electromagnetic Scattering from Arbitrary Shaped Dielectric Cylinders
Birol Aslanyurek (*Yildiz Technical University*); *Tolga Ulas Gurbuz* (*Gaziantep University*); *Ugur Cem Hasar* (*University of Gaziantep*);

00:00 Analytical Formula for Tightly Focused Spatially Phase-shaped Beams
Xiaorun Zang (*Tampere University of Technology*); *Leo Turquet* (*Tampere University of Technology*); *Godofredo Bautista* (*Tampere University of Technology*); *Martti Kauranen* (*Tampere University of Technology*);

00:00 Numerical Convergence Study of Some Iterative Algorithms for Coupled Physics Electrical Conductivity Imaging
Alex Timonov (*University of South Carolina Upstate*);

00:00 Intertype Transformation of Modes in Nonhomogeneous Waveguides
Ignat V. Fialkovsky (*Universidade Federal do ABC*); *Maria V. Perel* (*St. Petersburg State University*);

00:00 Diffraction by a Transversal Screen in a Planar Waveguide
A. V. Shanin (*Moscow State University*); *Andery Igorevich Korolkov* (*Moscow State University*);

00:00 Aposteriori Estimates in Inverse Problems for the Helmholtz Equation
Alexander G. Nakonechny (*Kiev National University*); *Yury K. Podlipenko* (*Kiev National University*); *Yury V. Shestopalov* (*University of Gavle*);

00:00 Angular Frequency Dynamics of Chirped Electromagnetic Pulses in Causal, Dispersive Media
Constantinos M. Balictsis (*Hellenic Telecommunications and Post Commission*);

00:00 TM Scattering by a Homogeneously Filled Slit in a Thick Impedance Plane
Ismail H. Tayyar (*Karabuk University*); *Bektas Colak* (*Karabuk University*);

00:00 The Optimal Interpolation of Narrowband Signal in Sense of Minimizing of Root Mean Square Error
Rui Dinis (*ISCTE/Instituto de Telecomunicacoes*); *Stanislav Gritsutenko* (*Omsk State Transport University*); *Ksenia Koroleva* (*Omsk State Transport University*);

00:00 Influence of Boundary Conditions on the Analytical Solution Describing the Ferrofluid Shape in the Magnetic Field of a Wire
Alexandra S. Vinogradova (*Lomonosov Moscow State University*); *V. A. Turkov* (*Lomonosov Moscow State University*); *V. A. Naletova* (*Lomonosov Moscow State University*);

00:00 On Principle of Least Action in Classical Electrodynamics
Igor Pavlovich Krasnov (*Krylov State Research Centre*);

Session 4A5
Ultra-thin Plasmonic and Photonic Structured Surfaces for Sensing, Energy Harvesting, and Spectral Engineering of Light

Thursday AM, May 25, 2017

Room G9

Organized by Junpeng Guo

Chaired by Junpeng Guo

00:00 Boundary Integral Spectral Element Method for Linear and Nonlinear Nanophotonics
Jun Niu (*Duke University*); *Ma Luo* (*Duke University*); *Qing Huo Liu* (*Duke University*);

00:00 Transverse Stratified Structures for Filtering Signals at Terahertz Frequencies
Daniele Lo Forti (*University of Alabama in Huntsville*);

00:00 The Method of Surface Plasmon-polariton Pulses Generation via Cooperative Effects in Waveguide Spaser
A. V. Shesterikov (*Alexandr and Nikolai Stoletovs Vladimir State University*); *M. Yu. Gubin* (*Alexandr and Nikolai Stoletovs Vladimir State University*); *M. G. Gladush* (*Institute of Spectroscopy, Russian Academy of Sciences*); *Alexey V. Prokhorov* (*Alexandr and Nikolai Stoletovs Vladimir State University*);

00:00 Fabrication of 5 nm Graphene Nanopores with a Helium Ion Microscope for Biomolecule Detection
Deqiang Wang (*Chongqing Institute of Green and Intelligent Technology, Chinese Academy of Sciences*); *Yunsheng Deng* (*Chongqing Institute of Green and Intelligent Technology, Chinese Academy of Sciences*); *Yunjiao Wang* (*Chongqing Institute of Green and Intelligent Technology, Chinese Academy of Sciences*);

00:00 Emission Enhancement and Redirection in Plasmonic Pillar Nanoantenna
Joel Bellessa (*Universite de Lyon*); *J. Paparonne* (*Universite de Lyon*); *Clementine Symonds* (*Universite de Lyon*); *J. M. Benoit* (*Universite de Lyon*); *J. Laverdant* (*Universite de Lyon*);

00:00 Strain Driven Tunable Electronic Properties of Pentagraphene Nanotubes: A First-principles Calculation
Zhanyu Wang (*Fudan University*); *Rongjun Zhang* (*Fudan University*); *Yuxiang Zheng* (*Fudan University*); *Liangyao Chen* (*Fudan University*); *Songyou Wang* (*Fudan University*); *Wan-Sheng Su* (*National Taiwan Science Education Center*);

00:00 Mechanisms of Plasmonic and Non-plasmonic Resonance Enhanced Light Absorption in Patterned Metal-insulator-metal Nanostructures
Junpeng Guo (*University of Alabama in Huntsville*); *Wonkyu Kim* (*University of Alabama in Huntsville*);

Session 4A6
Waves Propagation and Scattering in Random Media

Thursday AM, May 25, 2017

Room G10

Organized by Hosam El-Ocla

Chaired by Kihong Kim, Qing Zhao

00:00 Heat Island Phenomena and It's Influence on Troposphere Mezo-scale Structure Measured by Set of GPS-GLONASS Receivers
Vladislav E. Khutorov (*Kazan Federal University*); *G. M. Teptin* (*Kazan Federal University*); *Olga G. Khutorova* (*Kazan Federal University*);

00:00 GPS Signals Phase Fluctuations Caused by Atmospheric Integral Water Vapor Mesoscale Variability
Olga G. Khutorova (*Kazan Federal University*); *Vladislav E. Khutorov* (*Kazan Federal University*); *A. S. Blizorukov* (*Kazan Federal University*); *G. M. Teptin* (*Kazan Federal University*);

00:00 Experimental and Numerical Studies of the Scattering of Light from a Two-dimensional Randomly Rough Interface in the Presence of Total Internal Reflection: Optical Yoneda Peaks
Alma Karen Gonzalez-Alcalde (*Centro de Investigacion Cientifica y de Educacion Superior de Ensenada*); *Jean-Philippe Banon* (*Norwegian University of Science and Technology*); *Oyvind Storesund Hetland* (*NTNU Norwegian University of Science and Technology*); *Alexei A. Maradudin* (*University of California*); *Eugenio Rafael Mendez* (*Centro de Investigacion Cientifica y de Education Superior de Ensenada (CICESE)*); *Tor Nordam* (*NTNU Norwegian University of Science and Technology*); *Ingve Simonsen* (*Norwegian University of Science and Technology*);

00:00 Localization of Electromagnetic Waves in Randomly-stratified Uniaxial Media
Kihong Kim (*Ajou University*);

00:00 Spatiotemporal Control of Microwaves in a Cavity by Wave Front Shaping
Philipp Del Hougne (*ESPCI Paris & CNRS*); *Fabrice Lemoult* (*ESPCI ParisTech*); *Mathias Fink* (*ESPCI Paris Tech and CNRS*); *Geoffroy Lerosey* (*ESPCI Paris and CNRS*);

00:00 Classical Implementation of a Quantum-Fourier-Transform Computation with Wavefront Shaping
Philipp Del Hougne (*ESPCI Paris & CNRS*); *Sebastien Popoff* (*ESPCI Paris & CNRS*); *Laurent Daudet* (*ESPCI Paris & CNRS*); *Geoffroy Lerosey* (*ESPCI Paris and CNRS*);

00:00 On the Performance Analysis of Diversity Combining in an OFDM-based BPSK PLC System with Impulsive Noise
Steven O. Awino (*University of KwaZulu Natal*); *Thomas Joachim Odhiambo Afullo* (*University of KwaZulu-Natal (UKZN)*); *Peter O. Akuon* (*University of Kwa-Zulu Natal (UKZN)*);

00:00 Diffraction from Octagonal Periodic Pure Amplitude Sinusoidal Structure
Davud Hebri (*Institute for Advanced Studies in Basic Sciences (IASBS)*); *Saifollah Rasouli* (*Institute for Advanced Studies in Basic Sciences (IASBS)*);

00:00 Talbot Images of 2D Orthogonal Multiplicatively Separable Sawtooth and Triangular Gratings
Davud Hebri (*Institute for Advanced Studies in Basic Sciences (IASBS)*); *Saifollah Rasouli* (*Institute for Advanced Studies in Basic Sciences (IASBS)*);

00:00 Molecular Dynamics as Studied by Laser Correlation Spectroscopy
Elina K. Nepomnyashchaya (*Peter the Great Saint Petersburg Polytechnic University*); *Evgenii T. Aksenov* (*Peter the Great Saint Petersburg Polytechnic University*); *E. N. Velichko* (*Peter the Great Saint Petersburg Polytechnic University*);

00:00 The Dual Jones Birefringence in Magneto-electric Media
Jian-Ye Wei (*Beijing Institute of Technology*); *Waqas Mahmood* (*Beijing Institute of Technology*); *Guang-Jie Zhai* (*National Space Science Center, Chinese Academy of Sciences*); *Qing Zhao* (*Beijing Institute of Technology*);

Session 4A7
Microwave and Millimeter Wave Circuits and Devices, CAD 1

Thursday AM, May 25, 2017
Room B1

00:00 Summation of the Output Powers for the Low Voltage 2.45 GHz Multi-stream Klystrons with Double-gap Output Cavity
Vladislav Alekseevich Tsarev (*Saratov State Technical University*); *Vadim Yurievich Muchkaev* (*Yuri Gagarin State Technical University of Saratov*);

00:00 On-chip Grounded CPW Line Model with Anomalous Skin Effect in THz Band
Hideshi Kakiuchi (*Kagoshima University*); *Yuta Sakiyama* (*Kagoshima University*); *Kenjiro Nishikawa* (*Kagoshima University*);

00:00 Synthesis of an Artificial High Effective Permittivity Medium in a SIW Periodically Loaded with Metallic Cylinders
Gaspar Vicent (*Universidad Miguel Hernandez de Elche*); *Angela Coves Soler* (*Universidad Miguel Hernandez de Elche*); *Enrique Bronchalo* (*Universidad Miguel Hernandez de Elche*); *German Torregrosa-Penalva* (*Universidad Miguel Hernandez de Elche*);

00:00 Number of Calibration Loads and Degree of Freedom of Fixture's $\boldsymbol{T}$-parameter for Indirect $\boldsymbol{S}$-parameter Estimation
Yuya Kojima (*Gifu University*); *Toshikazu Sekine* (*Gifu University*); *Yasuhiro Takahashi* (*Gifu University*);

00:00 Design of Compact Strip-line Directional Couplers for High Power Operation within Frequency Band 4–12 GHz
Mikhail G. Pischenko (*JSC "Faza"*); *Dmitry G. Pischenko* (*JSC "Faza"*); *Mikhail B. Manuilov* (*Southern Federal University*);

00:00 A Design of 180° Coupler with Predefined Negative Group Delay Characteristics
Girdhari Chaudhary (*Chonbuk National University*); *Boram An* (*Chonbuk National University*); *Phirun Kim* (*Chonbuk National University*); *Jongsik Lim* (*Soonchunhyang University*); *Yongchae Jeong* (*Chonbuk National University*);

00:00 Application of Transmission Line-based Inductors to Dual-band Branch Line Couplers
Jongsik Lim (*Soonchunhyang University*); *Boram An* (*Chonbuk National University*); *Yongchae Jeong* (*Chonbuk National University*); *Sang-Min Han* (*Soonchunhyang University*); *Dal Ahn* (*Soonchunhyang University*); *Kwansun Choi* (*Soonchunhyang University*);

00:00 Full Wave Analysis and Design of Waveguide Diplexer with Ridged Sections and Diaphragms
Mikhail B. Manuilov (*Southern Federal University*); *K. V. Kobrin* (*Southern Federal University*);

00:00 On the Complexity of Randomly Overlapped Subarray Feeding Networks
Davide Bianchi (*University of Pisa*); *Simone Genovesi* (*University of Pisa*); *Agostino Monorchio* (*University of Pisa*);

00:00 Compact Microstrip Feed Networks for Low-impedance Quadrifillar Helix Antennas
Dmitriy Aleksandrovitch Dyomin (*Moscow Institute of Physics and Technology*); *Nikolai Petrovitch Chubinskiy* (*Moscow Institute of Physics and Technology*); *Evgeniya Sergeevna Stukalova* (*Moscow Institute of Physics and Technology*); *Ivan Vasilevitch Filatov* (*Moscow Institute of Physics and Technology*);

00:00 Design of a Wideband CMOS Variable-gain Low Noise Amplifier
Chen Fan (*Southeast University*); *Zhigong Wang* (*Southeast University*);

Session 4A8
MS-2: BRICS Mini-symposium on Nonlinear Photonics and Photonic Assisted Technologies 3

Thursday AM, May 25, 2017

Room B5

Organized by Alexander. P. Alodjants, Yikun Liu

Chaired by Alexander. P. Alodjants

00:00 Supercontiuum Generation in Photonic Crystal Fibers: Recent Applications
Kuppuswamy Porsezian (*Pondicherry University*);

00:00 Two-level Diffraction Structures Prepared by Vertical Deposition of SiO_2 Microspheres
M. S. Ashurov (*M. V. Lomonosov Moscow State University*); *A. L. Stepanov* (*Kazan Physical-Technical Institute, Russian Academy of Sciences*); *Sergey O. Klimonsky* (*Lomonosov Moscow State University*);

00:00 Light Propagation in Semiconductor Resonant Exciton-polariton Hyperbolic Metamaterials
Evgeny S. Sedov (*University of Southampton*); *E. D. Cherotchenko* (*University of Southampton*); *I. E. Sedova* (*Vladimir State University Named after A. G. and N. G. Stoletovs*); *S. M. Arakelian* (*Vladimir State University Named after A. G. and N. G. Stoletovs*); *Alexey V. Kavokin* (*University of Southampton (GB)*);

00:00 All-optical Logic Devices Based on Anisotropic Responsive Liquid Crystal
Tsung-Hsien Lin (*National Sun Yat-Sen University*);

00:00 Optical Imagine beyond Conventional Limit
Yikun Liu (*Sun Yat-sen University*); *Jianying Zhou* (*Sun Yat-sen University*);

00:00 2D and 3-D Lithography of Nanoscale and Microscale Structures Using Femto-second Laser
Shobha Shukla (*Indian Institute of Technology Bombay*);

00:00 Optical Quantum State Generation with Integrated Frequency Combs
Christian Reimer (*INRS-EMT*); *Michael Kues* (*INRS-EMT*); *Piotr Roztocki* (*INRS-EMT*); *Benjamin Wetzel* (*INRS-EMT*); *Brent E. Little* (*Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Science*); *Sai T. Chu* (*City University of Hong Kong*); *Lucia Caspani* (*INRS-EMT*); *David J. Moss* (*University of Sydney*); *Roberto Morandotti* (*INRS-EMT*);

00:00 Coherent Controlization in a Quantum Register via Cavity QED
N. Friis (*University of Innsbruck*); *Alexey A. Melnikov* (*University of Innsbruck*); *G. Kirchmair* (*Austrian Academy of Sciences*); *H. J. Briegel* (*University of Innsbruck*);

00:00 Spatio-temporal Continuum Generation in Polariton Nonlinear Waveguides
Paul M. Walker (*University of Sheffield*); *C. E. Whittaker* (*University of Sheffield*); *M. Sich* (*University of Sheffield*); *B. Royall* (*University of Sheffield*); *I. Farrer* (*University of Sheffield*); *M. S. Skolnick* (*University of Sheffield*); *D. N. Krizhanovskii* (*University of Sheffield*);

00:00 Generation of Terahertz Waves with Strong Quasistatic Precursors by Ultrashort Laser Pulses Inducing Ionization in Nonlinear Crystals
Michael I. Bakunov (*University of Nizhni Novgorod*); *Alexey V. Maslov* (*University of Nizhny Novgorod*); *M. V. Tsarev* (*University of Nizhni Novgorod*);

00:00 Determining the Internal Quantum Efficiency of Nitrogen-vacancy Defects in Bulk Diamond
Ilya P. Radko (*Technical University of Denmark*); *Mads Boll* (*Technical University of Denmark*); *Ulrik L. Andersen* (*Technical University of Denmark*); *Alexander Huck* (*Technical University of Denmark*);

Session 4A9a
Antenna Array, Phased Array and Reconfigurable Array 2

Thursday AM, May 25, 2017

Room B3

00:00 Practical Aspects of Active Phased Arrays Characterization during Thermal Testing
Grigory Kuznetsov (*Moscow Aviation Institute (National Research University)*); *Maxim Miloserdov* (*Moscow Aviation Institute (National Research University)*); *Vladimir Temchenko* (*Moscow Aviation Institute (National Research University)*); *Alexander Kovalenko* (*Research Institute of Precision Instruments*); *Dmitry Voskresenski* (*Moscow Aviation Institute (National Research University)*); *Sergey Vnotchenko* (*Research Institute of Precision Instruments*); *Viktor Riman* (*Research Institute of Precision Instruments*); *Anatoliy Shishanov* (*Research Institute of Precision Instruments*);

00:00 Beam Steering Performance of Wideband Cavity-backed Patch Antenna Array Element
Artem Vilenskiy (*Bauman Moscow State Technical University*); *Vladimir Litun* (*Bauman Moscow State Technical University*); *Konstantin Lyulyukin* (*Bauman Moscow State Technical University*); *Vladimir Mitrokhin* (*Bauman Moscow State Technical University*);

00:00 Leaky Coaxial Cable with Continuous Scanning Directive Beam
Ahmed Radwan (*University of Oulu*); *Zeeshan Siddiqui* (*University of Oulu*); *Marko Sonkki* (*University of Oulu*); *Marko Tuhkala* (*University of Oulu*); *Sami Myllymaki* (*University of Oulu*);

00:00 Design of a W-band One-dimensional Beam Scanning Slotted Waveguide Antenna with Narrow Beam and Low Side Lobe
Lei Tan (*Southeast University*); *Jian Zhang* (*Southeast University*); *Wenbo Wang* (*Southeast University*); *Jinping Xu* (*Southeast University*);

00:00 Design of Metasurface Radomes for Wide-scan Phased Array Antennas
Davide Bianchi (*University of Pisa*); *Simone Genovesi* (*University of Pisa*); *Filippo Costa* (*University of Pisa*); *Michele Borgese* (*University of Pisa*); *Agostino Monorchio* (*University of Pisa*);

00:00 Reconfigurable Sparse Concentric Ring Arrays with Optimized Number of Rings and Elements
Said Esmail El-Khamy (*Alexandria University*); *Magdy A. Abdelhay* (*Alexandria Institute of Engineering and Technology*);

Session 4A9b
Wireless Power Transfer and Harvesting

Thursday AM, May 25, 2017

Room B3

00:00 Double-layer Variable Geometry Inductor for Energy Harvesting Applications
Nikola Djuric (*University of Novi Sad*); *Gorana Mijatovic* (*University of Novi Sad*); *Danka Antic* (*University of Novi Sad*); *Jelena Bjelica* (*University of Novi Sad*); *Dragan Kljajic* (*University of Novi Sad*); *Karolina Kasas-Lazetic* (*University of Novi Sad*);

00:00 The Planar Inductor with Adjustable Surface for Energy Harvesting Applications
Jelena Bjelica (*University of Novi Sad*); *Nikola Djuric* (*University of Novi Sad*); *Alessandro Fanti* (*University of Cagliari*); *Snezana M. Djuric* (*University of Novi Sad*);

00:00 Coupling Analysis for a WPT System Including Dielectric/Magnetic Materials
Yangjun Zhang (*Ryukoku University*); *Tatsuya Yoshikawa* (*Ryukoku University*);

00:00 Energy-Harvesting RF System Designs for IoT Sensor Network Applications
Sang-Min Han (*Soonchunhyang University*); *Seok-Jae Lee* (*Soonchunhyang University*); *Jongsik Lim* (*Soonchunhyang University*); *Dal Ahn* (*Soonchunhyang University*); *Won-Sang Yoon* (*Hoseo University*);

Session 4A_10
MS-1: Mini-symposium on Nanophotonics and Metamaterials 4

Thursday AM, May 25, 2017

Room R11

Organized by Pavel A. Belov, Andrey A. Bogdanov

Chaired by Andrey A. Bogdanov

00:00 Polarisation Dependent Purcell Factor in a Fishnet Metamaterial: Modelling and Measurement in the Microwave Range
Kaizad Rustomji (*Institut Fresnel*); *Redha Abdeddaim* (*ESPCI Paris Tech.*); *C. Martijn de Sterke* (*University of Sydney*); *Boris T. Kuhlmey* (*University of Sydney*); *Stefan Enoch* (*Institut Fresnel*);

00:00 Decomposing Meta-molecules into Fundamental Meta-atoms: Materiatronics Concept
Sergei A. Tretyakov (*Aalto University*);

00:00 Crystalline Structure Dependence on Optical Properties of Silver Thin Film Over Time
Aleksandr S. Baburin (*BMSTU*); *Anton I. Ivanov* (*VNIIA*); *Ilya A. Ryzhikov* (*VNIIA*); *Igor V. Trofimov* (*VNIIA*); *Aidar R. Gabidullin* (*VNIIA*); *Dmitry O. Moskalev* (*BMSTU*); *Yuri V. Panfilov* (*Bauman Moscow State Technical University*); *Ilya A. Rodionov* (*All-Russian Research Institute of Automatics*);

00:00 Microgap TPV Systems for Electricity Generation: A New Perspective
Constantin R. Simovski (*Aalto University*); *Mohammad-Sajjad Mirmoosa* (*Aalto University*);

00:00 Optical Bound State in the Continuum in the One-dimensional Photonic Structures: Transition into a Resonant State
Zarina Failevna Sadrieva (*ITMO University*); *Ivan S. Sinev* (*ITMO University*); *Anton K. Samusev* (*ITMO University*); *Ivan V. Iorsh* (*ITMO University*); *Andrey A. Bogdanov* (*ITMO University*); *K. L. Koshelev* (*ITMO University*); *O. Takayama* (*Technical University of Denmark*); *Radu Malureanu* (*Technical University of Denmark*); *Andrei V. Lavrinenko* (*Technical University of Denmark*);

00:00 Light Source-free Manipulation by Nanoparticles Using Lateral-drag Propulsion Forces, Induced by Anisotropy
Igor S. Nefedov (*Helsinki University of Technology*); *J. Miguel Rubi* (*University of Barcelona*);

00:00 Metasurfaces with Fractal Coding of the Far-field Radiation Pattern
Samaneh Moeini (*Universidade de Aveiro*); *Tie Jun Cui* (*Southeast University*);

00:00 Dispersion of Surface Waves in All-dielectric Hyperbolic Metasurfaces
Kirill L. Koshelev (*ITMO University*); *Andrey A. Bogdanov* (*ITMO University*);

00:00 Effective Conductivity Tensor of Plasmonic Anisotropic Metasurface: Theory and Experiment
Oleh Y. Yermakov (*ITMO University*); *I. S. Mukhin* (*ITMO University*); *Anton K. Samusev* (*ITMO University*); *Andrey A. Bogdanov* (*ITMO University*); *Ivan V. Iorsh* (*ITMO University*);

00:00 Laser Printing Optical Metasurfaces
Anders Kristensen (*Technical University of Denmark*); *Xiaolong Zhu* (*Technical University of Denmark*); *Christoph Vannahme* (*Technical University of Denmark*); *Emil Hojlund-Nielsen* (*Technical University of Denmark*); *N. Asger Mortensen* (*Technical University of Denmark*);

00:00 Magneto-optical Effects in Subwavelength Nanoparticles Enhanced by Optically-induced Magnetic Resonances
Maria G. Barsukova (*Lomonosov Moscow State University*); *Alexander S. Shorokhov* (*Lomonosov Moscow State University*); *Alexander I. Musorin* (*Lomonosov Moscow State University*); *Maxim R. Shcherbakov* (*Lomonosov Moscow State University*); *Dragomir N. Neshev* (*Australian National University*); *Andrey A. Fedyanin* (*Lomonosov Moscow State University*); *Yuri S. Kivshar* (*Australian National University*);

Session 4A_11
Optical Spectroscopy of Two-dimensional Materials

Thursday AM, May 25, 2017

Room R10

Organized by Hui Zhao, Yongsheng Wang

Chaired by Hui Zhao, Yongsheng Wang

00:00 Invited Coulomb Engineering of Electronic Bandgaps in 2D Materials
Alexey Chernikov (*University of Regensburg*);

00:00 Invited Ultrafast Magneto-optical Studies of Anisotropic Response of Black Phosphorus
Dong Sun (*Peking University*);

00:00 Invited Study on Carrier Dynamics of Two Dimensional Semiconductor Materials
Jiaqi He (*Beijing Jiaotong University*); *Dawei He* (*Beijing Jiaotong University*); *Yongsheng Wang* (*Beijing Jiaotong University*); *Zhiyi He* (*Gulin University of Electronic Technology*);

00:00 Invited Optoelectrical Devices Based on Transition Metal Chalcogenides
Alexander Sinitskii (*University of Nebraska-Lincoln*);

00:00 Invited Laser-induced Electron Coherence in 2D Quantum Materials
Jimin Zhao (*Institute of Physics, Chinese Academy of Sciences*);

00:00 Wavelength-dependent Linear Birefringence of a New Carbon Allotrope Intercalated with Bimetallic Au-Ag Nanoparticles
A. A. Manshina (*St. Petersburg State University*); *M. Neugebauer* (*Max Planck Institute for the Science of Light*); *T. Bauer* (*Max Planck Institute for the Science of Light*); *Peter Banzer* (*Max Planck Institute for the Science of Light*); *G. Leuchs* (*Max Planck Institute for the Science of Light*);

00:00 *In-situ* Optical Characterisation of the Spatial Dynamics of Liquid Crystalline Nanocomposites
Ben Hogan (*University of Exeter*); *Sergey Dyakov* (*Skolkovo Institute of Science and Technology, Photonics and Quantum Material Center*); *Samuel Rault* (*University of Exeter*); *Jenny O'Dowd* (*University of Exeter*); *Yuri Gun'ko* (*The University of Dublin*); *Tatiana S. Perova* (*The University of Dublin & ITMO University*); *Monica Craciun* (*University of Exeter*); *Anna Baldycheva* (*University of Exeter*);

00:00 Graphene and Beyond
Sumit Saxena (*Indian Institute of Technology Bombay*); *Shobha Shukla* (*Indian Institute of Technology Bombay*);

Session 4A_12
Quantum Optics 1

Thursday AM, May 25, 2017

Room R9

Organized by Byoung S. Ham, Xiaoying Li

00:00 Quantum State Model of Non-radiative Decay for Description of Superradiance
Igor E. Protsenko (*Lebedev Physical Institute*); *A. V. Uskov* (*Lebedev Physical Institute*);

00:00 Bloch Oscillations of Non-local N00N States
Markus Grafe (*Friedrich-Schiller-Universitat Jena*); *Maxime Lebugle* (*Friedrich-Schiller-Universitat Jena*); *Armando Perez-Leija* (*Friedrich-Schiller-Universitat Jena*); *Rene Heilmann* (*Friedrich-Schiller-Universitat Jena*); *Stefan Nolte* (*Friedrich-Schiller-Universitat Jena*); *Alexander Szameit* (*Friedrich-Schiller-Universitat Jena*);

00:00 Photonic Implementation of Quantum Discrete Fractional Fourier Transform
Markus Grafe (*Friedrich-Schiller-Universitat Jena*); *Steffen Weimann* (*Friedrich-Schiller-Universitat Jena*); *Armando Perez-Leija* (*Friedrich-Schiller-Universitat Jena*); *Maxime Lebugle* (*Friedrich-Schiller-Universitat Jena*); *Robert Keil* (*Universitat Innsbruck*); *Rene Heilmann* (*Friedrich-Schiller-Universitat Jena*); *Stefan Nolte* (*Friedrich-Schiller-Universitat Jena*); *Gregor Weihs* (*Universitat Innsbruck*); *Demetrios N. Christodoulides* (*University of Central Florida*); *Alexander Szameit* (*Friedrich-Schiller-Universitat Jena*);

00:00 Quantum Coherence Endurance in Open Quantum Systems
Markus Grafe (*Friedrich-Schiller-Universitat Jena*); *Armando Perez-Leija* (*Friedrich-Schiller-Universitat Jena*); *Diego Guzman-Silva* (*Friedrich-Schiller-Universitat Jena*); *Roberto De J. Leon-Montiel* (*Universidad Nacional Autonoma de Mexico*); *Matthias Heinrich* (*Friedrich-Schiller-Universitat Jena*); *Stefan Nolte* (*Friedrich-Schiller-Universitat Jena*); *Kurt Busch* (*Humboldt Universitat zu Berlin*); *Alexander Szameit* (*Friedrich-Schiller-Universitat Jena*);

00:00 Managing the Spatial Entanglement and Mode Content of Squeezed Non-classical States of Light
Roman V. Zakharov (*Lomonosov Moscow State University*); *O. V. Tikhonova* (*Lomonosov Moscow State University*);

00:00 States Tomography of Quantum Systems via Twisted Light
Alexander F. Klinskikh (*Voronezh State University*); *Peter A. Meleshenko* (*Voronezh State University*); *Hang T. T. Nguyen* (*Vietnam National University*); *Svetlana A. Sokolova* (*Voronezh State Agricultural University*); *Mikhail E. Semenov* (*Zhukovsky-Gagarin Air Force Academy*); *Olesya I. Kanishcheva* (*Zhukovsky-Gagarin Air Force Academy*); *Vladimir A. Gorlov* (*Zhukovsky-Gagarin Air Force Academy*);

00:00 Collective Behavior of Multiple Atoms in General Electromagnetic Environments: Dressed Atom Fields and Bound States
Aiyin Y. Liu (*University of Illinois*); *Weng Cho Chew* (*University of Illinois*);

00:00 Coherent Population Oscillation-based Light Storage
P. Neveu (*Universite Paris-Sud*); *M.-A. Maynard* (*Universite Paris-Sud*); *R. Bouchez* (*Universite Paris-Sud*); *J. Lugani* (*Universite Paris-Sud*); *R. Ghosh* (*Shiv Nadar University*); *F. Bretenaker* (*CNRS*); *F. Goldfarb* (*Universite Paris-Sud*); *Etienne Brion* (*CNRS/Universite Paris-Sud/ENS-Cachan*);

00:00 Hybrid Homodyne-like Detection Scheme with Photon-Number-Resolving Detectors
Alessia Allevi (*University of Insubria*); *Matteo Bina* (*University of Milan (Italy)*); *Stefano Olivares* (*University of Milan (Italy)*); *Maria Bondani* (*Institute for Photonics and Nanotechnology — National Research Council (CNR)*);

00:00 Charge Polarization Effect on the Optical Response of Ultraviolet Emitting Superlattices
Pedro Pereyra (*Universidad Autonoma Metropolitana*); *Fatna Assaoui* (*University Mohammed V*);

00:00 Understanding of Collective Coherence Conversion in Photon Echoes for Quantum Memory Applications
Byoung Seung Ham (*Gwangju Institute of Science and Technology*);

Session 4A_13
Earth Electromagnetic Environment and Radiowaves Propagation & Scattering: Modeling, Measurements and Observations Including NanoSats and CubeSats Emerging Approach

Thursday AM, May 25, 2017

Room R8

Organized by Rachid Talhi

Chaired by Rachid Talhi

00:00 Co-rotating Leo Satellites for Estimating the 2D Tropospheric Water Vapor
Fabrizio Cuccoli (*Universita di Firenze*); *Luca Facheris* (*Universita di Firenze*); *Fabrizio Argenti* (*Universita di Firenze*); *A. Lapini* (*Universita di Firenze*);

00:00 Application of Neural Network in Vertical Profile of Radio Refractivity in Akure South-West Nigeria
Gabriel Friday Ibeh (*Federal University of Agriculture Makurdi*);

00:00 On the Applicability of Physical Optics in the mm-wave Region of the Electromagnetic Spectrum
Anthony J. Baran (*Met Office*); *Evelyn Hesse* (*University of Hertfordshire*); *Odran Sourdeval* (*Universitat Leipzig*);

00:00 Fabri-Perot Interferometer in the East Syberia. Selected Results.
Roman V. Vasilyev (*Institute of Solar-Terrestrial Physics, Siberian Branch of Russian Academy of Science*); *Alexander V. Mikhalev* (*Institute of Solar-Terrestrial Physics, SB, RAS*); *Konstantin G. Ratovsky* (*Institute of Solar-Terrestrial Physics SB RAS*); *Andrey V. Medvedev* (*Institute of Solar-Terrestrial Physics of Siberian Branch of Russian Academy of Sciences*); *Yury Vladimirovich Yasyukevich* (*Institute of Solar-Terrestrial Physics (ISTP), Siberian Branch of Russian Academy of Sciences*);

00:00 Simultaneous Observation of Radio Signal Ionospheric Scintillations in Meter and Decameter Bands in the Direction of the Magnetic Zenith
Maria V. Globa (*Institute of Solar-Terrestrial Physics, Siberian Branch of Russian Academy of Science*); *Roman V. Vasilyev* (*Institute of Solar-Terrestrial Physics, Siberian Branch of Russian Academy of Science*); *Yury Vladimirovich Yasyukevich* (*Institute of Solar-Terrestrial Physics (ISTP), Siberian Branch of Russian Academy of Sciences*);

00:00 Evolution of Some E.M Wave Characteristics through Earth's Ionospheric Environment: Focus on Scattered Wave — Energy Distribution
Rachid Talhi (*University of Tours*);

00:00 Mapping Supra-Snow/Ice Floods in Russia Using SNPP/VIIRS Imagery
Donglian Sun (*George Mason University*); *Sanmei Li* (*George Mason University*); *Mitchell D. Goldberg* (*NOAA/NESDIS*); *Bill Sjoberg* (*NOAA/NESDIS*); *Edward Plumb* (*Alaska-Pacific River Forecast Center*);

00:00 Phase Synchronism of Microwaves in Space Plasma: Nonlinear Resonant Broadband Wideangle Generation of Second Harmonics
Alexander Borisovich Shvartsburg (*Joint Institute for High Temperatures, Russian Academy of Sciences*); *Nikolay Sergeevich Erokhin* (*Space Research Institute of RAS*); *S. A. Pulinets* (*Space Researches Institute, Russian Academy of Sciences*);

00:00 Modelling of Rain Drop Size Distribution for Microwave and Millimiter Wave in Central Africa
Djuma Sumbiri (*Universuty of KwaZulu-Natal*); *Thomas Joachim Odhiambo Afullo* (*University of KwaZulu-Natal (UKZN)*);

Session 4P1a
Application of EM Field in Medical Diagnostics and Therapy 2

Thursday PM, May 25, 2017

Room G5

Organized by Jan Vrba

Chaired by Jan Vrba

00:00 Comparative Study of Antennas for Microwave Tomography
Ilja Merunka (*Czech Technical University in Prague*); *Ondrej Fiser* (*Czech Technical University in Prague*); *Jan Vrba* (*Czech Technical University in Prague*); *Jan Vrba, Jr.* (*Czech Technical University in Prague*); *David Vrba* (*Czech Technical University in Prague*);

00:00 Microwave Hyperthermia System for Head and Neck Area with Noninvasive UWB Temperature Change Detection
Ondrej Fiser (*Czech Technical University in Prague*); *Ilja Merunka* (*Czech Technical University in Prague*); *Jan Vrba* (*Czech Technical University in Prague*);

00:00 Microwave Differential Tomography for Medical Imaging
Jan Vrba, Jr. (*Czech Technical University in Prague*); *David Vrba* (*Czech Technical University in Prague*); *Ondrej Fiser* (*Czech Technical University in Prague*); *Ilja Merunka* (*Czech Technical University in Prague*); *Jesus Cumana* (*Institute of Microbiology, Czech Academy of Sciences*); *Jan Vrba* (*Czech Technical University in Prague*);

00:00 An Investigation of Machine Learning Techniques for Microwave Breast Cancer Detection
Cagri Cinar (*Yildiz Technical University*); *Birol Aslanyurek* (*Yildiz Technical University*); *Hulya Sahinturk* (*Yildiz Technical University*);

00:00 Effect on the Antenna Performance of the Variability of the Physical Properties of a Biological Tissue during Microwave Cancer Ablation
Hulusi Acikgoz (*KTO Karatay University*);

00:00 Electromagnetic Pulse Fields and Nanoparticles in Cancer Treatment
Alireza Baiat (*Imam Khomeini International University*); *Mohammad Reza Karimi Rad* (*Imam Khomeini International University*);

00:00 A 3D Unidirectional Antenna for Microwave
Md. Amanath Ullah (*Universiti Kebangsaan Malaysia*); *Touhidul Alam* (*Universiti Kebangsaan Malaysia*); *Mohammad Tariqul Islam* (*Universiti Kebangsaan Malaysia*);

Session 4P1b
Medical Electromagnetics, Biological Effects, Bioimaging 2

Thursday PM, May 25, 2017
Room G5

00:00 Method for Rapid, Automated Detection of Pathogenic Bacteria Using a Wireless Biosensor
Shin Horikawa (*Auburn University*); *Aleksandr L. Simonian* (*National Science Foundation*); *Bryan A. Chin* (*Auburn University*);

00:00 Principle Component Analysis and Linear Discriminant Analysis of Multispectral Fluorescence Imaging Data for Early Non-invasive Diagnosis of Skin Cancer
Anastasiya D. Lesnichaya (*Bauman Moscow State Technical University*); *Nikita V. Chernomyrdin* (*Bauman Moscow State Technical University*); *Konstantin G. Kudrin* (*Institute of Improvement of Professional Skill of the Federal Medico-Biological Agency of Russia*); *Elena N. Rimskaya* (*I. M. Sechenov First Moscow State Medical University*); *O. P. Cherkasova* (*Institute of Laser Physics of SB RAS*); *Irina A. Shikunova* (*Institute of Solid State Physics of Russian Academy of Sciences*); *Vladimir N. Kurlov* (*Institute of Solid State Physics of Russian Academy of Sciences*); *Kirill I. Zaytsev* (*Bauman Moscow State Technical University*); *Igor V. Reshetov* (*I. M. Sechenov First Moscow State Medical University*);

00:00 Development of a Prototype of Applicator Based on 16 Antennas for Hyperthermia Treatments in the Head and Neck Region
Rosario del Pilar Orna Pisconte (*Pontificia Universidad Catolica del Peru*); *Manuel A. Yarleque Medina* (*Pontificia Universidad Catolica del Peru, Seccion Telecomunicaciones*);

00:00 Combining Optical Instruments of Screening and Refining Diagnosis for Non-invasive Early Diagnosis of Skin Malignances
Kirill I. Zaytsev (*Bauman Moscow State Technical University*); *Konstantin G. Kudrin* (*Institute of Improvement of Professional Skill of the Federal Medico-Biological Agency of Russia*); *Nikita V. Chernomyrdin* (*Bauman Moscow State Technical University*); *Elena N. Rimskaya* (*I. M. Sechenov First Moscow State Medical University*); *Vladimir N. Kurlov* (*Institute of Solid State Physics of Russian Academy of Sciences*); *Igor V. Reshetov* (*I. M. Sechenov First Moscow State Medical University*);

00:00 The Effect of MRET Polymer Compound on SAR Values of RF Phones
Igor V. Smirnov (*Global Quantech, Inc.*);

Session 4P2a
Radio Wave Propagation and Wireless Channel Modeling 2

Thursday PM, May 25, 2017

Room G6

Organized by Tao Jiang

Chaired by Tao Jiang

00:00 An Analysis of Maritime Communications between Ship at Sea and Shore Station by a Ray-based Monte Carlo Method
Attasit Tingsuwatit (*Chulalongkorn University*); *Panuwat Janpugdee* (*Chulalongkorn University*);

00:00 Time-varying Rainfall Characterization from Queueing Theory Approach for Rain Attenuation Modeling over Wireless Links in Ethiopia
Feyisa Debo Diba (*University of KwaZulu-Natal*); *Thomas Joachim Odhiambo Afullo* (*University of KwaZulu-Natal (UKZN)*); *Alonge Ayodeji Akintunde* (*University of KwaZulu-Natal*);

00:00 Indoor Positioning System Based on INS/WiFi Propagation Model
Xianfeng Yang (*Harbin Engineering University*); *Menglu Deng* (*Harbin Engineering University*); *Tao Jiang* (*Harbin Engineering University*);

00:00 An Improved Resource Allocation Algorithm Based on Stackelberg Game and Gradient Theory
Fang Ye (*Harbin Engineering University*); *Jing Dai* (*Harbin Engineering University*); *Yibing Li* (*Harbin Engineering University*);

00:00 Interference Cancellation and PAPR Reduction Using Carrier Interferometry Codes for Adaptive NC-SOFDM System Used with Dynamic Spectrum Access
Maryam Saeed (*IICT*); *Abdul Waheed Umrani* (*Mehran University of Engineering and Technology*); *Fahim Aziz Umrani* (*Mehran University of Engineering and Technology*); *Syed M. Zafi S. Shah* (*Mehran University of Engineering and Technology*); *Saadullah Kalwar* (*Mehran UET*); *Naveed Ahmed* (*Politecnico Di Milano*); *Farhan Ahmed* (*Dawood UET*);

Session 4P2b
MIMO Systems and Techniques

Thursday PM, May 25, 2017

Room G6

Organized by Mario Marques da Silva

Chaired by Mario Marques da Silva

00:00 A Comparison of Massive MIMO Using Pre and Post-processing
Mario Marques da Silva (*Universidade Autonoma de Lisboa*); *Rui Dinis* (*Universidade Nova de Lisboa*);

00:00 An Iterative Decision Directed Channel Estimation for Multi-user MIMO Systems
Guilherme Gaspar (*Universidade Nova de Lisboa*); *Afonso Ferreira* (*Universidade Nova de Lisboa*); *Paulo Montezuma Carvalho* (*Universidade Nova de Lisboa*); *Mario Marques Da Silva* (*Instituto de Telecomunicacoes*); *Rui Dinis* (*Universidade Nova de Lisboa*);

00:00 Combining Info and Spatial Directivities in Multiple Antenna Transmission Systems
Paulo Montezuma Carvalho (*Universidade Nova de Lisboa*);

00:00 Interference Cancellation in Broadcast Channel of Multiuser MIMO System Using Block Diagonalization and Dirty Paper Coding Schemes
Dalver Kaur (*Punjab Technical University*); *Neeraj Kumar* (*IKG Punjab Technical University*);

00:00 MIMO Antenna Design for WLAN Indoor Wi-Fi Application with Improved Isolation
Cafer Uyanik (*Istanbul Technical University*); *Mehmet Ali Yesil* (*AirTies Wireless Networks*); *Emre Aydin* (*AirTies Wireless Networks*); *Mehmet Nuri Akinci* (*Istanbul Technical University*); *Ibrahim Akduman* (*Istanbul Technical University*);

00:00 Analysis of Inter-bundle Crosstalk in High Speed MIMO Signalling in Powerline Communication Channels
Modisa Mosalaosi (*University of KwaZulu-Natal*); *Thomas Joachim Odhiambo Afullo* (*University of KwaZulu-Natal (UKZN)*);

00:00 A Single Cylindrical Dielectric Resonator Based MIMO Antenna System for WiMAX Applications
Gourab Das (*Indian School of Mines*); *Anand Sharma* (*Indian School of Mines*); *Ravi Kumar Gangwar* (*Indian School of Mines*);

00:00 Performance Enhancement of SIC-MMSE Based MIMO Detection Method
Saleem Ahmed (*Dawood University of Engineering and Technology*); *Abdul Waheed Umrani* (*Mehran University of Engineering and Technology*); *Dost Muhammad Saqib Bhatti* (*Dawood University of Engineering and Technology*);

00:00 Account of Topography in SAR Images Simulation of Forest Scattering
Jean-Pascal Monvoisin (*Universite Federale de Toulouse-ONERA Toulouse*); *Pierre Borderies* (*Office National d'Etudes et de Recherches Aerospatiales (ONEAR)*); *Pascale Dubois-Fernandez* (*ONERA*); *D. Dubucq* (*TOTAL*); *C. Taillandier* (*TOTAL*);

Session 4P3a
Scattering, Rough Surface Scattering

Thursday PM, May 25, 2017
Room G7

00:00 Scattering of Femtosecond Electromagnetic Pulses by Spherical Nanoparticles
V. A. Astapenko (*Moscow Institute of Physics and Technology*); *Egor Sergeevich Khramov* (*Moscow Institute of Physics and Technology*);

00:00 Some Features of Electromagnetic Wave Scattering by Radially Inhomogeneous DNG Cylinders
Alina R. Gabdullina (*Moscow Institute of Physics and Technology*); *Sergei P. Skobelev* (*Joint Stock Co Radiophyzika*); *Olga N. Smolnikova* (*Moscow Aviation Institute*);

00:00 Electromagnetic Wave Scattering from Statistically Distributed System of Reflectors over Smooth Sea Surface
Andreev Y. Alexander (*Krylov State Research Centre*); *V. V. Zalipaev* (*Loughborough University*);

00:00 Radiohолography Based Method for Parabolic Reflector Surface Quality Control
Maxim Golubtsov (*Bauman Moscow State Technical University*); *Eduard Mozharov* (*Bauman Moscow State Technical University*); *Vladimir Mitrokhin* (*Bauman Moscow State Technical University*); *Gennady Slukin* (*Bauman Moscow State Technical University*);

00:00 Estimation of the Radar Backscatter from a Very Rough Soil Surface with an Exponential-type Correlation Function
Yisok Oh (*Hongik University*);

00:00 Application of Maehly Approximation to EM Scattering from a Dielectric Rough Surface and a Dielectric Object over a Frequency Band
Ran Bao (*Anhui University*); *An-Qi Wang* (*Xidian University*); *Zhi-Xiang Huang* (*Anhui University*);

Session 4P3b
Georadar: Theory, Numerics and Application

Thursday PM, May 25, 2017
Room G7

Organized by Sergey Kabanikhin, Maxim A. Shishlenin

00:00 Globally Convergent Numerical Methods for Coefficient Inverse Problems
Michael V. Klibanov (*University of North Carolina at Charlotte*);

00:00 Linear GPR Data Processing
S. I. Kabanikhin (*Sobolev Institute of Mathematics*); *Maxim Shishlenin* (*Sobolev Institute of Mathematics*);

00:00 Combined Inverse Problems for GPR
Sergey I. Kabanikhin (*Sobolev Institute of Mathematics*); *Maxim A. Shishlenin* (*Sobolev Institute of Mathematics*);

00:00 The Dynamic and Kinematic Analysis of GPR Data
Maxim Shishlenin (*Sobolev Institute of Mathematics*);

00:00 Radar with a Local Positioning Video-system
Dmitry Ya. Sukhanov (*Tomsk State University*); *O. G. Ponomarev* (*Tomsk State University*); *K. V. Zavyalova* (*Tomsk State University*); *V. L. Khmelev* (*Tomsk State University*); *S. N. Roslyakov* (*Tomsk State University*);

00:00 About the Results of the Processing Route Radarogram Haar Wavelets and Daubechies
Nurgul Uzakkyzy (*L.N. Gumilyov Eurasian National University*); *Kazizat Iskakov* (*L.N. Gumilyov Eurasian National University*); *S. Boranbayev* (*L.N. Gumilyov Eurasian National University*);

00:00 Theory, Numerical Methods and Applications of GPR "Loza"
M. A. Bektemessov (*Al-Farabi Kazakh National University*); *Bakytgerey Bakturovich Sholpanbayev* (*Abay Kazakh National Pedagogical University*); *C. E. Kasenov* (*Al-Farabi Kazakh National University*);

00:00 Experiences of Interpretation on the Example of Using GPR "Loza-V"
Sergey I. Kabanikhin (*Sobolev Institute of Mathematics*); *A. S. Berdyshev* (*Abay Kazakh National Pedagogical University*); *Bakytgerey Bakturovich Sholpanbayev* (*Abay Kazakh National Pedagogical University*);

Session 4P4
Computational Electromagnetics 2

Thursday PM, May 25, 2017

Room G8

Organized by Alexander B. Samokhin

Chaired by Alexander B. Samokhin

00:00 Ultrafast Shaping of Microwave Single-cycle Pulses in Non-stationary Transmission Lines (Exactly Solvable Model)
Alexander Borisovich Shvartsburg (*Joint Institute for High Temperatures, Russian Academy of Sciences*); *N. V. Silin* (*Far Eastern Federal University*); *L. Vazquez* (*Universidad Complutence*);

00:00 Contribution to Study of the Lightning Electromagnetic Field
Djalel Dib (*University Larbi Tebessi of Tebessa*); *Sihem Ghoudelbourk* (*University Larbi Tebessi of Tebessa*); *Bilel Maghni* (*University of Kasdi Merbah*);

00:00 Core Losses Estimation of High Speed Electrical Machines Based on Corrections in Epstein Frame Method Data
Wei-Ming Su (*National Tsing Hua University*); *Shang-Hsun Mao* (*ANSYS Taiwan*); *Pei Jen Wang* (*National Tsing Hua University*);

00:00 The Bistatic Radar Experiment at Pluto: Surface Characterization through Electromagnetic Modeling
Ivan R. Linscott (*Stanford University*); *Michael Bird* (*Universitat Koln*); *Chris DeBoy* (*The Johns Hopkins University*); *Becca Sepan* (*The Johns Hopkins University*); *S. A. Stern* (*Southwest Research Institute*); *Michae Vincent* (*Southwest Research Institute*); *George Leonard Tyler* (*Stanford University*); *L. A. Young* (*Southwest Research Institute*); *K. Ennico* (*NASA Ames Research Center*); *C. B. Olkin* (*Southwest Research Institute*); *H. A. Weaver* (*The Johns Hopkins University*); *W. W. Woods* (*SETI Institute*); *The New Horizons ATM, COMP and GGI Theme Teams* ();

00:00 Numerical Solution of Problem of Electromagnetic Wave Diffraction by a Perfectly Conducting Body of Small Thickness
Sergey Nikolaevich Fetisov (*Institute of Numerical Mathematics of the Russian Academy of Sciences*); *Aleksey Viktorovich Setukha* (*Lomonosov Moscow State University*);

00:00 Case Study of Hypersingularity at Sharp Edges in the Simplest Lamellar Grating: Further Mathematical Results
Lifeng Li (*Tsinghua University*); *Gunther Schmidt* (*Weierstrass Institute*);

00:00 Modified Thin Dielectric Sheet Model to Efficiently Analyze the High Contrast Problem
Yi-Ling Wang (*University of Electronic Science and Technology of China (UESTC)*); *Zaiping Nie* (*University of Electronic Science and Technology of China*); *Dingbang Wen* (*University of Electronic Science and Technology of China*);

00:00 Optimization of Halbach Array Parameters for New Type of Magnetic Refrigerator Cascading
Konstantin Filonenko (*Syddansk Universitet*); *Sergejs Boroviks* (*University of Southern Denmark*); *Christian Veje* (*University of Southern Denmark*);

00:00 Characteristic Modes of Electrically Small Antennas in the Presence of Electrically Large Platforms
Michal Masek (*Czech Technical University in Prague*); *Miloslav Capek* (*Czech Technical University in Prague*); *Pavel Hazdra* (*Czech Technical University in Prague*); *Qi I. Dai* (*University of Illinois at Urbana-Champaign*); *Weng Cho Chew* (*University of Illinois*);

00:00 Calculation of the Radar Station Field in 3D Space in the Presence of Forest and Other Obstacles by the Method of Parabolic Equation
Valery A. Permyakov (*Moscow Power Engineering Institute (Technical University)*); *Mikhail Sergeyevich Mikhailov* (*National Research University "Moscow Power Engineering Institute"*); *E. S. Malevich* (*National Research University "Moscow Power Engineering Institute"*);

00:00 A Hybrid Structured-unstructured Meshing Approach for Time Domain EM Analysis of Curved Geometries
Sripada Aditya Sivaram (*Indian Institute of Science*); *K. J. Vinoy* (*Indian Institute of Science*);

00:00 Fast Iterative Algorithm for Solving Two-dimensional Electromagnetic Scattering Problems
Dayalan Prajith Kasilingam (*University of Massachusetts Dartmouth*); *Anthony Fascia* (*University of Massachusetts Dartmouth*);

00:00 Physical Technique to Provide Accuracy of the Construction Element Backscattering Diagram Calculation
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*);

00:00 Numerical Analysis on Bent Part of the Down Conductor in Lightning Protection Systems Installation
Norpisah Mohd. Yusoff (*Universiti Putra Malaysia*); *Jasronita Jasni* (*Universiti Putra Malaysia*); *Mohd Zainal Abidin Ab Kadir* (*Universiti Putra Malaysia*);

00:00 Notch Loaded Half Disk Patch Antenna for Dual and Broadband Operation
Rakesh Kumar Bajpai (*Sam Higginbottom Institute of Agriculture, Technology & Sciences*); *Rajeev Paulus* (*Sam Higginbottom Institute of Agriculture, Technology & Sciences*); *Ashish Singh* (*University of Allahabad*);

00:00 Electromagnetic Band Gap Antenna for GSM Applications
Lina Moustapha (*Lebanese University*); *Najib Fadlallah* (*Lebanese University*); *Hassan Fneish* (*Lebanese University*); *Charif Olleik* (*Lebanese University*);

00:00 Explicit Consideration of Body Shape in the Modeling of Electromagnetic Scattering
Mathias Perrin (*Laboratoire Ondes et Matière d'Aquitaine*); *Frederic Gruy* (*Ecole Nationale Superieure des Mines*);

00:00 Analytical Treatment of the Interaction between Light and Plasmons: The Corrected Quasi-normal Mode Expansion
Mathias Perrin (*Laboratoire Ondes et Matiere d'Aquitaine*);

00:00 Analysis and Optimization of Multiport Junctions
Malika Ourabia (*University of Science and Technology U.S.T.H.B.*);

00:00 First-principles Analysis of Metallic-patch Frequency Selective Surface and Its Effective Conductivity
Muhammad Ismail Khan (*COMSATS Institute of information Technology*); *Farooq Ahmad Tahir* (*National University of Sciences and Technology (NUST)*);

00:00 Electromagnetic Guided Waves on Infinite and Finite Periodic Linear Arrays of Thin Metallic Wires
Victor Zalipaev (*Krylov State Research Centre*); *V. Vialov* (*Krylov State Research Centre*);

Session 4P5
Metamaterials and Plasmonics

Thursday PM, May 25, 2017
Room G9

00:00 Understanding the Propagation of Surface Plasmon-polaritons on Metallic Films
Parva Chhantyal (*Laser Zentrum Hannover e.V.*); *Tobias Birr* (*Laser Zentrum Hannover e.V.*); *Dominik Hinrichs* (*Leibniz University Hannover*); *Urs Zywietz* (*Laser Zentrum Hannover e.V.*); *Laszlo Sajti* (*Laser Zentrum Hannover e.V.*); *Dirk Dorfs* (*Leibniz University Hannover*); *Boris N. Chichkov* (*Laser Zentrum Hannover e.V.*); *Carsten Reinhardt* (*Laser Zentrum Hannover e.V.*);

00:00 Design and Simulations of Plasmonic Planar Fiber to Chip Coupler Works at the Optical Communication Wavelength
Anton Kuzma (*Slovak University of Technology in Bratislava*); *Frantisek Uherek* (*Slovak University of Technology in Bratislava*); *Jozef Chovan* (*International Laser Centre*); *Martin Donoval* (*Slovak University of Technology in Bratislava*);

00:00 Possibility of Isotropic Metafilm Representation by an Equivalent Homogeneous Layer
Zhanna O. Dombrovskaya (*Lomonosov Moscow State University*); *Anton V. Zhuravlev* (*Lomonosov Moscow State University*);

00:00 Light Scattering Characteristics of a Small Sphere
Dimitrios C. Tzarouchis (*Aalto University*); *Pasi Yla-Oijala* (*Aalto University*); *Ari Sihvola* (*Aalto University*);

00:00 About Two Approaches to Automation of a Process of Calculating Metamaterial Parameters According to the Scattering-parameter Extraction Method Using Modern Full-wave Simulators
Andrey N. Plastikov (*National Research University "Moscow Power Engineering Institute"*);

00:00 Applications of fs Laser Radiation for Formation of Thermochemical LIPSS on Cr Films and Fabrication of Submicron Amplitude Gratings
Alexandr V. Dostovalov (*Novosibirsk National Research State University*); *V. P. Korolkov* (*Institute of Automation and Electrometry, Siberian Branch, Russian Academy of Sciences*); *V. S. Terentyev* (*Institute of Automation and Electrometry, SB, RAS*); *S. A. Babin* (*Institute of Automation and Electroetry, SB, RAS*);

00:00 Artificial Anisotropic Dielectric Material for Antenna Polarization Rotation
Markus Berg (*Centre for Wireless Communications — Radio Technology Research Unit*); *Tommi Tuovinen* (*Centre for Wireless Communications — Radio Technology Research Unit*); *Erkki T. Salonen* (*University of Oulu*);

00:00 Coherent Perfect Absorption in a Coupled Electric-magnetic-resonator System
Lei Zhu (*Harbin Institute of Technology*); *Liang Dong* (*Qiqihar University*); *Jing Guo* (*Qiqihar University*); *Fan-Yi Meng* (*Harbin Institute of Technology*); *Qun Wu* (*Harbin Institute of Technology*);

00:00 Stable and Tunable Plasma Photonic Crystals Produced by Dielectric Barrier Discharge
Wei-li Fan (*Hebei University*); *Lifang Dong* (*Hebei University*);

00:00 Soliton Generation and Stability in the Discrete Left-handed Electrical Network
Georges Bickele Ambassa (*University of Yaounde I*); *Frederic Biya Motto* (*University of Yaounde I*); *Bernard Zobo Essimbi* (*University of Yaounde I*); *Timoleon Crepin Kofane* (*University of Yaounde I*);

Session 4P6
Microwave Remote Sensing and Polarimetry, SAR

Thursday PM, May 25, 2017
Room G10

00:00 MW Holographic Imaging System for Detection of Hidden Dinosaur Tracks
Sergey I. Ivashov (*Bauman Moscow State Technical University*); *Margarita A. Chizh* (*Bauman Moscow State Technical University*); *Andrey V. Zhuravlev* (*Bauman Moscow State Technical University*); *Vladimir V. Razevig* (*Bauman Moscow State Technical University*); *Timothy Bechtel* (*Franklin & Marshall College*); *Lorenzo Capineri* (*Università di Firenze*); *Masaharu Inagaki* (*Walnut Ltd.*);

00:00 An Impedance Tuner Based Self-interference Canceller for Monostatic Low Noise CW GPR Sensor
Yunlong Pan (*Southeast University*); *Jinping Xu* (*Southeast University*);

00:00 High Altitude Terrain Correlation Navigation Resetting by Nadir Looking Synthetic Aperture Radar
Hubert M. J. Cantalloube (*Office National d'Etudes et Recherches Aerospatiales (ONERA)*);

00:00 Simultaneous Antenna Pattern and Water Surface Back Scattering Law Estimation from Synthetic Aperture Radar
Hubert M. J. Cantalloube (*Office National d'Etudes et Recherches Aerospatiales (ONERA)*); *P. Martineau* (*Office National d'Etudes et Recherches Aerospatiales (ONERA)*); *L. Pastore Guyonvarch* (*Renault Vehicle Research Centre*);

00:00 Comparison of Polarimetric SAR Features for Terrain Classification Using Incremental Training
Turker Ince (*Izmir University of Economics*); *Mete Ahishali* (*Izmir University of Economics*); *Serkan Kiranyaz* (*Qatar University*);

00:00 Analytical Approximation-based Method for Calculation of Generalized Ambiguity Function and 3D Down-looking SAR Image Reconstruction
Gennady Slukin (*Bauman Moscow State Technical University*); *Valery V. Chapursky* (*Bauman Moscow State Technical University*); *Maxim Golubtsov* (*Bauman Moscow State Technical University*); *Igor Kryuchkov* (*Bauman Moscow State Technical University*); *Nikolay Soloviev* (*Bauman Moscow State Technical University*);

00:00 Monitoring of the Moon as the Natural Satellite of the Earth in the Solar System
Shigehisa Nakamura (*Kyoto University*);

00:00 A Dynamical Balance of the Moon on the Lunar Orbit
Shigehisa Nakamura (*Kyoto University*);

00:00 Effect of Porosity, Pore Size and Permeability on the Complex Relative Permittivity of Sandstone
Andrey V. Repin (*Omsk State Pedagogical University*); *O. V. Rodionova* (*Omsk State Pedagogical University*); *M. Y. Shumskayte* (*Trofimuk Institute of Petroleum Geology and Geophysics SB RAS*);

00:00 Efficiency Analysis of Feature Extraction Methods for Pulse Laser Ranging Systems
Fedor Borisovich Baulin (*Bauman Moscow State Technical University*); *E. V. Buryi* (*Bauman Moscow State Technical University*); *D. A. Semerenko* (*Bauman Moscow State Technical University*);

00:00 South African Passive Radar and towards Its Characterisation
Albert A. Lysko (*CSIR Meraka Institute*); *Francois D. V. Maasdorp* (*CSIR Meraka Institute*);

00:00 Design and Algorithms of the Tiangong-2 Interferometric Imaging Radar Altimeter Processor
Xiao Dong (*Center for Space Science and Applied Research, Chinese Academy of Sciences*); *Yunhua Zhang* (*National Space Science Center, Chinese Academy of Sciences*); *Wenshuai Zhai* (*Center for Space Science and Applied Research, Chinese Academy of Sciences*);

00:00 Primary Results of Ocean Parameters Retrieval from the Interferometric Imaging Radar Altimeter Onboard Chinese Space Laboratory TG-2
Lin Ren (*State Oceanic Administration*); *Jingsong Yang* (*Second Institute of Oceanography, State Oceanic Administration*); *Yunhua Zhang* (*National Space Science Center, Chinese Academy of Sciences*); *Wenshuai Zhai* (*Center for Space Science and Applied Research, Chinese Academy of Sciences*); *Xiao Dong* (*Center for Space Science and Applied Research, Chinese Academy of Sciences*); *Gang Zheng* (*Second Institute of Oceanography, State Oceanic Administration*); *Juan Wang* (*State Oceanic Administration*);

00:00 Tiangong-2 Interferometric Imaging Radar Altimeter — Its Mission and The First Results
Yunhua Zhang (*National Space Science Center, Chinese Academy of Sciences*); *Xiaojin Shi* (*Center for Space Science and Applied Research, CAS*); *Hongjian Wang* (*National Space Science Center, Chinese Academy of Sciences*); *Yueying Tang* (*Center for Space Science and Applied Research, CAS*); *Wenshuai Zhai* (*Center for Space Science and Applied Research, Chinese Academy of Sciences*); *Xiao Dong* (*Center for Space Science and Applied Research, Chinese Academy of Sciences*); *Xueyan Kang* (*Center for Space Science and Applied Research, CAS*); *Qingshan Yang* (*Center for Space Science and Applied Research, Chinese Academy of Sciences*); *Dong Li* (*National Space Science Center, Chinese Academy of Sciences*); *Jingshan Jiang* (*Center for Space Science and Applied Research, Chinese Academy of Sciences*);

00:00 Application for Determining the Modulation Transfer Function of the Smartphone Built-in Camera
Oleg. A. Perezyabov (*ITMO University*); *Aleksandr N. Baranov* (*ITMO University*); *Nadezhda K. Maltseva* (*ITMO University*); *Aleksandr V. Ilinski* (*S. I. Vavilov State Optical Institute*);

Session 4P7
Microwave and Millimeter Wave Circuits and Devices, CAD 2

Thursday PM, May 25, 2017
Room B1

00:00 A Fully Integrated Variable Gain Amplifier for X-band Application
Jageon Koo (*Chonbuk National University*); *Junhyung Jeong* (*Chonbuk National University*); *Yongchae Jeong* (*Chonbuk National University*);

00:00 X-band GaN Power Amplifier Using Interposer-based MMIC
Junhyung Jeong (*Chonbuk National University*); *Jageon Koo* (*Chonbuk National University*); *Yongchae Jeong* (*Chonbuk National University*);

00:00 Design of Wideband Lumped Element Circulator
Parth Shah (*Mumbai University*); *Mrunmay Mahesh Sahasrabudhe* (*Mumbai University*); *Arun C. Nambiar* (*Mumbai University*); *Shreya Shah* (*Mumbai University*); *Neha Gharat* (*Mumbai University*); *Vikas Gupta* (*VCET*); *Harish Dixit* (*Mumbai University*);

00:00 Design of a High Power Junction Circulator
Arun C. Nambiar (*Mumbai University*); *Shreya Shah* (*Mumbai University*); *Mrunmay Mahesh Sahasrabudhe* (*Mumbai University*); *Parth Shah* (*Mumbai University*); *Vikas Gupta* (*VCET*); *Neha Gharat* (*Mumbai University*); *Harish Dixit* (*Mumbai University*);

00:00 Accurate Design of a W-band Full Band Frequency Tripler Based on Anti-parallel GaAs Schottky Varistor Diode Pair
Jiangling Dou (*Southeast University*); *Jinping Xu* (*Southeast University*); *Shu Jiang* (*Southeast University*);

00:00 Design of a Compact Fractional-N PLL-based Frequency Synthesizer for Dual-band DBS Applications
Zhiqiang Liu (*Southeast University*); *Jinping Xu* (*Southeast University*); *Gang Liu* (*Southeast University*); *Yunlong Pan* (*Southeast University*);

00:00 Power Limiter Based on Reflected Phase Shifter with Ferroelectric Varactor
Olesya T. Drak (*Saint Petersburg State Electrotechnical University "LETI"*); *Alexey N. Vasiliev* (*Planeta-IRMIS, LLC*); *Anton I. Zadorozhny* (*Saint Petersburg State Electrotechnical University*); *Andrey V. Tumarkin* (*St. Petersburg Electrotechnical University (LETI)*); *Victor D. Draznin* (*Scientific Research Institute "Giricond"*);

00:00 Analog Varactor Phase Shifter
Artem Vilenskiy (*Samsung Research Institute Russia*); *Mikhail Makurin* (*Samsung Moscow Research Center*);

00:00 Design Approach for Microstrip PIN-diode Phase Shifters with Equalized Losses
Roman Semernya (*Bauman Moscow State Technical University*); *Artem Vilenskiy* (*Bauman Moscow State Technical University*); *Vladimir Litun* (*Bauman Moscow State Technical University*); *Sergey Chernyshev* (*Bauman Moscow State Technical University*);

00:00 Multiphysics Analysis of High Power CW Ferrite Phase Shifter Designs for Application in Circulators
Harish V. Dixit (*Veermata Jijabai Technological Institute*); *Aviraj R. Jadhav* (*V.J.T.I.*); *Yogesh M. Jain* (*IPR*); *Alice N. Cheeran* (*V.J.T.I.*); *Vikas Gupta* (*VCET*); *Promod K. Sharma* (*Institute for Plasma Research*);

00:00 Design of a High Speed SP4T Switch at Ka-band
Le Ren (*Southeast University*); *Jian Zhang* (*Southeast University*); *Jinping Xu* (*Southeast University*);

00:00 Studies of High-frequency Giant Magnetoimpedance Effect in Soft Magnetic Microwire
Arkady P. Zhukov (*Universidad del Pais Vasco*); *M. Ipatov* (*University of the Basque Country*); *V. A. Zhukova* (*University of Basque Country*);

00:00 Design of LLC Converter Using Method Figure of Merit for Perspective Semiconductors and Magnetic Components
Boris Kozacek (*University of Zilina*); *Michal Frivaldsky* (*University of Zilina*); *Viliam Jaros* (*University of Zilina*);

00:00 Impact of Geometrical Parameters on Performance of MWCNT Based Chip Interconnects
M. Kaur (*PEC University of Technology*); *N. Gupta* (*PEC University of Technology*); *Arun Kumar Singh* (*PEC University of Technology*);

00:00 A Novel Design for Large-division-ratio Ring Coupler
Xuchun Zhang (*Missile Institute of Air Force Engineering University*);

Session 4P9
Antenna Theory, Microstrip and Printed Antenna

Thursday PM, May 25, 2017
Room B3

00:00 Uniform Microstrip Array Antenna with Low Sidelobe Level for Coastal Surveillance Radar Application at 9.37–9.43 GHz
Damaraji Wijoyono (*University of Indonesia, Kampus Baru UI Depok*); *Savira Ramadhanty* (*University of Indonesia, Kampus Baru UI Depok*); *Dewa Rakmatullah* (*University of Indonesia, Kampus Baru UI Depok*); *Fitri Yuli Zulkifli* (*University of Indonesia*);

00:00 Line-coupled Microstrip Slotted Patch Antenna with Modified Ground Structure for Next Generation of Wireless Communications
Arash Masrouri (*Islamic Azad University*); *N. Amiri* (*Islamic Azad University*); *Manouchehr Kamyab* (*K. N. Toosi University of Technology*);

00:00 Design Regular Fractal Slot-antennas for Ultra-wideband Applications
Majed O. Dwairi (*Al-Balqa' Applied University*); *Mohamed S. Soliman* (*Taif University*); *Ahmad A. Alahmadi* (*Taif University*); *Iman I. M. Abu Sulayman* (*Taif University*); *Sami H. A. Almalki* (*Taif University*);

00:00 Compact and High-gain Quasi-Yagi Antennas with Multi-element Folded Dipole Feed
Mohamad Farran (*Universita degli Studi di Brescia*); *Mohammed Al-Husseini* (*American University of Beirut*); *Karim Y. Kabalan* (*American University of Beirut*);

00:00 A Compact Dual-band GCPW-fed Antenna for WLAN, WiMAX and Bluetooth Applications
Goksenin Bozdag (*Izmir Institute of Technology*); *Alp Kustepeli* (*Izmir Institute of Technology*);

00:00 A Leaky Coaxial Cable Antenna Based on Sinusoidally-modulated Reactance Surface
Zeeshan Siddiqui (*University of Oulu*); *Ahmed Radwan* (*University of Oulu*); *Marko Sonkki* (*University of Oulu*); *Marko Tuhkala* (*University of Oulu*); *Sami Myllymaki* (*University of Oulu*);

00:00 A Novel Compact Triple-band Fractal Antenna
Hayder S. Ahmed (*University of Technology*);

00:00 Design of Compact Wearable Antennas by Using Printed Electronics
Simone Genovesi (*University of Pisa*); *Filippo Costa* (*University of Pisa*); *Agostino Monorchio* (*University of Pisa*);

00:00 Design of a Slot-loaded Dielectric Resonator Reflectarray Using Perforation Technique
Reza Movahedinia (*Concordia University*); *Mohammad Reza Chaharmir* (*Communications Research Centre Canada*); *Abdel Razik Sebak* (*Concordia University*);

00:00 Spherical Lens-reflector for Aerospace Communication
V. P. Yakubov (*National Research Tomsk State University*); *A. V. Kamenev* (*National Research Tomsk State University*); *S. V. Ponomarev* (*National Research Tomsk State University*);

00:00 Lens Antenna Design for E-band Point-to-Point Radio Links
Sabin Kumar Karki (*Aalto University*); *Juha Ala-Laurinaho* (*Aalto University*); *Ville Viikari* (*Aalto University*); *Risto Valkonen* (*Nokia Networks*);

00:00 A Simple Method for On-wafer Antenna Gain Measurement
Jianfang Zheng (*Aalto University*); *Juha Ala-Laurinaho* (*Aalto University*); *Antti V. Raisanen* (*Aalto University*);

00:00 Polarization Characteristics of the Paraboloidal Reflector Antenna
Francis Olutunji Okewole (*University of Lagos*); *Sulaiman Adeniyi Adekola* (*University of Lagos*); *Alex Ike Mowete* (*University of Lagos*);

00:00 Frequency-domain Synthesis of Tapered Slot Antennas
Artem Vilenskiy (*Bauman Moscow State Technical University*); *Sergey Chernyshev* (*Bauman Moscow State Technical University*); *Gennady Slukin* (*Bauman Moscow State Technical University*);

00:00 Geometric Optics Synthesis of Dual-reflector Beam-waveguides with Pattern Symmetry and Zero Cross-polarization
Boris L. Kogan (*National Research University "Moscow Power Engineering Institute"*); *Andrey N. Plastikov* (*National Research University "Moscow Power Engineering Institute"*); *Igor V. Belkovich* (*Moscow Power Engineering Institute*); *Vasiliy N. Seleznev* (*JSC "Special Research Bureau of Moscow Power Engineering Institute (OKB MEI)"*);

00:00 TEM Antenna's Arrays and High Power Radiators of UWB Electromagnetic Sub-nanosecond Impulses
Vladimir M. Fedorov (*Institute for High Energy Densities of JIHT of RAS*); *Vasily Ye. Ostashev* (*Joint Institute for High Temperatures of RAS*); *Alekxander V. Ul'yanov* (*Joint Institute for High Temperatures of Russian Academy of Sciences (JIHT of RAS)*);

Session 4P_10
MS-1: Mini-symposium on Nanophotonics and Metamaterials 5

Thursday PM, May 25, 2017

Room R11

Organized by Pavel A. Belov, Andrey A. Bogdanov

Chaired by Andrey A. Bogdanov

00:00 Enhanced Opto-acoustics in Non-resonant Metamaterials
M. J. A. Smith (*University of Sydney*); *Christian Wolff* (*University of Technology Sydney (UTS)*); *Boris T. Kuhlmey* (*University of Sydney*); *Christopher G. Poulton* (*University of Technology Sydney*); *C. Martijn de Sterke* (*University of Sydney*); *Mikhail Lapine* (*University of Technology Sydney*);

00:00 Strong Plasmon-exciton Coupling Using Individual Plasmonic Nanoantennas
M. Wersall (*Chalmers University of Technology*); *J. Cuadra* (*Chalmers University of Technology*); *Tomasz J. Antosiewicz* (*Chalmers University of Technology*); *Timur Shegai* (*Chalmers University of Technology*);

00:00 Temporal Dynamics of a Single Excitation in a 1D Array of Chirally Coupled Two-level Systems
Danil F. Kornovan (*ITMO University*); *Mihail I. Petrov* (*ITMO University*); *Ivan V. Iorsh* (*National Research University for Information Technology, Mechanics and Optics*);

00:00 Plasmonic Nanoantenna for Enhancement of Vertical Emission from Whispering Gallery Mode Laser
Andrey A. Bogdanov (*ITMO University*); *E. I. Moiseev* (*St Petersburg Academic University*); *N. V. Kryzhanovskaya* (*St Petersburg Academic University*); *Yu. S. Polubavkina* (*St Petersburg Academic University*); *M. V. Maximov* (*St Petersburg Academic University*); *M. M. Kulagina* (*Ioffe Institute*); *Yu. M. Zadiranov* (*Ioffe Institute*); *A. A. Lipovskii* (*St Petersburg Academic University*); *I. S. Mukhin* (*ITMO University*); *A. M. Mozharov* (*St Petersburg Academic University*); *F. E. Komissarenko* (*ITMO University*); *Zarina Failevna Sadrieva* (*ITMO University*); *A. E. Krasnok* (*ITMO University*); *A. V. Lavrinenko* (*ITMO University*); *A. E. Zhukov* (*St Petersburg Academic University*);

00:00 Multifunctional Sensing with Hybrid Nanophotonic Structures
Dmitry A. Zuev (*ITMO University*); *D. G. Baranov* (*Moscow Institute of Physics and Technology*); *G. P. Zograf* (*ITMO University*); *S. V. Makarov* (*ITMO University*); *K. V. Volodina* (*ITMO University*); *A. A. Krasilin* (*ITMO University*); *I. S. Mukhin* (*ITMO University*); *P. A. Dmitriev* (*ITMO University*); *V. V. Vinogradov* (*ITMO University*); *V. A. Milichko* (*ITMO University*); *E. A. Pidko* (*ITMO University*);

00:00 Ultrafast Tunable Hybrid Yagi-Uda Nanoantenna
Roman S. Savelev (*ITMO University*); *Olga N. Sergaeva* (*ITMO University*); *Denis G. Baranov* (*Chalmers University of Technology*); *Alexandr E. Krasnok* (*National Research University of Information Technologies, Mechanics and Optics (ITMO)*); *Andrea Alu* (*The University of Texas at Austin*);

00:00 Time-domain Multiphysics of Loss-compensated Surface Plasmons
Shaimaa Azzam (*Purdue University*); *Nikita Arnold* (*Johannes Kepler University Linz*); *Ludmila J. Prokopeva* (*Purdue University*); *Zhaxylyk Kudyshev* (*Purdue University*); *Alexander V. Kildishev* (*Purdue University*);

00:00 Optical Forces on Dielectric Particles in Light-guiding Structures
Alexey V. Maslov (*University of Nizhny Novgorod*);

00:00 Graphene Surface Conductivity: Efficient Numerical Modeling
Ludmila J. Prokopeva (*Purdue University*); *Zhaxylyk Kudyshev* (*Purdue University*); *Alexander V. Kildishev* (*Purdue University*);

00:00 Active and Nonlinear Semiconductor Metasurfaces
Maxim R. Shcherbakov (*Lomonosov Moscow State University*);

00:00 Resonant Properties of THz Metamaterials and Systems Based on Metal-semiconductor Microhelices
Elena V. Naumova (*Institute of Semiconductor Physics, SB RAS*); *Victor Yakovlevich Prinz* (*Institute of Semiconductor Physics, SB RAS*); *Sergey V. Golod* (*Institute of Semiconductor Physics, SB RAS*); *Vladimir A. Seleznev* (*Institute of Semiconductor Physics, SB RAS*); *Vitaliy V. Kubarev* (*Budker Institute of Nuclear Physics, Russian Academy of Science, Siberian Branch*);

00:00 Highly Absorptive Weakly Reflective Terahertz Metamaterials with Compensated Chirality
Sergey V. Golod (*Institute of Semiconductor Physics, SB RAS*); *Elena V. Naumova* (*Institute of Semiconductor Physics, SB RAS*); *Victor Yakovlevich Prinz* (*Institute of Semiconductor Physics, SB RAS*); *Alexander G. Milekhin* (*Rzhanov Institute of Semiconductor Physics, Russian Academy of Science*); *Igor V. Semchenko* (*Francisk Skorina Gomel State University*); *Sergey A. Khakhomov* (*Francisk Skorina Gomel State University*); *Viktar S. Asadchy* (*Aalto University*); *Andrei M. Goncharenko* (*Stepanov Institute of Physics, National Academy of Sciences of Belarus*); *George V. Sinitsyn* (*Stepanov Institute of Physics, National Academy of Sciences of Belarus*); *Andrey V. Lyakhnovich* (*Stepanov Institute of Physics, National Academy of Sciences of Belarus*); *Vitalij L. Malevich* (*Stepanov Institute of Physics, National Academy of Sciences of Belarus*);

00:00 Chiral Photonic Crystals and Metasurfaces for Compact Sources of Circularly Polarized Light
Sergei G. Tikodeev (*University Stuttgart*);

00:00 All-dielectric Reconfigurable Metasurface with Phase Changing Material
Qiang Li (*Zhejiang University*); *Jingyi Tian* (*Zhejiang University*); *Hao Luo* (*Zhejiang University*); *Min Qiu* (*Zhejiang University*);

00:00 Near-field Spectral Properties of Coupled Plasmonic Systems
Kosei Ueno (*Hokkaido University*); *Quan Sun* (*Hokkaido University*); *Hiroaki Misawa* (*Hokkaido University*);

00:00 Higher-order Surface Plasmons Resonances in Single Silver Nanoparticles and Plasmonic Resonance in Laser-induced Damaged Metal Films at Percolation
Nicolas Stenger (*Technical University of Denmark*); *Christian Frydendahl* (*Technical University of Denmark*);

00:00 Copper Plasmonics Explored for Nano-optics Applications
Valentyn S. Volkov (*University of Southern Denmark*); *Dmitry Yakubovsky* (*Mocsow Institute of Physics and Technology*); *Roman Kirtaev* (*Mocsow Institute of Physics and Technology*); *Dmitry Fedyanin* (*Moscow Institute of Physics and Technology (State University)*);

00:00 Bound States in the Continuum with Orbital Angular Momentum in a Periodic Array of Dielectric Rods and Spheres
Evgeny Bulgakov (*Kirensky Institute of Physics*); *Almas F. Sadreev* (*L. V. Kirensky Institute of Physics*);

00:00 A Flight of Excited Atom trough Subwavelength Aperture
Anton E. Afanasiev (*Institute of Spectroscopy, Russian Academy of Sciences*); *Pavel N. Melentiev* (*Institute for Spectroscopy, Russian Academy of Sciences*); *A. A. Kuzin* (*Institute of Spectroscopy, Russian Academy of Sciences*); *A. Yu. Kalatskiy* (*Institute of Spectroscopy, Russian Academy of Sciences*); *V. I. Balykin* (*Institute for Spectroscopy, Russian Academy of Sciences*);

00:00 Absence of Rabi Oscillations in Two-level System with Permanent Dipole Moment: The Quantum Approach
Mihail I. Petrov (*ITMO University*); *D. G. Baranov* (*Moscow Institute of Physics and Technology*); *A. E. Krasnok* (*ITMO University*);

00:00 B1+ Homogenization Using Metamaterial
Redha Abdeddaim (*CEA, DRF*); *L. Leroi* (*Aix-Marseille Universite*); *A. Vignaud* (*Aix-Marseille Universite*); *S. Enoch* (*CEA, DRF*);

00:00 Electromagnetic Field Enhancement in Tip Silicon Metasurface and SERS Based Nanosensors
Andrey K. Sarychev (*Institute for Theoretical and Applied Electrodynamics*); *Andrey N. Lagarkov* (*Institute for Theoretical and Applied Electromagnetics, Russian Academy of Sciences*); *I. A. Boginskaya* (*ITAE RAS*); *I. V. Bykov* (*Institute for Theoretical and Applied Electromagnetics, Russian Academy of Sciences*); *A. V. Ivanov* (*Institute for Theoretical and Applied Electromagnetics, Russian Academy of Sciences*); *I. A. Ryzhikov* (*Institute for Theoretical and Applied Electromagnetics (ITAE RAS)*); *M. V. Sedova* (*Institute for Theoretical and Applied Electromagnetics, Russian Academy of Sciences*); *I. Budashov* (*Emanuel Institute of Biochemical Physics, Russian Academy of Sciences*); *I. N. Kurochkin* (*Emanuel Institute of Biochemical Physics, Russian Academy of Sciences*); *Aleksandr V. Zverev* (*BMSTU*); *I. Rodionov* (*Bauman Moscow State Technical University*);

00:00 Gapless States in Microwave Artificial Graphene
Yulia N. Dautova (*University of Exeter*); *Andrey V. Shytov* (*University of Exeter*); *Ian R. Hooper* (*University of Exeter*); *J. Roy Sambles* (*University of Exeter*); *Alastair P. Hibbins* (*University of Exeter*);

Session 4P_11
Optics and Photonics

Thursday PM, May 25, 2017
Room R10

00:00 Electro-optic Broadband Modulator Based on Lithium Niobate Microresonator
Andrey Sergeevich Voloshin (*Russian Quantum Centrum*); *Nikita M. Kondratyev* (*Russian Quantum Center*); *Nikolay G. Pavlov* (*Moscow Institute of Physics and Technology*); *A. D. Ostapchenko* (*Moscow Institute of Physics and Technology*); *A. S. Gorodnitsky* (*Moscow State University*); *I. A. Bilenko* (*Russian Quantum Center*); *M. L. Gorodetsky* (*Russian Quantum Center*);

00:00 30-GHz OFDM Radar and Wireless Communication Experiment Using Radio over Fiber Technology
Toshimasa Umezawa (*National Institute of Information and Communications Technology*); *Kunihisa Jitsuno* (*Waseda University*); *Atsushi Kanno* (*National Institute of Information and Communications Technology*); *Naokatsu Yamamoto* (*National Institute of Information and Communications Technology*); *Tetsuya Kawanishi* (*National Institute of Information and Communications Technology*);

00:00 Agar and Silica Gel Based Biotissue-mimicking Phantoms in THz Frequency Range
Evgeniy L. Odlyanitskiy (*ITMO University*); *O. A. Smolyanskaya* (*National Research University of Information Technologies, Mechanics and Optics*); *O. V. Kravtsenyuk* (*ITMO University*); *Jean-Paul Guillet* (*Bordeaux University*); *A. P. Popov* (*National ITMO University*); *Mikhail Konstantinovich Khodzitsky* (*ITMO University*);

00:00 Optical Absorption at Free Electrons in Semiconductors Induced by Acoustic and Longitudinal Optical Phonon-assisted Processes
Maria O. Zhukova (*ITMO University*); *Evgeny Yu. Perlin* (*ITMO University*);

00:00 Circular-lattice Photonic Crystal Fiber with Square Air Holes Supporting 58 OAM Modes
Xiuli Bai (*Nanjing University of Posts and Telecommunications*); *Heming Chen* (*Nanjing University of Posts and Telecommunications*); *Yingying Ma* (*Nanjing University of Posts and Telecommunications*); *Honghong Yang* (*Nanjing University of Posts and Telecommunications*);

00:00 Radio over Plastic Optical Fiber for Future Mobile Fronthaul Application
Atsushi Kanno (*National Institute of Information and Communications Technology*); *Naokatsu Yamamoto* (*National Institute of Information and Communications Technology*); *Tetsuya Kawanishi* (*National Institute of Information and Communications Technology*);

00:00 Theory to Optical Properties of Compound Semiconductors for Laser Applications
Kakhaber Jandieri (*Philipps-University*); *Martin Wiemer* (*Philipps-University*); *Sergei D. Baranovskii* (*Philipps University Marburg*);

00:00 Investigation on the Acceptor State of Li-N Codoped ZnO Films
Bingye Zhang (*Dalian University of Technology*); *Bin Yao* (*Jilin University*);

00:00 From TV White Space/Spectrum Sharing Trials and Geolocation Spectrum Database towards 5G
Albert A. Lysko (*CSIR Meraka Institute*); *David L. Johnson* (*CSIR Meraka Institute*);

00:00 Instantaneous Frequency Measurement by the Use of Optical Single-sideband Modulation
Tetsuya Kawanishi (*National Institute of Information and Communications Technology*); *Hideki Hayashi* (*Waseda University*); *Atsushi Kanno* (*National Institute of Information and Communications Technology*); *Keizo Inagaki* (*National Institute of Information and Communications Technology*); *Naokatsu Yamamoto* (*National Institute of Information and Communications Technology*);

00:00 Holographic Wavefront Sensors — A New Generation of Wavefront Sensors
Vladimir Yu. Venediktov (*St.-Petersburg Electrotechnical University and St.-Petersburg State University*); *Sergey B. Odinokov* (*Moscow Bauman State Technical University*);

00:00 Amplitude Noise Transfer due to Four-wave Mixing
Aravind Padath Anthur (*Dublin City University*); *Sean P. O. Duill* (*Dublin City University*); *Liam P. Barry* (*Dublin City University*);

00:00 Readout Circuit Design for Noise-based Photodetection
Fernando Massa Fernandes (*Universidade do Estado do Rio de Janeiro*); *Germano Maioli Penello* (*Universidade do Estado do Rio de Janeiro*); *Patricia Lustoza Souza* (*Pontificia Universidade Catolica*);

00:00 Investigation of Nanoantenna Geometries for Maximum Field Enhancements at Optical Frequencies
E. Ustun (*Middle East Technical University*); *O. Eroglu* (*Middle East Technical University*); *U. M. Gur* (*Middle East Technical University*); *Ozgur Ergul* (*Middle East Technical University*);

00:00 Measurement of Microwave Electromagnetic Field Characteristics inside the Reverberation Chamber Based on Carbon Fiber Reinforced Plastic Structure
Shunichi Futatsumori (*Electronic Navigation Research Institute*);

00:00 Investigation of the Photo-stimulated Effect in a Cylindrical Semiconductor Quantum Wire with Infinite Potential under the Influence of Confined Optical Phonon and Laser Radiation
Do Tuan Long (*Hanoi University of Science, Vietnam National University*); *Nguyen Quang Bau* (*Hanoi National University*);

00:00 III-V Heterostructure Based Three Terminal Thermal Rectifier
Ankur Garg (*PEC University of Technology*); *Krishna Prakash* (*PEC University of Technology*); *Neelu Jain* (*PEC University of Technology*); *Arun Kumar Singh* (*PEC University of Technology*);

Session 4P_12a
Quantum Optics 2

Thursday PM, May 25, 2017

Room R9

Organized by Byoung S. Ham, Xiaoying Li

00:00 Recent Progresses on Quantum Key Distributions
Zhen Qiang Yin (*University of Science and Technology of China*);

00:00 Realization of Sub-picosecond Clock Synchronization Based on Second-order Quantum Coherence
Ruifang Dong (*National Time Service Center (NTSC), Chinese Academy of Sciences*); *Runai Quan* (*National Time Service Center, Chinese Academy of Science*); *Yiwei Zhai* (*National Time Service Center, Chinese Academy of Science*); *Mengmeng Wang* (*National Time Service Center, Chinese Academy of Science*); *Tao Liu* (*National Time Service Center, Chinese Academy of Science*); *Shou-Gang Zhang* (*National Time Service Center, Chinese Academy of Science*);

00:00 Indivisibility Test of Coherent States of Light
Jeongwoo Jae (*Hanyang University*); *Kang Hee Seol* (*Hanyang University*); *Kwang-Geol Lee* (*Hanyang University*); *Jinhyoung Lee* (*Hanyang University*);

00:00 Quantum Enhanced Joint Measurement of Multiple Non-commuting Observables with SU(1,1) Interferometer
Xiaoying Li (*Tianjin University*); *Yuhong Liu* (*Tianjin University*); *Jiamin Li* (*Tianjin University*); *Nan Huo* (*Tianjin University*); *Z. Y. Ou* (*Indiana University-Purdue University Indianapolis*);

Session 4P_12b
Advanced Photonic Materials and Nanophtonics

Thursday PM, May 25, 2017

Room R9

00:00 The Topological Electroconductivity Control in the Semiconductor/Metal/Carbon Unit by Laser-induced Nanogranular Structures
Sergey M. Arakelyan (*Stoletovs Vladimir State University*); *Alexey O. Kucherik* (*Stoletovs Vladimir State University*); *Stella V. Kutrovskaya* (*Stoletovs Vladimir State University*); *Anton V. Osipov* (*Vladimir State University*);

00:00 UV-plasmonics with Rh Nanocubes
Yael Gutierrez (*University of Cantabria*); *Fernando Moreno* (*Universidad de Cantabria*); *Henry O. Everitt* (*Duke University*); *Francisco Gonzalez* (*Universidad de Cantabria*);

00:00 Near-field Focusing of Dielectric Microspheres: Super-resolution and Field-invariant Parameter Scaling
Bing Yan (*Bangor University*); *Liyang Yue* (*Bangor University*); *James Norman Monks* (*Bangor University*); *Zengbo Wang* (*Bangor University*);

00:00 Nanofabrication of Polymeric Photonic Devices by Two-photon Polymerization
Lei Zheng (*Laser Zentrum Hannover e.V.*); *Kestutis Kurselis* (*Laser Zentrum Hannover e.V.*); *Carsten Reinhardt* (*Laser Zentrum Hannover e.V.*); *Andrey B. Evlyukhin* (*Laser Zentrum Hannover e.V.*); *R. Kiyan* (*Laser Zentrum Hannover e.V.*); *Boris N. Chichkov* (*Laser Zentrum Hannover e.V.*);

00:00 Time-resolved Nonlinear Optical Response Induced in Glassy Semiconductors by Sub-bandgap Illumination
Elena A. Romanova (*Saratov State University*); *Andrey I. Konyukhov* (*Saratov State University*); *G. N. Vasilyev* (*Saratov State University*); *S. A. Evseyko* (*Saratov State University*); *S. Guizard* (*Ecole Polytechnique*);

00:00 Strong Magneto-optical Effect and Low Optical Transmission Loss in $Ce_xY_{3-x}Fe_5O_{12}$ and $Ce_xDy_{3-x}Fe_5O_{12}$ Thin Films Deposited on Silicon on Insulator Waveguides
Yan Zhang (*University of Electronic Science and Technology of China*); *Chuangtang Wang* (*University of Electronic Science and Technology of China*); *Keyi Sui* (*University of Electronic Science and Technology of China*); *Longjiang Deng* (*University of Electronic Science and Technology of China*); *Lei Bi* (*University of Electronic Science and Engineering of China*);

00:00 Silicon Dimers as Perfect Switching Optical Devices
Angela I. Barreda (*Universidad of Cantabria*); *Hassan Saleh* (*Aix-Marseille Univ.*); *Amelie Litman* (*Universite Paul Cezanne Aix-Marseille III*); *Francisco Gonzalez* (*Universidad de Cantabria*); *Jean-Michel Geffrin* (*Universite Paul Cezanne Aix-Marseille III*); *Fernando Moreno* (*Universidad de Cantabria*);

Session 4P_13b
Nonlinear Electromagnetics and Metasurfaces

Thursday PM, May 25, 2017

Room R8

Organized by Diana V. Semenikhina

Chaired by Diana V. Semenikhina

00:00 The Spectral Characteristics of the Excitation of Cylindrical Surface with Nonlinear Loads with a Metamaterial Layer
Diana V. Semenikhina (*Southern Federal University*); *N. N. Gorbatenko* (*Southern Federal University*); *Andrey I. Semenikhin* (*Southern Federal University*);

00:00 Digital 2-bit Anisotropic Impedance Metasurfaces for UWB RCS Reduction
Andrey I. Semenikhin (*Southern Federal University*); *Diana V. Semenikhina* (*Southern Federal University*); *P. V. Blagovisnyy* (*Southern Federal University*);

00:00 Modeling of Higher Harmonic Generation in the Fourier Modal Method with Adaptive Coordinates
Josselin Defrance (*University of Stuttgart*); *Maxim L. Nesterov* (*University of Stuttgart*); *Martin Schaeferling* (*University of Stuttgart*); *Thomas Weiss* (*University of Stuttgart*);

00:00 Surface Versus Bulk Contribution to Second-harmonic Generation in Centrosymmetric Meta-atoms
Daniel Timbrell (*University College London*); *J. W. You* (*University College London*); *Yuri S. Kivshar* (*Australian National University*); *Nicolae-Coriolan Panoiu* (*University College London*);