

Tentative program of NEW2AN/ruSMART 2016

Monday, September 26, 2016

08:30 – 08:55 Registration

08:55 – 9:00 Opening

09:00 – 10:00 Keynote 1 TBA

10:00 – 11:00 Keynote 2 TBA

11:00 – 11:30 Coffee break

11:30 – 13:30 Technical Sessions: Room A

Wireless networks

1570287790

Improving Efficiency of Heterogeneous Wi-Fi Networks with Energy-Limited Devices
Aleksy Kureev (IITP RAS; MIPT, Russia); Evgeny Khorov (IITP RAS, Russia); Dmitry Bankov (Institute for Information Transmission Problems (IITP RAS), Russia)

1570287967

Mathematical Model of QoS-aware Streaming with Heterogeneous Channel Access in Wi-Fi Networks
Aleksandr Sergeevich Ivanov, Evgeny Khorov and Andrey Lyakhov (IITP RAS, Russia); Ilya Solomatin (IITP, Russia)

1570288969

Mobility Load Balancing Enhancement for Self-Organizing Network over LTE System
Sangchul Oh, Hong-Soog Kim and Jeehyeon Na (ETRI, Korea); Yeong Jin Kim (Electronics and Telecommunications Research Institute, Korea); Sungoh Kwon (University of Ulsan, Korea)

1570290597

Optimizing Network-Assisted WLAN Systems with Aggressive Channel Utilization
Aleksandr Ometov and Sergey Andreev (Tampere University of Technology, Finland); Alla Levina (National Research University ITMO, Russia); Sergey V. Bezzateev (Saint-Petersburg Aerospace Instrumentation University, Russia)

1570290756

Randomized priorities in queuing system with randomized push-out mechanism
Alexander Ilyashenko and Oleg Zayats (Saint-Petersburg State Polytechnical University, Russia); Vladimir Muliukha (Peter the Great St. Petersburg Polytechnic University & Russian State Scientific Center for Robotics and Technical Cybernetics, Russia)

Cooperative communications

1570277430

A Source Prioritizing Scheme for Relay Cooperative Networking

Ioannis Giannoulakis (NCSR Demokritos, Greece); Emmanouil Kafetzakis (Orion Innovations P. C., Greece); Anastasios Kourtis (NCSR Demokritos, Greece)

1570287953

QoS Aware Admission and Power Control for Two-tier Cognitive Femtocell Networks

Jerzy Martyna (Jagiellonian University, Poland)

13:30 – 14:30 Lunch

14:30 – 16:30 Technical Sessions

Room A	Room B
<p>Role of Context for Smart Services</p> <p>1570289418 RCOS: Real Time Context Sharing Across A Fleet Of Smart Mobile Devices Julien Dhallenne (Lappeenranta University of Technology, Finland); Prem Jayaraman (RMIT University, Australia); Arkady Zaslavsky (CSIRO, Australia)</p> <p>1570287916 Reasoning over Knowledge-based Generation of Situations in Context Spaces to Reduce Food Waste Niklas Kolbe and Arkady Zaslavsky (CSIRO, Australia); Sylvain Kubler (Luxembourg University, Luxembourg); J��r��my Robert (University of Luxembourg, Luxembourg)</p> <p>1570287401 Storing and Indexing IoT Context for Smart City Applications Alexey Medvedev (Monash University, Australia); Arkady Zaslavsky (CSIRO, Australia); Maria indrawan-Santiago and Pari Delir Haghghi (Monash University, Australia); Alireza Hassani (University of Monash, Australia)</p> <p>Smart Services Serving Telecommunication Networks</p> <p>1570281656 Neural Network System for Monitoring State of an Optical Telecommunication System Anton Saveliev, Irina Vatamaniuk, Sergey Saitov, Oleg Basov and Nikolay Shilov (SPIIRAS, Russia)</p>	<p>IoT and Industrial IoT</p> <p>1570287143 Supernodes-based solution for Terrestrial Segment of Flying Ubiquitous Sensor Network under Intentional Electromagnetic Interference (IEMI) Hoang Trung (The Bonch-Bruevich Saint-Petersburg State University of Telecommunication, Russia); Ruslan Kirichek (The Bonch-Bruevich Saint - Petersburg State University of Telecommunications, Russia); Alexander Paramonov (The Bonch-Bruevich Saint-Petersburg State University of Communication, Russia); Andrey Koucheryavy (SPbSUT, Russia)</p> <p>1570287553 A New Centralized Link Scheduling for 6TiSCH Wireless Industrial Networks Choi Kanghoon and Sang-Hwa Chung (Pusan National University, Korea)</p> <p>1570287607 Coverage and Network Requirements of a Flash Crowd Monitoring System Using Users' Devices An Truong Nguyen, Mikhail Komarov and Dmitri Moltchanov (Tampere University of Technology, Finland)</p> <p>NoC and positioning</p> <p>1570279587 Intra-CPU Traffic Estimation and Implications on Networks-on-Chip Research</p>

<p>1570283471 Optimization algorithm for an information graph for an amount of communications Yulia Shichkina, Mikhail Kupriyanov and Mohammed Al-Mardi (Saint Petersburg Electrotechnical University, Russia)</p> <p>1570283458 Application of fuzzy sections for constructing dynamic routing in the network DTN Yulia Shichkina, Mikhail Kupriyanov and Anastasia Plotnikova (Saint Petersburg Electrotechnical University, Russia); Yaroslav Domaratsky (Technology Office Motorola Solutions, Russia)</p> <p>1570287770 Strategic Analysis in Telecommunication Project Management System Ekaterina Burova and Ekaterina Abushova (Peter the Great Saint-Petersburg Polytechnic University, Russia); Svetlana Suloeva (Peter the Great Saint-Petersburg Polytechnic University, Russia)</p>	<p>Dmitri Moltchanov (Tampere University of Technology, Finland); Arkady Kluchev (ITMO-University, Russia); Pavel Kustarev (ITMO University, Russia); Karolina Borunova (St.-Petersburg State University of Telecommunications, Russia); Alexey Platunov (ITMO University & LMT Ltd., Russia)</p> <p>1570287718 Indoor Positioning in WiFi and NanoLOC Networks Mstislav Sivers and Grigoriy Fokin (The Bonch-Bruevich St. Petersburg State University of Telecommunications, Russia); Pavel Dmitriev (The Bonch-Bruevich St. Petersburg State University of Telecommunication, Russia); Artem Kireev and Dmitry Volgushev (The Bonch-Bruevich St. Petersburg State University of Telecommunications, Russia); Abdulwahab Al-odhari (The Bonch-Bruevich Saint - Petersburg State University of Telecommunications, Russia)</p> <p>ITS</p> <p>1570287934 Pilot Zone of Urban Intelligent Transportation System based on Heterogeneous Wireless Communication Network Vladimir Grigoryev, Igor Khvorov, Yury Raspaev, Vladimir Aksenov and Anna Shchesniak (ITMO University, Russia)</p> <p>1570293736 Connectivity of VANET segments using UAVs Pavel Shilin and Ruslan Kirichek (The Bonch-Bruevich Saint - Petersburg State University of Telecommunications, Russia)</p>
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16:30 – 17:00 Coffee break

17:00 – 19:00 Technical Sessions

Room A	Room B
New Generation of Smart Services	Wireless Sensor Networks

1570283382 Forecasting Youth Unemployment in Korea with Web Search Queries
Jae Un Jung (Dong-A University, Korea)

1570287968 Competency Management System for Technopark Residents: Smart Space-Based Approach
Alexander Smirnov (SPIIRAS, Russia); Alexey Kashevnik (SPIIRAS & ITMO University, Russia); Sergey I. Balandin (FRUCT Oy, Finland); Olesya Baraniuc and Vladimir Parfenov (ITMO University, Russia)

1570288027 Data Mining for Internet of Things with Fog Nodes
Ivan Kholod (LETI & LETI, Russia); Ilya Petuhov and Maria Efimova (LETI, Russia)

Smart Services in Automotive Industry

1570287975 "Connected Car"-Based Customised On-Demand Tours: the Concept and Underlying Technologies
Alexander Smirnov and Nikolay Shilov (SPIIRAS, Russia); Oleg Gusikhin (Ford, USA)

1570288158 Smart driving: influence of context and behavioral data on driving style
Mikhail Sysoev (University of Ljubljana Faculty of Electrical Engineering, Slovenia)

Satellite communications

1570289008 Rubidium atomic clock with improved metrological characteristics for satellite communication system
Alexander Petrov, Vadim Davydov and Nikita Myazin (Saint-Petersburg state Polytechnical University, Russia)

1570289469 GNSS Attitude Determination Based on Antenna Array Space-Time Signal Processing
Igor Tsikin (St. Petersburg Polytechnic University, Russia); Elizaveta Shcherbinina (Peter the Great Saint-Petersburg Polytechnic University, Russia)

1570288013 Improving Energy-awareness in Selective Reprogramming of WSNs
Hadeel Abdah (Centro Algoritmi, Universidade do Minho); Emanuel Lima (Instituto de Telecomunicações (IT), Portugal); Paulo Carvalho (Centro Algoritmi, Universidade do Minho, Portugal)

1570289210 Modified Elastic Routing to support Sink Mobility Characteristics in Wireless Sensor Networks
Imane Benkhelifa (Houari Bourmediene University of Science and Technology, Algeria); Nassim Belmouloud, Yasmine Tabia and Samira Moussaoui (USTHB, Algeria)

1570293734 Connectivity Estimation In Wireless Sensor Networks

Ilhom Nurilloev (Saint-Petersburg State University of Telecommunications, Russia); Alexander Paramonov (The Bonch-Bruевич Saint-Petersburg State University of Communication, Russia); Andrey Koucheryavy (SPbSUT, Russia)

Network issues

1570280630 The Analysis of Abnormal Behavior of the System Local Segment on the Basis of Statistical Data Obtained from the Network Infrastructure Monitoring
Ilya Lebedev, Irina Krivtsova, Viktoria Korzhuk, Nurzhan Bazhayev, Mikhail Sukhoparov, Sergey Pecherkin and Kseniya Salakhutdinova (ITMO University, Russia)

1570286589 Improving the efficiency of architectural solutions based on cloud services integration
Vladimir Gluhov (Saint-Petersburg State Polytechnical University, Russia); Igor Ilin and Oksana Iliashenko (Peter the Great Saint-Petersburg Polytechnic University, Russia)

1570289216 Optimization of Selection Strategies for P2P

<p>1570289485 Angle-Of-Arrival GPS Integrity Monitoring Insensitive to Satellite Constellation Geometry Igor Tsikin (St. Petersburg Polytecnic University, Russia); Antonina Melikhova (St. Petersburg Polytechnic University, Russia)</p>	<p>Streaming Network Based on Daily Users' Behavior and Users' Distribution over Time Zones Yuliya Gaidamaka and Ivan Vasiliev (Peoples' Friendship University of Russia, Russia)</p> <p>SDN</p> <p>1570289604 Comprehensive SDN testing based on model network Andrey Vladyko (The Bonch-Bruevich Saint - Petersburg State University of Telecommunications, Russia); Ammar Muthanna (State University of Telecommunications, Russia); Ruslan Kirichek (The Bonch-Bruevich Saint - Petersburg State University of Telecommunications, Russia)</p> <p>1570289596 Increasing the efficiency of IPTV by using software-defined networks Yuri Ushakov, Petr Polezhaev, Leonid Legashev, Irina Bolodurina and Alexander Shukhman (Orenburg State University, Russia); Nadezhda Bakhareva (Volga Region State University of Telecommunications and Informatics, Russia)</p> <p>1570289354 Fuzzy model of dynamic traffic management in software-defined mobile networks Andrei Vladyko, Ivan Letenko and Anton Lezhepekov (The Bonch-Bruevich Saint-Petersburg State University of Telecommunications, Russia); Mikhail Buinevich (Saint-Petersburg University of State fire service of EMERCON of Russia)</p>
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Tuesday, September 27, 2016

09:00 – 10:00 Keynote 3 TBA

10:00 – 11:00 Keynote 4 TBA

11:00 – 11:30 Coffee break

11:30 – 13:30 Technical Sessions: Room A

Security issues

1570289457

Survey: Intrusion detection systems in encrypted traffic

Tiina Kovanen and Timo Hämäläinen (University of Jyväskylä, Finland); Gil David (University of Jyväskylä, Finland)

1570285655

Architecture for the Cyber Security Situational Awareness System

Tero Kokkonen (JAMK University of Applied Sciences, Finland)

1570286613

Detecting the origin of DDoS Attacks in OpenStack Cloud Platform Using Data Mining Techniques

Konstantin Borisenko and Andrey Rukavitsyn (Saint Petersburg Electrotechnical University, Russia); Andrei Gurtov (Linköping University, Sweden); Andrey Shorov (Saint Petersburg Electrotechnical University, Russia)

1570287976

Investigation of protection mechanisms against DRDoS attacks using a simulation approach

Yana Bekeneva, Nikolay Shipilov and Andrey Shorov (Saint Petersburg Electrotechnical University, Russia)

1570288915

Weighted Fuzzy Clustering for Online Detection of Application DDoS Attacks in Encrypted Network Traffic

Mikhail Zolotukhin (University of Jyväskylä, Finland); Tero Kokkonen (JAMK University of Applied Sciences, Finland); Timo Hämäläinen (University of Jyväskylä, Finland); Jarmo Siltanen (University of Applied Sciences, Finland)

1570290603

Dynamic Trust Management Framework for Robotic Multi-Agent Systems

Igor Zikratov (University ITMO, Russia); Oleg Maslennikov and Ilya Lebedev (ITMO University, Russia); Aleksandr Ometov and Sergey Andreev (Tampere University of Technology, Finland)

13:30 – 14:30 Lunch

14:30 – 16:30 Technical Sessions: Room A

Cellular networks and systems

1570281245

Innovation radar as a tool of 5G development analysis

Valery Tikhvinskiy (Moscow Technical University of Communication and Informatization (MTUCI) & Icominvest, Russia); Grigory Bochechka (Icominvest & Moscow Technical University of Communications and Informatics, Russia); Alexander Minov (Moscow Technical University of Communications and Informatics & Osnova Telecom, Russia); Andrey Gryazev (Federal State Unitary Enterprise Central Science Research Telecommunication Institute, Russia)

1570289570

Analytical Evaluation of D2D Connectivity Potential in 5G Wireless Systems

Ammar Muthanna (State University of Telecommunications, Russia); Pavel Masek, Jiri Hosek and Radek Fujdiak (Brno University of Technology, Czech Republic); Oshdi Hussein (State University of Telecommunication, Russia); Alexander Paramonov (The Bonch-Bruевич Saint-Petersburg State University of Communication, Russia); Andrey Koucheryavy (SPbSUT, Russia)

1570289614

Queuing Model for Analyzing Simultaneous Access to Spectrum by Limiting Power of LSA Licensee

Konstantin Samouylov (Peoples' Friendship University of Russia, Russia); Irina A. Gudkova (RUDN University & Institute of Informatics Problems, Federal Research Center Computer Science and Control of Russian Academy of Sciences, Russia); Ekaterina V. Markova (Peoples' Friendship University of Russia, Russia)

1570289554

Correlation properties comparative analysis of pseudorandom binary sequences and LTE standard ZC sequences

Vitaly Lazarev (The Bonch-Bruевич St. Petersburg State University of Telecommunications); Alexander Ryjkov and Vladimir Lavrukhin (The Bonch-Bruевич St. Petersburg State University of Telecommunications, Russia)

1570289595

Evaluating Impact of Licensed Shared Access Regime on QoS by the Busy Period Analysis of a Queuing System with Breakdowns

Dmitry Efrosinin (Peoples' Friendship University of Russia, Russia & Johannes Kepler University Linz, Austria); Konstantin Samouylov (Peoples' Friendship University of Russia, Russia); Irina A. Gudkova (RUDN University & Institute of Informatics Problems, Federal Research Center Computer Science and Control of Russian Academy of Sciences, Russia)

1570289600

Evaluating a case of downlink uplink decoupling using queuing system with random requirements

Eduard Sopin (Peoples' Friendship University of Russia, Russia); Konstantin Samouylov (Peoples' Friendship University of Russia, Russia); Olga Vikhrova (Peoples' Friendship University of Russia, Russia); Roman Kovalchukov (Peoples' Friendship University of Russia, Russia); Dmitri Moltchanov and Andrey Samouylov (Tampere University of Technology, Finland)

16:30 – 17:00 Coffee break

17:00 – 19:00 Technical Sessions: Room A

Signals and circuits I

1570285096

Investigation of questions of non-harmonic signal scattering on impedance structures

Alexander Kryachko and Mikhail Kryachko (St. Petersburg State Polytechnical University, Russia); Kirill Antonov and Igor Tyurin (Peter the Great St. Petersburg Polytechnic University, Russia); Yakov Levin (Peter the Great St. Petersburg Polytechnic University, Russia)

1570287926

Joint use of SEFDM-signals and FEC schemes

Andrey Rashich (Peter the Great St. Petersburg Polytechnic University, Russia); Dmitry Vasilyev (Peter the Great Polytechnic University, Russia); Dmitrii Fadeev (Peter the Great St. Petersburg Polytechnic University, Russia)

1570287944

Possibilities of "Nyquist barrier" breaking by optimal signal selection

Sergey V. Zavjalov and Sergey V. Volvenko (Peter the Great St. Petersburg Polytechnic University, Russia); Sergey B. Makarov (Peter the Great St. Petersburg State Polytechnic University, Russia); Shen De Yuan (Jiangsu Normal University, P.R. China)

1570287946

Reduction of Energy Losses under Conditions of Overcoming "Nyquist Barrier" by Optimal Signal Selection

Sergey V. Zavjalov and Sergey V. Volvenko (Peter the Great St. Petersburg Polytechnic University, Russia); Sergey B. Makarov (Peter the Great St. Petersburg State Polytechnic University, Russia)

1570284306

Principles of constructive synthesis of electromagnetic wave radiators

Roman U. Borodulin and Boris V. Sosunov (Military Academy of Telecommunications named after Marshal S. M. Budenny, Russia); Sergey B. Makarov (Peter the Great St. Petersburg Polytechnic University)

1570287966

Root-Raised Cosine versus Optimal Finite Pulses for Faster-than-Nyquist Generation

Anton Gorlov, Aleksandr Gelgor and Van Phe Nguyen (Peter the Great St. Petersburg Polytechnic University, Russia)

1570287989

Optimal input power backoff of a nonlinear power amplifier for FFT-based trellis receiver for SEFDM signals

Dmitrii Fadeev and Andrey Rashich (Peter the Great St. Petersburg Polytechnic University, Russia)

Wednesday, September 28, 2016

09:00 – 10:00 Keynote 5 TBA

10:00 – 11:00 Keynote 6 TBA

11:00 – 11:30 Coffee break

11:30 – 13:30 Technical Sessions

Room A	Room B
Signals and circuits II	Advanced Materials and their properties

1570289558

The Allan variance usage for stability characterization of weak signal receivers
Alexander P. Lavrov (Peter the Great St. Petersburg Polytechnic University, Russia); Yuriy Vekshin (Institute of Applied Astronomy of Russian Academy of Sciences, Russia)

1570290827

An Extremely Flexible, Energy, and Spectral Effective Green PHY-MAC for Profitable Ubiquitous Rural and Remote 5G/B5G IoT/M2M Communications
Alexander Markhasin (Siberian State University of Telecommunications and Information Science, Russia)

1570279935

Application of Microwave Photonics Components for Ultrawideband Antenna Array Beamforming
Alexander Lavrov, Sergey Ivanov and Igor Saenko (State Polytechnical University, Russia)

1570289608

Study of specific features of laser radiation scattering by aggregates of nanoparticles in ferrofluids used for optoelectronic communication systems
Elena Velichko and Elina Nepomniashchaia (Peter the Great St. Petersburg Polytechnic University, Russia); Evgeni Aksenov (Peter the Great St. Petersburg Politechnic University, Russia); Ivan Pleshakov, Yurii Kuzmin and Andrey Prokofiev (Peter the Great St. Petersburg Polytechnic University, Russia)

1570283510

Compensation of chromatic and polarization mode dispersion in fiber-optic communication lines in microwave signals transmission
Aleksandr Ermolaev (Peter the Great Saint - Petersburg Polytechnic University, Russia)

1570289266

Acousto-optic switch based on scanned

1570275034

Quantum Field Theoretical Approach to the Electrical Conductivity of Graphene
Galina Klimchitskaya (Central Astronomical Observatory at Pulkovo of the Russian Academy of Sciences & St. Petersburg State Polytechnical University, Russia); Vladimir Mostepanenko (Central Astronomical Observatory at Pulkovo of the Russian Academy of Sciences, Russia); Viktor Petrov (St.-Petersburg State Polytechnical University, Russia)

1570277371

Writing ferroelectric nanodomains in PZT thin film at low temperature
Alexey Filimonov (Peter the Great St. Petersburg Polytechnic University, Russia); Natalia Andreeva (Peter the Great St. Petersburg Polytechnic University); Alexandr Vakulenko (Peter the Great St. Petersburg Polytechnic University, Russia); Sergej Vakhrushev and Alexandr Fotiadi (St. Petersburg State Polytechnical University, Russia)

1570284841

Investigation of electro-physical and transient parameters of energy accumulating capacitors applied in nanosecond and sub-nanosecond high-current avalanche switches
Alexey Filimonov (Peter the Great St. Petersburg Polytechnic University, Russia); Sergey Vainshtein (University of Oulu, Finland); Vladimir Egorkin and Valery Zemlyakov (NRUET, Russia); Andrey Maslevtsov (Peter the Great St. Petersburg Polytechnic University, Russia)

Economics and business

1570278395

Evaluating the Efficiency of Investments in Mobile Telecommunication Systems Development
Tatyana Nekrasova, Valery Leventsov and Ekaterina Axionova (Peter the Great St. Petersburg Polytechnic University, Russia)

1570279804

<p>acoustic field Elena Velichko (Peter the Great St. Petersburg Polytechnic University, Russia); Evgeni Aksenov (Peter the Great St. Petersburg Politechnic University, Russia); Alina Galichina (Peter the Great St. Petersburg Polytechnic University, Russia)</p>	<p>Development of Project Risk Rating for Telecommunication Company Svetlana Suloeva (Peter the Great Saint-Petersburg Polytechnic University, Russia); Sergey Grishunin (Peter the Great St. Petersburg Polytechnic University, Russia)</p> <p>1570287848 Innovation Venture Financing Projects in Information Technology Olga Kalinina, Alexander Bril and Olga Valebnikova (Peter the Great St. Petersburg Polytechnic University, Russia)</p> <p>1570289606 Information risk analysis for logistics systems Elena Velichko and Constantine Korikov (Peter the Great St. Petersburg Polytechnic University, Russia); Aleksy Grishentsev (St. Petersburg NR University of Information Technologies, Mechanics and Optics, Russia); Anatoliy Korobeynikov (SPb Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation of the RAS, Russia)</p>
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