

# **2019 Ural Symposium on Biomedical Engineering, Radioelectronics and Information Technology (USBEREIT)**

## **Conference Program**

**25 April 2019, Yekaterinburg, Russia**

**Venue:** 19 Mira street, Main building of Ural Federal University

**9:00 Welcome Desk and Registration** (Hall of the Ural Federal University)

**10:00** (Hall of the Academic Council of Ural Federal University, И-420)

### **OPENING SESSION**

Victor Anatolevich Koksharov, Rector of Ural Federal University

Ilya Nikolaevich Obabkov, Director of the Engineering School of Information Technologies,  
Telecommunications and Control Systems, Ural Federal University

### **PLENARY PRESENTATIONS / KEYNOTE SPEAKERS:**

- **«New Generation of Electromagnetic Modeling Simulation Tools»**  
Professor Branko M Kolundzija, President of WIPL-D d.o.o., University of Belgrade,  
IEEE Fellow (Belgrade, Serbia)
- **«Medical Applications of IR and THz Spectroscopy and Machine Learning»**  
Professor Yury Vladimirovich Kistenev, Head of Laboratory of Biophotonics, Tomsk State  
University (Tomsk, Russia)
- Sponsors presentation **«Application of Keysight Technologies devices for tasks of  
Radioelectronics and Biomedicine»** Dipaul company (Saint Petersburg, Russia)
- **«Processing of Synchronous Recordings of Surface ECG and Intracardiac Potentials  
for Diagnostics of Dangerous Heart Rate Disturbances»**  
Professor Zafar Mukhamedovich Yuldashev, Head of Department BioTechnical Systems,  
St. Petersburg State Electrotechnical University "LETI" (Saint Petersburg, Russia)
- **«Application of the Green's functions of layered structures in Electromagnetics»**  
Professor Sergey Nikolaevich Shabunin, Head of the Department of Radio Electronics and  
Telecommunications, Ural Federal University, IEEE Senior Member (Yekaterinburg, Russia)

**14:00 Welcome Reception**

**Venue:** 32 Mira street, Engineering School of Information Technologies, Telecommunications  
and Control Systems, Ural Federal University

**Section Biomedical Engineering**  
**(CHAIR Prof. Kublanov Vladimir Semenovich)**

**25 April**

**Venue:** 32 Mira street, Engineering School of Information Technologies, Telecommunications and Control Systems, Ural Federal University

**Subsection 1, from 15:00 to 17:00. Room: P-217**

**Co-Chairs:**

**Prof. Danilova Irina Georgievna**

**Prof. Kalmykov Alexey Andreevich**

<b>№</b>	<b>time</b>	<b>Title</b>	<b>Presenter</b>	<b>Affiliation</b>
1	15:00 - 15:15	<b>Processing of Cardiac Optical Mapping Data for Cameras with Hexagonally Packed Photodiode Array. K-means Cluster Maps for Experiment Analysis</b>	Razumov Artem	UB RAS
2	15:15 - 15:30	<b>Sensing of Human Breathing and Heart Beating at Different Orientation Angles by CW Doppler Radar</b>	Evteeva Kseniya	BMSTU
3	15:30 - 15:45	<b>Comparison of Unet architectures for identification of the left ventricle endocardial border on two-dimensional ultrasound images</b>	Zyuzin Vasiliy	UrFU
4	15:45 - 16:00	<b>Evaluation of Three Dimensional Motion of Mass Center of the Heart by Electrical Impedance Mapping</b>	Tikhomirov Alexey	BMSTU
5	16:00 - 16:15	<b>Method for Determining Non-destructive Erythrocyte Irradiation Dose during Low Intensity Optical Exposure to Blood</b>	Afanasyeva Anna	BMSTU
6	16:15 - 16:30	<b>Macrophage Cytokine Production and Regeneration of Pancreas at Experimental Diabetes Mellitus Type 2 and at Modulation Activity of Macrophages</b>	Danilova Irina	UB RAS
7	16:30 - 16:45	<b>Control of Hyperglycemia and Enhancement of Regenerative Processes in Pancreas by 1,3,4-Thiadiazines at Experimental Diabetes Mellitus</b>	Emelianov Viktor	UB RAS
8	16:45 - 17:00	<b>Automatization of HER2 Status Assessment in Breast Cancer</b>	Makhov Denis	BMSTU

**26 April**

**Venue:** 32 Mira street, Engineering School of Information Technologies, Telecommunications and Control Systems, Ural Federal University

**9:00 Welcome Desk and Registration**

**Subsection 2, from 10:00 to 13:00. Room: P-217**

**Co-Chairs:**

**Prof. Yuldashev Zafar Mukhamedovich**

**Ass. Prof. Dolganov Anton Yuriyevich**

<b>№</b>	<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Affiliation</b>
1	10:00 - 10:15	<b>Recognition of Arrhythmias Based on the Spectral Description of ECG</b>	Yuldashev Zafar	LETI
2	10:15 - 10:30	<b>HHT Modification for Automatic Separation of EEG Rhythms</b>	Tychkov Alexander	PSU
3	10:30 - 10:45	<b>Development of Methods and Algorithms for Determining Physiological Parameters of the Patient with the Help of the Biomodule</b>	Galastov Andrew	MIET
4	10:45 - 11:00	<b>Development of Analog Filtering Circuit for Electromyography Signals</b>	Kabanov Artemii	ObmSTU
5	11:00 - 11:15	<b>Extrasystole Episodes Detection Algorithm in Real Time Mode</b>	Yuldashev Zafar	LETI
	11:15 - 11:45	<b>Coffee Break</b>		
6	11:45 - 12:00	<b>Effect of Electrode Pressure on Neuromuscular Signals During Hand Movements</b>	Briko Andrew	BMSTU
7	12:00 - 12:15	<b>Influence of the Neuro-electrostimulation on Galvanic Skin Response Signals: Case-Study</b>	Pomosova Anna	UrFU
8	12:15 - 12:30	<b>Indirect Measurement of Arterial Pressure by Means of Heart Rate Variability Signals</b>	Dolganov Anton	UrFU
9	12:30 - 12:45	<b>Parallel Control of Two Digital Micromanipulators for Biomechanical Experiments Using LabVIEW</b>	Volzhaninov Denis	UrFU
10	12:45 - 13:00	<b>Approximation of Action Potential in Populations of Cardiomyocyte Electrophysiology Models</b>	Ushenin Konstantin	UB RAS
	13:00 - 14:00	<b>Lunch Time</b>		

**Subsection 3, from 10:00 to 13:00. Room: P-239****Co-Chairs:****Ass. Prof. Ryvkin Alexandr Mikhailovich****Ass. Prof. Syskov Alexey Mstislavovich**

<b>№</b>	<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Affiliation</b>
1	10:00 - 10:15	<b>Occupational Exposure to Static Magnetic Fields from MRI Units in Health Care Settings: a Narrative Review</b>	Phoka Caiphus Rathebe	University of Johannesburg
2	10:15 - 10:30	<b>Automation of Preoperative Planning of Surgical Operations on Abdominal Organs</b>	Semenova Evgenia	LETI
3	10:30 - 10:45	<b>The Decision Support Algorithm for a Surgeon in Preoperative Planning of Mini-laparotomy Gallbladder Surgery from an Arbitrary Incision Site</b>	Timokhov Gennady	LETI
4	10:45 - 11:00	<b>Auxiliary Surgical System Development</b>	Shcherbachev Andrew	BMSTU
5	11:00 - 11:15	<b>Computational modeling of electroaerosol flows for the treatment of burn injuries</b>	Klimiashvili George	BMSTU
	11:15 - 11:45	<b>Coffee Break</b>		
6	11:45 - 12:00	<b>Method and Device for Treatment of Fungal Diseases of the Skin and Nails</b>	Lebedinskaya Olga	VISU
7	12:00 - 12:15	<b>The Analysis of the Accuracy of Measurement of Main Pigmented Skin Lesions Signs</b>	Zhelnov Vladislav	BMSTU
8	12:15 - 12:30	<b>Project: Geographic Information System of Epidemiological Monitoring and Elimination of "Foci of Tuberculosis" on the Territory of the Subjects of the Russian Federation</b>	Evgeniy Komosky	UrFU
9	12:30 - 12:45	<b>Neonatal Intensive Care Unit Equipment: Future Perspectives and Current Challenges</b>	Trofimova Elena	UrFU
10	12:45 - 13:00	<b>Hardware-Software Integration for EEG Coherence Analysis</b>	Syskov Alexey	UrFU
	13:00 - 14:00	<b>Lunch Time</b>		

**Subsection 4, from 14:00 to 17:00. Room: P-217****Co-Chairs:****Prof. Kandoba Igor Nikolaevich****Ass. Prof. Ushenin Konstantin Sergeevich**

<b>№</b>	<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Affiliation</b>
1	14:00 - 14:15	<b>Modeling of Human Circulatory System Using Three-dimensional Fractal Structures</b>	Afanasyeva Anna	BMSTU
2	14:15 - 14:30	<b>Mathematical Model of Electrotonic Interaction Between Mechanically Active Cardiomyocyte and Fibroblasts</b>	Bazhutina Anastasia	UB RAS
3	14:30 - 14:45	<b>Voxel Based Finite Element Method Modelling Framework For Electrical Stimulation Applications Using Open Source Software</b>	Babich Michael	UrFU
4	14:45 - 15:00	<b>Age-related Calcium Sparks Alterations in Heart Pacemaker Cells. Computer Modeling</b>	Markov Nikita	UB RAS
5	15:00 - 15:15	<b>Comparison of Mechanical Parameters of the Great Saphenous Vein under Various Test Conditions</b>	Khaydukova Irina	BMSTU
	15:15 - 15:45	<b>Coffee Break</b>		
6	15:45 - 16:00	<b>Algorithm for Recognition of Vascular Structures in the Biotissue Volume</b>	Orlova Veronica	BMSTU
7	16:00 - 16:15	<b>Electrochemical Method of Dialysate Regeneration</b>	Putrya Boris	MIET
8	16:15 - 16:30	<b>Development of an Artificial Heart Ventricles Adaptive Control System</b>	Kudashov Ivan	BMSTU
9	16:30 - 16:45	<b>Research of Algorithms of Modeling Acoustic Fields for Synthesizing Ultrasound Images of Biological Tissues</b>	Kondratova Alena	UrFU
10	16:45 - 17:00	<b>Impact of the Transmural Dimension of Infarction Scar on the Dynamics of Spiral Waves in Realistic Models of the Human Heart's Left Ventricle</b>	Dokuchaev Arsenii	UB RAS

**Subsection 5, from 14:00 to 17:00. Room: P-239****Co-Chairs:****Prof. Kostousov Victor Borisovich****Ass. Prof. Petrenko Timur Sergeevich**

<b>№</b>	<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Affiliation</b>
1	14:00 - 14:15	<b>Application of Aerosol Therapy for Complex Treatment of Upper Respiratory Tracks of the Children</b>	Lebedinskaya Elena	VISU
2	14:15 - 14:30	<b>Application of Mathematical Modeling for Assessment of Developmental Delays Risk in Young Children with Hearing Impairments</b>	Mashevsky Gleb	LETI
3	14:30 - 14:45	<b>The model for computation of electroaerosol flows for bronchial asthma treatment</b>	Klimiashvili George	BMSTU
4	14:45 - 15:00	<b>Determining the Level of Human Health and Physical Performance by the State of Cardiovascular and Respiratory Systems</b>	Al-Haidri Walid Ahmed Ahmed	VISU
5	15:00 - 15:15	<b>Sleep Apnea and Hypopnea Detection Algorithm</b>	Zhivolupova Yuliya	LETI
	15:15 - 15:45	<b>Coffee Break</b>		
6	15:45 - 16:00	<b>Blood Saturation Decreasing Level Based on the Features of a Spirogram Signal</b>	Zhivolupova Yuliya	LETI
7	16:00 - 16:15	<b>Optical System for Assessment of Fibrotic Changes</b>	Raznitsyna Irina	MONIKI
8	16:15 - 16:30	<b>Application of Laser Light Scattering in Bacteria Viability Testing Using Lab-on-a-chip Format</b>	Zimina Tatyana	LETI
9	16:30 - 16:45	<b>Magneto-Mechanotherapy Combined System</b>	Deshin Ilia	BMSTU
10	16:45 - 17:00	<b>Laser Systems Supplied with Silver Halide Fibres for Laser-Surgery Angioplasty</b>	Korsakova Elena	UrFU

**Section Information Technology**  
(CHAIR Prof. Porshnev Sergey Vladimirovich)

**25 April**

**Venue:** 32 Mira street, Engineering School of Information Technologies, Telecommunications and Control Systems, Ural Federal University

**Subsection 1, from 15:00 to 17:30. Room: P-243**

**Co-Chairs:**

**Prof. Porshnev Sergey Vladimirovich**

**Ass. Prof. Aksonov Konstantin Aleskandrovich**

<b>№</b>	<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Affiliation</b>
1	15:00 - 15:15	<b>A Software Product for Processing Data on Employees of a Small Enterprise Who are Allowed to Work with Restricted Access Information</b>	Basharin Sergey	SUSU
2	15:15 - 15:30	<b>Smart Grid Sustainability Analysis Using a Geoinformation Model</b>	Morev Kirill	SFedU
3	15:30 - 15:45	<b>Intuitionistic Fuzzy Approach to Solving a Distributional Problem Under Uncertainty</b>	Morev Kirill	SFedU
4	15:45 - 16:00	<b>An Approach to Unification of Application Programming Interfaces of Gaming Platforms for Artificial Intelligence</b>	Vesnina Anastasia	UrFU
5	16:00 - 16:15	<b>Design Of DSQLM Language Extensions</b>	Mirvoda Sergey	UrFU
6	16:15 - 16:30	<b>Modeling Message Spoofing Attacks on the OLSR Routing Protocol</b>	Litvinov George	OmSTU
7	16:30 - 16:45	<b>Parameters Specification of the 3D STEP Object Format in Modular Multiphysical Modeling</b>	Zeyde Kirill	UrFU
8	16:45 - 17:00	<b>Implementing IoT Systems in Service-Oriented Architecture</b>	Papulovskaya Nataliya	UrFU
9	17:00 - 17:15	<b>Application of Random Forest Algorithm to Predict the Atmospheric Concentration of NO2</b>	Masih Adven	UrFU
10	17:15 - 17:30	<b>Numerical One-Dimensional Infinitesimal Analysis and Its Application to the Study of Optimization Problems</b>	Ivanov Alexey	UrFU

**26 April**

**Venue:** 32 Mira street, Engineering School of Information Technologies, Telecommunications and Control Systems, Ural Federal University

**9:00 Welcome Desk and Registration**

**Subsection 2, from 09:30 to 13:00. Room: P-243**

**Co-Chairs:**

**Prof. Porshnev Sergey Vladimirovich**

**Ass. Prof. Safiullin Nikolai Tahirovich**

<b>№</b>	<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Affiliation</b>
1	09:30 - 09:45	<b>Research of Window Function Influence on the Result of Arabic Speech Automatic Recognition</b>	Al-Daibani Abdulgani Mohammed Saleh	VISU
2	09:45 - 10:00	<b>Partition Procedure of the Initial Data for the Models Based on Artificial Neural Networks</b>	Rakhmatova Anna	UrFU
3	10:00 - 10:15	<b>Improvement of the Ensemble Empirical Mode Decomposition with Parallel Computing</b>	Safiullin Nikolai	UrFU
4	10:15 - 10:30	<b>On the Stationarity of the Informational Parameters Calculated from the Burning Torch Frame Sequences in Infrared Band</b>	Berg Ivan	UrFU
5	10:30 - 10:45	<b>Intelligent Video Monitoring System: Technical and Economic Aspects</b>	Morev Kirill	SFedU
6	10:45 - 11:00	<b>Prediction Subsystem for a Public Cloud Electricity Consumption Planning System</b>	Doronin Anton	UrFU
	11:00 - 11:15	<b>Coffee Break</b>		
7	11:15 - 11:45	<b>The Required Number of Sunspot Cycles in the Training Set for a Better Accuracy of the Forecast with Artificial Neural Network</b>	Safiullin Nikolai	UrFU
8	11:45 - 12:00	<b>Research and Development of Hybrid Simulation Models of Mining Complexes</b>	Kuznetsov Yaroslav	UrFU
9	12:00 - 12:15	<b>A Data Collection and Analysis System for Managing the Vulnerabilities of Users of an Information System in a Small Business</b>	Muravyov Nikita	SUSU
10	12:15 - 12:30	<b>Matrix Model of Estimation and Forecasting of Technical Parameters</b>	Klevtsov Sergey	SFedU
11	12:30 - 12:45	<b>Statistical Model for the Synthesis of Billing Information</b>	Sinadskii Alexey	UrFU
12	12:45 - 13:00	<b>A Method of Planning Experiments for Simulation-Evolutionary Modeling and Improvement of the Multiagent Resource Conversion Processes</b>	Antonova Anna	UrFU
	13:00 – 14:00	<b>Lunch Time</b>		



**Subsection 3, from 14:00 to 17:00. Room: P-243****Co-Chairs:****Prof. Porshnev Sergey Vladimirovich****Ass. Prof. Safiullin Nikolai Tahirovich**

<b>№</b>	<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Affiliation</b>
1	14:00 - 14:15	<b>Using the Method of Normalized Amplitude for Assessing the Quality of the Calibration Tests of the Pressure Sensor</b>	Klevtsov Sergey	SFedU
2	14:15 - 14:30	<b>Markov and Semi-Markov Models of Real-Time Quests in Information Security Education</b>	Maro Ekaterina	SFedU
3	14:30 - 14:45	<b>The Development of Information Educational Environment</b>	Topolsky Dmitriy	SUSU
4	14:45 - 15:00	<b>Development and Oculographic Research of the Website Design Concept for Inclusive Education</b>	Moreva Alla	SFedU
5	15:00 - 15:15	<b>Development of a Model “Digital Tutor” System for the Project Education in the University</b>	Syskov Alexey	UrFU
	15:15 - 15:45	<b>Coffee Break</b>		
6	15:45 - 16:00	<b>Fixed-Point Implementation of Extrapolation ODE Solvers</b>	Khalyasmaa Alexandra	UrFU
7	16:00 - 16:15	<b>Roof Segmentation on the High Resolution Digital Terrain Model</b>	Mikhailov Igor	UrFU
8	16:15 - 16:30	<b>Algorithms Based on Trigonometric Interpolation for Signal Reconstruction with Even Number of Sampling Points</b>	Klevakin Maxim	UrFU
9	16:30 - 16:45	<b>Synthesis and Comparative Analysis of Characteristics of Complex Kalman Filter and Particle Filter in Two-dimensional Local Navigation System</b>	Petukhov Nikita	MPEI
10	16:45 - 17:00	<b>Industrial Power Consumption Forecasting Methods Comparison</b>	Babich Lyudmila	UrFU

## Section Radioelectronics

(CHAIRS Prof. Noskov Vladislav Yakovlevich, Prof. Shabunin Sergey Nikolaevich)

25 April

Venue: 32 Mira street, Engineering School of Information Technologies, Telecommunications and Control Systems, Ural Federal University

Subsection 1, from 15:00 to 17:00. Room: P-143

Co-Chairs:

Prof. Tuev Vasilii Ivanovich

Ass. Prof. Malygin Ivan Vladimirovich

№	Time	Title	Presenter	Affiliation
1	15:00 - 15:15	Improving the Accuracy of Local Positioning for Mobile Network Nodes Using Satellite Navigation Systems	Telny Andrew	VISU
2	15:15 - 15:30	Cooperative navigation of vehicles using mutual retransmission of GNSS's signals	Kulikov Roman	MPEI
3	15:30 - 15:45	An Extended Simulink Model of Single-Chip Automotive FMCW Radar	Kravchenko Ivan	SevSU
4	15:45 - 16:00	Phase-Based Algorithm for Estimation of Time Delay Difference in Ultrasonic Flow Meters With Frequency Modulated Signals	Ronkin Michael	UrFU
5	16:00 - 16:15	Interference Detection in the Useful Signal Using a Neural Network	Malygin Ivan	UrFU
6	16:15 - 16:30	Detection of Coherent Sequence of Rectangle Shape Ultra-Wideband Quasi-Radiosignal	Titov Konstantin	VSU
7	16:30 - 16:45	Digital Receiving Devices with Time-Division Multiplexing for Bandwidth Extension	Fateeva Anna	OmSTU
8	16:45 - 17:00	Sawtooth Voltage Source Based on Field Programmable Analog Array	Bokov Alexander	UrFU

**Subsection 2, from 15:00 to 17:00. Room: P-215**

**Co-Chairs:**

**Ass. Prof. Kudinov Sergey Ivanovich**

**Ass. Prof. Topolsky Dmitriy Valerianovich**

<b>№</b>	<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Affiliation</b>
1	15:00 - 15:15	<b>Modeling Radar Signals Reflected from the Ice Covering Water Surfaces</b>	Vazhenin Vladimir	UrFU
2	15:15 - 15:30	<b>Microwave Limiter Design in 180 nm SiGe BiCMOS Technology</b>	Filippov Ivan	SevSU
3	15:30 - 15:45	<b>Parameters Correction System for Phased Array Front-end Chip</b>	Filippov Ivan	SevSU
4	15:45 - 16:00	<b>Performance Comparison of Dual Axis Solar Tracker with Static Solar System in Ural Region of Russia</b>	Odinaev Ismoil	UrFU
5	16:00 - 16:15	<b>Impedance Transformers Simulation for Matching of Cascades of L-band SAR ERS Power Amplifiers</b>	Trenkal Evgeniy	TUSUR
6	16:15 - 16:30	<b>Measurement of Aerological Radiosonde Coordinates by Monopulse Radar Station</b>	Kudinov Sergey	UrFU
7	16:30 - 16:45	<b>Dielectric Resonator as Primary Transducer of Liquid Hydrocarbons Moisture. Applicability. Potentials. Prospects</b>	Topolsky Dmitriy	SUSU
8	16:45 - 17:00	<b>Radiation of Patch and Slot Antenna Arrays Located on a Conducting Cylinder with a Dielectric Cover</b>	Chechetkin Viktor	UrFU

**26 April**

**Venue:** 32 Mira street, Engineering School of Information Technologies, Telecommunications and Control Systems, Ural Federal University

**Subsection 3, from 10:00 to 13:00. Room: P-146**

**Co-Chairs:**

**Prof. Tuev Vasily Ivanovich**

**Ass. Prof. Malygin Ivan Vladimirovich**

<b>№</b>	<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Affiliation</b>
1	10:00 - 10:15	<b>Weighted Pseudo-Range Method of Positioning in Local Ultra-Wide Band Navigation Systems</b>	Chugunov Alexander	MPEI
2	10:15 - 10:30	<b>Stochastic Model of Parametric Prediction of Reliability of Radio-Electronic Systems</b>	Proshin Alexey	PSU
3	10:30 - 10:45	<b>Numerical Investigation of the Ultrasonic Transit Time Flowmeter Accuracy in Heterogeneous Flows</b>	Ronkin Michael	UrFU
4	10:45 - 11:00	<b>Automated Excitation Signal Generation System for Time-Domain Impedance Spectroscopy</b>	Nikishina Guzel	KAI
5	11:00 - 11:15	<b>Inkjet-Printed Filament for LED Bulbs</b>	Tuev Vasily	TUSUR
	11:15 - 11:45	<b>Coffee Break</b>		
6	11:45 - 12:00	<b>Improving the Measurement Accuracy of a Piezoelectric Pressure Sensor</b>	Ovechkina Elena	UrFU
7	12:00 - 12:15	<b>Diode Detectors with Extended Dynamic Range for Radioastronomical Receivers</b>	Lavrov Alexander	SPbSTU
8	12:15 - 12:30	<b>Designing a Tunable Microwave Filter Using Stepper Motors</b>	Malygin Ivan	UrFU
9	12:30 - 12:45	<b>Measurement of Electrophysical Properties of Fabric Materials and Their Use in the Implementation of Antennas</b>	Malkin Alexander	UrFU
10	12:45 - 13:00	<b>Investigation of the Characteristics of the TEM Cell Model</b>	Sychugov Evgenii	UrFU
	13:00 – 14:00	<b>Lunch Time</b>		

**Subsection 4, from 14:00 to 17:00. Room: P-143**

**Co-Chairs:**

**Prof. Shabunin Sergey Nikolaevich**

**Prof. Kolundzija Branko**

<b>№</b>	<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Affiliation</b>
1	14:00 - 14:15	<b>An Estimation of Polarization Parameters of Pulsar Radio Emission, Registrated by 2D Acousto-Optic Processor</b>	Lavrov Alexander	SPbSTU
2	14:15 - 14:30	<b>Techniques for Reducing Output Current Ripple in a Flyback Converter with PFC</b>	Nikitin Dmitriy	UrFU
3	14:30 - 14:45	<b>The Possibility of Using the Orbital Angular Momentum in Radio Communication Systems</b>	Vavilova Victoria	USATU
4	14:45 - 15:00	<b>Strain Monitoring Transducers for Helicopter Rotating Assemblies Based on Combined Use of Optoelectronic and Ultrahigh Frequency Transducers</b>	Zhukov Semyon	SSAU
5	15:00 - 15:15	<b>Electrodynamic Model of the Earth's Atmosphere Based on the Green's Functions of Stratified Media</b>	Shabunin Sergey	UrFU
	15:15 - 15:45	<b>Coffee Break</b>		
6	15:45 - 16:00	<b>Investigation of Microstrip High-Pass Filters Based on Multimode Resonator</b>	Khodenkov Sergey	SibSAU
7	16:00 - 16:15	<b>Investigation of the Connection of Additional Stubs to the Phase Shifter Based on the Directional Coupler</b>	Letavin Denis	UrFU
8	16:15 - 16:30	<b>Investigation of the Boundary Conditions of a Radio Channel Noise Immunity Using LoRa Modulation</b>	Luchinin Alexander	UrFU
9	16:30 - 16:45	<b>Measurement of Electrodynamic Parameters of Powder Materials</b>	Malkin Alexander	UrFU
10	16:45 - 17:00	<b>Statistical Properties of the Interaction Between Linear Mode Coupling and Kerr-Nonlinearities in Few-Mode Fibers</b>	Kutluyarov Ruslan	USATU

**Subsection 5, from 14:00 to 17:00. Room: P-146****Co-Chairs:****Ass. Prof. Knyazev Nikolai Sergeevich****Ass. Prof. Mitelman Yuriy Evgenievich**

<b>№</b>	<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Affiliation</b>
1	14:00 - 14:15	<b>Lens Antenna Array Excited by the Primary-Feed System</b>	Denisov Dmitriy	UrFU
2	14:15 - 14:30	<b>Theoretical Assumptions for Stratification of a Cylindrical Luneberg Lens of Maximum Accuracy</b>	Zeyde Kirill	UrFU
3	14:30 - 14:45	<b>Quality Factor of the Resonator Cavity Antenna with Partially Reflecting Planar Wall</b>	Bukharin Victor	SUSU
4	14:45 - 15:00	<b>A Novel Method for Inhomogeneous Coaxial Line Analysis</b>	Mitelman Yuriy	UrFU
5	15:00 - 15:15	<b>Scattering by a Flat PEC Plate with Three Angular DOF</b>	Zeyde Kirill	UrFU
	15:15 - 15:45	<b>Coffee Break</b>		
6	15:45 - 16:00	<b>Microwave Electromagnetic and Absorbing Properties of Iron/Polymer Nanocomposites</b>	Knyazev Nikolai	UrFU
7	16:00 - 16:15	<b>Pseudorandom Sequence Generator Using CORDIC Processor</b>	Sokolovsky Alexey	SibFU
8	16:15 - 16:30	<b>Phase Noise Suppression Efficiency on InSAR Interferograms</b>	Sosnowski Andrew	UrFU
9	16:30 - 16:45	<b>Elimination of Abnormal Errors in Local Ultra-Wide Band Navigation System</b>	Tsaregorodtsev Dmitriy	MPEI
10	16:45 - 17:00	<b>Modular Power Amplifier for Transmitter of X-band Aircraft High Resolution SAR for Earth Remote Sensing</b>	Shabash Anton	TUSUR

26 April

**17:00 BEST PAPER AWARDS AND CLOSING CEREMONY (P-325)**

Ilya Nikolaevich Obabkov, Director of the Engineering School of Information Technologies, Telecommunications and Control Systems

CONFERENCE WORKSHOPS

25 April P-317 17:00 Prof. Popechitelev, E. P. Saint Petersburg Electrotechnical University

"LETI" **"Workshop on History and Progress of BioTechnical Systems for Medical Purposes"**

26 April P-406 10:00 Jasmin Musić, WIPL-D d.o.o. (Belgrade, Serbia) **"Workshop on WIPL-D 3D EM solver"**.