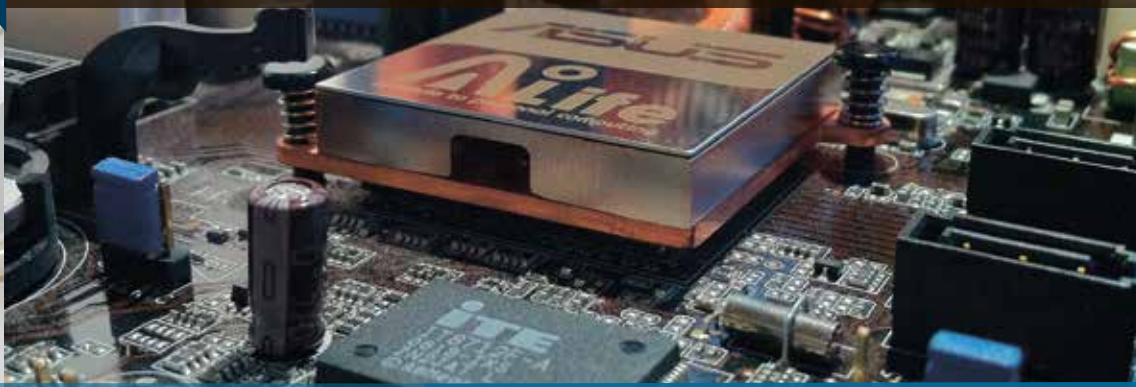
https://eexpolytech.spbstu.ru/

PROGRAM OF THE 2024 IEEE INTERNATIONAL CONFERENCE ON ELECTRICAL ENGINEERING AND PHOTONICS



The conference is organised by Institute of Electronics and Telecommunications of Peter the Great St.Petersburg Polytechnic University, Saint Petersburg, Russia

October 17-18, 2024

Saint Petersburg, Russia

EExPolytech

POLYTECH
Peter the Great
St.Petersburg Polytechnic
University

IEEE

October 17, 2024

9:45	**Opening** ***Alexander Korotkov, Jian Song*** Join in Zoom: (links to Zoom session are sent to the participants via e-mail)
Session	**Plenary lections** Join in Zoom: (links to Zoom session are sent to the participants via e-mail)
Chairs	***Dmitry Tkachenko, Viktoria Kapralova, Platon Karaseov***
10:00	**Jian Song** Optical Wireless Communications for the Heterogeneous Networks of Intelligent Transportation
10:25	**Mehdi Fardmanesh**, Mojtaba Hossein pour Choubi Design and Simulation of High Tc Superconducting Charge-Based Qubit
10:50	**Venugopal Rao Soma** Novel Nanomaterials for Explosives Sensing
11:15	Konstantin Bystrushkin, **Dmitry Tkachenko** Current Trends in Development of Future Digital TV Technologies
11:40	Coffee break

October 17, 2024

Session	**Algorithms & Signal Processing** Room 347, 2nd building SPbPU Join in Zoom: (links to Zoom session are sent to the participants via e-mail)
Chairs	***Dmitry Tkachenko, Anna Orlova, Changyong Pan***
12:00	**Xiaofeng Su**, Jian Song, Yi Jiang Low-Complexity Nonlinear Hybrid Precoding for Massive MIMO Broadcast Channels
12:15	**Yongjun Ye**, Changyong Pan, Chao Zhang, Jun Wang Performance Evaluation for 5G NR Communication System based on OpenAirInterface
12:30	Feng Wu, Yang Hui, Yingguang Zhu, Guodong Zhang, **Changyong Pan** Design and Realization of a Flexible Wearable Non-Invasive Phototherapy Device
12:45	Bokuan Yang, Jinghai Cao, **Wu Yuanqi**, Jie Zhang, Changyong Pan, Jessie Wu Search, Estimate, and Predict: Efficient Weakly-Supervised Learning
13:00	**Fan Zhang**, Jianxi Kang, Yingguang Zhu, Guohui Zhang, Yonglan Hu, Changyong Pan Research on Laser Lift-off Process of Flexible OLED Panels for Phototherapy Application
13:15	**Shuo Li**, Jun Wang, Chao Zhang, Zhuoer Zhang A Joint Estimation Algorithm of Timing and Carrier under Large Frequency Offset Satellite Signal

13:30	**Bin Guo**, Eric Fu Design and Implementation of 8K Display Chip Technology Platform
13:45	**Quynh T. Thanh Nguyen** Moving Target Localization and Enclosing Control with Fixing-Wing Unmanned Aerial Vehicle
14:00	**Phat Vo Le Thanh**, Huy Nguyen Van, Khuc Thanh Bang, Aleksandr Gelgor, Phuoc Nguyen T. H. A Public Dataset for Simultaneous Human Activity Recognition and Localization using WiFi Signals
14:15	**Khuc Thanh Bang**, Aleksandr Gelgor FBMC/OQAM with OTFS Pre-Processing for High-Mobility Channels
14:30	**Viet Them Nguyen**, Andrey Rashich Experiment of Receiving SEFDM-signals with Higher-order Modulation Methods on Subcarriers
14:45	**Dmitry Tkachenko**, Eugene Popov, Aleksandr Gelgor, Pablo Angueira Scenarios for Use of DVB-I System
15:00	**Dmitry Tkachenko**, Eugene Popov, Victor Vargauzin Combination of 5G Broadcast and DVB-I Technologies for Unified Access to TV Services
15:15	Coffee break
15:30	**Alexander Golovitski** An Inverse Problem of Differential Equations of Non-linear Oscillations
15:45	**Alexander Eponeshnikov**, Amir Sulimov Histogram-Based Estimation of CIR Entropy for Multipath Propagation Environments

16:00	Andrey Serov, **Anton Pavlovich**, Darya Evtekhova, Artem Orlov Comparative Analysis of High-Speed Methods of Frequency Measurement of the Power Grids
16:15	Sergey Podobuev, Viktor Kacharsky, Alsu Nurtdinova, **Andrey Serov** Modification of the Adaptive Moving Average Filter for the Signal Parameters Measurement
16:30	**Vsevolod Tsap**, Grigoriy Fokin Development and Validation of LTE SDR-based Signal Analyzer. Part 1. Procedures Description
16:45	**Vsevolod Tsap**, Grigoriy Fokin Development and Validation of LTE SDR-based Signal Analyzer. Part 2. Experiment Results
17:00	**Vyacheslav Shershenkov** High-Quality General Method of Sub-Nyquist BandPass Sampling with Selected Minimal In-band Distortion including Intermodulation
17:15	**Nikita Ivanov**, Viktor Vargauzin Algorithms for Using Ground Stations in Satellite Geolocation
17:30	**Alexandra Kuznetsova**, Nguyen Dac Cu, Ilya Lavrenyuk A Study of Collision Reduction Methods for Satellite-Based AIS
17:45	**Sophia Belkova**, Nguyen Dac Cu, Ilya Lavrenyuk Joint Application of Signals with Controlled ISI and Iterative Decision-Feedback Detection Algorithm in DVB-S2
18:00	**Sergey Melnikov**, Sergey Makarov, Ilya Lavrenyuk Energy Loss when Receiving GMSK-Modulated Signals with a Small Normalized Frequency Band and an Increased Message Rate

October 17, 2024

Session	**Materials & Nanoscience** Room 458, 2nd building SPbPU Join in Zoom: (links to Zoom session are sent to the participants via e-mail)
Chairs	***Mehdi Fardmanesh, Viktoria Kapralova, Platon Karaseov***
12:00	**Niladri Mohan Das**, Devesh Kumar Avasthi, Mukul Gupta Synthesis of Nanostructured Ag and Ag-Cu Alloy Thin Films
12:15	**Vladislav Chernyavsky**, Viktor Markov, Maria Lebedeva, Iliya Iezhov, Pavel Vishnyakov, Maxim Maximov Effect of Asymmetrical Coating by Ald on LAGP Solid Electrolyte
12:30	**Victor Klinkov**, Vsevolod Archelkov, Tatyana Sedegova, Alexander Semencha, Ilya Kobykhno, Natalia Grozova Effect of Gamma and Electron Irradiation on the Spectral and Luminescent Properties of a Composite Film with Halide Perovskite Nanocrystals
12:45	**Anton Klevtsov**, Konstantin Karabeshkin, Alexander Azarov, Platon Karaseov, Andrey Titov Defect Accumulation in Alpha Gallium Oxide During Successive keV Light Ion Implantation
13:00	Evgeny Taradaev, **Sergei Taradaev**, Gennadii Sominskii The Influence of the Tips Geometry on the Formation of Electron Velocities in the Electron Flow
13:15	Viktor Markov, **Irina Dalimova**, Vladislav Chernyavsky, Gang He, Maxim Maximov Multicolor Dual-Layer Electrochromic Device

13:30	**Alexandra Sitnikova**, Ekaterina Gasilova, Natalia Saprykina Carbon Dots and Carbon Spheres Produced by Hydrothermal Synthesis of Oligochitosan Solutions
13:45	Galina Politova, **Nikolay Pankratov**, Aleksey Karpenkov, Yuriy Milov, Maksim Politov, Aleksey Filimonov, Alexander Andreenko, Sergey Nikitin Effect of 3d-Substitutional Atoms on the Magnetic and Magnetostrictive Properties in (Tb,Ho)Fe2 Laves Phase
14:00	**Darya Sokolova**, Oleg Podsvirov, Alexander Sidorov Effect of Electron Irradiation on Optical Properties of Sodium Silicate Glass with Silver, Copper and Gold Films
14:15	**Dmitrii Karov**, Viktoria Kapralova, Nikolai Melnikov, Alexsander Goryaynov Stresses in Ion Exchange Hardened Cylindrical Active Elements of Lasers Based on Neodymium Phosphate Glasses

Session	**Special Session** **Nanotechnologies & Thermoelectric Materials: Theory and Practice** Room 458, 2nd building SPbPU Join in Zoom: (links to Zoom session are sent to the participants via e-mail)
Chairs	***Ilhom Bekpulatov, Vera Loboda***
15:00	**Elena Orlenko**, Fedor Orlenko Phonon Coherent States in Nanomaterials
15:15	**Alexander Arkhipov**, Karina Trofimovich, Pavel Gabdullin Model for Assessment of Nonlinear Phonon Drag Contribution to Thermopower in Metal/Semiconductor Nanocontacts
15:30	**Anastasia Kurganskaya**, Ioulia Ovtchenkova, Olga Alexeeva, Irina Tereshina, Alexander Morozkin, Anatoly Bogdanov, Anna Ovtchenkova, Sergey Nikitin, Alexey Filimonov Structural and Magnetic Phase Transitions in Gd5-x-yTbxTiySi2Ge2 Compounds
15:45	**Svetlana Smirnova,** Rostislav Smerdov, Sergey Davydov, Maria Istomina, Valeriy Kondratev, Elizaveta Karaseva, Ekaterina Vyacheslavova, Nikita Svinkin, Vyacheslav Moshnikov The Emission Characteristics and Electron Energy Distribution Function of a Novel Composite Field Cathode Prototype

16:00	**Danila Karaulov**, Ratmir Ustimenko, Maksim Ya Vinnichenko, David Hayrapetyan, Hayk Sarkisyan, Dilshod Normurodov, Dmitry Firsov, Grigory Melentev, Kuvondik Dovranov Photoinduced Absorption Spectrum of GeSi/Si Quantum Dots in the Mid-IR and Terahertz Ranges under Resonant and Non-resonant Optical Pumping
16:15	**Semyon Stolbov**, Vera Loboda Design of a MEMS Accelerometer in COMSOL Multiphysics and a Pickup Circuit Model in Matlab Simulink

October 18, 2024

Session	**Circuits & Systems for Telecommunications** Room 347, 2nd building SPbPU Join in Zoom: (links to Zoom session are sent to the participants via e-mail)
Chairs	***Alexander Korotkov, Evgenii Balashov***
10:00	**Evgeniy A Ishchenko**, Igor Bobylkin, Evgeniya Egorova, Dmitry Fedorov, Sergey Fedorov Increasing the Noise Immunity of Communication Systems by Highly Directional Antennas Based on an Air Substrat
10:15	**Evgeniya Egorova**, Evgeniy A Ishchenko, Sergey Fedorov Study of SDR-Based Direction Finder Threshold Sensitivity Depending on Signal-To-Noise Ratio
10:30	**Dmitry V. Kuznetsov,** Alexey Titov, Marsel Sergeenko, Nikolay Prokopenko Method for Improving the Performance of Operational Amplifier with HA2700 Microchip Architecture
10:45	**Anna Bugakova**, Ilya Frolov, Yuri Ivanov; Nadezhda Dmitrienko Compensation's Method of Collector Load's Parasitic Components in SiGe and SOI Cascode Amplifiers Operating at High Temperatures
11:00	**Pham Van Thiem** Evaluation of Fault Isolability in Multi-Agent Systems

11:15	**Sara Kengesbayeva**, Nurzhigit Smailov, **Yerlan Tashtay, Dmitry Kiesewetter**, Victor Malyugin, Aziskhan Amir Research of Deformation of Concrete Structures using Fiber Optic Sensors and Bragg Gratings
11:30	Ainur Kuttybayeva, Askar Abdykadyrov, Gulzhaina Tolen, Anton Bourdine, **Victor Malyugin, Dmitry Kiesewetter** Application of Distributed Acoustic Sensors Based on Optical Fiber Technologies for Infrastructure Monitoring
11:45	Ainur Kuttybayeva, Askar Abdykadyrov, Gulzhaina Tolen, Anton V Bourdine, Victor Malyugin, **Dmitry Kiesewetter** Development and Optimization of Distributed Acoustic Sensors for Seismic Monitoring
12:00	**Ilya Grischin**, Grigoriy Fokin, Alla Kalinkina, Alexander Sinilnikov MIMO-NOMA Analysis. Part I. Beamforming
12:15	**Ilya Grischin**, Grigoriy Fokin, Alla Kalinkina, Alexander Sinilnikov MIMO-NOMA Analysis. Part II. Power Allocation
12:30	Coffee break
12:45	Alexander Nikitin, **Alexander Stroganov**, Dmitry Tkachenko, Igor Tsikin 180° Reflection-Type Phase Shifter Using GaAs pHEMT Technology
13:00	**Andrey Tikhomirov**, Nikita V. Ivanov Synthesis of Bandpass Filters by Transfer Function Using the Darlington Method
13:15	**Liyuan Zhang**, Dmitry Budanov ECG Monitoring System Based on Multi-Scale Convolutional Neural Network

13:30	**Artem Pyatlin**, Dmitry Morozov Low-Pass Filters with Pseudo Resistors for Electronic Stethoscopes
13:45	**Olga Golovan**, Alexander Korotkov Nonlinear Analysis of the Diode-Connected Transistor Mixers Using Volterra Series: Generalized Matrix Approach in the Frequency Domain
14:00	**Ha Nam Nguyen**, Alexander Sochava, Sergey Bogachev, Konstantin Greshnevikov, Thanh Son Nguyen The Effect of the Slot in Wave Propagation: Theoretical and Experimental Analysis
14:15	**Ha Nam Nguyen,** Alexander Sochava , Andrey Cherepanov, Sergey Bogachev, Konstantin Greshnevikov Design of a Slot Phase Shifter Using a Radio-Frequency Microelectromechanical Systems
14:30	**Pham Huu Duc**, Vladimir A. Sorotsky, Roman Zudov Design of a Class E Power Amplifier with Complex Impedance Load
14:45	Coffee break
15:00	**Andrey Davydov**, Nikolay Kulikov, Vladimir Sorotsky Reduction of Mutual Influence and Losses in Antenna Matching Unit Coils
15:15	**Natalya Kvashina**, Mikhail Yenuchenko Sorting Algorithms in Switching-Based Calibration of DACs with Non-Ideal Comparator
15:30	**Alexander Gubin**, Evgenii Balashov Simulation of the Active Filter Tuning Systems Based on Delay Times, Periods and Phases Comparison
15:45	**Kirill Mironov**, Denis Akhmetov, Dmitry Morozov Current Pulse Generator for Deep Brain Stimulation

16:00	**Danil Skrebenkov**, Dmitry Budanov Hardware Implementation of Neural Networks
16:15	Ivan Rumyancev, Mikhail Lotov, **Dmitrii Sergeev**, Denis Akhmetov Oscilloscope and Arbitrary Waveform Generator 3D Interfaces for a Virtual Reality Remote Laboratory
16:30	Vladislav Antropov, **Yaroslav Leshukov**, Ivan Piatak Design of a Digital RISC-V ASIC Using an Open- Source Software and Domestic Standard Cell Libraries

Session	**Photonics** Room 257, 2nd building SPbPU Join in Zoom: (links to Zoom session are sent to the participants via e-mail)
Chairs	***Nikolai Ushakov***
10:00	**Ivan V. Stepanov,** Vladimir Lyubopytov, Anton Ivanov, Elizaveta Grakhova PIC Design for the Two-Channel Dual-Band SS-OCT System
10:15	**Leonid Zhukov**, Roman Ponomarev, Anatoly Pankov, Natalia Medvedeva Numerical Study of the Dependence of the Parameters of Lensed Optical Fibers on Geometric Parameters
10:30	**Maria Sergeeva**, Vladimir Semenov, Sergey Ermak, Natalia Riabogina, Olga Ermak Modeling the Influence of Magnetic Field on the Parameters of Onboard Rubidium Atomic Clocks Shield
10:45	Leonid Liokumovich, **Ekaterina Evdokimenko**, Daniil Shevchenko Influence of the Bending of the Outer Mirror in the External Fiber Fabry-Perot Interferometer on the Interference Signal Parameters
11:00	**Igor Buchilko**, Leonid Liokumovich Analysis of the State of Polarization at the Output of an Imperfect Faraday Rotator Mirror

11:15	Sergey Gulyaev, **Darina Ilyushina**, Nina Ganzherli, Irina Maurer Influence of Ultraviolet Irradiation on the Formation of Surface Holographic Structures Recorded in a Counter-Directional Recording Scheme on Photoemulsion Layers
11:30	**Artemy Kozlov**, Alexey Mayzel, Andrei Medvedev, Evgenii Motorin, Evgeny Savelyev, Valentina Temkina, Valery Filippov, Yury Chamorovskiy Picosecond Laser with Yb-doped Tapered Double Clad Fiber
11:45	**Konstantin Topilskiy**, Oleg Tsybin Emitter of Accelerated Neutral Atoms and Molecules with Ion-Electron Conversion for Terrestrial Testing And Modelling of Spacecraft
12:00	Coffee break

Session	**Posters** View posters: https://miro.com/app/board/uXjVLSColYY=/?share_link_id=374368648505 Join in Zoom: (links to Zoom session are sent to the participants via e-mail)
Chairs	***Alexander Korotkov, Sergey Zavjalov, Viktoria Kapralova, Platon Karaseov, Vera Loboda, Ilhom Bekpulatov, Nikolay Ushakov***
13:00	**Circuits & Systems for Telecommunications**
P1-01	**Daria Kiselkina**, Konstantin Greshnevikov, Georgy Zhabko, Alexander Sochava, Sergey Bogachev Calculation of SIW Structure Parameters Using Asymptotic Methods
P1-02	**Tatiana Legkova**, Alexey Sosunov, Darya Spetsakova, Andrey Altynnikov Antenna Module with Integrated SIW Passband Filter for Application in Communication Systems
P1-03	**Nikita Treimut**, Roman Zudov, Vladimir Sorotsky Signal Distortions in Switched Mode Power Amplifiers
P1-04	Sergei Ivanov, **Alexander Lavrov**, Maxim Zotov, Evgeny Khvostov, Yuri Vekshin Measuring the Noise Figure of a Cooled Broadband Radio Astronomy Receiver

	Algorithms & Signal Processing
P2-01	**Ngoc Thanh Nguyen**, Taehyun Jeon, Thuan Le Van, Nguyen Dac Cu Performance Evaluation of a CNN-based Channel Estimation for OFDM Systems in High-Mobility Scenarios
P2-02	**Faridoddin Shariaty**, Vitalii Pavlov, Nikita Serebrennikov Application of Deep Learning for Classification of CT Images in Order to Predict EGFR and KRAS Mutations in Oncology
P2-03	**Nadezhda Krasnova**, Alexander Berdnikov, Anton Bulyanitsa, Anatoly Evstrapov, Konstantin Solovyev Error Oriented Tau Method
P2-04	Vitalii Pavlov, Andrei Belov, **Alexander Ivanov** Ship Detection in SAR Images Using Neural Network Trained on Optical Images
P2-05	**Elena Savchenko**, Eugeniy Mirkin, Ekaterina Medvedeva Algorithms for Artificial Neural Networks with Interval Target Tuning for the Task of Classifying Cammeo and Osmancik Rice Varieties
P2-06	**Alexander Fedotov**, Vitaly Andrianov, Vladimir Kuptsov, Sergei Ivanov Hardware-Software Prototyping of a Multichannel Frequency-Modulated Continuous Wave Radar
P2-07	**Yeldos Altay**, Lashin Bazarbay, Raisa Uskenbayeva, Alexey Fedorov, Zhuldyz Kalpeyeva Water Indicator Measurement and Data processing From Internet of Things Modules
P2-08	**Kristina Yatsukova**, Anna Orlova Estimation of Signal Distortions in Industrial Scenario

P2-09	**Kristina Yatsukova**, Anna Orlova Improving Energy Efficiency of Single-Frequency Signals in Industrial Scenario
P2-10	**Sophia Litvin**, Anna Orlova PAPR Reduction using Probabilistic Method for DVB-S2X with FTN Signaling
Materials & Nanoscience	
P3-01	**Andrey Babichev**, Ekaterina Nikitina, Leonid Karachinsky, Innokenty Novikov, Anton Egorov Planar Micropillar Cavity Structure with Enhanced Power-Conversion Efficiency
P3-02	**Denis Papylev**, Andrey Babichev, Alexey Nadtochiy, Anna Dragunova, Natalia Kryzhanovskaya, Leonid Karachinsky, Innokenty Novikov, Anton Egorov Self-Assembled InGaAs Quantum Dots with Reduced Inhomogeneous Broadening
P3-03	**Ilya Neustroev**, Andrey Tsymbalyuk, Roman Platonov, Andrey Komlev, Andrey Altynnikov, Semyon Khakhulin Preparation Of VO2 Thin Films On 6H-SiC Substrate By Magnetron Sputtering
P3-04	**Maksim Baranov**, Oleg Tsybin Computer Simulation of Phenylalanine Oligomers in an IR Electric Field with Different Form and Polarization
P3-05	**Sergey Semenov**, Sudar Nicolay, Vladimir Pakhotin Pulse Electrical Strength of Polymer Dielectric Films
P3-06	**Dmitry Kiesewetter**, Lyudmila Aseeva, Albert Khripunov, Alexandra Migunova, Sofya Yarusova, Alexandr Panasenko Investigation of the Electrophysical Properties of Composite Materials Based on Wollastonite and Bacterial Cellulose

P3-07	**Anna Petrovskaya**, Alexander Tsyganov Fabrication of Beta-Active Carbon Nano-Layer Using Ion-Plasma Technology for Irradiated Reactor Graphite Deactivation
P3-08	**Sergey Rykov** Features of Differential Current-Voltage Characteristics of Tunnel Structures Based on PbTe:In Single Crystals at Low Temperatures
P3-09	Viktoria Kapralova, Nicolay Sudar, **Elizaveta Nikitina**, Sergio T.A. Barragan Modification of Dielectric Properties of Polyvinyl Alcohol Films Using Water-Soluble Additives
P3-10	**Alexander Malkin**, Oleg Louksha, Pavel Trofimov Experimental Study of Multistage Energy Recovery in the SPbPU Gyrotron
P3-11	**Dmitry Dolzhenko** Anisotropy of Minority Charge Carrier Concentration in the MOSFET Undergate Region
P3-12	**Faridoddin Shariaty**, Maksim Baranov, Oleg Tsybin Growing of Biomolecular Micro Particles and Surface Films with Ultrasound Activation of Solution
P3-13	**Konstantin Polotnyanshchikov**, Valentine Svetlichnyi, Gleb Vaganov, Almaz Kamalov, Alexey Ivanov, Elena Popova, Elena Ivankova, Vladimir Yudin Synthesis and Properties of Heat-Resistant Polyimide Foams Based on Various Diamines
P3-14	**Dmitry Tonkov**, Vitaliy E. Gasumyants, Ekaterina Vasilyeva, Oleg Tolochko Conductive and Tensoresistive Properties of Flexible Polymer Composites: Experimental Study and Modeling

P3-15	**Nikita Kharin**, Andrey Babichev, Dmitry Mikhailov, Evgenii Kolodeznyi, Vladislav Dudelev, Vadim Panevin, Gleb Voznyuk, Maksim Mitrofanov, Sergey Slipchenko, Andrey Lyutetskii, Vadim Evtikhiev, Leonid Karachinsky, Innokenty Novikov, Grigorii Sokolovskii, Nikita Pikhtin, Anton Egorov Ring Cavity Surface-Emitting Quantum-Cascade Lasers with Staircase-Like Distributed Feedback Grating
P3-16	Kuvondik Dovranov, Muradulla Normuradov, Khujamkul Davranov, **Muzaffar Davlatov**, Maksim Vinnichenko, Dilmurod Nabiyev Obtaining Thin Films from Semiconductor Compounds and their X-ray Analysis
Nanotechnologies & Thermoelectric Materials: Theory and Practice	
P3-17	Bakhrom Igamov, Aleksey Kamardin, **Ilkhom Bekpulatov,** Murodulla Normuradov, Valentina Zhurikhina, Dilshod Normuradov Formation of Barium Silicide Coatings by Vacuum Thermal Evaporation Methods
P3-18	Jasur Jumayev, Baltokhodja Umirzakov, **Ilkhom Bekpulatov**, Ilkhom Turapov, Vera Loboda, Alexander Korotkov Obtaining Nano-Sized Silicide Films MeSi2 for the Contact System
P3-19	Dmitrii Goroshko, **Konstantin Galkin**, Evgenii Subbotin, Olga Goroshko, Semen Balagan, Andrey Maslov, Igor Chernev, Oleg Kropachev, Dmitrii Khoroshilov, Sergei Dotsenko, Nikolay Galkin Comparison of Structure, Transport Properties and Thermoelectric Power Efficiency of Thin CrSi and CoSi Films on Si(111) and Si(100) Substrates

P3-20	**Konstantin Galkin**, Oleg Kropachev, Olga Goroshko, Evgenii Subbotin, Igor Chernev, Dmitrii Khoroshilov, Dmitrii Goroshko, Nikolay Galkin Formation, Phonon Structure, Transport and Thermoelectric Properties of Multilayer Heterostructures Si/NC β-FeSi2/Si/ NC β-FeSi2/.../Si(111) and Si/NC α-FeSi2/Si/ NC α-FeSi2/.../Si(111)
P3-21	Muradulla Normuradov, **Kuvondik Dovranov**, Vadim Korablev, Maksim Vinnichenko, Sardor Eshboboyev, Ozoda Egamberdiyeva Raman and IR Spectrum Analysis of CrSi2 Thin Films Formed in Direct Current and Variable Frequency Modes of a Magnetron Sputtering Device
P3-22	**Aumama Dayob**, Vera Loboda Modeling the Thermomechanical Behavior of a Bimorph Microcantilever Near Solid-Liquid Phase Transition
P3-23	**Artyom Tulaev**, Vera Loboda, Yakob Belyaev System Level IC Analog Processing Design For Piezoresistve MEMS Pressure Sensor
P3-24	Maksim Furman, Anton Broyko, Ivan Khmelnitskiy, **Vagarshak Aivazyan**, Ekaterina Kholodkova Mathematical Modeling of IPMC Sensor
P3-25	Stepan Parfenovich, Daria Adamovich, Ivan Khmelnitskiy, **Vagarshak Aivazyan**, Ekaterina Kholodkova, Maksim Palamarchuk Development of Lamination-Based Technological Approach for Encapsulation of Ionic EAP Sensors

Photonics	
P4-01	**Arseniy Alekseev**, Ivan Pleshakov, Efim Bibik Effect of Agglomeration of Nanoparticles in Ferrofluid Induced by a Focused Laser Beam
P4-02	**Anastasia Funtikova**, Alexey Mozharov, Vladimir Fedorov, Ivan Mukhin Numerical Researching the Modal Structure of Gallium Phosphide Microresonators
P4-03	**Sergey Ermak**, Vladimir Semenov, Yakov Enns, Alexandra Khiran Influence of a Miniature Gas Cell Heater on the Parameters of a Radio-Optical Resonance Line
P4-04	**Aleksandr Bogdanov**, Mikhail Parfenov, Aleksandr Tronev, Igor Ilichev, Aleksandr Shamrai Titanium-Indiffused Lithium Niobate Waveguides for Quantum Integrated Optical Circuits Working on the Wavelength of 808 nm
P4-05	**Andrei Medvedev**, Nikolai Ushakov, Andrei Belov Improved Quenching Circuit for a Single Photon Detector with Avalanche Photodiode
P4-06	Aleksandr Petrov, **Andrey Golovchenko**, Oleg Kotov Intermodal Fiber Interferometer Based on an SMSMS structure with Spectral Interrogation for Measuring External Impacts
P4-07	**Liubov Zavalishina**, Aleksandr Markvart, Leonid Liokumovich, Nikolai A. Ushakov Refractive Index Measurement Resolution of the Core-Cladding Intermode Fiber Optic Interferometer with Spectral Interrogation