6th 2024 International Youth Conference on Radio Electronics, Electrical and Power Engineering (REEPE), IEEE

The Official Language of Conference is *English*.

Registration of Participants – February 29, 2024, from 9:30 till 10:20

«MPEI», Moscow, Krasnokazarmennaya st. 17, Room Г-200 (G-200), Russia.

Opening the Conference Event

(February 29, 2024) (“10:30 AM – 11:45 AM”, Moscow time)

1. **Rector:** Dr. Nikolay Rogalyov, Professor, Moscow Power Engineering Institute, Moscow, Russian Federation.
2. **Acting Vice-Rector for Scientific Work:** Komarov Ivan Igorevich, Moscow Power Engineering Institute, Moscow, Russian Federation.
3. **Vice-Rector for International Relation:** Dr. Alexander Tarasov, Associate Professor, Moscow Power Engineering Institute, Moscow, Russian Federation.
4. **Vice-Rector for Scientific Work:** Dr. Viktor Karpovich Dragunov, Professor, Moscow Power Engineering Institute, Moscow, Russian Federation.
5. **Head of the Department of Science and Innovation under the Ministry of Education and Science:** Dr. Niyozi Sirojiddin Rajabboki, Associate Professor, Dushanbe, Republic of Tajikistan.
6. **Plenary Speaker (Introduce Lecture “20 minutes”):** Klimenko Vladimir Viktorovich, Professor, Doctor of Technical Sciences, Academician of the Russian Academy of Sciences. Plenary report on the topic: "Russia and the world in the era of global warming and countering it."
7. **Plenary Speaker (Introduce Lecture “20 minutes”):** Shilin Vladimir Alekseevich, Candidate of Technical Sciences, General Director of ETS-Energo LLC. Plenary report on the topic: "The experience of developing an electric power supply scheme for the city of Moscow for the future until 2035."

Coffee Break 11:45 – 12:45, Room-D-213

Conference Program (February 29, 2024)

{Each Participant has 7 minutes for introducing presentation + 3 minutes Q&A by attendees}

Starting the international participants' presentations (13:30-15:30)

Section A1: Power, Energy and Industry Applications. Fields, Waves and Electromagnetics. General Topics for Engineers; Room (KU-03)

1.	**About the use of composite materials press for traverse of 6(10) kV overhead line**	*Alexander Leonidovich Gusev, Grigory Ivanovich Pavlov, Oleg Rudolfovich Sitnikov, Viktor Vladimirovich Maximov, Oleg Vladimirovich Vorkunov, Olga Evgenievna Kurakina*
2.	**Investigation of ash deposit formation dynamics in boiler units of small steam capacity**	*Lipantiev Roman Evgenyevich, Gainullina Leysan Raisovna*
3.	**Investigating the performance of solar thermal assisted air conditioning system under the summer season of Baghdad, Iraq**	*Al-Okbi Ahmed Khaleel, Vankov Yuri Vitalievich, Ahmed Hamza Hussieny Ali, Ziganshin Shamil Gayazovich*
4.	**Development of a technological scheme for a combined water treatment using strong oxidizing agents**	*Antonina A. Filimonova, Alena Y. Vlasova, Oleg E. Babikov*
5.	**Investigation of aerogel-based thermal covers characteristics during testing in a climate chamber**	*Gafiatullina Kamilya Rasulovna, Kraikov Maksim Dmitrievich, Fedyukhin Alexander Valeryevich, Afanaseva Olga Valerevna, Dontsova Anna Evgenyevna, Nemova Darya Viktorovna*
6.	**Study of electric power quality indicators and their impact on the functioning of specialized electrical equipment in a medical institution**	*Khairullin Rustem Nailevich, Shigaev Stanislav Yurievich, Mukhamedyarov Lenar Nailevich, Denisova Alina Renatovna, Semenova Olga Dmitrievna, Gibadullin Ramil Rifatovich*
7.	**Determination of optimal operation parameters of steam reforming system**	*Mayorov Egor Sergeevich, Filimonova Antonina Andreevna*
8.	**Condensation of Water from a Vapor-Air Mixture on a Surface with Annular Round Straight Ribs of Constant Thickness**	*Guzel Ramilevna Badretdinova, Oksana Sergeevna Popkova, Andrey Vladimirovich Dmitriev, Ildar Ramilevich Kalimullin*
9.	**System analysis of pulp and paper production in the development of schemes for the generation and transformation of secondary energy resources**	*Lyudmila V. Plotnikova, Yury V. Vankov, Irina I. Chilikova*
10.	**Influence of transmission lines inhomogeneities on transient signal**	*Rustem G. Khuziashev, Iskander R. Tukhfatullin, Iluza I. Irkagalieva*
11.	**Investigation of the influence of the adsorption purification process of transformer oils on the tangent of the dielectric loss angle**	*Slobodina Yulia Nikolaevna, Dmitry Andreyevich Korenkov, Alexander Nikolayevich Kachanov, Marsel Sharifyanovich Garifullin,Oleg Vladimirovich Vorkunov,Shamil Faridovich Rakhmankulov*

12.	**Productive assets management system as a way to increase the efficiency of the energy facilities control**	*Gleb Reutin, Yuliya Zatsarinnaya Rustem Gainullin, Guzel Valeeva Konstantin Suslov, Eugenii Fedotov*

Section B1: Power, Energy and Industry Applications. Room (D-2/10)

1.	**The influence of the capacity of the electric network on the pricing of the day-ahead electricity market**	*Kurnaleeva Anastasiya Aleksandrovna, Nasyrov Rinat Rishatovich*
2.	**Economic Mathematical Model Used to Evaluate Lebanon's Integrated Energy System**	*Karam Fares charafeddine, Sergey Alexandrovich Tsyruk, Youlia Valeryevna Matiunina*
3.	**Optimum Power Flow Modelling and Dispatching of Power Plants in Lebanon's Energy System**	*Karam Fares Charafeddine, Sergey Alexandrovich Tsyruk, Youlia Valeryevna Matiunina*
4.	**Investigation of compatibility of fluid dielectric and elastomeric material of stress-cone for high voltage outdoor termination**	*Filippov Alexander Alekseevich, Serebryannikov Sergey Vladimirovich, Slavinsky Alexander Zinovievich*
5.	**Resolving issues in the Russian power industry's transition to the use of domestically produced fire-resistant fluids**	*Sergey Lenev, Roman Milyaev, Andrey Okhlopkov, Pavel Shumov*
6.	**Assessment of Various Technologies Influence to Reduce the Impact of Single-Phase Earth Faults in Distribution Systems with an Isolated Neutral**	*Ahmed M. Elkholy, Dmitry I. Panfilov, Michael G. Astachev*
7.	**Enhancing Power System Resilience: An Analysis of Arc Suppression Device Technology in Mitigating Single Line to Ground Faults**	*Ahmed M. Elkholy, Dmitry I. Panfilov, Michael G. Astachev*
8.	**Features of constructing information models of power electronics devices as part of a SCADA system**	*Denis P. Khmelyuk, Ivan I. Zhuravlev, Andrey E. Bannov*
9.	**Numerical analysis of a latent thermal energy system assisted by finned heat pipe**	*Ashraf AL-Nassar, A. N. Makeev, Bassam E. Badran.*
10.	**Convective heat transfer coefficient modelling in laboratiry tests of photovoltaic solar modules efficiency**	*Muhammet A. Razakov*
11.	**Liquid-phase reduction reactor with a carbon-hydrogen mixture**	*Strogonov Konstantin Vladimirovich, Lvov Dmitriy Dmitrievich, Petelin Alexander Lvovich, Terekhova Anastasia Yurievna, Murashov Vyacheslav Andreevich, Bastynets Andrey Konstantinovich*
12.	**Radar based lateral clearance decreasing warning system**	*Yazan Wassouf, G. V. Tsokurenko, M. V. Korzhukov, Ahmad Aws*

Section C1: Components, Circuits, Devices and Systems. Computing, Signal Processing and Analysis. Room (D-209)

1.	**ESD induced irreversible degradation processes in the semiconductor devices**	*Vadim Kuznetsov, Vladimir Andreev*
2.	**Development of optical electronic setup for water flow diagnostics**	*Vladimir V. Netkachev, Shirin Sh. Usmanova, Nadezhda M. Skornyakova, Maksim V. Sapronov*
3.	**Application of a depth camera for constructing complex three-dimensional models in multiple scanning complexes**	*Shilin Denis Viktorovich, Shuvra Dey, Vtyurina Svetlana Igorevna, Zabarin Ilya Dmitrievich*
4.	**Analysis of the information content of orbital analysis options**	*Ryad H. Ajamieh Sergey D. Ivanovich*
5.	**Characteristics of Radio Signal Detection by a Multichannel Non-Monopulse Detector-Direction Finder**	*Mikhail Slichenko, Olga Zavalishina*
6.	**The concept of modeling multidimensional signals, processes and images in hybrid real-time artificial intelligence systems**	*Vladimir Vasilievich Syuzev, Andrey Viktorovich Proletarsky, Dmitry Alexandrovich Mikov, Ivan Igorevich Deykin*
7.	**Multimodel approach to forecasting nonlinear nonstationary processes in optimal control problems**	*Minitaeva Alina Mazhitovna*
8.	**Dynamic Errors of the Switched-Capacitor Discrete-to-Analog Filters in Control and Monitor Systems**	*Leonty Samoilov, Darya Denisenko, Ilya Pakhomov, Irina Alferova*
9.	**Exploring the effectiveness of the system for processing the results of a free associative experiment**	*Vladimir R. Barinov, Yuriy N. Philippovich, Anna Y. Philippovich*
10.	**Spectrum transformation in the system of discrete Fibonacci functions**	*Boris Igorevich Bychkov, Vladimir Viktorovich Gurenko, Vladimir Vasil'evich Syuzev.*
11.	**ChatGPT and Unified State Exam in Computer Science**	*Vladislav S. Popov*
12.	**Using a one-dimensional linear microphone array to identify work area noise sources**	*Daniil Laukhin, Viktor Statsenko, Anna Drankova, Ivanov Mikhail*

Section D1: Nuclear and Mechanical Science Applications. Fields, Waves and Electromagnetics. Room (D-207)

1.	**Development of a Robotic Glove Powered by Incompressible Variable-Length Threads**	*Saypulaev G. R., Saypulaev M. R., Astakhov S. V., Semenyakina E. S., Snegirev I. S.*
2.	**Kinematic Analysis of the Translational Motions of a Quadruped Robot**	*Fernando Marcelino Julio, Saypulaev Gasan Ruslanovich, Saypulaev Musa Ruslanovich, Astakhov Sergey Vladimirovich, Ninalalov Ibragim Guseinovich*
3.	**The Mathematical Model of Exoskeleton Motion Taking into Account the Dynamics of Electric Drives of Its Links**	*Garcia Bello Roilan, Merkuryev Igor Vladimirovich, Salimov Maksim Sergeevich, Glazkov Nikita Vladimirovich*
4.	**Formula for the dependence of the fundamental natural frequency of a regular truss on the number of panels**	*Luong Cong Luan, Kirsanov M. N*
5.	**Variants of self-braking and modification of cylindrical self-braking gears**	*Timofeev Gennady Alekseevich, Kiselev Roman Mikhailovich, Strelkova Julia Evgenievna*
6.	**Prospects of design of electronic equipment enclosures by means of additive technologies**	*Kirill Vladimirovich Selivanov, Artem Olegovich Yakimov, George Alekseevich Volkov, Dmitriy Sergeevich Lyskov*
7.	**Electromagnetic field emitted by a moving dipole**	*Litvinov Oleg Stanislavovich, Koroleva Klavdia Maksimovna, Sivakov Vsevolod Vyacheslavovich*
8.	**Research of waveguide directional couplers with cross-shaped coupling hole**	*Yury S. Rusov, Alexandra E. Krupskaya*
9.	**Surface tension of methylene blue aqueous solution**	*Svetlana L. Timchenko, Evgenii N. Zadorozhnyi*

Section E1: General Topics for Engineers. Transportation. Room (D-2/21)

1.	**Dynamic Analysis of Pair Undulating Propulsors**	*Ahmad, Nikolay Tschur, Arkady Yushchenko, Ammar Sharath*
2.	**Continuous degasser for steel melt treatment**	*Viacheslav Andreevich Murashov, Konstantin Vladimirovich Strogonov, Dmitry Dmitrievich Lvov, Andrey Konstantinovich Bastynets*
3.	**Software Emulator to Provide the Interoperability of Wireless Sensor Networks Protocols**	*Farah Yousef*
4.	**Research of the applicability of rectangular-shaped volutes for pumps of various parameters**	*Alexander Konstantinovich Lyamasov, Andrey Vitalievich Filatov*
5.	**Modeling of resistivity profiles in multicrystalline silicon**	*Radchenko Irina Nikolaevna*
6.	**Ontological analysis of metacognitive processes of teaching technical disciplines**	*Pavel A. Panilov, Tatiana Y. Tsybizova, Alexander S. Orlov, Ivan O. Makarov,*

		Alexander E. Komkov
7.	**Evaluation of cognitive computing and algorithms in engineering**	*Pavel A. Panilov, Tatiana Y. Tsybizova, Maxim A. Kocheshkov, Georgy A. Voskresensky, Kirill P Grishin*
8.	**Recognition of forest damage from Sentinel-2 satellite images using U-Net, RandomForest and XGBoost**	*Natalya Sergeevna Podoprigorova, Fedor Alexeyevich Safonov, Svetlana Sergeevna Podoprigorova, Andrew Vladimirovich Tarasov, Andrey Nikolaevich Shikhov*
9.	**Raman lidar for equipping carbon polygons**	*V.A. Devisilov, V. V. Diachencko, V. G. Shemanin*
10.	**Algorithms of signal processing in the system for high-speed corrugation monitoring of rails**	*Vasiliy Yakovlevich Koluchkin, Nikita Evgenievich Marenov*
11.	**Modelling Approaches and Control in the Autonomous Driving and Advanced Driver Assistance Systems**	*Yazan Wassouf, Andrey V. Tarasenko, Vladimir V. Serebrenny*

Starting the participants' presentations (15:45-17:45)

{Each Participant has 7 minutes for introducing presentation + 3 minutes Q&A by attendees}

Section B2: Power, Energy and Industry Applications. Room (D-2/10)

1.	**Application of virtual and augmented reality technology to demonstrate energy equipment**	*Alexei Sergeevich Malenkov, Simon Romanovich Shchepalov*
2.	**Implementation of power electronics devices control systems based on a real-time operating system**	*Alexander Nikolaevich Rozhkov, Dmitry Vasilievich Mostovoi, Pavel Akhmatovich Rashitov, Artush Vasilievich Badalyan, Ivan Ismailovich Zhuravlev, Roman Nikolaevich Krasnoperov*
3.	**The influence of climatic factors on noise from «dry» fan cooling towers**	*Vladimir B. Tupov, Ainur B. Mukhametov, Vladislav V. Tishkov, Elizaveta A. Ragozina*
4.	**Calculation of the condensation heat exchanger for methane-hydrogen boiler unit**	*Stanislav A. Dronov, Aleksei G. Gusenko, Daniil V. Semin, Alexander V. Fedyukhin, Ilya B. Kaplanovich, Liliya R. Mukhametova*
5.	**Features of mufflers simulation in the presence of a grazing flow**	*Olga Yu. Matasova, Alexander I. Komkin Vladimir B. Tupov*
6.	**Analysis of the use of solar panels for power supply of country houses located in various regions of Russia**	*I.V. Korolev, A.A. Zakrevsky, N.V. Vasileva*
7.	**Development and testing of modules for identification and optimization of an adaptive controller**	*Pikina Galina; Suslov Daniil*
8.	**Study of the evolution of a cellular flame front**	*Natalia Konstantinovna Dentsel, Artem Eugenievich Elyanov, Vladislav Vladimirovich Volodin*

9.	**Investigation of jet pump by hydrodynamic modelling methods**	*B.S. Ksenofontov, A.G. Boyarenko, P.P. Chertanov, K.V. Titov, A.A. Protopopov, A.V. Bondarenko*
10.	**Modeling of two-phase flow using STEG code with module for calculating interfacial area transport**	*Alexander Nikulin, Vladimir Melikhov*
11.	**Modernization and development of the electrical power system of the Isla de la Juventud**	*Odalys Maria Sanchez Gomez, Oleg Nicolaevich Kuznetsov, Ahmed Saeed Alakayshee*

Section C2: Components, Circuits, Devices and Systems. Computing, Signal Processing and Analysis. Room (D-209)

1.	**Study of the temperature influence on the near optical field of a laser diode bar**	*Buryi Evgeny Vladlenovich Semerenko Denis Alekseevich*
2.	**Optimizing the Quantity of Diesel Generators Considering Induction Motor Start-up and Short Circuit Occurrence**	*Mohammadreza Shekari, Asainov Danil Nuritdinovich*
3.	**Two-Wire Analog Interfaces of Capacitance Sensors Based on GaAs Transistors**	*Dvornikov Oleg Vladimirovich, Chumakov Vladislav Evgenievich, Tchekhovski Vladimir Alekseevich, Dmitriy Vladimirovich Kleimenkin, Prokopenko Nikolay Nikolaevich*
4.	**Study of optic gas sensor calibration problems**	*Ivantsov Andrey Anatolievich, Mironova Elizaveta Andreevna, Ryakhina Mariya Yurievna*
5.	**Algorithm of sliding correlation-spectral analysis for the pulse wave instantaneous frequency estimation**	*Labunets Leonid Vitalievich, Ryakhina Mariya Yurievna*
6.	**Visualization of bipolar aggregation operators based on modified 3D balance model**	*Sergey Aleksandrovich Sakulin, Nikita Gavrilov, Igor Igorevich Lychkov, Alexander Nikolaevich Alfimtsev*
7.	**Stabilization of a dynamic video stream taking into account vehicle movement characteristics**	*Loktev Daniil, Loktev Alexey, Illarionova Lilia*
8.	**Forecasting the occurrence of forest fires**	*Sergey Nelyub, Alexander Dolinsky, Alexey Balabanov, Marina Zhamnova*
9.	**Fitting the Keeling Curve: Using K-dimensional general linear fitting in the LabVIEW**	*Vladislav S. Popov*
10.	**Intelligent analysis of the user interface of mobile applications to search for functions and services**	*Vidmanov Dmitry A., Alfimtsev Alexander N.*
11.	**Detection of Phase Modulation Disorder of Narrowband Radio Signals Against a Background of White Gaussian Noise**	*Korchagin Yury Eduardovich, Titov Konstantin Dmitrievich, Zavalishina Olga Nikolaevna*

12.	**Using machine learning methods to analyze optimal oil drilling sites**	*Ali Najievich Zein, Maria Aleksandrovna Durova, Dmitrii Olegovich Tsaplin, Alina Aleksandrovna Krasnova, Aleksandra Dmitrievna Krasnova, Dmitrii Sergeevich Filippov*
13.	**Creating three-dimensional models using lidar data classification**	*Danila A. Ovchinnikov, Alexei V. Kovalenko, Dmitry O. Smyslov, Anton I. Kanev*
14.	**Development of a laboratory stand for automated mechanical production of stromal-vascular fraction from adipose tissue**	*Andrey N. Briko, Alexander V. Kobelev, Alexey N. Tikhomirov, Ahmad M. Hammoud, Konstantin V. Kotenko, Ilya I. Eremin*

SectionD2: Nuclear and Mechanical Science Applications. Fields, Waves and Electromagnetics. Room (D-207)

1.	**Validation of the STEG code on experimental data obtained on the PGV-1500 model**	*Hossein Abdi, Najmeh Jafari Ouregani, Oleg igorevich Melikhov*
2.	**Molten Fuel Fast Reactor: Concept of Core, Fuel Efficiency, and Safety**	*Viacheslav Sergeevich Okunev*
3.	**Criteria for discussing the results of experimental studies of plastic and brittle materials**	*Duishenaliev Turatbek, Mozgunova Anna, Dogadina Tatyana, Tsoy Valeryan*
4.	**Estimates of the modular underwater SNPP option**	*Vladimir Romanov, Vladislav Romanov, Yury Lunchev, Mikhail Kaverznev*
5.	**Nuclear power plant image formation conditions**	*Antonina Suzdaleva, Daniil Guliaev*
6.	**Thermoelectrokinetic effect in colloidal solutions of tanin under conditions of suppressed natural convection**	*Sidorov Alexandr Valentinovich, Grabov Vladimir Minovich, Zaitsev Andrei Anatolievich, Kuznetsov Denis Vladimirovich*
7.	**Wideband matching of planar three-layer dielectric composite media**	*Alexey Alexeyevich Propastin, Yury Sergeevich Rusov*
8.	**Research of the PAA operation under time-varying overloads**	*Konstantin Alekseevich Pyatibratov, Grigory Mikhailovich Seregin*
9.	**Mathematical modeling and construction of an equivalent circuit for replacing an skin system**	*Fedin Maksim Andreyevich, Fedina Svetlana Aleksandrovna Molostova Anastasia Vyacheslavovna, Vasilenko Alexandra Ilyinichna, Zotov Maksim Leonidovich*

Section E2: General Topics for Engineers. Transportation. Room (D-2/21)

1.	**Reduction of residual stresses in aluminum oxide films by ion-plasma methods**	*Svetlana Vladimirovna Sidorova, Aleksey Dmitrievich Kouptsov, Vladislav Sergeevich Maltsev*
2.	**Comparison of functional state of human body before and after the laboratory practice work**	*Rumyantseva A.A., Romanova P.S., Buslaeva A.A., Ordzhonikidze M.A., Volkova A.K.*

3.	**Ultra sensitive rapid electrochemical detection of lead based on laser reduced graphene oxide sensor in biological object**	*Shojaa Ayed Ali Aljasar, Ekaterina Sergeevna Marchenko*
4.	**An ultra sensitive rapid electrochemical determination of Trypsin based on laser reduced graphene oxide sensor in biological product**	*Shojaa A. Aljasar, Ekaterina Sergeevna Marchenko*
5.	**Design and optimization of novel laser reduced graphene oxide sensor for neural signal investigation**	*Amrit Lal Hui, Mrinal Vashisth, Shojaa Ayed Ali Aljasar*
6.	**Design and optimization of laser reduced graphene oxide sensor for cognitive sleep and spatial factors Investigation**	*Amrit Lal Hui, Mrinal Vashisth, Shojaa Ayed Ali Aljasar Nirmal Kumar Hazra*
7.	**On modeling of target heating by a kilovolt electron beam**	*Mikhail A. Stepovich, Anar N. Amrastanov, Mikhail N. Filippov, Veronika V. Kalmanovich*
8.	**Function for optimization parameters of power engineering objects**	*Nataliya S. Nikolaeva, Vitaliy S. Antipenko*
9.	**Algorithms for optimizing the values of parametric series of machine tools**	*Nataliya S. Nikolaeva, Vitaliy S. Antipenko*
10.	**Toward More Safety on the Roads: Development of Lane Keep Assistance System for Public Transport**	*Semeon V. Tsukorenko, Andrey V. Tarasenko, Yazan Wassouf, Vladimir Serebrenny*

Conference Program (March 01, 2024)

Starting the participants' presentations (10:00-12:00)

{Each Participant has 7 minutes for introducing presentation + 3 minutes Q&A by attendees}

Section A1: Power, Energy and Industry Applications; Room (D-2/10)

1.	**Results of development and approbation of the program for computer for determination of empirical coefficients of sprinkler**	*Natalia A. Tatarnikova, Artysh B. Ondar*
2.	**Verification of computational method for studying separated flows in annular diffusers of turbomachines**	*Kuleshov Sergey Nikolaevich*
3.	**Implementation of justified inspection zone for fault location on overhead transmission lines of 110 kV and above**	*Dmitriy Sharygin, Galina Filatova, Andrey Yablokov*
4.	**Assessment of the possibility of using adaptive control of the water-chemical regime at thermal power plants**	*Olga V. Egoshina, Egor A. Bezuglov, Alexandra O. Ivanova, Sofia K. Lukutina*
5.	**The Study of Estimated Outdoor Temperature in Ulaanbaatar city**	*Luvsandorj Batmend, Khaltar Enkhjargal, Tserendorj Tsetsgee, Yuriy V. Yavorovsky, Ildar A. Sultanguzin*
6.	**Simulation of the thermal operation mode of TVF-110 to verify the relevance of the problem of reactive power compensation**	*Bitney Vladislav, Smotrov Nickolay, Timofeev Alexander*
7.	**Investigation of the capillary climate-control systems effectiveness**	*Aleksey Vladimirovich Shishkin, Yury Viktorovich Yavorovsky, Ekaterina Valerievna Zhigulina*
8.	**Oscillations of structures interacting in the aerodynamic medium**	*Khazov Pavel Alekseevich, Erofeev Vladimir Ivanovich, Satanov Andrey Andreevich*
9.	**Garnissage as an effective fence in high-temperature reactors**	*Konstantin Strogonov, Andrey Bastynets, Anastasia Ushakova, Dmitry Lvov, Viacheslav Murashov*
10.	**Methodology for developing software for data exchange controllers used in power electronics and industrial automation systems**	*Daniil A. Bukin, Roman N. Krasnoperov, Alexander N. Rozhkov, Ivan I. Zhuravlev*

Coffee Break 12:00-13:00, Room D-213

Continuing the participants' presentations (13:30-15:30)

Section A2: Power, Energy and Industry Applications; Room (D-2/10)

1.	**An integrated approach to the electronic industry diversification problems**	*Alexander V. Gutenev, Vladimir A. Shiboldenkov*
2.	**Rational Capacity of 10/0.4 kV Distribution Transformers (on the Example of the Republic of the Union of Myanmar)**	*Ye Htut Myat, Galaktion Vladimirovich Shvedov*
3.	**A Novel Scheme for Fault Detection in a Series Compensated Line Based on Wavelet Transform**	*Ahmed R. Adly, Alaa M. Abdel-hamed*
4.	**Core directions of renewable energy sources development**	*Nikita Aleksandrovich Sevostyanov,Arthur Olegovich Shaforost*
5.	**The influence of meteorological factors on the electrical load of residential buildings**	*Alyona S. Solovyeva, Galaktion V. Shvedov, Mikhail A. Shakh*
6.	**Research of elevator loads of apartment buildings**	*Ilya Aleksandrovich Babenko, Galaktion Vladimirovich Shvedov*
7.	**Comparison of the smooth tube bundle with circle and drop-shaped tubes**	*Songqing L., Sidenkov D. V.*
8.	**Influence of the use of delay block approximations on the stability of the SVC**	*Erik Francisco Jaramillo Leon, Rinat Karymov*
9.	**Assessment of the influence of electromagnetic fields of the radio frequency range on a person**	*Ilya V. Korolev, Elena V. Fedorov, Anastasia M. Borovkova*
10.	**Frequency and voltage stabilization of induction generator based on STATCOM**	*Shorstkin Ilya Pavlovich, Kiselev Mikhail Gennadievich, Krukov Konstantin Viktorovich, Rodkin Nikolay Sergeevich*
11.	**Calculation of a flat plate convective-film cooling**	*Nadezhda Alekseevna Tukmakova, Vitaly Viktorovich Kharkov, Alexey L'vovich Tukmakov*

Starting the participants' presentations (10:00-12:00)

{Each Participant has 7 minutes for introducing presentation + 3 minutes Q&A by attendees}

Section B1: Components, Circuits, Devices and Systems. Computing, Signal Processing and Analysis. Room (D-207)

1.	**Development of a beam steering system for a phased antenna array with variable duration of the control pulses**	*Yury S. Rusov, Denis R. Russo, Pavel P. Kurenkov*
2.	**Investigation of factors, affecting the behaviour of Id–Vg shift in MOSFET**	*Chukhraev Igor Vladimirovich, Drach Vladimir Evgenievich*
3.	**Strong coupling model for a superconducting particle in a triangular lattice of Abrikosov vortices**	*Anton Matasov, Arsenii Evsiukov, Roman Shcherbakov, Margarita Selikhova, Valeria Kovalchuk, Arkadov Nikolai*

4.	**Introducing text analysis algorithms in decision support systems for automated evaluation of the doctor prescriptions**	*Nekoula Haddad, Konstantin S. Myshenkov, Gennady I. Afanasiev*
5.	**Multi-Agent Reinforcement Learning as Interaction Model for Online Multi-Object Tracking**	*Vladislav E. Bolshakov*
6.	**Decentralized Edge-AI System for Real-Time Syrian License Plate Recognition Using Khadas Vim3**	*Omar Hamdoun, Salman Ali, Ahmad Hamed, Alexey Y. Spasenov, Dmitry V. Berezkin*
7.	**Investigation of the grid convergence of a finite-difference model of the dynamics of an electrically charged gas suspension**	*Tukmakov D.A.*
8.	**Research of Metrological Aspects of Apparent Power Measurement**	*Sergey A. Podobuyev, Konstantin Y. Potanin, Polina D. Bulekova, Andrey N. Serov*
9.	**Creating 3D models using segmented point clouds**	*Danila A. Ovchinnikov, Artem A. Milevich, Timofey U. Krutov*
10.	**A study on the application of using Hypernetwork and Low Rank Adaptation for text-to-image generation based on diffusion models**	*Levin Artyom Olegovich, Belov Yuri Sergeevich*
11.	**Using quantum algorithms for uncertainty processing**	*Volosova Aleksandra Vladimirovna*
12.	**Intelligent Management of University International Activities**	*Anastasia V. Krivtsun, Anton M. Lankin, Dmitriy V. Grinchenkov, Daria N. Kushchiy*
13.	**Emergent program synthesis based on reinforsment learning and computer vision techniques**	*Pitikin Aleksei Ruslanovich, Sherstova Anastasiia Gennadievna*

Coffee Break 12:00-13:00

Continuing the participants' presentations (13:30-15:30)

Section B2: Components, Circuits, Devices and Systems. Computing, Signal Processing and Analysis. Room (D-207)

1.	**Distributed multi-agent reinforcement learning based on feudal networks**	*Velichko Nikita Alekseevich*
2.	**Precision Operational Amplifier on nJFet Arsenide-Gallium Field Effect Transistors and p-n-p Bipolar Transistors**	*Chumakov Vladislav Evgenievich, Dmitriy Vladimirovich Kleimenkin, Prokopenko Nikolay Nikolaevich.*
3.	**Technology of producing photonic crystal colloidal films by centrifugation**	*Artem R. Ibragimov, Olesya M. Medvedeva, Ekaterina V. Panfilova, Daria Yu. Shramko*
4.	**PESQ enhancement for decoded speech audio signals using complex convolutional recurrent neural network**	*Shahhoud Farah, Ali Deeb Ahmad, Terekhov I. Valery*
5.	**Study of the surface phases formation features in the VT23 titanium–based**	*Vintaikin Boris Evgeneevich, Aleynikova Anastasia Ilhamovna, Smirnov Andrey*

	alloy during quenching	*Evgeneevich, Tsinkolenko Olga Alexandrovna*
6.	**Speech Enhancement and Denoising Audio For Hard-of-Hearing People In Universities**	*Anton Kanev Igorevich, Veronika Shapovalova Vladislavovna*
7.	**Mathematical modelling of overhead electric power line wire oscillations**	*Viktor Aushev*
8.	**Development of algorithmic support for the geoinformation system intended for urban space and environment design**	*Olga Olegovna Kozeeva, Igor Vladimirovich Chukhraev*
9.	**Models as a key factor of environments design in multi-agent reinforcement learning**	*Morozov Kirill Andreevich*
10.	**A Framework for 4G/5G radiocommunication systems modeling using Cognitive Flow Analysis**	*Prokhin Ilya Antonovich, Zinchenko Lyudmila Anatolievna*
11.	**Data security in Web 3.0 based on full homomorphic encryption**	*Ekaterina D. Vdovkina, Boris S. Goryachkin*
12.	**Tree segmentation of LiDAR point clouds using a graph-based algorithm**	*Valeri Terekhov, Denis Bondarenko, Iuliia Ryzhkova, Daniil Zelinskii*
13.	**A Sliding Mode Reaching Law based on Hermit Neural Network**	*Mohammed Molhem, Mohammad Anbar, Rim Omran, Mohammad Nassr, Hamid Ali Abed Al-Asadi, Maria Skvortsova*

Starting the participants' presentations (15:45-17:45)

{Each Participant has 7 minutes for introducing presentation + 3 minutes Q&A by attendees}

Section C: Nuclear and Mechanical Science Applications. Fields, Waves and Electromagnetics. Room (D-2/10)

1.	**Minimizing energy loss using an optimal control algorithm for an active human exoskeleton**	*Delshan Deeb, Merkuryev Igor Vladimirovich*
2.	**Simulation modeling analysis of operational temperature modes for the fuel rods in the IRT-T research reactor**	*Shojaa A. Aljasar, Amirt L. Hui, Alexender A. Kozulin, Yubin Xu*
3.	**Simulation of coolant mixing experiments at the DTF stand using Open foam code**	*Najmeh jafari Ouregani, Hossein Abdi, Vladimir I. Melikhov*
4.	**A solution to the problem of fresh water shortage in Egypt using nuclear desalination**	*Mostafa Mohammed Saleh, Ahmed Atef AbdelRazek, Arafa Fayez Mohammed, Ekaterina Andreevna Sokolova*
5.	**Cliff-edge effect when operating NPP with VVER**	*Konstantin Nikolaevich Proskuryakov, Marina Sergeevna Khvostova, Ragy Muhammed Nasr Hassanin Ismail, Kirill Alekseevich Yakovlev*
6.	**Development of a digital model of the pressurizer system for NPPs with VVER**	*Konstantin Nikolaevich Proskuryakov, Marina Sergeevna Khvostova, Ragy Muhammed Nasr Hassanin Ismail, Kirill Alekseevich Yakovlev*

7.	**Justification of the need to supplement the strength calculation standards for nuclear power plant equipment and pipelines by prohibiting vibro-acoustic resonances in nominal mode**	*Konstantin Nikolaevich Proskuryakov, Marina Sergeevna Khvostova, Ragy Muhammed Nasr Hassanin Ismail, Kirill Alekseevich Yakovlev*
8.	**Study of the problem of a high induction magnetic field influence on equipment in the T-15MD tokamak hall**	*Egor Alexandrovich Shramkov, Galina Borisoana Igonkina, Nikolay Vasilyevich Korshunov, Ioann Vikentievich Lozhkin, Mikhail Mikhailovich Sokolov, Eduard Nailevich Khairutdinov*
9.	**Using an electric arc model based on MHD plasma theory to determine the parameters of the model Cassie-Mayr**	*Verstunin Alexey Yurievich, Vedeshenkov Nikolay Alekseevich*
10.	**Quadrupole microwave diagnostics of azimuthally asymmetric plasma formations**	*A. V. Kozyrev, M. L. Pozdyshev, A. Basak*

Section D: General Topics for Engineers. Transportation. Room (D-207)

1.	**Analysis of requirements for providing personal protective equipment to electric power industry employees**	*Olga Evgenievna Kondrateva, Oleg Aleksandrovich Loktionov, Dmitry Aleksandrovich Miroshnichenko*
2.	**Steady-State Heat Exchange in an Electrically Heated Bath Stove with a Daily Cast Iron Heat Accumulator**	*Michail Purdin, Vadim Yuzyuk*
3.	**Principles of forming machine quality criteria**	*N. N. Barbashov, A. A. Polyantseva, S. V. Shanygin*
4.	**Security analysis of wireless sensor networks in prospective aircraft industry**	*Chekunov Mikhail Ilich', Ermakov Vasiliy Igorevich, Tetin Alexander Pavlovich*
5.	**The use of fast-flowing chemical processes for the application of metal coatings in artistic creation**	*N. N. Kuznetsov, S. Yu. Bogoslovskii, A. D. Atangulova*
6.	**Separate method in simulating the spindle unit dynamics**	*Dosko Sergey Ivanovich, Shirshov Andrey Gennad'evich*
7.	**Generalized algorithm for website parsing**	*Artyom Sergeevich Volkov, Mikhail Valerievich Chernenky*
8.	**Mathematical modeling of contact interaction of fuel section elements, including up to 350 pellets, considering creep**	*Pavel Sergeevich Aronov, Mikhail Pavlovich Galanin, Alexandr Sergeevich Rodin*
9.	**Assessment approaches of climate factors influence for design of overhead transmission lines**	*Oleg A. Loktionov, Nikolay S. Kuznetsov, Mikhail A. Zabelin, Daniil O. Maksimov*
10.	**Estimation of accident rates in Russian power grid system under climate factors**	*Oleg A. Loktionov, Mikhail A. Zabelin, Nikolay S. Kuznetsov, Daniil O. Maximov*
11.	**Study of the HVAC system of a supersonic passenger aircraft**	*Kruzhilova Galina Vitalievna, Tishchenko Igor Valerievich*
12.	**Study of the ECS system of a passenger aircraft with a hybrid power plant**	*Dmitruk Sergey Andreevich, Tishchenko Igor Valerievich*

Conference Program (March 02, 2024)

Starting the participants' presentations (10:00-12:00)

{Each Participant has 7 minutes for introducing presentation + 3 minutes Q&A by attendees}

Section A1: Power, Energy and Industry Applications; Room (D-209)

1.	**Artificial intelligence in the innovation management systems**	*Chubakova Victoria Denisovna, Chobitko Miroslava Timofeevna, Zueva Ekaterina Victorovna*
2.	**Vibration analysis & technical assessment for necessary equipments in power plants**	*Ismail Hossain, Velkin Vladimir Ivanovich*
3.	**Industrial potential management: dynamics, structure, approaches, indicators**	*Badalova Anna Georgievna, Goncharova Elena Borisovna, Volnaya Sima Agilevna, Kaznacheeva Anastasia Aleksandrovna*
4.	**Systems of automatic control of electrochromic devices**	*Anastasiia Atangulova, Aleksey Kochnov, Anastasiia Sennikova*
5.	**Application of equivalent synchrophasors for admittance based ground fault protection**	*Sergey Aleksandrovich Piskunov, Alexey Vladimorovich Mokeev, Dmitry Nikolaevich Ulyanov*
6.	**AI-Driven Electrostatic Modeling for Improved Electronic Reliability: Case of Electrical Substations of Kyrgyzstan**	*Asan uulu Askat* *Bakasova Aina Bakasovna*
7.	**Power frequency electric and magnetic fields exposure human health risk analysis under overhead transmission lines transfer to cable**	*Bashir E. Bashirov, Nina B. Rubtsova, Andrey Yu. Tokarskiy*
8.	**Evaluating the efficiency of variants of technical raw water heater design solutions at CHPPs**	*Dmitri Lvovich Astanovsky, Lev Zalmanovich Astanovsky, Pavel Vladimirovich Kustov, Bitney Vladislav Dmitrievich, Nikishov Kirill Sergeevich, Popov Nikolay Vitalievich.*
9.	**Determining the characteristics of current transformers required for correct operation of relay protection devices in transient modes**	*Yablokov Andrey Anatolyevich, Panashchatenko Anton Vitalievich, Tychkin Andrey Romanovich*
10.	**Analysis of the classification system of technogenic emergencies of radiation character**	*Fedoseeva Tatiana Alekseevna* *Taranov Roman Aleksandrovich* *Taranov Aleksandr Avenirovich*
11.	**Reducing losses by decreasing zero-sequence currents in residential and commercial buildings**	*Maxim Ryabchitsky, Konstantin Krukov, Kirill Vorontsov, Damir Erkanaliev, Daniil Gridunov*

Section B1: Power, Energy and Industry Applications; Room (D-207)

1.	**Analysis of the heat exchange process in the evaporator of an adsorption-type solar refrigeration unit.**	*Alexandr A. Guzeev, Natalia M. Savchenkova, Inna F. Samson, D. Rosario, E. Baez*
2.	**Analysis of the local daily maximum load of apartment using probabilistic and statistical methods**	*Vasiliy A. Khomichev, Galaktion V. Shvedov*
3.	**Development of an electroflotation device for the purification of oily waste from power generating enterprises**	*Bondarenko Anna Viktorovna, Antonova Ekaterina Sergeevna*
4.	**Overview of Python power flow solvers**	*Egor Grishin, Grigorii Gerasimov, Elena Gryazina*
5.	**Adjustment of electricity tariffs for efficient installation of electricity storage devices**	*Mikhail A. Shakh, Galaktion V. Shvedov, Alyona S. Solovyeva*
6.	**Top pressure recovery turbine efficiency improving**	*Nikita L. Budarin, Ekaterina V. Zhigulina, Valery G. Khromchenkov, Yury V. Yavorovsky*
7.	**Case study of microgeneration for power supply in remote island communities**	*Sofya Badamshina, Alexander Klokov, Egor Loktionov*
8.	**Application of neural network models in control systems of small generation facilities**	*Makhsud Mansurovich Sultanov, Elena Gennadyevna Zenina, Ilya Anatolyevich Boldyrev, Aleksey Sergeevich Kuznetsov Mikhail Evgenyevich Shevchenko*
9.	**Properties of Some Working Fluids for Ground Source Heat Pumps**	*Michail Purdin, Vadim Yuzyuk*

Coffee Break 12:00-13:00, Room D-213

Continuing the participants' presentations (13:30-15:30)

Section A2: Power, Energy and Industry Applications; Room (D-209)

1.	**Design of the last stage of a steam turbine with a moisture removal system**	*Popov Vitaliy Vladimirovich, Kovalenko Daniil Ilyich, Bakurin Ivan Vasilievich, Kuznetsov Maxim Sergeevich*
2.	**Investigation of the use of rogovsky coils for fast automatic bus transfer**	*Aleksey Evdakov, Andrey Yablokov, Galina Filatova*
3.	**Prospects for Achieving Carbon Neutrality of the Russian Economy**	*Alexander V. Klimenko, Alexei G. Tereshin, Olga E. Prun*
4.	**Sustainable development technologies research issue of the modern fuel-energy industry**	*Zhang Yan, Vladimir A. Shiboldenkov*
5.	**Digital Behavioral Model of CHP Plant Operating Personnel as a Human Factor Reliability Management Tool**	*Mikhail Vasilyevich Alyushin, Lyubov Viktorovna Kolobashkina, Vladislav Dmitrievich Bitney*
6.	**Calculation of phase equilibrium in neon-helium mixture**	*Mironov Aleksey Igorevich, Kulebyakin Savely Dmitrievich, Navasardyan Ekaterina Sergeevna*
7.	**Modeling of de-icing heating system by machine learning methods**	*Perov Victor Borisovich, Miloserdov Vladislav Olegovich, Milman Oleg Osherovich Korliakova Mariya Olegovna, Korliakova Ekaterina Julievna*
8.	**Examining and Modeling a Three-Phase PWM AC/DC Boost Converter for High-Performance Applications**	*Ahmed Hamed Ahmed Adam, Salah Kamel Radwa Mansour, Mohamed A. Tolba*
9.	**Direct Power Control of Three-Phase AC/DC Voltage Source Converters under Unbalanced Conditions**	*Ahmed Hamed Ahmed Adam, Salah Kamel, Radwa Mansour, Mohamed A. Tolba*

Section B2: Power, Energy and Industry Applications; Room (D-207)

1.	**Modeling of biomass gasification in a dual fluidized bed with presence of a catalyst Using: Aspen plus**	*I.G. Philippov, Khalid El-Sheikh, K.A.Pleshanov, G.A.Ryabov*
2.	**Study of the influence of the charging infrastructure of electric vehicles on the parameters of the quality of electric energy**	*Danil N. Asainov, Yuriy V. Monakov, Aleksei A. Lankin, Aleksandr P. Torokhtunov*
3.	**Technical and economic analysis of solar energy utilization opportunities in the Republic of Tajikistan**	*Zokirzoda Aminjon Rahmon, Tsgoev Ruslan Sergeevich, Shohzoda Behruzi Talbi, Safarov Manuchehr Isufovich*
4.	**Investigation of the Influence of the Virtual Inertia System Based on the Topology of a Virtual Synchronous Generator on the Stability of a PV plant Operating as Part of a Microgrid**	*Maxim V. Burmeyster, Ilya I. Berdyshev, Ramis V. Bulatov, Rinat R. Nasyrov, Aina B. Bakasova*
5.	**An assessment of the feasibility of creating a biofuel-powered CCGT plant**	*Mikhail Nikolaevich Zaichenko, Dmitry Aleksandovich Khokhlov, Kirill Vladimirovich*

		Sterkhov, Rodion Sergeevich Maslov
6.	**Development of a mathematical model of a rail-type electrodynamic mass accelerator**	*Egor Alexandrovich Shramkov, Alexey Anatolievich Dukhanin, Yuri Ivanovich Belyakov*
7.	**An approach to creating a system for environmental monitoring the efficiency of greenhouse gas absorption by natural areas**	*Roman A. Taranov, Victoria D. Vyazova, Marianna M. Tsaregradskaya, Ivan O. Sinev*
8.	**Comparison of Direct and Indirect Approaches to PV Power Estimation**	*Alisher Farkhatovich Narynbaev, Vladislav Alexeyevich Kremer, Alexey Gennadievich Vaskov*
9.	**Enhanced African Queen Meliponula bee Mating Optimization Algorithm for Active Power Loss Diminution in Transmission System**	*Lenin Kanagasabai*
10.	**Active Power Loss Lessening and Voltage Stability Enhancement by Hybrid Parenting Optimization-Wealthy and Poverty-Stricken Inspired Algorithm**	*Lenin Kanagasabai*

Starting the participants' presentations (10:00-12:00)

{Each Participant has 7 minutes for introducing presentation + 3 minutes Q&A by attendees}

Section C1: Components, Circuits, Devices and Systems. Computing, Signal Processing and Analysis. Room (D-2/10)

1.	**Automatic heating technology module**	*Svetlana Vladimirovna Sidorova Aleksey Dmitrievich Kouptsov*
2.	**Plasma-chemical etching of colloidal photonic crystal polystyrene films**	*Artem Rustamovich Ibragimov, Vladislav Sergeevich Maltsev, Konstantin Romanovich Min'ko, Cao Van Hoa, Ekaterina Vadimovna Panfilova*
3.	**Model for conductance in composite materials having a dielectric matrix and conductive component**	*Anton Matasov, Arsenii Evsiukov, Roman Shcherbakov, Margarita Selikhova, Valeria Kovalchuk, Viktoriia Katina*
4.	**Identification And Resolving The «Stag Hunt» Social Dilemma In Multi-Agent Reinforcement Learning**	*Egor Feliksovich Morgunov, Alexander Nikolaevich Alfimtsev*
5.	**An approach of using ultrasound to obtain information about muscle contraction**	*Ekaterina A. Romanova, Vladislava V. Kapravchuk, Leonid R. Kondaurov, Ahmad M. Hammoud, Andrey N. Briko*
6.	**Modeling the remaining useful life of a gas turbine engine using neural networks**	*Smirnov Aleksandr Nikolaevich, Smirnov Sergey Nicolaevich*
7.	**Metagraph Storage Implementation using Relational Database Based on Mutability/Temporality Approach**	*Yuriy Gapanyuk, Evgeny Belousov, Anatoly Nardid, Danila Gromozdov, Alexey Molchanov*

8.	**Speech disorders analysis using a line of narrow-band filters**	*Fonkants Roman Viktorovich, Belodedov Mikhail Vladimirovich*
9.	**An intelligent system for classifying emotional coloration of comments**	*Valeriia O. Zarubenkova, Maria Skvortsova Habib Fardoun*
10.	**Study of the surface layers structure of Fe-Cr-Ni dispersion-hardening alloys after laser processing and nitriding**	*Boris Evgenievich Vintaikin, Tatyana Igorevna Kopylova, Andrey Evgenievich Smirnov, Natalia Anatolievna Smirnova, Yaroslav Vladislavovich Cherenkov*
11.	**The search for anomalies in network traffic**	*Anton Kanev, Daniil Kalinnikov, German Panov, Daria Rumak*
12.	**Strengthening Health Care Networks: A Security Model for Enhanced Cyber Resilience Using Hybrid Honeypots**	*Heidi Melhem, Atheer Yousif oudeh, Emad Salloum, Mohammad Anbar, Mohammed Molhem, Ivan Golubtsov*
13.	**Channel allocation in 5G networks using ant colony optimization Algorithm**	*Areej Hussein, Atheer Yousif oudeh, Mohammad Anbar, Mohammad Nassr, Mohammed Molhem, Habib Fardoun*
14.	**Investigation of UAV obstacle avoidance algorithms in a simulated complex environment**	*Li Jingyi, I. K. Romanova-Bolshakova, Liu Yi*

Section D1: Components, Circuits, Devices and Systems. Computing, Signal Processing and Analysis. Room (D-2/21)

1.	**Hysteretic voltage regulator as a dynamic supply modulator for radar power amplifier**	*Popov Dmitriy Olegovich*
2.	**Development of a heating orthosis**	*Aliona G. Tsyganova, Andrey A. Merkulov, Nikita I. Kiriushin, Alexey M. Mikhailov, Ivan A. Sukach, Demid R. Subbotin*
3.	**Development of a design methodology for the placement of reference points of the local navigation system using ultra-wideband signals.**	*Stepan Vladimirovich Orobchenko, Alexander Valeryevich Pavlovsky, Mikhail Marsovich Zaynutdinov, Kirill Vladimirovich Kochka, Nikita Igorevich Petukhov, Chernyh Vladimirovich Sergey*
4.	**Comparison of Genetic and Bayesian Neural Architecture Searches for Anomorphosis Approximation Problem**	*Ishkov Denis Olegovich, Terekhov Valery Igorevich*
5.	**Dynamic Programming in the Problems of the Russian Unified State Exam in Informatics (Computer Science)**	*Vladislav S. Popov*
6.	**Simulation modeling network traffic behavior using regression analysis in wavelet domain**	*Yury Stanislavovich Bekhtin, Kirill Sergeevich Balanev*
7.	**An algorithm for automatic image segmentation using the Sobel method for an optical coherence tomography**	*Olga Pchelkina, Petr Luzhnov*
8.	**Analysis of the selection of the cold plasma device therapeutic electrode electrical characteristics**	*Mariia Arakelian, Alexander Kobelev*

9.	**Implementation of a real-time text-to-speech system considering dynamic variability of voice data based on deep learning models Tacotron-2 and WaveRNN**	*Belonozhko Pavel Evgenievich, Belov Yuri Sergeevich*
10.	**Research of hemodynamic parameters variability during photoplethysmographic signals prolonged registrations**	*Derevesnikova Darya Aleksandrovna, Ziganurova Diana Albertovna, Luzhnov Petr Vyacheslavovich*
11.	**An Efficient Technique for Determining Tree Coordinates Using LiDAR Data via Deep Learning**	*Ilya A. Grishin, Boris S. Goryachkin, Valeri I. Terekhov, Sergey I. Chumachenko*
12.	**Selecting the alternating current waveform measurement channel for detecting a feeder with a single-phase ground fault**	*Alexander Olegovich Paramzin, Stanislav Yurievich Dolinger*

Coffee Break 12:00-13:00, Room D-213

Continuing the participants' presentations (13:30-15:30)

Section C2: Components, Circuits, Devices and Systems. Computing, Signal Processing and Analysis. Room (D-2/10)

1.	**The solution to the heat conduction problem of a cylinder during its heating and cooling from the lateral surface**	*Arsenii Evsiukov, Konstantin Rodenko, Dmitrii Kholodny, Roman Shcherbakov*
2.	**Relative positioning in GNSS on ultra-long baseline**	*Alexander Andreevich Chugunov, Artyom Denisovich Evseev, Alexander Pavlovich Malyshev, Sergey Vladimirovich Chernyh, Stepan Vladimirovich Orobchenko, Kirill Vladimirovich Kochka*
3.	**Interrogation of SAW-Resonator-Based Vibration Sensor by Low Cost SDR**	*Aleksandr S. Shvetsov, Nikita O. Ignatev, Andrey A. Merkulov, Sergei A. Zhgoon*
4.	**New Generation of B Programming Language for Data Analysis Tasks**	*Gleb S. Brykin, Boris S. Goryachkin*
5.	**Computer simulation of velocity fields in the flow of plate models with a given roughness**	*Chernykh Dmitryi Andreevich*
6.	**A Technique for Increasing the Accuracy of Frequency Measurement When Using a Method Based on Phase Increment Analysis**	*Elizaveta A. Budkina, Alsu I. Nurtdinova, Kirill A. Ivanenko, Andrey N. Serov*
7.	**Assessing software interface quality in the human-machine interaction systems**	*Sergey Vladimirovich Tarkhov, Lyaylya Mukaddasovna Tarkhova, Anastasia Shamilevna Minasova*
8.	**Video camera with controlled sensor position for physical simulating decalibration of intrinsic camera**	*Eremin Danil Vladimirovich, Shmatko Ekaterina Viktorovna, Pechinskaya Olga Viktorovna, Poroykov Anton Yuryevich*

	parameters	
9.	**Building a forest fire digital twin based on the aerial photography data**	*Anastasia Sh. Minasova, Shamil M. Minasov, Anna A. Shirokova, Mikhail V. Ivanov, Alexander N. Lapin, Mikhail V. Kuznetsov*
10.	**Computer simulation of microparticle trajectories in a laboratory study of lunar dust dynamics**	*Yangyang Tian, Anton Poroykov, Inna Shashkova, Ilia Kuznetsov, Alexander Zakharov*
11.	**Data analysis system based on the intelligent agent**	*Tatiana I. Buldakova, Anna V. Lantsberg*
12.	**To the question of increasing the reliability of measurements on the basis of application of bayesian approach**	*Rustam Z. Khayrullin, Anna S. Zenger*
13.	**Diver gestures recognition in underwater human-robot interaction using recurrent neural networks**	*V. A. Plotnikov, T. R. Akhtyamov, V. V. Serebenny*

Section D2: Components, Circuits, Devices and Systems. Computing, Signal Processing and Analysis. Room (D-2/21)

1.	**Development of magnetic-pulse compression device for nanosecond capillary discharge generator**	*Andrey A. Samokhvalov; Artem A. Smirnov; Kirill A. Sergushichev; Stepan I. Eliseev; Timur P. Bronzov*
2.	**Experimental study of the influence of anchors synchronization on the local navigation system performance**	*Aleksander Pavlovich Malyshev, Alexander Andreevich Chugunov, Nikita Igorevich Petukhov, Sergey Vladimirovich Chernyh, Stepan Andreevich Chuykin, Artyom Denisovich Evseev*
3.	**Integration of Inertial Measurement Unit with ToF/AoA Local Navigation System using Extended Kalman Filter**	*Nikita Igorevich Petukhov, Kirill Vladimirovich Kochka, Artyom Denisovich Evseev, Alexander Andreyevich Chugunov, Stepan Vladimirovich Orobchenko, Alexander Pavlovich Malyshev*
4.	**Approbation of the Control Angle Algorithm of the Phase Shifting Transformer in order to Integrate RES into the Electric Power System**	*Yuri Sharov, Sergey Loktionov, Oleg Kuznetsov, Alexey Kochergin, Alexei Vestfalskii, Alexey Sharov*
5.	**Improving Sign Language Recognition with Machine Learning and Artificial Intelligence**	*Victor Sergeevich Mokhnachev, Arifa Ashrafi, Alexey Evgenyevich Harlamenkov*
6.	**Evaluating the accuracy of a simplified gradient bousting model over a kNN classifier for gesture detection based on forearm EMG signal**	*Viacheslav Alexeevich Bezrukov, Rodion Radikovich Vakhitov, Pavel Yuryevich Anuchin, Anton Viacheslavovich Kruglov, Anna Yrievna Siziakova, Stepan Andreevich Chuykin*
7.	**Modeling digital document flow processes with stochastic timed Petri nets**	*Bogachenko Artyom Evgenyevich, Stroganov Yuri Vladimirovich*
8.	**Development of a verification system for the socio-economic entities in a virtual**	*Elena Alexandrovna Kirillova, Alexey Igorevich Lazarev*

	tunnel safe interaction	
9.	**Analysis of the nonlinear multimode systems under the limited measurement conditions**	*Gorodinov Vladimir Dmitrievich, Mikhail Sergeevich Kuts.*
10.	**Automation an algebraic algorithm for solving the inverse problem of electrocardiography**	*Kupriyanova Yana Anatolevna, Zhikhareva Galina Vladimirovna, Gamalienko Polina Borisovna, Zhuchkova Polina Mikhailovna, Andreev Igor Vladimirovich*
11.	**Utilizing Gyroscope Data for Classifying Types of Fencer Movements in an Assistive Coaching System**	*Andreeva Polina, Tikhomirov Alexey*
12.	**Application of a model based on variational autoencoder for music generation**	*Mosin Eugeniy Dmitrievich,Belov Yuri Sergeevich*
13.	**Using artificial intelligence search algorithms to improve multipath routing and QoS parameters in software-defined networks**	*Mothanna Alkubeily, Bushra Hasan, Olga V. Zudina*