7th 2025 International Youth Conference on Radio Electronics, Electrical and Power Engineering (REEPE), IEEE

Registration of Participants – *April 08, 2025*

(11:00 - 11:30 AM Moscow | 10:00 - 10:30 AM EGY | 12:00 - 12:30 AM UAE)

Electrical Power Systems Department, Institute of Electrical Power Engineering, Moscow Power Engineering institute "MPEI"

General Opening Program of RUSSIA, EGYPT, EMIRATES Venues

The Opening Program will be started online in connection with all venues

Note that for Moscow venue, the registration will be inside rooms of participation

(April 08, 2025) (11:30 - 12:30 PM Moscow | 10:30 - 11:30 PM EGY | 12:30 - 13:30 PM UAE)

- His Excellency Prof. Ismail Abdel Ghaffar, President of AASTMT, Egypt.
- His Excellency Prof. Alexander Tarasov, Vice-Reactor for International Cooperation of MPEI, NRU, Russia.
- Prof. Yasser Galal, Dean of College of Engineering and Technology (Heliopolis), AASTMT, Egypt.
- Prof. Fadi Aloul, Dean of College of Engineering, AUS, Sharjah, Emirates.
- Prof. Ahmed Madyan, Chairman of the IEEE Egypt Section.
- Prof. Mostafa Shaaban, Director of Energy, Water and Sustainable Environment Research Center, AUS, UAE.
- Prof. Rania El Sharkawy, Dean of Education (Cairo Campus), AASTMT, Egypt.
- Prof. Rinat Nasyrov and Prof. Mohamed Tolba, General Chairs of the IEEE REEPE conference.

Plenary Speakers Program of RUSSIA, EGYPT, EMIRATES Venues

The program will be started without online connection between venues

(April 08, 2025) (12:30 PM Moscow | 11:30 PM EGY | 13:30 PM UAE)

Note that for Moscow venue, the registration will be inside rooms of participation

(11:30 AM - 12:30 PM Moscow)

Conference Program (April 08, 2025)

Starting the participants' presentations (12:30 PM-14:30 PM)

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

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

Chaired by:

Prof. Artem S. Vanin

1.	**New structure of solar battery optimizer in maximum power mode**	*Maxim S. Volonin, Daniil A. Shevtsov, Anastasia D. Matveeva, Denis V. Savin*
2.	**Comparison of transmission line parameter estimation algorithms through simulated and real-field PMU data**	*Igor E. Ivanov, Yaroslav A. Umnov, Andrey A. Yablokov, Andrey R. Tychkin*
3.	**Digital Dual-loop Inverter Control Algorithm with Feedback Signal Prediction**	*Dmitriy A. Seregin, Maria S. Pavlova, Vladislav A. Kozlov*
4.	**Genetic Algorithm-based Optimal EV Charging Station and V2G Allocation with Power Factor Control**	*Ismail A. Soliman, Vladimir Tulsky, Hossam A. Abd El-Ghany*
5.	**Developing a methodology to determine the optimal reactive power modes for GTU and CCGT generators by way of a digital calculation tool**	*Vladislav Dm. Bitney, Nickolay N. Smotrov, Alexander An. Timofeev*
6.	**Evaluating the compatibility of diesel generator sets and uninterruptible power supplies on the criterion of voltage harmonicity**	*Vladislav Dm. Bitney, Nickolay N. Smotrov*
7.	**Influence of Wind Farm Integration on the Efficiency Indicators of the Existing Wind Power Complex**	*Galina V. Deryugina, Evgeniy V. Ignatiev, Nikita V. Sychev, Viktor P. Strokov*
8.	**Vehicle-to-grid technology as a means of equalizing load curves for business centers in the Moscow power system**	*Alena Al. Bulavina, Vladislav Dm. Bitney, Nickolay N. Smotrov, Kirill S. Nikishov*
9.	**Enhancing Non-Intrusive Load Monitoring with Features Extracted by Independent Component Analysis**	*Sahar Moghimian Hoosh, Ilia Kamyshev, Henni Ouerdane*

Coffee Break 14:30-15:00

Continuing the participants' presentations (15:00-17:00)

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

Chaired by:

Prof. Artem S. Vanin

10.	**Development and Techno-Economic Analysis of Solar Power Plant Projects in Vietnam**	*Nam H. Pham, Oleg N. Kuznetsov, Canh T. Doan*

11.	**Biodiesel: a sustainable alternative to fossil fuels for internal combustion engines**	*Ali Ismail, Edik K. Arakelyan, Baydaa Bo-Dakkah*
12.	**The Utilization of Renewable Energy Sources in the Electric Power System of the Isle of Juventud**	*Odalys M. Sanchez Gomez, Oleg N. Kuznetsov*
13.	**Numerical modeling of losses in the stator winding of a large electric machine considering Roebel transposition**	*Michael S. Ventserev, Eduard A. Chelyshev, Pavel A. Dergachev*
14.	**Numerical simulation of the two-phase flow hydrodynamics over a submerged perforated sheet using the OpenFOAM code**	*Alexander S. Nikulin, Vladimir I. Melikhov, Evgeny A. Gorlov*
15.	**Enhancing global maximum power point tracking in partically shaded photovoltaic systems using agent colony optimization**	*Aleksandr S. Mishin, Oleg V. Zhuravlev*
16.	**Experimental study on enhancing PCM melting using finned heat pipe in a storage unit**	*Ashraf AL-Nassar, A. N. Makeev, Bassam E. Badran*
17.	**Efficiency Analysis of Harmonic Suppression in the Inductive Power Filtration System of a Distribution Transformer**	*Xinyi Zhang, Sergey E Kokin, Stanislav N. Shelyug*
18.	**Development of a Cooling System for Vanadium Redox Flow Batteries**	*Diaa Alkhateeb, Yuriy V. Lyulin*
19.	**The Gamma Distribution for Modeling a Two-Point Bend of a Multilayer Rod**	*Mikael D. Martirosyan, Mark G. Markarov, Ilya A. Savelyev, Pavel V. Lobanov*

Section B: Power, Energy and Industry Applications. Room (Д-26)

Chaired by:

Prof. Rinat R Nasyrov & Eng. Zhou Haochen

Start the participants' presentations (12:30-14:30)

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

1.	**Genetic Algorithm-Based Optimization of EV Charging Station Placement on Long-Distance Routes**	*Ahmed M. Elkholy, Rozhkov Alexander Nikolaevich, Badalyan Artush Vasilievich, Cherdintsev Ivan Aleksandrovich*
2.	**Virtual Inertia: Current State and Application in China's Power Systems**	*H. Zhou, Maxim V. Burmeyster, Rinat R. Nasyrov*
3.	**Formation of power consumption forecasting models for the day-ahead electricity market purposes**	*Anastasiya A. Kurnaleeva, Vladimir N. Tulsky, Roman E. Ognev*
4.	**Analysis of the prospects for using waste gas from an oil refinery in order to increase production efficiency and reduce the carbon footprint**	*Maxim A. Kislitsyn, Sergei N. Petin, Anna V. Burmakina, Valeriia R. Zhikhareva, Sofia S. Orlova*

5.	**A study of the parameters of a fire-tube boiler using hydrogen-containing gas**	*Valeriia R. Zhikhareva, Sergei N. Petin, Anna V. Burmakina, Maxim A. Kislitsyn, Nikita M. Bonadykov*
6.	**Economic Justification of a Comprehensive Helio-Thermal Station**	*Aminjon R. Zokirzoda, Ruslan S. Tsgoev, Behruzi T. Shohzoda, Jamshed H. Karimzoda, Manuchehr I. Safarov, Shamsiddin F. Samiev*
7.	**Investigation of the thermal state of the battery in the operating cycle of solar panels**	*Botirjon Khaliljonov, Sanjarbek Odilov, Bobonazar Soliyev, Rasuljon Raxbarov, Sardorbek Saydaliyev, Xusanboy Muxammadyoqubov*
8.	**Determination of variables based on the mathematical model of an asynchronous motor in the system of absolute units**	*Usmonov Shukurillo Yulbarsovich, Norxojayeva Nargiza Nosirovna, Umurzakova Guzal Rinatovna, Gulsanamkhon Nazarova, Gulnozakhon Alimjonova, Nilufar Mirzamaxmudova*

Coffee Break 14:30-15:00

Continuing the participants' presentations (15:00-17:00)

Section B: Power, Energy and Industry Applications. Room (Д-26)

Chaired by:

Prof. Rinat R Nasyrov & Eng. Zhou Haochen

9.	**Modeling the coefficients of simultaneity, demand, and participation at the maximum of multiapartment buildings**	*Alyona S. Solovyeva, Ilya A. Babenko, Galaktion V. Shvedov*
10.	**A Comprehensive Review of Demand Response in Developing Countries: The Cases of India, Brazil and South Africa**	*Keyyapat Tiputhai, Elena Gryazina*
11.	**Approaches to the study of the operation of rotary heat exchangers in ventilation and air conditioning systems**	*Andrey A. Arbatsky, Denis A. Mechnik, Andrey S. Ankudinov*
12.	**Conjugate heat transfer analysis of oil-mist cooling and lubrication system of bearing supports for small gas turbine engine**	*Faizrakhmanova A.A., Danilov M.A., Remchukov S.S.*
13.	**Absorption and adsorption cooling cycles for residential applications in Moscow region**	*Vasily S. Lukyanov, Baydaa Bo-Dakkah, Ildar A. Sultanguzin, Sergey Yu. Kurzanov, Yury V. Yavorovsky, Alexey V. Skorobatyuk*
14.	**Current Experience and Prospects for the Use of Energy Storage Systems in the Russian Federation**	*Ramis V. Bulatov, Petr A. Balaev, Tatyana V. Petrakova, Rustam R. Khisamov*
15.	**Using the heat of data center equipment in the heat supply systems**	*Andrey A. Pilipenko, Andrey B. Garyaev*
16.	**The Hypothesis of Quenching a DC Electric Arc by an Inhomogeneous Permanent Magnetic Field**	*Ilya V. Kirillov, Pavel A. Dergachev, Elizaveta V. Koniushenko*

Section C: Components, Circuits, Devices and Systems. Room (Д-207)

Chaired by:

Dr. Maxim Burmeyster

Start the participants' presentations (12:30-14:30)

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

1.	**Development of a control and monitoring circuit for a chilled water machine (chiller)**	*Rami M. Mahmoud, Sergei S. Gavriushin*
2.	**Dependence of lead sulfide films photoelectric properties and morphology on precursor's variations**	*Kristina S. Makaruk, Boris N. Miroshnikov, Larisa N. Maskaeva, Irina N. Miroshnikova, Anatoliy I. Popov, Maksim I. Krasilnikov*
3.	**Quantitative assessment of particular reliability indicators of PACS under computer attacks using the fault tree method**	*Karantaev V.G., Latyshov K.V., Voloshin A.A., Solnykov D. A.*
4.	**Implementation of a pulse method for determining the parameters of a low-signal equivalent circuit of semiconductor devices**	*Pavel K. Zakharov, Elena M. Torina*
5.	**Optimizing Start-Up Procedures to Decrease Magnetizing Inrush Current in Power Transformers**	*Mohammadreza Shekari, Danil N. Asainov, Yury V. Monakov*
6.	**Development of Algorithm for Filtering the Parameters of Angular Orientation of the Object on Signals of GNSS**	*Stepan V. Orobchenko, Kirill V. Kochka, Artyom D. Evseev, Alexander A. Chugunov, Sergey V. Chernyh, Alexander P. Malyshev*
7.	**Synthesis of a Two-Stage Algorithm for Estimating Antenna Array Orientation Angles from GNSS Signals**	*Artyom D. Evseev, Stepan V. Orobchenko, Kirill V. Kochka, Alexander A. Chugunov, Nikita I. Petukhov, Alice O. Kozhevnikova*
8.	**Development of a Local Navigation System Based on Ultra-Wideband Signals with Active Reference Points and Passive Wearable Modules**	*Sergey V. Chernyh, Alexander P. Malyshev, Elina M. Liubchenko, Igor B. Galuev, Tatiana A. Brovko, Roman S. Kulikov*
9.	**Experimental investigation of the coordinate estimation algorithm for the local navigation system with signals time division**	*Aleksander P. Malyshev, Alice O. Kozhevnikova, Sergey V. Chernyh, Igor B. Galuev, Pavel A. Bondarev, Vladislav A. Yushin*
10.	**Synthesis of the Algorithm for Assessing Vehicle Lane Based on a Local Positioning System Using Ultra-Wideband Signals**	*Igor B. Galuev, Nikita I. Petukhov, Stepan V. Orobchenko, Adam A. Khabachirov, Pavel A. Bondarev, Alisa O. Kozhevnikova.*

Coffee Break 14:30-15:00

Continuing the participants' presentations (15:00-17:00)

Section C: Components, Circuits, Devices and Systems. Room (Д-207)

Chaired by:

Dr. Maxim Burmeyster

11.	**Method of Time Scales Modeling in GNSS Digital Twins**	*Alexander A. Chugunov, Tatiana A. Brovko, Artur R. Yusupov, Elina M. Liubchenko, Kostya A. Beloglazov, Andrey R. Boldyrev*
12.	**Stationary operating modes of a biharmonic oscillator with frequency multiplicity three**	*Galina A. Altukhova, Ekaterina S. Vetluzhskih, Daniil A. Frolov, Milena V. Ryazanovskaya*
13.	**Development of the concept and computer model of a prototype of a wireless signal transmission system for automatic relay protection at substations**	*Sergey V. Soldatkin, Anton Y. Boev, Sergey A. Chechenya, Konstantin V. Vorontsov, Anastasia O. Khodakova*
14.	**Photon-Counting Optical Time Domain Refloctometer Using Superconducting Nanowire Single Photon Detector based on Time to Digital Converter**	*Mazen Makhlouf, Mikhail S. Elezov, Roman V. Ozhegov, Gregory N. Goltsman*
15.	**Development and Investigation of Optical System Parameters for a Presetter**	*Kirill S. Gogolev*
16.	**Rain and fog sensors based on frustrated total internal reflection**	*Ilya R. Rodin, Olga V. Korolkova, Ilya N. Pavlov*
17.	**An improved voltage regulator for a radar transmitting module with long duration signals**	*Mikhail V. Rodin, Alexey Yu. Semenov*
18.	**Environmental Air Quality Control System Based on Gas-Dynamic and Acoustic Principles**	*Ekaterina A. Drach, Maria K. Zolotenkova, Anastasia O. Kosolapova, Vasily V. Egorov*
19.	**Power Transformer Inrush Current: Mitigation Strategies Using Diesel Generators and Soft Starters**	*Mohammadreza Shekari, Danil N. Asainov, Yury V. Monakov, Alexander V. Murzintsev*
20.	**Optimizing Hybrid Energy Systems: A Simulation Study of Diesel and Solar Integration for Rural Electrification**	*Mohammadreza Shekari, Konstantin V. Suslov, Sajad. Jafari, Danil N. Asainov*

Section D: Computing, Signal Processing and Analysis. Room (Д-209)

Chaired by:

Dr. Ramis V. Bulatov

Start the participants' presentations (12:30-14:30)

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

1.	**Algorithm for Drone Recognition from Birds Based on a Neural Network Approach Using Radar Data**	*Alexandr R. Gorbunov, Marat R. Akmalov, Alexey E. Semichastnov, Dmitry A. Balakin*

2.	**Visualization of the 2023 Turkey-Syria earthquakes using the Yandex Maps**	*Vladislav S. Popov*
3.	**Study and efficiency analysis of data frames unification process for a pair of wireless sensor networks protocols ZigBee and WirelessHART**	*Farah Jaber Yousef*
4.	**A combined algorithm for measuring the frequency and bandwidth of a signal with increased accuracy**	*Konstantin V. Vorontsov, Michael N. Baldaev, Sergey A. Chechenya, Sergey V. Soldatkin, Anton Y. Boev, Anastasia O. Khodakova*
5.	**Investigation of algorithms of multi-agent robot swarm control in the task of finding the shortest path**	*Andrey D. Razorvin, Oleg V. Glukhov, Anton I. Martynov, Konstantin I. Sokolov, Pavel Y. Anuchin, Vladislav A. Yushin*
6.	**Performance Comparison of Autoencoders and Traditional Denoising Methods Across Four Image Datasets: Metric-Based Optimization**	*Mohammad Zedan, Yury S. Bekhtin*
7.	**Development of Signal Detection and Recognition Algorithm Using Software-Defined Radio**	*Anastasia O. Khodakova, Yulia D. Naumova, Sergey A. Chechenya, Sergey V. Soldatkin, Anton Y. Boev, Konstantin V. Vorontsov*
8.	**Machine Learning Methods for Development of a Model of "Land/Ocean" Contrast in the Parameters of ULF/ELF Variations of the Geomagnetic Field**	*Aleksey M. Bondarenko, Nadezhda V. Yagova, Pavel R. Varshavskii*
9.	**Investigation of Lamb Wave Attenuation**	*Vera A. Barat, Egor A. Lepsheev*
10.	**Character Recognition Using Convolutional Neural Networks Based on CUDA**	*Set Paing Tun*

Coffee Break 14:30-15:00

Continuing the participants' presentations (15:00-17:00)

Section D: Components, Circuits, Devices and Systems. Room (Д-209)

Chaired by:

Dr. Ramis V. Bulatov

11.	**Research on DOA Estimation Method of Vector Hydrophone Array in Low SNR Based on CNN**	*Nan Zou, Yueming Li, Jin Fu, Guangpu Zang, Zhiyao Du, Yanhe Li*
12.	**A data association method based on azimuth inverse cotangent value**	*Nan Zou, Muze Yin, Guangpu Zhang, Dongyu Li, Zhenqi Yang, Pengbo Ma*
13.	**Multiple objects tracking algorithm for car radar**	*Adam A. Khabachirov, Dmitry O. Makarevich, Konstantin A. Beloglazov, Arthur R. Yusupov, Oleg V. Glukhov, Anna Y. Sizyakova*
14.	**Modification of the Spectral Analysis Method for Measuring Power Parameters Based on the Application of**	*Alexey A. Kharinov, Vladimir V. Korshunov, Sergey A. Podobuev, Anna A. Krylovich, Viktor D. Kacharsky, Andrey N. Serov*

	Window Functions	
15.	**Double Integration Method for Power Frequency Measurement**	*Darya S. Evtekhova, Artem S. Orlov, Anton V. Pavlovich, Petr K. Makarychev, Andrey N. Serov*
16.	**A Method to Reduce the Spectrum Leakage Effect**	*Elizaveta A. Budkina, Alsu I. Nurtdinova, Alexander A. Shatokhin, Andrey N. Serov*
17.	**Machine Learning Methods for Development of a Model of Inter-relation between Seismic and Thunderstorm Parameters**	*Aleksey M. Bondarenko, Nadezhda V. Yagova, Pavel R. Varshavskii*
18.	**Integrating Computing and Analysis in the Development of Interactive Quizzes for Sign Language Learning**	*Arifa Ashrafi, Viktor S. Mokhnachev, Mohammed H. Uvaysov, Evgenii P. Medvedev*
19.	**An Improved S-D Assignment Algorithm for Underwater Multi-sensor Multi-target Tracking**	*Bin Qi, Lei Sun, Xiang Li, Chenxin Hui, P. Takis Mathiopoulos*
20.	**A Multilayered cognitive control architecture for dynamic object management using recursive feedback and predictive adaptation**	*Pavel A. Panilov, Tatiana Y. Tsibizova*

Section E: Nuclear and Mechanical Science Applications. Fields, Waves and Electromagnetics. Room (Г-101)

Start the participants' presentations (12:30-14:30)

Chaired by:

Dr. Irina S. Anisimova & Eng. Alyona S. Solovyeva

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

1.	**Mathematical Modeling of the Spatial Kinematics of an Omni-platform Balancing on a Spherical Wheel**	*Saypulaev G.R., Saypulaev M.R., Demidov A.A., Sokiranskaya E.K., Semenyakina E.S., Lipatov A.A.*
2.	**Dynamic Analysis of a Quadruped Robot**	*Saypulaev G.R., Saypulaev M.R., Sokiranskaya E.K., Fernando M.J., Mohamed A.M., Kazarinova A.S.*
3.	**Numerical Study of the VOF Model for Film-Wise Condensation in Rounded, Elliptical, and Flattened Tubes**	*Diaa Alkhateeb, Yuriy V. Lyulin*
4.	**Passive Prosthesis of Human Foot With Spring System of Bending Parts**	*Saypulaev M.R., Kazarinova A.S., Sibirtsev N.A., Astakhov S.V.*
5.	**Motion Control of a Chain of Wheeled Robots**	*Grechko D.V., Sionov P.D., Adamov B.I., Pankrateva G.V.*
6.	**Optimal Control of a Wheeled-Exoskeleton using linear quadratic regulator and Kalman filter**	*Delshan Deeb, Igor V. Merkuryev*
7.	**Geometry and Kinematics of a Mobile Platform with a Rocker-Bogie Suspension during Its Spatial Movement on an**	*Saypulaev G.R., Gribov A.E., Gribova O.V.*

	Uneven Surface	
8.	**Influence of end effects on energy characteristics and temperature distribution in a multilayer inductor with external cooling**	*Alexander B. Kuvaldin, Maksim A. Fedin, Ekaterina S. Bulgakova, Alexander R. Lepeshkin, Mariya A. Bulatenko, Victoria V. Pankova*

Coffee Break 14:30-15:00

Continuing the participants' presentations (15:00-17:00)

Section E: Nuclear and Mechanical Science Applications. Fields, Waves and Electromagnetics. Room (Г-101)

Chaired by:

Dr. Irina S. Anisimova & Eng. Alyona S. Solovyeva

9.	**The evaluation of the effect of charged particle concentration on the breakdown voltage**	*Artur I. Mugu, Andrey V. Samusenko*
10.	**Development of a program for processing MPIV measuruments**	*Denis V. Sofuev, Shirin Sh. Usmanova, Nadezhda M. Skornyakova, Maksim V. Sapronov*
11.	**Modeling of Active Dampers Based on Magnetorheological Elastomers for Precision Equipment**	*Alexandr V. Kazakov, Valeriy P. Mikhailov*
12.	**Space exploration using sensors based on island nanostructures**	*Svetlana V. Sidorova, Sergey V. Kiryanov, Sofia A. Aksenova*
13.	**UHF and VHF-band Parabolic Reflector Antenna Feed Design**	*Vadim D. Ugnichev, Boris L. Kogan, Igor V. Belkovich, Vasiliy N. Seleznyov*
14.	**Ensuring electromagnetic safety of urban development near overhead transmission lines**	*Antonina E. Kalacheva, Nina B. Rubtsova, Andrey Yu. Tokarskiy*
15.	**Modified SIW structure with contrast dielectric filling**	*Daria Kiselkina, Konstantin Greshnevikov, Georgy Zhabko, Alexander Sochava, Sergey Bogachev*
16.	**Investigation of dielectric nanoparticles in optically transparent liquid solution by static light scattering**	*Artem A. Polev, Maksim V. Sapronov, Shirin Sh. Usmanova*

Conference Program (April 09, 2025)

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

Starting the participants' presentations (10:00-12:30)

Chaired by:

Prof. Artem S. Vanin

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

1.	**Study of Solar Electric Supply System for Building with Net-Zero Carbon**	*Ildar A. Sultanguzin, Vladislav Y. Chaikin, Tserendorj Tsetsgee, Yuri V. Yavorovsky, Alexander V. Govorin, Ivan D. Kalyakin*
2.	**Analysis of primary energy consumption forecasts in the short and medium term for Russia**	*Oleg A. Loktionov, Daniil O. Maksimov, Mikhail A. Zabelin, Irina A. Beloshitskaya*
3.	**Analysis of Defects' Impact on the External Magnetic Field of the Turbogenerator**	*Ekaterina P. Kurbatova, Alexandr A. Kostenko, Evgeniy D. Smirnov, Anna V. Dishina*
4.	**Evaluation of the impact of microwave electromagnetic fields on humans**	*Ilya V. Korolev, Elena V. Fedorova, Anastasia M. Borovkova*
5.	**Analysis of the operation of the Arc-Fault Detection Device (AFCI) on an experimental stand simulating real low-voltage electrical equipment**	*Ilya V. Korolev, N.V. Vasileva, P. A. Vasin*
6.	**Locating faults on overhead power transmission lines of 110 kV and above using emergency mode parameters**	*Dmitriy Sharygin, Galina Filatova, Andrey Yablokov*
7.	**Optimizing Apparent Power and Efficiency in DC-DC Converters: Transformer vs. Autotransformer.**	*Nikita Abdugaliyev, Sergei Yurevich Ostanin, Kirill Alexandrovich Vorontsov*
8.	**Forecasting Short-Term Load Profiles in Distribution Networks Using Machine Learning**	*Andrey A. Yablokov, Aleksandr F. Sorokin, Vladislav A. Titov, Roman A. Maltsev*
9.	**A design and classification study for some families of 3R manipulators with geometric simplifications**	*Bassel Kaddar, Yazan Wassouf*

Coffee Break 12:30-13:00

Continuing the participants' presentations (13:00-15:00)

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

Chaired by:

Prof. Artem S. Vanin

10.	**Numerical simulation of energy separation effect in compressible air flow behind the cylinder**	*Manas. Z. Shekenov, Nickolay.A. Kiselev, Nikolay S. Malastowski*
11.	**Problem-solving analysis of power engineering design problems**	*Zadorkin S. M., Borsuk N. A.*
12.	**Optimizing Industrial Energy Costs with V2G and EV Infrastructure: A Case Study in Russia**	*Ahmed Eltwam, Marina Dolmatova*
13.	**Study of the aluminium alloy properties for the cable production**	*Anton S. Chernetsov, Ekaterina S. Sakharova, Svetlana A. Pakhomova, Dmitriy A. Kharchenko*
14.	**Impact of High Photovoltaic Penetration on the Voltage Stability of Vietnam's Power System**	*Nam H. Pham, Oleg N. Kuznetsov, Canh T. Doan*
15.	**Numerical Simulation of Convergence and Electrocoalescence of Two Conducting Droplets**	*Vladimir Iu. Gavrilov, Vladimir A. Chirkov, Sergei A. Vasilkov*
16.	**Simulation of a Power Inverter with a Grid-Support Mechanism at the Point of Common Connection**	*Leonid A. Verentsov, Maxim V. Burmeyster, Ilya I. Berdyshev, Yuri D. Kavoikov, Andrei A. Samoilov, Jin Liu*
17.	**Analysis of the effectiveness of installing electric power storage systems in managing electricity demand**	*Mikhail A. Shakh, Galaktion V. Shvedov*
18.	**Hybridized Stone Helix - Hippocampus Erectus algorithm for genuine power loss diminution and voltage stability enrichment**	*Lenin Kanagasabai*

Section B: Power, Energy and Industry Applications. Room (Д-26)

Starting the participants' presentations (10:00-12:30)

Chaired by:

Prof. Rinat R Nasyrov & Eng. Zhou Haochen

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

1.	**Impact of High Renewable Energy Penetration on Price Volatility: A Comparative Analysis of Denmark and Germany**	*Ladanov Lev, Marina Dolmatova*
2.	**Comparative Analysis and Pre-Feasibility Study of Electric Vehicle Charging Hub Architectures**	*Vyacheslav A. Voronin, Elizaveta E. Kartashova, Fedor S. Nepsha*

3.	**Charging Load Prediction Method for Electric Vehicles using CNN-GRU-Attention model with SSA optimization strategy**	*Xinyu Fan, Chuqiao Cai, Galaktion V. Shvedov*
4.	**Application of the Zonal Method for Heat Transfer Calculation in the Tower-Type Steam Boiler**	*Mikhail N. Zaichenko, Dmitry A. Khokhlov, Marina D. Berezina, Elion A. Ulanov, Valeria S. Likholetova*
5.	**Grid regulator with a modified control system based on the fuzzy logic method**	*Ruslan G. Apalkov, Mikhail G. Kiselev, Mikhail G. Lepanov, Nikolai S. Rodkin*
6.	**Design and Calculation of the Autonomous Hybrid Energy Complex in A Grid-Scale Hydrogen Energy Storage**	*Zahra Pezeshki, Ildar Sultanguzin, Yury V. Yavorovsky, Alena Veresotskaya*
7.	**Assessment of Domestic Resources for Enhancing Electricity Production in Mongolia**	*Myagmargarav Baldorzh, Dmitry N. Udintsev*
8.	**Power Quality Analyzing in a Power Supply System with a Predominantly Pulsed Load**	*Olga A. Vasilyeva, Maxim G. Popov, Maria A. Shakhova, Yulia A. Markovskaya, Ekaterina P. Lebedeva*
9.	**Doping engineering in multicrystalline silicon: accounting incomplete ionization and charge carrier mobility**	*Irina N. Radchenko*
10.	**Enhancing Voltage Stability in PV/Wind Power Systems with STATCOM Utilizing Fuzzy Controller**	*Ahmed A. Zaki Diab, Ibram Y. Fawzy, Ahmed M. Elsawy, Mohamed A. Tolba, Ayat G. Abo El-Magd*

Coffee Break 12:30-13:00

Continuing the participants' presentations (13:00-15:00)

Section B: Power, Energy and Industry Applications. Room (Д-26)

Chaired by:

Prof. Rinat R Nasyrov & Eng. Zhou Haochen

11.	**Modeling of electroflotation process to improve water purification efficiency**	*Boris S. Ksenofontov, Anna V. Bondarenko, Ekaterina S. Antonova, Daria G. Glashkina*
12.	**The development of the ejection flotator for the power entarprise oily wastewater treatment**	*Ekaterina S. Antonova, Veronika O. Karpikova*
13.	**Analysis of Main Gas Pipeline Crack Resistance at a Distance from Transverse Weld**	*Alexey M. Pokrovskii, Alexey I. Kazantsev, Yuri G. Matvienko*
14.	**Experimental study of wave dynamics in the exhaust pipe of a small two-stroke engine**	*Dmitry V. Vyalikov, Nikolay S. Malastowski, Nickolay A. Kiselev, Aleksander V. Saychinov*
15.	**Savonius design-based rotor performance optimization with the usage of solar panels as guiding nozzles**	*Maria V. Sokolovskaya, Sergey V. Kempel, Nikita V. Khlebtovskiy*
16.	**Improving environmental situation at**	*Anna V. Bondarenko, Nikita R. Ratushny*

	paint and varnish production facilities	
17.	**Investigation of The Plasma Polarization Parameters Effect on The Polyvinylidene Fluoride Film Piezoelectric Properties Used for Flexible Nanogenerators**	*Bogdan A. Basov, Kamila T. Makarova, Konstantin M. Moiseev, Alexey S. Osipkov*
18.	**Analysis of requirements for the provision of personal protective equipment for an electrical installer on a construction site**	*Dmitry A. Miroshnichenko, Natalia V. Ozerova, Liubov N Lisienkova*
19.	**Evaluation of renewable energy resources potential for elimination electricity shortage**	*Alexey V. Melnikov, Alexander V. Klokov*

Section C: Components, Circuits, Devices and Systems. Room (Д-207)

Starting the participants' presentations (10:00-12:30)

Chaired by:

Dr. Maxim Burmeyster

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

1.	**The integration of edge computing into IoT application using AdvantEDGE platform, case study: mobility**	*Ali Dayoub*
2.	**Ferroelectric composite materials based on polyvinylidene fluoride with addition of molybdenum disulfide nanosheets**	*Evgeniya L. Buryanskaya, Aleksey S. Osipkov, Mstislav O. Makeev, Asaf A. Nabiev, Olga Yu. Ponomareva, Dmitriy A. Kisilev*
3.	**Fowler-Nordheim stress-induced degradation in n-channel MOSFETs**	*Igor V. Chukhraev, Dmitry V. Mastykash, Vladimir E. Drach*
4.	**Determination of the torque motor parameters of the indicator gyrostabilizer using the Vyshnegradsky criterion**	*Anna S. Syrchina, Alexander V. Kuleshov*
5.	**Automated mobile operator customer service using large language models combined with RAG system**	*Vladimir A. Lovtsov, Maria Skvortsova*
6.	**Effective Integration of Innovative Computer Vision Tools into Electronics Manufacturing Process**	*Arina A. Adamova, Andrey I. Vlasov, Elena A. Medvedeva*
7.	**Ferroelectric Flexible Temperature Sensor**	*Svetlana V. Sidorova, Anastasia A. Felde*
8.	**Investigation of Electrical Properties and Structure of ITO Thin Films Fabricated by Magnetron Sputtering**	*Selbi Yu. Hydyrova, Kamila T. Makarova, Mikhail G. Popkov, Timur I. Mavliaviev, Sergei S. Romanov, Konstantin M. Moiseev*
9.	**Semiconductor device compact simulation taking into account the ESD effect and using the free circuit simulation software**	*Vadim V. Kuznetsov, Vladimir V. Andreev, Semen A. Lomakin*

10.	**Reward shaping based on information design in multi-agent reinforcement learning**	*Nikita A. Velichko*
11.	**Technological cycle of the periodic structures controlled formation based on the microparticle regular arrays**	*Ekaterina V. Panfilova, Artem R. Ibragimov, Olesya M. Ibragimova, Konstantin R Min'ko, Cao Van Hoa, Ilya O. Azarnin, Daria Yu. Shramko*

Coffee Break 12:30-13:00

Continuing the participants' presentations (13:00-15:00)

Section C: Components, Circuits, Devices and Systems. Room (Д-207)

Chaired by:

Dr. Maxim Burmeyster

12.	**Structural study of thin copper and brass films deposited on a polyimide substrate by PLD**	*Grigoriy V. Tikhomirov, Tatiana V. Tikhomirova, Alexander E. Shupenev, Ivan S. Korshunov, Anna V. Mikhailova*
13.	**Effect of the ignition voltage amplitude on the breakdown delay time of the ring laser discharge gap**	*Anton O. Sinelnikov, Ilya A. Smetanin, Bogdan A. Basov, Egor A. Smetanin, Uliana F. Bykanova*
14.	**Ontological Modeling as a Means of Enhancing the Efficiency of MEMS Creation**	*Yuriy B. Tsvetkov, Ilya A. Rodionov, Dmitry A. Baklykov, Victoria E. Stukalova, Igor S. Pilnik*
15.	**Research of the possibilities of upgrading the radio path of a repeater using software-defined devices**	*Yury S. Rusov, Pavel P. Kurenkov*
16.	**Flood monitoring system using the Internet of Things**	*Valery G. Gogolev, Timur A. Katanov, Ian M. Kardashevskii, Vladimir M. Efimov, Nikita I. Tananaev*
17.	**Control loop intellectualization in human-machine systems**	*Boris S. Goryachkin, Kirill P. Grishin*
18.	**On approaches to creating the logical inference machines for ensuring compatibility and integration of systems and controls**	*Dmitry V. Aladin, Azat K. Bilalov, Leonid I. Ilinov*
19.	**On the Possibility of Creating Energy-Efficient Mesh Network to Prevent Forest Fires and Provide Video Surveillance of Hard-to-Reach Areas**	*Artem D. Penkin, Denis I. Kochetkov, Nikita D. Nashchekin, Danila P. Posevin, Igor P. Ivanov*
20.	**High-power LED lamp driver modelling**	*Igor V. Chukhraev, Marina A. Sevastyanova, Vladimir E. Drach, Julia V. Torkunova*
21.	**Analysis of energy efficiency and miniaturization issues of Internet of Things components in energy complex**	*Kirill V. Selivanov, Anna R. Evseeva, Boris E. Safonov*

Section D: Computing, Signal Processing and Analysis. Room (Д-209)

Starting the participants' presentations (10:00-12:30)

Chaired by:

Dr. Ramis V. Bulatov

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

1.	**Synthesis of the reference model based on the generative model method**	*Alexander V. Finoshin, Nikita A. Martynov*
2.	**Application of deep RESNET architectures for plant disease classification based on visual features**	*Ilya A. Bukhantsev, Ivan S. Sabetev, Vladimir V. Gurenko*
3.	**Stability appraisal of the wavelet-and-regression method for unsteady network traffic trend highlighting**	*Yury S. Bekhtin, Kirill S. Balanev, Elena A. Dubrovskaya, Anton V. Pavlovich*
4.	**Integration of Large Language Models for Autonomous Navigation of a Mobile Robot**	*Andrew N. Kravtsov, Boris S. Goryachkin*
5.	**Hybrid Approach to Decision Support in Ensuring Software Code Security**	*Zuev I. A., Sakulin S. A., Shmakova A. V.*
6.	**Research on Pre-trained Speech Recognition Models for Pronunciation Improvement**	*Kanev I. Anton, Alexey V. Papin*
7.	**Generation of pseudo-random sequences using generative predictive neural network transformers**	*Kirill V. Parfentiev*
8.	**Gas Turbine Vibration Analysis Using Polar Orbital Analysis**	*Ryad H. Ajamieh*
9.	**Cognitive modeling for technological optimization of thermal power plants**	*Roman M. Britvin, Maxim A. Komardin, Makar R. Zykov, Pavel A. Panilov, Tatiana Y. Tsibizova*
10.	**Chinese text classification based on different word segmentation methods**	*Xie Jiawen, Anton Kanev*
11.	**Comparative analysis of machine learning methods for medical decision support systems**	*Nekoula Haddad, Konstantin S. Myshenkov*

Coffee Break 12:30-13:00

Continuing the participants' presentations (13:00-15:00)

Section D: Computing, Signal Processing and Analysis. Room (Д-209)

Chaired by:

Dr. Ramis V. Bulatov

12.	**Enhancing Arabic Text Classification: The Impact of Dataset Variety on BERT Model**	*Muhammad Aliah,Dmitry V. Berezkin, Ilya A. Kozlov*
13.	**Improving Data Transmission Efficiency in UAV Networks through Adaptive Coding**	*Majd M. Safadi, Vladislav B. Amoursky*
14.	**Algorithm Development and Research for Processing Measurements in a Bluetooth-Based Local Positioning Radio System**	*Dmitrii O. Makarevich, Andrey D. Razorvin, Grigoriy N. Tulin, Pavel Y. Anuchin, Anton O. Kirsanov, Igor A Lisiukov6*
15.	**Neural network-based control of an undulating robot for underwater pipeline tracking in Unity 3D**	*Aws Ahmad* *Arkady Yushchenko*
16.	**2D dynamic simulation of the undulating fin motion**	*Aws Ahmad, Yazan Wassouf, Ahmad Bshlawi*
17.	**Data Compression Efficiency in the Modified Meyer Wavelet Filters Based on the Atomic Functions: Impact of the Filter Coefficient Count**	*Ivan I. Fedorov, Nikita N. Trufanov, Yaroslav Yu. Konovalov, Oleg V. Kravchenko*
18.	**Analysis of the Machine Learning Methods for Optimizing the Wireless Access Point Position Indoors**	*Fedor S. Tikhomirov, Boris I. Bychkov*
19.	**Three ways to integrate microservices into MARL**	*Egor F. Morgunov*
20.	**Tree segmentation of airborne LiDAR point clouds using a graph-based algorithm**	*Iulia N. Ryzhkova, Daniil M. Zelinskii, Svetlana S. Loseva*

Section E: Nuclear and Mechanical Science Applications. Fields, Waves and Electromagnetics; Room (Г-101)

Starting the participants' presentations (10:00-12:30)

Chaired by:

Dr. Irina S. Anisimova & Eng. Alyona S. Solovyeva

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

1.	**Dynamics of a Solid Moving along an Elastic Base with Contact at Two Points of Support**	*Naim M., Astakhov S.V., Merkuryev I.V.*

2.	**Analysis and calculation of steel corrosion by metallic and oxide melt**	*Danil S. Tregub, Ivan A. Melnikov*
3.	**Development of magnetic transmission for auxiliary drives**	*Danil S. Taritsyn, Oleg N. Molokanov, Danil A. Orlov*
4.	**Estimation of the Suboptimal Control Accuracy in the Fastest Possible Bringing of a Physical Pendulum to an Arbitrary Position**	*Olga M. Kapustina, Alexander I. Kobrin, Anastasia D. Zhuravleva*
5.	**Nonlinear Effects in AI and NPPs: Experimental Validation of Frequency Conversion and Self-Oscillations in Reactor Hydraulics**	*Konstantin N. Proskuryakov, Marina S. Khvostova, Ragy M. Ismail*
6.	**The Impact of the fuel pellet's geometry on the thermomechanical state of the fuel element section**	*Pavel S. Aronov, Mikhail P. Galanin, Aleksandr S. Rodin*
7.	**Development of Methodologies for Predicting and Preventing Vibroacoustic Resonances in VVER NPPs**	*Konstantin N. Proskuryakov, Marina S. Khvostova, Ragy M. Ismail*
8.	**Development of Precision Laser Cutting Technology for Thin-Walled Metal Blanks: Stent Processing**	*Nikita I. Rodimkin, Alexander E. Shupenev*
9.	**Starfish Optimization Algorithm for Enhanced Parameter Identification of Proton Exchange Membrane Fuel Cell Models**	*Ahmed S. Menesy, Hamdy M. Sultan, Salah Kamel, Mahmoud Kassas, Mohamed A. Tolba, Mohamed Kourany Saad*

Coffee Break 12:30-13:00

Continuing the participants' presentations (13:00-15:00)

Section E: Nuclear and Mechanical Science Applications. Fields, Waves and Electromagnetics; Room (Γ-101)

Chaired by:

Dr. Irina S. Anisimova & Eng. Alyona S. Solovyeva

10.	**Low budget patch antenna design based on binary coding using the surrogate-based optimization**	*Maxim V. Artyuskin*
11.	**Effect of core/shell/shell semiconductor nanocrystals on optical properties of polymer membranes**	*Mikhail D. Govorov , Evgenii N. Zadorozhnyi, Nikolay A. Zadorozhnyi, Alexander V. Skrabatun, Evgenii A. Sharandin, Svetlana L. Timchenko*
12.	**Polariton Spectrum and Optical Features of Porous All-Metal One-Dimensional Plasmonic Photonic Crystal**	*Sofia A. Chebakova, Daria A. Gavrilovets, Maria A. Kulagina, Veronika V. Volkova, Vladimir V. Filatov*

13.	**Cassegrain-type double-reflector parabolic antenna with transformable reflector for small satellite**	*V.S. Zheleznova, E.V. Ovchinnikova*
14.	**Investigation of interferometer instability for a fibre wavelength meter**	*Nina V. Ilgovskaya, Tatyana V. Gritsenko, Andrey A. Zhirnov, Roman I. Khan, Sofia V. Seliverstova, Alexey B. Pnev*
15.	**Simulation and Analysis of the Temperature Field Effect on Deposition of the Photonic Crystal Films through Self-assembly**	*Vladislav A. Dyubanov, Ekaterina V. Panfilova*
16.	**Dual-band circular polarized antennas for small spacecraft**	*Oleg I. Melnichenko, Elena V. Komissarova*
17.	**Restoration, current approaches using the additive technologies: issues of transparency**	*Sergei V. Kurakov, Maria A. Melnikova, Aleksandr V. Bogdanov, Grigoriy V. Tikhomirov, Pavel N. Kotel'nikov*
18.	**Using Digital Acoustic Models to Create a Nuclear Reactor Twin**	*Konstantin N. Proskuryakov, Marina S. Khvostova, Ragy M. Ismail*
19.	**Wi-Fi signal propagation modeling**	*Sergey V. Rakhmanov, Daniil A. Loktev*
20.	**Optimal Sizing and Energy Management of an Off-Grid Hybrid Solar-Wind-Diesel-Battery System for Residential Electricity and Freshwater in Saudi Arabia**	*Ahmed S. Menesy, Hamdy M. Sultan, Mahmoud Kassas, Ibrahim O. Habiballah, Mohamed A. Tolba, Salah Kamel*

Conference Program (April 10, 2025)

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

Starting the participants' presentations (10:00-12:30)

Chaired by:

Prof. Artem S Vanin

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

1.	**Solar PV-Integrated EV CCCV Charger with MPPT-FLC-ACO and Hybrid FLC-PI Controllers for Three-Phase G2V Applications**	*Wongsathan R.*
2.	**Development of measurment methods adhesive properties of ice**	*Margarita A. Baranova, Alexey S. Osipkov, Roman A. Poshekhonov*
3.	**The properties investigation results of low-temperature co-fired ceramics**	*Svetlana V. Sidorova, Svyatoslav A. Khokhlun*
4.	**Innovation method in enhancing the internal surface of a heat exchange tube**	*Nikolai N. Zubkov*
5.	**Possible benefits of thermal load for energy flexibility in off-grid power systems energy service**	*Sofya Yu. Badamshina, Alexander V. Klokov*
6.	**Design of an Integrated Helio-Thermal Plant Scheme and Methodology for Assessing Its Performance**	*Aminjon R. Zokirzoda, Ruslan S. Tsgoev, Behruzi T. Shohzoda, Jamshed H. Karimzoda, Jamshed B. Rahimzoda, Manuchehr I. Safarov*
7.	**Forecasting the solar panel output using the machine learning methods**	*Abdula V. Bakhmadov*
8.	**A Comparative Study of Metaheuristic Optimization Algorithms for GMPP Tracking in Photovoltaic Systems Under Partial Shading Conditions**	*Salam J. Yaqoob, Salah Kamel, Francisco Jurado, Naseer T. Alwan, Mohamed A. Tolba*

Coffee Break 12:30-13:00

Continuing the participants' presentations (13:00-15:00)

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

Chaired by:

Prof. Artem S Vanin

9.	**Features of measuring acoustic characteristics of mufflers using the four-microphone method**	*Aleksei Ivanovich Bykov, Olga Yurievna Matasova, Alexander Ivanovich Komkin*

10.	**Selective laser spectroscopy of neutral near-wall layers**	*Aleksandr V. Kozyrev*
11.	**Near-wall plasma resonances of longitudinal waves**	*Aleksandr V. Kozyrev*
12.	**Fuel Materials for Next Generation of the Liquid Metal Fast Reactor: Physics, Technology and Acceptability**	*V.S. Okunev*
13.	**Acoustic barrier with sound-absorbing cylindrical cap on upper edge**	*Rukiyat N. Musaeva, Alexander I. Komkin, Polina M. Barannikova*
14.	**Creation and practical application: 3D modeling and calculation of porous ordered structure**	*Bulayeva V. S., Savchenkova N. M., Savchenkov A. M.*
15.	**Software for heat exchange numerical calculation in micro gas turbine recuperator**	*Svyatoslav S. Remchukov, Arsenii E. Sidorov, Sergey A. Burtsev*

Section B: Computing, Signal Processing and Analysis. Room (Д-26)

Starting the participants' presentations (10:00-12:30)

Chaired by:

Dr. Irina S. Anisimova & Eng. Alyona S. Solovyeva

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

1.	**Feature ranking methods for classifying vehicle motion and immobility states**	*Sergey Vasyukov, Vladislav Kabakov, Alexander Tronnikov*
2.	**Research of different neural network architectures for real-time metal surface defect detection**	*Ye Zheming, Valery I. Terekhov, Jin He*
3.	**Exploring contextualized embeddings for C++ code search and algorithms classification**	*Robert R. Khazhiev, Darya A. Skvortsova, Sergey N. Golubev, Lev R. Barabanshchikov*
4.	**Mathematical model and method of decision making in economic systems based on deep learning**	*Alina M. Minitaeva*
5.	**Generative user interface for the mobile apps: image synthesis with VAEs, GANs, and Stable Diffusion**	*Konstantin V. Kostinich, Dmitry A. Vidmanov*
6.	**Implementation of a neural network model on the Aurora operating system using ARM architecture**	*Daniil S. Markevich, Dmitry A. Vidmanov*
7.	**Building a conceptual structure of a text in the field of electric power industry**	*Daniil Trebukov, Danila Gromozdov, Evgeny Belousov, Sergey Oleynikov, Marina Zhamnova, Yuriy Gapanyuk*
8.	**An evolutionary metagraph approach for solving problems in complex subject areas**	*Anatoly N. Nardid, Stepan S. Vinnikov, Alexey V. Orazov, Yuriy E. Gapanyuk*
9.	**A complex network-based dialogue**	*Evgeny A. Belousov, Danila R. Gromozdov,*

	hybrid intelligent information system for solving tasks in thermal power engineering	*Dmitry V. Aladin, Marina O. Ponomareva, Nikita S. Klimov, Nikolay M. Gorkunov*
10.	**Application of metagraph model for three-dimensional visualisation of complex subject areas**	*Alexander M. Proshin, Ovannes G. Sargsian, Ivan A. Petrov, Ilya A. Kekin, Alexey V. Molchanov, Nguyen D. Lam*

Coffee Break 12:30-13:00

Continuing the participants' presentations (13:00-15:00)

Section B: Computing, Signal Processing and Analysis. Room (Д-26)

Chaired by:

Dr. Irina S. Anisimova & Eng. Alyona S. Solovyeva

11.	**Group Method of Data Handling (GMDH) in forecasting electric power consumption**	*Artem S. Babin, Mikhail I. Baryshnikov, Yuriy E. Gapanyuk*
12.	**Combined speckle removal based on the Wiener filter and wavelet transform using texture analysis**	*Y. S. Bekhtin, V. T. Trinh*
13.	**Synchronous Synthesis of Microwave Modulated Signal: Spectrum Purity Control & Analysis**	*Georgii A. Alekseev, Vladimir E. Martirosov*
14.	**Information retrieval system based on the knowledge extraction**	*Ilya V. Kolomichyk, Vadim V. Dzitiev, Anton I. Kanev*
15.	**Multilingual Sign Language Dictionary Development for Clinical Use**	*Arifa Ashrafi, Viktor S. Mokhnachev, Diem H. Chung, Ali Makhmud, Waseem Bacha*
16.	**A method for extracting classifying tags from the digital multimedia content using the neural network technologies**	*Andrey P. Bibikov, Yuri S. Belov*
17.	**Decentralized Cognitive Swarm-Based Control Systems: A Novel Approach for Autonomous Decision-Making and Adaptation**	*Pavel A. Panilov, Tatiana Y. Tsibizova*
18.	**Identifying intersections of planes using convolutional neural networks**	*Kirill D. Volkov, Pavel A. Panilov, Tatiana Y. Tsibizova*
19.	**Synchronous Synthesis of Microwave Modulated Signals: Transient Processes Control & Analysis**	*Vladimir E. Martirosov, Georgii A. Alekseev*
20.	**Analysis of ECG data using AutoML frameworks to predict the classification of some cardiovascular disease features**	*Andrey D. Shevchenko, Alexander K. Bukhov, Maria A. Skvortsova, Denis Andrikov*

Section C: Computing, Signal Processing and Analysis. Room (Д-207)

Starting the participants' presentations (10:00-12:30)

Chaired by:

Prof. Rinat R Nasyrov & Eng. Zhou Haochen

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

1.	**Multi-agent model-based deep reinforcement learning: testing the method in grid-world environments**	*Vladimir V. Bazhenov*
2.	**Infrastructure-as-Code approach for IT-infrastructure**	*Sergei A. Bykov, Vladimir A. Shiboldenkov*
3.	**A multimodal target detection method based on the MES and the improved BEV perception algorithm**	*Linghan Dou, Oleg O. Varlamov, Anton A. Kotsenko*
4.	**Forecasting time series in the stock exchange quotations using the Fourier series**	*Mark E. Khabarov, Vladimir V. Gurenko*
5.	**Phase center errors and noise power impact on DOA estimation for elliptical antenna arrays**	*Alexey A. Propastin, Vladimir V. Prokhorenko, Ivan M. Trifonov*
6.	**Evolution of the Software Development Methodologies**	*Nikita S. Antsifrov, Nekoula Haddad, Konstantin S. Myshenkov*
7.	**The application of the probabilistic analysis method in the design of complex technical systems**	*Khayrullin R. Zinnatullovich, Popov I. Andreevich*
8.	**Machine learning in non-stationary object classification tasks in cardiology**	*Valeria O. Platonova, Kirill D. Platonov, Maria Skvortsova, Denis Andrikov*
9.	**Studying data normalization methods in the sustainable development indicators analysis**	*Nikita O. Romanov, Darya A. Skvortsova, Nikita A. Filin, Boris A. Shvaiko, Andrey A. Kuznetsov*
10.	**Methods for creating contextual models of subject areas**	*Nikita G. Vorobyov, Anna Yu. Philippovich*
11.	**Discrete Wavelet Transform approach for reliable fault detection in Series Compensated Transmission Lines**	*Karim M. Gamal, Ahmed R. Adly, Mahmoud M. Elgamasy, Almoataz Y. Abdelaziz*

Coffee Break 12:30-13:00

Continuing the participants' presentations (13:00-15:00)

Section C: Computing, Signal Processing and Analysis. Room (Д-207)

Chaired by:

Prof. Rinat R Nasyrov & Eng. Zhou Haochen

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

12.	**Modern approaches to extraction text data from documents: review, analysis and practical implementation**	*Vladislav A. Philippovich, Anna Yu. Philippovich*
13.	**Initiatives in browser privacy enhance the Internet advertising market monopolization and infringe user privacy by sreading the web fingerprinting**	*Denis. S. Kirillov, Andrey V. Sukhobokov.*
14.	**Fast and lightweight multiagent image generation based on the evolution methods**	*Vali O. Magomedov*
15.	**Improving the Cloud Healthcare Services by introducing AI for Better Performance and Quality**	*Aisha Hamedi, Mohammad Nassr, Mohammad Ali Anbar, Vita V. Vlasova, Alena A. Zykina, Tan K. Sin*
16.	**A system for controlling the GUI by gestures using a webcam, based on MV algorithms**	*Nikita S. Borisov, Yuri S. Belov*
17.	**Digital technologies for content management of interactive electronic technical manuals**	*Sergey V. Tarkhov, Lyaylya M. Tarkhova, Anastasiya Sh. Minasova*
18.	**Algorithm for dynamic robot trajectory planning based on semantic object detection using a mivar expert system**	*Shen Qiujie, Gong Shengshuo, Kotsenko A. A., Varlamov O. O.*
19.	**Neural network architecture for scheduling tank trucks loading at petroleum products storages**	*Yuriy V. Ignatyev, Gennady I. Afanasyev*
20.	**Experimental Setups for Studying Network Attacks and Their Use in Machine Learning**	*Sergey S. Kostin, Daniil A. Uspenskii, Artem I. Antonov*
21.	**Comparative Evaluation of Machine Learning Models for Time Series Forecasting in Network Traffic Analysis**	*Areej Hussein, Gerald Guan Gan Goh, Mohammad Ali Anbar, Mohammad Nassr, Mariya I. Semenova, Tatiana V. Aksenova*

Section D: Transportation. Engineering Management and Financial Engineering. Medical Devices and Diagnostic Engineering. Room (Д-209)

Starting the participants' presentations (10:00-12:30)

Chaired by:

Dr. Ramis V. Bulatov

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

1.	**Training of power engineers using a digital educational platform: management features**	*Tarasov Y. Alexander, Gulicheva G. Elena, Sysoeva A. Ekaterina, Osipova S. Marina, Sazonova D. Irina, Silaev A. Maxim*
2.	**Modern approaches for improving the accuracy of radar-camera sensors in advanced driver assistance systems**	*Yazan Wassouf, Vladimir V. Serebrenny*
3.	**Justifying the equipment position in a universal cleaning system with its separate elements imrovement**	*Pavel.V. Vitchuk, Ekateriva V. Slavkina, Andrey A. Sidirov, Natalia A. Vitchuk, Nadezhda D. Reykhert*
4.	**Sensitive EEG brain signal detection for RGB color using laser integrated electrode**	*Amrit Lal Hui, Mrinal Vashisth*
5.	**Cost Effective and Sensitive Electrochemical Detection of Dopamine on Laser Driven Sensor**	*Mrinal Vashisth, Amrit Lal Hui*
6.	**Laser Driven Flexible Ultra-Robust Sensor for Bioelectronic Applications**	*Mrinal Vashisth, Amrit Lal Hui*
7.	**Integration of Risk-Based Approach in ESG Technology**	*Badalova A.G., Goncharova E.B., Volnaya S.A., Goncharova M.S.*
8.	**A Nash Equilibrium Prediction for Commodity Markets Using Machine Learning Methods**	*Anton A. Meshcheryakov, Oleg O. Khamisov*

Coffee Break 12:30-13:00

Continuing the participants' presentations (13:00-15:00)

Section D: Transportation. Engineering Management and Financial Engineering. Medical Devices and Diagnostic Engineering. Room (Д-209)

Chaired by:

Dr. Ramis V. Bulatov

9.	**Influence of Defects in Railway Transport System on Increase of Noise Exposure**	*Lilia A. Illarionova, Alexey A. Loktev, Daniil A. Loktev*

10.	**Depression Detection through EEG signal analysis: A Convolutional Autoencoder Deep Learning Model**	*Neda Firoz, Olga Grigorievna Beresteneva, Sergey Vladimirovich Axyonov, Alexander Nikolaevich Savostyanov, Alexander E. Saprygin*
11.	**Neural network approach to identifying anomalies in the traffic flow**	*Mikhail S. Tovarnov, Nikita V. Bykov*
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