Registration of Participants – *April 01, 2026*

(10:00 - 11:00 AM Moscow | 09:00 - 10:00 AM EGY | 11:00 - 12:00 AM UAE)

Opening Speeches

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

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

(April 01, 2026) (11:00 - 12:30 AM Moscow | 10:00 - 11:30 AM EGY | 12:00 - 13:30 PM UAE)

Moderator:

- **Prof. Rania Elsharkawy**, Dean of Education (Cairo Campuses), AASTMT, Egypt

Speeches:

- His Excellency, **Prof. Ismail Abd El-Ghaffar**, AASTMT President, Egypt.
- His Excellency, **Prof. Alexander Tarasov**, MPEI Vice Rector for International Cooperation, NRU, Russia.
- His Excellency, **Mr. Mikhail Belov**, Science and Technology Counsellor, Embassy of the Russian Federation to Egypt.
- **Prof. Yasser Galal**, Dean of College of Engineering & Technology (Heliopolis) AASTMT, Egypt.
- **Prof. Ghaleb Husseini**, Associate Vice Chancellor Research, AUS, Emirates.
- **Prof. Ahmed Madyan**, Chairman of the IEEE Egypt Section.
- **Prof. Rinat Nasyrov** & **Prof. Mohamed Tolba**, General Chairs of the IEEE REEPE Conference.

Keynote Speeches

1- **Title: Initiatives towards NET-ZERO**

Prof. Ahmed M. Darwish

Former State Minister for Administration Development

Professor of Computer Engineering

Consultant to a number of international organizations (UNDP, UNIDO, WHO, UNICEF, ILO, UNESCO, FAO, ESCWA, European Union and World Bank), government organizations and companies in Egypt, Middle East, Africa, Europe and the United States

Eng. Mohamed Medhat Abdlel-Rahman

Deputy Head of the Energy Committee in the Net-Zero Egypt Chapter

Managing Director of the Sustainable Green Energy and Energy Systems Business Unit in KORRA ENERGI

Certified Energy Manager (CEM).

2- **Title: Building the Resilient Power Grid of the Future with HVDC**

Prof. Khaled Ahmed

Professor of Power Electronics

Head of Power Electronics, Drives, and Energy Conversion (PEDEC) Research Group

University of Strathclyde, Glasgow, UK

3- **Title: Start a new era of all-scenario Grid Forming**

Dr. Carlos Alvarez

Director of Grid Connection

Huawei Middle East, Emirates

Conference Program (April 01, 2026)

Starting the participants' presentations (12:30 PM-14:00 PM)

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

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

Chaired by:

Prof. Nofri Y.B. Dahlan & Dr. Svetlana Fakhrieva & Eng. Alyona S. Solovyeva

1.	**Flashover Voltage Prediction of Polluted Insulators Using Extreme Gradient Boosting (XGBoost)**	*Rama Alkhtiar, Jamal Alnassier, George Isber, Ibrahim Alwazah*
2.	**The potential of agrovoltaics in Uzbekistan**	*Shavkat E. Begmatov, Zarifa G. Pulatova*
3.	**Solar Power Plant Cable Layout Based on Markov Clustering Algorithm**	*Vadim I. Zakutsky, Sanzhar A. Sharapov*
4.	**Situational Blindness in Power Distribution: How Current Transformer Saturation Makes Immeasurable Critical Power Transformer Overloads**	*Obed A. Nyarko, Vladimir N. Tulsky, Maxim A. Silaev*
5.	**Developing a Mathematical Analysis for Hydrogen Production in the Off-grid PV System**	*Zahra Pezeshki, Ildar Sultanguzin, Yury V. Yavorovsky, Alena Veresotskaya*
6.	**Similarity-Based Reduced-Scale Modeling of Overhead Transmission Lines: Error Analysis of π-Section Approximations**	*Rinat R. Nasirov, Daniil A. Isakov*

Coffee Break 14:00-15:00. Room (D-207)

Continuing the participants' presentations (15:00-16:30)

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

7.	**Study of an absorption-diffusion refrigeration machine with integration of a solar vacuum tube collector**	*Vasily S. Lukyanov, Baydaa Bo-Dakkah, Ildar A. Sultanguzin, Yury V. Yavorovsky, Anvar F. Karimov,Alexey V. Skorobatyuk*
8.	**Battling the Noise: Robust Machine Learning for Lithium-Ion Battery SoC Estimation**	*Alexei A. Druzhinin, Daniel Lisnovetski, Aleksei A. Matskevich*
9.	**Integrating Supercapacitor Energy Storage System on a Wind Turbine to enhance efficiency of work as a part of power systems**	*Ramis V. Bulatov, Rustam R. Khisamov, Tatyana V. Ruzina, Petr A. Balaev, Fedor A. Chudin*
10.	**Development of classroom lighting systems using a biodynamic model**	*Anastasia M. Borovkova, Ilya V. Korolev, Elena V. Fedorova, Alina Zagorskaya, E. Cheremnykh*
11.	**An Analysis of the Effectiveness of ESG Transformation in Russian Business:**	*I.V. Korolev, E.B. Goncharova, N.S. Kalmykova, M.S. Goncharova*

	Market Leaders	
12.	**Investigation of the Metrological Performance of Power Quality and Energy Meter with IEC 61850-9-2 LE Support**	*Olga A. Vasilyeva, Maria A. Shakhova, Ekaterina P. Lebedeva, Yulia A. Markovskaya, Yelizaveta A. Burtseva , Valeria D. Ugolkova*

Section B: Computing, Signal Processing and Analysis. Nuclear and Mechanical Science Applications. Room (D-209)

Chaired by:

Dr. Gasan Saypulaev & Dr. Zayed S.S. Ali

Start the participants' presentations (12:30-14:00)

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

1.	**A Queuing-Theoretic Modeling and Performance Evaluation of Data Frame Unification in Wireless Sensor Networks**	*Farah J. Yousef*
2.	**Steganalysis of digital images using neural networks**	*Ivan S. Vasilov, Alexander V. Sergeev, Pavel B. Khorev*
3.	**Phase-Change Material Networks with Collective Thermal Behavior**	*Diaa Alkhateeb*
4.	**Testing of the designed pulsed eddy-current device for corrosion monitoring of ferromagnetic pipes**	*Alexander K. Shepelev, Valery P. Lunin, Alexey M. Dobrenko, Vadim A. Gladovsky*
5.	**A Method for Reducing the Execution Time of Spectral Analysis and Assessing it's Resulting Error**	*Angelina A. Chirkova, Andrey N. Serov*
6.	**A Method for Enhancing the Accuracy of Amplitude Spectrum Measurement Based on Fractional Tuning of the Observed Sample Number**	*Artem S. Bozhevalov, Veronika A. Pertseva, Vadim A. Loginov, Elizaveta V. Koniushenko, Olga I. Baidakova, Andrey N. Serov*
7.	**Efficient MPI Parallelization of Sparse Conjugate Gradient Method Using Eigen Library**	*Andrey Chernetsov, Soe Min Htet*
8.	**Terrain-Aware Path Planning for a Mobile Robot Using Visual SLAM-Based Height Map Reconstruction**	*Meleshko P.N., Martynov A.I., Astakhov S.V., Razorvin A.D., Makarevich D.O., Glukhov O.V.*

Coffee Break 14:00-15:00. Room (D-207)

Continuing the participants' presentations (15:00-16:30)

Section B: Computing, Signal Processing and Analysis. Nuclear and Mechanical Science Applications. Room (D-209)

9.	**Hybrid Deep Learning Framework for Potato Disease Classification Using Transfer Learning and SMOTE**	*Ali S. A. Muthana, Elena V. Lyapuntsova, Adnan A. K. Al-Saeedi*
10.	**Learning-Based UAV–RIS Secure Communication Under Eavesdropper Location Uncertainty**	*Ehab S. Suleiman, Ali J. Dayoub*
11.	**A Machine Learning–Driven NDCG-Optimized MCDM Framework for Industrial Welding Robot Selection in Industry 5.0**	*Sara Samy Elkafas, Kalashnikov Evgeniy A.*
12.	**Dynamic Model of an Omni-platform Balancing on a Spherical Wheel**	*Saypulaev G.R., Saypulaev M.R., Demidov A.A., Ionina A.D., Lipatov A.A., Mohamed A.M.*
13.	**Method for Identifying Installation Errors of Mecanum-wheels on a Mobile Platform**	*Saypulaev G.R., Kalinin G.N., Astakhov S.V., Trapeznikova E.V., Leontyev S.V., Voloshko D.D.*
14.	**Determination of Workspace of a Quadruped Robot in Motion Planning and Control Problems**	*Saypulaev G.R., Saypulaev M.R., Mohamed A.M., Kazarinova A.S., Sibirtsev N.A., Lipatov A.A.*
15.	**Mathematical Model of the Dynamics of a Four-Wheeled Robot with an Elastic Chassis Suspension**	*Saypulaev M.R., Ionina A.D., Meshkov V.A., Makhmutov V.D., Grechko D.V., Kormakov A.A.*
16.	**Federated Reinforcement Learning for Intelligent Traffic Signal Control: A Privacy-Preserving Approach with Edge-Assisted Aggregation**	*Ali J. Dayoub, Ehab S. Suleiman*

Section C: Medical Devices and Diagnostic Engineering. Engineering Management and Financial Engineering. Room (D-213)

Chaired by:

Dr. Ahmed Hommoud

Start the participants' presentations (12:30-14:00)

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

1.	**Testing of the algorithm for calculating the duration of heating donor blood plasma prior to transfusion**	*Vakhtang N. Lemondzhava, Sergey V. Selishchev, Andrey D. Kasyanov, Daria V. Lastochkina*
2.	**Adaptive Fractional-Order Sliding Mode Strategy for Robust and Compliant Control in Upper-Limb Rehabilitation Robots**	*Turatbek B. Duishenaliev, Guijun Wu, Tatyana N. Dogadina, Zhanygyl Zh. Dotalieva*
3.	**The Risks of Using Artificial Intelligence in Pediatric Intensive Therapy**	*Tatiana S. Pilishvili, Ekaterina A. Cho*

4.	**Visible-near-infrared Imaging System for Eye Tracking**	*Nikita Ligostaev, Anton Stepanov, Andrey Somov*
5.	**Analysis of Early Signs of Parkinson's Disease Using Wrist-Worn IMU and Machine Learning**	*Mohammed Hammoud, Ola Haydar, Sergey Lupin, Andrey Somov*
6.	**Pupil Detection Algorithm for an Infrared Eye-Tracking System Based on Computer Vision Methods**	*Daria Pechenova, Nikita Ligostaev, Anton Stepanov, Andrey Somov*

Coffee Break 14:00-15:00. Room (D-207)

Continuing the participants' presentations (15:00-16:30)

Section C: Medical Devices and Diagnostic Engineering. Engineering Management and Financial Engineering. Room (D-213)

7.	**Design and Development of LRGO Sensor for Multi-modal Objective Assessment of Neurophysiological Pain**	*Mrinal Vashisth, Amrit Lal Hui, Nirmal K. Hazra*
8.	**Conceptual bases of the goods circulation, features of development and influencing factors**	*Sotnichenko E., Volnaya S.A., Tsibulskaya K. S.*
9.	**Digital transformation in project management**	*Volnaya S.A., Akhmetov D., Polin A.S.*
10.	**Leveraging Foreign Graduates' Potential for State's Benefit: An Innovative Model of Lifelong Professional Development**	*Tarasov A. E., Gulicheva E. G., Vokhmyanina A. N., Sysoeva E. A., Osipova M. S., Bibicheva O. Y.*
11.	**Novel and Cost-effective Laser Fabricated Graphene Sensor for Sensitive Electrochemical Detection of Biotin in Food Products**	*Amrit Lal Hui, Mrinal Vashisth, Nirmal K. Hazra*

Conference Program (April 02, 2026)

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

Chaired by:

Dr. Maxim V. Burmeyster

Starting the participants' presentations (11:00-12:30)

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

1.	**Assessment of Protective Devices and Conductors in DC Systems with Static Converter Supply**	*Nikolay Smotrov, Vladislav Ostroushko, Yuri Monakov, Pavel Trukhanov, Egor Sergeev*
2.	**Application a series compensator to improve the conditions of stable operation generating equipment hydroelectric power plant**	*Dmitriy V. Statsenko, Irina S. Anisimova*
3.	**Optimizing Electric Vehicle Charging Station Capacity through V2G and Capacitors**	*Ismail A. Soliman, Vladimir Tulsky*
4.	**Analysis of ways to protect underground utilities of buildings from stray currents**	*Ilya V. Korolev, N.V. Vasileva, V.O. Milovanova*
5.	**Remaining Useful Life (RUL) Prediction Model for Hybrid Battery Energy Storage System (BESS) At Commercial Building Using Long Short-Term Memory (LSTM)**	*Abdul Hafiz Abdul Halim, NY Dahlan, Muhammad Zulhamizan Ahmad*

Coffee Break 12:30-13:00. Room (D-207)

Continuing the participants' presentations (13:00-14:30)

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

6.	**Application of Battery Storage Systems in Electricity Markets**	*Rustam R. Khisamov, Petr A. Balaev, Anastasia A. Kurnaleeva, Vladimir N. Tulsky*
7.	**Power Quality Analysis Including the Regulatory Limitation for Current Harmonics**	*Olga A. Vasilyeva, Maria A. Shakhova, Yulia A. Markovskaya, Ekaterina P. Lebedeva*
8.	**High-speed Assembly of Spring Components with Pre-separation System**	*Kazarinova A.S., Lipatov A.A., Ionina A.D., Meshkov V.A., Astakhov S.V., Mohamed A.M.*
9.	**Vanadium Redox Flow Batteries applications for remote microgrids**	*Mikhail Pugach, Andrey Achitaev*
10.	**Particle Filter Based Joint State Estimation of a Vanadium Redox Flow Battery**	*Yasir Khan, Mikhail A. Pugach, Hamza Said, Federico M. Ibanez*

11.	**Numerical Simulation of the Magnetic-Pulse Hardening Process for Tool Steel Gear Shaper Cutters**	*Yuriy S. Byrkin, Fedor V. Chmilenko, Yuriy Y. Perevalov, Artem S. Melnikov, Artem N. Drevs*

Section B: Power, Energy and Industry Applications. Room (D-209)

Chaired by:

Dr. Bydaa Bo-Dakkah & Eng. Anastasia A. Kurnaleeva

Starting the participants' presentations (11:00-12:30)

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

1.	**Investigation of two-phase thermosiphons in passive cooling systems of spent fuel pools**	*S.E. Shcheklein, L.O. Yakovlev*
2.	**Computational and experimental study of film boiling in subcooled liquid**	*Nikita Krasnov, Daniil Deberdeev, Irina Molotova, Michael Vinogradov, Tatiana Gubanova, Ivan Molotov*
3.	**Heat inputs from electric cables in waste water pumping stations**	*Muhammet A. Razakov Alexandr Ya. Shelginsky*
4.	**The Theory of Heat and Mass Transfer in Low-Weber Drop of Fine-Dispersed Coolant Flow**	*Mikael D. Martirosyan*
5.	**Cooling of High-Temperature Bodies by a Submerged Jet of an Ethanol-Water Mixture**	*Tatiana A. Gubanova, Irina A. Molotova, Michael M. Vinogradov, Nikita A. Krasnov, Daniil D. Deberdeev, Victor V. Yagov*

Coffee Break 12:30-13:00. Room (D-207)

Continuing the participants' presentations (13:00-14:30)

Section B: Power, Energy and Industry Applications. Room (D-209)

6.	**CFD-Based Digital Model of a Supersonic Channel with Sensitivity to Initial Conditions and Nozzle Geometry**	*Anton S. Novokshonov, Manas Z. Shekenov, Nikolay S. Malastowski, Sergey S. Popovich*
7.	**CFD simulation of the combustion process in a steam boiler and comparison with zonal calculation methods**	*Mikhail N. Zaichenko, Marina D. Berezina, Dmitry A. Khokhlov, Igor L. Ionkin*
8.	**Analysis of steam flow equalization for VVER-1500 horizontal steam generator**	*Hossein Abdi, Najmeh J. Ouregani, Alexander S. Nikuli, Vladimir I. Melikhov, Oleg I. Melikhov*
9.	**Study of the influence of the diameter of the inlet vertical section on the structure of stratified flow in a horizontal pipe**	*Oleg I. Melikhov, Bashar F. Saleh, Darya V. Finoshkina, Vladimir I. Melikhov*
10.	**Engineering Estimates for the Feasibility of a Device Based on the Eckert–Weise Effect**	*Anton S. Novokshonov, Nickolay A. Kiselev, Nikolay S. Malastowski*

Section C: Components, Circuits, Devices and Systems. Transportation. Room (D-213)

Chaired by:

Dr. Ramis V. Bulatov

Starting the participants' presentations (11:00-12:30)

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

1.	**Gallium Arsenide Class AB Input Differential Stage of High Speed Operational Amplifier**	*Marsel A. Sergeenko, Vladislav E. Chumakov, Nikolay N. Prokopenko*
2.	**Design Features of Gallium Arsenide Operational Amplifiers based on a "Folded" Cascode**	*Vladislav E. Chumakov, Nikolay N. Prokopenko, Dmitriy V. Kleimenkin*
3.	**Investigation and Synthesis of frequency-tuned RC Oscillator with a Notch Filter**	*Elena M. Torina , Ivan I. Romanov*
4.	**Scheme for smoothly changing the polarity of the direct voltage on field effect transistors**	*Pavel K. Zakharov, Elena M. Torina*
5.	**FTIR-based optoelectronic sensor for rain and fog detection**	*Olga V. Korolkova, Ilya R. Rodin, Ilya N. Pavlov, Olga V. Pechinskaya*
6.	**A Cooperative Behavior of Autonomous Vehicles in Interaction with Priority Vehicles in Heterogeneous Traffic: A Simulation Study**	*Mikhail S. Tovarnov, Maxim A. Kostrov, Natalia S. Vlasova, and Nikita V. Bykov*
7.	**Determination of electromagnetic characteristics of thin films of electrical materials using percolation theory**	*Arsenii Evsiukov, Roman Shcherbakov, Yuliya Nosova, Leonid Maltsev, Viktoriia Katina, Artem Matveev*

Coffee Break 12:30-13:00. Room (D-207)

Continuing the participants' presentations (13:00-14:30)

Section C: Components, Circuits, Devices and Systems. Transportation. Room (D-213)

8.	**Investigation of the applicability of the RISC-V software ecosystem for industrial control systems**	*Karantaev V.G., Latyshov K.V., Blinov A.S., Rusin A.N.*
9.	**Analysis of the power spectral density of a biharmonic oscillator in the synchronous biharmonic mode with a frequency multiplicity of two**	*Ekaterina S. Vetluzhskikh, Galina A. Altukhova, Nikita A. Borodin, Daniil A. Frolov, Ivan S. Prishvitsyn*
10.	**AI SWIR Camera: Deep-Learning-Based Super-Resolution and Segmentation for Multispectral Short-wave Infrared Imaging**	*Vladislav Tuchin, Vladimir Shumigai, Gleb Brykin, Azat Ismagilov, Anastasiia Lappo-Danilevskaia, Valeria Efimova*
11.	**Resonant frequency of the equivalent oscillatory system of a spintronic oscillator**	*Ekaterina S. Papoyan, Lyudmila A. Tsyrulnikova, Ansar R. Safin*
12.	**Optimization of bottom electrode geometry in TiO_2 cross-bar memristors**	*Igor L. Jityaev, Maxim S. Kartel, Yulia Yu. Jityaeva, Vladimir A. Smirnov*
13.	**Bending-induced resistive switching modulation in flexible ITO/TiO_2/graphene memristors for neuromorphic systems**	*Igor L. Jityaev, Maxim S. Kartel, Yulia Yu. Jityaeva, Vladimir A. Smirnov*
14.	**Weak-coupling model for a superconducting particle in a triangular Abrikosov vortex lattice**	*Roman Shcherbakov, Arsenii Evsiukov, Leonid Maltsev, Viktoriia Katina, Artem Matveev*
15.	**Micromachined Thermal Flow Sensors on Zirconia Ceramic Membrane**	*Ekaterina A. Drach, Ivan G. Borzunov, Vasily V. Egorov, Boris E. Prudnikov, Nikolay N. Samotaev, Konstantin Yu. Oblov*

Conference Program (April 03, 2026)

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

Chaired by:

Dr. Maxim V. Burmeyster

Starting the participants' presentations (11:00-12:30)

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

1.	**Improvement of the excitation system for a superconducting electrical machine**	*Boris F. Kuznetsov, Ivan I. Solovev, Aleksei L. Lisitsyn*
2.	**Modeling and Analysis of Losses in Distribution Networks under Loads with Different Spatio-Temporal Distributions**	*Yuhan Xie, Galaktion V. Shvedov*
3.	**Unraveling the reasons of capacity decay in Vanadium Redox Flow Batteries**	*Nikita Buriak, Ilia Khristoforov, Mikhail Pugach*
4.	**Analysis of Electrical Load in Apartments of Multi-Storey Residential Buildings within Urban Power Supply Systems**	*Zheng Wu, Ximeng Wang, Galaktion V. Shvedov*
5.	**Influence of Frequency and Phase on the Operation and Resonance of the DC-DC Converter**	*Ivan A. Cherdintsev, Alexander N. Rozhkov, Artush V. Badalyan, Ahmed M. Elkholy*
6.	**Assessment of Solar Energy Potential in Egypt**	*Ragy M. Ismail, Anatoly N. Makarov, Konstantin B. Korneev, Alexander Y. Rusin, Dmitry V. Chernyshov, Dmitry K. Ivanov*
7.	**Thermal and structural analysis of the turbine blisk of the small-sized gas turbine engine with oil-mist cooling system**	*Aleksandra A. Faizrakhmanova, Maksim A. Danilov, Svyatoslav S. Remchukov, Anton V. Salnikov*
8.	**Quantifying Modeling-Assumption Errors in Physical Transformer Simulation**	*Rinat R. Nasirov, Daniil A. Isakov*

Coffee Break 12:30-13:00. Room (D-207)

Continuing the participants' presentations (13:00-14:30)

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

9.	**Comparative Analysis of Single and Dual Phase Shift Control for Reactive Power Mitigation in Dual Active Bridge DC-DC Converter under RL Load Conditions**	*Amirul Shafiq Abdul Razak, Suriana Salimin, Erwan Sulaiman, Sim Sy Yi, Md Zarafi Ahmad, Maxim V. Burmeyster*

10.	**FPGA-Based Two-Phase Interleaved Boost Converter for Battery Charger with Reduced Inductor Current Ripple**	*C.C. Wai, A.A. Bakar, M.Z. Ahmad, E. Sulaiman, A. Ponniran, Ramis V. Bulatov*
11.	**Optimization of Fiber-Optic Sensor Parameters to Improve Deformation Measurement Accuracy**	*Nurzhigit Smailov, Askar Abdykadyrov, Zhandos Dosbayev, Sunggat Marxuly, Zhiger Zhanatayuly*
12.	**Algorithm for operating centrifugal well pumps based on an energy-efficient system**	*Sanjarbek Odilov, Jamshidbek Obidov, Shokhrukh Rubidinov, Jasurbek Gayratov, Rakhmatjan Tadjikuziev*
13.	**Control of Grid-Connected PV Systems Using INC-Based MPPT Technique with DC-DC Boost Converter Integration**	*Ibram Y. Fawzy, Ahmed A. Zaki Diab, Mohamed A. Tolba, Hussien I. Abdul-Ghaffar, Mohamed Kourany Saad*

Section B: Power, Energy and Industry Applications. Room (D-213)

Chaired by:

Dr. Ramis V. Bulatov

Start the participants' presentations (11:00-12:30)

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

1.	**Assessment of the impact of technological connection on the effectiveness of using storage devices to align the daily load profile**	*Mikhail A. Shakh, Galaktion V. Shvedov*
2.	**Main aspects of ensuring the mechanical strength of polymer insulating structures of gas-filled high-voltage equipment**	*Vladimir N. Varivodov, Dmitriy A. Kruglikov, Alexandr A. Nesterenko, Sergey V. Graudyn, Elizaveta A. Kiseleva*
3.	**Model-Based Analysis and Validation of an Adaptive Flow Control Strategy for VRFBs under Dynamic Loading**	*Ilia Khristoforov, Nikita Buriak, Stanislav Bogdanov, Aleksei Chernyshov, Federico Martin Ibanez, Mikhail Pugach*
4.	**Development of a method for valuation of microgrid power supply with market mechanisms for recouping BESS**	*Andrei A. Samoilov, Maxim V. Burmeyster, Anastasia A. Samoilova*
5.	**Assessment of pollution accumulation on insulators using leakage current measurements**	*Shereen Gath, Dmitry Titov*
6.	**Diesel power plant fuel efficiency under variable speed diesel generator integration**	*Stepan I. Iakibchuk, Nikolay I. Ignatev, Rashid R. Ganeev*
7.	**Techno-Economic Analysis of Energy Storage Deployment for Large Energy Consumers in Russia**	*Lev Ladanov, Marina Dolmatova*

Coffee Break 12:30-13:00. Room (D-207)

Continuing the participants' presentations (13:00-14:30)

Section B: Power, Energy and Industry Applications. Components, Circuits, Devices, and Systems. Room (D-213)

8.	**Mechatronic Design and PID Control of DC Motor-Actuated Robotic Grippers: A SolidWorks-to-Simulink Implementation**	*Ahmed A. Zaki Diab, Rufaidah Shehata, Hamdy M. Sultan, Abou-Hashema M. El-Sayed, Kotin A. Denis, Hussien I. Abdul-Ghaffar*
9.	**Development of a mathematical model for substantiating the energy efficiency of a "Climate Control" device**	*Doniyor Tursunov, Anvarjon Xaqiqov, Abdulahad Ashurov, Abdinabi Eraliyev, Nodira Farxodjonova, Shakhzodbek Numonjonov*
10.	**Geometric shape and characteristics of the hydro turbine**	*Sanjarbek Urmonov, Abdullajon Khomidov, Kambarali Akhunov, Nematulla Karimov, Bobirbek Mirzaliyev, Musulmonkul Mamadaliev*
11.	**Performance Comparison of HEFSM using Modular rotor and Salient rotor**	*Saira Soomro, Erwan Bin Sulaiman, Md Zarafi Bin Ahmed, Sim Sy Yi, Suriana Binti Salimin, Sergey V. Shirinskii*
12.	**Maximizing Solar Panel Energy Output Using Multi-Junction Cells Combined with Quantum Dots**	*Ahmad Zhahirin Adly, Sim Sy Yi, Erwan Bin Sulaiman, Suriana Binti Salimin, Md Zarafi Bin Ahmad, Vaskov A.G.*
13.	**Design Consideration of Inductor and Capacitor Components in Multilevel Boost Converter for EV Application**	*Asmarashid Ponniran, Md Zarafi Ahmad, Samsul Haimi Dahlan, Afarulrazi Abu Bakar, Erwan Sulaiman, Mohd Rostam Anuar*

Section C: Nuclear and Mechanical Science Applications. Fields, Waves and Electromagnetics. Room (D-209)

Chaired by:

Dr. Bydaa Bo-Dakkah & Eng. Anastasia A. Kurnaleeva

Start the participants' presentations (11:00-12:30)

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

1.	**Advanced Numerical Modelling of Film Wise Condensation in Mini and Microchannels**	*Diaa Alkhateeb, Yuriy V. Lyulin*
2.	**Experimental investigation of explosive interaction of melted tin drops and steel spherical bodies with cooling water**	*Yuri P. Ivochkin, Stepan M. Yudin, Kira A. Lesechko*
3.	**Validation of the STEG-IATE thermohydraulic code on experimental PGV-1000 data with a reconstructed feed water system**	*Alexander S. Nikulin, Vladimir I. Melikhov, Evgeny O. Babkin*
4.	**Investigation of Cooling Regularities of High-Temperature Bodies Applied to Accident Tolerant Nuclear Fuel**	*Daniil Deberdeev, Nikita Krasnov, Irina Molotova, Michael Vinogradov, Tatiana Gubanova, Arslan Zabirov*
5.	**On the process-microstructure correlation for wire additive manufacturing with metallic alloys**	*Vsevolod D. Anisimov, Matvey A. Merkulov, Iuliia A. Sadykova, Eugene S. Statnik, Alexey I. Salimon, Alexander M. Korsunsky*
6.	**Noise Immunity of Relay Protection and Automation Devices on the Communication Line and Power Supply Port**	*Sergey G. Chumarov*
7.	**Spectral Properties of Optical Dimer Chains with Topological Defects**	*Nikita V. Bykov, Natalia S. Vlasova, Olga V. Minina*

Coffee Break 12:30-13:00. Room (D-207)

Ending the participants' presentations