## 13 November

### The Opening Ceremony

- **10:00 Moscow time**
  - Welcome speech from the Anastaiia Rusina, D.Sc., Dean of the Energy Faculty of Novosibirsk State Technical University
- **10:15 – 10:35**
  - Invited speaker: Zagdkhorol Bayasgalan, Ph.D., Associate professor at Power Engineering School, Mongolian University of Science and Technology. Security assessment and flexibility in the Energy System
- **10:35 – 10:55**
  - Invited speaker: Stanislav Eroshenko, Ph.D., Ural Federal University, CIGRE NGN Executive Committee Vice-Chair. Machine Learning for Solar energy forecasting

### Section I: Automated Electrical Systems

- **11:00 – 11:15**
  - Research of the Number and Installed Capacity of Solar & Wind Power Plants in Interregional and Regional Power Systems in the Russian UPS. Alena Savosina (ID 3517)
- **11:15 – 11:30**
  - The Georgian Power System Hydro Power Plants Install Capacity Review. Olga Pichugova (ID 3513)
- **11:30 – 11:45**
  - Methods for Formation and Tunning of Group Prognostic Controller of Hydrogenerators Rotors’ Rotational Frequency. Konstantin Suslov (ID 3412)
- **11:45 – 12:00**
  - Collaborative Control of Hydroelectric and Thermal Power Plants Units During Emergency Departures of Frequency. Maksim Elaev (ID 3369)
- **12:00 – 12:15**
  - N-1 Based Multiobjective Optimization of Static Var Compensator Placement Using Heuristic Methods. Danil Ignatev (ID 3500)
- **12:15 – 12:30**
  - Improving The Algorithm Of Power Station Unloading Automation In Case Of Fault. Anatoly Osintsev (ID 3475)
- **12:30 – 12:45**
  - Automation of the Adaptive Heavy-Loaded Trajectory Identification Algorithm. Vasilyi Sukhorukov (ID 3464)
- **12:45 – 13:00**
  - Python - Alternative Tool for Calculating Electric Power Modes of IPS. Alena Sidorova (ID 3456)
- **13:00 – 13:15**
  - Application of Long Short-Term Memory for Energy Load Prediction in the Microgrid Using Python software. Alexander Zhavoronkov (ID 3401)

### Contact Details

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SECTION I: AUTOMATED ELECTRICAL SYSTEMS

13:45 - 14:00
- An Improved Method of Electric Braking for Power System Transient Stability in Severe Emergency Disturbances. Anna Arestova (ID 3418)

14:00 - 14:15
- Application of the “Worst Case” Method to Estimate the Spectrum and Power Measurement Error Caused by ADC Imperfection. Andrey Serov (ID 3319)

14:15 - 14:30
- Renewable Energy Sources as Part of the Auxiliary Network of Small and Micro Hydropower Plants. Andrey Achitaev (ID 3316)

14:30 - 14:45
- Fundamentals of Multichannel Structural Analysis Of Electrical Signals. Evgeny Vorobyev (ID 3302)

14:45 - 15:00
- Analysis of Transient Processes in a Three-Phase Single-Machine System with a High-Temperature Superconducting Transformer. Dmitriy Ivanov (ID 3285)

15:00 - 15:15
- Application of Interpolating Polynomials for the Active Power Within a Given Frequency Band Measurement. Andrey Serov (ID 3281)

15:15 - 15:30
- Development of a Software Module of Intra-Plant Optimization for Short-Term Forecasting of Hydropower Plant Operating Conditions. Anna Arestova (ID 3263)

15:30 - 16:00

BREAK

SECTION II: POWER EQUIPMENT, ELECTRICAL MACHINES AND DRIVES

16:00 - 16:15
- Simulation and Analysis of Reactive Power Consumption of the Coal Mine Excavation Area. Vyacheslav Voronin (ID 3488)

16:15 - 16:30
- The Mathematical Model of Pulse Width Modulation Frequency Converter. Bohirjon Sharifov (ID 3382)

16:30 - 16:45

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**SECTION II: POWER EQUIPMENT, ELECTRICAL MACHINES AND DRIVES**

17:05 MOSCOW TIME

16:45 – 17:00
- Induction Heating of the Large-Size Installations. Part 2. Study of the Power Supply Parameters. **Fedor Tarasov** (ID 3542)

17:00 – 17:15
- Influence of the Turbulence Scale of Gas Flows on the Heat Exchange Intensity in Channels with Different Cross Sections. **Leonid Plotnikov** (ID 3532)

17:15 – 17:30
- Long-term Wind Power Development in Morocco: Optimality Assessment using Bottom-up Modeling. **Jabran Slimani** (ID 3431)

17:30 – 17:45
- Synchronization Digital Device Development for Generators Automatic Connection to the Network by Various Methods. **Viktoriya Fyodorova** (ID 3392)

17:45 – 18:00
- Study of the Dc-Dc Boost Converter Physical Model. **Kamola Gulyamova** (ID 3374)

18:00 – 18:15
- Hazard Assessment of Low-voltage Insulated Neutral Networks with Unstable Single-phase Fault. **Darya Kugucheva** (ID 3365)

**SECTION III: DIAGNOSTIC, PROGNOSTIC AND MAINTENANCE METHODS**

14 NOVEMBER

08:30 MOSCOW TIME

08:45 – 09:00
- Distributed Optical Sensor System for Comprehensive Power System Equipment Monitoring. **Igor Naumov** (ID 3404)

09:00 – 09:15
- Development and Verification of an Advanced Method for Diagnosing Measuring Transformers. **Alexandra Sidorova** (ID 3339)

09:15 – 09:30
- Adaptive Single-End Fault Location Method. **Aleksey Fedorov** (ID 3293)

09:30 – 09:45
- Investigation of Energy Storage Systems - Improvement of Utilization by Use Case Combination. **Lukas Böhning** (ID 3537)

- Distributed Optical Sensor System for Comprehensive Power System Equipment Monitoring. **Alexander Shapeev** (ID 3558)

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<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
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<tbody>
<tr>
<td>09:45 - 10:00</td>
<td>The Prospects of Distributed Generation in Russia. Andrey Bramm (ID 3528)</td>
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<tr>
<td>10:30 - 10:45</td>
<td>The Concept of Optimizing the Efficiency of the Calculation of the Electrical Loads of Kindergartens and Schools. Azat Akhmetshin (ID 3423)</td>
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<tr>
<td>10:45 - 11:00</td>
<td>The Basic Tasks in the Development of the Smart Protection Device. Daria Stepanova (ID 3391)</td>
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<td>11:00 - 11:15</td>
<td>Adjusting the Requirements to the Allowable Current and Voltage Error in Active Power Systems. Konstantin Suslov (ID 3311)</td>
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<td>11:30 - 11:45</td>
<td>Model of Optimal Load Control for Electric Power Stations in a Hydrothermal Power System on the Basis of Maximization Profit Criteria. Tatyana Myateg (ID 3560)</td>
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<td>11:45 - 12:00</td>
<td>Development of Energy Management System Based on a Digital Platform. Fedor Nepsha (ID 3460)</td>
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<td>12:00 - 12:15</td>
<td>Recurrent and Ensemble Models for Short-Term Load Forecasting of Coal Mining Companies. Pavel Matrenin (ID 3321)</td>
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<tr>
<td>12:15 - 12:30</td>
<td>IT Risk Assessment of Companies in the Energy Sector. Pavel Matrenin (ID 3552)</td>
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**BREAK**

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<tr>
<th>14:00 MOSCOW TIME</th>
<th>SECTION VI: POWER ENGINEERING EDUCATION</th>
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<tbody>
<tr>
<td>13:30 – 13:45</td>
<td>The energy companies reports study for the formation of maps and power and energy balances on the example of Lithuanian power system. Olga Pichugova (ID 3540)</td>
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<tr>
<td>13:45 – 14:00</td>
<td>Formation of a Digital Educational Ecosystem For Lifelong Learning in the Area “Technosphere Safety”. Marina Legan (ID 3362)</td>
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<tr>
<td>14:15 – 14:30</td>
<td>Role and Contribution of the Dispatch Control System of the Power Industry for City Status. Vladimir Griažnov (ID 3555)</td>
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