

**WORKSHOP
PROGRAMME**

March 17

Arrival in the Baikalsk and registration of participants

Welcome Party

March 18, 10:00

OPENING CEREMONY

Session 1:

1. Flexibility Problems of Electric Power Systems/ **Nikolay Voropai**
2. Digitalization of electricity consumption / **Elena Galperova**, Olga Mazurova
3. Model-instrumental means for research of critical energy infrastructure / **Natalia Pyatkova**, Natalia Beresneva
4. Intelligent tools of strategic decisions making support on development of Smart Grid/ **Aleksei Massel**, Liudmila Massel
5. Problems of search for critical facilities in the gas industry in terms of energy security of Russia / Sergei Vorobev, **Sergey Senderov**
6. Application Big Data for Forecasting of Energy Technology / **Aleksei Kopaygorodsky**
7. Electromagnetic environment management in smart railroad power systems / **Natalya Buyakova**, Vasily Zakaryukin, Andrey Kryukov
8. Multi-criteria optimization of the heat energy sources structure / **Olga Edeleva**, Valery Stennukov

Round table / Discussion

“Digitization and Energy”

Keynote speakers: Liudmila Massel, Irina Kolosok

Session 2:

1. Post-stimulation analysis for atomic-molecular clusters / **Alexander Gornov**, Anton Anikin
2. Techniques for software performance and reliability testing / Tatiana Zarodnyuk, P. Sorokovikov, **Anton Anikin**, Fedor Khandarov
3. Composition of machine learning models in biomedical diagnostics / Fedor Khandarov, Stanislav Maltcev, **Liliya Alekseeva**
4. On one approach to the identification of artifacts in forests according to radio images / **Dugar Badagarov**, Fedor Khandarov, Tumen Tchimitdorzhiev
5. Collection of reachable sets for dynamical systems with linear controls / Alexander Gornov, **Tatiana Zarodnyuk**, Anton Anikin, P. Sorokovikov, Evgenia Finkelshtein
6. Metallic Gupta clusters of extremely large dimensions / **Pavel Sorokovikov**, Alexander Gornov
7. The application of the knowledge-based systems development platform for creating scenario analysis support tools **Alexandr Stolbov**, Alexandr Pavlov
8. Conceptual knowledge model for studies of the critical infrastructures of energy / **Tatiana Vorozhtsova**, Pyatkova Natalia
9. Converting network-unlike data into complex networks: problems and prospective / **Andrey Trufanov**, Alexei Tikhomirov, Nikolay Kinash, Olga Berestneva, Alessandra Rossodivita, Elena Mokina

Round table

A method of experts' knowledge agreement for industrial safety expertise tasks / Olga Nikolaychuk, Alexandr Yurin

Keynote speakers: Olga Nikolaychuk

Session 3:

1. Intellectual decision support in energy and ecology, taking into account the quality of life / **Liudmila Massel**
2. Impact of critical energy facilities on components of the environment / Elena Maysyuk, Irina Ivanova, **Alexander Izhbuldin**
3. Ontological approach to the design of database and knowledge base for assessing the impact of energy facilities on the environment / Tatiana Vorozhtsova, **Nadezhda Makagonova**
4. Computer simulation of physico-mathematical modelling of energy impact on the environment / **Maxim Zarodnyuk**, Massel Aleksey, Ivanov Roman
5. Using heatmap tools to research and validate decisions in the energy field/ **Rodion Markov**
6. Algorithm for the production rules formation from cognitive models/ **Dmitry Pesterev**
7. Digital Health: Problems of Formation and Quality of Life / **Marina Diakovich**
8. Representation of subject knowledge from the field of vulnerability analysis of energy systems in distributed applied software packages / Natalia Beresneva, **Alexey Edelev**, Sergei Gorsky, Ivan Sidorov, Alexander Feoktistov

Round table

**“Methods and technologies for the assessment of energy impact on the
geoecology of the region”**

Keynote speakers: Liudmila Massel, Alexander Izhbuldin

March 21, 10:00

Session 4:

1. Problems of cyber security of digital substation / **Irina Kolosok**, Elena Korkina
2. Authentication in critical infrastructure systems using intellectual behavioral analysis / **Andrey Ishakov**
3. On Application of Distributed Ledger Technology for Storing the Information from Smart Meters / **Konstantin Mironov**, Sergey Trishin, Amir Makhmutov, Thilo Sauter, Marcus Meisel, Vadim Kartak
4. The development of the stratified model of critical infrastructures on the example of energy from the standpoint of energy and cyber security / **Daria Gaskova**
5. Advances and trends in energy systems research through bibliometric approach / **Aleksey Mikheev**
6. Use of Ontologies in Semantic Systems / **Elena Khairullina**
7. On solving the problem of equal balls packing in a multi-connected set / **Anna Lempert**, Alexander Kazakov, Ta T.T.
8. Methodical approach and tools for the collaborative work of scientific groups in energy research / **Ilya Khairullin**

Round table

“Energy systems cybersecurity”

Keynote speakers: Aleksei Massel, Daria Gaskova

March 22, 10:00

Session 5:

1. Modeling activities of financial blockchain-intermediaries / **Roman Erzhenin**
2. The role of specialized thesauruses in cognitive technologies / **Natalia Tuchkova**

3. Some aspects of publications in international databases / **Aleksei Ermakov**, Natalia Tuchkova
4. Making Baikal tourism infrastructures efficient and resilient: comprehensive network approach / **Andrey Trufanov**, Olga Berestneva, Alexei Tikhomirov, Nikolay Kinash, Maria Kuklina, Vera Kuklina, Irina Bilichenko, Alessandra Rossodivita, Zamira Ashurova
5. Optimization models for the procurement of food wild-growing products with expert assessments / **Sophia Petrova**, Yaroslav Ivanyo
6. Output forms for the calculation results in the Computing & geo-Information System / **Ivan Trofimov**, Leonid Trofimov, Sergei Podkovalnikov, Lyudmila Chudinova
7. Application of the Agent-service approach to building intelligent decision support system / **Vasiliy Galperov**, Vladimir Kuzmin
8. Development of intelligent decision-making support system using agent-service approach and contingency management language / **Vladimir Kuzmin**
9. Software Systematization in Critical Infrastructures / **Leonid Arshinskiy**, Vadim Arshinskiy, Sergey Bakhvalov
10. Architecture of information system for monitoring the state of roads / **Sergey Bakhvalov**, A. Bondarev

Round table

“ Blockchain - new generation infrastructure ”.

Keynote speakers: Roman Erzhenin, Aleksei Massel.

All participants are invited to the Farewell dinner at the end of the day.

March 23, 10:00

GENERAL DISCUSSION

It is time for free discussions and establishment of research contacts

POSTER PRESENTATIONS

1. Valery Taranchuk. Intelligent Computing, Neural Networks, Cognitive Graphics in Computer Models of Forest Fires
2. Marina Polkovskaia, Valerii Zorkaltsev. Situation management of agricultural production based on the prediction of prices for agricultural products
3. Sergei Skripkin. Ontological space of Reimers (System paradigm in system-wide generalizations)
4. Aleksey Edelev, Dmitriy Karamov, Doan Van Binh, Nguyen Hoai Nam, Nguyen Hong Anh, Nguyen Viet Huong. The Long-Term Development Planning of Energy Critical Infrastructures of Vietnam
5. Evgeny Barakhtenko, Sokolov Dmitry. Architecture of information and technology platform for optimal development of heating systems
6. Yurii Bulatov, Andrey Kryukov. Generator digital controllers distributed generation plants
7. Alexey Edelev, Evgeny Barakhtenko. Vulnerability analysis of intelligent integrated energy systems
8. Fedor Khandarov, Liliya Alekseeva, Stanislav Maltcev. Machine learning models composition for biomedical diagnostics
9. Fedor Khandarov, Dugar Badagarov, Tumen Tchimitdorzhiev. About an approach to the artifacts recognition in forests according to radio image data
10. Sergei Senderov, Elena Smirnova, Sergei Vorobev. Estimation of the energy security level of regions by the example of the siberian federal district
11. Dmitry Sokolov, Evgeny Barakhtenko. Metaprogramming in the information and technology platform for optimal development of heating systems
12. Alexander Stolbov, Alexander Pavlov, Olga Nikolaychuk. The agent-based modeling method for the study of unique mechanical systems

CLOSING CEREMONY

March 24, 10:00

Departure of the participants