March 26

Departure from Irkutsk at 12:00
Arrival in the Baikalsk and registration of participants

March 26, 17:00

OPENING CEREMONY

SESSION 1

1. Situational awareness and a value driven approach to address misinformation / Komendantova Nadejda (*International Institute for Applied Systems Analysis, Laxenburg, Austria*)

2. On integrated approach to the retrieval of information on critical situations / Tuchkova Natali (*Dorodnicyn Computing Center of FRC CSC RAS, Moscow*)

3. About geographical search for information based on zoospace platform, taking into account time changes / Leonova Yuliya, Zhizhimov Oleg (*Institute of Computational Technologies SB RAS, Novosibirsk*)

March 26, 20:00
Welcome Party
SESSION 2


2. Digital twins as one of the trends in energy digitalization / Massel Liudmila (Melentiev Energy Systems Institute SB RAS, Irkutsk)

3. Architecture of information system for analysis of big data in energy sector research / Kopaygorodsky Aleksei, Khairullin Ilya (Melentiev Energy Systems Institute SB RAS, Irkutsk)

4. Virtualization in building of digital twins and digital images / Massel Aleksei (Melentiev Energy Systems Institute SB RAS, Irkutsk)

5. The approach to developing digital twin of solar power plant / Massel Aleksei, Tsybikov Aleksey, Shchukin Nikita (Melentiev Energy Systems Institute SB RAS, Irkutsk)

6. The digital twin development of a solar power plant / Massel Aleksei, Shchukin Nikita, Tsybikov Aleksey (Melentiev Energy Systems Institute SB RAS, Irkutsk)

7. Data emulation for Scada virtual standas a stage of digital twin building / Losev Aleksey, Massel Aleksei (Irkutsk National Research Technical University, Melentiev Energy Systems Institute SB RAS, Irkutsk)

8. Information protection in cloud data storages / Arshinsky Leonid, Shurkhovetsky Georgy (Irkutsk State Transport University, Irkutsk)


DISCUSSION

March 27, 17:00

Round Table: «Digital Twins: Problems and Perspectives»
Keynote Speakers: Massel Liudmila, Kolosok Irina
SESSION 3

1. About of using the concept of scale in the design of a complex information system / Erzhenin Roman (SPC «Gosuchet», Moscow)

2. Network scope on complex sustainability of socio-economic and environmental systems in rural territories of Eastern Siberia / Berestneva Olga1, Trufanov Andrey2, Kuklina Maria2, Kobylkin Dmitriy3, Krasnoshtanova Natalia3, Istomina Elena3, Kuklina Vera4, Tikhomirov Alexei5, Rossodivita Alessandra6, Kinash Irina7

1 Tomsk Polytechnic University, Tomsk, 2 Irkutsk National Research Technical University, Irkutsk, 3 V. B. Sochava Institute of geography SB RAS, Irkutsk, 4 George Washington University, Washington, D.C., USA, 5 INHA University, Incheon, Republic of Korea, 6 Ospedale Luigi Sacco, Milan, Italy, 7 Irkutsk Scientific Centre of Surgery and Traumatology, Irkutsk

3. Optimization of agricultural production using a price forecasting model with a seasonal component / Polkovskaya Marina, Ivanyo Yaroslav (Irkutsk State Agrarian University named after A.A. Ezhevsky, Irkutsk)

4. Ecological-mathematical modeling in problems of planning of production of agricultural products in conditions of risks / Ivanyo Yaroslav, Kovaleva Evgeniya, Petrova Sofia (Irkutsk State Agrarian University named after A.A. Ezhevsky, Irkutsk)

5. Software complex "Forecasting of production and economic indicators for agricultural production" / Ivanyo Yaroslav, Romme Alexey, Varanitsa-Gorodovskaya Zhanna, Barsukova Margarita (Irkutsk State Agrarian University named after A.A. Ezhevsky, Irkutsk)

6. Automation of design and development of a database structure based on ontologies / An Gleb (Melentiev Energy Systems Institute SB RAS, Irkutsk)

March 28, 17:00

Round table: «Independent examination as a tool for information support for assessing the effectiveness of budget IT investments»
Keynote Speaker: Erzhenin Roman
SESSION 4

1. An approach to assessing the impact of distributed generation development on regional energy supply systems / Galperova Elena, Kononov Yury (Melentiev Energy Systems Institute SB RAS, Irkutsk)

2. Multi-agent system to control voltage in mains with small distributed generation plants / Shumanskii Eduard, Bulatov Yuri (Bratsk State University, Bratsk)

3. DR Aggregator’s Prosumer as a Cyber-Physical System / Kolosok Irina, Korkina Elena (Melentiev Energy Systems Institute SB RAS, Irkutsk)

4. Vulnerability analysis of cyber-physical power system for state estimation / Kolosok Irina, Gurina Liudmila (Melentiev Energy Systems Institute SB RAS, Irkutsk)

5. Methods, tools, and information technologies for energy sector impact assessment on geoecology / Kuzmin Vladimir (Melentiev Energy Systems Institute SB RAS, Irkutsk)

6. The improvement of the software for creating maps of the different regions for analyzing of their energy infrastructure / Trofimov Ivan, Trofimov Leonid (Melentiev Energy Systems Institute SB RAS, Irkutsk)

7. Multi-agent software package "INTEC-A" for researching the directions development of the fuel and energy complex / Mamedov Timur (Melentiev Energy Systems Institute SB RAS, Irkutsk)

DISCUSSION

March 29, 17:00

8. Algebraic means of generative design and verification of power systems / Kovalyov Serge (Institute of Control Sciences, Russian Academy of Sciences, Moscow)

Round table: «Informatization, automation, digitalization: what are the differences»

Keynote Speakers: Massel Liudmila, Vorozhtsova Tatiana
SESSION 5

1. Resilience research of energy and socio-ecological systems: problem and decision ways / Massel Liudmila, Pesterev Dmitriy (Melentiev Energy Systems Institute SB RAS, Irkutsk)

2. Integration of geological data as a knowledge graph / Cherkashin Evgeny, Lunina Oksana, Gladkov Anton, Cherkashina Tatiana, Pellinen Vadim (Matrosov Institute for System Dynamics and Control Theory SB RAS, Institute of the Earth’s Crust SB RAS, Irkutsk)

3. Cognitive engineering / Massel Aleksei (Melentiev Energy Systems Institute SB RAS, Irkutsk)

4. Integration of the components of ontological knowledge space to assess the impact of energy sector on the quality of life of the population / Vorozhtsova Tatiana, Ivanova Irina, Maysyuk Elena (Melentiev Energy Systems Institute SB RAS, Irkutsk)

5. Ontological and cognitive modeling of socio-ecological aspects of energy research / Pesterev Dmitriy (Melentiev Energy Systems Institute SB RAS, Irkutsk)

6. Hierarchical overview of energy technology research trends using ontology models / Alexey Mikheev (Melentiev Energy Systems Institute SB RAS, Irkutsk)

7. Preliminary prediction of a road capacity due to an accident based on neural networks / Kharakhinov Vladimir, Sosinskaya Sofya (Irkutsk National Research Technical University, Irkutsk)

8. Object detection in digital video streams / Gerget Olga, Laptev Nikita, Laptev Vladislav (Tomsk Polytechnic University, Tomsk)

9. Modeling and visualization of natural hazards and their effect on the region’s economic security and ecological safety / Kuklin Egor (Irkutsk National Research Technical University, Irkutsk)

DISCUSSION

March 30, 17:00

Round table: «Ideal artificial intelligence - requirements and opportunities to achieve them»
Keynote Speakers: Massel Liudmila, Tuchkova Natalia
SESSION 6

1. Cybersecurity of prognostic control algorithms distributed generation plant / Bulatov Yurii, Kryukov Andrey (Bratsk State University, Bratsk; Irkutsk State Transport University, Irkutsk National Research Technical University, Irkutsk)

2. Cyber situational awareness in energy facilities / Gaskova Daria (Melentiev Energy Systems Institute SB RAS, Irkutsk)

3. Infrastructure for transmission of critical data over open communication channels / Duga Sergey1, Trufanov Andrey2

1Investigative Committee of the Russian Federation
2Irkutsk National Research Technical University, Irkutsk

4. Multicomponent dynamic model of information security threats / Gorbylev Alexander (Irkutsk National Research Technical University, Irkutsk)

DISCUSSION

March 31, 17:00

1. Challenges of proactive threat intelligence in critical information infrastructure operating systems / Meshcheryakov Roman, Iskhakov Sergei (Institute of Control Sciences, Russian Academy of Sciences, Moscow; Tomsk State University of Control Systems and Radioelectronics, Tomsk)

2. Algorithmic software for multi-threaded analysis of malicious requests / Iskhakova Anastasia, Iskhakov Andrei (Institute of Control Sciences, Russian Academy of Sciences, Moscow)

3. Cybersecurity aspects of anomaly search methods in unmanned vehicle object measurement systems / Romanova Maria, Iskhakov Andrei (Institute of Control Sciences, Russian Academy of Sciences, Moscow)

DISCUSSION
1. Mathematical modeling of plasma flow at low pressures in vacuum chamber with charged body / Shemakhin Aleksander (Kazan Federal University, Kazan)

2. Experience in solving applied optimization problems / Gornov Alexander, Tyatyushkin Aleksander, Zarodnyuk Tatiana, Anikin Anton, Sorokovikov Pavel, Madjara Taras (Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk)

3. Multi-stage technology for constructing mathematical models / Gornov Alexander, Sorokovikov Pavel (Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk)

4. Numerical solution of Keating potential minimization problems with dimensions up to 300 million variables / Anikin Anton (Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk)

5. Approaches to studying controlled processes described by systems of functional differential equations / Gornov Alexander, Zarodnyuk Tatiana, Anikin Anton, Tyatyushkin Aleksander (Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk)

6. Application of mathematical simulating and data approximation methods in laboratory diagnostics / Kuzmenko Vladimir¹, Zarodnyuk Tatyana², Gornov Alexander²

¹ISMAPgE – Branch Campus of the FSBEI FPE RMACPE MOH Russia, Irkutsk
²Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk

**Round table:** «Science 2.0 as the basis for a new critical infrastructure»

Keynote Speaker: Mikheev Alexey

**FINAL DISCUSSION**

**CLOSING CEREMONY**

**April 2, 10:00**

Departure of the participants to Irkutsk