CRITICAL INFRASTRUCTURES

IN DIGITAL WORLD-2026

WORKSHOP
PROGRAMME

March 12, 10:00	**Thursday**

Departure from Irkutsk at 10:00

Arrival in Bolshoe Goloustnoe

March 12, 20:00	**OPENING CEREMONY**
	Welcome Party

March 18, 10:00	**Wednesday**

Departure of the participants to Irkutsk

Ссылка на онлайн-секцию 16 марта в 17.00:

https://telemost.yandex.ru/j/62518094541621

OPENING OF THE WORKSHOP

PROBLEMS OF DEVELOPMENT AND PROSPECTS FOR APPLICATION KNOWLEDGE ECOSYSTEMS IN ENERGY

Massel Liudmila

Melentiev Energy Systems Institute of SB RAS, Irkutsk, Russia

THE DIGITAL PLATFORM OF THE ECOSYSTEM OF KNOWLEDGE IN THE ENERGY SECTOR

Massel Aleksei

Melentiev Energy Systems Institute of SB RAS, Irkutsk, Russia

ARCHITECTURE OF THE DIGITAL PLATFORM OF THE KNOWLEDGE ECOSYSTEM IN ENERGY

Kuzmin Vladimir

Melentiev Energy Systems Institute of SB RAS, Irkutsk, Russia

COMPOSITION AND META DESCRIPTIONS OF DATALAKE COMPONENTS FOR ENERGY RESEARCH

Vorozhtsova Tatiana

Melentiev Energy Systems Institute of SB RAS, Irkutsk, Russia

CONSTRUCTION OF RAG SYSTEM COMPONENTS WITHIN THE FRAMEWORK OF THE DIGITAL PLATFORM OF THE KNOWLEDGE ECOSYSTEM IN THE ENERGY SECTOR

Pesterev Dmitrii

Melentiev Energy Systems Institute of SB RAS, Irkutsk, Russia

ARCHITECTURE OF A DATA LAKE FOR THE ENERGY KNOWLEDGE ECOSYSTEM

Tsybikov Aleksei

Melentiev Energy Systems Institute of SB RAS, Irkutsk, Russia

AN APPROACH TO THE AUTOMATION OF COGNITIVE MODEL CONSTRUCTION: TECHNIQUE, ALGORITHMS, AND SOFTWARE

Kozlov Maksim, Mikheev Aleksei

Melentiev Energy Systems Institute of SB RAS, Irkutsk, Russia

ARTIFICIAL INTELLIGENCE TECHNOLOGIES TO INCREASE THE ENERGY EFFICIENCY OF ECONOMIC SECTORS

Galperova Elena, Galperov Vasilii

Melentiev Energy Systems Institute of SB RAS, Irkutsk, Russia

ARCHITECTURE OF THE DIGITAL TWIN VISUALIZATION COMPONENT USED IN THE KNOWLEDGE ECOSYSTEM.

Shchukin Nikita

Melentiev Energy Systems Institute of SB RAS, Irkutsk, Russia

INTELLIGENT DECISION SUPPORT FOR THE OPERATION OF NUMERICALLY PROGRAM CONTROLLED MACHINES

Vovikov Daniil

Irkutsk National Research Technical University, Irkutsk, Russia

A METHOD FOR INCREASING THE DIGITAL MATURITY OF TERRITORIAL SAFETY MANAGEMENT

Nicheporchuk Valerii

Institute of Computational Modeling Siberian Branch of the RAS, Krasnoyarsk, Russia

APPLICATION OF THE INTEC SOFTWARE PACKAGE IN STUDIES OF RESILIENT ENERGY SYSTEM

Mamedov Timur

Melentiev Energy Systems Institute of SB RAS, Irkutsk, Russia

MODELING AND OPTIMIZATION OF ENERGY SYSTEMS: PROBLEMS, TOOLS, PARADOXES

Mikheev Aleksei

Melentiev Energy Systems Institute of SB RAS, Irkutsk, Russia

IMPLEMENTATION OF A NEURO-ASSISTANT BASED ON THE RAG-SYSTEM

Alekseev Roman[1], Lukyanov Nikita[2], Massel Liudmila[1]

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[2]*Irkutsk National Research Technical University, Irkutsk, Russia*

TELEMETRY DATA PREPARATION TECHNOLOGY FOR TRAINING HYBRID NEURAL NETWORKS IN PREDICTIVE ANALYTICS

Shtyrkin Philip
Irkutsk National Research Technical University, Irkutsk, Russia

MATHEMATICAL MODELS AND A METHOD FOR ASSESSING THE BALANCING OF COMPUTATIONAL COMPLEXITY FACTORS IN THE STUDY OF THE VIABILITY OF POWER SYSTEMS

Mikheev Mikhail, Edelev Aleksei
Melentiev Energy Systems Institute of SB RAS, Irkutsk, Russia

DIGITAL TECHNOLOGY OF AUTOMATION FOR AGENT MODELING OF MICROGRID INTERACTIONS

Chekan Mikhail
Matrosov Institute for System Dynamics and Control Theory of SB RAS, Irkutsk, Russia

PARADOXES OF NUMERICAL ANALYSIS OF CONTINUOUS SYSTEMS

Gornov Aleksander
Matrosov Institute for System Dynamics and Control Theory of SB RAS, Irkutsk, Russia

Discussion of the dissertation **METHODS, MODELS AND TOOLS FOR INTELLIGENT DECISION SUPPORT IN PREDICTIVE RESEARCH OF THE FUEL AND ENERGY COMPLEX** for the degree of candidate of technical sciences (1.2.2)

Mamedov Timur

Supervisor: **Massel Aleksei**

Melentiev Energy Systems Institute of SB RAS, Irkutsk, Russia

BAIKAL HOVERCRAFT TRIP

Round Table:
DIGITAL PLATFORM OF SITUATIONAL AWARENESS
FOR RESILIENT ENERGY
Moderator: **Massel Aleksei**

WAYS TO INCREASE PRODUCTIVITY IN THE DEVELOPMENT OF COMPLEX INFORMATION SYSTEMS
Erzhenin Roman

LLC "KRISTA-IRKUTSK"

MULTIPLEX MAPPING OF SCIENTIFIC COMMUNICATIONS: FROM KNOWLEDGE FLOWS TO A MANAGED INNOVATION ECOSYSTEM
Lesin Aleksander

Melentiev Energy Systems Institute of SB RAS, Irkutsk, Russia

SELECTED SECURITY CONSIDERATIONS FOR DIGITAL PLATFORMS
Gaskova Daria

Melentiev Energy Systems Institute of SB RAS, Irkutsk, Russia

FASTEST COLLISION-FREE ROUTES IN AN ENVIRONMENT WITH DYNAMIC OBSTACLES
Tran Thai Viet[1], Lempert Anna[2], Kazakov Aleksandr[2]

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MODELING THE POPULATION OF LIVESTOCK IN RELATION TO THE NATURAL-ECONOMIC ZONES OF MONGOLIA
Enkhbat Ariunjargal, Ivanyo Yaroslav

Irkutsk State Agricultural University, Molodezhny, Irkutsk Municipal District, Russia

APPLICATIONS OF MULTILEVEL MODELING IN AGRICULTURAL PRODUCTION MANAGEMENT
Ivanyo Yaroslav, Petrova Sofia

Irkutsk State Agricultural University, Molodezhny, Irkutsk Municipal District, Russia

MACHINE LEARNING IN PARAMETRIC OPTIMIZATION OF AGRICULTURAL PRODUCTION VOLUMES
Klimov Egor, Ivanyo Yaroslav

Irkutsk State Agricultural University, Molodezhny, Irkutsk Municipal District, Russia

ALGORITHM FOR MODELING A MULTI-STAGE MULTI-LEVEL PROBLEM OF OPTIMIZING THE PRODUCTION AND PROCESSING OF AGRICULTURAL PRODUCTS
Ananyev Leonid, Ivanyo Yaroslav

Irkutsk State Agricultural University, Molodezhny, Irkutsk Municipal District, Russia

MODELING OF UNBALANCED OPERATING MODES OF LOW-VOLTAGE ELECTRIC NETWORKS
Ntsama Ndi Bernard Josselin, Naumov Igor

Irkutsk State Agricultural University, Molodezhny, Irkutsk Municipal District, Russia

March 15, 14:00   **Sunday**

DRY LAKE EXCURSION

PRIORITY AREAS AND KEY TRENDS IN THE DEVELOPMENT OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES

Moderator: **Liudmila Massel**

Discussion of the dissertation **METHODS OF APPROXIMATION AND CONVEXIFICATION OF REACHABLE SETS OF NONLINEAR CONTROLLED DYNAMIC SYSTEMS** for the degree of doctor of technical sciences (2.3.1)

Zarodnyuk Tatiana

Supervisor: **Gornov Alexander**

Matrosov Institute for System Dynamics and Control Theory of SB RAS, Irkutsk, Russia

PRACTICAL APPLICATION OF SWARM-BASED GLOBAL OPTIMIZATION ALGORITHMS IN ATOMIC AND MOLECULAR MODELING

Sorokovikov Pavel

Matrosov Institute for System Dynamics and Control Theory of SB RAS, Irkutsk, Russia

FACTOR ANALYSIS OF RESPIRATORY TRACT INJURY RISKS USING THE SHEPARD OPERATOR

Gornov Aleksandr, Anikin Anton, Lykhin S.A.

Matrosov Institute for System Dynamics and Control Theory of SB RAS, Irkutsk, Russia

NUMERICAL AND ANALYTICAL APPROACHES TO THE STUDY OF TRANSIENT PROCESSES OF CARDIAC RHYTHM

Anikin Anton

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SELECTING MODELING TECHNIQUES FOR ASSESSING RELATIONSHIPS AMONG NOISY MEDICAL INDICATORS

Kuz'menko Vladimir[1], Anikin Anton[2], Gornov Aleksandr[2]

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ORCHESTRATION OF SEMANTIC ANALYSIS METHODS

Ataeva Olga, Tuchkova Natalia
Federal Research Center «Informatics and Management», Moscow

AUTOMATION OF REQUEST PROCESSING BASED ON AI AND STOCHASTIC MODELS

Fedotov Nikita
Baikal State University, Irkutsk, Russia

TIME SERIES CLUSTERING FOR THE ANALYSIS OF BIOMASS PYROLYSIS TG DATA

Bachurin Roman, Zakharova Irina
University of Tyumen, Tyumen, Russia

A HIERARCHICAL GRAPH-BASED MODEL OF DOCUMENT STRUCTURE FOR CONTROLLED LECTURE SUMMARY GENERATION

Ismagulov Milan
Yugra State University, Khanty-Mansiysk, Russia

NEURAL NETWORK STACKING FOR LOSS FORECASTING IN INSURANCE

Morozov Mikhail
Yugra State University, Khanty-Mansyisk, Russia

THE "FILLER & POINTER" APPROACH FOR IMPROVED SATELLITE-BASED SUPERVISION OF LINEAR CLEAR-CUTS IN ENERGY, TRANSPORT, AND OIL/GAS INFRASTRUCTURE EXPANSION

Sokolkov Oleg
Yugra State University, Khanty-Mansiysk, Russia

GEOMAGNETIC INDUCED CURRENTS AND IONOSPHERIC DISTURBANCES AS RISK FACTORS FOR ENERGY SYSTEMS

Garashchenko Aleksandr[1], Tomin Nikita[2], Dreglea Alena[1], Sidorov Denis[2]
[1]National Research Technical University, Irkutsk, Russia
[2]Melentiev Energy Systems Institute of Siberian Branch of SBRAS, Irkutsk, Russia

ON DEFECTS OF WELDED JOINTS IN STEEL PENSTOCKS OF HYDROELECTRIC POWER PLANTS

Gilmutdinov Vladimir[1,2], Popov Maksim[2]
[1]Melentiev Energy Systems Institute of SB RAS, Irkutsk, Russia
[2]Irkutsk National Research Technical University, Irkutsk, Russia

THE MAIN DIRECTIONS OF QUALITY CONTROL OF PROJECT DOCUMENTATION IN AVIATION INDUSTRY

Govorkov Aleksei
Irkutsk National Research Technical University, Irkutsk, Russia

Discussion of the dissertation **METHODOLOGICAL APPROACH TO CONSTRUCTING DIGITAL TWINS OF RENEWABLE ENERGY SOURCES USING SEMANTIC MODELLING** for the degree of candidate of technical sciences (2.3.1)

Shchukin Nikita

Melentiev Energy Systems Institute of SB RAS, Irkutsk, Russia

Discussion of the dissertation **DEVELOPING SMART DIGITAL TWINS IN ENERGY USING MACHINE LEARNING METHODS** for the degree of candidate of technical sciences (1.2.2)

Tsibikov Aleksey

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Supervisor: Massel Liudmila

Melentiev Energy Systems Institute of SB RAS, Irkutsk, Russia

BAIKAL HOVERCRAFT TRIP
TO PESCHANAYA BAY

Round Table:
DIGITAL PLATFORM OF SITUATIONAL AWARENESS
FOR RESILIENT ENERGY:
ARCHITECTURE AND TECHNOLOGIES
Moderator: **Massel Aleksei**

FINAL DISCUSSION

Departure of the participants to Irkutsk