

PROGRAM

6th International Workshop on Information, Computation, and Control Systems for Distributed Environments

(ICCS-DE 2025, <https://iccs-de.icc.ru/>)

July 7-11, 2025, Irkutsk, Russia

The languages of the workshop are English and Russian.

The schedule of events indicated Irkutsk time (GMT+8).

July 7, 2025	EVENT
8:30 – 17:00	REGISTRATION OF WORKSHOP PARTICIPANTS, INSTITUTE LOBBY
10:00 – 12:00	LECTURES FOR YOUNG SCIENTISTS INSTITUTE CONFERENCE HALL (OFFLINE-ONLINE) Chairs: <i>Roman Kostromin</i>¹, <i>Александр Феоктистов</i>² ¹ Cloud.ru, Irkutsk, Russia roman@kostromin.net ² Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia agf65@yandex.ru Technical secretaries: <i>Svyatoslav Melkozerov</i>, <i>Evgeny Yumashev</i> Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia 10:00 – 10:40 <i>Vladimir Shelekhov</i>. 50 Years to the Scientific Team of the Matrosov Institute for System Dynamics and Control Theory SB RAS 10:40 – 11:20 <i>Alexey Novopashin</i>. Supercomputer Systems: Brief Overview 11:20 – 12:00 <i>Roman Kostromin</i>. Basic Concepts of Cloud Technologies
14:00 – 14:10	OPENING CEREMONY (offline-online), INSTITUTE CONFERENCE HALL Chairs: <i>Andrei Tchernykh</i>¹, <i>Igor Bychkov</i>², <i>Zeljko Stojanov</i>³ ¹ CICESE Research Center, Ensenada, México chernykh@cicese.mx ² Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia idstu@icc.ru ³ University of Novi Sad, Technical Faculty "Mihajlo Pupin", Zrenjanin, Serbia zeljko.stojanov@uns.ac.rs Technical secretaries: <i>Taras Madjara</i>, <i>Mikhail Voskoboinikov</i> Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia <i>Igor Bychkov</i>, <i>Andrey Tchernykh</i>, <i>Zeljko Stojanov</i>. Greetings to the Participants of the Seminar
14:10 – 15:30	PLENARY SESSION (offline-online), INSTITUTE CONFERENCE HALL Chairs: <i>Igor Bychkov</i>¹, <i>Valeria Gribova</i>² ¹ Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia idstu@icc.ru ² Institute of Automation and Control Processes, FEB RAS, Vladivostok, Russia gribova@iacp.dvo.ru Technical secretaries: <i>Taras Madjara</i>, <i>Mikhail Voskoboinikov</i> Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia 14:10 – 14:50 <i>Andrey Tchernykh</i>. Trust is not Enough: Privacy Protection in Cloud Systems with Zero-Trust Paradigm 14:50 – 15:30 <i>Zeljko Stojanov</i>. Graph Clustering Methods in Distributed Socio-Technical Systems

15:30 – 16:30	SECTION INTELLIGENT SYSTEMS, INFORMATION, COMPUTATION, AND TELECOMMUNICATION SYSTEMS, MATHEMATICAL MODELING COMPLEX SYSTEMS (offline-online), INSTITUTE CONFERENCE HALL Chairs: <i>Andrei Tchernykh</i>¹, <i>Zeljko Stojanov</i>² ¹ CICESE Research Center, Ensenada, México chernykh@cicese.mx ² University of Novi Sad, Technical Faculty "Mihajlo Pupin", Zrenjanin, Serbia zeljko.stojanov@uns.ac.rs Technical secretaries: <i>Taras Madjara, Mikhail Voskoboinikov</i> Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia
	15:30 – 15:50 <i>Igor Vecstejn, Zeljko Stojanov</i> . Personal Experience in the Onboarding Process: A Reflective Analysis through Autoethnography (online)
	15:50 – 16:10 <i>Maxim Kenzin</i> . An Evolutionary Approach to Connectivity-based Vehicle Routing in Ground-and-air Robotic Groups (online)
	16:10 – 16:30 <i>Anton Tolstikhin</i> . Multiple Mobile Robots Formation Control Using Behavioral-based Approach

July 8, 2025	EVENT
8:30 – 9:50	PLENARY SESSION (offline-online), INSTITUTE CONFERENCE HALL Chairs: <i>Aleksei Sorokin</i>¹, <i>Alexander Feoktistov</i>² ¹ Computing Center FEB RAS, Khabarovsk, Russia alsor@febras.net ² Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia agf65@yandex.ru Technical secretaries: <i>Taras Madjara, Mikhail Chekan</i> Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia 8:30 – 9:10 <i>Valeriya Gribova</i>. Decision-Making Support in Conditions of Information Deficiency 9:10 – 9:50 <i>Aleksei Sorokin</i>. Analysis of the Current State and Possible Approaches to the Development of Scientific Computing Infrastructure in the Russian Far East
	9:50 – 10:00 Break, INSTITUTE LOBBY
	ORIENTED SECTION ON INFORMATION AND COMPUTATION TECHNOLOGIES FOR STUDYING MODERN ENERGY SYSTEMS (offline-online), INSTITUTE CONFERENCE HALL Chairs: <i>Gleb Mayorov</i>¹, <i>Dmitriy Karamov</i>² ¹ Melentiev Energy Systems Institute SB RAS, Irkutsk, Russia mayorovgs@isem.irk.ru ² Irkutsk National Research Technical University, Irkutsk, Russia dmitriy.karamov@mail.ru Technical secretaries: <i>Taras Madjara, Mikhail Chekan</i> Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia 10:00 – 10:20 <i>Dmitry Sokolov, Evgeny Barakhtenko, Gleb Mayorov</i>. Computational Automation in the Design of Integrated Energy Systems (online) 10:20 – 10:40 <i>Gleb Mayorov, Evgeny Barakhtenko, Dmitry Sokolov</i>. Development of a Multi-agent System for Designing Integrated Energy Systems 10:40 – 11:00 <i>Olga Edeleva</i>. Methodological Approach to Integrated Assessment of Energy Technologies Based on Life Cycles 11:00 – 11:20 <i>Olga Basharina</i>. Correlation Analysis of Natural Gas Consumption Time Series 11:20 – 11:40 <i>Yana Severina, Vladislav Shakirov</i>. Comparison of heuristic algorithms of multi-criteria optimization for sizing of hybrid renewable energy system

13:00 – 17:20	SECTION INTELLIGENT SYSTEMS, INFORMATION, COMPUTATION, AND TELECOMMUNICATION SYSTEMS, MATHEMATICAL MODELING COMPLEX SYSTEMS (offline-online), INSTITUTE CONFERENCE HALL Chairs: Aleksandr Yurin and Alexander Stolbov Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia iskander@icc.ru, stolboff@icc.ru Technical secretaries: <i>Svyatoslav Melkozerov, Maksym Bodnyuk</i> Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia
	13:00 – 13:20 <u>Igor Skopin</u> . Designing of Software Interfaces (online)
	13:20 – 13:40 <u>Mikhail Voskoboinikov</u> , <u>Alexander Feoktistov</u> . Scientific Workflow Manager: Resource Allocation and Data Transfer Tools Compared to HTCondor
	13:40 – 14:00 <u>Victor Simonov</u> , <u>Marat Khairtdinov</u> . Development of a Python Programming Language Preprocessor for Distributed Data Processing (online)
	14:00 – 14:20 <u>Pavel Kosov</u> , <u>Alexander Legalov</u> . Adding Procedural-parametric Polymorphism to the C Language (online)
	Break, INSTITUTE LOBBY
	14:30 – 14:50 <u>Aleksandr Yurin</u> , <u>Nikita Dorodnykh</u> . A Problem-specific Framework for Creating Decision Support Systems Based on Decision Tables
	14:50 – 15:10 <u>Nikolay Vershkov</u> , <u>Natalia Kuchukova</u> , <u>Vladislav Lutsenko</u> . Creation of Artificial Neural Networks for Work in Distributed Computing Environments (online)
	15:10 – 15:30 <u>Kirill Blinov</u> , <u>Ilya Kurochkin</u> . Hyperparameter Tuning for a Synchronous Distributed Deep Learning Method in Image Classification Tasks (online)
	15:30 – 15:50 <u>Viktor Mochalov</u> , <u>Olga Grigorieva</u> . Methodology for Generating Raw Data for Machine Learning Algorithms when Identifying Landscape Elements (online)
	15:50 – 16:10 <u>Igor Kimyaev</u> , <u>Boris Sokolov</u> , <u>Valerii Zakharov</u> . Methodology of The Manufacturing Companies Viability Evolutionary Management (online)
	Break, INSTITUTE LOBBY
	16:20 – 16:40 <u>Marat Khairtdinov</u> . Kolmogorov-Arnold Networks in Recognition of random Processes (online)
	16:40 – 17:00 <u>Oksana Kopylova</u> . Detection and Recognition of Geo-signals in Noise Using Wavelet Functions (online)
	17:00 – 17:20 <u>Inna Trofimova</u> , <u>Aleksandra Vihareva</u> . Optimization of the One Supply Chain Functioning Based on a Heuristic Approach (online)

July 9, 2025	EVENT
8:30 – 9:10	PLENARY SESSION (offline-online), INSTITUTE CONFERENCE HALL Chairs: <i>Aleksei Sorokin</i>¹, <i>Alexander Feoktistov</i>² ¹ Computing Center FEB RAS, Khabarovsk, Russia alsor@febras.net ² Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia agf65@yandex.ru Technical secretaries: <i>Taras Madjara, Mikhail Voskoboinikov</i> Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia 8:30 – 9:10 <i>Igor Bychkov, Evgeniy Fereferov, Roman Fedorov</i>. Digital Platform for Interdisciplinary Scientific Research
	ORIENTED SECTION ON DIGITAL TECHNOLOGIES FOR ENVIRONMENTAL MONITORING OF THE BAIKAL NATURAL TERRITORY (offline-online), INSTITUTE CONFERENCE HALL Chairs: <i>Alexei Hmelnov and Roman Fedorov</i> Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia hmelnov@icc.ru, fedorov@icc.ru Technical secretaries: <i>Taras Madjara, Mikhail Voskoboinikov</i> Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia 9:10 – 9:30 <i>Alexander Feoktistov, Mikhail Voskoboinikov, Igor Bychkov, Aleksey Edelev</i>. Development of Service-oriented Environment for Modeling Natural and Technical Systems 9:30 – 9:50 <i>Aleksey Edelev</i>. Hybrid Approach to Structural and Parametric Optimization of Engineering Systems 9:50 – 10:10 <i>Yuliya Pestova, Olga Nikolaychuk, Yana Vetvitskaya</i>. Investigation of the Impact of Thunderstorms on Forest Fires Based on Machine Learning Methods 10:10 – 10:30 <i>Alexander Stolbov</i>. Towards Web Services Development for Complex Environmental Research Based on Open Modeling Standards 10:30 – 10:50 <i>Roman Fedorov, Alla Verkhovzina</i>. Methodology of Service Compositions for Botanical Research 10:50 – 11:10 <i>Andrey Gachenko, Alexei Hmelnov</i>. Methods and algorithms for Creating Coastal Relief Models 11:10 – 11:30 <i>Ivan Diomidov</i>. Integrated Support System for Forest Inventory
13:15 – 15:15	SECTION FOR YOUNG SCIENTISTS (offline-online), INSTITUTE CONFERENCE HALL Chairs: <i>Maksim Zharkov, Andrey Mikhailov, Nikita Dorodnykh</i> Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia zharkm@mail.ru, mikhailov@icc.ru, nikidorny@icc.ru Technical secretaries: <i>Svyatoslav Melkozerov, Evgeny Yumashev</i> Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia 13:15 – 13:30 <i>Anastasia Osipova, Alexander Yakimenko</i>. Mathematical Model of Localization of an Acoustic Source in a Heterogeneous Medium (online) 13:30 – 13:45 <i>Igor Dyminsky, Alexander Yakimenko, Maksim Efirkin</i>. Algorithm for Comparing Electromagnetic Indicators and Seismic Characteristics of Earthquakes (online) 13:45 – 14:00 <i>Olga Gavenko, Natalia Shashok</i>. Vector Representations Generation: A Review of Methods for Preprocessing Multimodal Data Containing Climate Information (online)

	14:00 – 14:15 <u>Egor Shiriaev</u> , <i>Mikhail Babenko</i> . Modification of the Method of Division of Numbers in the System of Residual Classes (online)
	14:15 – 14:30 <u>Dmitry Lukyanov</u> , <i>Maria Lapina</i> , <i>Vitalii Lapin</i> , <i>Nikolay Kucherov</i> . Building Machine Learning Algorithms for Detecting Fraudulent Websites (online)
	14:30 – 14:45 <i>Maria Lapina</i> , <i>Mohammad Sajid</i> , <u>Yulia Dyadkova</u> , <i>Vitalii Lapin</i> . Research on Machine Learning Methods for Detecting Phishing Domains (online)
	14:45 – 15:00 <i>Maria Lapina</i> , <u>Elizabeth Trapeznikova</u> , <i>Vitaly Lapin</i> , <i>Alice Kushchenko</i> . Study of Network Attack Detection Methods Using Machine Learning Models (online)
	15:00 – 15:15 <i>Maria Lapina</i> , <i>Roman Gubin</i> , <i>Julia Andrusenko</i> , <i>Mohammed Saleh Ali Muthann</i> . Machine Learning Methods for Detecting Tca Text Classification Attacks (online)
	SECTION FOR SCHOOLCHILDREN (offline-online), INSTITUTE CONFERENCE HALL Chairs: Maksim Zharkov, Andrey Mikhailov, Nikita Dorodnykh Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia zharkm@mail.ru, mikhailov@icc.ru, nikidorny@icc.ru Technical secretaries: <i>Svyatoslav Melkozerov</i>, <i>Evgeny Yumashev</i> Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia
	15:15 – 15:30 <u>Vladimir Lapin</u> , <i>Oksana Evstafiadi</i> , <i>Alexey Smirnov</i> , <i>Alina Bagautdinova</i> . Educational chatbot in Telegram with AI test generation (online)

July 10, 2025	EVENT
9:00 – 12:00	SECTION FOR YOUNG SCIENTISTS (offline-online), INSTITUTE CONFERENCE HALL Chairs: Maksim Zharkov, Andrey Mikhailov, Nikita Dorodnykh Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia zharkm@mail.ru, mikhailov@icc.ru, nikidorny@icc.ru Technical secretaries: <i>Svyatoslav Melkozerov, Maksym Bodnyuk</i> Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia
	9:00 – 9:15 <u>Vladislav Badenko</u> , <i>Alexander Kozlov</i> . Application of Information and Computing Systems in a Hybrid Power Grid
	9:15 – 9:30 <u>Maksim Bodnyuk</u> . Development of the Monitoring System of the Microgrid Simulation Stand
	9:30 – 9:45 <u>Mikhail Chekan</u> . Methodology of Using the Instrumental Complex for Interacting Microgrids Modeling
	9:45 – 10:00 <u>Evgeny Yumashev</u> . Method for Developing Applications for The Collecting, Processing and Analysis of Meteorological Data
	10:00 – 10:15 <u>Evgeny Nikolaev</u> . DevOps Automation in a Distributed Computing Environment for Scientific Applications
	10:15 – 10:30 <u>Dmitriy Yakovlev</u> , <i>Alexander Feoktistov</i> . Monitoring System for Software and Hardware Infrastructure of Computing Environment
	Break, INSTITUTE LOBBY
	10:40 – 10:55 <u>Mikhail Klimonov</u> . Using the History of Service Calls to Determine Similarity in Users' Scientific Interests.
	10:55 – 11:10 <u>Ivan Ignatev</u> . Digital Transformation of Scientific Organizational Activities: Theoretical Approaches to the Development of a Specialized Framework
	11:10 – 11:25 <u>Aleksey Linyavsky</u> , <i>Nadezhda Nagul</i> . GOAP-based group planning in the object search problem
	11:25 – 11:40 <u>Elizabeth Vikulova</u> , <i>Anton Tolstikhin</i> . Development of Software Simulation Methods LIDAR Operation
	11:40 – 11:55 <u>Nadezhda Dushkina</u> , <i>Anton Tolstikhin</i> . Methods for Constructing a Perspective Transformation Matrix for image Stitching

13:00 – 15:15	SECTION FOR YOUNG SCIENTISTS (offline-online), INSTITUTE CONFERENCE HALL Сопредседатели: Maksim Zharkov, Nikita Dorodnykh, Anton Tolstikhin Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia zharkm@mail.ru, nikidorny@icc.ru, madstayler93@gmail.com Technical secretaries: <i>Taras Madjara, Mikhail Voskoboinikov</i> Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia
	13:00 – 13:15 <u>Andrey Alekseev</u> , <u>Andrey Mikhailov</u> . Representation learning of Electronic Documents
	13:15 – 13:30 <u>Anton Bulakh</u> . Segmentation of CBCT Images Based on U-Net Architecture
	13:30 – 13:45 <u>Mikhail Zagorodonikov</u> , <u>Andrey Mikhailov</u> . Integration of a Text Recovery Method for PDF Documents with Broken Encoding into the Dedoc System
	13:45 – 14:00 <u>Daniil Kopylov</u> . Graph Neural Networks in the Problem of Document Layout Restoration
	14:00 – 14:15 <u>Andrei Kuznecov</u> , <u>Andrey Mikhailov</u> . Protection Against Imperceptible Attacks on NLP Models Using Homoglyphs
	14:15 – 14:30 <u>Ivan Poddubny</u> , <u>Nikita Dorodnykh</u> . A Concept of Approach to Solving the Tabular Information Question Answering Problem Using Computational Graphs.
	14:30 – 14:45 <u>Kirill Tobola</u> , <u>Nikita Dorodnykh</u> . Adaptation of SimCLR Approach to Column Type Annotation Task of Russian Language Tables
	14:45 – 15:00 <u>Maria Shchurik</u> . The VGG Model in the Problem of Comparing Font Styles
	15:00 – 15:15 <u>Nikita Kosyanov</u> . On an Improvement to the Next-step Procedure (online)
15:15 – 15:30	Break, INSTITUTE LOBBY
15:30 – 17:00	Presentation of the ISDCT SB RAS Developments (offline-online), INSTITUTE CONFERENCE HALL Maksim Zharkov, Mikhail Voskoboinikov
17:00 – 17:30	CLOSING CEREMONY (OFFLINE-ONLINE), INSTITUTE CONFERENCE HALL Chairs: Igor Bychkov¹, Andrei Tchernykh², Zeljko Stojanov³ ¹ Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia idstu@icc.ru ² CICESE Research Center, Ensenada, México chernykh@cicese.mx ³ University of Novi Sad, Technical Faculty "Mihajlo Pupin", Zrenjanin, Serbia zeljko.stojanov@uns.ac.rs Technical secretaries: <i>Taras Madjara, Maksym Bodnyuk</i> Matrosov Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia <u>Igor Bychkov</u>, <u>Andrei Tchernykh</u>, <u>Zeljko Stojanov</u>. Summing up the Results of the Workshop and Rewarding Participants