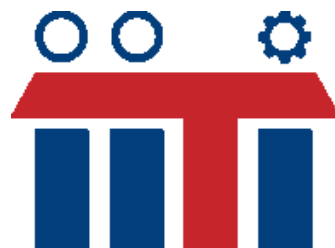




**6th INTERNATIONAL SCIENTIFIC CONFERENCE
“INTELLIGENT INFORMATION TECHNOLOGIES
FOR INDUSTRY”**

IITI'22

**October 31 - November 6, 2022, Istanbul,
Turkey**



ORGANIZERS

Rostov State Transport University (Russia)
Southern University (Russia)
Russian Association for Artificial Intelligence (Russia)
EURAS (Eurasian Universities Union)
IAU Istanbul Aydın University (Turkey)
(RABE) Russian Association of Business Education (Russia)

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- Imran Akperov, Southern University, Russia
- Mustafa Aydın, EURAS President (Eurasian Universities Union), Turkey
- Yadigar İzmirli, Istanbul Aydın University, Turkey

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- Vladimir V. Khramov, Southern University, Russia
- Vladimir V. Kureichik, Southern Federal University, Russia
- Yakup Çelikbilek, Istanbul Aydin University, Turkey
- Yuri I. Rogozov, Southern Federal University, Russia
- Zafer Aslan, Istanbul Aydin University, Turkey

VENUE

All conference sessions will be held at:

*Beşyol Mahallesi , İnönü Caddesi N 38, PK: 34295
Küçükçekmece / Istanbul , Turkey
İstanbul Aydın University;
Halit Aydın Campus.*

Rooms

Technical sessions

Tuesday, November 1, 09:00 – 15:00, Hall 1

Wednesday, November 2, 9:00 – 12:00, Hall 1 and Hall 2

Thursday, November 3, 9:00 – 12:00, Hall 1 and Hall 2

PROGRAMME

Monday, October 31

Arrival Day

Tuesday, November 1

09:00 – 09:30	Registration at Istanbul Aydin University
09:30 – 10:00	Opening session (Hall 1). Prof. Sergey Kovalev, Prof. Imran Akperov
10:00 – 11:00	Intelligent systems for medicine: retrospective and perspective Prof. Boris Kobrinskii The Federal Research Center “Computer Science and Control” of Russian Academy of Sciences, Problem Artificial Intelligence Institute, Russia
11:00 – 12:00	Medical Artificial Intelligence Applications Prof Dr. Ali Okatan Istanbul Aydin University, Istanbul, Turkey
12:00 – 13:00	Lunch
13:00 – 14:00	The problems of multi-objective design of fuzzy systems Prof. Sergey Kovalev Rostov State Transport University, Russia
14:00 – 15:00	Development of AI research in Russia Prof. Vadim Stefanuk Institute for Information Transmission Problems and Peoples’ Friendship Russian University, Russia
15:00-15:15	Coffee Break
15:15 – 16:15	The impact of Disruptive Technologies, Industrial Internet of Things Asst Prof Dr. Wassim Read Istanbul Aydin University , Istanbul, Turkey

Wednesday, November 2

09:00 – 11:00	Session 1 (Hall 1). Decision Making Intelligent Systems Chair: Asst Prof Dr. Semih Yön <ol style="list-style-type: none">1. Knowledge Bases Engineering Based on Event Trees Transformations: A Case Study for Aircraft Diagnostics Aleksandr Yurin, Olga Nikolaychuk, Nikita Dorodnykh, Aleksandr Stolbov, Yuriy Kotlov and Vladimir Popov2. Architecture of a Distributed Intelligence System for Data Mining Based On Case-Based Reasoning Alexander Eremeev, Pavel Varshavskii and Sergey Polyakov3. Category Technology to Design Intelligent Systems for Complicated Decisions Alexander Zhozhikashvili and Vadim Stefanuk4. Communication as a basic element of the methodology for the development of intelligent systems Yuri Rogozov, Vyacheslav Lapshin and Kucherov Sergey5. Approach to the implementation of intelligent Low-Code platforms Yuri Rogozov, Vyacheslav Lapshin and Borovskaya Marina6. Collaborative Decision Support with Ontology-Based Neuro-Symbolic Artificial Intelligence: Challenges and Conceptual Model Alexander Smirnov, Andrew Ponomarev and Nikolay Shilov7. Integration of Intelligent and Mathematical Technologies for Decision Support in Research and Ensuring Energy Resilience Liudmila Massel, Timur Mamedov and Aleksei Massel8. Patterns in Smart Wireless Sensor Network Nodes Gennady.P. Vinogradov, Igor.A. Konyukhov9. Intelligent Recommender System for Spatial Analysis Stanislav Belyakov, Alexander Bozhenyuk, Igor Dolgiy and Margarita Knyazeva10. Identification of generalized Euclidean N-dimensional information space of modeling and decision-making of a specialist Nikolay Liabakh, Maksim Kolesnikov, Maksim Bakalov and Vyacheslav Zadorozhny
09:00 – 11:00	Session 2 (Hall 2). Machine Learning and its Applications Chairs: Assoc. Prof. Andrey Chechulin, Prof Dr. Ali Okatan <ol style="list-style-type: none">1. Detection of anomalies and attacks in container systems: an integrated approach based on black and white lists Igor Kotenko, Igor Saenko, Andrey Chechulin, Lidia Vitkova, Maxim Kolomeec, Igor Zelichenok, Maxim Melnik, Denis Makrushin and Nikita Petrevich2. Comparison of Advance Machine Learning Techniques in River Flow Rate Prediction, Uğur Akbulut, Buket K. İşler, Zafer Aslan3. Frequent pattern discovery as table constraint satisfaction problem Alexander Zuenko and Olga Zuenko4. Methodology for detecting anomaly and attack on cloud infrastructure instances Igor Pestov and Lidia Vitkova5. Sift Descriptor for Social Media User Accounts Matching Anastasia Korepanova and Maxim Abramov6. Draft-based learning model to discover data from a cognitive causal model Alexander Tselykh, Vladislav Vasilev and Larisa Tselykh

	<p>7. Modeling Mechanical Properties of Coatings Based on Machine Learning Methods Vladimir Kolesnikov, Olga Belyak, Tatiana Suvorova, Alexander Guda and Danil Pashkov</p> <p>8. Synthesis of estimation system for uav orientation with a neural network-identifier Andrey Kostoglotov, Anton Penkov and Vladimir Zekhtser</p> <p>9. Hybrid approach to time series anomaly detection using LSTM networks and ontology Vadim Moshkin, Nadezhda Yarushkina, Dmitry Kurilo and Alexander Dyrnochkin</p>
11:10-11:30	Coffee Break
11:30-12:00	<p>Session 3 (Hall 1). Flexible models of management over socio-technical systems Chair: Assoc Prof Dr. Yakup Çelikbilek</p> <ol style="list-style-type: none"> Triple Energy Potential and Modelling in Beirut Port Ahmad Omais, Zafer Aslan, Sibel Ş. Menteş Intelligent scoring of publication activities and personal share of co-authorship in the decision support system for rewarding university employees Irina Dergacheva Influence-based matrix reconstruction method Alexander Tselykh, Vladislav Vasilev and Larisa Tselykh Identification of predictors for estimation the intensity of relationships between users of online social networks Anastasiia Khlobystova, Maxim Abramov, Anastasiia Korepanova and Nikita Liapin
11:30-12:00	<p>Session 4 (Hall 2). Intelligent medical systems Chairs: Prof Dr. Ali Okatan</p> <ol style="list-style-type: none"> Information Granulating and its Use in Descriptive and Predictive Analysis of Medical Data Tatiana Afanasieva Analysis of micro-images of skin neoplasms using convolutional neural networks in an intelligent medical information system for the early diagnosis of melanoma Gleb Guskov, Nadezhda Yarushkina, Elena Antonova, Anastasia Khambikova and Anton Sapunkov Data Mining Approach to Characterization of Bioactive Inorganic Scaffold Properties using Synthetic Images Oleg Kartashov, Ilias Savvas, Elizaveta Mukhanova, Dmitry Polyanichenko, Andrey Chernov and Maria Butakova Expert System for The Diagnosis of Orphan Diseases Boris A. Kobrinskii, Nikolay A. Blagosklonov, <u>Valeriya V. Gribova</u> and Elena A. Shalfeeva Methods and Aproaches for Predicting Speech Impairment after Brain Tumor Surgery Ilda Alushaj, Aleksey Molodchenkov and Andrey Bykanov

Thursday, November 3

<p>09:00 – 11:00</p>	<p>Session 5 (Hall 1). Automation and Intellectualization for Industrial, Transport and Energetic Systems Chairs: Prof. Igor Kotenko, Prof Dr. Hasan Alpay Heperkan</p> <ol style="list-style-type: none">1. Learning Adaptive Parking Maneuvers for Self-Driving Cars Gregory Gorbov, Mais Jamal and Aleksandr Panov2. Attacks against Artificial Intelligence Systems: Classification, the Threat Model and the Approach to Protection Igor Kotenko, Igor Saenko, Oleg Laut, Nikita Vasiliev and Ksenya Kribel3. Acyclic Structures of Transport Processes in Transportation Management Problems Alexander N. Guda and Vera V. Ilicheva4. Knowledge Graph Augmentation Based on Tabular Data: A Case Study for Industrial Safety Inspection Nikita Dorodnykh and Aleksandr Yurin5. Reconstruction of 3D Semantic Map and Its Quality Estimation Vitaly Bezuglyj and Dmitry Yudin6. Evolution Management of Multistage Manufacturing Based on Evidence Theory and Methods of Interval Analysis Boris Paliukh and Alexander Vetrov7. An approach to data mining of software repositories in terms of quantitative indicators of the development process and domain features Aleksey Filippov, Anton Romanov and Dmitrii Iastrebov8. Intelligent models for state assessment and behavior prediction in railway processes based on descriptive analytics and soft computing Alexander Dolgiy, Anatoly Khramtsov and Sergey Kovalev9. Terminal stochastic filtering of nonlinear dynamic processes: the case of invariant immersion Sergey Sokolov, Agop Khatlamadzhiyan, Arthur Novikov, Marianna Polyakova and Dmitriy Demidov10. Control of SRM of flywheel energy storage drive Pavel G. Kolpakhchyan, Sergey Pakhomin, Alexander E. Kochin, Alexey R. Shaikhiev, Margarita S. Podbereznaya and Georgy Nazikyan11. Development of a Model of User Interface Logic Representation Yulia Lipko, Alexander Sviridov, Svetlana Belikova and Alexander Belikov
<p>09:00 – 11:00</p>	<p>Session 6 (Hall 2). Fuzzy logic and non-classical logics Chairs: Prof Dr. Kürşad Melih Güleren</p> <ol style="list-style-type: none">1. Intelligent support for the interaction of transport process participants using fuzzy modeling Maksim Bakalov, Nikolay Lyabakh, Vladimir Vereskun and Vyacheslav Zadorozhniy2. Ontological engineering of interrelated processes in complex cyber-physical systems Vadim Borisov and Anton Misnik3. Mathematical models and algorithms of an intelligent platform for the implementation of an individual learning trajectory Sakharova Luydmila, Gurru Akperov, Anna Artamonova and Vladimir Khramov4. Mapping out the Measures to Prevent the Failure of Electrical Equipment Anna Kolodenkova, Svetlana Vereshchagina, Victoria Dobrova, Evgenia Muntyan and Ivan Olgeizer5. Synthesis of a Quasi-Optimal Control System Using the Maximum

	<p>Condition of Generalized Power Under Fuzziness of Operation Modes' Boundaries Sergey Lazarenko and Andrey Kostoglotov</p> <p>6. Complex modeling of inductive and deductive reasoning by the example of a planimetric problem solver Sergey Kurbatov and Igor Fominykh</p>
11:10-11:30	Coffee Break
11:30-12:00	<p>Session 7 (Hall 1). Bayesian Networks and Trust Networks, Fuzzy-Stochastic Modelling Chair: Asst Prof Dr. Kenan Kaya</p> <ol style="list-style-type: none"> 1. Probabilistic graphical models with continuous variables for the decision making about risky episodic behavior in the framework of gamma Poisson model with application to public posting data Valeriia Stoliarova and Alexander Tulupyev 2. BERT and ELMo in Task of Classifying Social Media Users Posts Valerii D. Oliseenko, Michael Eirich, Alexander L. Tulupyev and Tatiana V. Tulupyeva 3. The Learning of Fuzzy Models Based on the Fuzzy Bayesian Approach Vadim Borisov, Elena Luférova, Victor Luférov and Andrey Sukhanov
11:30 – 12:00	<p>Session 8 (Hall 2). Bioinspired systems Chair: Prof Dr. Ali Güneş</p> <ol style="list-style-type: none"> 1. Optimal Design of Conventional and Freeform Optical Systems with Memetic Mind Evolutionary Computation Algorithm Maxim Sakharov, Thomas Houllier and Thierry Lépine 2. Development and research of a hybrid algorithm for placement of elements of digital computing equipment Leonid Gladkov, Nadezhda Gladkova and Muhanad J. Yaser 3. An approach to fusing strategic objectives into agent-level decision making in load balancing Valerii Zakharov and Dmitrii Murashov
12:00 – 12:10	Closing session
14:00 – 17:00	<p>Roundtable discussion (Hall 1). “Intelligent information models in socio-economical systems” Chairs: Prof. Sergey Kovalev, Prof. Imran Akperov, Prof. Sergey Myasoedov, MBA Natalia Evtikhieva, Assoc. Prof. Mustafa Aydin, prof. Ramazan Korkmaz</p>