

SAMI 2023 preliminary program

Since it is a hybrid event, onsite and online participants are welcome.

Please click the link below to join online:
<https://us06web.zoom.us/j/81224700187>

Time zone: CET



VENUE: **Guest House of TUKE in Herl'any**

January 19, Thursday

10:00 – 10:30 **Opening Ceremony**

10:30 – 11:10 **Plenary Talk I**

Session chair: Levente Kovács

222	Pasquale Palumbo	A Mathematical Model of the G1/S Transition for the Budding Yeast
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11:10 – 11:50 **Plenary Talk II**

Session chair: Ladislav Főző

4466	Matúš Pleva	What Behavioral Signals could be Used to Identify Users?
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12:00 – 13:20 Lunch

13:20 – 14:00 **Plenary Talk III**

Session chair: Imre J. Rudas

6661	Okyay Kaynak	Engineering Education at the Age of Industry 5.0
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14:00 – 14:40 **Plenary Talk IV**

Session chair: Ervin Rácz

9979	István Kistelegdi, Zsolt Ercsey, Tamás Stortz and Anthony John Gall	Sensitivity Analysis of Building Comfort and Energy Design Variables
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14:40 – 15:00 Coffee break

15:00 – 16:30 [T1] **Session on Intelligent Robotics and Intelligent Mechatronics**

Session chair: Ján Vascák

2760	Ján Vascák and Dusan Herich	Map Merging for Multi-Robotic Applications
4470	Károly Fodor and Viktor Remeli	Validation of ORB-SLAM3 and VINS-Mono with Low-Cost Sensor Setup in Outdoor Environment
9408	Márton Cserni and András Rövid	Combining Classical and Neural Approaches for Image Segmentation
1801	Teresa Achtenberg and Dominik Boesl	Defining Emotional Intelligence for Robots based on a coaching Approach
1477	Vladislav Maxim, Jan Ligus, Jana Ligusova, David Kovaluk and Matus Sabol	Processing of collected data using an industrial 2D visual camera system
8925	Fodor Attila and Tamas Sandor	Development of a Drivecycle-based Twin Drive Control Procedure to Increase the Efficiency of Electric Motors

16:30 – 17:45 [T2] **Session on Informatics I**

Session chair: László Szilágyi

2606	Peter Pekarcik, Eva Chovancová, Martin Havrilla and Martin Hasin	Security analysis of attacks on UAV
3756	Miroslava Pavlusová, Oliver Lohaj, Zuzana Pella and Ján Paralič	Modeling the influence of factors associated with atherosclerosis
5268	Farida Asadova, Gabor Kertesz, Robert Lovas and Annamaria Varkonyi-Koczy	A Survey of Usage of Anytime Algorithm in Fault detection in Cloud Systems
6387	Jakub Blaško, Peter Papcun and Erik Kajáti	Laboratory access and evidence system
995	Gergő Bonnyai and Sándor Szénási	Machine Learning Assisted Temporal Continuous Clustering

18:00 Welcome Reception

January 20, Friday

9:00 – 10:45 [F1] **Session on Artificial Intelligence**

Session chair: Branislav Madoš

6628	Dominik Vranay and Peter Sinčák	Capsule Networks - With reconstruction to explainability
8716	Maroš Hliboký, Marek Bundzel and Stanislav Husár	State-of-the-Art in Lung Ultrasound Processing - Brief Review
515	Innokentiy S. Humonen and Ilya Makarov	Co-occurrence Networks for Word Sense Induction
864	Milana Shkhanukova	Dementia classification using attention mechanism on audio data
4710	Attila Hammas, Sándor Tihamér Brassai, András Németh and Szabolcs László Gábor	Training YOLO v4 on DOTA dataset
5151	Miklós Sipos and Bálint Bódi	Deception detection system with image processing
7753	János Hollósi, Áron Ballagi and Claudiu Radu Pozna	Capsule-based Autoencoder Network for Pointcloud Reconstruction

10:45 – 11:00 Coffee break

11:00 – 12:00 [F2] **Session on Informatics II**

Session chair: Marek Bundzel

6349	László Horváth	Reactive Context Structure (RCS)
7251	Kristián Mičko, Michal Beca, Peter Papcun and Iveta Zolotová	Responsive Web Applications Enables Automatization of Karaoke Song Playlist
590	Hamzeh Ghorbani, Sepideh Asadi, Simin Ghorbani, Parvin Ghorbani, Harutyun Stepanyan, Nina Khlgatyan, Diana Aghabalyan, Samaneh Bahrami and Rituraj Rituraj	Investigating the predictive contribution of attitude towards life and belief system on self-resilience and psychological toughness of cancer patients about the mediating role of emotion regulation
2941	Hamzeh Ghorbani, Sahar Lajmorak, Simin Ghorbani, Parvin Ghorbani, Nina Khlgatyan, Harutyun Stepanyan, Samaneh Bahrami, Seyed Mohammad Rasaei, Mehdi Ahmadi Alvar and Rituraj Rituraj	Application of a New Hybrid Machine Learning (Fuzzy-PSO) for Detection of Breast's Tumor

11:00 – 12:00 [FP] **Poster Session**

Session chair: Norbert Ádám

3366	Alzbeta Kanalikova and Emília Bubeníková	Possibilities of using WSN for object localization and analysis of acquired data
5528	Anton Balaz, Branislav Mados and Emilia Pietrikova	Extending Minecraft for Teaching Bitcoin Cryptocurrency
8343	Monika Pogatsnik	Dual Training in Engineering Education
8756	Martin Chovanec, Martin Hasin, Martin Havrilla, Pavol Tkáč and Eva Chovancová	Two ways to analyze data from the netflow protocol with a view to non-relational databases
8923	György Györök, Margit Makó and Olga Shvets	Functional IN CIRCUIT tester with FPAA
9625	Maroš Harahus, Daniel Hládek, Jozef Juhár and Zuzana Sokolová	Comparison of neural architectures for machine translation of the Slovak language using the Fairseq toolkit
9730	Norbert Ádám, Dávid Vaľko and Branislav Madoš	Acquiring favorable ECG signal from low-cost devices

12:00 – 13:45 Lunch

13:45 – 15:00 [F3] **Special Session on Recent PhD Research Achievements in Applied Informatics I (organized by László Horváth)**

Session chair: László Horváth

3664	Esmeralda Kadena and Rajnai Zoltan	Beyond the potential of 5G
3692	Dominik Csík, Ákos Odry, Richárd Pesti, József Sárosi and Peter Sarcevic	A novel orientation-based FSPL model parameter optimization method using PSO for indoor localization
4384	Suryakant Tyagi, Annamária Várkonyi-Kóczy and Sándor Szénási	A Comprehensive Investigation into The Noise Reduction Techniques for Speech
5407	Bertalan Beszédes, Ladislav Főző, Dimén Levente and Péter Dr. Udvardy	The Practice of Troubleshooting and Maintenance in a Small-scale Off-grid Industrial Environment
597	Ferenc Tolner, Róbert Pálovics, György Eigner and Balázs Barta	Long-term Development Perspectives of Resilient Companies

15:00 – 15:30 Coffee break

15:30 – 17:15 [F4] Session on Man-Machine Systems, Engineering Education, Systems Engineering, Intelligent Manufacturing Systems, Computational Intelligence

Session chair: György Györök

7143	Gergo Ignezi and Ernő Horváth	Node Point Optimization for Local Trajectory Planners based on Human Preferences
8210	Gábor Molnár	Orthocorrection of Corona KH-1 Satellite Panoramic Images
7261	György Molnár, József Cserkó and Éva Karl	Evaluation and technological solutions for a dynamic, unified cloud programming development environment
869	Eva Beke	Engineering competencies expected in the digital working places
3579	Péter Kádár and Vass Attila	An isolated microgrid supply block in a urban network for emergency situations Pending paper, since no final version submitted
180	Lourdes Ruiz, Huu Phuoc Dai Nguyen and Rajnai Zoltan	SCADA Systems: Security Concerns and Countermeasures
5725	Amira Marouani and Andrea Tick	Predictive Modeling to Investigate and Forecast Customer Behaviour in the Banking Sector

18:00 Banquet

January 21, Saturday

9:00 – 10:30 [S1] **Special Session on Recent PhD Research Achievements in Applied Informatics II (organized by László Horváth)**

Session chair: László Horváth

5821	Yue Wu and Katalin Takács-György	Information security of food security
6052	Zoltán Varga and Dr. Ervin Racz	Statistical Analysis of the Performance of the Dye-Sensitized Solar Cell – Thermoelectric Generator
9642	Massimo Stefanoni, Richard Pesti, Ákos Odry and Peter Sarcevic	Measurement System for the Simulation of Indoor Magnetic Disturbances using a Robotic Arm
9493	Zoltán Varga and Dr. Ervin Racz	Simulation of the Performance of the Dye-Sensitized Solar Cell – Thermoelectric Generator
4854	Máté Siket, Rebeka Tóth, László Szász, Kamilla Novák, György Eigner and Levente Kovács	An application programming interface for the widely used academic version of the UVA/Padova Type 1 Diabetes Mellitus Metabolic Simulator
4952	Mirtill Boglárka Naghi, Levente Kovács and László Szilágyi	A review on advanced c-means clustering models based on fuzzy logic

10:30 – 10:45 Coffee break

10:45 – 11:00 [S2] **Special Session on Digitalisation, Generation Research, Consumer Trends (organized by Mónika Garai-Fodor, Ágnes Csiszárík-Kocsir and János Varga)**

Session chairs: Mónika Garai-Fodor, Ágnes Csiszárík-Kocsir and János Varga

5836	Rozália Szatmáry and Péter Szikora	Factors influencing technostress
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11:00 – 12:00 [S3] **Session on Biomedical Engineering**

Session chair: Marek Bundzel

4286	Marianna Kucarov, Miklós Vincze, Malgorzata Verőné Wojtaszek, Miklos Kozlovsky and Bela Molnar	Using Geospacial-aimed eCognition in Biomedical Field for Gland Detection
9261	Stanislav Husár, Marek Bundzel and Maroš Hliboký	Upper Limb Diagnostics and Rehabilitation Devices - Brief Review
5767	Marianna Dimitrova Kucarov, Bela Molnar and Miklos Kozlovsky	Patho-Genomics Fused Database Schema and Optimisation for Automatic Pathology Workflow
362	Kristina Motuzenko and Ilya Makarov	Analyzing Immunomes using Sequence Embedding and Network Analysis

12:00 Lunch and farewell

Thank you for your contribution!
See you at SAMI 2024!