2023 IEEE 17th International Symposium on Applied Computational Intelligence and Informatics (SACI) | 979-8-3503-2110-4/23/$31.00 ©2023 IEEE | DOI: 10.1109/SACI58269.2023.10158558

SACI 2023

IEEE 17th International Symposium on Applied Computational Intelligence and Informatics

PROCEEDINGS

Timişoara, Romania
May 23–26, 2023

2023 IEEE 17th International Symposium on Applied Computational Intelligence and Informatics (SACI) | 979-8-3503-2110-4/23/$31.00 ©2023 IEEE | DOI: 10.1109/SACI58269.2023.10158555

The pendrive proceedings material is prepared by the organizers.

All papers are reviewed by at least two reviewers.

ISBN: 979-8-3503-2109-8
Part number: CFP2345C-USB

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Opening Ceremony and Plenary Talks are hybrid events. You can join via Teams: bit.ly/SACI2023_Teams_link (EEST time zone)

Venue: **Conference Center** (address: Vasile Parvan no. 2)  Map: bit.ly/3IbvpeD

May 24 (Wednesday)

8:00 – 12:30 and 14:00 – 16:00 **Registration** **Lobby**

9:00 – 9:30 **Opening Ceremony** **Auditorium**

9:30 – 10:10 **Plenary Talk I** **Auditorium**

Session chair: Ciprian-Bogdan Chirila

5875	**Dana Petcu**	Cognitive Cloud Continuum

10:10 – 10:50 **Plenary Talk II** **Auditorium, via Teams**

You can join via Teams: bit.ly/SACI2023_Teams_link (EEST time zone)

Session chair: Imre J. Rudas

5171	**Nikola Kasabov**	Neuroinformatics, Neural Networks and Neurocomputers for Brain-inspired Computational Intelligence

10:50 – 11:10 Coffee break

11:10 – 12:10 [W1a] Session on Intelligent Robotics I **Auditorium**

Session chair: Radu-Emil Precup

3596	**Enikő Nagy and Ildiko Holik**	Educational robots in higher education - findings from an international survey
4434	**Barbara Abonyi-Tóth and Ákos Nagy**	Autonomous Exploration Using a Tree Structure For Goal Selection
7959	**Dénes Tompos and Balázs Németh**	Safe trajectory design for indoor drones using reinforcement-learning-based methods

11:10 – 12:10 [W1b] Session on Computational Intelligence I **Room K1 Amphitheater**

Session chair: Zsolt Čonka

224	**Modafar Al-Shouha and Gábor Szűcs**	PIC-XAI: Post-hoc Image Captioning Explanation using Segmentation
592	**Adriana Berdich, Patricia Iosif, Camelia Burlacu, Alfred Anistoroaei and Bogdan Groza**	Fingerprinting Smartphone Accelerometers with Traditional Classifiers and Deep Learning Networks
727	**Nader Karballaeezadeh, Danial Mohammadzadeh S. and Mohammed Mudabbiruddin**	Modeling Road Roughness through Vibration Analysis for Driving Quality and Extended Discussion on AI Potential

12:30 – 14:00 Lunch CP1

14:00 – 15:40 [W2a] Session on Informatics I **Auditorium**

Session chair: Ádám Csapó

7174	**Balazs Solymos and Laszlo Bacsardi**	Efficiency improvement of photon arrival time based quantum random number generator with hashing
9645	**Tarek Setti and Adam Csapo**	GITS: A Graph-Indexed-Tensor Structure for the Adaptive Associative-Semantic Tagging of Digital Documents
6712	**Bence Richard Hach, Daniela Stănescu, Lucian Ionel Găină and Bianca Gușiță**	The impact of age on NBA player's performances: A Data Mining approach
778	**Kristián Fodor, Zoltán Balogh and György Molnár**	Real-time Emotion Recognition in Smart Homes
8191	**Fruzsina Bene and Attila Kiss**	Public Key Infrastructure in the Post-Quantum Era

14:00 – 15:40 [W2b] Session on Computational Intelligence II **Room K1 Amphitheater**

Session chair: Dániel András Drexler

2290	**Karballaeezadeh Nader, Maaruof Ali, Mohammadzadeh S. Danial, Zamani Sepehr and Mohammed Mudabbiruddin**	Machine Learning Approaches for Detection/Classification and Prediction Purposes in Pavement Engineering Studies: An Overview
3077	**Eszter Virágh, Dániel András Drexler and Bálint Kiss**	Motion planning and modeling for isothermal parallel chemical reactions
4397	**Martin Dömény, Melánia Puskás, Levente Kovács and Dániel András Drexler**	In silico chemotherapy optimization with genetic algorithm
8171	**Tamás Dániel Szűcs, Melánia Puskás, Levente Kovács and Dániel András Drexler**	Model predictive fuzzy control in chemotherapy optimization
8598	**Lilla Kisbenedek, Melánia Puskás, Levente Kovács and Dániel András Drexler**	Indirect supervised fine-tuning of a tumor model parameter estimator neural network

14:00 – 15:30 [W2c] Special Session on PhD Student Research in Applied Informatics and Numerical Mathematics I

via Teams only - You can join via Teams: bit.ly/SACI2023_Teams_link (EEST time zone)

Session organizer and chair: László Horváth

2481	**Zoltán Biczó, Imre Felde and Sándor Szénási**	A Novel Machine Learning Solution for the Inverse Heat Conduction Problem with Synthetic Datasets
1742	**Ádám Pintér and Sándor Szénási**	Longest Common Subsequence-based Source Code Similarity
1859	**Ferenc Tolner, Balázs Barta and György Eigner**	Economic Resilience and Antifragility: Classification of SMEs' Shock Reactions based on Balance Sheet and Income Statement Data
1951	**Kovacs Andras, Szenasi Sandor and Lovas Robert**	Vectorisation of Program Codes for Machine Learning Based Resource Estimation
2501	**Ghazanfar Shahgholian, Majid Moazzami, Sayed Mohammadali Zanjani, Amir Mosavi and Arman Fathollahi**	A Hydroelectric Power Plant Brief: Classification and Application of Artifactual Intelligence
3091	**Mohammad Merei and József K. Tar**	Adaptive Backstepping Control Design for Nonlinear System

15:40 – 16:00 Coffee break

16:00 – 17:40 [W3a] Session on Informatics II **Room K1 Amphitheater**

Session chair: Márta Takács

7290	**Jelena Tasic, Márta Takács and Levente Kovács**	A Kinetic Model-Based Approach for Estimating Hemoglobin A1c Based on Average Glucose
4506	**Krisztián Bálint**	Creation of a Unifie University Blockchain for the Purpose of Storing the University's Teaching Materials
3201	**Esmeralda Kadena, Silvana Qose and Zoltan Rajnai**	5G in Europe: Security and Challenges
5274	**Silvana Qose and Rajnai Zoltan**	Blockchain Technology in Healthcare Industry: Benefits and Issues
5342	**Ashley Hurrelbrink and Alexandru Topirceanu**	On the impact of population density and mobility restrictions in the control of epidemic spreading

16:00 – 17:15 [W3b] Special Session on PhD Student Research in Applied Informatics and Numerical Mathematics II

via Teams only - You can join via Teams: bit.ly/SACI2023_Teams_link (EEST time zone)

Session organizer and chair: László Horváth

3989	**Miklós Vincze, Abdallah Benhamida, Bence Biricz and Miklos Kozlovszky**	Real-time video streaming in medicine using virtual reality
4542	**Ádám Pintér and Sándor Szénási**	GPU Acceleration of Longest Common Substrings Algorithm
6210	**Marianna Dimitrova Kucarov, Bela Molnár and Miklós Kozlovszky**	Single Cell Position Determination and Transformation From Static High-resolution Digital Image To Laser-microdissector Coordinate System Using Image Processing Techniques
6563	**José Vicente Egas-L'Opez and Gábor Gosztolya**	Using Custom X-vectors for the Automatic Screening of COVID-19 Based on Coughing Audio Samples
9783	**Zsolt Krutilla and Attila Prof. Dr. Kővári**	How we can use text classification in the Back-Office environment of a bank as 'business as usual' solution

18:00 Welcome Reception Restorant Universitar (address: Aleea FC Ripensia no. 1)

May 25 (Thursday)

8:00 – 12:30 **Registration** **Lobby**

8:00 – 10:20 **[T1a] Special Session on Applied Mathematics: Nonlinear Phenomena** **Auditorium**
Session organizer and chair: Alexandru Kristály

5514	**Károly Szilák**	Schrödinger-Maxwell differential inclusion system
	Árpád Baricz	Generalized gamma convolutions and hyperbolically completely monotone densities
	Sándor Kajántó	Saturation phenomena of a Riemannian non-local eigenvalue problem
	Csaba Farkas	Lower semicontinuity of Kirchhoff-type energy functionals and spectral gaps on (sub)Riemannian manifolds
	Ana Şirianţu	Neerven Type Criteria for Stability of Variational Systems - An Ergodic Theory Approach

via Teams - You can join via Teams: bit.ly/SACI2023_Teams_link (EEST time zone):

6814	**Boroka Oltean-Peter and Csaba Farkas**	Algorithm for equilibrium in the symmetric two-player Hirshleifer contests
	Genet M. Assefa	Quotients of Whittaker functions and applications in probability theory

8:00 – 10:20 **[T1b] Session on Systems Engineering I** **Room K1 Amphitheater**
Session chair: Péter Kádár

134	**Michail Dimitriev, György Morva and Kadar Peter**	Testing of 6-500 kV Cables in Polymer Pipes
5450	**Lucian Popa, Camil Jichici, Tudor Andreica, Pal-Stefan Murvay and Bogdan Groza**	Impact of Wiring Characteristics on Voltage-based Fingerprinting in Controller Area Networks
560	**Lourdes Ruiz and Rajnai Zoltan**	5G Vendors, cybersecurity and NESAS
7789	**Mihaela Codruta Ancuti, Florinel Butaru, Geza Mihai Erdodi, Ciprian Sorandaru, Sorin Musuroi and Razvan Ancuti**	Wind System Control at Time-Varying Wind Speeds Using the Perturb and Observe Method
6395	**László Horváth**	Model Organized Theoretical and Experimental Research in Collaborative Space

9118	**Judith Pálfi, Zsolt Čonka, Róbert Štefko and Ferenc Molnár**	Development of a complex mathematical model for the extreme voltage fluctuations in the public distribution networks
4043	**Michail Dimitriev, György Morva and Kadar Peter**	Damage Locating of 6-500 kV Cables in Polymer Pipes

8:00 – 10:20 [T1c] e-poster Special session on Digitalisation, Generation Research, Consumer Trends I **Room K2 Amphitheater**

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

168	**Katalin Jäckel, Mónika Garai-Fodor and Zoltán Gábor Lukács**	Jaycustomers in the Hungarian healthcare system
661	**János Varga Ph.D., Ágnes Csiszárik-Kocsir Dr.Ph.D., Bíborka Eszter Bíró, Kinga Katalin Székely, Boróka Júlia Bíró and Mónika Garai-Fodor**	Change Management Practices and the Impact of the Pandemic on Hungarian and Romanian SMEs
2084	**Ágnes Csiszárik-Kocsir Dr.Ph.D. and Oszkár Dobos**	The place and role of research, development and innovation activities in the life of domestic enterprises along business characteristics
2112	**Anett Popovics and Monika Garai-Fodor**	Hungarian food purchasing behaviour and promotion opportunities in the light of primary data
3600	**Ágnes Csiszárik-Kocsir Dr.Ph.D. and János Varga Ph.D.**	Innovation and factors leading to innovative behaviour according to Hungarian businesses
5894	**Katalin Jaeckel and Monika Garai-Fodor**	What represents value and happiness for the Hungarian Generation Z in 2022-2023?
6594	**Szilárd Hegedüs and Csaba Lentner**	Evolution of Debt, Revenue and Budget Balance in the Hungarian Local Government System between 2012 and 2021
6900	**Csilla Mizser**	Green city as a development issue – based on an empirical survey of Budaörs
7213	**István Márk Tóth and Ágnes Csiszárik-Kocsir Dr.Ph.D.**	Examining the competences needed for an agile approach in different generations
7749	**János Varga Ph.D. and Ágnes Csiszárik-Kocsir Dr.Ph.D.**	Perception of innovation and innovative projects at user level through the example of the Atala Prism project
7988	**Ágnes Csiszárik-Kocsir Dr.Ph.D. and János Varga Ph.D.**	The advancing role of digitalisation through the example of the Perlmutter project from the user side
8325	**Patrik Viktor and Albert Molnar**	Perceptions of Mooc systems among domestic university students at different levels
8485	**Patrik Viktor and Monika Garai-Fodor**	Generation-specific analysis of adaptive self-driving technology in Hungary
8974	**Oszkár Dobos and Ágnes Csiszárik-Kocsir Dr.Ph.D.**	Individual-level perception of research, development and innovation in the life of Hungarian enterprises
9698	**Monika Garai-Fodor**	Digitalisation trends based on consumer research

1137	**Péter Váradi, Judit Lukács and Richárd Horváth**	Examination of vehicle fraud detection possibilities with the help of Fuzzy inference system
5559	**Júlia Zombori, Judit Lukács and Richárd Horváth**	Determination of rainfall probability using Response Surface Method

10:20 – 10:40 Coffee break

10:40 – 12:00 [T2a] Special Session on Shared Control and Cooperative Systems **Auditorium**
Session organizers and chairs: Simon Rothfuß and Bálint Varga

5662	**Márton Jagicza, Gábor László Tóth, Dávid Józsa, Letícia Pekk and Dénes Fodor**	Classification of vulnerable road users in terms of automotive radar systems cross-section measurements
7901	**Balint Varga, Dongxu Yang and Soeren Hohmann**	Intention-Aware Decision-Making for Mixed Intersection Scenarios

via Teams - You can join via Teams: bit.ly/SACI2023_Teams_link (EEST time zone)

3935	**Bálint Kővári, Csanád Balogh and Szilárd Aradi**	Multi-Agent Reinforcement Learning for railway rescheduling
7280	**Christian Alexander Braun, Aniketh Ramesh, Simon Rothfuß, Manolis Chiou, Rustam Stolkin and Sören Hohmann**	Model Predictive Control of the Degree of Automation Optimizing Robot Health

10:45 – 12:00 [T2b] Special Session on PhD Student Research in Applied Informatics and Numerical Mathematics III **Room K1 Amphitheater**
Session organizer and chair: László Horváth

302	**Dénes-Fazakas Lehel, Máté Siket, László Szilágyi, György Eigner and Levente Kovács**	Investigation of reward functions for controlling blood glucose level using reinforcement learning
1521	**Massimo Stefanoni, Ákos Odry and Peter Sarcevic**	A neural network-based approach for the identification and compensation of magnetic disturbances in mobile robot localization
1869	**Péter Mogyorosi and Sándor Szénási**	GPU Database for Large Geospatial Datasets

3729	**Mohammed Mudabbiruddin and Mosavi Amir**	Machine Learning and Mathematical Models for Prediction of Structural Aging Process
7042	**Tamás Zoltán Zakota, Zoltan Zakota and József Fogarasi**	On the Possibility of Using Tree Inventories in Forecasting Pollen Caused Allergic Symptoms in Hungary, Based on Data of Szeged and Miskolc

10:40 – 12:00 [T2c] e-poster Session on Systems Engineering II **Room K2 Amphitheater**

Session chair: Amir Mosavi

655	**Ibrahim Ahmed and Lucian Mihet-Popa**	Model Predictive Control of a Packed-U-cells inverter with PV, Boost and Bidirectional Rectifier for Solid-State Transformers
883	**Attila Jancsi and Dániel Kiss**	Parameter optimization of a cellular automaton model in distributed environment
3333	**Sina Ardabili, Amir Mosavi and Imre Felde**	Machine Learning in Heat Transfer: Taxonomy, Review and Evaluation
3381	**Zsuzsanna Molnár and Dániel Kiss**	Constellation recognition on digital images
6972	**Firan Darius-Ovidiu, Haisiuc Andrei-Cristian, Hedes Ioan-Alexandru, Stangaciu Cristina and Nimara Sergiu**	Bluetooth Sensor Modules for Monitoring Indoor Ambient
9132	**Mahdi Taleb, Bahador Fani, Ghazanfar Shahgholian, Amir Mosavi and Arman Fathollahi**	Maintaining Fuse in the Presence of Distributed Generation Sources in the Distribution Network to Improve Protection System
9274	**Gréta Gonda and Gábor Kertész**	Birth time prediction based on uterus-activity using machine learning
9924	**Sayed Mohammad Ali Zanjani, Majid Moazzami, Mohammad Amin Honarvar, Amir Mosavi and Arman Fathollahi**	Study and Simulation of Wind Farms Based on Squirrel Cage Induction Generator in Electrical Distribution System
8975	**Barnabás Erdei and Sándor Szénási**	Procedural City Generation
9441	**Barnabás Rőczey and Sándor Szénási**	Automated Moderation Helper System Using Artificial Intelligence Based Text Classification and Recommender System Techniques
5995	**Codruta Mihaela Ancuti, Alin Ilie Stingu, Sorin Musuroi and Cristian Vasile Lascu**	Novel EIGHT-SWITCH Power Factor Correction Converter Scheme Allowig Bidirectional Power Flow

12:30 – 14:00 Lunch CP1

14:00 – 15:00 [T3a] Special Session on PhD Student Research in Applied Informatics and Numerical Mathematics IV **Auditorium**

Session organizer and chair: László Horváth

7486	**Dominik Csík, Peter Sarcevic, Richard Pesti and Ákos Odry**	Comparison of different radio communication-based technologies for indoor localization using trilateration
9173	**Richard Pesti, Peter Sarcevic, Dominik Csík and Ákos Odry**	Particle swarm optimization aided calibration of sensor installation errors for MEMS accelerometers
9491	**Borbála Gergics, Flóra Vajda, Alex Ládi, András Füredi and Dániel András Drexler**	Pharmacodynamics modeling based on in vitro 3D cell culture experiments
5737	**Bertalan Beszédes**	Human Circadian Rhythm Friendly Adaptive Spectrum Wake-up Clock Lighting

14:00 – 14:40 [T3b] Special session on Digitalisation, Generation Research, Consumer Trends II **Room K1 Amphitheater**

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

5025	**Yue Wu and Katalin Takács-György**	What is stopping agriculture 4.0?---Examples from China

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4764	**Márta Péntek, János Tibor Czere, Zsombor Zrubka, Tamás Haidegger, Levente Kovács and László Gulácsi**	EQ-5D studies in robotic surgery: a mini-review

14:00 – 15:00 [T3c] e-poster session on Computational Intelligence and Intelligent Mechatronics **Room K2 Amphitheater**

Session chair: Iosif Szeidert

3883	**Bahram Choubin, Omid Rahmati, Seyed Masoud Soleimanpour, Samad Shadfar, Ahmad Najafi Igdir and Amir Mosavi**	The Most Important Hydro-Environmental Drivers Affecting Gully Erosion Occurrence Through Wrapper Methods
4763	**Maria Brad, Ana Brad and Mihai Micea**	Method for Autonomous Lane Detection in Assisted Driving
5148	**Raul Robu, Paul Arseni-Ailoi and Dan Ungureanu-Anghel**	Using Weka API for creating a custom classification application
2871	**Ioan Filip, Iosif Szeidert, Cristian Vasar, Octavian Prostean and Dorin Bordeasu**	Tuning of a minimum variance control system based on the estimated process gain

5134	**Milad Taheri, Ghazanfar Shahgholian, Bahador Fani, Amir Mosavi, Arman Fathollahi and Imre Felde**	Protection Methodoly for Supporting Distributed Generations with Respect to Transient Instability
8685	**Mansoor Zeinali, Sayed Mohammadali Zanjani, Somaye Yaghoubi, Amir Mosavi and Arman Fathollahi**	Torque Control in a Two-Mass Resonant System: Simulation and Dynamic Analysis
1001	**Cristian Avramescu, Andrei Tenescu, Bogdan Bercean and Marius Marcu**	Bounding Box Information Benefits Lung Pathology Classification in Pulmonary X-Rays

15:00 – 16:40 [T4] Session on Computational Intelligence III **via Teams only -** You can join via Teams: bit.ly/SACI2023_Teams_link (EEST time zone)
Session chair: Voicu Groza

1508	**Henrik Varga, Attila Kiss and Zoltán Kolarovszki**	Benchmarking Photonic Quantum Machine Learning Simulators
1818	**Diana Aghabalyan, Hamzeh Ghorbani and Rituraj Rituraj**	Relationship of Medicine and Philosophy: Mathematical Modeling of Moral Structures-Etometry
2163	**Anischal Kumar, Niklesh Kumar, Shahil Kumar, Voicu Groza, Mansour Assaf and Rahul Kumar**	Comparative Analysis of Machine Learning Techniques for Bearing Fault Classification in Rotating Machinery
3094	**Karen Dsouza, Lin Zhu, Pratibha Varma-Nelson, Shiaofen Fang and Snehasis Mukhopadhyay**	AI-Augmented Peer Led Team Learning for STEM Education
3923	**Mehran Amini, Miklos F. Hatwagner and Laszlo T. Koczy**	Machine learning and fuzzy cognitive maps in a hybrid approach toward freeway on-ramp traffic control

16:40 – 17:40 [T5] Session on Intelligent Robotics II **via Teams only -** You can join via Teams: bit.ly/SACI2023_Teams_link (EEST time zone)
Session chair: Tamás Haidegger

2709	**Marianna Dimitrova Kucarov, Mátyás Takács, Bela Molnar and Miklos Kozlovszky**	Automatic Calibration of Robotic Arm for Workstation Installation in Changing Environment - Comparison of Manual, Mechanic, and Automatic Calibration
4112	**Miklós Vincze, Csaba Sántics, Miklós Kozlovszky and Tamás Haidegger**	Application of 3D Multi-User Software Tools in Digital Medicine – a Scoping Review
6582	**József Kuti and Péter Galambos**	Revitalizing KUKA youBot project for Research and Educational purposes: Architecture of a new C++ driver

18:00 Banquet Restorant Universitar (address: Aleea FC Ripensia no. 1)

May 26 (Friday)

Today's presentations are via Teams only
You can join via Teams: bit.ly/SACI2023_Teams_link (EEST time zone)

8:00 – 10:00 [F1] Session on Informatics III
Session chair: Alexandru Topîrceanu

1424	**Peter Krammer, Marcel Kvassay, Ondrej Habala, Ján Mojžiš, Ladislav Hluchý, Ľuboš Pavlov and Ľuboš Skurčák**	Refinement of an Environmental Pollution Model for the Needs of the Electric Power Industry by Addition of Precipitation Attributes
2393	**Benjamin van Oostendorp**	Object Detectors as Input for Reinforcement Learning Agents
2892	**Jean Rosemond Dora, Ladislav Hluchý and Jean Rosemond Dora**	Detection of Attacks in Software-Defined Networks (SDN)
3681	**Mircea Trifan, Bogdan Ionescu and Dan Ionescu**	A Combined Finite State Machine and PlantUML Approach to Machine Learning Applications
4041	**Ondrej Habala, Martin Bobak, Martin Šeleng and Ladislav Hluchy**	Transformation of a Legacy Airport Meteorology Application into a Serverless Cloud Application
4410	**Andrea Tick**	Evaluation of Industry 4.0 familiarity at SMEs in Central-Eastern Europe using Machine Learning Algorithms

10:00 – 12:00 [F2] Session on Systems Engineering III
Session chair: Tibor Wührl

133	**Árpád Rigó and Balázs Tusor**	Options Evaluator With An Artificial Intelligence-based Volatility Model
2125	**David Holecska and Adrienn Dineva**	Towards Sustainable Energy Management: Analyzing AI-Based Solutions for PV Systems with Battery in Energy Communities
2682	**Xinyan Jiang and István Bíró**	The effects of shoes with a triple density midsole on lower limb kinematics and kinetics in male recreational runners
3022	**Marcell Csaba Sárkány and András Kovács**	Timetable generator and optimizer for Hungarian university students
3638	**Péter János Varga, Dávid Óhegyi, Sándor Gyányi and Tibor Wührl**	Optical network problems in 5G Radio Access Networks
5054	**Bence Hodák and Elemér Balázs**	Carpentry software designing and development with pane cutting optimization functionality

12:00 – 13:00 [F3] Session on Intelligent Manufacturing Systems
Session chair: Iosif Szeidert

2366	**Sarvenaz Sharifi, Danial Navabi and Amir Mosavi**	Translucent Concrete: Comprehensive Review of Concepts, Recent Technologies and Advances in Light Transmitting Concrete
3588	**Emil Gatial, Zoltán Balogh, Sepideh Hassankhani Dolatabadi, Hatem Ghorbel, Stefano Carrino, Jonathan Dreyer, Vicente Rodríguez Montequín, Adrian Gligor and Laszlo Barna Iantovics**	Auction-based Job Scheduling for Smart Manufacturing
8304	**Majid Dehghani, Mohammad Reza Yousefi, Amir Mosavi and Arman Fathollahi**	Unified Power Flow Controller: Operation, Modelling and Applications

12:00 – 13:00 Lunch CP1

13:00 – 15:00 [F4] Session on Informatics IV
Session chair: Mihaela Codruta Ancuti

4651	**Michal Staňo, Ladislav Hluchý, Martin Bobák, Peter Krammer and Viet Tran**	Federated Learning Methods for Analytics of Big and Sensitive Distributed Data and Survey
5717	**Sina Ardabili, Amir Mosavi and Imre Felde**	Deep learning for 5G and 6G
6102	**Radu-Iulian Gheorghica**	An Algorithm for Concurrent Use of Quantum Simulators and Computers in the Context of Subgraph Isomorphism
7033	**Éva Hegedűs and Andrea Tick**	Digitalization, Extended Reality and Artificial Intelligence in Explosive Ordnance Risk Education
7401	**Bahram Choubin, Abolfazl Jaafari, Jalal Henareh, Farzaneh Sajedi Hosseini and Amir Mosavi**	Averaged Neural Network Integrated with Recursive Feature Elimination for Flood Hazard Assessment
8709	**Mahsa Dehghan Manshadi, Milad Mousavi, Arian Golzarian, Madjid Soltani, Pascale Maul and Amir Mosavi**	Colorectal Polyp Localization: From Image Restoration to Real-time Detection with Deep Learning

15:00 – 17:00 [F5] Session on Systems Engineering IV
Session chair: Adrienn Dineva

5071	**Róbert Mészáros and Szabolcs Sergyán**	Lane detection and traffic sign recognition
7161	**Gergely Kún and Wührl Tibor**	Classification of Communication Interfaces in Railway Systems
7351	**Ámon Kiss and András Kovács**	Food recognition using neural network on mobile device
7495	**Krisztofer Szebasztián Molnár and Szabolcs Sergyán**	Random and shortest path generation for running or walking purposes
7301	**Tibor WÜhrl**	Simulation of Digital Signal Processing algorithms in time domain
8262	**Adrienn Dineva**	Advances in Lithium-Ion Battery Management through Deep Learning Techniques: A Performance Analysis of State-of-Charge Prediction at Various Loads Conditions

17:00 – 19:00 [F6] Session on Computational Intelligence, Intelligent Mechatronics and Systems Engineering
Session chair: Mohammed Faeik Ruzaij Al-Okby

7980	**Robert Zsolt Szabo, Gábor Orosz, Tamás Ungi, Colton Barr, Chris Yeung, Roland Incze, Gábor Fichtinger, János Gál and Tamás Haidegger**	Automation of lung ultrasound imaging and image processing for bedside diagnostic examinations
8686	**László Lindenmaier, Balázs Czibere, Szilárd Aradi and Tamás Bécsi**	A Runtime-Efficient Multi-Object Tracking Approach for Automotive Perception Systems
1904	**Paul Tota, Mircea-Florin Vaida, Romulus-Mircea Terebes, Gelu-Ovidiu Tirian and Sebastian-Daniel Maris**	Mesh Network with Telepresence Robots for Advertising
5831	**Delia Moga and Ioan Filip**	Automotive Scenarios for Trajectory Tracking using Machine Learning Techniques and Image Processing
5834	**Olivér Balogh and Zoltán Vámossy**	Solving Jigsaw Puzzles Using Computer Vision and Curve Similarity Measures
145	**Mohammed Faeik Ruzaij Al-Okby, Thomas Roddelkopf, Hartmut Ewald and Kerstin Thurow**	Testing and Integration of Commercial Hydrogen Sensor for Ambient Monitoring Application

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