

SACI 2019 final program

May 29, Wednesday

8:00 – 11:45 Registration *Room A 107*

9:30 – 10:00 Opening Ceremony *Room A 101*

10:00 – 10:45 Plenary session I *Room A 101*

Session chair: Imre J. Rudas

79	Edward Tunstel	Next-Level Robotic Intelligence
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10:45 – 11:00 Coffee break

11:00 – 11:45 Plenary session II *Room A 101*

Session chair: Levente Kovács

3	Hyo-Sung Ahn	Distributed Formation Control: A Generalized Framework for Multi-Agent and Network Systems
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11:45 – 13:30 Lunch break

13:00 – 16:00 Registration *Room A 107*

13:30 – 14:50 Parallel sessions

13:30 – 14:50 [W1a] Session on Informatics I *Room A 109*

Session chairs: Ciprian-Bogdan Chirila and Ján Hurtuk

52	Adelina Diana Stana and IoanaSora	Analyzing information from versioning systems to detect logical dependencies in software systems
60	Ciprian-Bogdan Chirila and IoanaSora	The Optimization of a Page Rank Based Key Classes Classifier using Simulated Annealing with ROC-AUC and Recall Metrics
77	Dániel András Drexler, Tamás Ferenci, Anna Lovrics and Levente Kovacs	Comparison of Michaelis-Menten kinetics modeling alternatives in cancer chemotherapy modeling
28	Ján Hurtuk and Eva Chovancová	Highly Interactive Hybrid Honeypot

13:30 – 14:50 [W1b] Session on Intelligent Control *Room A 115*

Session chairs: Hyo-Sung Ahn and Octavian Prostean

19	Yoo-Bin Bae , Hyo-Sung Ahn and Young-Hun Lim	Leader-Follower Bearing-based Formation System with Exogenous Disturbance
76	Péter Szilassy, Balázs Németh, Peter Gaspar, Ferenc Szauter and Dániel Pup	Robustness analysis and reconfiguration strategy of autonomous vehicles in intersections
41	IosifSzeidert, Ioan Filip, Octavian Prostean and Cristian Vasar	About MPPT used in Wind and Photovoltaic Energy Systems
78	Daniel Fenyes, Balázs Németh, Peter Gaspar, Pup Daniel and Szauter Ferenc	Study on a road surface estimation method based on big data analysis

13:30 – 14:50 [W1c] Session on Computational Intelligence I *Room A 110*

Session chairs: Gábor Kertész and Lorand Dobai

73	MihaelaTopirceanu, Alexandru Topirceanu and Mihai Udrescu	Exploring currency exchange dynamics from a complex network perspective
11	Mihai Teletin and Lorand Dobai	Lightweight models for fruits recognition
10	Shintaro Hashimoto and Kenji Mori	Lunar Crater Detection based on Grid Partition using Deep Learning
39	Arthur Piazzi and Tamás Tettamanti	Deep Learning Approach for Spatial Extension of Traffic Sensor Points in Urban Road Network

14:50 – 15:10 Coffee break

15:10 – 16:50 Parallel sessions

15:10 – 16:50 [W2a] Special session on PhD students papers I *Room A 109*

Session organizer and session chair: László Horváth

26	Philipp Rosenberger and Jozsef Tick	Relevance of PMBOK v6 Processes for Tailored Agile Project Categories
25	Carmen Maribel Cajas Vega, Lourdes Edith Villalva Vallejo, Mayra Susana Alban Taipe, Diana Karina VinuezaMoralez, Esmeralda Kadena and Ramiro Sebastian Vargas Cruz	Web Application: Enhancing birds' monitoring in Cotopaxi-Ecuador
35	Tamás Dániel Nagy and Tamás Haidegger	Recent Advances in Robot-assisted Minimally Invasive Surgery: Soft-tissue Contact Identification
59	HemzaRedjimi and József Tar	Investigation of Noise-sensitivity of a Fixed Point Iteration-based Adaptive Controller for a Pendulum-like Electric Cart
82	Gergő Pintér and Imre Felde	Prediction of thermal boundary conditions by using FWA

15:10 – 16:50 [W2b] Special session on Man and Cybernetics *Room A 115*

Session organizer and session chair: Kornélia Lazányi

91	Mónika Bartók and Gréta Maráci	POTENTIAL USE OF IT SOLUTIONS IN BUSINESS PROCESSES
94	Sándor Barnabas and Dávid János Fehér	Examining the relationship between the Bitcoin and Cybercrime
93	Máté Maráci	WARDRIVING IN EGER
95	Dávid János Fehér and Sándor Barnabas	Cloud SaaS security issues and challenges
92	Kornélia Lazányi	EMOTIONAL PROFILING OF ROBOTS IN HEALTH-CARE

17:30 Dinner *Casa Politehnicii 2 (address: Bd. Mihai Eminescu 11, 300028 Timisoara)*

May 30, Thursday

8:30 – 12:00 Registration *Room A 107*

9:00 – 9:45 Plenary session III *Room A 109*

Session chair: Imre J. Rudas

90	László Kóczy	Fuzzy Cognitive Maps in Modelling
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9:50 – 10:35 Plenary session IV *Room A 109*

Session chair: Radu-Emil Precup

54	Žarko Čojbašić	Machine Learning for Personalized Medicine: Clinical Outcome Prediction and Diagnosis
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10:35 – 10:50 Coffee break

10:50 – 12:10 Parallel sessions

10:50 – 12:10 [T1a] Session on Informatics II *Room A 109*

Session chairs: Vlad Muresan and Iosif Szeidert

6	Margit Antal and Lehel Denes-Fazakas	User Verification Based on Mouse Dynamics: a comparison of public data sets
23	Tamas Daniel Juhasz, Szilveszter Pletl and Lorand Molnar	A Method for Designing and Implementing a Real-Time Operating System for Industrial Devices

9	Robert-George Simion and Mihai Lica Pura	A BitTorrent DHT Crawler
62	Felicia MirabelaCostea, Ciprian Bogdan Chirila, OanaSorina Chirila and Vladimir Ioan Cretu	On the Generation of Random Data for Auto-Generative Learning Objects

10:50 – 11:50 [T1b] Session on Systems Engineering

Session chairs: JurajGazda and Octavian Prostean *Room A 110*

53	Cezara Liliana Rat , Octavian Prostean and Ioan Filip	Power Control of a Variable-Pitch Hydrokinetic Turbine
56	David-TiberiuGruescu	Attorney-client interaction platform. Modelling and automated integration of legal fees.
89	László Horváth	Virtual Research Laboratory for Smart Engineering in the Cloud

10:50 – 12:10 [T1c] Session on Computational Intelligence II *Room A 115*

Session chairs: Alexandru Topîrceanu and Peter Drotar

5	Mihai Teletin , Gabriela Czibula and Maria-IulianaBocicor	Using clustering models for uncovering proteins' structural similarity
43	János Hollósi and Áron Ballagi	Training Capsule Networks with Various Parameters
45	Paul Diaconescu and Victor-Emil Neagoe	A Higly Configurable Deep Learning Architecture for Hyperspectral Image Classification
47	Cristea Daniela Maria and Gabriel Trofin	Neural Network adaptability from 2D to 3D Chess

10:50 – 12:10 Poster Session *Faculty Council Room at Ground Floor*

Session chairs: Miklós Mezei and Tamás Nógrádi

4	Bertalan Beszédes and György Györök	Concept of a Reliable Redundant Off-grid Power Supply Chain
7	Katarina Mitrović, DanijelaMilošević and Marian Greconici	Comparison of Machine Learning Algorithms for Shelter Animal Classification
13	Ioan-Daniel Borlea, Daniel Iercan, Radu-Emil Precup, Florin Dragan and Alexandra-Bianca Borlea	Implementing a Platform to Run Clustering Algorithms Using Distributed Computing
15	Marius-Florin Crainic and Stefan Preitl	Juice dispenser for hard-working students
17	Alexandra-Iulia Szedlak-Stinean , Radu-Emil Precup and Radu-Codrut David	Speed and Acceleration Control of BLDC Drives Using Different Types of Observers
31	Adriana Albu , Mădălina Sofia Paşca and Cristian G. Zimbru	Medical Predictions: Bayes' Theorem vs Artificial Neural Networks
34	OanaSaman and LoredanaStanciu	Hand mobility recovery through game controlled by gestures
40	Ján Perháč , Zuzana Bilanová, William Steingartner and JergušPiatko	Benchmark of software developed in different component models
44	Zuzana Bilanová and Ján Perháč	About possibilities of applying logical analysis of natural language in computer science

49	Cristian Vasar, Octavian Prosteian, Ioan Filip and IosifSzeidert	Issues Regarding the Optimum Tilt Angle of Solar Applications in Western Romania
66	Marcel Vološin , JurajGazda and TarasMaksymyuk	Realistic user mobility simulator for 5G communication networks
67	Gábor Kertész, Sándor Szénási and Zoltán Vámosy	Multi-Directional Projection Transformations for Machine Learning based Object Matching
68	Alexandra-Bianca Borlea, Radu-Emil Precup, Ioan-Daniel Borlea and Florin Dragan	Intelligent Lighting System Platform Architecture and Linear Process Models
72	Peter Bugata , Peter Gnip and Peter Drotár	Stability analysis of WkNN feature selection
74	Roxana Lorint and Marius Marcu	Survey regarding the way students perceive security permissions of mobile applications
80	Robert Kristof, Valentin Ciupe, Cristian Moldovan, InocentiuManiu, Magdalena Banda and Ana-Maria Stoian	On the design of a myoelectric human-machine interface for the control of an industrial robot
81	Robert Kristof, Valentin Ciupe, Cristian Moldovan, InocentiuManiu, Magdalena Banda and Ana-Maria Stoian	Arduino mobile robot with Myo Armband gesture control
85	Stanislav Szabo, Iveta Vajdová, Edina Jenčová, AlicaTobisová, Branko Mikula and Ladislav Főző	Materials composition of aircraft up to 2000 kg MTOW in the Czech Republic

12:10 – 13:50 Lunch break

13:15 – 16:00 Registration *Room A 107*

13:50 – 15:30 Parallel sessions

13:50 – 15:30 [T2a] Special session on PhD students papers II *Room A 109*

Session organizer and session chair: László Horváth

83	Zoltán Fried , Sándor Szénási and Imre Felde	Prediction of objective function value for heat transfer coefficient function reconstruction by the FWA
84	Ágnes Mester and Alexandru Kristály	A bipolar Hardy inequality on Finsler manifolds
86	Gergő Pintér and Imre Felde	Evaluation of urban daily routines by using Mobile Phone Indicators
87	Abdallah Benhamida, Miklos Kozlovsky and Sándor SzénÁsi	GPU Usage trends in Medical Image processing
88	Péter Piros, Rita Fleiner, Tamás Ferenci, Levente Kovács and András Jánosi	Comparing the predictive power of decision tree models with different tuning approaches on Hungarian Myocardial Infarction Registry

13:50 – 15:30 [T2b] Session on Intelligent Mechatronics *Room A 115*

Session chairs: Zsofia Bodo and Elena-Lorena Hedrea

20	Zsofia Bodo and Bela Lantos	Modeling and control of fixed wing UAVs
27	Tamás Kolb, Adrienn Dineva and István Vajda	Rotor Fault Detection under Fast-varying Dynamic Load based on Adaptive Morlet Wavelet Transform
64	Vlad Muresan, Mihail Abrudean, Iulia Clitan, Mihaela-Ligia Unguresan, Roxana Carmen Cordos and Calin Ciprian Otel	Advanced Control System for the Rotary Hearth Furnace Servicing System
69	Elena-Lorena Hedrea, Radu-Emil Precup, Claudia-Adina Bojan-Dragos, Ciprian Hedrea, Denisa Ples and Daniela Popovici	Cascade Control Solutions for Level Control of Vertical Three Tank Systems
71	Ralph Alexandru Erdelyi and Virgil-Florin Duma	Optimizing the Sensor Array for Dental Radiographs

13:50 – 14:50 [T2c] Session on Systems Engineering and Intelligent Manufacturing Systems *Room A 110*

Session chairs: Octavian Pastravanu and Margit Antal

55	Anita Agárdi , Laszlo Kovacs and Tamás Bányai	Optimization of automatized picking process
58	László Pokorádi	Sensitivity Analysis of Bridge Structure Systems' Reliability
61	Octavian Pastravanu and Mihaela-Hanako Matcovschi	Developments in exploring set invariance for Hopfield neural networks

17:00 Cocktail and Farewell *Restaurant Universitar* (address: Aleea Studentilor 2, 300551 Timisoara)