

IEEE  
International Conference on  
**Automation, Quality and Testing, Robotics**  
**AQTR 2026**

**May 21–23, 2026 • Băile Felix, Romania**

*Hotel Lotus Therm Spa & Luxury Resort*

20 Victoria Str., 417500 Băile Felix, Bihor County, Romania

## **Technical Program**

# Session A1

Thursday, May 21 – Onix  
15:00 – 16:30

## Chairs:

[Chair 1 Name] ([Affiliation])

[Chair 2 Name] ([Affiliation])

10 Optimizing Last-Mile Delivery via Public Transportation and Blockchain-Backed Trust			
	Radu Miron	<i>Technical University of Cluj-Napoca</i>	Romania
	Mihai Hulea	<i>Technical University of Cluj-Napoca</i>	Romania
	Vlad Muresan	<i>Technical University of Cluj-Napoca</i>	Romania
48 Hybrid 1D-2D Deep CRNN Ensemble with Feature Selection for Cross-Corpus Robust Speech Emotion Recognition			
	Valentin-Dimitrie Popescu	<i>Technical University of Cluj-Napoca</i>	Romania
	Mircea Giurgiu	<i>Technical University of Cluj-Napoca</i>	Romania
141 Dynamic Route Computation for Emergency Evacuation			
	Dan Radu	<i>Technical University of Cluj-Napoca</i>	Romania
	Camelia Avram	<i>Technical University of Cluj Napoca</i>	Romania
	Claudiu Domuta	<i>Technical University of Cluj Napoca</i>	Romania
	Valentin Sita	<i>Technical University of Cluj Napoca</i>	Romania
	Adina Astilean	<i>Technical University of Cluj Napoca</i>	Romania
167 Parent-Seeding Pheromone-Guided Subgraph Extraction for Clinical Question Answering over FHIR Knowledge Graphs			
	Cristian Cola	<i>Technical University of Cluj-Napoca</i>	Romania
	Cristinel Costea	<i>Technical University of Cluj-Napoca North University Centre of Baia Mare</i>	Romania
	Honoriu Valean	<i>Technical University of Cluj-Napoca</i>	Romania
170 A Unified Objective Evaluation Framework for Deep Neural Text-to-Speech Synthesis in Romanian			
	Oscar Gal	<i>Technical University of Cluj-Napoca</i>	Romania
	Mircea Giurgiu	<i>Technical University of Cluj-Napoca</i>	Romania
188 Story-Based AR Mini-Game Scalable Experimental Application for Enhancing Both Cognitive and Emotional Development in Children			
	Sergiu-Dimitrie Gruia	<i>Technical University of Cluj-Napoca</i>	Romania
	Iulia Adina Stefan	<i>Technical University of Cluj-Napoca</i>	Romania
	Stefana Andreea Oarga	<i>Individual Psychology Office</i>	Romania
	Henrietta Vitca	<i>Technical University of Cluj-Napoca</i>	Romania

## Session C1

Thursday, May 21 – Flora  
12:00 – 13:30

### Chairs:

[Chair 1 Name] ([Affiliation])

[Chair 2 Name] ([Affiliation])

16 Quantum Fuzzy Logic Petri Nets			
	Tiberiu S. Letia	<i>Technical University of Cluj-Napoca</i>	Romania
	Dahlia Al-Janabi	<i>Technical University of Cluj-Napoca</i>	Romania
	Octavian P. Cuiibus	<i>Technical University of Cluj-Napoca</i>	Romania
	Maria M. Santa	<i>Technical University of Cluj-Napoca</i>	Romania
27 Koopman and DMD-Based Model Approximations for Continuous Stirred-Tank Reactor			
	Tudor-Stefan Plugaru	<i>Technical University of Cluj-Napoca and Bitdefender</i>	Romania
	Ioan Nascu	<i>Technical University of Cluj-Napoca</i>	Romania
	Ioana Nascu	<i>Technical University of Cluj-Napoca</i>	Romania
123 Fractional-Order Sliding Mode Control for a Horizontal Two-Link Underactuated Manipulator Using Bayesian Optimization			
	Yoshihiro Maruo	<i>University of Hyogo</i>	Japan
	Masaharu Kuroda	<i>University of Hyogo</i>	Japan
	Natsuki Kawaguchi	<i>University of Hyogo</i>	Japan
165 Control-inspired load resistance observer for boost DC-DC power electronic converter			
	Iulian Munteanu	<i>PRECIS Research Institute, National University of Science and Technology Politehnica Bucharest</i>	Romania
	Nicoleta Arghira	<i>National University of Science and Technology Politehnica Bucharest</i>	Romania
	Ioana Fagarasan	<i>National University of Science and Technology Politehnica Bucharest</i>	Romania
	Sergiu Stelian Iliescu	<i>National University of Science and Technology Politehnica Bucharest</i>	Romania
	Antoneta Iuliana Bratcu	<i>Université Grenoble Alpes</i>	France
183 Comparative Evaluation of FOPID, Adaptive Neural FOPID, and Robust $H^\infty$ Controllers for a Rotary Hearth Furnace Subject to Disturbances			
	Roxana-Maria Motorga	<i>Technical University of Cluj-Napoca</i>	Romania
	Vlad Muresan	<i>Technical University of Cluj-Napoca</i>	Romania
	Mihail Abrudean	<i>Technical University of Cluj-Napoca</i>	Romania
	Iulia Clitan	<i>Technical University of Cluj-Napoca</i>	Romania
	Mihaela-Ligia Ungureşan	<i>Technical University of Cluj-Napoca</i>	Romania
	Ioan Valentin Sita	<i>Technical University of Cluj-Napoca</i>	Romania

## Session C2

Thursday, May 21 – Flora  
15:00 – 16:30

### Chairs:

[Chair 1 Name] ([Affiliation])

[Chair 2 Name] ([Affiliation])

18 Web-based system for monitoring and controlling a simulated industrial process			
	Tudor Covrig	<i>Technical University of Cluj-Napoca and Bitdefender</i>	Romania
	Alexandru Ciobotaru	<i>Technical University of Cluj-Napoca</i>	Romania
	Liviu Miclea	<i>Technical University of Cluj-Napoca</i>	Romania
95 Computationally Efficient Hybrid Model of an Integrated Urban Wastewater System			
	Iulian Vasiliev	<i>"Dunărea de Jos" University of Galați</i>	Romania
	Liliana Maria Ghinea	<i>"Dunărea de Jos" University of Galați</i>	Romania
	Sergiu Caraman	<i>"Dunărea de Jos" University of Galați</i>	Romania
105 Virtual Instrumentation Applied in Experimental Remote Control			
	Nicolae Patrascoiu	<i>University of Petrosani</i>	Romania
158 A Physics-Based Digital Twin for a Two-Wheeled Self-Balancing Robot			
	Eduard-Andrei Tanase	<i>National University of Science and Technology Politehnica Bucharest</i>	Romania
	Mircea Stefan Simoiu	<i>National University of Science and Technology Politehnica Bucharest</i>	Romania
	Vasile Calofir	<i>National University of Science and Technology Politehnica Bucharest</i>	Romania
	Sergiu Stelian Iliescu	<i>National University of Science and Technology Politehnica Bucharest</i>	Romania
184 Physical Parameter Estimation via Structured State-Space Modeling: Application to the Sallen-Key Filter			
	Ana-Gabriela Tămaș	<i>Technical University of Cluj-Napoca</i>	Romania
	Mircea Șușcă	<i>Technical University of Cluj-Napoca</i>	Romania
	Petru Dobra	<i>Technical University of Cluj-Napoca</i>	Romania

# Session P1

Thursday, May 21 – Foyer  
11:00 – 12:00

## Chairs:

[Chair 1 Name] ([Affiliation])

[Chair 2 Name] ([Affiliation])

5 Performance evaluation of the 802.11ax standard in the 5 GHz band using MikroTik and Ubiquiti			
	Adrian-Daniel Dragoescu	Valahia University of Targoviste	Romania
	Gabriel Predusca	Valahia University of Targoviste	Romania
	Liana Denisa Circumarescu	Valahia University of Targoviste	Romania
	Nicoleta Angelescu	Valahia University of Targoviste	Romania
	Dan Constantin Puchianu	Valahia University of Targoviste	Romania
6 Breaking communication limitations of Huawei inverters: advanced method for local provisioning			
	Alex Petrar	Technical University of Cluj-Napoca	Romania
	Dan Gota	Technical University of Cluj-Napoca	Romania
	Iulia Adina Stefan	Technical University of Cluj-Napoca	Romania
	Liviu Miclea	Technical University of Cluj-Napoca	Romania
22 Distributed Air Quality Monitoring Network Using Raspberry Pi and SEN5x Sensors			
	Teodor Valentin Rosioru	Technical University of Cluj-Napoca	Romania
	Ioan Valentin Sita	Technical University of Cluj-Napoca	Romania
24 Development of a simulation testbed for AI Routing Techniques in Wireless Networks			
	Alexandru Ilovan	Technical University of Cluj-Napoca	Romania
	Bogdan Iancu	Technical University of Cluj-Napoca	Romania
	Vasile Dadarlat	Technical University of Cluj-Napoca	Romania
	Adrian Munteanu	Vrije Universiteit Brussel	Belgium
25 Security and Threat Modelling for OTA updates in Classic AUTOSAR systems			
	Mihai-Robert Radu	Technical University of Cluj-Napoca	Romania
	Dorin Petreus	Technical University of Cluj-Napoca	Romania
40 A Security-Oriented Migration Model from Industry 3.0 to Industry 4.0: Case Studies and Practical			
	Bogdan Valentin Vasilićă	National University of Science and Technology Politehnica Bucharest	Romania
	Florin Daniel Anton	National University of Science and Technology Politehnica Bucharest	Romania
	Beatrice-Nicoleta Chiriac	National University of Science and Technology Politehnica Bucharest	Romania
51 A Multi-Orientation Static Calibration Method for MEMS Triaxial Accelerometers			
	Ionut-Dragos Roman	Technical University of Cluj-Napoca	Romania
	Petru Dobra	Technical University of Cluj-Napoca	Romania
62 LLM-Driven Multi-Agent Surrogate Modeling for Integrated Circuit Design			
	Monika Grezer	Technical University of Cluj-Napoca	Romania
	Andrei-Alexandru Bunea	National University of Science and Technology Politehnica Bucharest and Infineon Technologies	Romania
	Cosmin Banica	Infineon Technologies	Romania
	Marina Topa	Technical University of Cluj-Napoca	Romania
	Valentina Davidoiu	Infineon Technologies	Romania

	Andi Buzo	<i>Infineon Technologies</i>	Germany
	Georg Pelz	<i>Infineon Technologies</i>	Germany
<b>91</b>	<b>Automated Intrusion Prevention System Using Smote-Enhanced Transformer Architectures</b>		
	Andrea Gogota	<i>Technical University of Cluj-Napoca</i>	Romania
	Lucian Farmathy Pop	<i>Technical University of Cluj-Napoca</i>	Romania
	Petru Grigore Urs	<i>Technical University of Cluj-Napoca</i>	Romania
	Alexandru Ciobotaru	<i>Technical University of Cluj-Napoca</i>	Romania
	Dan Gota	<i>Technical University of Cluj-Napoca</i>	Romania
	Szilárd Enyedi	<i>Technical University of Cluj-Napoca</i>	Romania
	Liviu Miclea	<i>Technical University of Cluj-Napoca</i>	Romania
<b>112</b>	<b>Improving Fault-Resilience of IoT Monitoring Systems</b>		
	Codruta Maria Serban	<i>Universitatea Tehnica Cluj-Napoca</i>	Romania
	Gheorghe Sebestyen	<i>Technical University of Cluj-Napoca</i>	Romania
	Anca Hangan	<i>Technical University of Cluj-Napoca</i>	Romania
<b>114</b>	<b>Hyper-Local Air Quality Awareness for Distributed Agentic Traffic Signal Control</b>		
	Bernat-Kristof Vescan-Bakcsy	<i>Shobolinsky</i>	Romania
	Atena Stefania Szabo	<i>Shobolinsky</i>	Romania
	Claudiu Domuta	<i>Technical University of Cluj-Napoca</i>	Romania
	Alexandru Ciobotaru	<i>Technical University of Cluj- Napoca</i>	Romania
	Dan Gota	<i>Technical University of Cluj- Napoca</i>	Romania
<b>115</b>	<b>Simplifying the Design of an FPGA-Based CoAP Non-Confirmable Message Transmitter</b>		
	Alin-Tudor Sferle	<i>Technical University of Cluj-Napoca</i>	Romania
	Andrei-Bogdan Rus	<i>Technical University of Cluj-Napoca</i>	Romania
	Daniel Zinca	<i>Technical University of Cluj-Napoca</i>	Romania
	Virgil Dobrota	<i>Technical University of Cluj-Napoca</i>	Romania
<b>116</b>	<b>IoT-Based Dependable Remote Laboratory Trainer for Power Electronics Using LabVIEW</b>		
	Florin Samoila	<i>"1 Decembrie 1918" University of Alba Iulia</i>	Romania
	Mihaela Cretu	<i>Technical University of Cluj-Napoca</i>	Romania
	Mircea Risteiu	<i>"1 Decembrie 1918" University of Alba Iulia</i>	Romania
	Aldea Mihaela	<i>"1 Decembrie 1918" University of Alba Iulia</i>	Romania
	Buica Georgiana	<i>National Research and Development Institute of Occupational Safety</i>	Romania
	Dobra Remus	<i>"1 Decembrie 1918" University of Alba Iulia</i>	Romania
<b>122</b>	<b>Intelligent Autoscaling of Virtual Machines Based on Performance Metrics and Machine Learning</b>		
	Dan Cuciureanu	<i>Technical University of Cluj-Napoca</i>	Romania
	Robert Botez	<i>Technical University of Cluj-Napoca</i>	Romania
	Virgil Dobrota	<i>Technical University of Cluj-Napoca</i>	Romania
<b>142</b>	<b>Benchmarking RSA, ECC, FALCON, and SPHINCS+ Cryptographic Algorithms for Distributed Ledger Technology</b>		
	Diana-Elena Niți	<i>Technical University of Cluj Napoca</i>	Romania
	Liviu Cristian Miclea	<i>Technical University of Cluj Napoca</i>	Romania
	Szilárd Enyedi	<i>Technical University of Cluj Napoca</i>	Romania
<b>189</b>	<b>Embedded Vision-Based Automated Testing for Electronic Control Boards</b>		
	Emilian Ceuca	<i>"1 Decembrie 1918" University of Alba Iulia</i>	Romania

Lucian Marcu	<i>Technical University of Cluj-Napoca</i>	Romania
Andreea Gombos	<i>Technical University of Cluj-Napoca and "1 Decembrie 1918" University of Alba Iulia</i>	Romania

## Session P2

Thursday, May 21 – Foyer  
16:30 – 17:30

### Chairs:

[Chair 1 Name] ([Affiliation])

[Chair 2 Name] ([Affiliation])

13 Neural Network Pipeline for Kidney Stone Detection and Segmentation from CT Images			
	Madalina-Sorina Popa	<i>National University of Science and Technology Politehnica Bucharest</i>	Romania
	Dan Popescu	<i>National University of Science and Technology Politehnica Bucharest</i>	Romania
	Loretta Ichim	<i>National University of Science and Technology Politehnica Bucharest</i>	Romania
32 Object Counting on Low-Resource Devices: YOLOv8n vs. Classical Vision			
	Krister Matteo Herban	<i>Politehnica University of Timisoara</i>	Romania
	Adrian Korodi	<i>Politehnica University of Timisoara</i>	Romania
	Stelian Nicola	<i>Politehnica University of Timisoara</i>	Romania
33 Adaptive ETL Orchestration for Biomedical Data Streams Using Reinforcement Learning			
	Bogdan Nicușor Bindea	<i>Technical University of Cluj-Napoca</i>	Romania
	Călin Cenan	<i>Technical University of Cluj-Napoca</i>	Romania
	Gratiana Hermann	<i>Iuliu Hațieganu University of Medicine and Pharmacy</i>	Romania
	Zeno Sparchez	<i>Iuliu Hațieganu University of Medicine and Pharmacy</i>	Romania
69 High-Precision UWB Novel Localization Framework for Proximity-Based Interaction in Smart Spaces			
	László Benedek	<i>Technical University of Cluj-Napoca</i>	Romania
	Mircea Giurgiu	<i>Technical University of Cluj-Napoca</i>	Romania
84 AI-driven Gaze Tracking Framework for Text and Speech Generation in Assistive Communication			
	Ioana-Maeva Cărbunescu-Stoenescu	<i>Technical University of Cluj-Napoca</i>	Romania
	Mircea Giurgiu	<i>Technical University of Cluj-Napoca</i>	Romania
90 A Scoping Review of the Deep Learning-Based Neoadjuvant Chemotherapy Response Prediction in Breast Cancer			
	Alexandru Ciobotaru	<i>Technical University of Cluj-Napoca</i>	Romania
	Tudor Covrig	<i>Technical University of Cluj-Napoca</i>	Romania
	Cosmina Corches	<i>Technical University of Cluj-Napoca</i>	Romania
	Dan Gota	<i>Technical University of Cluj-Napoca</i>	Romania
	Liviu Miclea	<i>Technical University of Cluj-Napoca</i>	Romania
93 Human Emotion Classification Using Convolutional Neural Networks and CutMix Data Augmentation Method			
	Adina Maria Vlas	<i>Technical University of Cluj-Napoca</i>	Romania
	Alexandru Ciobotaru	<i>Technical University of Cluj-Napoca</i>	Romania
	Alexandru Stanciu	<i>Technical University of Cluj-Napoca</i>	Romania
	Adela Pop	<i>Technical University of Cluj-Napoca</i>	Romania
	Dan Gota	<i>Technical University of Cluj-Napoca</i>	Romania
	Liviu Miclea	<i>Technical University of Cluj-Napoca</i>	Romania
109 AI-Based Energy Management of Grid-Connected Photovoltaic Systems: A Digital Twin Approach			
	Raul-Gavril Șipoș	<i>Technical University of Cluj-Napoca</i>	Romania
	Mihail Ioan Abrudean	<i>Technical University of Cluj-Napoca</i>	Romania

	Eveline Mihok Ecsedi	<i>Technical University of Cluj-Napoca</i>	Romania
	Vasile Alexandru Dulgheriu	<i>Technical University of Cluj-Napoca</i>	Romania
	Imre Filip	<i>Technical University of Cluj-Napoca</i>	Romania
	Mihaela-Ligia Unguresan	<i>Technical University of Cluj-Napoca</i>	Romania
<b>124</b>	<b>VLM-Assisted Self-Supervised Learning: Addressing the Cold Start Problem in High-Volume Manufacturing</b>		
	Andrei Alexandru Tulbure	<i>Technical University of Cluj Napoca</i>	Romania
	Adrian Alexandru Tulbure	<i>"1 Decembrie 1918" University of Alba Iulia</i>	Romania
	Eva-Henrietta Dulf	<i>Technical University of Cluj-Napoca</i>	Romania
<b>130</b>	<b>DiabetesHybridEns: A Novel Hybrid Ensemble Learning Approach for Enhanced Diabetes Prediction</b>		
	Marina Adriana Mercioni	<i>Politehnica University of Timisoara</i>	Romania
	Cătălin Daniel Căleanu	<i>Politehnica University of Timisoara</i>	Romania
	Nina Ivanovic	<i>Victor Babes University of Medicine and Pharmacy Timisoara</i>	Romania
	Raluca Dumache	<i>Victor Babes University of Medicine and Pharmacy Timisoara</i>	Romania
<b>156</b>	<b>Finger Movement Estimation from Surface EMG using Mamba Architecture</b>		
	Bogdanel-Cristian Dragan	<i>University of Craiova</i>	Romania
	Ana-Maria Spiridon	<i>University of Craiova</i>	Romania
	Constantin Birtan	<i>University of Craiova</i>	Romania
	Madalin Mamuleanu	<i>University of Craiova</i>	Romania
<b>159</b>	<b>A Hybrid Deep Neural Network for Sleep Postures Recognition</b>		
	Ionut-Robert Badoi	<i>Politehnica University of Timisoara</i>	Romania
	Catalin Daniel Caleanu	<i>Politehnica University of Timisoara</i>	Romania
<b>190</b>	<b>EEG-Based Assessment of Human Adaptation and Stability in Electromagnetically Disturbed Environments</b>		
	Andreea Gombos	<i>Technical University of Cluj-Napoca and "1 Decembrie 1918" University of Alba Iulia</i>	Romania
	Emilian Ceuca	<i>"1 Decembrie 1918" University of Alba Iulia</i>	Romania
	Lucian Marcu	<i>Technical University of Cluj-Napoca</i>	Romania
<b>199</b>	<b>ReSort: Edge-Optimized Mobile Recycling Classification with Cloud-Assisted Geolocation Guidance</b>		
	Adela Pop	<i>Technical University of Cluj-Napoca</i>	Romania
	Alexandra Fanca	<i>Technical University of Cluj-Napoca</i>	Romania
	Dan-Ioan Gota	<i>Technical University of Cluj-Napoca</i>	Romania
	Alexandru Ciobotaru	<i>Technical University of Cluj-Napoca</i>	Romania
	Christine-Matilda Moldovan	<i>Technical University of Cluj-Napoca</i>	Romania
	Honoriu Valean	<i>Technical University of Cluj-Napoca</i>	Romania

## Session P3

Friday, May 22 – Foyer

9:30 – 10:30

### Chairs:

[Chair 1 Name] ([Affiliation])

[Chair 2 Name] ([Affiliation])

31 Integrating Edge AI and Distributed IoT Architectures for Privacy-Preserving Smart Home Automation			
	Robert Munteanu	<i>Technical University of Cluj-Napoca</i>	Romania
	Marius Misaros	<i>Technical University of Cluj-Napoca</i>	Romania
	Ovidiu Stan	<i>Technical University of Cluj-Napoca</i>	Romania
	Liviu Miclea	<i>Technical University of Cluj-Napoca</i>	Romania
39 Fisher Information-Based Subspace Projection for Stable Online Pharmacodynamic Parameter Estimation in Dual-Drug Anesthesia			
	Erwin Hegedüs	<i>Technical University of Cluj-Napoca</i>	Romania
	Isabela Birs	<i>Technical University of Cluj-Napoca</i>	Romania
	Bouchra Khoumeri	<i>Ghent University</i>	Belgium
	Dana Copot	<i>Ghent University</i>	Belgium
	Marcian Mihai	<i>Technical University of Cluj-Napoca</i>	Romania
	Cristina Muresan	<i>Technical University of Cluj-Napoca</i>	Romania
43 IoT Enabled System for Real Time Inventory and Logistics Monitoring in Cyber-Physical Industrial Environments			
	Ioana-Cornelia Gros	<i>Technical University of Cluj-Napoca</i>	Romania
	Dan-Cristian Popa	<i>Technical University of Cluj-Napoca</i>	Romania
	Norbert Kertész	<i>Technical University of Cluj-Napoca</i>	Romania
	Loránd Szabó	<i>Technical University of Cluj-Napoca</i>	Romania
45 A Near-Real-Time Satellite Tracking and Imaging Platform Using WARC			
	Tudor-Horatiu Vatca	<i>Technical University of Cluj-Napoca</i>	Romania
	Marius Misaros	<i>Technical University of Cluj-Napoca</i>	Romania
	Ovidiu Stan	<i>Technical University of Cluj-Napoca</i>	Romania
	Liviu Miclea	<i>Technical University of Cluj-Napoca</i>	Romania
104 A Comprehensive Study of EMG-Based Lower Limb Muscle Force Estimation Using Machine Learning Methods			
	Vijayakumar Muthusamy	<i>University of Luxembourg</i>	Luxembourg
	Atal Anil Kumar	<i>Universite de Lorraine</i>	France
	Ines Chihi	<i>University of Luxembourg</i>	Luxembourg
148 Design and Evaluation of an LED Solar Simulator Using Sunlike Spectrum Technology			
	Lucian Fechete Tutunaru	<i>Technical University of Cluj-Napoca</i>	Romania
	Tania Rus	<i>Technical University of Cluj-Napoca</i>	Romania
	Liviu Dodea	<i>Technical University of Cluj-Napoca</i>	Romania
	Octavian G. Pop	<i>Technical University of Cluj-Napoca</i>	Romania
149 Learning from historical behavior: an adaptive recommendation system for energy community management			
	Samuel Irinel Dumitru	<i>National University of Science and Technology Politehnica Bucharest</i>	Romania
	Mircea Stefan Simoiu	<i>National University of Science and Technology Politehnica Bucharest</i>	Romania
	Vasile Calofir	<i>National University of Science and Technology Politehnica Bucharest</i>	Romania

	Ioana Fagarasan	National University of Science and Technology Politehnica Bucharest	Romania
<b>152</b>	<b>From individual to central storage: towards minimizing grid interaction in energy communities</b>		
	Gadiela-Daiana Uta	National University of Science and Technology Politehnica Bucharest	Romania
	Mircea Stefan Simoiu	National University of Science and Technology Politehnica Bucharest	Romania
	Vasile Calofir	National University of Science and Technology Politehnica Bucharest	Romania
	Ioana Fagarasan	National University of Science and Technology Politehnica Bucharest	Romania
<b>172</b>	<b>Intelligent System for Emergency Intervention: Critical Alert Transmission via FM/RDS</b>		
	Anamaria-Bianca Simirad	Transilvania University of Brasov	Romania
	Marian-Alexandru Gherghe	Transilvania University of Brasov	Romania
	Ioana Corina Bogdan	Transilvania University of Brasov	Romania
<b>176</b>	<b>Lightweight New Product Introduction Forecasting for University MVPs Using Early Traction Signals and Random Forests</b>		
	Mihai Zgirdea	University of Petrosani	Romania
	Monica Leba	University of Petrosani	Romania
	Andreea Cristina Ionica	University of Petrosani	Romania
<b>182</b>	<b>Energy Management System for Microgrids to Reduce Energy Cost</b>		
	Cosmin Sabadas	Technical University of Cluj-Napoca	Romania
	Vlad Mihaly	Technical University of Cluj-Napoca	Romania
<b>205</b>	<b>Conceptual framework for maintenance planning based on spare parts volatility: Case study of wheel loader maintenance in an open pit mine in Morocco</b>		
	Mouna Berquedich	Mohammed VI Polytechnic University (UM6P)	Morocco
	Lahoussine Bouzzit	Mohammed VI Polytechnic University (UM6P)	Morocco
	Hajar Talebi	Mohammed VI Polytechnic University (UM6P)	Morocco
	Khalid Kouiss	Mohammed VI Polytechnic University (UM6P)	Morocco
	Mustapha Ouhimmou	Mohammed VI Polytechnic University (UM6P)	Morocco
	Ahmed Chebak	Mohammed VI Polytechnic University (UM6P)	Morocco

## Session P4

Friday, May 22 – Foyer  
12:00 – 13:00

### Chairs:

[Chair 1 Name] ([Affiliation])

[Chair 2 Name] ([Affiliation])

4 Embedded IoT System for Real-Time People Counting and Remote Visualization with ToF Sensors			
	Bogdan Dragoteanu	Technical University of Cluj-Napoca	Romania
	George Dan Mois	Technical University of Cluj-Napoca	Romania
	Cristinel Mihai Mocan	Technical University of Cluj-Napoca	Romania
35 Enhanced Control of DC Motors Lathe Machine Using a CNC Mach3 Breakout Board			
	Tiberiu Barabas	University of Oradea	Romania
	Laura Coroiu	University of Oradea	Romania
	Liliana Magdoiu	University of Oradea	Romania
	Helga Silaghi	University of Oradea	Romania
	Eugen Gergely	University of Oradea	Romania
	Adrian Codoban	University of Oradea	Romania
83 Robot Control for Rehabilitation: PD vs. LQG			
	Simona-Daiana Stiole	Technical University of Cluj-Napoca	Romania
	Zsofia Lendek	Technical University of Cluj-Napoca	Romania
	Mircea Susca	Technical University of Cluj-Napoca	Romania
	Vlad-Mihai Mihaly	Technical University of Cluj-Napoca	Romania
	Petru Dobra	Technical University of Cluj-Napoca	Romania
	Paul Tucan	Technical University of Cluj-Napoca	Romania
85 Modelling, Simulation and Control of the Regenerative Braking in AC Locomotives			
	Ioan Pop	National Railway Company and Technical University of Cluj-Napoca	Romania
	Clement Festila	Technical University of Cluj-Napoca	Romania
	Eva-Henrietta Dulf	Technical University of Cluj-Napoca	Romania
100 Adaptive Neuro-Fuzzy Inference System and Fuzzy Logic Control Strategies Versus Traditional Control Strategies – Case Study and Performance Comparison			
	Roxana-Elena Tudoroiu	University of Petrosani	Romania
	Maria Magdalena Santa	Technical University of Cluj-Napoca	Romania
	Sorin Mihai Radu	University of Petrosani	Romania
106 Implementation of a Flexible Control System for Industrial AMRs Based on Node-Red and PLC			
	Vasile Alexandru Dulgheriu	Technical University of Cluj-Napoca	Romania
	Imre Filip	Technical University of Cluj-Napoca	Romania
	Mihail Ioan Abrudean	Technical University of Cluj-Napoca	Romania
	Mihaela-Ligia Unguresan	Technical University of Cluj-Napoca	Romania
	Eveline Mihok Ecsedi	Technical University of Cluj-Napoca	Romania
	Raul-Gavril Sipos	Technical University of Cluj-Napoca	Romania
110 Nuclear reactor simulation using point kinetics with 6 delayed precursor groups			
	Imre Filip	Technical University of Cluj-Napoca	Romania

	Mihail Ioan Abrudean	<i>Technical University of Cluj-Napoca</i>	Romania
	Mihaela Ligia Ungureșan	<i>Technical University of Cluj-Napoca</i>	Romania
	Vasile Alexandru Dulgheriu	<i>Technical University of Cluj-Napoca</i>	Romania
	Eveline Mihok Ecsedi	<i>Technical University of Cluj-Napoca</i>	Romania
	Raul Gavril Șipoș	<i>Technical University of Cluj-Napoca</i>	Romania
<b>113</b>	<b>Coupled Tanks System Control based on Reinforcement Learning Algorithms</b>		
	Corina-Elena Vlad	<i>University of Craiova</i>	Romania
	Gheorghe Bujgoi	<i>University of Craiova</i>	Romania
	Dorin Sendrescu	<i>University of Craiova</i>	Romania
<b>131</b>	<b>Modelling, simulation and control of the nuclear reactor CANDU 600</b>		
	Ruxandra-Andrea Enescu	<i>Technical University of Cluj-Napoca</i>	Romania
	Mihaela-Ligia Unguresan	<i>Technical University of Cluj-Napoca</i>	Romania
	Mihail Abrudean	<i>Technical University of Cluj-Napoca</i>	Romania
	Roxana Carmen Cordos	<i>Technical University of Cluj-Napoca</i>	Romania
<b>157</b>	<b>Analysis of fuel cell integration for BLDC motors control</b>		
	Petru Dobra	<i>Technical University of Cluj-Napoca</i>	Romania
	Ionut Dragos Roman	<i>Technical University of Cluj-Napoca</i>	Romania
	Mirela Dobra	<i>Technical University of Cluj-Napoca</i>	Romania
<b>192</b>	<b>Control of DC-DC Converters Network for Power Microgrids</b>		
	Sebastian Babota	<i>Technical University of Cluj-Napoca</i>	Romania
	Vlad Mihaly	<i>Technical University of Cluj-Napoca</i>	Romania
<b>202</b>	<b>Robust Feedback Linearization of a Fixed-Wing UAV</b>		
	Nicolae Racheriu	<i>Technical University of Cluj-Napoca</i>	Romania
	Vlad Mihaly	<i>Technical University of Cluj-Napoca</i>	Romania

## Session P5

Saturday, May 23 – Foyer

9:30 – 10:30

### Chairs:

[Chair 1 Name] ([Affiliation])

[Chair 2 Name] ([Affiliation])

38 HeliosTools: Signed Remote Operations for Secure Management of Non-Domain Windows Teaching Laboratories			
	Stefan Szalai Dragos	Technical University of Cluj-Napoca	Romania
	Cosmin Strilețchi	Technical University of Cluj-Napoca	Romania
	Paul Tota	Polytechnic University of Timișoara	Romania
52 Securing Edge-Based Cyber Threat Intelligence System Using Defense-in-Depth Approach			
	Bogdan Donat	Technical University of Cluj-Napoca	Romania
	Bogdan Gabriel Draghici	Technical University of Cluj-Napoca	Romania
	Ovidiu Petru Stan	Technical University of Cluj-Napoca	Romania
60 Multi-Asset Portfolio Optimization Conditioned on Oil Market Regimes using Genetic Algorithms and Machine Learning			
	Daria-Georgiana Chiriac	Technical University of Cluj-Napoca	Romania
	Octavian Cuibus	Technical University of Cluj-Napoca	Romania
75 A Study on Automatic Adaptation of Romanian Language and Literature Textbooks for Dyslexic Readers			
	Anamaria Briciu	Babes-Bolyai University	Romania
	Adela Chindris	West University of Timisoara	Romania
	Grigoreta-Sofia Cojocar	Babes-Bolyai University	Romania
	Adriana-Mihaela Guran	Babes-Bolyai University	Romania
	Vladiela Petrascu	Babes-Bolyai University	Romania
	Roxana Rogobete	West University of Timisoara	Romania
79 Framework for Fully Homomorphic Encryption Libraries Comparative Analysis Case Study for Microsoft SEAL, OpenFHE, and HELib			
	Ioan Andrei Șpac	Technical University of Cluj-Napoca	Romania
	Marcel Antal	Technical University of Cluj-Napoca	Romania
	Bogdan Nicusor Bindea	Technical University of Cluj-Napoca	Romania
80 Indoor Localization Techniques based on Mathematical Models and Machine Learning using Smartphone and WiFi Routers			
	Alexia Iliescu	Technical University of Cluj-Napoca	Romania
	Marcel Antal	Technical University of Cluj-Napoca	Romania
	Bogdan Nicusor Bindea	Technical University of Cluj-Napoca	Romania
102 A Comparative Evaluation of Deep Learning Detectors for Satellite Streak Detection in Astronomical Images			
	Razvan Itu	Technical University of Cluj-Napoca	Romania
	Attila Fűzes	Technical University of Cluj-Napoca	Romania
	Lara Taras-Zinveliu	Technical University of Cluj-Napoca	Romania
	Radu Danescu	Technical University of Cluj-Napoca	Romania
107 From Proxy Metrics to Driving-Level Objectives: A Survey of End-to-End Architectures for Autonomous Driving			
	Flaviu Rares Lemnariu	Technical University of Cluj-Napoca	Romania
	Brendan Tran Morris	University of Nevada	United States
	Ionut Muntean	Technical University of Cluj-Napoca	Romania

<b>133 Using Hyper-V Sockets for Real-time Data Extraction from a Malware Analysis Sandbox</b>			
	Istvan Attila Csaszar	<i>Technical University of Cluj-Napoca</i>	Romania
	Radu-Marian Portase	<i>Technical University of Cluj-Napoca</i>	Romania
	Adrian Coleşa	<i>Technical University of Cluj-Napoca</i>	Romania
	Adrian Groza	<i>Technical University of Cluj-Napoca</i>	Romania
<b>137 Experimental Virtual Reality Teleoperation of the Pepper Robot with Cybersecurity Considerations</b>			
	Bogdan Gabriel Drăghici	<i>Technical University of Cluj-Napoca</i>	Romania
	Alexandra Elena Dobre	<i>Technical University of Cluj-Napoca</i>	Romania
	Ovidiu Petru Stan	<i>Technical University of Cluj-Napoca</i>	Romania
	Liviu Cristian Miclea	<i>Technical University of Cluj-Napoca</i>	Romania
<b>147 Ensuring Data Integrity and Non-Repudiation in Distributed SIEM Architectures via Per-Block Event PKI-Signing</b>			
	Dragoş Ionică	<i>University of Craiova</i>	Romania
	Marius Marian	<i>University of Craiova</i>	Romania
	Adelin Cusman	<i>Centrul de Calcul S.A.</i>	Romania
<b>177 Integrated Design, Modeling, and Control Benchmarking of an 18-DoF 3D-Printed Hexapod Robot</b>			
	Sandor Nagy	<i>Technical University of Cluj-Napoca</i>	Romania
	Roxana Rusu-Both	<i>Technical University of Cluj-Napoca</i>	Romania
<b>179 Edge-AI Vehicle Detection and Tracking for Degraded Urban CCTV with Irregular Sampling</b>			
	Gheorghe-Daniel Voinea	<i>Transilvania University of Brasov</i>	Romania
	Răzvan Gabriel Boboc	<i>Transilvania University of Brasov</i>	Romania
<b>204 AI-Driven Behavioral Intrusion Detection for Cyber-Enabled Electronic Health Record Systems</b>			
	Cristina Maria Stancioi	<i>Technical University of Cluj-Napoca</i>	Romania
	Petru Urs	<i>Technical University of Cluj-Napoca</i>	Romania
	Vlad Muresan	<i>Technical University of Cluj-Napoca</i>	Romania
	Mihail Abrudean	<i>Technical University of Cluj-Napoca</i>	Romania

## Session QT1

Thursday, May 21 – Onix  
12:00 – 13:30

### Chairs:

[Chair 1 Name] ([Affiliation])

[Chair 2 Name] ([Affiliation])

<b>30 Framework for an intelligent Reliability Engineering Assistant : A RAG-based GenAI Approach leveraging Python containers to assist Reliability Engineering in Industrial Automation</b>			
	Nasser Jazdi	<i>University of Stuttgart</i>	Germany
	Regina Maucher	<i>University of Stuttgart</i>	Germany
	Milea Koch	<i>University of Stuttgart</i>	Germany
<b>37 GeoMECH: Geographical Measure of Exposure to Cyberattacks Using Honeypots</b>			
	Andrei Calin Cadar	<i>Technical University of Cluj-Napoca and Bitdefender</i>	Romania
	Adrian Viorel Colesa	<i>Technical University of Cluj-Napoca and Bitdefender</i>	Romania
	Radu Marian Portase	<i>Technical University of Cluj-Napoca and Bitdefender</i>	Romania
<b>41 Detecting and Blocking Vulnerable Driver Attacks on Windows</b>			
	Andrei-Marius Muntea	<i>Technical University of Cluj-Napoca and Bitdefender</i>	Romania
	Radu-Marian Portase	<i>Technical University of Cluj-Napoca and Bitdefender</i>	Romania
	Eduard Mureşan	<i>Technical University of Cluj-Napoca and Bitdefender</i>	Romania
	Diana-Elena Petrean	<i>Technical University of Cluj-Napoca and Bitdefender</i>	Romania
	Gheorghe Sebestyen-Pal	<i>Technical University of Cluj-Napoca</i>	Romania
<b>70 Reconfigurable Hardware Technology: the Ideal Tool to Upgrade Hardware in Automotive Embedded Systems</b>			
	Csaba Szasz	<i>Technical University of Cluj-Napoca</i>	Romania
	Eva-Henrietta Dulf	<i>Technical University of Cluj-Napoca</i>	Romania
<b>92 Deep Learning-Based Fire Hazard Detection Using a Hybrid Autoencoder and ANN Model</b>			
	Alexia Morcan	<i>Technical University of Cluj-Napoca</i>	Romania
	Alexandru Ciobotaru	<i>Technical University of Cluj-Napoca</i>	Romania
	Alexandra Fanca	<i>Technical University of Cluj-Napoca</i>	Romania
	Claudiu Domuta	<i>Technical University of Cluj-Napoca</i>	Romania
	Dan Gota	<i>Technical University of Cluj-Napoca</i>	Romania
	Szilárd Enyedi	<i>Technical University of Cluj-Napoca</i>	Romania

## Session QT2

Friday, May 22 – Flora

8:00 – 9:30

### Chairs:

[Chair 1 Name] ([Affiliation])

[Chair 2 Name] ([Affiliation])

<b>36 From Edge to Cloud: An Extensible IoT Platform for Secure Data Acquisition and Control of Battery Management Systems</b>			
	Alexandra Baicoianu	<i>Siemens Industry Software</i>	Romania
	Radu Andrei Marin	<i>Siemens Industry Software</i>	Romania
	Mircea Ruba	<i>Technical University of Cluj-Napoca</i>	Romania
	Ioana-Alexandra Rosu	<i>Siemens Industry Software</i>	Romania
<b>103 Smart Multi-Model Fusion Approach for Bridge Displacement Prediction and Damage Assessment</b>			
	Rabie Hayder	<i>University of Luxembourg</i>	Luxembourg
	Vijayakumar Muthusamy	<i>University of Luxembourg</i>	Luxembourg
	Khatereh Dakhili	<i>University of Luxembourg</i>	Luxembourg
	Lilia Sidhom	<i>Tunis El Manar University</i>	Tunisia
	Ines Chihi	<i>University of Luxembourg</i>	Luxembourg
<b>140 Thermal Behavior Analysis and Core Temperature Estimation using Extended Kalman Filter for a Lithium-Ion Battery Cell</b>			
	Paula Serban	<i>Technical University of Cluj-Napoca</i>	Romania
	Claudia V. Pop	<i>Technical University of Cluj-Napoca</i>	Romania
	Sebastian Ursache	<i>Technical University of Cluj-Napoca</i>	Romania
	Mircea Ruba	<i>Technical University of Cluj Napoca</i>	Romania
	Alexandra Baicoianu	<i>Transilvania University of Brasov</i>	Romania
	Adelina Ilies	<i>Technical University of Cluj-Napoca</i>	Romania
<b>168 Cryptographic Mechanisms for Secure Data Handling in a Stereo Vision Wearable Assistive Device</b>			
	Gabor Kovacs	<i>University of Oradea</i>	Romania
	Andras Kapy	<i>West University of Timisoara</i>	Romania
<b>178 Development of a Decision Support System for Building Energy Management</b>			
	Teodor-Lucian Ene	<i>National University of Science and Technology Politehnica Bucharest</i>	Romania
	Grigore Stamatescu	<i>National University of Science and Technology Politehnica Bucharest</i>	Romania

## Session QT3

Saturday, May 23 – Onix  
10:30 – 12:00

### Chairs:

[Chair 1 Name] ([Affiliation])

[Chair 2 Name] ([Affiliation])

153 Behavioral Detection Using Apple Endpoint Security Framework			
	Dimitrie-Toma Furdui	<i>Bitdefender and Technical University of Cluj-Napoca</i>	Romania
	Radu-Marian Portase	<i>Bitdefender and Technical University of Cluj-Napoca</i>	Romania
	Andrei-Marius Muntea	<i>Bitdefender and Technical University of Cluj-Napoca</i>	Romania
	Adrian Viorel Coleșa	<i>Technical University of Cluj-Napoca and Bitdefender</i>	Romania
169 Deep Reinforcement Learning for Adaptive Start-Stop Battery Management Using Digital Twin Simulation			
	George Flutur	<i>Technical University of Cluj-Napoca</i>	Romania
	Gabriel Chindris	<i>Technical University of Cluj-Napoca</i>	Romania
	Liviu Miclea	<i>Technical University of Cluj-Napoca</i>	Romania
	Ovidiu Petru Stan	<i>Technical University of Cluj-Napoca</i>	Romania
185 Experimental ICS Security Analysis of Network-Based Malicious Teleoperation			
	Alexandra Elena Dobre	<i>Technical University of Cluj-Napoca</i>	Romania
	Bogdan Gabriel Drăghici	<i>Technical University of Cluj-Napoca</i>	Romania
	Mihai-Alexandru Jibotean	<i>Technical University of Cluj-Napoca</i>	Romania
	Ovidiu Petru Stan	<i>Technical University of Cluj-Napoca</i>	Romania
	Liviu Miclea	<i>Technical University of Cluj-Napoca</i>	Romania
195 Towards Zero-Trust Application Execution: An eBPF-Based Policy Enforcement Engine			
	Andrei-Ioan Ficior	<i>Technical University of Cluj-Napoca</i>	Romania
	Roxana Rusu-Both	<i>Technical University of Cluj-Napoca</i>	Romania
	Ovidiu Stan	<i>Technical University of Cluj-Napoca</i>	Romania
200 Human-Certified Module Repositories for the AI Age			
	Szilárd Enyedi	<i>Technical University of Cluj-Napoca</i>	Romania

## Session QT4

Saturday, May 23 – Topaz  
10:30 – 12:00

### Chairs:

[Chair 1 Name] ([Affiliation])

[Chair 2 Name] ([Affiliation])

11 Comparative Analysis of Ethernet Media Independent Interfaces through Highspeed Simulations			
	Catalin Pescari	<i>Politehnica University of Timisoara</i>	Romania
	Andrei-Marius Silaghi	<i>Politehnica University of Timisoara</i>	Romania
	Aldo De Sabata	<i>Politehnica University of Timisoara</i>	Romania
73 Spectral Efficiency Evaluation of Resource Allocation Types in 5G NR Downlink Scheduling			
	Cristina-Maria Andras	<i>Politehnica University of Timisoara</i>	Romania
	Teodor-Octavian Pacurar	<i>Politehnica University of Timisoara</i>	Romania
	Andrei-Marius Silaghi	<i>Politehnica University of Timisoara</i>	Romania
74 Specialized Neural Architectures vs LLMs for eBPF-based Software Composition Analysis			
	Lucia Pășcuți	<i>Technical University of Cluj-Napoca</i>	Romania
	Ciprian Opreșă	<i>Technical University of Cluj-Napoca and Bitdefender</i>	Romania
143 Performance Benchmarking of Romanian ASR Models Across Mobile and Desktop Environments in an Educational Context			
	Dan Cojocar	<i>Babes-Bolyai University</i>	Romania
	Grigoreta-Sofia Cojocar	<i>Babes-Bolyai University</i>	Romania
	Adriana-Mihaela Guran	<i>Babes-Bolyai University</i>	Romania
	Adrian-Ioan Sterca	<i>Babes-Bolyai University</i>	Romania
163 Statistical evaluation of the impact of three mixing schemes on raw DNA sequences			
	Remus-Florin Stanca	<i>Technical University of Cluj-Napoca</i>	Romania
194 Active Mapping of Underwater Litter using Camera-Sonar Fusion			
	David Rete	<i>Technical University of Cluj-Napoca</i>	Romania
	Patrick Boros	<i>Technical University of Cluj-Napoca</i>	Romania
	Lucian Busoniu	<i>Technical University of Cluj-Napoca and Corresponding Member of the Romanian Academy</i>	Romania

## Session R1

Thursday, May 21 – Topaz  
15:00 – 16:30

### Chairs:

[Chair 1 Name] ([Affiliation])

[Chair 2 Name] ([Affiliation])

<b>7 A nonlinear optimal control method for the 6-DOF autonomous helicopter</b>			
	Gerasimos Rigatos	<i>Unit of Industrial Automation and Industrial Systems Institute</i>	Greece
	Gennaro Cuccurullo	<i>University of Salerno</i>	Italy
	Krishna Busawon	<i>University of Northumbria</i>	United Kingdom
	Laurent Dala	<i>University of Northumbria</i>	United Kingdom
	Zhiwei Gao	<i>University of Northumbria</i>	United Kingdom
	Pierluigi Siano	<i>University of Salerno</i>	Italy
	Masoud Abbaszadeh	<i>Rensselaer Polytechnic Institute</i>	United States
	Farouk Zouari	<i>Université de Tunis El Manar</i>	Tunisia
<b>96 Control Architecture and experimental validation of a Novel Surgical Robotic Instrument</b>			
	Doina Pisla	<i>Technical University of Cluj-Napoca and Technical Sciences Academy of Romania</i>	Romania
	Ionut Zima	<i>Technical University of Cluj-Napoca</i>	Romania
	Calin Vaida	<i>Technical University of Cluj-Napoca</i>	Romania
	Andrei Cailean	<i>Technical University of Cluj-Napoca</i>	Romania
	Marius Miclaus	<i>Technical University of Cluj-Napoca</i>	Romania
	Adrian Pisla	<i>Technical University of Cluj-Napoca</i>	Romania
	Andrei Caprariu	<i>Technical University of Cluj-Napoca</i>	Romania
	Vasile Bulbucan	<i>Technical University of Cluj-Napoca</i>	Romania
	Bogdan Gherman	<i>Technical University of Cluj-Napoca</i>	Romania
	Pierre Mougnot	<i>Technical University of Cluj-Napoca and Nantes Universite</i>	France
	Damien Chablat	<i>Technical University of Cluj-Napoca and Nantes Universite</i>	Romania
<b>101 A DQN-Based Framework for Leader-Follower Dynamics</b>			
	Bianca-Valeria Rus	<i>Politehnica University of Timisoara</i>	Romania
	Ovidiu Baniias	<i>Politehnica University of Timisoara</i>	Romania
<b>120 Improving Line-Follower Robots Performance Through Hybrid Path Optimization</b>			
	Eveline Mihok-Ecsedi	<i>Technical University of Cluj-Napoca</i>	Romania
	Eduard Mihok-Ecsedi	<i>Independent Researcher</i>	Romania
	Mihail-Ioan Abrudean	<i>Technical University of Cluj-Napoca</i>	Romania
	Helga-Maria Silaghi	<i>University of Oradea</i>	Romania
	Laura Coroiu	<i>University of Oradea</i>	Romania
	Eugen Gergely	<i>University of Oradea</i>	Romania
	Vasile Alexandru Dulgheriu	<i>Technical University of Cluj-Napoca</i>	Romania
	Imre Filip	<i>Technical University of Cluj-Napoca</i>	Romania
	Raul-Gavril Şipoş	<i>Technical University of Cluj-Napoca</i>	Romania
<b>155 Exploration Path Optimization for Ground Robots Leveraging Aerial 3D Perspective</b>			

	Ádám Gulyás	<i>HUN-REN Institute for Computer Science and Control, Budapest Univ. of Technology and Economics</i>	Hungary
	Barnabás Bugár-Mészáros	<i>HUN-REN Institute for Computer Science and Control, Budapest Univ. of Technology and Economics</i>	Hungary
	András László Majdik	<i>HUN-REN Institute for Computer Science and Control</i>	Hungary
<b>173</b>	<b>Freespace and Optical Flow Fusion for Generic Contours Accumulation</b>		
	Ovidiu-Marcel Maghear	<i>Technical University of Cluj-Napoca</i>	Romania
	Bianca-Veronica Avram	<i>Technical University of Cluj-Napoca</i>	Romania
	Sergiu Nedevschi	<i>Technical University of Cluj-Napoca</i>	Romania

## Session SS1

Friday, May 22 – Onix

8:00 – 9:30

### Chairs:

[Chair 1 Name] ([Affiliation])

[Chair 2 Name] ([Affiliation])

<b>42 Integrity-Tested, Blockchain-Ready Traceability for Key Materials in a Permanent Magnet Synchronous Machine</b>			
	Diana Artudean	<i>Technical University of Cluj-Napoca</i>	Romania
	Florina-Ambrozia Coteș	<i>Technical University of Cluj-Napoca</i>	Romania
	Dan-Cristian Popa	<i>Technical University of Cluj-Napoca</i>	Romania
	Loránd Szabó	<i>Technical University of Cluj-Napoca</i>	Romania
<b>46 Haptic-Audio Guidance System for Visually Impaired Users</b>			
	Mihail-Constantin Saulea	<i>Transilvania University of Brasov</i>	Romania
	Ioana Corina Bogdan	<i>Transilvania University of Brasov</i>	Romania
	Gabriel Mihail Danciu	<i>Transilvania University of Brasov</i>	Romania
	Bogdan-Valentin Floricescu	<i>Transilvania University of Brasov</i>	Romania
<b>65 AI Assisted Diagnosis in Medicine – Clinical, Ethical and Legal Approach</b>			
	Miruna-Elena Iliuță	<i>National University of Science and Technology Politehnica Bucharest</i>	Romania
	Damien Trentesaux	<i>Université Polytechnique Hauts-de-France</i>	France
	Mihnea-Alexandru Moisescu	<i>National University of Science and Technology Politehnica Bucharest</i>	Romania
	Traian-Costin Mitulescu	<i>Carol Davila University of Medicine and Pharmacy</i>	Romania
<b>201 Automated Information Security Policy Analysis: A Conceptual Framework</b>			
	Cătălina-Mihaela Priescu	<i>National University of Science and Technology Politehnica Bucharest</i>	Romania
	Mihnea-Alexandru Moisescu	<i>National University of Science and Technology Politehnica Bucharest</i>	Romania
	Radu Nicolae Pietraru	<i>National University of Science and Technology Politehnica Bucharest</i>	Romania
<b>203 A Biomechanical Analysis System for Physical Exercises using Machine Learning and Inertial Sensors</b>			
	Roxana Rusu-Both	<i>Technical University of Cluj-Napoca</i>	Romania
	David Mocan	<i>Technical University of Cluj-Napoca</i>	Romania
	Doina Pisla	<i>Technical University of Cluj-Napoca</i>	Romania

## Session SS3

Friday, May 22 – Topaz

8:00 – 9:30

### Chairs:

[Chair 1 Name] ([Affiliation])

[Chair 2 Name] ([Affiliation])

8 Dreaming in Data: Using Artificial Intelligence to Decode Sleep and Its Effects on Human Health			
	Alexandru-George Berciu	<i>Technical University of Cluj-Napoca</i>	Romania
	Dan Doru Micu	<i>Technical University of Cluj-Napoca</i>	Romania
	Levente Kovács	<i>Óbuda University</i>	Hungary
	Eva-Henrietta Dulf	<i>Technical University of Cluj-Napoca</i>	Romania
76 A robust [FO-PID] $\lambda$ controller for computer-controlled chemotherapy			
	Nicoleta Badau	<i>Technical University of Cluj-Napoca</i>	Romania
	Cristina Muresan	<i>Technical University of Cluj-Napoca</i>	Romania
	Erhan Yumuk	<i>Ghent University</i>	Belgium
78 Personalized Decentralized FOPI Control for Hypnosis–Analgesia Regulation in Anesthesia			
	Erhan Yumuk	<i>Ghent University, Istanbul Technical University and Flanders Make@UGent</i>	Belgium
	Bora Ayvaz	<i>Ghent University and Flanders Make@UGent</i>	Belgium
	Isabela R. Birs	<i>Ghent University and Technical University of Cluj-Napoca</i>	Belgium
	Cristina I. Muresan	<i>Technical University of Cluj-Napoca</i>	Romania
	Dana Copot	<i>Ghent University and Flanders Make@UGent</i>	Belgium
87 A modular approach on implementing a Type 1 Diabetes-Mellitus Simulator			
	Nandor Robert Palko	<i>Technical University of Cluj-Napoca</i>	Romania
	Alexandru-George Berciu	<i>Technical University of Cluj-Napoca</i>	Romania
	Levente Kovacs	<i>Óbuda University</i>	Hungary
	Eva-Henrietta Dulf	<i>Technical University of Cluj-Napoca</i>	Romania
160 A PCG Signal Acquisition and Classification System Based on CNN and Spectrogram Analysis			
	Gabriel Oncea	<i>Technical University of Cluj-Napoca</i>	Romania
	Ovidiu Buza	<i>Technical University of Cluj-Napoca</i>	Romania
	Ramona Galatus	<i>Technical University of Cluj-Napoca</i>	Romania

## Session SS4

Thursday, May 21 – Topaz  
12:00 – 13:30

### Chairs:

[Chair 1 Name] ([Affiliation])

[Chair 2 Name] ([Affiliation])qt

<b>47 Leveraging dual return mode of LiDAR sensors for small flying object tracking and classification</b>			
	Krisztián Balla	<i>HUN-REN Institute for Computer Science and Control</i>	Hungary
	Sándor Gazdag	<i>HUN-REN Institute for Computer Science and Control and Budapest Univ. of Technology and Economics</i>	Hungary
	Anita Keszler	<i>HUN-REN Institute for Computer Science and Control</i>	Hungary
	András L. Majdik	<i>HUN-REN Institute for Computer Science and Control</i>	Hungary
<b>97 Intelligent Energy Optimization in RAN Sites Through Integrated Sensing and Edge Automation</b>			
	Daniel Mihai Matei	<i>University of Craiova</i>	Romania
	Dan Selisteanu	<i>University of Craiova</i>	Romania
	Mircea Catalin Constantinescu	<i>University of Craiova</i>	Romania
<b>117 Camera-inertial Sensor Extrinsic Calibration</b>			
	Szilard Molnar	<i>Technical University of Cluj-Napoca</i>	Romania
	Cosmin Marcu	<i>Technical University of Cluj-Napoca</i>	Romania
	Ioan Dragomit	<i>Analog Devices, Inc.</i>	Romania
	Levente Tamas	<i>Technical University Cluj-Napoca</i>	Romania
<b>119 Identification-based prediction for event-triggered control in platooning</b>			
	Etienne Gorski	<i>Université de Lorraine</i>	France
	Lucian Busoniu	<i>Technical University of Cluj-Napoca</i>	Romania
	Constantin Morarescu	<i>Université de Lorraine</i>	France
	Vineeth Satheeskumar Varma	<i>Université de Lorraine</i>	France
<b>181 Connectivity constraints in cluttered environments within a predictive control architecture</b>			
	Rami Abu Sara	<i>National University of Science and Technology Politehnica Bucharest</i>	Romania
	Florin Stoican	<i>National University of Science and Technology Politehnica Bucharest</i>	Romania
	Daniel-Mihail Ioan	<i>National University of Science and Technology Politehnica Bucharest</i>	Romania
<b>198 Enhanced PID Control for an Industrial Thermal Process using Reinforcement Learning</b>			
	Gheorghe Bujgoi	<i>University of Craiova</i>	Romania
	Corina-Elena Vlad	<i>University of Craiova</i>	Romania
	Dorin Sendrescu	<i>University of Craiova</i>	Romania

## Session SS5

Saturday, May 23 – Flora  
10:30 – 12:00

### Chairs:

[Chair 1 Name] ([Affiliation])

[Chair 2 Name] ([Affiliation])

29 Mathematical and simulation model of a grid connected fuel cell system			
	Dorin Petreus	<i>Technical University of Cluj-Napoca</i>	Romania
	Toma Patarau	<i>Technical University of Cluj-Napoca</i>	Romania
	Eniko Szilagyi	<i>Technical University of Cluj-Napoca</i>	Romania
64 A local AI assistant developed in Python with OpenAI tools to facilitate PEMFC research			
	Maria Cristea	<i>Technical University of Cluj-Napoca</i>	Romania
	Radu-Adrian Tîrnovan	<i>Technical University of Cluj-Napoca</i>	Romania
	Ciprian Cristea	<i>Technical University of Cluj-Napoca</i>	Romania
	Anamaria-Andreea Șpaimoc	<i>Technical University of Cluj-Napoca</i>	Romania
	Daniel Fodorean	<i>Technical University of Cluj-Napoca</i>	Romania
108 Comparative Analysis of Classic and Bio-inspired Anode/Cathode Supply Geometries in PEMFCs			
	Anamaria-Andreea Șpaimoc	<i>Technical University of Cluj-Napoca</i>	Romania
	Maria Cristea	<i>Technical University of Cluj-Napoca</i>	Romania
	Daniel Fodorean	<i>Technical University of Cluj-Napoca</i>	Romania
	Radu-Adrian Tîrnovan	<i>Technical University of Cluj-Napoca</i>	Romania
134 Powering the Hydrogen Economy: A Review of Current Approaches in Compression Systems			
	Claudia Violeta Pop	<i>Technical University of Cluj-Napoca</i>	Romania
	Dan-Cristian Popa	<i>Technical University of Cluj-Napoca</i>	Romania
	Daniel Fodorean	<i>Technical University of Cluj-Napoca</i>	Romania
138 Analysis of a Bidirectional Power Converter for Fuel Cell–Battery Hybrid Systems			
	Vasile Mihai Suciu	<i>Technical University of Cluj-Napoca</i>	Romania
	Alexandru Madalin Pacuraru	<i>Technical University of Cluj-Napoca</i>	Romania
	Lucian Nicolae Pintilie	<i>Technical University of Cluj-Napoca</i>	Romania
	Eric Gabriel Lefter	<i>Technical University of Cluj-Napoca</i>	Romania
	Petre Dorel Teodosescu	<i>Technical University of Cluj-Napoca</i>	Romania
191 Energy Management and Sizing Strategy for a PV–Fuel Cell Hybrid System			
	Mirela Dobra	<i>Technical University of Cluj-Napoca</i>	Romania
	IonutDragos Roman	<i>Technical University of Cluj-Napoca</i>	Romania
	Petru Dobra	<i>Technical University of Cluj-Napoca</i>	Romania
	Dora Laura Morar	<i>Technical University of Cluj-Napoca</i>	Romania