

IEEE International Conference on Automation, Quality and Testing, Robotics - AQTR 2024

May 16-18, 2024, Cluj-Napoca, Romania

Venue: HUB UTCN, 4-8 G. Baritiu Str. / 3rd floor



S

Technical program

Conference opening and Plenary session

Thursday, May 16 – Aula HUB UTCN

8:30 – 10:30

Chair:

Liviu Miclea (*Technical University of Cluj-Napoca, Romania*)

Conference opening

Model predictive control and reinforcement learning: Merits and disadvantages

Bart De Schutter (*Delft University of Technology, Netherlands*)

Mobility Transformation

Alin Pantea (*Bosch Engineering Center Cluj*)

Boundless Automation

Sergiu Man (*Emerson Cluj*)

Session C1

Thursday, May 16 – Room 1

11:00 – 12:30

Chairs:

Ioana Nascu (*Technical University of Cluj-Napoca, Romania*)

Vlad Mihaly (*Technical University of Cluj-Napoca, Romania*)

25	<p>A novel architecture - Switching Echo State Networks</p> <p>Codrin Lupascu <i>Technical University "Gheorghe Asachi" of Iasi, Romania</i> Daniel Coca <i>School of Engineering, Newcastle University, Newcastle UK</i> Octavian Pastravanu <i>Technical University "Gheorghe Asachi" of Iasi, Romania</i></p>
28	<p>Weight Matrix Syntheses Using the Controllability Gramian for LQR Anaesthesia Control</p> <p>Paul Andrei Pintea <i>Technical University of Cluj-Napoca</i> Eva-Henrietta Dulf <i>Technical University of Cluj-Napoca</i></p>
53	<p>Nonlinear Neural Control Strategies versus Conventional Control - Case Study and Performance Comparison</p> <p>Roxana Elena Tudoroiu <i>University of Petrosani</i> Mohammed Zaheeruddin <i>Concordia University from Montreal, Montreal, Canada</i> Maria Magdalena Santa <i>Technical University of Cluj-Napoca</i> Sorin Mihai Radu <i>University of Petrosani</i> Horatiu Florian <i>Technical University of Cluj-Napoca</i> Nicolae Tudoroiu <i>John Abbott College, Sainte-Anne-de-Bellevue, Canada</i></p>
58	<p>Robust Feedback Linearization for Serial Robots</p> <p>Vlad Mihai Mihaly <i>Technical University of Cluj-Napoca</i> Mircea Susca <i>Technical University of Cluj-Napoca</i> Iosif Birllescu <i>Technical University of Cluj-Napoca</i> Simona Sim <i>Technical University of Cluj-Napoca</i> Doina Pista <i>Technical University of Cluj-Napoca</i> Petru Dobra <i>Technical University of Cluj-Napoca</i></p>
59	<p>Real-Time Simultaneous Optimistic Planning for Hybrid-Input Nonlinear Optimal Control</p> <p>Elvin Pop <i>Technical University of Cluj-Napoca</i> Ioana Lal <i>Technical University of Cluj-Napoca</i> Lucian Buşoniu <i>Technical University of Cluj-Napoca</i></p>
66	<p>Alternating Aeration Control and Optimization In Activated Sludge Processes</p> <p>Ioana Nascu <i>Technical University of Cluj-Napoca</i> Gabriel Harja <i>Technical University of Cluj-Napoca</i> Mihai Stanese <i>Technical University of Cluj-Napoca</i> Nascu Ioan <i>Technical University of Cluj-Napoca</i></p>

Session R1

Thursday, May 16 – Room 2

11:00 – 12:30

Chair:

Cosmin Marcu (*Technical University of Cluj-Napoca, Romania*)

32	Advancing Humanoid Robotics: Leg Control and Locomotion Emanuel Muntean Monica Leba	<i>University of Petrosani</i> <i>University of Petrosani</i>
45	Design of a stepping hexapod bio-inspired robot Razvan Dologa Honoriu Valean Alexandru Ianosi	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
46	Compression Algorithm for Extended Grid Coordinates used in Mobile Robots Navigation Cosmin Marcu Claudia Tigauan	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
70	Human Avoidance During Robot Operations Delia Guran Tassos Natsakis	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
87	Autonomous Robot Relocalization with Motion Constraints Robert Konievici Victor Domsa Levente Tamas	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
88	Traversability Map Estimation for Agricultural Robots Paul Sucala Levente Tamas	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>

Session QT1

Thursday, May 16 – Aula HUB UTCN

11:00 – 12:30

Chairs:

Radu Babiceanu (*Embry-Riddle Aeronautical University, Daytona Beach, Florida, USA*)

Gabriel Harja (*Technical University of Cluj-Napoca, Romania*)

31	<p>Optimizing the Test Plan for a Mobile Financial Technology Application in the Scaled Agile Framework Methodology</p> <p>Raul Ionut Riti <i>University of Petrosani</i> Andreea C. Ionica <i>University of Petrosani</i> Monica Leba <i>University of Petrosani</i></p>
44	<p>Implementation of 802.11b/g/n standards in 2.4GHz WLANs using MikroTik equipment</p> <p>Adrian-Daniel Dragoescu <i>Valahia University of Targoviste</i> Gabriel Predusca <i>University Politehnica of Bucharest</i> Dan Constantin Puchianu <i>Valahia University of Targoviste</i> Liana Denisa Circiumarescu <i>Valahia University of Targoviste</i> Nicoleta Angelescu <i>Valahia University of Targoviste</i></p>
72	<p>PwnMaster: Automatic Buffer Overflow and Format String Vulnerability Detection and Exploitation</p> <p>Florin Petrean <i>Technical University of Cluj-Napoca</i> Adrian Coleşa <i>Technical University of Cluj-Napoca</i></p>
73	<p>Lightweight Hardware in the Loop setup for research and Rapid Prototyping</p> <p>Attila Medgyesi <i>Technical University of Cluj-Napoca</i> Gabriel Harja <i>Technical University of Cluj-Napoca</i></p>
80	<p>Airspace Integration of New Entrants and Safety Risk Models</p> <p>Fadjimata Issoufou Anaroua <i>Embry-Riddle Aeronautical University, United States</i> Radu Babiceanu <i>Embry-Riddle Aeronautical University, United States</i></p>

Session A1

Thursday, May 16 – Room 1

14:30 – 16:00

Chairs:

Cristinel Mocan (*Technical University of Cluj-Napoca, Romania*)

Octavian Cuibus (*Technical University of Cluj-Napoca, Romania*)

19	Microservice-based interface to ChatGPT Rosen Ivanov Victoria Velkova	<i>Technical University - Gabrovo, Bulgaria</i> <i>Technical University - Gabrovo, Bulgaria</i>
47	What influence does the type of extracted audio features have on emotional states? Toma Telembici Lorena Muscar Corneliu Rusu	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
79	Modeling and Scheduling a Continuous Casting System – a Logistics Perspective Radu Vlad	<i>Technical University of Cluj-Napoca</i>
86	A Digital Twin Framework for Applications in Ophthalmology Miruna-Elena Iliuță Eugen Pop Mihnea-Alexandru Moisescu Traian-Costin Mitulescu	<i>University Politehnica of Bucharest</i> <i>University Politehnica of Bucharest</i> <i>University Politehnica of Bucharest</i> <i>University of Medicine and Pharmacy "Carol Davila", Bucharest</i>
91	Automated Keyword Extraction and Summarization for Romanian Texts Mihai Iulian Lupea Cristinel Mihai Mocan Constantin Ioan Nandra Emil Stefan Chifu	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
92	Detection of Domain-Specific Hypernyms Using Named Entity Recognition and Extraction Dragos Liviu Prata Cristinel Mihai Mocan Constantin Ioan Nandra Emil Stefan Chifu	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>

Session SS1. Emerging Technologies for the Future of Sustainability

Thursday, May 16 – Room 2

14:30 – 16:00

Chairs:

Roxana Rusu-Both (*Technical University of Cluj-Napoca*)

Iulia-Cristina Stanica (*National University of Science and Technology Politehnica Bucharest*)

Alexandra Cernian (*National University of Science and Technology Politehnica Bucharest*)

13	<p>Sustainability in Hip Replacement Bearings: A Study of Research and Modern Trends</p> <p>Ionuț-Cristian Perederic <i>National University of Science and Technology Politehnica Bucharest</i> Nicoleta-Luminița Căruțașu <i>National University of Science and Technology Politehnica Bucharest</i> Patricia Isabela Brăileanu <i>National University of Science and Technology Politehnica Bucharest</i> Nicoleta-Elisabeta Pascu <i>National University of Science and Technology Politehnica Bucharest</i></p>
15	<p>Design of Virtual Reality Games for eHealth: Immersive Exercises to Reduce Anxiety</p> <p>Iulia-Cristina Stanica <i>National University of Science and Technology Politehnica Bucharest</i> Simona Magdalena Hainagiu <i>National University of Science and Technology Politehnica Bucharest</i> Alberta Milicu <i>National University of Science and Technology Politehnica Bucharest</i> Maria-Iuliana Dascalu <i>National University of Science and Technology Politehnica Bucharest</i></p>
17	<p>The impact of testing in robotics business for sustainable economic growth</p> <p>Crina Duta <i>Doctoral School of Industrial Engineering and Robotics, Faculty of Industrial Engineering and Robotics, Bucharest</i> Nicoleta Carutasu <i>Department of Engineering and Management, Faculty of Industrial Engineering and Robotics, Bucharest</i> Robert Brezoaie <i>Doctoral School of Computers and Information Technology, Faculty of Automatics and Computers, Bucharest</i></p>
18	<p>Strategic Resource Challenges in the Development of Smart Cities</p> <p>Diana Artudean <i>Technical University of Cluj-Napoca</i> Nicoleta Aitonean <i>Technical University of Cluj-Napoca</i> Maria Pârcălab <i>Technical University of Cluj-Napoca</i> Dan-Cristian Popa <i>Technical University of Cluj-Napoca</i> Loránd Szabó <i>Technical University of Cluj-Napoca</i></p>
27	<p>Intelligent Illumination of Crosswalks for Increasing Pedestrian Safety</p> <p>Erzsébet Mátyás <i>Technical University of Cluj-Napoca</i> Lorand Szabo <i>Technical University of Cluj-Napoca</i></p>
82	<p>Machine-learning based Elastography analysis in predicting lymph node metastasis</p> <p>Roxana Rusu-Both <i>Technical University of Cluj-Napoca</i> Cristian Socaci <i>Technical University of Cluj-Napoca</i> Adrian Palagos <i>Technical University of Cluj-Napoca</i></p>

Session QT2

Thursday, May 16 – Aula HUB UTCN

14:30 – 16:00

Chairs:

Gheorghe Sebestyen (*Technical University of Cluj-Napoca, Romania*)

Radu Miron (*Technical University of Cluj-Napoca, Romania*)

6	Anomaly Detection in Water Consumption Patterns using Prediction and Clustering Approaches Codruta Maria Serban Gheorghe Sebestyen Anca Hangan	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
10	Forensic Investigation of Data Storage Systems Ioan Ticovan Gheorghe Sebestyen	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
12	Adapting supervised machine learning for analysis of neurobiological signals Andrei Ciuparu Ann Christin Garvert Koen Gerard Alois Vervaeke Raul Muresan	<i>Transylvanian Institute of Neuroscience</i> <i>University of Oslo, Norway</i> <i>University of Oslo, Norway</i> <i>Transylvanian Institute of Neuroscience</i>
21	Lightweight Implementation of the AES Encryption Algorithm for IoT Applications Constrained by Memory and Processing Power Andrei Baneasa Radu Donca Sorin Besoiu Debora Buleandra	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
26	Monitoring of RPC Messages with ALPC-Level API Hooking Andrei-Marius Muntea Radu-Marian Portase Gheorghe Sebestyen-Pal	<i>Technical University of Cluj-Napoca; Bitdefender</i> <i>Technical University of Cluj-Napoca; Bitdefender</i> <i>Technical University of Cluj-Napoca</i>

Session C2

Thursday, May 16 – Room 1

16:45 – 18:15

Chairs:

Alexandru Codrean (*Technical University of Cluj-Napoca, Romania*)

Mircea Şuşcă (*Technical University of Cluj-Napoca, Romania*)

22	<p>Air Preheating Identification for Heat Pump Performance Improvement</p> <p>Claudiu Rafa <i>Technical University of Cluj-Napoca</i> Maria M. Santa <i>Technical University of Cluj-Napoca</i> Dahlia Al-Janabi <i>Technical University of Cluj-Napoca</i> Octavian P. Cuiibus <i>Technical University of Cluj-Napoca</i> Tiberiu S. Letia <i>Technical University of Cluj-Napoca</i></p>
30	<p>Adaptive filters for DC motor identification: a case study</p> <p>Simona Daiana Sim <i>Technical University of Cluj-Napoca</i> Attila Medgyesi <i>Technical University of Cluj-Napoca</i> Zsofia Lendek <i>Technical University of Cluj-Napoca</i> Mircea Susca <i>Technical University of Cluj-Napoca</i> Vlad-Mihai Mihaly <i>Technical University of Cluj-Napoca</i> Doina Pista <i>Technical University of Cluj-Napoca</i> Calin Liviu Vaida <i>Technical University of Cluj-Napoca</i> Petru Dobra <i>Technical University of Cluj-Napoca</i> Anca-Elena Pica <i>Technical University of Cluj-Napoca</i></p>
60	<p>Thermal power simulation of nuclear reactor in LabVIEW environment</p> <p>Imre Filip <i>Technical University of Cluj-Napoca</i> Iulia Maria Baraian <i>Technical University of Cluj-Napoca</i></p>
64	<p>Design of the Control System of a Flexible Line for Manufacturing Metallic Parts by Using Programmable Logic Controllers</p> <p>Vasile Alexandru Dulgheriu <i>Department of Engineering, Plexus Services RO SRL</i> Eugen Ioan Gergely <i>University of Oradea</i> Laura Coroiu <i>University of Oradea</i> Helga Maria Silaghi <i>University of Oradea</i> Adrian Codoban <i>University of Oradea</i></p>
69	<p>Optimization to Robustify Controllers Using the Disk Margin Tool</p> <p>Roxana Bălescu <i>Technical University of Cluj-Napoca</i> Mircea Şuşcă <i>Technical University of Cluj-Napoca</i></p>
78	<p>Acquisition and processing of PCG signals originating from the heart</p> <p>Gabriel Oncea <i>Technical University of Cluj-Napoca</i> Ovidiu Buza <i>Technical University of Cluj-Napoca</i></p>

Session A2

Thursday, May 16 – Room 2

16:45 – 18:15

Chairs:

Eva Dulf (*Technical University of Cluj-Napoca, Romania*)

Delia Mitrea (*Technical University of Cluj-Napoca, Romania*)

24	Assistive Helmet for Visually Impaired Human Beings Ovidiu Ceoca Eva-Henrietta Dulf	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
43	Automatic license plate recognition and real-time car vignette notifications Cătălin Alexandru Andreș Emilia Șipoș Laura-Nicoleta Ivanciu	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
55	Letter Identification in EEG Signals using Scalograms Rares Tant Vlad Mihaly	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
75	Pancreatic Tumor Recognition from CT Images through Advanced Deep Learning Techniques Delia Mitrea Raluca Brehar Razvan Itu Sergiu Nedevschi Mihai Socaciu Radu Badea	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca</i> <i>Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca</i>
77	Enhanced Cane for Blind People Mobility Assistance Adrian Mocanu Valentin Sita Adina Astilean Camelia Avram	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
81	Development of a virtual reality simulator for a robotic-assisted laparoscopic surgery Florin Covaciu Bogdan Gherman Gabriela Rus Calin Vaida Ionut Zima Doina Pislă	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>

Session A3

Friday, May 17 – Room 1

8:00 – 9:30

Chairs:

Mihai Hulea (*Technical University of Cluj-Napoca, Romania*)

Radu Slavescu (*Technical University of Cluj-Napoca, Romania*)

7	<p>Beyond the Click: Navigating the Depths of Page Ranking Algorithms</p> <p>Iulia-Maria Baraian <i>Technical University of Cluj-Napoca</i> Honoriu Valean <i>Technical University of Cluj-Napoca</i> Oliviu Matei <i>Technical University of Cluj-Napoca</i> Rudolf Erdei <i>Technical University of Cluj-Napoca</i> Laurentiu Chifor <i>Technical University of Cluj-Napoca</i></p>
11	<p>Development of a simulated industrial process and its control with a PLC</p> <p>Tudor Covrig <i>Technical University of Cluj-Napoca</i> Liviu Miclea <i>Technical University of Cluj-Napoca</i> Alexandru Ciobotaru <i>Technical University of Cluj-Napoca</i></p>
29	<p>Optimizing Multi-Modal Transportation in Smart Cities: A Graph-Oriented Database Approach</p> <p>Mihai Hulea <i>Technical University of Cluj-Napoca</i> Radu Miron <i>Technical University of Cluj-Napoca</i> Andrei Rusu <i>NTT DATA Romania</i></p>
39	<p>Graphical Presentation of Traditional Bulgarian Embroidery Patterns</p> <p>Elena Zaharieva-Stoyanova <i>Technical University - Gabrovo, Bulgaria</i></p>
56	<p>Computing Fisher's Exact Test using Prime Decomposition</p> <p>Sebastian-Antonio Toma <i>Technical University of Cluj-Napoca</i> Razvan Gabriel Dumitru <i>Technical University of Cluj-Napoca</i> Radu Razvan Slavescu <i>Technical University of Cluj-Napoca</i></p>
67	<p>Smart Agriculture: Farm Management through IoT with Predictive and Precision Monitoring</p> <p>Alexandra Elena Dobre <i>Technical University of Cluj-Napoca</i> Bogdan Gabriel Draghici <i>Technical University of Cluj-Napoca</i> Bianca Ciobanu <i>Technical University of Cluj-Napoca</i> Ovidiu Petru Stan <i>Technical University of Cluj-Napoca</i> Liviu Cristian Miclea <i>Technical University of Cluj-Napoca</i></p>

Session QT3 Friday, May 17 – Room 2 8:00 – 9:30 Chair: Szilard Enyedi (<i>Technical University of Cluj-Napoca, Romania</i>) Ovidiu Petru Stan (<i>Technical University of Cluj-Napoca, Romania</i>)	
20	Increasing the Dependability of a Real-Time System Diana-Elena Niți <i>Technical University of Cluj-Napoca</i> Tomasz Kubik <i>Wroclaw University of Science and Technology, Poland</i> Szilárd Enyedi <i>Technical University of Cluj-Napoca</i> Liviu Cristian Miclea <i>Technical University of Cluj-Napoca</i>
42	A Knowledge Graph Approach to Cyber Threat Mitigation Derived from Data Flow Diagrams Andrei Chis <i>Babeş-Bolyai University of Cluj-Napoca</i> Ionut Stoica <i>Babeş-Bolyai University of Cluj-Napoca</i> Ana-Maria Ghiran <i>Babeş-Bolyai University of Cluj-Napoca</i> Robert Andrei Buchmann <i>Babeş-Bolyai University of Cluj-Napoca</i>
49	Reliable Breast Cancer Detection from Ultrasound Images using Image Segmentation Alexandru Ciobotaru <i>Technical University of Cluj-Napoca</i> Dan Gota <i>Technical University of Cluj-Napoca</i> Tudor Covrig <i>Technical University of Cluj-Napoca</i> Liviu Miclea <i>Technical University of Cluj-Napoca</i>
62	Advanced Brain Tumor Diagnosis using Haralick Texture Features and Multiclass SVM in MRI Imaging Shaik Karimullah <i>Annamacharya Institute of Technology and Sciences (Autonomous), Rajampet, Andhra Pradesh, India</i> Mohammed Mahaboob Basha <i>Sreenidhi Institute of Science and Technology, Hyderabad, Telangana, India</i> Fahimuddin Shaik <i>Annamacharya Institute of Technology and Sciences (Autonomous), Rajampet, Andhra Pradesh, India</i> Ovidiu Petru Stan <i>Technical University of Cluj-Napoca</i> Gundala Srinivasulu <i>Lakireddy Bali Reddy College of Engineering (Autonomous), Mylavaram, Krishna Dt. Andhra Pradesh, India</i> Anca Stan <i>Technical University of Cluj-Napoca</i>
85	Improving Manufacturing Testing Steps Using Artificial Intelligence and Machine Learning Algorithms Trained on Simulated Waveforms Eliza Maria Olariu <i>Technical University of Cluj-Napoca</i> Horia Hedesiu <i>Technical University of Cluj-Napoca</i>
90	On the Feasibility of Deep Learning Classification from Raw Signal Data in Radiology, Ultrasonography and Electrophysiology Szilárd Enyedi <i>Technical University of Cluj-Napoca</i>

Session QT4 Friday, May 17 – Room 3 8:00 – 9:30	
Chairs: Ioana Făgărășan (<i>University Politehnica of Bucharest</i>) Roxana Both (<i>Technical University of Cluj-Napoca, Romania</i>)	
9	One phase open-circuit fault-tolerant vector control for a five phase PMSM machine Tudor-Stefan Plugaru <i>Technical University of Cluj-Napoca</i> Anton-Horatiu Tamas <i>Robert Bosch Cluj-Napoca</i> Vlad-Iulian Albu <i>Robert Bosch Cluj-Napoca</i> Ioan Nascu <i>Technical University of Cluj-Napoca</i>
23	IoT and Machine Learning-Based System for Predicting, Monitoring and Controlling Indoor Air Quality Balazs Kovacs <i>Technical University of Cluj-Napoca</i> Roxana Rusu-Both <i>Technical University of Cluj-Napoca</i>
38	Lead Acid battery parameters identification, modelling and testing applied for a hybrid-electric funicular concept Ruba Mircea <i>Technical University of Cluj-Napoca</i> Paula Serban <i>Technical University of Cluj-Napoca</i> Sebastian Ursache <i>Technical University of Cluj-Napoca</i> Oprea Claudiu <i>Technical University of Cluj-Napoca</i> Gabriel Chindris <i>Technical University of Cluj-Napoca</i> Razvan Inte <i>Technical University of Cluj-Napoca</i> Ankidim Zinveli <i>Technical University of Cluj-Napoca</i> Claudia Martis <i>Technical University of Cluj-Napoca</i>
40	New trends in automation applied to monitor and control grain quality in silos Ana Sophia Schuler <i>University Politehnica of Bucharest</i> Ioana Fagarasan <i>University Politehnica of Bucharest</i> Vasile Calofir <i>University Politehnica of Bucharest</i> Nicoleta Arghira <i>University Politehnica of Bucharest</i> Mircea Simoiu <i>University Politehnica of Bucharest</i> Sergiu Stelian Iliescu <i>University Politehnica of Bucharest</i>
48	Spoiled food detection using a matrix of gas sensors Andrei Tămâian <i>Technical University of Cluj-Napoca</i> Silviu Folea <i>Technical University of Cluj-Napoca</i>
57	Railway Safety, from a Set of Rules to Cyber Physical Systems Ioan Pop <i>Technical University of Cluj-Napoca</i> Clement Festila <i>Technical University of Cluj-Napoca</i>

Plenary session 2
Friday, May 17 – Aula HUB UTCN
10:00 – 12:00

Chair:

Liviu Miclea (*Technical University of Cluj-Napoca, Romania*)

The challenges of Silicon Health
Yervant Zorian (*Synopsys, USA*)

AQTR Student Forum
Saturday, May 18 – Room 1, 2, 3
9:00 – 12:00