

Conference opening and Plenary session
Thursday, May 19 – Aula Domşa / online
10:00 – 12:00

Chair: Prof.dr.ing. Liviu Miclea

Conference opening

Personalized Cancer Therapy by Model-based Optimal Robust Control Methods
 Professor Levente Kovács (*Óbuda University, Hungary*)

DataMatrix in Healthcare Industry
 Ing. Ovidiu Mureşan, (*Engineering manager, Terapia SA, Romania*)

Continuous testing using virtualization for an efficient powertrain ECU software development
 Bianca Todorean (*Robert Bosch SRL*)

Session SS1: Transdisciplinary approaches in emerging engineering problems
Thursday, May 19 – Room D21 / online
14:30 – 16:00

Chairs: Levente Kovács, (*Óbuda University*), Eva Dulf (*Technical University of Cluj-Napoca*),
 Ioana Nascu (*Technical University of Cluj-Napoca*)

12	Control of a T1DM model using Robust Fixed-Point Transformations based control with disturbance rejection	Bence Czakó Dániel András Drexler Levente Kovács	<i>Óbuda University</i> <i>Óbuda University</i> <i>Óbuda University</i>
14	Survey on Applying 3D Printing in Manufacturing the Cooling Systems of Electrical Machines	Lorand Szabo	<i>Technical University of Cluj-Napoca</i>
15	Utilization of IMU-based gesture recognition in the treatment of diabetes	Marcell Szántó Gergő Strasser László Szász Lehel Dénes-Fazakas György Eigner Gábor Kertész Levente Kovács	<i>Óbuda University</i> <i>Óbuda University</i> <i>Óbuda University</i> <i>Óbuda University</i> <i>Óbuda University</i> <i>Óbuda University</i> <i>Óbuda University</i>
18	Novel defect tracking using DeepSORT, ScaledYOLOv4 and the Clip model	Andrei A. Tulbure Cosmin Covaciu Adrian A. Tulbure Eva-Henrietta Dulf	<i>Technical University of Cluj-Napoca</i> <i>University of Pitesti</i> <i>University "1 December 1918"</i> <i>Technical University of Cluj-Napoca</i>
36	LMI Conditions for CNC Cascade Controller Design - A State Feedback Approach	Dora Morar Vlad Mihaly Mircea Susca Petru Dobra	<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>
53	Optimization and Control of a Perfusion Bioreactor System in Tissue Engineering	Ioana Nascu Ioan Nascu Wenli Du	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>East China University of Science and Technology</i>

Session QT1

Thursday, May 19 - Room 356 / online

14:30 - 16:00

Chair: Zsofia Lendek (*Technical University of Cluj-Napoca*), Iulia Stefan (*Technical University of Cluj-Napoca*),

	Mixed signal ASIC Validation	Adrian Georgescu	<i>Continental Automotive Systems</i>
6	Locate, execute, expect design pattern	Andrei M. Vadan Liviu C. Miclea	<i>Porsche Engineering Romania Technical University of Cluj-Napoca</i>
43	Towards assuring conformance of AI systems	Calin-Marian Iurian Adrian Groza	<i>Technical University of Cluj-Napoca Technical University of Cluj-Napoca</i>
51	Detect data deviation for temperature and ambient light sensors, and create a simple calibration method	Andrei M. Vadan Liviu C. Miclea	<i>Porsche Engineering Romania Technical University of Cluj-Napoca</i>
59	Input-Aware Approximate Computing	Ali Piri Saeedi Sepide Mario Barbareschi Bastien Deveautour Stefano Di Carlo Ian O'Connor Alessandro Savino Marcello Traiola Alberto Bosio	<i>Lyon Institute of Nanotechnology Politecnico di Torino University of Naples Federico II Lyon Institute of Nanotechnology Politecnico di Torino Lyon Institute of Nanotechnology Politecnico di Torino Inria Rennes / IRISA Lyon Institute of Nanotechnology</i>
72	Implementation and testing of digital filters on STM32 Nucleo-64P	Sim Simona-Daiana Zsófia Lendek Petru Dobra	<i>Technical University of Cluj-Napoca Technical University of Cluj-Napoca Technical University of Cluj-Napoca</i>

Session QT2

Thursday, May 19 – online

14:30 – 16:00

Chair: Camelia Avram (*Technical University of Cluj-Napoca*), Mirela Dobra (*Technical University of Cluj-Napoca*), Mihai Hulea (*Technical University of Cluj-Napoca*),

11	Quality Enhancement of the SEM Images	Florin Toadere Nicoleta Tosa Alin Sebastian Porav	<i>National Institute for Research and Development of Isotopic and Molecular Technologies Cluj-Napoca</i> <i>National Institute for Research and Development of Isotopic and Molecular Technologies Cluj-Napoca</i> <i>National Institute for Research and Development of Isotopic and Molecular Technologies Cluj-Napoca</i>
26	Computerized Detection of JWH Synthetic Cannabinoids Class Membership Based on Machine Learning Algorithms and Molecular Descriptors	Catalina Mercedes Burlacu Mirela Praisler Adrian Constantin Burlacu	<i>Dunarea de Jos University of Galati</i> <i>Dunarea de Jos University of Galati</i> <i>Dunarea de Jos University of Galati</i>
31	Clustering consumption activities in a water monitoring system	Diana-Andreea Arsene Alexandru Predescu Ciprian-Octavian Truică Elena-Simona Apostol Mariana Mocanu Costin-Gabriel Chiru	<i>University Politehnica of Bucharest</i> <i>University Politehnica of Bucharest</i> <i>University Politehnica of Bucharest</i> <i>University Politehnica of Bucharest</i> <i>University Politehnica of Bucharest</i>
58	Towards energy communities: a multi-agent case study	Mircea Stefan Simoiu Ioana Fagarasan Stephane Ploix Vasile Calofir Sergiu Stelian Iliescu	<i>Politehnica University of Bucharest</i> <i>University Politehnica of Bucharest</i> <i>Grenoble INP</i> <i>Universitatea POLITEHNICA din Bucuresti</i> <i>Politehnica University of Bucharest</i>
60	Predictive maintenance efficiency study using wireless sensor clusters (WSCs)	Ioan Szabo Andrei Alexandru Tulbure Dorin Fleseriu Adrian Alexandru Tulbure	<i>University of Pitesti</i> <i>Technical University of Cluj-Napoca</i> <i>University of Pitesti</i> <i>University of Alba Iulia</i>

Session SS4

Thursday, May 19 – Room D21 / online

16:30 – 18:00

Chairs: Isabela Birs (*Technical University of Cluj-Napoca*), Dana Copot (*Ghent University*),
 Cristina Mureşan (*Technical University of Cluj-Napoca*)

24	Use of Intelligent Digital Twin for Dynamic Calculation of the Reliability of Industrial Automation Systems	Nasser Jazdi Baran Gül Manuel Müller	<i>University of Stuttgart / IAS</i> <i>University of Stuttgart</i> <i>University of Stuttgart / IAS</i>
29	A systematic framework for design and evaluation of control strategies for continuous manufacturing of tablets	Dana Copot	<i>Ghent University</i>
33	Closed-Loop System Sensitivity Analysis for Passivity-Based Controller Parameters	Vlad Mihaly Mircea Susca Dora Morar Petru Dobra	<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>
35	Worst-Case Execution Time Estimation for Numerical Controllers	Mircea Susca Vlad Mihaly Dora Morar Petru Dobra	<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>
38	Optimization of the Wastewater Treatment Plant Recycle Flowrates Using Artificial Neural Networks	Norbert-Botond Mihály Alexandra-Veronica Luca Melinda Simon-Várhelyi Vasile-Mircea Cristea	<i>Babeş-Bolyai University</i> <i>Babeş-Bolyai University</i> <i>Babeş-Bolyai University</i> <i>Babeş-Bolyai University</i>
73	Fractional Order Controller for the ¹³ C Isotope Separation Process	Roxana Motorga Vlad Muresan Mihail Abrudean Iulia Clitan Mihaela Unguresan Mihai Marusciac	<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 R1

Thursday, May 19 – Room 356 / online

16:30 – 18:00

Chair: Cosmin Marcu (*Technical University of Cluj-Napoca*), Anastasios Natsakis (*Technical University of Cluj-Napoca*)

48	Development of a Human Service Robot application using Pepper robot as a museum guide	Bogdan Gabriel Draghici Alexandra Elena Dobre Marius Misaros Ovidiu Petru Stan	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
54	Analysis and preliminary design of a new parallel robot for SILS	Ionut-Mihai Ulinici Nicolae Crisan Calin Vaida Iulia Andras Doina Pisla	<i>CESTER, Technical University of Cluj-Napoca</i> <i>Iuliu Hatieganu University of Medicine and Pharmacy Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Iuliu Hatieganu University of Medicine and Pharmacy Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
55	HRI based command system of a modular parallel robot for brachial monoparesis	Alin Burz Paul Tucan Nicoleta Tohanean Bogdan Gherman Calin Vaida Cristian Abrudan Giuseppe Carbone Doina Pisla	<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>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>University of Calabria, Cosenza</i> <i>Technical University of Cluj-Napoca</i>
61	MPI Planar Correction of Pulse Based ToF Cameras	Marian-Leontin Pop Levente Tamas	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
86	Underwater robot pose estimation using acoustic methods and intermittent position measurements at the surface	Vicu-Mihalis Maer Levente Tamas Lucian Buşoniu	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>

Session QT3

Thursday, May 19 – online

16:30 – 18:00

Chair: Honoriu Valean (*Technical University of Cluj-Napoca*), Dan Radu (*Technical University of Cluj-Napoca*)

10	Security Analysis of Vehicle Instrument Clusters by Automatic Fuzzing and Image Acquisition	Alfred Anistoroaei Bogdan Groza Pal-Stefan Murvay Eugen Gurban	<i>Politehnica University of Timisoara</i> <i>Politehnica University of Timisoara</i> <i>Politehnica University of Timisoara</i> <i>Politehnica University of Timisoara</i>
23	Judicial surveillance of cyber-physical systems	Ticovan Ioan Vasile Sebestyen Gheorghe	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
41	Test Cost-Test Quality Modeling For Adaptive Test	Bekir Zahit Demiray Baris Arslan	<i>University of Iowa</i> <i>Acibadem University</i>
74	Ontology Driven High Performance Messaging System for Distributed Software Platforms	Daniela Delinschi Rudolf Erdei Oliviu Matei	<i>Holisun SRL</i> <i>Holisun SRL</i> <i>Technical University of Cluj-Napoca, North University Centre of Baia Mare</i>
79	3D Object Recognition Method using CNNs and Slicing	Razvan Gabriel Dumitru Sebastian Antonio Toma Dorian Gorgan	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
21	A performance evaluation of modern virtualization techniques	Ionut Donca Liviu Miclea Ovidiu Petru Stan	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>

Session A1

Friday, May 20 – online

9:00 – 10:30

Chair: Thomas Josso-Laurain (*University of Haute-Alsace*), Levente Tamas (*Technical University of Cluj-Napoca*)

40	A new exoskeleton robot for human motion assistance	Ionut Geonea Cristian Copilusi Alexandru Margine Leonard Marius Ciurezu-Gherghe Nicolae Dumitru Adrian Sorin Rosca	<i>University of Craiova</i> <i>University of Craiova</i> <i>University of Craiova</i> <i>University of Craiova</i> <i>University of Craiova</i> <i>University of Craiova</i>
44	Transforming the university campus into an open-lab: the SMART-UHA project	Jonathan Ledy Thomas Josso-Laurain Frédéric Fondement Sébastien Bindel Frédéric Drouhin Françoise Simon Michel Basset	<i>IRIMAS UHA</i> <i>IRIMAS UHA</i> <i>IRIMAS UHA</i> <i>IRIMAS UHA</i> <i>IRIMAS UHA</i> <i>CREGO UHA</i> <i>IRIMAS UHA</i>
45	Flexible mechanical system with applications in exploratory activities	Leonard Marius Ciurezu-Gherghe Nicolae Dumitru Ionut Geonea Stefan Lucian Bostina	<i>University of Craiova</i> <i>University of Craiova</i> <i>University of Craiova</i> <i>University of Craiova</i> <i>Softronic SRL Craiova</i>
46	Telepresence robot for exploring protected natural areas	Paul Tota Gelu Ovidiu Tirian Ligia Chiorean Mircea-Florin Vaida	<i>Technical University of Cluj-Napoca</i> <i>“Politehnica” University of Timisoara</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
64	Development of a Neural Network Method to Estimate the Workspace of a Parallel Robot	Catalin Boanta Cornel Brisan	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>

Session QT4

Friday, May 20 –online

9:00 – 10:30

Chair: Teodora Sanislav (*Technical University of Cluj-Napoca*), Emilia Sipos (*Technical University of Cluj-Napoca*)

4	An Internet of Things-Enabled Sound Level Meter Using Off-the-Shelf Components	George Mois Teodora Sanislav Silviu Corneliu Folea	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
50	Studies on the operation of electromagnetic actuators with potential use to reduce the level of vibrations generated in piping systems	Vlad Mihai Panainte Sanda Oltean Ana Maria Moldovan Horia Bălan	<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>
62	Using analog scrambling circuits for automotive sensor integrity and authenticity	Alessandro Savino Cristiano Chenet Stefano Di Carlo	<i>Politecnico di Torino</i> <i>Politecnico di Torino</i> <i>Politecnico di Torino</i>
76	Activity recognition using unsupervised learning	Anca Alexan Alexandru Alexan Stefan Oniga	<i>Technical University of Cluj-Napoca,</i> <i>North University Centre of Baia Mare</i> <i>Technical University of Cluj-Napoca,</i> <i>North University Centre of Baia Mare</i> <i>Technical University of Cluj-Napoca,</i> <i>North University Center of Baia Mare</i> <i>/ University of Debrecen</i>
77	Smartwatch activity recognition feature comparison using ML.net	Alexandru Alexan Anca Alexan Stefan Oniga	<i>Technical University of Cluj-Napoca,</i> <i>North University Centre of Baia Mare</i> <i>Technical University of Cluj-Napoca,</i> <i>North University Centre of Baia Mare</i> <i>Technical University of Cluj-Napoca,</i> <i>North University Center of Baia Mare</i> <i>/ University of Debrecen</i>
84	PCB quality check: optical inspection using color mask and image thresholding	Emilia Sipos Alexandra Ones Laura Nicoleta Ivanciu	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>

Session A2

Friday, May 20 – online

9:00 – 10:30

Chair: Mihaela Dinsoreanu (*Technical University of Cluj-Napoca*), Eugen Pop (*University “Politehnica” of Bucharest*)

8	Extraction of Functional Brain Networks from EEG Signals in the Context of Visual Perception	Dan Dumitru Emanuela Ceuta Raul C. Mureşan Vlad Moca Mihaela Dinsoreanu	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Transylvanian Institute of Neuroscience</i> <i>Transylvanian Institute of Neuroscience</i> <i>Technical University of Cluj-Napoca</i>
25	Classification of Sessile Oak Leaves Affected by Defoliating Insects	Rares Petrisor Honoriu Valean	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
27	Road traffic analysis using unmanned aerial vehicle and image processing algorithms	Carmen Gheorghe Nicolae Filip	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
56	Cyber-Physical Systems Based Business Models	Eugen Pop Daniela Gîfu Mihnea Alexandru Moisescu	<i>University “Politehnica” of Bucharest; R&D Institute for Automation-IPA SA</i> <i>IIT, Romanian Academy – Iaşi branch & “Alexandru Ioan Cuza” University of Iaşi</i> <i>University “Politehnica” of Bucharest</i>
82	Ab initio gene identification using Apache Spark	Tatar Simion-Daniel Gheorghe Sebestyen	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>

Session C1

Friday, May 20 – online

11:00 – 12:30

Chair: Zoltan Nagy (*Technical University of Cluj-Napoca*), Iulia Clitan (*Technical University of Cluj-Napoca*)

16	Field Orientation Control of a PMSM Electrical Drive System with Application in Hybrid Electric Vehicle	Helga Silaghi Viorica Spoiala Sanda Dale Claudiu Costea Tiberiu Barabas Dragos Spoiala Andrei Silaghi	<i>University of Oradea</i> <i>University of Oradea</i> <i>University of Oradea</i> <i>University of Oradea</i> <i>University of Oradea</i> <i>University of Oradea</i> <i>University Politehnica Timisoara</i>
20	Model Based Design Controller for Stand-Alone Conversion System with MPPT	Calin Rusu Iulian Birou Sorin Salcu	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
39	Efficient Load Forecasting Model Assessment for Embedded Building Energy Management Systems	Cristina Nichiforov Nicoleta Arghira Grigore Stamatescu Iulia Stamatescu Ioana Fagarasan Sergiu Stelian Iliescu	<i>University Politehnica of Bucharest</i> <i>University Politehnica of Bucharest</i> <i>University Politehnica of Bucharest</i> <i>University Politehnica of Bucharest</i> <i>University Politehnica of Bucharest</i> <i>University Politehnica of Bucharest</i>
47	H_∞ controller design and parametric identification for a DC brushed motor	Oliver Janos Petru Dobra	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
63	Experimental Control of Thermal Processes inside the Datacenter	Jefta Nagy Mihail Radu Cătălin Truşcă Ştefan Albert Felix Fărcaş Cristian-Andrei Lupşe	<i>National Institute for Research and Development of Isotopic and Molecular Technologies Cluj-Napoca</i> <i>National Institute for Research and Development of Isotopic and Molecular Technologies Cluj-Napoca</i> <i>National Institute for Research and Development of Isotopic and Molecular Technologies Cluj-Napoca</i> <i>National Institute for Research and Development of Isotopic and Molecular Technologies Cluj-Napoca</i> <i>National Institute for Research and Development of Isotopic and Molecular Technologies Cluj-Napoca</i>

Session A3

Friday, May 20 – online

11:00 – 12:30

Chair: Adrian Peculea (*Technical University of Cluj-Napoca*), Dan Gota (*Technical University of Cluj-Napoca*)

42	Towards a self-describing gateway-based IoT solution	Bogdan Iancu Andrei Gatea	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
49	Evaluation of the Use of LiDAR Type Systems in Environmental Protection	Constantin Daniel Oancea Ciprian Mihai Coman Bogdan Corneliu Toma	<i>University Politehnica of Bucharest</i> <i>Tesagon International SRL</i> <i>Tesagon International SRL</i>
66	Multi-channel Chatbot and Robotic Process Automation	Claudiu Domuta Alexandra Fanca Adela Puscasiu Pop Dan Gota Ovidiu Stan Honoriu Valean Liviu Miclea	<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> <i>Technical University of Cluj-Napoca</i>
70	Simulation Framework for 6LoWPAN Networks Using Mininet-WiFi	Sorin Buzura Hugo Bertrand Raphaël Chevalier Vasile Dadarlat Adrian Peculea	<i>Technical University of Cluj-Napoca</i> <i>CESI Engineering School, Computer Science Section, Rouen</i> <i>CESI Engineering School, Computer Science Section, Rouen</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
85	Automatic Tests Correction System in Education	Ovidiu Buza	<i>Technical University of Cluj-Napoca</i>

Session A4

Friday, May 20 – Room 356 / online

14:30 – 16:00

Chair: Alexandru Codrean (*Technical University of Cluj-Napoca*), Roxana Both- Rusu (*Technical University of Cluj-Napoca*)

37	A system for evaluating the correctness of physical exercises execution	Codruta Maria Serban Anca Hangan	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
67	Gaze Analysis and Concentration Monitoring for Children With Attention Disorder using Eye-Tracking	Claudiu Domuta Ruxandra Miron Onciul Dan Gota Alexandra Fanca Adela Pop Puscasiu Ovidiu Stan Honoriu Valean Liviu Miclea	<i>Technical University of Cluj-Napoca</i> <i>Riverbed Technology Romania</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> <i>Technical University of Cluj-Napoca</i>
71	Probabilistic Petri Nets Model for Assessing Temporal Variations of the Number of Bikes in Bike-Sharing Stations	Horatiu Florian Camelia Avram Mihai Pop Adrian Mocanu Dan Radu Adina Astilean	<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>
80	A New Approach for Detection and Analysis of Lung Pleural Line Morphology	Roxana Both Alexandra Popa Bianca Todorean Romeo Ioan Chira	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i> <i>University of Medicine and Pharmacy Cluj-Napoca</i>
81	Romanian coins recognition and sum counting system from image using TensorFlow and Keras	Alexandra Fanca Adela Pop Puscasiu Dan Ioan Gota Flavius Madalin Giurgiu Maria Magdalena Santa Honoriu Valean Claudiu Domuta Liviu Miclea	<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> <i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>

Session C2

Friday, May 20 – Room D21 / online

14:30 – 16:00

Chair: Tiberiu Letia (*Technical University of Cluj-Napoca*), Bianca Todorean (*Technical University of Cluj-Napoca*)

7	A case study for the optimal residential battery size and dispatch control in the energy market context in Romania	Adrian Fratean Petru Dobra	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
17	Approaching Problems with Different Kinds of Petri Net Models	Octavian Cuibus Tiberiu Letia	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>
68	Smart Energy Communities Power Capacity Firming and Grid Flexibility Services	Mihaela Coroiu Daniel Dumitrascu Radu Tarau	<i>ENERGOBIT S.A.</i> <i>ENERGOBIT CONTROL SYSTEMS</i> <i>ENERGOBIT CONTROL SYSTEMS</i>
78	Image Processing based System for Detecting and Unloading Billets from a Hearth Rotary Furnace	Cristina-Maria Stancioi Vlad Muresan Mihai Abrudean Iulia Clitan Mihaela-Ligia Unguresan Tiberiu Colosi	<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>
83	Control Solutions for anti-lock braking system	Bianca Todorean Roxana Rusu-Both	<i>Technical University of Cluj-Napoca</i> <i>Technical University of Cluj-Napoca</i>