



SIELMEN 2025 TECHNICAL PROGRAM

WEDNESDAY - OCTOBER 15, 2025

IAȘI - ROMÂNIA

13.45 ONLINE / HYBRID PRE-OPENING

Hurmuzescu Conference Hall

Chairmen: Ilie Nuca, Dorin Lucache, Mihaela Popescu

[SIELMEN 2025: ONLINE / HYBRID PRE-OPENING | Meeting-Join | Microsoft Teams](#)

ONLINE / HYBRID SESSIONS

Hybrid session 1 - **Management and entrepreneurship**

Hurmuzescu Conference Hall

Chairs: Marius Pîslaru, Corina Guțu-Chetrușca

[SIELMEN 2025: "Dragomir Hurmuzescu" Conference Hall | Meeting-Join | Microsoft Teams](#)

14.00	Casaneanu Dascalu, Nicoleta-Mihaela*; Pîslaru, Marius; Alexa, Elena-Lidia; Giosan, Gianina	Digital Twin Integration with Lean Six Sigma Methodologies in Smart Manufacturing Ecosystems: A Conceptual Framework	66
	Ivascu, Larisa; Mirea, Nicoleta; Hamat, Codruta Oana; Saptebani, Neta; Zifceak, Daiana	Managing Failure in Education: Stem Productivity and Vocational Success Pathways for the Romanian Context	73
	Ivascu, Larisa; Sarfraz, Muddassar*; Faraz, Ahmad Zaeem; Ozturk, Ilknur	How Entrepreneurial Minds and Digital Leadership Drive Sustainable Startup Success in China's Tech Ecosystem	81
	Brezuleanu Mădălina-Maria* , Marius Pîslaru Mămăligă Andrei	Technological entrepreneurship in renewable energy: challenges and opportunities in Eastern Europe	89
	Butt , Jaffar Mahmood ; Abdullah, M. Ibrahim; Khalil, Junaid; Ivascu, Larisa*; Gaiianu, Mihail	Channel Preferences and Impulsive Buying in the Digital Era: Investigating the Roles of Subjective Norms and Compulsive Tendencies	91
	Petrina-Delia Văguc , Ionuț-Viorel Herghiligiu , Marius Pîslaru	Theoretical Insights into Organizational Sustainability Management in the Context of Industry 5.0	93
	Laura Crina Miraute , Nicoleta Mihaela Casaneanu , Marius Pîslaru	Sustainable Transformation of the Pharmaceutical Supply Chain: The Role of Strategic Management	145
	Denisa-Alexandra Nica, Ion Verzea, Marius Pîslaru	Artificial Intelligence Supporting in Eco-Maintenance for Sustainable Industry	154
	Ștefana-Cătălina Pohonțu-Dragomir , Adrian Vilcu , Ionuț-Viorel Herghiligiu , Marius Pîslaru	Management Decision-making Process: Research on the Associated Information Systems	155
	Mihaela Brindusa Tudose , Georgiana Chihaia	Evidence on the dynamics of IT companies' performance in the pre- and post-pandemic period	184
	Liliana Aioanei , Vasilica Damaschin , Alexandra Cobzeanu	Autonomy and Decision-Making in Romanian Preschools: A Qualitative Approach	197
	Vasilica Damaschin , Liliana Aioanei , Alexandra Cobzeanu	Empowering Preschool Teachers: The Role of Continuing Professional Development in Boosting Performance, Wellbeing, and Self-Efficacy	198
	Diana Geantimir , Luminița Mihaela Lupu	Corporate Social Responsibility as a Strategic Lever for Career Development, Management and Entrepreneurship	199
	Mămăligă Andrei*, Marius Pîslaru , Ionuț-Viorel Herghiligiu , Brezuleanu Mădălina-Maria	Corporate sustainability assessment models: a theoretical approach	203
16.30	Elena Avram , Raluca Petronela Lazarescu	Ambidexterity of Collaborative Structures: Current State of Knowledge	205

Coffee break

Hybrid session 2 - **EEE (Engineering Education and Evocations) & Miscellaneous (PED, ETAE, MEE, EA, MSS)**

Hurmuzescu Conference Hall

Chairs: Lorand Szabo, Dumitru Braga, Gabriel Chiriac

[SIELMEN 2025: "Dragomir Hurmuzescu" Conference Hall | Meeting-Join | Microsoft Teams](#)

16.30	Lorand Szabo, Florin Jurca, Dan-Cristian Popa	Embedding the Sustainable Development Goals in Electromechanical Engineering Curricula: Preparing Engineers for Sustainable Industry	67	
	Lorand Szabo, Florin Jurca, Dan-Cristian Popa	Transforming Electric Machines Curricula Through the Lens of Sustainable Development Goals	68	
	Gabriela Dana Petropol Serb , Ion Petropol Serb	Method to Introduce the Approaching of the DNSH - "Do Not Significant Harm" Principle in Smart Products Development Education	157	
	Carmen Tita, Silviu Mihail Tita	Transferring Entrepreneurial Knowledge to Students From Experiential Learning	185	
	Dimitri Grigoras, Stefan Panaite	High Junction Temperature Influence on Switching Dynamics of SiC mosfets in Comparison with the Threshold model	95	
	Madalina Simion, Tudor Alexandru Filip, Georgiana Prodan, Marius Andrei Olariu	Dielectric Characterization of Yeast Cell Viability Using Electrical Impedance Spectroscopy	112	
	Christoph Holtmann	Lumped Parameter Thermal Model for the Optimization of an Eddy Current Brake	17	
	Alin-Iulian Dolan*	Exhaustive Optimization Method Based on Screening and Zoom Techniques Applied to an Electromagnetic Device	138	
	Dominik Schreiber, Cristian-Ioan Fosalau	LPWAN Protocol Selection for IoT-Based Energy Measurement Systems: A Comparative Analysis of Mioty and NB-IoT Technologies	14	
	18.30	Ion-Cornel, Mituletu; Elisabeta, Spunei; Cosmin Daba	Testing the Electrical Resistance of the Velostat Conductive Rubber Sheet using a WiFi-based System	70

Hybrid session 3 - Power Generation, Transport and Distribution

Room EN109

[SIELMEN 2025: Room EN109 | Meeting-Join | Microsoft Teams](#)

Chairs: Inga Zicmane, Bogdan Neagu, Mihai Tirsu

14.00	Sergejs Kovalenko, Inga Zicmane, Tatjana Lomane, Aleksandrs Sahnovskis	Opportunities for the Application of AI in the Configuration of Relay Protection and Automation	4
	Aleksandrs Sahnovskis, Inga Zicmane, Roman Petrichenko	Optimization of Renewable Energy Resource Utilization and Minimization of Operational Costs	12
	George-Andrei Marin, Marian Gaiceanu	Analysis of a Hybrid Energy System Connected to the Power Grid	21
	Ivan Burdukov	Practical Approach for Current Transformer Sizing with Analytical Saturation Compensation	153
	Elena Madalina Armenia, Mihai Gavrilas	Peer-to-Peer Energy Trading for Local Markets Using Multi-Agent Systems and Blockchain Smart Contracts	183
	Sandesh Acharya, Shubha Narayan Yadav, Prakash Adhikari	Study of voltage stability using sensitivity analysis by optimum capacitor placement (OCP) for 7 bus system	186
	Alin-Ionut Pricop, Mihai Gavrilas	Advanced Simulation and Red-Team Scenarios for Improving Cybersecurity in SCADA Systems within Power Systems	190
	Mihai-Andrei Luca, Bogdan-Constantin Neagu, Mihai Gavrilas	Holistic Optimization Approach for Voltage Control in Active Distribution Networks	204
	Bogdan-Constantin Neagu, Andrei Ceclan, Gheorghe Grigoras, Dan Doru Micu, Radu Porumb, Attila Simo	A Multi-Criteria Approach for Mitigating Energy Poverty in Romania	208
16.15	Sandesh Acharya	Dominated Sorting Optimization Algorithm (DSOA) Implementing Optimal Capacitor Placement (OCP) for Power System Stability	120

Coffee break

Hybrid session 4 - Energy Efficiency and Renewable Energy

Room EN109

[SIELMEN 2025: Room EN109 | Meeting-Join | Microsoft Teams](#)

Chairs: Dragos Machidon, Vasile Rachier

16.30	George-Andrei Marin, Marian Gaiceanu	Autonomous PV System	22
	Elmer Arellanos-Tafur, Marcelo Damas-Niño	Quantitative Climate Vulnerability Assessment of Solar Energy Infrastructure under Extreme Weather Events	36
	Elmer Arellanos-Tafur, Marcelo Damas-Niño	Efficiency Assessment of Wind Power Companies Through Multi-Dimensional DEA Performance Comparison	37
	Ciprian Sorandaru, Sorin Musuroi, Marcus Svoboda, Samuel Ciucurita, Cristina-Lavinia Milos, Valentin Mueller	Energy Loss Analysis in Wind Turbines Operating under Time-Variable Wind Speeds	45
	Constantin Daniel Oancea	Real-time monitoring of the energy efficiency of a photovoltaic system	65
	Ajawin Emmanuel Bufwoj, Harvinder Singh, Sunny Vig, Tinotenda Spencer Madosi, Lelohonolo Mercy Makhetha, Hazel Panashe Manwere	Design and Implementation of Smart Solar Generation and IoT-Enabled Solar Power Monitoring System	119
	Faig Kalbaliyev, Fuad Mammadov	Socio-economic and Environmental Impacts of Potential Concentrated Solar Power Plant Deployment in Azerbaijan	148
	Faig Kalbaliyev	Hybrid Supercritical CO2 Brayton Cycle in CSP Plant with Post-Combustion Carbon Capture	149
	F. Phillibert Andriniriniamalaza, Nour Mohammad Murad, George Balan, Habachi Bilal, Nirilaina Randriatefison, Abdel Khoodaruth, Charles Bernard Andrianirina, Blaise Ravelo, Dorin Lucache	Hybrid Fuzzy Logic and Shading-Aware Particle Swarm Optimization for Dynamic Photovoltaic Shading Faults Mitigation	159
	Sorin Robertino Sintea, Cornel Panait, Bogdan Hnatiuc, Mihaela Hnatiuc, Catalin Pomazan, Ana Dumitrascu	Online Sodium Battery Status Monitoring	201
19.00	Sorin Robertino Sintea, Bogdan Hnatiuc, Mihaela Hnatiuc	Detection of noise associated with a series electric arc fault	200

Hybrid session 5 - Automation, Robots and Mechatronics & Industry Applications

Room EN310

[SIELMEN 2025: Room EN310 | Meeting-Join | Microsoft Teams](#)

Chairs: Irina Cojohari, Marian Poboroniuc, Elena Serea

14.00	Liviu Dinca, Jenica-Ileana Corcau, Marius-Ionut Filipoiu, Dumitru Sirbu	Control System for Servo-Actuator Bay Temperature on Board of an Airliner	10
	Andrei Popa, Florin Horgot, Marian Poboroniuc	Control of an Arm-Type Robot Based on Electromyographic Signals	26
	Muhammad Ishaq, Dario Calogero Guastella, Giuseppe Sutura, Francesco Cancelliere, Giovanni Muscato	A Quantitative Review of Smart Walkers: Trends, Gaps, and a Proposed Evaluation Framework	98
	Nimit Bhardwaj, Anvit Bhardwaj, Lavanya Garg	Cross-Domain Adaptation of AI Models for Customer Query Classification	118
	Utkarsh Alset, Datta Chavan, Ashwini Pawar, Jyoti Pedram, Panchshila Pillewar, Snehal Andhale	Optimizing Electric Vehicle Performance: Simulation-Based Analysis of Pune-Specific Drive Cycles Using Regression Models	94
	George Balan, Elena Serea, Andrei Salceanu	A Cost-Effective Continuous Thermal Monitoring Solution for Electrical Panels Using Thermocouples	124
	Elena Marcu, Catalin Damian	Smart Laundry Reservation System for University Dormitories	139
	16.00	Mouad Danane, Youssef Rochdi, Abdelmajid El Ouedi	A Proof-of-Concept Framework for Maintenance 4.0: From Data Collection to Augmented Reality-Guided Operations

Coffee break

Hybrid session 6 - Power Electronics & Drives, Electrical Circuits, and Electrical Machines

Room EN310

[SIELMEN 2025: Room EN310 | Meeting-Join | Microsoft Teams](#)

Chairs: Murat Tezcan, Vadim Cazac, Leonard Livadaru

16.30	Claudiu Nicola, Marcel Nicola, Camelia Marinescu	HIL Simulation for the Control of DC-DC Converter for PEM-FC and Battery Hybrid System Based on FOPI Controller Using RT-OPAL	59	
	Nicola, Marcel; Nicola, Claudiu*; Prejbeanu, Răzvan; Popescu, Marian; Pirvu, Cristian	Load Frequency Control for a Two-Area Power System with Time Delay Using RT-OPAL for Hardware-in-the-Loop Simulation	58	
	Silvia Placinta, Yannick Rauch, Patrick Rebling, Iulian Balan, Philipp Nenninger, Marian Poboroniuc	Modern Technologies Used in Powertrain Design of Electric Vehicles	173	
	Eyup Okumus, Fatih Adigüzel	Offset-Free Robust Backstepping Position Control in a Nonlinear Electromagnetic Suspension System	146	
	Adelina-Cristina T Căsuță (Rudnic), Alexandru-Marian Bordaș, Valeriu David	The Influence of Electromagnetic Interference on Magnetic Resonance Imaging	156	
	Mehran Mirzaei	Design of a 25 MW Superconducting Wind Turbine Generator with Axial Flux Structure	19	
	Fernando Neto José, Manuel Jossai Namburete Cumbi	Algebraic Method for Determining the Vector Group Phase Displacement of the Three-Phase Transformer	20	
	18.30	M. Murat TEZCAN, Cihan YEŞİLDAĞ	Performance Comparison Between Double Fed Induction Generator (DFIG) and Permanent Magnet Synchronous Generator (PMSG) for Wind Energy Conversion Systems	39

THURSDAY - OCTOBER 16, 2025

CHIȘINĂU - R. MOLDOVA

14.00 **OFFICIAL OPENING** SIELMEN 2025: Tekwill Center, Imaginarium Hall | Meeting-Join | Microsoft Teams

15.00 **Tekwill Center, Imaginarium Hall**
no. 9/11, Studentilor (UTM campus, Râșcani sector), <https://tekwill.md/>

15.00 **PLENARY SESSIONS** SIELMEN 2025: Tekwill Center, Imaginarium Hall | Meeting-Join | Microsoft Teams

Charmen: Mihaela Popescu, Oleg Stiopca, Alexandru Sălceanu		
15.00	Mitrofan CURTI	Advances in soft magnetic materials characterization and electric stress prediction for next-generation electromechanics systems
16.00	Petre M. NICOLAE, Iurie NUCĂ	Power Quality and Electromagnetic Compatibility Problems in Railway Traction Systems
Coffee break		
16.30	IORDACHE, Mihai; STANCULESCU, Marilena; BOBARU, Lavinia; Niculae, Dragos*; Deleanu, Sorin; Georgescu, Adrian; Rotaru, Mihai; Moscu, Anton Anastasie	Using the SSEMGP – SEMI - STATE equation matrix generation program for transfer function generation in analog circuits with single input – single output and multiple inputs - multiple outputs
17.30	Vasile RACHIER, Octavian MANGOS	Web Platform for Wind Potential Assessment in the Republic of Moldova

17.30 **POSTER SESSIONS**

Tekwill Center, Imaginarium Hall			
POSTER SESSION - 1			
Chairs: Sorin Pavel, Viorica Sudacevschi, Alexandru Bitoleanu			
		ID	
17.30	Elisabeta Spunei, Dorian Anghel, Liuba Gheorghe, Mihaela Martin, Cristian Paul Chioncel, Ion Piroi	Analysis of the Transitory Process of Asynchronous Start-Up of a High-Power Synchronous Motor	6
	Enache, Sorin*; Vlad, Ion; Popescu, Marian; Enache, Monica-Adela	Light Railway Traction Transformer	31
	Victor Popescu, Mihail Balan, Vitali Vișanu, Oleg Stiopca, Ion Vișanu, Igor Gidei	Microwave Treatment Application for Sea Buckthorn Dehydration Process Efficiency Increasing	33
	Victor Popescu, Vitali Vișanu, Mihail Melenciuc, Natalia Tislińska, Tatiana Balan, Igor Kurdov	Increasing the Efficiency of the Apple Seed Drying Process by Applying Fluidized Bed Treatment	34
	Victor Popescu, Mihail Melenciuc, Mihail Balan, Natalia Tislińska, Dinu Voinescu, Ion Vișanu	Using the Electrohydraulic Effect for the Treatment of Agricultural Products	35
	Mihaela Popescu, Alexandru Bitoleanu, Tudor Mătușa, Constantin Vlad Suru	Quasi-Rotor Field-Oriented Control Algorithm for Electric Railway Traction Systems	42
	Enache, Monica-Adela; Vlad, Ion; Enache, Sorin*	Optimizing Production and Operating Costs for Asynchronous Motors Used in Electric Cars	43
	Mihai Lupu, Nicolae Soloviov, Victor Viziru, Galina Uzun, Mihai Corcimari, Aurel Speian	Biogas use in CHP and Transport Sector: A Comparative Study	44
	Nita Lucian	Multimodal Telemedicine Platform for Remote Consultation, Messaging, and Automated Medical Documentation	54
	Cristian-Gyozo Haba	AI enhanced teaching of Real-Time Programming topics	57
	Mihai Rata, Gabriela Rata, Radu Fechet, Adrian Graur	Position Control Application with PLC	63
	Nițu, Maria-Cristina*; Scornea, Aurelia Iuliana; Aciu, Ancuta-Mihaela	Revitalization of Used Oil from Electrical Equipment with a Composite Adsorber	75
	Felicia Elena, Stan Ivan; Mihaela Adelaida, Duinea; Radu Cristian, Dinu; Gabriel Cosmin, Buzatu; Cristian, Bratu; Paul Mihai, Mircea	Analyzing the impact of cooling systems on the performance of photovoltaic panels	77
	Felicia Elena, Stan Ivan*; Adelaida Mihaela, Duinea; Alina Daniela, Margineanu ; Radu Cristian, Dinu; Andreea-Maria, Neacă	Operational Scenarios for Power Plants in the Context of Reducing the Use of Solid Fuel	80
	Munteanu, Silvia; Sudacevschi, Viorica; Ababii, Victor*; Carbune, Viorel; Borozan, Olese; Alexei, Victoria	Self-Organizing Multi-Agent Collaborative Decision-Making System	86
	Niste, Daniela*; Pavel, Sorin; Cziker, Andrei; Beleiu, Horia; Miron, Anca; Martineac, Corina	Data-Driven Regression for Load Current Prediction in Industrial Systems	90
	Nitu, Maria Cristina*; Mircea, Paul-Mihai; Dina, Livia	Lightning impulse test for fault detection in power transformers	96
	Braga, Dumitru*; Hlusuov, Viorica	Feasibility of Using Solid Biomass in District Heating Systems in the Republic of Moldova	101
	Bitoleanu, Alexandru*; Popa, Ion Cristian; Popescu, Mihaela; Lincă, Mihăiță	Influence of Load on the Output Voltage of a Low-Power Photovoltaic Plant	103
	Denisa, Burada*; Viorica, Voicu; Ionel, Dumbrava; Constantin, Chelan; Constantinescu, Cristian; Mihaela, Popescu ; Alin, Neagoe; Tania, Nicoara	Contributions to the construction of a new reverberation chamber	107
	Todos, Petru; Terteza, Ghenadie*; Nuca, Ilie	Analysis of Stator Winding Topologies of Six-Phase AC Machines Using the Winding Quality Factor	109
	Niste, Daniela*; Beleiu, Horia; Tirnovan, Radu-Adrian; Botezan, Aurel; Stefanescu, Silviu; Misaros, Marius	Predicting Energy Losses in Distributed Networks Using LSTM Models	116
	Rosu Petru Valentin	Design and implementation of a KNX energy management system for optimizing self-consumption in off-grid photovoltaic systems	168
18.30	Rosu Petru Valentin	Comparative analysis of energy management strategies in an off-grid photovoltaic system with storage and active load control	172

Tekwill Center, Imaginarium Hall

POSTER SESSION - 2

Chairs: Dragos Niculae, Cristian Zet, Viorica Hlusuov

ID

17.30	Maer, Emil-Daniel*; Fodorean, Daniel; Spaimoc, Anamaria - Andreea	The Evolution of Fuel Cells: State-of-the-Art and Emerging Trends	113
	Spaimoc, Anamaria - Andreea*; Anamaria - Andreea, Spaimoc; Emil - Daniel, Maer; Fodorean, Daniel	Design and Modelling of a 100 kW Fuel Cell for EV Propulsion	115
	Jahrstorfer, Robert; Salceanu, Andrei*; Balan, George	Influence of humidity and temperature on potential induced degradation from a maintenance perspective	133
	Jahrstorfer, Robert; Salceanu, Andrei*; Balan, George	Experimental Approaches to the Influence of Shunt Resistance on Potential Induced Degradations	136
	Iliescu, Ionut*; Nemes, Ciprian	Dimensioning of Operating Reserves using Maintenance History of Hydroelectric Generating Units	137
	Constantinescu, Mihaela-Daniel*; Popescu, Mihaela; Toma, Ionut-Cosmin; Lincă, Mihăiță; Ravigan, Florin	Real-Time Implementation of Direct Current Control Strategies for Active Power Filtering Using dSPACE	150
	Ruşinaru, Denisa; Toma, Cosmin Ionut*; Lincă, Mihăiță; Buzatu, Cosmin; Mănescu, Leonardo- Geo; Mihăiță, Constantinescu	Hosting Capacity Assessment for PV Units Integration in the Power Distribution Grids	151
	Maer, Emil-Daniel; Fodorean, Daniel; Spaimoc*, Anamaria - Andreea	The Evolution of Fuel Cells: State-of-the-Art and Emerging Trends	113
	Spaimoc, Anamaria - Andreea*; Anamaria - Andreea, Spaimoc; Emil - Daniel, Maer; Fodorean, Daniel	Design and Modelling of a 100 kW Fuel Cell for EV Propulsion	115
	Pop, Claudia*; Spaimoc, Andreea; Fodorean, Daniel	Modal and Vibrational Analysis of PEM Fuel Cells for Mobile Transportation Applications	158
	Braga, Dumitru*; Hlusuov, Viorica; Gutu-Chetrusca, Corina	Biomass Potential and Suitable Technologies for Valorifying Biomass in District Heating Systems in the Republic of Moldova	161
	Toma, Ionut; Nitu, Maria Cristina; DINA, Livia*; Mircea, Paul-Mihai	Sustainable Approaches in the Reliability Assessment of Cables for Overhead Power Line Infrastructure	164
	Beniuga, Constantin Razvan*; Bedrule, Elena Bianca; Machidon, Dragos; Beniuga, Oana Cristina; Istrate, Dumitru Marcel	AI-Based Optimization of Turbine Selection for Wind Farms Using Python and Machine Learning	167
	Adam, Maricel; Andrusca, Mihai*; Anton, Adrian; Caia, Mihnea; Ciornohac, Claudiu; Covali, Ionut-Alexandru	Monitoring, Command, and Control System of a Testing Installation for Electrical Equipment	175
	Caia, Mihnea; Andrușcă, Mihai*; Adam, Maricel; Dragomir, Alin; Anton, Adrian; Ghlujan, Beatris Natalia	Monitoring of Medium Voltage Switchgear using Dedicated High Technological Sensors	176
	Plopa, Olga*; Zodi, Wissam; Ursan, Maria	Study of the Influence of Nonlinear Core Parameters on the Precision of Instrument Transformers	179
	Covali, Ionut*; Burlica, Radu; Astanei, Dragos; Pingescu, Bogdan; Anton, Adrian; Andrusca, Mihai	DC Circuit Breaker with rotary contacts	189
	Ciobanu, Romeo Cristian*; Trandabat, Alexandru Florentin; Aradoaei, Mihaela; Pachi, Cristina; Suche, Mirela; Dumitrache, Monica	Innovative Analysis of Electromagnetic Shielding Effect of Composite Materials using Specific Absorption rate of Electromagnetic Energy	194
	Ciobanu, Romeo Cristian; Aradoaei, Mihaela*; Aradoaei, Sebastian-Teodor; Plopa, Olga; Agop, Adelina	Adapting the Grounding Measurements Technique for Electrical Resistivity Tomography Applications	195
	Zet, Cristian*; Tataru, Gina Ionela; Toma, Andrei	IoT-Based Multi-Sensor Weather Station with MQTT Integration for Real-Time Environmental Monitoring	196
Toma, Cosmin Ionut*; Ruşinaru, Denisa; Lincă, Robert; Constantinescu, Mihăiță-Daniel	Communication Protocols for Energy Activity Monitoring in Transformer Substations	202	
Scarlatache, Vlad-Andrei*; Olariu, Marius Andrei; Scarlatache, Florina; Aradoaei, Sebastian; Filip, Tudor Alexandru; Simion, Madalina Petronela	Modeling and Simulation of Regenerative Braking Systems Using MATLAB System Composer and Simulink	207	
18.30	Sticea, Daniel*; Georgel, Gabor; Chiriac, Gabriel; Albu, Mihai; Brinzei, Anamaria	DC Motor Closed Loop Speed Control Using Rapid Control Prototyping	208

FRIDAY - OCTOBER 17, 2025

CHIȘINĂU - R. MOLDOVA

Faculty of Energy and Electrical Engineering (FEIE)

no. 78, 31 August str., Building no. 2, TUM

Room: 2-117

Conference secretariat

ORAL SESSIONS

Room: 2-122

EERR (Energy Efficiency and Renewable Resources)

Chairs: Gheorghe Manolea, Radu Dumitru Pentiu, Rachier Vasile

ID

9.30	Pavel Atanasoae, Radu Dumitru Pentiu, Constantin Ungureanu, Eugen Hopulele, Lucian Georgel Ungureanu	Biogas as a Circular Energy Vector: Integrating Cogeneration into the Organic Waste Recovery Chain	27
	Mihai Tirsu, Dmitrii Zaitsev, Irina Golub, Mihail Uzun, Mihail Lupu	Dimensioning of battery storage for household prosumers	46
	Mihai Tirsu, Dmitrii Zaitsev, Irina Golub, Mihai Corcirmari, Victor Galbura	Hybrid cogeneration units as important element in energy transition	47
10.30	Iulian Rotari	Optimal Wind and PV Capacity for Moldova's 32.8% Electricity Target	104

Coffee break. Room 2-209

11.00	Ionel Alboteanu, Gheorghe Manolea, Gheorghe Eugen Subtirelu, Cristian Bratu	Residential Photovoltaic Systems Energy Production Estimation	125
	Catalin Daniel Galatanu	Energy Efficiency of Road Lighting without Specific Numerical Indicators	143
	Corina Gutu-Chetrusca, Amandine Mathieu-Mann	Comparative Energy Approaches in France and Republic of Moldova	165
12.00	Rusu Daniel, Rachier Vasile, Mangos Octavian, Sobor Ion Voinesco Dinu, Burduniuc Marcel	Current Status and Distribution of Installed Capacities from Renewable Energy Sources (e-RES) in the Republic of Moldova	171

Room: 2-204

PGTD (Power Generation, Transport and Distribution)			ID
Chairs: Denisa Ruşinaru, Ion Stratan, Oana Beniuga			
9.00	Cheregi Adrian, Dzitac Simona, Simo Attila, Tutu Filip, Serban Bunda	The Role of Fiber Optics in Modern Energy Infrastructure: Enhancing Efficiency and Reliability	2
	Valeriu Bosneaga, Victor Suslov	Possibilities of power injection from a single-phase renewable energy source to a low-voltage 0.4 kV distribution line with various connection schemes of the supply transformer windings.	8
	Simon Mihaela, Spunei Elisabeta, Ana-Maria Dumitrescu, Soanda Naomi-ionela, Stanculescu Marilena	Power quality assessment. Study case: 40 kW hybrid installation	38
	Verdes Galina, Lupu Mihail, Tirsu Mihai, Juravliov Anatole, Soloviov Nicolae, Uzun Mihai	Impact of thermal load reduction on fuel consumption and energy production: a case study for the Chisinau district heating system	40
	Iulian Rotari, Ala Tverdohle	Impact of 0.8 kV Inverters on AC Losses in a 2.2 MW PV Plant	62
	Elena Vasilos, Ion Stratan, Iulian Rotari	Development of an algorithm for active power flow traceability in power systems	102
10.30	Ina Dobrea, Viorica Hlusuov, Elena Vasilos, Iulian Rotari	Feasibility Study of Energy Storage System Integration for Power System Balancing	140

Coffee break. Room 2-209

Room: 2-204

ARM (Automation, Robots and Mechatronics)			ID
Chairs: Marian Poboroniuc, Ion Fiodorov, Dorin Popescu			
11.00	Dorin Popescu, Ioan Ghimciuc, Mihail Ghimciuc	Training for a Mechatronics Systems Student Competition	49
	Alexandru Buzamat, Marian-Silviu Poboroniuc, Danut Irimia, Mirela Stefănescu, Sandra Mavhima	Audience-Performer Neural Dynamics in Live Dance: A Preliminary EEG Investigation	51
	Secrieru Adrian, Izvoareanu Bartolomeu, Fiodorov Ion, Moraru Dumitru	Tuning the Controller for Object Models with One Zero and One to Four Poles and Astatism Using the Polynomial Method	55
	Mihai-Andrei Gheorghe, Marian-Silviu Poboroniuc	A Counter-small Unmanned Aircraft System Proof of Concept	74
	Irina Cojuhari, Vladimir Melnic, Alexei Martiniuc, Viorel Cărbune	Closed-Loop Model Identification and Control of the DC Engine Coupled with a Reaction Wheel	114
	Marian-Stefan, Nicolae Petre-Marian, Nicolae Petrisor, Abagiu, Ileana-Diana Nicolae, Raluca-Cristina Nicolae, Iurie Nuca	Smart Home Monitoring Based on the LoRa Protocol as a Solution for Connectivity in Difficult Environments	160
12.30	Adrian Danila	An Implementation of Domain Coloring for Visualizing Transfer Functions of Dynamic Processes	169

Room: 2-222

MMS (Metrology and measurement systems)			ID
Chairs: Cristian Fosalau, Petre-Marian Nicolae, Andrei Chiciuc			
9.00	Mihai Sebastian Carp, Cristian Fosalau	Cattle Behavior Monitoring Using IoT Technologies	7
	Anatolii Bescupschi, Andrei Chiciuc	Optical Absorbance Liquied Filters as a new path to metrological traceability in medical devices	87
	Cristian Fosalau, Cristian Zet, Anamaria Hariton	Evaluation of Performances and Capabilities of an Electronic Nose	97
	Andrei Chiciuc, Constantin BORDIANU, Anatolii BESCUPSCHI	□ The National Temperature Standard ETN 02-12 in the Context of the SI Redefinition	99
	Camelia-Petronela Oprea*, Andrei Salceanu, Marius-Valerian Paulet	Approach to Floral Digital Models from a SAR Perspective	127
10.30	Camelia-Petronela Oprea*, Marius-Valerian Paulet, Andrei Salceanu	Study On Adult-Child Differences from the Perspective of Radiofrequency Electromagnetic Energy Absorption	128

Coffee break. Room 2-209

11.00	Emanuela Buzenche, Denisa Deaconu, Robert Fuior, Călin Corciovă	Interactive Feedback System for Rehabilitation Support	141
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	Andrei Salceanu, Marinel Temneanu, Bogdan Giurcanu, Catalin Lazarescu, Silviu Vornicu, Silviu Ursache	Considerations on experimental determinations of the Specific Absorption Rate data for a multi-band mobile phone	162
	Matei-Constantin Moruz, Camelia-Petronela Oprea, Silviu Vornicu, Andrei Salceanu	□ Evaluation of Disturbing Electromagnetic Emissions Produced by an Electrosurgery Unit	166
12.30	Daniela Dolhascu, Codrin Dnciu, Ioana Adochiei, Marina Georgiana Roman, Calin Corciova, Danut Constantin Irimia	Preliminary Investigation of Adult EEG Responses to Emotionally Valenced Social Robot Behavior	182

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EM (Electrical machines) & ETAE (Electrical Traction and Automotive Equipment)			ID
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	Burduniuc Marcel, Răileanu Corneliu, Mangos Octavian, Cazac Vadim, Terteza Ghenadie, Nitucă Costică	Automated System for Real-Time Testing of Multiphase Asynchronous Electric Motors	170
	Dan Gabriel Stănescu, Ioana Gabriela Sirbu, Alexandru Vanvu, Lucian Mandache, Mircea Emilian Ardeleanu, Mihai Iacob	Aspects Regarding the Design, Realization and Testing of an ONAN Special Transformer Used in the Electrical Distribution Networks	187
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	Radu Zlatian, Ovidiu Dreșcă, Ștefan Boștină	Railway Product Certification	123
10.30	Iurie Nucă, Marian Cosmin Buse, Petre Marian Nicolae, Marian Stefan Nicolae	Improving Power Quality and Electromagnetic Compatibility in Railway Electric Traction Drives: Hardware and Software Solutions	144

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EA (Electrical apparatus)			ID
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	Paduraru, Bogdan-Constantin*; Adam, Maricel; Dragomir, Alin; Anton, Adrian; Chiriac, Gabriel; Răchier, Vasile	Infrared Thermal Stresses Monitoring of Medium Voltage Switchgear Cabinet	78
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EFEC (Electromagnetic field and electrical circuits) & MEE (Materials, Eco-design and Electro-ecology) & EEE (Engineering Education and Evocations) & ME (Management and entrepreneurship)			ID
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	Nistiriuc, Pavel; SAVA, Lilia*; TIRSU, Valentina; Turcanu, Dinu	Optical devices based on magnetorheological fluids	85
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ARM (Automation, Robots and Mechatronics)			ID
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	Secrieru Adrian, Izvoareanu Bartolomeu, Fiodorov Ion, Moraru Dumitru	Tuning the Controller for Object Models with One Zero and One to Four Poles and Astatism Using the Polynomial Method	55
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	Irina Cojuhari, Vladimir Melnic, Alexei Martiniuc, Viorel Cărbune	Closed-Loop Model Identification and Control of the DC Engine Coupled with a Reaction Wheel	114
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10.30	Adrian Danila	An Implementation of Domain Coloring for Visualizing Transfer Functions of Dynamic Processes	169

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IA (Industry Applications) & PED (Power Electronics and Drives)			ID
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	Beniuga, Constantin Razvan*; Tirșu, Mihai; Burlica, Radu; Astanei, Dragos George; Pingescu, Bogdan Andrei; Beniuga, Oana Cristina	Pathways to Efficient Agrivoltaics Through Functional Requirements and Light Dispersion Constraints for Photovoltaic Greenhouses	188
	Oleschuk, Valentin*; Vasilev, Irina	A Unified Approach to Dual-Mode Synchronous Overmodulation Regulation of PWM Inverters with Constant and Variable Fundamental Frequencies	130
	Oleschuk, Valentin*	Smooth Adjustment of Switching Frequency of Triple PWM Inverters of Transformer-Based PV System	132
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	Brăescu, Giani*; Poboroniuc, Marian-Silviu	Nonlinear Magnetic Modeling in LTSpice with Gyrator Capacitor Permeance	60
12.30	Gabor, Georgel; Nitucă, Costică; Dragomir, Alin; Chiriac, Gabriel; Cazac, Vadim; Boca, Mihai	Low Voltage Circuit Breaker Controlled by Programmable Logic Controller	206

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13.00 - 14.00	CLOSING CONCLUSIONS AND SPEECHES
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