

PROGRAM

DAY 1

**Wednesday,
24 September
2025**

8:00	Registration	
8:30 - 09:00	Welcome	
9:00 - 10:30	IS1 (Aula HUB)	
	IS2 (Aula HUB)	
10:30 - 10:45	Coffee break - foyer	
10:45 - 12:30	Oral Session 1.1 Room 301	Oral Session 3.1 Room 302
12:30 - 13:30	Lunch - foyer	
13:30 - 15:30	Oral Session 5.1 Room 301	Oral Session 4.1 Room 302
15:30 - 15:45	Coffee break - foyer	
15:45 - 16:45	IS5 - Exhibition room	
16:45 - 18:45	Oral Session 2.1 Room 301	Oral Session 3.2 Room 302
19:00 - 22:00	Welcome cocktail - Exhibition room	

DAY 2

Thursday,
25 September
2025

9:00 - 10:30	IS3 (Aula HUB)	
	IS4 (Aula HUB)	
10:30 - 10:45	Coffee break - foyer	
10:45 - 12:30	Oral Session 2.2 Room 301	Oral Session 3.3 Room 302
12:30 - 13:30	Lunch - foyer	
13:30 - 15:30	Oral Session 5.2 Room 301	Oral Session 6.1 Room 302
15:30 - 15:45	Coffee break - foyer	
15:45 - 16:45	WS1 - Exhibition room	
16:45 - 17:45	WS2 Room 301	Oral Session 1.2 Room 302
18:30 - 22:00	Visit & Dinner (Fabrica de bere – Euphoria Restaurant)	

DAY 3

**Friday,
26 September
2025**

9:00 - 10:00	WS3 - room 301	WS4 - room 302
10:00 - 10:15	Coffee break - foyer	
10:15 - 12:15	WS5 - room 301	WS6 - room 302
12:15	Closing of the conference Exhibition room	

- IS1:** Radu Dudau, President and co-founder of EPG - Powering AI in Romania. Attracting investment and readying the energy system for AI data centers
- IS2:** Bianca Gunnesch, Business Development Manager Eastern Europe, Siemens Energy, Romania - Siemens Energy - Sustainable Energy Solutions
- IS3:** Gianfranco Chicco, Politecnico di Torino, Italy - Controllability of Smart Appliances in Households
- IS4:** Radu Tarau, Energobit, Romania - Accelerating Digital Transformation in an Electrical Design Engineering Company for Enhanced Efficiency and Innovation: A Case Study in the Romanian Energy Sector
- IS5:** Taylor Riche, Director of Technology and Innovation Software, Emerson Test and Measurement - Empowering the Test Engineer through Intelligent Test

PROGRAM AT A GLANCE

Oral Session 1.1: Digitalization and Smart Technologies in Power Systems	Oral Session 3.3: Energy Storage and Renewable Integration
Oral Session 1.2: Digitalization and Smart Technologies in Power Systems	Oral Session 4.1: Market Evolution and Energy Transition
Oral Session 2.1: AI and Advanced Analytics in Energy Systems	Oral Session 5.1: Power System Modelling, Analysis, and Applications
Oral Session 2.2: AI and Advanced Analytics in Energy Systems	Oral Session 5.2: Power System Modelling, Analysis, and Applications
Oral Session 3.1: Energy Storage and Renewable Integration	Oral Session 6.1: Electrical Machines and Drives
Oral Session 3.2: Energy Storage and Renewable Integration	

Workshop	Title
WS1	Typhoon HIL technologies applied in research and industry
WS2	IEC 61850-Based Virtualized Centralized Protection Schemes
WS3	Smart Energy Systems of the Future: AI, Resilience, and Digital Solutions for Renewable Integration
WS4	Business Innovation and Green Entrepreneurship in the Energy Sector
WS5	Workshop MIDINA
Ws6	Fostering shallow geothermal energy use in the Danube Region

8:00 Registration

Plenary session (Aula HUB)

[Plenary session, Wednesday, 24th September 2025, 8:30 - 10:30 | Meeting-Join | Microsoft Teams](#)

08:30 - 09:00 Welcome

09:00 - 09:45 Invited speaker (IS1): Radu Dudau, President and co-founder of EPG

Powering AI in Romania. Attracting investment and readying the energy system for AI data centers

09:45 - 10:30 Invited speaker (IS2): Bianca Gunnesch, Business Development Manager Eastern Europe, Siemens Energy

Siemens Energy - Sustainable Energy Solutions

10:30 - 10:45 Coffee Break (Foyer)

10:45 - 12:30 Oral Session 1.1. Digitalization and Smart Technologies in Power Systems

Room 301

[Oral Session 1.1. Digitalization and Smart Technologies in Power Systems, 24.09.1015, 10:45 12:30 | Meeting-Join | Microsoft Teams](#)

Session Chair: Iwona Goldasz

1. **Robust 2D Fall Detection for Multitask Intelligent Video Surveillance Systems Using Skeleton-Based and Perspective-Aware Heuristics.**

*Adam Surówka (CUT)**

2. **AI in Smart Grids for Enhanced Renewable Energy Management: Part 1. Techniques and Applications**

Amir Nedaei (University of Technology Tehran, Iran); Aref Eskandari (University of Science and Technology Tehran, Iran); Sherko Salehpour (University of Technology

*Tehran, Iran); Peyman Ghaedi (University of Technology Tehran, Iran); Miadreza Shafie-khah (Nowocert); Mohammadreza Aghaei (NTNU)**

3. **AI in Smart Grids for Enhanced Renewable Energy Management: Part 2. Challenges and Future Directions**

*Amir Nedaei (University of Technology, Tehran, Iran); Aref Eskandari (University of Science and Technology, Tehran, Iran); Sherko Salehpour (University of Technology, Tehran, Iran); Peyman Ghaedi (University of Technology, Tehran, Iran); Miadreza Shafie-khah (Nowocert); Mohammadreza Aghaei (NTNU)**

4. **Design of a cost effective IoT-based solar irradiance monitoring system**
*Adrian Pop (Technical University of Cluj Napoca); Ferencz HAVADI (Technical University of Cluj Napoca) **

10:45 - 12:30 Oral Session 3.1. Energy Storage and Renewable Integration

Room 302

[Oral Session 3.1. Energy Storage and Renewable Integration, 24.05.2025, 10:45 12:30 | Meeting-Join | Microsoft Teams](#)

Session Chair: Cristina Adascalitei

1. **The impact of prosumers load factors on energy losses in the system**
Ion Comendant (The Institute of Power Engineering); Iulia Prepelita (Institute of Power Engineering TUM); Lilia Turcuman (Institute of Power Engineering TUM)*

2. **Calculation of the equivalent impedance of transformer with zigzag winding connection based on the pair short-circuit impedances of the windings.**

*Valeriu Bosneaga (Technical University of Moldova)**

3. **Three-generation system as important element in energy sector decarbonisation**

Mihai Tirsu (Institute of Power Engineering of Moldova); Victor Galbura (Technical University of Moldova); Mihai Corcimari (Technical University of Moldova)*

4. **Energy communities as solution to reduce negative impact of prosumers on the power grid**

Mihai Tirsu (Institute of Power Engineering of Moldova)*; Dmitrii Zaitev (Technical University of Moldova); Irina Golub (Technical University of Moldova); Mihail Lupu (Technical University of Moldova); Ion Rudei (Technical University of Moldova); Mihail Uzun (Technical University of Moldova)

5. Current Scopes and Challenges Associated with Renewable Energy

Integration across Various Systems

Mahmuda Rahman (Universitatea Tehnica din Cluj-Napoca)*; Shahria Tanzil (Hungarian University of Agricultural and Life Sciences); Mihaela Cretu (Universitatea Tehnica din Cluj-Napoca); Dan Doru Micu (Universitatea Tehnica din Cluj-Napoca)

6. Analysis of seasonal flexibility of a prosumer with photovoltaic panels,

battery storage, and hydrogen

Radu Catalin Covaci (Technical University of Cluj-Napoca)*; Stefan Ungureanu (Technical University of Cluj-Napoca); Daniel Dumitrascu (Energobit Control Systems); Dan Doru Micu (Technical University of Cluj-Napoca)

12:30 – 13:30 Lunch (foyer)

13:30-15:30 Oral Session 5.1. Power System Modelling, Analysis, and Applications

Room 301

[Oral Session 5.1. Power System Modelling, Analysis, and Applications, 24.09.2025, 13:30-15:30 | Meeting-Join | Microsoft Teams](#)

Session Chair: Adrian Augustin Pop

1. Peer-to-peer energy trade by means of game theory: the value of

profusion

Rodica Loisel (Nantes Universite)*; Lionel Lemiale (Nantes Université); Dino Borie (Nantes Université)

2. Economic indicators for PV solar power sizing. Application to French

households

Rodica Loisel (Nantes Universite)*; Lionel Lemiale (Nantes Université); Dino Borie (Nantes Université); Lionel Richefort (Nantes Université)

3. Four-terminal active compensator-transducer for power systems – the

steady and the transient states

Marcin Jaraczewski (CUT)*; Maciej Siwczynski (CUT)

4. A fast method for determining stresses in thick-walled heating elements

using the regulation method

Iwona Goldasz (CUT)*; Jan Taler (CUT)

5. Comparing The Industry Standard Simulation Algorithms for Modeling of

The Analog-Digital Circuits

Łukasz Pluszyński (Cracow University of Technology)*; Marcin Jaraczewski (Cracow University of Technology)

6. Analysis of the quality of electrical energy parameters produced by a

three-phase inverter

Mihaela Lihet (Technical University of Cluj-Napoca)*; Mircea Horgoș (Technical University of Cluj-Napoca); Radu Adrian Tirnovan (Technical University of Cluj-Napoca)

13:30-15:30 Oral Session 4.1. Market Evolution and Energy Transition Room 302

[Oral Session 4.1. Market Evolution and Energy Transition, 24.09.2025, 13:30-15:30 | Meeting-Join | Microsoft Teams](#)

Session Chair: Lionel Lemiale

1. End-of-Life Waste from Photovoltaic Systems: Current Practices,

Challenges, and Opportunities

Margarete Silva (Federal Center for Technological Education Celso Suckow da Fonseca, Rio de Janeiro (CEFET-RJ)); Ronney Boloy (Federal Center for Technological Education Celso Suckow da Fonseca, Rio de Janeiro (CEFET-RJ)); Ângela Ferreira (, Instituto Politécnico de Bragança) *

2. Decarbonization strategies for district heating systems: modeling and

economic assessment of renewable energy sources integration

Verdes Galina (Institute of Power Engineering)*

3. From Grids to Growth: How Renewable Energy Drives Social

Transformation in Europe and North Africa

Anca Constantinescu (Technical University of Cluj-Napoca)*; Madalina Alexandra Cotiu

(Technical University of Cluj-Napoca); Veronica Maier (Technical University of Cluj-Napoca); Adrian Augustin Pop (Technical University of Cluj-Napoca)

4. Macroeconomic Indicators and Renewable Energy Infrastructure:

Romania's Pathway Towards a Microgrid Future

Veronica Maier (Technical University of Cluj-Napoca)*; Madalina Alexandra Cotiu (Technical University of Cluj-Napoca); Anca Constantinescu (Technical University of Cluj-Napoca); Adrian Augustin Pop (Technical University of Cluj-Napoca)

5. Financial Effect of the 18th edition of BS7671 implementation on the Cyprus Electrical installation trade

Alexis Polycarpou (Frederick University)*; Sotiris Dimofanous (Frederick University); Oguzhan Ceylan (Kadir Has University); Dan D. Micu (Technical University of Cluj-Napoca); Christos A. Christodoulou (National Technical University of Athens); Radu-Florin Porumb (University POLITEHNICA of Bucharest);

6. Distributed generation – present and future actors: key legal aspects and challenges in Romania

Andrei Ceclan (Technical University of Cluj-Napoca); Dan D. Micu (Technical University of Cluj-Napoca); Laura Neacsu (Technical University of Cluj-Napoca)*; Denisa Stet (Technical University of Cluj-Napoca); Timea Farkas (Technical University of Cluj-Napoca)

15:30-15:45 Coffee Break (foyer)

15:45-16:45 Invited Speaker (IS5): Taylor Riche

Director of Technology and Innovation Software, Emerson Test and Measurement

Empowering the Test Engineer through Intelligent Test

Exhibition room

[Invited Speaker \(IS5\): Taylor Riche, 24.09.2025, 15:45-17:45 | Meeting-join | Microsoft Teams](#)

16:45-18:45 Oral Session 2.1: AI and Advanced Analytics in Energy Systems

Room 301

[Oral Session 2.1: AI and Advanced Analytics in Energy Systems, 24.09.2025, 16:45-18:45 | Meeting-join | Microsoft Teams](#)

Session Chair: Tudor Cioara

1. A Deep Learning Framework based on Bidirectional LSTM and Covariance

Elliptic Envelope for Detecting Anomalies in Smart Grids Security

Mojtaba Mohammadikarachi (University of Vaasa)*; Arshia Afraki (University of Calgary); Mohsen Gitizadeh (Shiraz University of Technology); Mazaher Karimi (University of Vaasa); Shahin Fouladi Panah (University of Vaasa)

2. Artificial Intelligence-Powered Image Analysis for Load Disaggregation via Fog Computing

Adela-Stefania Băldean (Technical University of Cluj-Napoca); Alexandru-George Berciu (Technical University of Cluj-Napoca)*; Dacian Ioan Jurj (Technical University of Cluj-Napoca); Alexandru Mureșan (Technical University of Cluj-Napoca); Dan Doru Micu (Technical University of Cluj-Napoca)

3. Investigation of CNN Hyperparameters and Input Data Size for Automatic Bearing Fault Diagnosis

Jose Enrique Ruiz Sarrio (Universitat Politècnica de València); Geovanni Diaz- Saldaña (Universitat Politècnica de València); Jose A. Antonino-Daviu (Universitat Politècnica de València)*; Luis Morales-Velazquez (Universidad Autonoma de Querétaro)

4. A Practical Approach to Bearing Fault Detection using Pretrained

ResNet18

Alexandra Baicoianu (Transilvania University of Brasov)*; Arpad Kerestely (Siemens Industry Software); Jose Enrique Ruiz Sarrio (Universidad Politécnica de Valencia); Jose A. Antonino-Daviu (Universidad Politécnica de Valencia)

5. From Architecture to Action: Implementing and Validating a Digital Twin for PV Systems Using Real-Time IoT Data

Doha Kamal Mohamed Idris (Technical University of Cluj - Napoca)*; Claudia Martis (Technical University of Cluj - Napoca); Raymond BIRASA (Technical University of Cluj - Napoca); Farkhondeh naziri Moghaddam (Technical University of Cluj-Napoca); Renaud Philippe D'ALMEIDA (Polytechnic School of Abomey-Calavi, Benin)

16:45-18:45 Oral Session 3.2: Energy Storage and Renewable Integration

Room 302

[Oral Session 3.2: Energy Storage and Renewable Integration, 24.09.2025, 16:45-18:45 | Meeting-join | Microsoft Teams](#)

Session Chair: Ioana Gros

1. Design of an Agent-Based Smart Grid Management System for Local Energy Communities

Laurentiu-Alex Mustata (Transilvania University of Brasov); Rodolfo Dufo López (Universidad de Zaragoza); Elena Helerea (Transilvania University of Brasov)*

2. Towards Sustainable Energy in Higher Education: Feasibility and Benefits of a 303 KVA Solar Power Plant

*Fahad Javaid (University of L'Aquila) *; Davide Dibattista (University of L'Aquila); Marco Dibartolomeo (University of L'Aquila); Emanuele Del Rosso (University of L'Aquila)*

3. Analysis of an efficient cell balancing system applied to Li-Ion batteries

Mircea Ruba (Technical University of Cluj-Napoca); Sebastian URsache (UTCN); Paula Serban (UTCN); Claudia Martis (UTCN); Horia Hedesiu (UTCN); Patricia Trif (UTCN)*

4. State of charge estimation and modelling of a Lithium-Ion cell using Extended Kalman Filter

*Sebastian Ursache (Technical University of Cluj-Napoca); Paula Serban (Technical University of Cluj-Napoca); Mircea Ruba (Technical University of Cluj-Napoca); Claudia V. Pop (Technical University of Cluj-Napoca) *; Gabriel Chindris (Technical University of Cluj-Napoca); Claudia Marțiș (Technical University of Cluj-Napoca)*

5. Flexibility in the Context of Modern Power Systems

Daniel-George Dumitrascu (EnergoBit Control Systems); Radu Catalin Covaci (Technical University of Cluj-Napoca / EnergoBit Control Systems); Mihaela Coroiu (EnergoBit SA); Radu Tărau (EnergoBit Control Systems)*

6. Effects of Vibrations and Temperature on Lithium-Ion Batteries for Electric Vehicle Applications

Claudia Pop (Technical University of Cluj Napoca); Adelina Ilieș (Technical University of Cluj Napoca); Paula Șerban (Technical University of Cluj Napoca); Sebastian Ursache (Technical University of Cluj Napoca); Gabriel Chindriș (Technical University of Cluj Napoca); Mircea Ruba (Technical University of Cluj Napoca);*

19:00 – 22:00 Welcome cocktail (Exhibition room)

Thursday, 25th of September 2025

Plenary session (Aula HUB)

[Plenary session, 25.09.2025, 09:00 – 10:30 | Meeting-Join | Microsoft Teams](#)

09:00 – 09:45 Invited Speaker (IS3): Gianfranco Chicco, IEEE Fellow, Professor at Politecnico di Torino, Italy

Controllability of Smart Appliances in Households

09:45 – 10:30 Invited Speaker (IS4): Radu Tarau, Executive Director at EnergoBit Control Systems

Accelerating Digital Transformation in an Electrical Design Engineering Company for Enhanced Efficiency and Innovation: A Case Study in the Romanian Energy Sector

10:30 – 10:45 Coffee Break (Foyer)

10:45 – 12:30 Oral Session 2.2: AI and Advanced Analytics in Energy Systems

Room 301

[Oral Session 2.2: AI and Advanced Analytics in Energy Systems, Thursday, 25th of September 2025, 10:45 12:30 , | Meeting-Join | Microsoft Teams](#)

Session Chair: Mazaher Karimi

1. AI-Enabled Predictive Maintenance for Offshore Wind Turbines: An Empirical Study

*Muhamamd Hassan (university of vaasa); Mazaher karimi (University of Vaasa); Mojtaba Mohammadikarachi (University of Vaasa); Muhammad Hassan (University of vaasa)**

2. Evaluation of Weibull Estimation Methods Accuracy at Various Altitudes
Dragos Machidon ("Gheorghe Asachi" Technical University of Iasi); Marcel Istrate (Gheorghe Asachi Technical University of Iasi); Razvan Beniuga (Gheorghe Asachi Technical University of Iasi)*

3. AI Applications in Predictive Maintenance and Reliability of Batteries: Challenges and Future Directions

Ioana Cristina Sechel (Technical University of Cluj- Napoca); Aron Csato (Technical*

University of Cluj- Napoca); Florin Mariaşiu (Technical University of Cluj- Napoca)

4. Transformer model with Fourier Embeddings for District Energy

Prediction

Andrei Mateescu (Technical University of Cluj-Napoca) *; Tudor Cioara (Technical University of Cluj- Napoca); Ionut Anghel (Technical University of Cluj-Napoca)

5. The Localization Of Electrical Faults In Branched Powerlines Using

Machine Learning Methods

Ilieş Alin (Technical University of Cluj-Napoca)*; Calin Munteanu (UTCN)

10:45 – 12:30 Oral Session 3.3: Energy Storage and Renewable Integration

Room 302

[Oral Session 3.3: Energy Storage and Renewable Integration, Thursday, 25th of September 2025, 10:45 12:30 | Meeting-Join | Microsoft Teams](#)

Session Chair: Mircea Ruba

1. A comprehensive overview of software used for battery management systems. Challenges, solutions, and future trends (Part I)

Mihai Dit (UTCN); Sebastian Ursache (UTCN); Paula Serban (UTCN); Claudia Martis (UTCN); Mircea Ruba (Technical University of Cluj-Napoca)*; Ankidim Zinveli (UTCN)

2. A comprehensive overview of software used for battery management systems. Challenges, solutions, and future trends (Part II)

Mihai Dit (UTCN); Sebastian Ursache (UTCN); Paula Serban (UTCN); Claudia Martis (UTCN); Mircea Ruba (Technical University of Cluj-Napoca)*; Ankidim Zinveli (UTCN)

3. Real-Time Simulation and Analysis of Green Energy Harvesting Microgrid Systems

Adrian Pop (Technical University of Cluj Napoca)*; Mircea Ruba (Technical University of Cluj- Napoca)

4. Optimal configuration PV-BESS system using Python - OpenAI API application

Maria Cristea (Technical University of Cluj-Napoca)*; Ciprian Cristea (Technical University of Cluj- Napoca); Radu Tirnovan (Technical University of Cluj-Napoca); Aurel Botezan (Technical University of Cluj-Napoca); Daniela-Florentina Niste (Technical University of Cluj- Napoca)

5. Development of flexible simulation tool for analysis of microgrid systems

Adrian Pop (Technical University of Cluj Napoca)*; Mircea Ruba (Technical University of

Cluj- Napoca); Stefan Breban (Technical University of Cluj-Napoca); Soumia EL HANI (University in Rabat); Azeddine Houari (University of Nantes); Saad Motahhir (Laboratory of Applied Sciences and Innovative Technologies, ENSA)

12:30 – 13:30 Lunch (foyer)

13:30-15:30 Oral Session 5.2. Power System Modelling, Analysis, and Applications

Room 301

[13:30-15:30 Oral Session 5.2. Power System Modelling, Analysis, and Applications, Thursday, 25th of September 2025 | Meeting-Join | Microsoft Teams](#)

Session Chair: Alexandra Baicoianu

1. Enhancing Frequency Stability through Synthetic Inertia: Insights from Recent Iberian Grid Disturbances

Gorea Cristian (Politechnica of Bucharest)*; Chiorean Dragos- Lucian (Politechnica of Bucharest); Gorea Denisa- Maria (Technical University of Cluj-Napoca) *; Porumb Radu (Politechnica of Bucharest)

2. Natural Gas-Fired Combined Cycle Power Plants: A Strategic Solution for Balancing Modern Power Grids

Gorea Cristian (Politechnica of Bucharest); Chiorean Dragoş- Lucian (Politechnica of Bucharest) *; Arhip-Călin Mădălina (Politechnica of Bucharest); Bica Dorin (Universitatea de Medicină, Farmacie, Ştiinţe şi Tehnologie „George Emil Palade” din Târgu Mureş); Vlasa Ilie (Distributie Energie Electrica Romania)

3. Battery Solutions and Aging Process Simulation for Maritime Electric Propulsion

Cristi Irimia (Siemens Industry Software Romania); Robert-Matei Szabo (Siemens Industry Software Romania); Mihail Grovu (Siemens Industry Software Romania); Calin Husar (Siemens Industry Software Romania) *; Roberta Luca (Siemens Industry Software Romania); Tiberio Brinzea(Siemens Industry Software Romania)

4. Development of a Modular Monitoring System for Smart Test Environments

Mircea Lancranjan (Technical University of Cluj-Napoca)*; Bogdan Tebrean (Technical University of Cluj-Napoca); Calin Muresan (Technical University of Cluj-Napoca); Mihaela Cretu (Technical University of Cluj-Napoca); Dan Doru Micu (Technical University of Cluj-Napoca)

5. A Rule-Based Resilient Voltage Control System for Multi-Feeder Electric Distribution Networks Hosting High PV Penetration
Gheorghe Grigoras (Gheorghe Asachi Technical University of Iasi)*; Bogdan-Pavel Livadariu ("Gheorghe Asachi" Technical University of Iasi); Bogdan-Constantin Neagu ("Gheorghe Asachi" Technical University of Iasi); Livia Noroc ("Gheorghe Asachi" Technical University of Iasi); Vasilica Dandea ("Gheorghe Asachi" Technical University of Iasi)

6. Explainable Detection of Non-Technical Losses in Smart Grids Using a Deterministic Profiling Framework
Adi Aurelian Guguman (Gheorghe Asachi Technical University); Bogdan Constantin Neagu (Gheorghe Asachi Technical University of Iasi)*; Gheorghe Grigoras (Gheorghe Asachi Technical University of Iasi)

13:30-15:30 Oral Session 6.1. Electrical Machines and Drives

Room 302

[13:30-15:30 Oral Session 6.1. Electrical Machines and Drives, Thursday, 25th of September 2025 | Meeting-Join | Microsoft Teams](#)

Session Chair: Doha Kamal Mohamed Idris

- 1. Researching the impact of using different fuels on the decarbonization of the transport sector at a regional level in the Republic of Moldova**
Mihail Lupu (Technical University of Moldova)*; Mihai Tirsu (Technical University of Moldova); Nicolae Soloviov (Technical University of Moldova); Victor Viziru (Technical University of Moldova); Vasile Daud (Technical University of Moldova)
- 2. Numerical Analysis of an Outer Rotor Electric Machine for Solar Electric Vehicle Propulsion**
Danut Popa (Technical University of Cluj-Napoca)*; Florin Jurca (Technical University of Cluj-Napoca)
- 3. Finite Control Set Model Predictive Control with Reduced Computational Complexity for Actual CHB and PMSM Drives in EV Applications**
Peyman Bozorgzad (University of Pavia); Ali Fakhrolmobasheri (University of Pavia); Shahin Fouladi Panah (University of Vaasa)*
- 4. AI-Based Techniques for Condition Monitoring and Rotor Fault Detection in Permanent Magnet Synchronous Motors: A Review**
Raymond BIRASA (TECHNICAL UNIVERSITY OF CLUJ-NAPOCA)*; Doha Kamal Mohamed Idris (Technical University of Cluj-Napoca); Claudia Martis (Technical University of Cluj-Napoca)

5. Implementation of an electronic speed controller for BLDC motor using AVR microcontroller
Aron Kis (Technical University of Cluj-Napoca)*; Ioana Gros (Technical University of Cluj-Napoca)

6. Thermal Modeling of a PMSM Using Exponential and Logistic Curve Fitting in MATLAB
Cristina Adascalitei (Technical University of Cluj-Napoca)*; Claudia Martis (Technical University of Cluj-Napoca); Petros Karaisas (University of West Attica)

15:30-15:45 Coffee break (foyer)

15:45-16:45 WS1 Typhoon HIL technologies applied in research and industry

Exhibition room

[15:45-16:45 WS1 Typhoon HIL technologies applied in research and industry, Thursday, 25th of September 2025 | Meeting-Join | Microsoft Teams](#)

16:45-17:45 WS2 IEC 61850-Based Virtualized Centralized Protection Schemes

Room 301

[16:45-17:45 WS2 IEC 61850-Based Virtualized Centralized Protection Schemes, Thursday, 25th of September 2025 | Meeting-Join | Microsoft Teams](#)

16:45-17:45 Oral Session 1.2: Digitalization and Smart Technologies in Power Systems

Room 302

[16:45-17:45 Oral Session 1.2: Digitalization and Smart Technologies in Power Systems, Thursday, 25th of September 2025 | Meeting-Join | Microsoft Teams](#)

Session Chair: Azeddine HOUARI

- 1. Online Demagnetization Risk Detection in SPM Motors Using Provided Geometric Parameters**
Renaud D'ALMEIDA (EPAC/ UAC)*; Claudia Steluța Marțiș (Technical University of Cluj-Napoca); Audace B. K. DIDAVI (EPAC/UAC); Doha Kamal Mohamed Idris (Technical University of Cluj-Napoca)
- 2. Development of a GUI-Based IoT Infusion Pump for Smart Healthcare Systems**

Alexa Cotârlea (Technical University of Cluj-Napoca)*; Ioana Gros (Technical University of Cluj- Napoca)

3. Numerical modelling and validation of 5g signal propagation in complex urban environment

Marco Murgia (University of Cagliari); Matteo Bruno Lodi (University of Cagliari); Giacomo Muntoni (University of Cagliari); Giuseppe Mazzarella (University of Cagliari); Alessandro Fanti (University of Cagliari)*

4. Wide-Area Frequency based Power Sharing Scheme for Hybrid Multiple Subgrids

Venkata Naga Jagadish Neelamraju (Saudi Electricity Company)*

5. Energy Management Strategy for V2G-Enabled Smart Parking in a PV Microgrid

Khadija El HAROURI (University in Rabat Rabat, Morocco); Nisrine NASERI (University in Rabat Rabat, Morocco); Soumia El HANI (University in Rabat , Morocco)*; Youssef MCHAOUAR (University Casablanca, Morocco); Saad Motahhir (USMBA); Adrian-Augustin POP (Technical University of Cluj-Napoca, Romania); Azeddine Houari (University of Nantes, France)

18:30 -22:00 Visit and Gala Dinner ([Fabrica de bere Restaurant Euphoria](#))

Friday, 26th of September 2025

9:00-10:00 : WS3 Smart Energy Systems of the Future: AI, Resilience, and Digital Solutions for Renewable Integration

Room 301

[9:00-10:00 : WS3 Smart Energy Systems of the Future: AI, Resilience, and Digital Solutions for Renewable Integration, Friday, 26th of September 2025 | Meeting-join | Microsoft Teams](#)

9:00-10:00: WS4 Business Innovation and Green Entrepreneurship in the Energy Sector

Room 302

[9:00-10:00: WS4 Business Innovation and Green Entrepreneurship in the Energy Sector, Friday, 26th of September 2025 | Meeting-join | Microsoft Teams](#)

10:00 – 10:15 Coffee Break (foyer)

10:15 – 12:00 WS5 Modelling and Real Time Simulation of Microgrid using Typhoon HIL

Room 301

[WS5 Modelling and Real Time Simulation of Microgrid using Typhoon HIL | Meeting-join | Microsoft Teams](#)

10:15 – 12:00 WS6 Fostering shallow geothermal energy use in the Danube Region

Room 302

[WS6 Fostering shallow geothermal energy use in the Danube Region | Meeting-join | Microsoft Teams](#)

12:00 Closing of the conference - Exhibition room