
CANDO–EPE 2026

Preliminary Conference Program

26 – 28 May 2026

Budapest, Hungary

Tavaszmező u. 17, 1084 Budapest, Hungary

[View on Google Maps](#)

Conference website: <https://conf.uni-obuda.hu/Cando2026/>

Conference at a Glance

Date	Day	Program
Tuesday, 26 May 2026	Day 1	Opening Ceremony · Plenary Sessions · Welcome Reception
Wednesday, 27 May 2026	Day 2	Parallel Technical Sessions · E-Poster Exhibition · Gala Dinner
Thursday, 28 May 2026	Day 3	Social Program

Venue

Obuda University – Kandó Kálmán Faculty of Electrical Engineering

Tavaszmező u. 17, 1084 Budapest, Hungary

[View on Google Maps](#)

Online

<https://conf.uni-obuda.hu/Cando2026/>

DAY 1 TUESDAY, 26 MAY 2026

Opening Ceremony & Plenary Sessions

13:30	<i>Registration opens</i>
14:00 – 14:30	Opening Ceremony Room TG.F.19
14:30 – 15:30	Plenary Session I Room TG.F.19 <i>Session Chair: Róbert Szabolcsi</i>
14:30 – 15:00	Plenary Talk 1 <i>At the Heart of Bearingless Drive Technology</i> Wolfgang Gruber <i>Johannes Kepler University Linz, Austria</i>
15:00 – 15:30	Plenary Talk 2 <i>Monetize University Lab Output</i> Laslo Olah <i>Texas Institute of Science, Dallas, TX, USA</i>
15:30 – 16:00	<i>Coffee Break</i>
16:00 – 17:30	Plenary Session II Room TG.F.19 <i>Session Chair: István Németh</i>
16:00 – 16:30	Plenary Talk 3 <i>Hands-On Learning for Social Good: Adapting Toys for Children with Special Needs</i> Anikó Costa <i>Universidade Nova de Lisboa, Portugal</i>
16:30 – 17:00	Plenary Talk 4 <i>Cybersecurity in Smart Cities: Integrating Process and Ontological Modeling, Security Baselines, and Experimental Validation</i> Vladimír Soběslav <i>University of Hradec Králové, Czech Republic</i>
17:00 – 17:30	Plenary Talk 5 <i>Building-Integrated PV (BIPV) for Budapest's Panelház Blocks</i> Francesco Paolo Lamacchia <i>Polytechnic University of Bari, Italy</i>

18:00 →


Welcome Reception

DAY 2 WEDNESDAY, 27 MAY 2026

Main Conference Day · Parallel Technical Sessions

Registration desk opens at 08:30.

Day Overview

Time	ROOM TG.2.204	ROOM TG.2.205
08:30	<i>Registration opens</i>	
08:45 – 10:25	Session 1A — Power Systems: Renewables, V2G & Distribution Networks	Session 1B — Power Systems: Modeling, Forecasting & Smart Sensing
10:25 – 10:40	<i>Coffee Break</i>	
10:40 – 12:00	Session 2A — Smart Automation, UAV Systems & Industrial Localization	Session 2B — IIoT, Distribution Protection & Sustainable Engineering
12:00 – 13:00	<i>Lunch</i>	
13:00 – 15:20	Session 3A — Engineering Education: AI, Digital Transformation & Curricula	Session 3B — Energy Systems Resilience: Cybersecurity, Behavior & Operational Stability
13:00 – 14:40	 <i>E-Poster Exhibition (parallel to Session 3)</i>	
15:20 – 15:35	<i>Coffee Break</i>	
15:35 – 16:55	Session 4A — PhD Special Section: Energy Modeling & Embedded ML	Session 4B — Power Electronics: Motor Drives & Inverter Control
16:55 – 17:10	<i>Coffee Break</i>	
17:10 – 18:30	Session 5A — PhD Special Section: AI/NLP, Computer Vision & Biomedical Computing	Session 5B — Wireless Power Transfer & Industrial Inspection
19:30	<i>Gala Dinner</i>	

Session 1 · 08:45 – 10:25 (100 min)

Session 1A · Power Systems: Renewables, V2G & Distribution Networks

ROOM TG.2.204

Session Chair: Peter Kadar


Time	#	Title & Authors
08:45 – 09:05	14	Model-Less Online Feedback Optimization with Disturbance Estimation for AC/DC Microgrids Mustafa A. Kamoona, Juan Manuel Mauricio · <i>presented by</i> Hanaa Yasseen
09:05 – 09:25	39	Mobile Solar Power Supply Péter Ákos Girgász, Peter Kadar, Attila Hlavács
09:25 – 09:45	44	Power Quality Improvement in a Three-Phase System Using a Shunt Active Power Filter Under Nonlinear Load Conditions Lamptey Lamptey Odartei
09:45 – 10:05	57	Semiconductive Layer Over the Cable Sheath – Problems and Possible Solutions Peter Kadar, Patricia Alexandra Rebelo, Mikhail Dmitriev
10:05 – 10:25	63	Grid-Feasible Flexibility Envelopes for Bidirectional EV Charging Using a DSO Digital Twin Norbert Bagi, Sandor Nagy

Session 1B · Power Systems: Modeling, Forecasting & Smart Sensing

ROOM TG.2.205

Session Chair: Zsolt Conka

Time	#	Title & Authors
08:45 – 09:05	6	Design, Simulation, and Validation of a Synchronous Power Grid Converter for Low-Voltage Distribution Grid József Bencsik, Zsolt Conka, Marek Bobček, Virág Becsó
09:05 – 09:25	35	Scaling Behavior of Energy per Token in LLM Inference on Apple Silicon Dávid Csikai, Döníz Borsos, Zoltán Komáromi, Géza Kulcsár, Ernő Rigó
09:25 – 09:45	81	Design and Field Validation of an Energy-Autonomous LoRaWAN Environmental Monitoring Node for Multi-Fraction Particulate Matter Sensing Benedek Horváth, Döníz Borsos
09:45 – 10:05	93	A Deep Learning Framework for Enhancing Hourly Multi-Step Salinity Intrusion Forecasting Yali Huang, Hua Chen, Amir Mosavi, Yang Liu, Zhaoyang Hu, Chong-Yu Xu
10:05 – 10:25	94	Importance of Blackbody in Everyday Infrared Thermography Hrvoje Glavaš, Tomislav Barić, Dina Jukić, Tomislav Keser, Damir Rukavina, Tin Glogoški

10:25 – 10:40	 Coffee Break
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Session 2 · 10:40 – 12:00 (80 min)

Session 2A · Smart Automation, UAV Systems & Industrial Localization

ROOM TG.2.204

Session Chair: Robert Sándor Kovács


Time	#	Title & Authors
10:40 – 11:00	25	Artificial Intelligence-Powered Digital Twin for Smarter and Greener Greenhouse Systems Alex Mark, Sándor Nagy
11:00 – 11:20	38	Coverage Path Planning for UAV-Based LiDAR Mapping: Simulation and Evaluation Ahmed Mohammed Ahmed Alareqi, Amgad Naji Ali Ahmed, Róbert Szabolcsi
11:20 – 11:40	86	Satellite Imagery and ML for Infrastructure Risk Forecasting in Honduras Gefer Hernandez, László Ady, Dóníz Borsos
11:40 – 12:00	30	UWB-Based Real Time Location System Investigation Robert Sándor Dr. Kovács

Session 2B · IIoT, Distribution Protection & Sustainable Engineering

ROOM TG.2.205

Session Chair: Tibor Wührl

Time	#	Title & Authors
10:40 – 11:00	27	A Model and Measurement Framework for Evaluating Segmentation and Auditability in Event-Driven IIoT Architectures Péter Ungvári, Tibor Wührl
11:00 – 11:20	42	Carbon-Aware Data Centers Orchestration – CDN as Case Study Tamás Jursonovics, Jiyan Salim Mahmud
11:20 – 11:40	78	Multi-criteria Optimization Method for Recloser Placement and Distributed Generation Integration in Radial Distribution Networks Illia Diahovchenko, Artem Litovchenko, György Morva
11:40 – 12:00	16	Study on Ultrasonic Welding of Al and Ni-plated Cu Joints and Evaluating their Corrosion Resistance Performance Md Zamiul Alam, Schramko Marton, Kovacs Tunde Anna, Toth Laszlo

12:00 – 13:00	 Lunch
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Session 3 · 13:00 – 15:20 (140 min) — E-Poster Exhibition Parallel

Session 3A · Engineering Education: AI, Digital Transformation & Curricula

ROOM TG.2.204

Engineering Education and Workforce Development

Session Chair: György Molnár

Time	#	Title & Authors
13:00 – 13:20	89	Digital Transformation and Methodological Innovation in Education – Perspectives for the Renewal of Higher Education György Molnár, Enikő Nagy, László Kadocsa
13:20 – 13:40	5	Fuzzy Logic-Supported Student Task Generation – The Future of AI-Based Testing in School Practice Éva Karl, Enikő Nagy, György Molnár
13:40 – 14:00	40	Reasoning Models, Test-Time Compute, Self-Refinement Levente Dr. Juhasz
14:00 – 14:20	23	From Offline Experience to Online Presence: How Life-Course and Demographic Factors Shape Digital Engagement Adam Bela Horvath, Fruzsina Hoványi-Nagy, Peter Szikora
14:20 – 14:40	18	Transitioning a College Program from Electrical Engineering Technology (EET) to Electrical Engineering (EE): Case Study Abdelsalam Masoud, Fred Barlow, Julio Proano
14:40 – 15:00	74	A Three-Tier Approach to Gamma Spectrometry in Engineering Education Levente Sándor Szécsy, Tamás Sándor
15:00 – 15:20	76	Development of a Microcontroller-Based Luminescence Measurement System Cristiano Barata, Anikó Costa

Session 3B · Energy Systems Resilience: Cybersecurity, Behavior & Operational Stability

ROOM TG.2.205

Session Chair: Tamás Szádeczky

Time	#	Title & Authors
13:00 – 13:20	67	Network Science-Based Cybersecurity Vulnerability Analysis in Power Systems Ferenc Molnár, Judith Pálfi
13:20 – 13:40	77	Cybersecurity-by-Design Framework for Smart Grid-Integrated Battery Energy Storage Systems Márton Szentpétery, Judith Pálfi, Ferenc Molnár

Time	#	Title & Authors
13:40 – 14:00	64	AI-Powered Digital Twin Architecture for Dynamic Risk Assessment and Predictive Maintenance in Electrical Power Grids Kamal Ahmadov, Aliya Dostalizade
14:00 – 14:20	90	Trust and Verification: Building Nuclear Chain-of-Custody with Emerging Technologies Kristóf Stölczer, Tamás Szádeczky
14:20 – 14:40	65	Psychological Aspects of Energy Security: Climate Anxiety, Risk Perception, and Institutional Trust in the Stability of the Electric Power System Emese Lilla Molnár, Ferenc Molnár, Judith Pálfi
14:40 – 15:00	66	Behavioral Energy Reduction and System Stability: Psychological Drivers of Demand-Side Security Emese Lilla Molnár, Ferenc Molnár, Judith Pálfi
15:00 – 15:20	79	Elimination of Torque Dip at Half Synchronous Speed in Synchronous Motors with Laminated Salient Poles Through Optimal Damper Cage Design Sandor Nagy, József Kopják

E-Poster Exhibition · 13:00 – 14:40 (100 min)


ROOM TG.2.203

Cross-Disciplinary Advances in Power Electronics, Energy Systems, Control & Healthcare Engineering

Session Chair: Gergely Sebestyén

Paper #	Title & Authors
#10	Experimental Robustness Assessment of LED Lamps Under Extreme Voltage Waveforms Hasan Ali Abdulmajeed Salbi, Péter Kiss
#75	Effect of Thermal Aging on the Electrical Strength of Paper Impregnated With Mineral and Inhibited Natural Oil Ján Zbojovský, Juraj Kurimský, Michal Rajňák
#34	Impact of Heterogeneous Communication Latencies on the Stability of V2B-Integrated 3-Phase Nanogrids in Islanded Operation Robert Stefko, Vladimír Szomosi, Julius Simcak, Zoltan Balogh, Zsolt Conka
#53	Device Stresses in Single-Phase Inverters with Output Switching Ripple Elimination Ron Harush, Alon Kuperman, Riccardo Mandrioli
#61	Computationally Efficient dq-Domain Sensorless Control of PMSMs Robin Meisinger, Siegfried Silber, Wolfgang Gruber
#62	Symmetric Injection-Based Initial Position Detection Based on Zero-Sequence Measurement Robin Meisinger, Siegfried Silber, Wolfgang Gruber

Paper #	Title & Authors
#43	Extended CTC as a Differential Flatness-Based Control Technique Alexander Krasavin, Adema Dairbekova, Dana Baishuak, Bertalan Beszedes , Darya Alontseva
#19	A Hierarchical Multi-Domain Fusion Framework for Data-Driven Classification and Motor Function Assessment in Chronic Ankle Instability Tianle Jie, Jiachao Cai, Goda Tibor
#21	Dose–Response Evaluation of Heel-Lift Intervention for Reducing Trunk Compensation in Limited Ankle Dorsiflexion Jiachao Cai, Tianle Jie, Tibor Goda

15:20 – 15:35	 Coffee Break
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Session 4 · 15:35 – 16:55 (80 min)

Session 4A · PhD Special Section: Energy Modeling & Embedded ML

ROOM TG.2.204

Special Session on New PhD Student Research Achievements in Systems Related Software Engineering

Session Organizer and Chair: László Horváth


Time	#	Title & Authors
15:35 – 15:55	12	Comparative Assessment of Simulation Tools and a Proposed Co-Simulation Framework for Vehicle-to-Grid Integration Vladimír Szomosi, Róbert Štefko, Zoltan Balogh, Zsolt Čonka
15:55 – 16:15	46	Comparative Simulation of Residential Heating and Cooling Technologies Based on Annual Energy Demand and Operating Costs Mark Karacsi, Peter Kadar
16:15 – 16:35	84	Identifying EV User Charging Patterns Using Clustering Techniques István Szűcs, József Kopják
16:35 – 16:55	88	Sensorless Detection of Unbalanced Loads in Embedded Motor Control via ML-Trained Pattern Matching on Torque-Producing Current Signals Márk Wendler, Franziska Kofler, Christoph Baumgartner, József Kopják

Session 4B · Power Electronics: Motor Drives & Inverter Control

ROOM TG.2.205

Session Chair: László Számel

Time	#	Title & Authors
15:35 – 15:55	7	Data Driven Multiobjective SRM Design Optimization Based on Neural Network Surrogates and Constrained PSO Jackson Oloo, Szamel Laszlo
15:55 – 16:15	36	Investigation of Synchronization Scenarios and Gearbox Transient Phenomena in a Twin Synchronous Motor Drive with a Common Output Shaft István Bendiák, Tamás Sándor
16:15 – 16:35	45	Identification of Active and Reactive PCB Values in Resonant Inverters Driving Series RLC Loads in High-Current Applications Natan Schechter, Alon Kuperman
16:35 – 16:55	50	Design of PI+Notch DC Link Voltage Controllers for Transient Response Optimization of PFC Rectifiers Yoav Aminov, Andrey Vulfovich, Moshe Sitbon, Pavel Strajnikov, Mor M. Peretz, Alon Kuperman

16:55 – 17:10	 Coffee Break
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Session 5 · 17:10 – 18:30 (80 min)

Session 5A · PhD Special Section: AI/NLP, Computer Vision & Biomedical Computing

ROOM TG.2.204

Special Session on New PhD Student Research Achievements in Systems Related Software Engineering

Session Organizer and Chair: László Horváth

Time	#	Title & Authors
17:10 – 17:30	32	Stability, Efficiency, and Language Specificity in Transformer-Based Hungarian Banking NLP Zsolt Krutilla
17:30 – 17:50	73	Data Validation: SOC and LLM Approaches Patrik Dobrovodsky, Eszter Kail, Rita Fleiner, Gergely Nyilas, Anikó Szarvák, Valéria Póser
17:50 – 18:10	58	Inverse Packing as OCR Segmentation: Geometric Bounds, Practical Heuristics, and Traceable Computer Vision Pipelines Mihály Szabó, Attila Kertész, Gábor Kertész
18:10 – 18:30	72	Current-Based Roll-Off Detection in RF Liver Ablation Using a Constant Output Voltage RF Generator Roland Szand, József Kopják, Gergely Sebestyén

Session 5B · Wireless Power Transfer & Industrial Inspection

ROOM TG.2.205

Session Chair: Zoltan Balogh

Time	#	Title & Authors
17:10 – 17:30	51	Battery-Side Control in Dual-Winding Active Magnetic Energy Harvester Supplying a Constant Power DC Load Asaf Levhar, Yael Ditzkovich, Riccardo Mandrioli, Georgios I. Orfanoudakis, Mor M. Peretz, Alon Kuperman
17:30 – 17:50	52	Effect of Current Derating on Coupling Tolerance in Sub-Resonant Frequency Controlled Inductive Wireless Power Transfer Systems Andrey Vulfovich, Yegal Darhovskiy, Ananth Bharadwaj, Haile-Selassie Rajamani, Mattia Ricco, Alon Kuperman
17:50 – 18:10	22	Pole Integrity Monitoring System (PIMS): An Autonomous Solution for Utility Pole Maintenance Abdelsalam Masoud, Julio Proano
18:10 – 18:30	85	Development of a Semi-Autonomous, Edge-AI-Based Y6 Multicopter Drone System for Industrial Fire Alarm Network Inspection Gergo Kalocsay, Tamás Sándor

19:30 →

 **Gala Dinner**

DAY 3 THURSDAY, 28 MAY 2026

Social Program

10:00 –
18:30

Social Program

Details to be announced

Updated information about the Social Program — including itinerary, departure point, and registration — will be published on the conference website prior to the event.