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CIEES Hybrid Conference

IEEE

IEEE 7th International Conference on Communications, Information, Electronic and Energy Systems

CIEES 2026

Program

November 25 - 27, 2026

Hisarya, Bulgaria

https://ciees.eu

CIEES 2026

IEEE International Conference on
Communications, Information, Electronic and Energy Systems

November 25-27, 2026,
Hisarya, Bulgaria

Conference Programme

Organized by:

Association on Communication, Information, Electronic and Energy System

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Welcome to CIEES 2026

Dear participants,

It is our great pleasure to welcome you to the sixth edition of the International Conference on Communications, Information, Electronic and Energy Systems (CIEES 2026). The purpose of the CIEES 2026 conference is to provide a forum for researchers, academics, industry professionals, students who are interested in the latest research and development in the area of computer science, telecommunications, electronics, signal processing, information technologies, energy systems, automotive and industrial engineering, and applications related to the electrical engineering.

We have prepared an exciting program of plenary sessions delivered not only by respected professors and academic speakers on visionary topics, but also featuring a distinguished lecture from SUNOTEC. SUNOTEC offers expertly integrated solar solutions, internationally proven expertise, and a strong commitment to resource efficiency and business reliability for all customers. In addition, industry professionals have prepared technical presentation on the integration of energy storage systems, which are set to revolutionize the energy industry and drive sustainable solutions for a greener future.

The technical programme, plenary talks and exhibition are organized by the Association on Communication, Information, Electronic and Energy System and held under the auspices of the IEEE Bulgaria Section. The venue is located at the „AUGUSTA" SPA Hotel, Hisarya, Bulgaria.

We would like to express our gratitude to MDPI Journal Electronics (Journal Rank: CiteScore – Q2, IF 2.9) for becoming a Media Partner of the CIEES 2026, to our Institutional partner, the University of Ruse "Angel Kanchev", Bulgaria; to the TPC members, conference chairs and reviewers for their efforts in creating a successful and rigorous technical programme. We are also grateful to SUNOTEC for becoming an official sponsor of the CIEES 2026. We thank all the above-mentioned partners for their cooperation and for their technical and financial support.

We hope you will find CIEES 2026 inspiring, that you will enjoy the interesting talks, and that you will engage in meaningful discussions on the topics presented. We are confident that this conference will be a stimulating and rewarding experience, and we hope that you will also have an enjoyable and memorable time during the conference. Welcome and enjoy your time in Hisarya, Bulgaria.

Welcome and enjoy your time in Hisarya, Bulgaria.



Teodor ILIEV
General Conference Chair



Ivaylo STOYANOV
General Conference Chair

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CIEES 2026 CONFERENCE – SESSION SCHEDULE

Wednesday, November 25, 2026

Time	Session name	Place	Virtual Room
15:00 - 16:30	Registration	The Foyer Area in front of Augusta Hall	
16:00 - 16:30	Welcome Coffee	The Foyer Area in front of Augusta Hall	
16:30 - 16:40	Opening Ceremony & Welcome Remarks	Augusta Hall	VR_Hall 1
16:40 - 17:20	Plenary Keynote Lectures	Augusta Hall	VR_Hall 1
17:20 - 17:40	Technical Presentation by Sunotec	Augusta Hall	VR_Hall 1
18:00 - 18:30	IEEE Connect: Global Network, Local Impact	Augusta Hall	
18:00 - 19:30	Information Technologies and Artificial Intelligence 1	Online	VR_Hall 1
18:00 - 19:30	Smart Telecommunications, Industry and Services 1	Online	VR_Hall 2
19:30 – 21:30	Cocktail	Club Restaurant (in front of Augusta Hall)	

Join CIEES2026 via the following ZOOM links:

VR_Hall 1
Meeting ID: **602 711 7207**
Passcode: **BBXmV6**
URL: https://us06web.zoom.us/j/6027117207?pwd=YlhBOUU4RkY5UkxxaU9JclBOeWtJZz09

VR_Hall 2
Meeting ID: **472 970 9196**
Passcode: **R8T4ZK**
URL: https://us06web.zoom.us/j/4729709196?pwd=YkM4cHQvSDZsWE9sMGxVVGZJeGRxZz09

IMPORTANT:

1. Please note that at least one author per paper is requested to attend their session.
2. All times are presented in Eastern European Time (EET), so be careful in the recalculation to your national time zone. (**EET**= CET+1=GMT +2)

The details for joining the scheduled conference sessions on Zoom platform will be available on the official website.

Thursday, November 26, 2026

In person sessions

Time	Session name	Place	Type
09:00 - 12:00	Registration	The Foyer Area in front of Augusta Hall	-
09:00 - 10:30	Energy and Renewable Sources 1	Augusta Hall	In person
09:00 - 10:30	Advanced Education and Training in Engineering 1	Hisar Hall	In person
10:30 - 10:45	Coffee break	The Foyer Area in front of Augusta Hall	-
10:45 - 12:15	Information Technologies and Artificial Intelligence 2	Augusta Hall	In person
10:45 - 12:15	Energy and Renewable Sources 2	Hisar Hall	In person
12:15 - 13:30	Lunch	Restaurant "AUGUSTA"	-
13:30 - 14:45	Information Technologies and Artificial Intelligence 3	Augusta Hall	In person
13:30 - 14:45	Automotive and Industrial Engineering 1	Hisar Hall	In person
15:00 - 16:15	Electronics, Power Electronics and EMC 1	Augusta Hall	In person
15:00 - 16:15	Telecommunication Systems 1	Hisar Hall	In person
16:15 - 16:30	Coffee break	The Foyer Area in front of Augusta Hall	-
16:30 - 17:45	Energy Efficiency and Applied Thermodynamics 1	Augusta Hall	In person
16:30 - 17:45	Telecommunication Systems 2	Hisar Hall	In person
19:00 – 23:00	Conference Dinner	Restaurant "AUGUSTA"	

Thursday, November 26, 2026

Online sessions

Time	Session name	Virtual Room	Type
09:00 - 10:30	Information Technologies and Artificial Intelligence 4	VR_Hall 1	Online
09:00 - 10:30	Energy Efficiency and Applied Thermodynamics 2	VR_Hall 2	Online
10:45 - 12:15	Automotive and Industrial Engineering 2	VR_Hall 1	Online
10:45 - 12:15	Biomedical Engineering 1	VR_Hall 2	Online
12:30 - 14:00	Mechatronics and Industrial Automation 1	VR_Hall 1	Online
12:30 - 14:00	Electronics, Power Electronics and EMC 2	VR_Hall 2	Online
14:15 - 15:45	Advanced Education and Training in Engineering 2	VR_Hall 1	Online
14:15 - 15:45	Smart Telecommunications, Industry and Services 2	VR_Hall 2	Online
16:00 - 17:30	Automotive and Industrial Engineering 3	VR_Hall 1	Online
16:00 - 17:30	Telecommunication Systems 3	VR_Hall 2	Online
17:45 - 19:15	Information Technologies and Artificial Intelligence 5	VR_Hall 1	Online
17:45 - 19:15	Electronics, Power Electronics and EMC 3	VR_Hall 2	Online

Friday, November 27, 2026

Online sessions

Time	Session name	Virtual Room	Type
09:00 - 10:30	Information Technologies and Artificial Intelligence 6	VR_Hall 1	Online
09:00 - 10:30	Energy and Renewable Sources 3	VR_Hall 2	Online
10:45 - 12:00	Advanced Education and Training in Engineering 3	VR_Hall 1	Online
10:45 - 12:00	Energy and Renewable Sources 4	VR_Hall 2	Online
12:00 - 12:10	Closing Ceremony	VR_Hall 1	Online

CIEES 2026 Conference – Session List

Wednesday, November 25, 2026

Session:	Opening Ceremony	Time:	16:30 - 17:00
Hall:	Augusta Hall	Virtual room:	VR_Hall 1

Time	Schedule
16:30	**Opening Ceremony & Welcome Remarks** **Teodor Iliev** *University of Ruse, Bulgaria*
16:40	**National Power Grids in the Balkan Countries: Current Challenges and Future Perspectives, with a Focus on Romania and Bulgaria** **Prof. Dr. Bogdan Popa** *National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania*
17:00	**Comparative Analysis of Data-Driven Approaches for Evaluating Coordination Efficiency in Distributed Engineering Teams** **Prof. DSc. Kiril Anguelov** *Technical University of Sofia, Sofia, Bulgaria*
17:20	**Techno-Economic Assessment of Integrated BESS and Electric Vehicle Charging Stations** **Eng. Metodi Dimitrov** *SUNOTEC Group, Bulgaria*

Wednesday, November 25, 2026

Session:	IEEE Connect: Global Network, Local Impact	Time:	18:00 - 18:30
Chair:	Ivaylo STOYANOV, Bulgaria		
Hall:	Augusta	In person	

№	Paper
1	**The Power of IEEE in Bulgaria: 30 Years of Innovation** **Prof. Dr. Valentina Markova** *Technical University of Varna, Varna, Bulgaria*
2	**IEEE Antennas and Propagation Society in Bulgaria: International Scientific Collaboration and Innovation** **Prof. Dr. Teodor Iliev** *University of Ruse, Ruse, Bulgaria*
3	**Bridging Bulgaria and the World: Inside the IEEE Computer Society** **Assoc. Prof. Dr. Miroslav Markov** *Konstantin Preslavsky University of Shumen, Shumen, Bulgaria*

Keynote Speakers



Prof. Dr. Bogdan Popa
National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania

E-mail: popab_234@yahoo.com

Presentation: National Power Grids in the Balkan Countries: Current Challenges and Future Perspectives, with a Focus on Romania and Bulgaria

Short biography: Prof. Bogdan Popa is a habilitated Full Professor and PhD supervisor at the National University of Science and Technology POLITEHNICA Bucharest, with extensive expertise in hydropower engineering, hydrology, water resources management, reservoir operation and AI-based decision-support methods. Throughout his academic career, he has authored or co-authored 9 books and book chapters, 6 teaching manuals, 3 practical application guides, 28 Web of Science-indexed papers and 41 additional papers indexed in internationally recognized scientific databases, including Scopus. He is President of the Romanian Small Hydropower Association, a board member of the European Renewable Energies Federation and a member of the ETIP Hydropower governing board. He previously served as Vice-Dean of the Faculty of Energy Engineering and as a World Bank consultant.



Prof. DSc. Kiril Anguelov
Technical University of Sofia, Sofia, Bulgaria

E-mail: kiril_anguelov@abv.bg

Presentation: Comparative Analysis of Data-Driven Approaches for Evaluating Coordination Efficiency in Distributed Engineering Teams

Short biography: Kiril Anguelov currently works as a Full Professor at the Department of Management and Business Information Systems, Technical University of Sofia, Bulgaria. Prof. DSc Anguelov does research in the fields of Information Systems, Entrepreneurial Economics and Business Administration. His current projects are in the areas of effective and efficient implementation of high-class business information systems (ERP, CRM, PLM ...) and the application of artificial intelligence in business. He is Chair of Technology and Engineering Management Society Chapter, IEEE Bulgarian Section.



Eng. Metodi Dimitrov
SUNOTEC Group

E-mail: metodi.dimitrov@sunotec-group.com

Presentation: Innovative Approach for BESS based PV Power Integration

Short biography: Eng. Metodi Dimitrov graduated Electrical Engineering at the Technical University of Sofia in 2023, following up with a master's degree in Energy Business at the University of National and World Economy in Sofia, Bulgaria. Currently he is a PhD student at the Technical University of Gabrovo's Department of Electric Power Distribution and Electrical Equipment. He is currently a Project Manager at the SUNOTEC GROUP, handling EPC and grid connection of HV infrastructure with over 2.5 GW and 5.2 GWh and over 15 step-up substations (33/110kV) with the Bulgarian TSO.

IN-PERSON SESSIONS



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CIEES 2026 Conference – Session List

Thursday, November 26, 2026

Session:	Energy and Renewable Sources 1	Time:	09:00 - 10:30
Chair:	Vladimir ZINOVIEV, Bulgaria		
Hall:	Augusta	In person	

№	Paper
ID189	**PV System Integration in a Multi-Building Residential Energy Community** Adelaida Mihaela Duinea [1], Paul Mihai Mircea [1], Cristian Bratu [1], Felicia Elena Stan Ivan [1], **Livia Andreea Dina [2]**, and Radu Cristian Dinu [1] [1] *Energy and Aerospace University of Craiova, Craiova, Romania* [2] *HV Lab - National Institute for Research, Development and Testing in Electrical Engineering-ICMET, Craiova, Romania*
ID227	**Experimental Investigations on Sand as Sensible Heat Storage Material for Solar Energy Devices** **Amel Boulemtafes-Boukadoum,** Soffiane El Mokretar, and Sara Benbouali *Centre de Développement des Energies Renouvelables, CDER, Algiers, Algeria*
ID257	**Two-Stage Stochastic Linear Programming Capacity Configuration and Dynamic Simulink Verification of an Off-Grid Wind–PV–Pumped Hydro Storage Microgrid under Uncertainty** Raniia Garapshina, and **Hidir Duzkaya** *Gazi University, Ankara, Türkiye*
ID263	**Selection of an Economically Efficient and Resilient Energy System: A Case Study of a Municipal Structure** **Mantas Švažas**, and Valdemaras Makutėnas *Kauno Kolegija Higher Education Institution, Kaunas, Lithuania*
ID280	**Sensitivity of Photovoltaic Output Prediction Models to Historical Training-Window Length** **Filip Šklebar [1],** Vladimir Franki [2], Vedran Kirinčić [2], and Renato Filjar [1] [1] *Zagreb University of Applied Sciences, Zagreb, Croatia* [2] *University of Rijeka, Rijeka, Croatia*
ID13	**The Role of the Smart Grid in Traction Power Substations for Electric Mobility in South East Europe** **Vladimir Zinoviev** *University of National and World Economy, Sofia, Bulgaria*

IN PERSON

Thursday, November 26, 2026

Session:	Advanced Education and Training in Engineering 1	Time:	09:00 - 10:30
Chair:	Adriana BORODZHIEVA, Bulgaria		
Hall:	Hisar	In person	

№	Paper
ID17	**Interactive Learning via PowerWorld Simulator: Enhancing Student Interest in Electrical Power Networks and Systems** **Georgi Velev**, Krasimir Ivanov, and Ivaylo Lazarov *Technical University of Gabrovo, Gabrovo, Bulgaria*
ID205	**Design and Implementation of a Java-Based Educational Platform for Reed-Solomon Decoding** **Daniel Marinov** [1], Dimitar Stoyanov [2], and Adriana Borodzhieva [2] [1] *Sofia Vocational High School of Electronics "John Atanasov", Sofia, Bulgaria* [2] *University of Ruse, Ruse, Bulgaria*
ID255	**Enhancement of the Education Process used for Teaching the Topic Investigation of the Propagation in Microcells** **Ivanka Tsvetkova** *University of Ruse, Ruse, Bulgaria*
ID276	**Design and Educational Implementation of Basic Boolean Functions Using Sayem Gates in MS Excel and Logisim** **Adriana Borodzhieva** *University of Ruse, Ruse, Bulgaria*
ID312	**Blockchain-Based Provenance for Digital Archives** **Kiril Anguelov** [1], Miglena Angelova [2], and Bojko Mladenov [1] [1] *Technical University of Sofia, Sofia, Bulgaria* [2] *University of National and World Economy, Sofia, Bulgaria*
ID324	**Development and Experimental Study of a Laboratory Stand for Part Sorting** Petar Stoichkov, **Penko Mitev,** and Kliment Georgiev *Technical University of Sofia, Plovdiv Branch, Plovdiv, Bulgaria*
ID339	**Teaching Reversible Arithmetic Through Peres Gate Structures: Design and Simulation of Binary Subtractors in Logisim** **Adriana Borodzhieva** *University of Ruse, Ruse, Bulgaria*

IN PERSON

Thursday, November 26, 2026

Session:	Information Technologies and Artificial Intelligence 2	Time:	10:45 - 12:15
Chair:	Ivan BLAGOEV, Bulgaria		
Hall:	Augusta	In person	

№	Paper
ID173	**Fault-Isolated Low-Latency Bulgarian-to-English Simultaneous Speech Translation for Online Meetings** Hristo Hristov, **Angel Ignatov,** Simeon Kondov, Stanka Hadzhikoleva, and Kristina Asenova *University of Plovdiv Paisii Hilendarski, Plovdiv, Bulgaria*
ID54	**Evaluating AI Model Performance for On-Device Execution on Android** **Ivaylo Delev**, and Ivaylo Pandiev *Technical University of Sofia, Sofia, Bulgaria*
ID199	**Cyber Threats Monitoring Using Discriminant Analysis, Random Forest, CFNN, FFNN and GRNN Analytical Instruments** Ivelina Balabanova, **Georgi Georgiev, and** Toni Naydenov *Technical University of Gabrovo, Gabrovo, Bulgaria*
ID228	**Beyond Compliance: Auditability, Evidence, and Reconstructability in Agentic AI Systems** **Ivan Blagoev** [1]**,** Krassimira Stoyanova [1], Irina Tsolova [1], and Vladislav Vasilev [2] [1] *Institute of Information and Communication Technologies at the Bulgarian Academy of Sciences Sofia, Bulgaria* [2] *QAi Sentinel, Sofia, Bulgaria*
ID265	**Dual-View Canvas Architecture for Embroidery Pattern Design Software** Stefan Bozov, and **Elena Zaharieva-Stoyanova** *Technical University of Gabrovo, Gabrovo, Bulgaria*
ID346	**The Architecture and Characteristics of Cloud Computing Technologies: Structural Resilience Metrics** **Dragomira Dimitrova** *Todor Kableshkov University of transport, Sofia, Bulgaria*

IN PERSON

Thursday, November 26, 2026

Session:	Energy and Renewable Sources 2	Time:	10:45 - 12:15
Chair:	Bogdan POPA, Romania		
Hall:	Hisar	In person	

№	Paper
ID292	**Spatial Harmonization of Inter-Tile ERA5–WAsP Discontinuities in Wind Resource Mapping** **Hafida Daaou Nedjari** [1], Sabiha Kheder Haddouche [1], Louassa Samira [1], and Amine Saoudi [2] [1] *Centre de Développement des Energies Renouvelables, CDER, Algiers, Algeria* [2] *University of Science and Technology Houari Boumediene, Bab Ezzouar, Algeria*
ID79	**Systemic Architectures of Heavy-Duty Vehicle Decarbonisation: A Comparative Analysis of Regulatory, Cascading, and Incentive-Based Control Models** **Daniel Bustos** [1], Dimiter Ialnazov [1], and Vladimir Zinoviev [2] [1] *Kyoto University, Kyoto, Japan* [2] *University of National and World Economy, Sofia, Bulgaria*
ID316	**Experimental Characterization and Validation of Resonant Stepper Motor Generators for Low-Speed Wind Energy Systems** **Milan Belik**, Petr Preuss, and Olena Rubanenko *University of West Bohemia in Pilsen, Pilsen, Czech Republic*
ID116	**Comparative Daily Performance Evaluation of mono-Si and CIGS Rooftop Photovoltaic Systems under Variable Winter Weather Conditions and Shading Effects** **Ivaylo Lazarov** *Technical University of Gabrovo, Gabrovo, Bulgaria*
ID321	**Improving the Energy Efficiency of Household Photovoltaic Systems for Electricity and Heat Supply under Emergency Conditions in Ukraine** **Olena Rubanenko** [1,2,3], Milan Belik [1], and Iryna Hunko [2] [1] *University of West Bohemia, Pilsen, Czech Republic* [2] *Vinnytsia National Technical University, Vinnytsia, Ukraine* [3] *Institute of Renewable Energy, Kiev, Ukraine*
ID342	**Accuracy–Sensing–Energy Trade-offs in Short-Horizon Residential Energy Forecasting** Tsvetelina Stefanova, and **Slavi Georgiev** *University of Ruse, Ruse, Bulgaria*
ID288	**BESS-Led Energy Transition in Bulgaria: Grid Integration and Electricity Market Challenges** Dimitrina Koeva, **Ralena Kutkarska**, Georgi Bankov, Dimitar Slavov, and Metodi Dimitrov *Technical University of Gabrovo, Gabrovo, Bulgaria*

IN PERSON

Thursday, November 26, 2026

Session:	Information Technologies and Artificial Intelligence 3	Time:	13:30 - 14:45
Chair:	Selahattin KOSUNALP, Türkiye		
Hall:	Augusta	In person	

№	Paper
ID287	**A Hybrid AI Framework for Eye Disease Classification with McNemar-Bowker Error Analysis** Krassimira Stoyanova, **Ivan Blagoev,** and Petar Tomov *Institute of Information and Communication Technologies at the Bulgarian Academy of Sciences, Sofia, Bulgaria*
ID301	**Authentication and Authorization Module and Graphical User Interface for Software Defined Networks Control Application** **Delyan Genkov**, Rumen Tanovski, and Miroslav Slavov *Technical University of Gabrovo, Gabrovo, Bulgaria*
ID94	**Digital Technologies and Industry Performance: The Transformative Role of AI in the European ICT Sector** **Viktoriya Ivanova** *University of Ruse, Ruse, Bulgaria*
ID333	**Commissioning-Aware Leak Detection under Operating-Regime Shift in Water Distribution Networks** Tsvetelina Stefanova, and **Tsvetozar Georgiev** *University of Ruse, Ruse, Bulgaria*
ID358	**Drone Systems for Aerial Manipulation: Configurations, Dynamic Modeling, Control and a Soft-Link Case Study** **Nikolay Zlatov** [1]**,** Georgi Hristov [2], Yavor Yotov [1], Georgi Georgiev [2], Diyana Kinaneva [2], and Ivan Beloev [2] [1] *Bulgarian Academy of Sciences, Sofia, Bulgaria* [2] *University of Ruse, Ruse, Bulgaria*
ID219	**Topic Coverage and Numerical Accuracy of NotebookLM Summaries for an IoT-Based Smart Grid Investment Report** **Selahattin Kosunalp** *Bandırma Onyedi Eylul University, Bandırma, Türkiye*

IN PERSON

Thursday, November 26, 2026

Session:	Automotive and Industrial Engineering 1	Time:	13:30 – 14:45
Chair:	Penko MITEV, Bulgaria		
Hall:	Hisar	In person	

№	Paper
ID269	**Energy-Based Parametric Sizing of Wing-Propeller VTOL Lifting Systems** **Martin Zikyamov**, and Hristian Panayotov *Technical University of Sofia, Plovdiv Branch, Plovdiv, Bulgaria*
ID273	**Quality Management Approach in HMLV Production Environment** **Kristian Tsvetkov [1],** Pavel Vitliemov [1], and Tzvetelin Gueorguiev [2] [1] *University of Ruse, Ruse, Bulgaria* [2] *Technical University of Gabrovo, Gabrovo, Bulgaria*
ID304	**Kinematic Model and Redundancy Resolution of a PRPP Gantry Cylindrical Robot** Agop Izmirliyan, Valeri Bakardzhiev, Konstantin Chukalov, Plamen Kasabov, Sabi Sabev, and **Nikolay Dinev** *Technical University of Sofia, Plovdiv Branch, Plovdiv, Bulgaria*
ID308	**Comparative Analysis of AI Models for ESG Performance Assessment in Industrial Enterprises** **Kiril Anguelov**[1], and Philip Stoyanov [2] [1] *Technical University of Sofia, Sofia, Bulgaria* [2] *University of National and World Economy, Sofia, Bulgaria*
ID322	**Thermal Behavior of a Multi-Plate Clutch in a Racing Car** **Stiliyana Taneva**, Stanimir Penchev, and Krasimir Ambarev *Technical University of Sofia, Plovdiv Branch, Plovdiv, Bulgaria*
ID311	**AI-Based Evaluation of Intermodal Logistics Links** **Kiril Anguelov** [1], Kremena Tranakieva [1], and Ivajlo Stoyanov [2] [1] *Technical University of Sofia, Sofia, Bulgaria* [2] *University of Telecommunications and Post, Sofia, Bulgaria*
ID326	**Development and Experimental Evaluation of a Vision Stand for Flexible Feeding Systems and General Inspection Tasks** **Penko Mitev** *Technical University of Sofia, Plovdiv Branch, Plovdiv, Bulgaria*

IN PERSON

Thursday, November 26, 2026

Session:	Electronics, Power Electronics and EMC 1	Time:	15:00 – 16:15
Chair:	Adem KORKMAZ, Türkiye		
Hall:	Augusta	In person	

№	Paper
ID71	**Robust Stability Delay Margins for Interval DC-DC Buck Converters in Air Vehicles using Kharitonov Theorem** Mustafa Furkan Baş [1,2], Emine Sena Karahan [1,2], and **Saffet Ayasun** [1] [1] *Gazi University, Ankara, Türkiye* [2] *ASELSAN Inc, Ankara, Türkiye*
ID91	**A Comparative Benchmark of Scikit-Learn Classifiers for Reduced-Channel P300 EEG Spellers: A Neuro-Oncological Perspective** **Selma Bulut** [1], and Adem Korkmaz [2] [1] *Kırklareli University, Kırklareli, Türkiye* [2] *Bandırma Onyedi Eylül University, Bandırma, Türkiye*
ID150	**Spectroradiometric Characterisation of a Learning Environment for the Implementation of a Circadian Lighting System** **Ventsislav Vasilev** *University of Ruse, Ruse, Bulgaria*
ID151	**Experimental and Simulation-Based Assessment of Quality of Daylight for Application in a Learning Environment** **Ventsislav Vasilev,** Iordan Stoev, Aneliya Manukova, and Orlin Petrov *University of Ruse, Ruse, Bulgaria*
ID194	**Cross-Dataset Evaluation of Reduced-Frequency EIS for Battery Health Estimation** **Esteban Rua**, Lucian Perisoara, and Madalin Frunzete *National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania*
ID306	**STM32-Based Frequency Measurement and PI Control for Isolated Renewable Energy Systems** Ali Çimen, Mehmet Fatih Çelebi, **Talha Boz**, and Mustafa Caner Aküner *Marmara University, Istanbul, Türkiye*
ID329	**A Programmable-SoC-Based Digital Lock-In Amplification Approach for Sensing Small Signals Immersed in Noise from Near-Infrared Photodiodes** **Ramon Andrade Sousa Carvalho**, and Sebastião Gomes dos Santos Filho *University of São Paulo, São Paulo, Brazil*

IN PERSON

Thursday, November 26, 2026

Session:	Telecommunication Systems 1	Time:	15:00 – 16:15
Chair:	Filip TSVETANOV, Bulgaria		
Hall:	Hisar	In person	

№	Paper
ID202	**Design of an Adaptive Application-Level Protocol Mapping Architecture for Heterogeneous IoT Communication** **Ondřej Šolc,** and Tomáš Martinec *Technical University of Liberec, Liberec, Czech Republic*
ID237	**Models for Assessing the Impact of Human Factors on the Safety of Railway Signaling Systems** Emiliya Dimitrova, Vasil Dimitrov, Emil Borisov, and **Dragomira Dimitrova** *Todor Kableshkov University of transport, Sofia, Bulgaria*
ID238	**Intelligent Decision-Support System for Assessing the Safety of Railway Signaling Systems** Emiliya Dimitrova, Vasil Dimitrov, Emil Borisov, and **Dragomira Dimitrova** *Todor Kableshkov University of transport, Sofia, Bulgaria*
ID141	**Using a GPS Tracker to Optimize the Work of a Non-Emergency Medical Care Center Operating in a Medium-Sized European City** Reneta Kalaydzhieva, Dimitar Grozev, Ivan Beloev, and **Denitsa Miteva** *University of Ruse, Ruse, Bulgaria*
ID23	**Design of an Interactive Mobile Assistant Integrating Gamification and Metaverse-Based Rehabilitation for Healthcare Self-Management** Adnan Kavak [1], Muhammad Jamil [1], Sevinç Köseömür [1], Funda Uğurlu [2]**, and Filip Tsvetanov** [3] [1] *Kocaeli University, Izmit, Türkiye* [2] *Bandırma Onyedi Eylül University, Bandırma, Türkiye* [3] *University of Telecommunications and Post, Sofia, Bulgaria*
ID245	**A Low-Cost UAV Prototype for Fire Monitoring: Engineering Challenges and Design Trade-Offs** **Filip Tsvetanov** [1]**,** Lubomir Vasilev [1], and Adnan Kavak [2] [1] *University of Telecommunications and Post, Sofia, Bulgaria* [2] *Kocaeli University, İzmit, Türkiye*

Thursday, November 27, 2025

Session:	Energy Efficiency and Applied Thermodynamics 1	Time:	16:30 - 17:45
Chair:	Teodora HRISTOVA, Bulgaria		
Hall:	Augusta	In person	

№	Paper
ID57	**The Impact of Operating Conditions on the Long-term Reliability of Power Sources Involving Polymer Exchange Membrane Fuel Cell Stacks** **Magdalena Dudek [1],** Bartosz Adamczyk [1], Andrzej Raźniak [1], Jarosław Markowski [2], Anita Zych [1], and Iliya Iliev [3] [1] *AGH University of Kraków, Kraków, Poland;* [2] *Poznan University of Technology, Poznań, Poland* [3] *University of Ruse, Ruse, Bulgaria*
ID117	**Electromagnetic Interference and Mitigation of Buried Oil Pipelines near 400 kV Overhead Transmission Lines** Ozgur Cetin [1], Hidir Duzkaya [2], and **Muslum Cengiz Taplamacioglu [2]** [1] *Turkish Electricity Transmission Corporation, Ankara, Türkiye* [2] *Gazi University, Ankara, Türkiye*
ID133	**Comparative Parametric Assessment of Alternative Electricity Transmission Routes for Energy Security and Infrastructure Management in the Caspian-Black Sea-Europe Region** Davit Narmania, Manana Kharkheli, and **Shorena Davitaia** *Ivane Javakhishvili Tbilisi State University, Tbilisi, Georgia*
ID135	**Managing Energy Security in Georgia: A Resilience Assessment and Scenario-Based Vulnerability Framework** Eka Chokheli, **Nino Vardiashvili,** and Mikheil Makasarashvili *Ivane Javakhishvili Tbilisi State University, Tbilisi, Georgia*
ID188	**Grid-Forming Strategy for Stability Delay Margins Enhancement in Time-Delayed Microgrids** Mohammed Zaki, **Saffet Ayasun,** and Muslum Cengiz Taplamacıoğlu *Gazi University, Ankara, Türkiye*
ID348	**AI-Based Inflow and Energy Forecasting: A Case Study of the Dridu Hydropower Plant** **Eliza Isabela Tică [1],** Dan Finichiu [1], Angela Neagoe [1], Liana-Ioana Vuță [1], Gabriela-Elena Dumitran [1], Bogdan Popa [1] [1] *National University of Science and Technology Politehnica Bucharest, Bucharest, Romania* [2] *S.C. Vienna Energy Forța Naturală S.R.L, Bucharest, Romania*
ID356	**Impact of Distributed Energy Resources on Short-Circuit Currents and Protection in 20-kV Distribution Feeders** **Todor Todorov [1],** Ivaylo Stoyanov[2], Teodora Hristova [3], Gani Sargazin [4], Alina Fazylova [5], and Dimitrios Kazolis [6] [1] *ACDC Ltd, Sofia, Bulgaria;* [2] *University of Ruse, Ruse, Bulgaria;* [3] *Technical University of Sofia, Sofia, Bulgaria;* [4] *ALT University, Almaty, Kazakhstan;* [5] *Almaty University of Power Engineering and Telecommunications, Almaty, Kazakhstan;* [6] *Democritus University of Thrace, Kavala, Greece*

IN PERSON

Thursday, November 26, 2026

Session:	Telecommunication Systems 2	Time:	16:30 – 17:45
Chair:	Strahil SOKOLOV, Bulgaria		
Hall:	Hisar	In person	

№	Paper
ID64	**A Conceptual Model for Designing a Hybrid Corporate Network Infrastructure** Kalin Velichkov [1], Grigor Mihaylov [2], and **Teodora Hristova [3]** [1] *Kontrax Ltd., Sofia, Bulgaria* [2] *University of Telecommunications and Post, Sofia, Bulgaria* [3] *Technical University of Sofia, Sofia, Bulgaria*
ID65	**Protection of a Hybrid Corporate Network Infrastructure** Kalin Velichkov [1], Grigor Mihaylov [2], and **Teodora Hristova [3]** [1] *Kontrax Ltd., Sofia, Bulgaria* [2] *University of Telecommunications and Post, Sofia, Bulgaria* [3] *Technical University of Sofia, Sofia, Bulgaria*
ID118	**Spatial-Temporal Data Collection Scheme in Capacity-Constrained 5G/6G-IoT Networks** **Yaser Khamayseh** *Zayed University, Abu-Dhabi, UAE*
ID180	**Energy Consumption Comparison of RRC Low-Power Modes for IoT Communications** **Matheus N. Nery,** Hugo A. O. da Cruz, Helio R. O. Ferreira, Luiz A. P. do Nascimento *SIDIA Institute of Science and Technology, Manaus, Brazil*
ID215	**Towards Autonomous Cyber Deception: An Iterative Enhancement Framework for LLMBased SCADA Honeypots** **Strahil Sokolov,** Anton Grudov and Lilia Zaharieva *University of Telecommunications and Post, Sofia, Bulgaria*
ID216	**LoRaChain: Energy-Efficient and Blockchain-Protected Transfer of ML Models on Edge AI Devices via LoRaWAN Mesh Networks** **Strahil Sokolov [1]**, Kaloyan Varlyakov [2], Ognian Fetfov [1], and Pavlina Teneva [2] [1] *University of Telecommunications and Post, Sofia, Bulgaria* [2] *Medical College, Trakia University, Stara Zagora, Bulgaria*

ONLINE SESSIONS



VR_HALL 1

Meeting ID: **602 711 7207**
Passcode: **BBXmV6**

URL: https://us06web.zoom.us/j/6027117207?pwd=YlhBOUU4RkY5UkxxaU9JclBOeWtJZz09

VR_HALL 2

Meeting ID: **472 970 9196**
Passcode: **R8T4ZK**

URL: https://us06web.zoom.us/j/4729709196?pwd=YkM4cHQvSDZsWE9sMGxVVGZJeGRxZz09

ONLINE

Wednesday, November 25, 2026

Session:	Information Technologies and Artificial Intelligence 1	Time:	18:00 - 19:30
Chair:	Diyan DINEV, Bulgaria		
Hall:	Online	Virtual room:	VR_Hall 1

№	Paper
ID204	**Deep Learning-based Approach for the Identification of Unsound Wheat Seeds of Bulgarian Origin** **Eleonora Nedelcheva** [1], Tsvetelina Georgieva [1], Iliana Ivanova [2], Stanislav Penchev [1], and Plamen Daskalov [1] [1] *University of Ruse, Ruse, Bulgaria* [2] *Institute of Agriculture and Seed Science "Obraztsov Chiflik", Ruse, Bulgaria*
ID119	**Evolving IoF to Edge Internet of Food via a Layered Middleware Framework** Rositsa Maksimova, and **Krassimir Kolev** *Technical Faculty, University of Food Technologies, Plovdiv, Bulgaria*
ID131	**WASPAS-Based Model to Determine Multidimensional Cybersecurity Assessment** Daniela Dimitrova, and **Daniela Borissova** *Institute of Information and Communication Technologies, Bulgarian Academy of Sciences, Sofia, Bulgaria*
ID134	**Assessing the Security of LLM-Based Applications Through an Automated Red Teaming Approach** **Anton Stanoev**, Dimitriya Mihaylova, and Zlatka Valkova-Jarvis *Technical University of Sofia, Sofia, Bulgaria*
ID163	**Beyond Visibility: Timely Pedestrian Detection Through Camera-Monitor Systems During Excavator Operation** **Shuaixin Qi,** Julius Aussat, Corin F. Otesteanu, and Carlo Menon *ETH Zürich, Zürich, Switzerland*
ID212	**LoED-ML: A Leakage-Aware Benchmarking Methodology for Machine Learning on Real-World LoRaWAN Traces** **El Hadji Serigne Mamour Diop** *Gaston Berger University, Saint-Louis, Senegal*
ID351	**Predicting Performance Degradation at Scheduling Time with Machine Learning Joint Models in Kubernetes** **Megi Tartari,** Genti Daci, and Elinda Kajo Meçe *Polytechnic University of Tirana, Tirane, Albania*
ID357	**Recovery Boundaries and Saturation Criticality in Burst-Driven Computational Systems: From Linear Queueing Baselines to Nonlinear Collapse** **Alda Myzeqari,** and Jaumin Ajdari *South East European University, Tetovo, North Macedonia*
ID187	**Short-Term Wind Speed Forecasting for Bulgarian Coastal Lo-cations Using Open Meteorological Data and Machine Learning Models** Kiril Mitev, Diyan Dinev, and **Daniela Petrova** *Technical University of Varna, Varna, Bulgaria*
ID111	**Performance Differences and Random Variability in Classifier Comparisons for Imbalanced Bulgarian Text Classification** **Daniela Petrova,** Diyan Dinev, and Ivo Rakitin *Technical University of Varna, Varna, Bulgaria*
ID114	**Divergent Scaling Across Albanian, Italian, and English: The Role of Tokenizer Fertility** **Alda Myzeqari**[1,2], Rilind Muharremi[3], and Jaumin Ajdari[1] [1] *South East European University, Tetovo, North Macedonia* [2] *Canadian Institute of Technology, Tirana, Albania* [3] *AAB College, Prishtina, Kosovo*

ONLINE

Wednesday, November 25, 2026

Session:	Smart Telecommunications, Industry and Services 1	Time:	18:00 - 19:30
Chair:	Stanimir SADINOV, Bulgaria		
Hall:	Online	Virtual room:	VR_Hall 2

№	Paper
ID128	**Algorithmic Visibility in a Vertically-Integrated Telecom-VOD Market: The Bulgarian Case** Iva I. Kostadinova[1], **Magdalena Garvanova[1]**, Ivan Garvanov[2], and Nurassyl Kerimbayev [3] [1] *University of Library Studies and Information Technologies, Sofia, Bulgaria* [2] *Institute of Mathematics and Informatics, Bulgarian Academy of Sciences, Sofia, Bulgaria* [3] *Al-Farabi Kazakh National University Almaty, Kazakhstan*
ID137	**Design of an Autonomous Robotic Shopping Cart with Grid-Based Navigation and Radio-Frequency Identification Item Tracking** Mohamed Farag, Faris Khalil, Rufus John, Khaled Haji, and **Elias Yaacoub** *Qatar University, Doha, Qatar*
ID223	**Analytical Computer Vision Framework for Real-Time Drone Detection in Full HD Video** **Magdalena Garvanova** *University of Library Studies and Information Technologies, Sofia, Bulgaria*
ID244	**Real Time Impedance Concurrence Adjusting Unit** **Miroslav Tomov** [1], Michail Malamatoudis [2], and Stanimir Sadinov [1] [1] *Technical University of Gabrovo, Gabrovo, Bulgaria* [2] *Democritus University of Thrace, Kavala, Greece*
ID251	**Edge-based Data Pipeline for IoT Environmental Monitoring System: A Multi-City Approach in Albania** **Enida Sheme**, Alba Merdani, Eduart Torba, Megi Tartari, and Dorian Minarolli *Polytechnic University of Tirana, Tirana, Albania*
ID277	**Software-Only Facility-Level Positioning of Shared E-Scooters via Constrained HMM Map Matchin** **Tatyana Golubeva** [1], Ivan Beloev [2], Viktor Tailakov [1], and Teodor Iliev [2] [1] *META University, Almaty, Kazakhstan* [2] *University of Ruse, Ruse, Bulgaria*
ID328	**Key-Frame Selection for Video-Based 3D Reconstruction: A Comparative Analysis** **Ambra Korra**, Anduel Kuqi, and Indrit Enesi *Polytechnic University of Tirana, Tirana, Albania*
ID330	**Heterogeneous IoT-based Urban Environmental Monitoring Architecture for Smart City Deployment in Albania** **Enida Sheme**, Eduart Torba, Alba Merdani, Megi Tartari, and Dorian Minarolli *Polytechnic University of Tirana, Tirana, Albania*
ID343	**Compact High-Efficiency Multiband Rectenna for Ambient RF Energy Harvesting in Low-Power IoT Systems** Cong-Phuong Nguyen, Hoang-Tien Do, Minh-Hoang Le, **Minh-Hiep Le**, and Thanh-Huong Nguyen *SEEE, HUST, Hanoi, Vietnam*
ID355	**From Energy Consumers to Energy Participants: Digital Platforms and the Evolution of Decentralized Energy Systems in Southeast Europe** **Mariya Bozhilova** *University of National and World Economy, Sofia, Bulgaria*
ID240	**A Layered Reference Architecture for AI-Powered Extended Reality Systems in Education and Professional Training** **Ivaylo Chenchev** *University of Telecommunications and Post, Sofia, Bulgaria*

ONLINE

Thursday, November 26, 2026

Session:	Information Technologies and Artificial Intelligence 4	Time:	09:00 - 10:30
Chair:	Assel MUKASHEVA, Kazakhstan		
Hall:	Online	Virtual room:	VR_Hall 1

№	Paper
ID60	**Extraction of Latent Dependencies Between Atmospheric and Wastewater Parameters Using Factor Analysis** **Nikolina Ivanova** *University of Mining and Geology "St. Ivan Rilski", Sofia, Bulgaria*
ID72	**Next-Generation Mixed Reality: Contemporary Devices and Strategic Approaches in Practical Applications** Jennifer Sarvari, and **Emiliyan Petkov** *St. Cyril and St. Methodius University of Veliko Tarnovo, Veliko Tarnovo, Bulgaria*
ID121	**A Bézier Curve Based Momentum Optimizer for CNN Training: A Comparative Study on Image Classification** **Stela Lila**[1], Bekir Karlik[2], and Samed Jukic[3] [1] *International Burch University, Ilidza, Bosnia and Hercegovina;* [2] *Istanbul Esenyurt University, Istanbul, Turkey* [3] *University of Novi Pazar, Novi Pazar, Serbia*
ID123	**Multidimensional Assessment of Digital Tools for Countering Disinformation: A Multi-Criteria Decision Analysis** Ivan Lalev, Velizar Shalamanov, and **David Katana** *Institute of Information and Communication Technologies, Bulgarian Academy of Sciences, Sofia, Bulgaria*
ID167	**Cell-Averaging Constant False Alarm Rate Algorithm for Ultrawide band Radar Data Processing of Walabot** **Boris Borisov,** and Georgi Krastev *University of Ruse, Ruse, Bulgaria*
ID171	**Leakage-Aware Cross-Dataset Evaluation of Unsupervised Anomaly Detection for IoMT Security** **Dinargul Mukhammejanova** [1], Anel Aidos [2], Assel Mukasheva [3], and Jeong Won Kang [4] [1] *Al-Farabi Kazakh National University, Almaty, Kazakhstan;* [2] *Nazarbayev University, Astana, Kazakhstan;* [3] *Kazakh-British Technical University, Almaty, Kazakhstan;* [4] *Engineering Korea National University of Transportation, Uiwang-Si, Republic of Korea*
ID184	**Similarity-Based Bearing Defect Verification with Siamese ConvNeXt Networks on Raw Industrial Images** Ercan Ersoy, and **Sezer Ulukaya** *Trakya University, Edirne, Türkiye*
ID185	**Edge-AI Real-Time Driver Drowsiness Detection on AMD KV260 for ADAS Applications** Hüseyin Bartu Yazıcı [2], Ihsan Cicek [1], and **Güner Tatar**[2] [1] *Gebze Technical University, Kocaeli, Türkiye;* [2] *Medeniyet University, Istanbul, Türkiye*
ID206	**Multi-Criteria Evaluation of YOLO for Weed Infestation Severity Assessment Using a Farmer-Generated Rice Field Dataset** **Ioannis Glykos**[1], Gerassimos G. Peteinatos[2], Chrysi Kopaka[1], Zoi M. Tserioni[1], Eirini Kontali[1], Nikolina Vidali[3], Dimitrios Loukatos[1], Demosthenis Chachalis[3], and Konstantinos G. Arvanitis [1] [1] *Agricultural University of Athens, Athens, Greece;* [2] *Hellenic Agricultural Organisation—DIMITRA, Athens, Greece* [3] *Benaki Phytopathological Institute, Athens, Greece*
ID222	**A Generic Open-Source Platform for Configuring and Running Laboratory Experiments: Reference Architecture and Prototype Design** **Ionel Antohi** *Technical University of Moldova, Chisinau, Republic of Moldova*
ID291	**Direction-Aware Residual GNN–Transformer for Tropical Cyclone Track Forecasting** Cong-Phuong Nguyen [1], Minh-Hoang Le [1], Maxim Kovac [2], and **Thanh-Huong Nguyen** [1] [1] *SEEE, HUST, Hanoi, Vietnam;* [2] *University of Grenoble Alpes, Grenoble, France*

ONLINE

Thursday, November 26, 2026

Session:	Energy Efficiency and Applied Thermodynamics 2	Time:	09:00 - 10:30
Chair:	Ivan DIMCHEV, Bulgaria		
Hall:	Online	Virtual room:	VR_Hall 2

№	Paper
ID22	**Aerodynamic Analysis of an Adaptive Micro-Torch Burner for Supplementary Firing in Heat Recovery Steam Generators of Combined Cycle Power Plants** Abay Dostiyarov[1], **Alisher Teltay**[1], Iliya Iliev[2], and Hristo Beloev[2] [1] *Almaty University of Power Engineering and Telecommunications, Almaty, Kazakhstan* [2] *University of Ruse, Ruse, Bulgaria*
ID67	**AI-Based Supervisory Optimization of Energy Efficiency in Gas Compressor Units** **Gulkhandan Aghalarzade,** and Naila Allahverdiyeva *Baku Higher Oil School, Baku, Azerbaijan*
ID166	**Temperature Field Analysis of Building Floor Junctions with Lightweight Concrete Screeds for Energy-Efficient Design** Penka Zlateva, Lubomir Tashkov, **Nevena Mileva,** and Krum Yanazov *Technical University of Varna, Varna, Bulgaria*
ID275	**Thermodynamic, Environmental and Regulatory Comparison of R134a, R1234yf and R290 for Mobile Cooling Applications** **Nevena Mileva**, Krastin Yordanov, and Penka Zlateva *Technical University of Varna, Varna, Bulgaria*
ID293	**Targeted Hydrogen Deployment in Road Transport: A Harmonized Five-Country Scenario Comparison for the Western Balkans** **Emre Amet** [1], Onur Amet [2], Aleksandar Dedinec [2], Ljupco Kocarev [2], and Vasko Changoski [1] [1] *Ss. Cyril and Methodius University, Skopje, North Macedonia* [2] *Macedonian Academy of Sciences and Arts, Skopje, North Macedonia*
ID345	**Day-Ahead PV Forecast Accuracy during the 12 August 2026 Solar Eclipse: Evidence from Five European Bidding Zones** **Essam A. Al-Ammar** *King Saud University, Riyadh, Saudi Arabia*
ID352	**Closed-Loop Swirl Control for NOx Reduction in Gas Turbine Combustors: A Delay-Compensating Predictive Architecture and Simulation Study** **Abat Zhumagaliyev** [1], Abay Dostiyarov [1], Iliya Iliev [2], Ivan Beloev [2], and Hristo Beloev [2] [1] *Almaty University of Power Engineering and Telecommunications, Almaty, Kazakhstan* [2] *University of Ruse, Ruse, Bulgaria*
ID93	**Proposal of a Life-Cycle GWP Scale with Material Sensitivity Analysis for New Single-Family Houses in Bulgaria** **Ivan Dimchev,** Angel Terziev, and Martin Ivanov *Technical University of Sofia, Sofia, Bulgaria*
ID232	**Comparative Assessment of Summer Microclimate and CO_2 Concentrations in Two Administrative Offices** Penka Zlateva, **Nevena Mileva,** Krastin Yordanov, and Daniel Atanasov *Technical University of Varna, Varna, Bulgaria*

ONLINE

Thursday, November 26, 2026

Session:	Automotive and Industrial Engineering 2	Time:	10:45 - 12:15
Chair:	Seher KADIROVA, Bulgaria		
Hall:	Online	Virtual room:	VR_Hall 1

№	Paper
ID92	**Comparative FEM Analysis of External Gear Pumps and an Axial Piston Pump under Equal High-Pressure Loading** **Yordan Stoyanov,** Atanasi Tashev, and Penko Mitev *Technical University of Sofia, Branch Plovdiv, Plovdiv, Bulgaria*
ID107	**Assessment of Comfort and Vibration Levels in the Passenger Compartment of a Passenger Car while Driving on International Road II-29** Asparuh Atanasov, **Aleksandrina Bankova**, Stefan Tenev, and Anastas Yangyozov *Technical University of Varna, Varna, Bulgaria*
ID140	**GPS-Free Autonomous Vehicle Navigation Using Hierarchical Visual Localization in CARLA** **Orhun Onar,** and Yavuz Şenol *Dokuz Eylül University, İzmir, Türkiye*
ID158	**Towards Situation-Adaptive Visual Assistance for Off-Road Driving: A Vehicle-Integrated Drone Perception System** **Jörg Kneip** [1], Mario Hirz [2], Daniel Bensch [3], and Albert Helbing [3] [1] *Mercedes-Benz G GmbH, Raaba, Austria* [2] *Graz University of Technology, Graz, Austria* [3] *Mercedes-Benz AG, Esslingen, Germany*
ID193	**Beyond MACs: DPU-Partitioned Redesign of a Five-Task ADAS Perception Network for Improved Throughput on AMD Kria KV260 Platforms** **Güner Tatar**[1], and Burcu Erkmen[2] [1] *Istanbul Medeniyet University, Istanbul, Türkiye* [2] *Yıldız Technical University, Istanbul, Türkiye*
ID225	**Evaluation of the Performance of Different Machine Learning Models for Early Identification of Problems with a Vehicle's Compressed Air System** **Stilian Okishelov,** Boris Evstatiev, and Seher Kadirova *University of Ruse, Ruse, Bulgaria*
ID254	**Investigation of the Surface Roughness of PLA and PETG Parts After Removing Different Support Materials (PVA and Support for PLA/PETG)** **Anton Bashev**, and Velko Rupetsov *University of Plovdiv "Paisii Hilendarski, Plovdiv, Bulgaria*
ID327	**Investigation of Gasoline Engine Fueled with Butanol–gasoline Blends** **Simeon Iliev** [1], Radostin Dimitrov [2], Velichka Georgieva [2] [1] *University of Ruse, Ruse, Bulgaria* [2] *Technical University of Varna, Varna, Bulgaria*
ID261	**Experimental Investigation of Planar Rhombic (Diamond) Beam-Lattice Structures Fabricated from 1.4548 (17-4 PH) Stainless Steel via Metal Additive Manufacturing** Emil Velev, Velislava Raydovska, **Miroslav Aleksiev**, and Petar Georgiev *The University of Plovdiv "Paisii Hilendarski", Plovdiv, Bulgaria*
ID210	**Solution for Linear Actuators Test Bench Automation** **Desislava Mihaylova,** and Asparuh Atanasov *Technical University of Varna, Varna, Bulgaria*

ONLINE

Thursday, November 26, 2026

Session:	Biomedical Engineering 1	Time:	10:45 - 12:15
Chair:	Hristo HRISTOV, Bulgaria		
Hall:	Online	Virtual room:	VR_Hall 2

№	Paper
ID211	**Temperature Effects on Ultrasound Dimensional Accuracy** **Angelina Dimitrova** *Technical University of Varna, Varna, Bulgaria*
ID181	**Autocorrelation Analysis and Investigation of Respiratory Data Obtained via Inertial Sensors from Individuals with Traumatic Transtibial Amputation** Eren Çakan, İlke Kurt, **Sezer Ulukaya,** Halit Selçuk, Zeynep Arıbaş, Sinem Salar, and Hilal Keklicek *Trakya University, Edirne, Türkiye*
ID183	**Classification of Respiratory Data Obtained from Individuals Who Have Undergone Amputation Using Machine Learning Techniques** Ercan Ersoy, İlke Kurt, **Sezer Ulukaya**, Halit Selçuk, Zeynep Arıbaş, Sinem Salar, and Hilal Keklicek *Trakya University, Edirne, Türkiye*
ID233	**Patient-Aware Skin Lesion Malignancy Classification Using Complementary Visual AI** **Ahmad Derbas,** and Mehmet Beyaz *TTG International Ltd., Istanbul, Türkiye*
ID295	**The Evolution of Federated Learning for Medical Image Segmentation: Recent Trends and Emerging Directions** **Ataberk Urfalı** [1], Sait Ali Uymaz [1], and Özgü Can [2] [1] *Konya Technical University, Konya, Türkiye* [2] *Ege University, İzmir, Türkiye*
ID344	**A Study of the Relationship between Eye and Ear Temperatures of Dairy Cows in a State of Mild Heat Stress using Infrared Thermography** Hristo Hristov [1], and **Kalin Dimitrov** [2] [1] *Institute of Information and Communication Technologies, Bulgarian Academy of Sciences, Sofia, Bulgaria* [2] *Technical University of Sofia, Sofia, Bulgaria*
ID298	**Integrated IoT-5G System for Military Facility Security and Real-Time Personnel Health Monitoring** **Ersia Selfaj**, Donatela Osmenaj, Lea Likaj, and Bexhet Kamo *Polytechnic University of Tirana, Tirana, Albania*
ID56	**HBC-Med v2: A Hybrid Blockchain Architecture Integrating SSI, Zero-Knowledge Proofs and AI for Secure eHealth Systems** Stefan Georgiev, and **Emiliyan Petkov** *St. Cyril and St. Methodius University of Veliko Tarnovo, Veliko Tarnovo, Bulgaria*
ID59	**A Carbon Footprint Assessment and Reduction Calculator for Healthcare Institutions** Benjamin Urh, Tomaž Kern, **Marjan Senegačnik**, Jernej Gabrijel, Tilen Medved, and Eva Krhač Andrašec *University of Maribor, Kranj, Slovenia*

ONLINE

Thursday, November 26, 2026

Session:	Mechatronics and Industrial Automation 1	Time:	12:30 - 14:00
Chair:	Pavel VITLIEMOV, Bulgaria		
Hall:	Online	Virtual room:	VR Hall 1

№	Paper
ID48	**Development of an Automated System for Assembling Inserts for Clamps** **Ivan Tashev** *Technical University of Sofia, branch Plovdiv, Plovdiv, Bulgaria*
ID76	**Control of a Fixed-Wing Unmanned Aerial Vehicle Using a Mamdani Fuzzy Inference System** Stefan Biliderov[1], **Radostina Calovska**[1], and Radoslav Chalakov[2] [1] *Bulgarian Air Force Academy "Georgi Benkovski", Dolna Mitropolia, Bulgaria* [2] *Rakovski National Defence College, Sofia, Bulgaria*
ID122	**Development of Electronic Nose with Calibration Chamber and Wi-Fi Interface** **Stefan Ivanov**[1], Jacek Wilk-Jakubowski[2], Stanimir Yordanov[1], Kostadin Zikatanov[1], Toshko Nenov[1], and Todor Todorov[1] [1] *Technical University of Gabrovo, Gabrovo, Bulgaria* [2] *Kielce University of Technology, Kielce, Poland*
ID130	**Machine-Learning Prediction of Throughput and Latency in Crossbar-Based SMP Systems with Statistical Validation** Ivo Rakitin, Milen Angelov, Evgeniya Rakitina-Qureshi, Hristo Nenov, Iliyan Boychev, and Dimitrichka Nikolaeva *Technical University of Varna, Varna, Bulgaria*
ID154	**Exemplary Classification of Industrial Robots** **Ivan Ralev** *University of Ruse, Ruse, Bulgaria*
ID156	**Analysis of the Feasibility of Remote Monitoring of Nitrogen Content in a Winter Wheat Field** **Asparuh Atanasov**, and Aleksandrina Bankova *Technical University of Varna, Varna, Bulgaria*
ID241	**DS-DBSCAN: A Sensor-Geometry-Derived Coordinate Warp for Clustering 2D LiDAR Scans** **Hernan Vinicio Lopez Morocho**, and Aaron S. Crandall *University of Europe for Applied Sciences, Potsdam, Germany*
ID256	**Research Results on Pre-processing Technology of Durian Peels for Water Extraction by Cylinder Pressing Method** Nguyen Duc Long[1], Hristo Beloev[2], **Dau The Nhu**[1], Nguyen Duc That[1], Chu Van Thien[1], and Nguyen Tien Khuong[1] [1] *Vietnam Institute of Agricultural Engineering and Post-Harvest Technology, Hanoi, Vietnam* [2] *University of Ruse, Ruse, Bulgaria*
ID267	**Computational Kinematic Modeling and Statistical Analysis of Trajectory Tracking Errors in a Six-DOF Robotic Manipulator** **Perizat Rakhmetova**[1], Aiman Rysbayeva[2], Altay Tuyakbayev[1], Yerlik Nurymov[3], Kaisar Abutalipov[1], Aigul Sagyndykova[1], Moldir Sakhova[4] and Kalima Mukhamadiyeva[5] [1] Satbayev University, Almaty, Kazakhstan [2] *Kazakh Leading Academy of Architecture and Civil Engineering, Almaty, Kazakhstan* [3] *Al-Farabi Kazakh National University, Almaty, Kazakhstan* [4] *Kazakh University of Technology and Business named after K. Kulazhanov, Astana, Kazakhstan* [5] *Almaty Technological University, Almaty, Kazakhstan*
ID294	**Modeling and Development of a Tendon Driven Continuum Robot for Aircraft Visual Inspection** **Marina Kalekeyeva**, and Stanislav Penchev *University of Ruse, Ruse, Bulgaria*

ONLINE

Thursday, November 26, 2026

Session:	Electronics, Power Electronics and EMC 2	Time:	12:30 - 14:00
Chair:	Alina FAZYLOVA, Kazakhstan		
Hall:	Online	Virtual room:	VR_Hall 2

№	Paper
ID45	**Electrical Experimental Test of DC-Block Prototype Based on Coffee By-Products** Daisy J. Rodríguez, María F. Morel, and **Daniel A. Flores** *National Autonomous University of Honduras, Tegucigalpa, Honduras*
ID106	**Simulation and Experimental Tests of a IRFZ44N Based Driver for the DM2G300SH6NE IGBT** Daniel Fuentes, Alejandro Galeas, **Daniel Flores,** and Cinthia Irías *National Autonomous University of Honduras, Tegucigalpa, Honduras*
ID139	**Repeatability-Aware Near-Field EMC Diagnostics for Embedded and Power Electronic Systems** **Dzhihan Menseidov** *University of Telecommunications and Post, Sofia, Bulgaria*
ID182	**A UVM-Based Verification Framework with Fault Injection for MIL-STD-1553B IP Cores** **Yavuz Aksu** [1], İhsan Çiçek [2] [1] *ASELSAN Inc., Ankara, Türkiye* [2] *Gebze Technical University, Kocaeli, Türkiye*
ID186	**Evaluating the Robustness of Cross-Coupled FPGA BRAM PUFs Against Supervised Machine Learning Attacks** Ahmad Al Khas[1], Salih Bayar[1], and Ihsan Cicek[2] [1] *Marmara University, İstanbul, Türkiye* [2] *Gebze Technical University, Kocaeli, Türkiye*
ID201	**Measurement of Inductively Coupled RFID Key Fobs and Cards Immunity to Extraneous Magnetic Fields** **Peter Vestenický**[1], and Juraj Paleček[2] [1] *University of Žilina, Žilina, Slovakia* [2] *Amicus SK, s.r.o., Skalica, Slovakia*
ID266	**MATLAB Simulation of Visual Display Air Bubble-Based System** Petru-Iulian Tofan [1], **Mihaela Andrei** [1], Ana-Maria Grigoras Oanca [2], and Laurentiu-Marius Baicu [1] [1] *"Dunarea de Jos" University of Galati, Romania, Galati, Romania* [2] *"Gheorghe Asachi" Technical University of Iasi, Iasi, Romania*
ID272	**Design of a "Curtain" Control System with Water** **Iliyan Boychev**, Gergana Spasova, and Toma Tomov *Technical University of Varna, Varna, Bulgaria*
ID296	**Development of the Test Bench for Characterization of Operational Amplifiers** **Ioan Lie**, Bogdan Marinca, and Radu Ricman *Politehnica University, Timisoara, Romania*

ONLINE

Thursday, November 26, 2026

Session:	Advanced Education and Training in Engineering 2	Time:	14:15 - 15:45
Chair:	Panagiotis KOGIAS, Greece		
Hall:	Online	Virtual room:	VR_Hall 1

№	Paper
ID51	**Transforming the Creative and Work Process in Graphic Design Through AI Collaboration** Krasimira Drumeva, Bilyana Tsanova, and **Preslava Todorova** *St. Cyril and St. Methodius University of Veliko Tarnovo, Veliko Tarnovo, Bulgaria*
ID149	**Early Consideration of Technical Documentation in Contract Management: A Literature Review and a Conceptual Framework for Process-Oriented Information Systems** **Mario Marsic** [1], Nikolay Yanev [2], and Georgi Dimitrov [2] [1] *University of Library Study and Information Technologies, Stuttgart, Germany* [2] *University of Library Study and Information Technologies, Sofia, Bulgaria*
ID190	**The Role of Artificial Intelligence and Adaptive Learning Systems in Modern Education and the Impact of Various Digital Formats on Students** **Vasil Vasilev**, and Oleg Asenov *University of Veliko Turnovo "St Cyril and St. Methodius", Veliko Tarnovo, Bulgaria*
ID207	**Enhancing Pedagogical Efficiency with a Custom Gamified Project Management Education Environment** **Viktor Velikov,** and Galina Ivanova *University of Ruse, Ruse, Bulgaria*
ID249	**Reference Architecture for Orchestration and Governance of AI agents in a University's Digital Ecosystem under Resource Constraints** **Veselin Popov** *Tsenov Academy of Economics, Svishtov, Bulgaria*
ID307	**Hidden Artefacts of Tick-Based Price Simulation in Financial Education Tools** Elitsa Ibryamova, and **Pavel Zlatarov** *University of Ruse, Ruse, Bulgaria*
ID349	**A Persona-Based Strategic Framework for Women's Participation in Smart Electricity for Buildings VET** **Emmanuel Karapidakis**[1], Rodos Andoulakis[2], Spyros Apostolakis[1], Alexandra Tsekoura[3], Marini Markaki[1], and Costas Andoulakis [4] [1] *Hellenic Mediterranean University, Heraklion, Greece* [2] *LDI UG Co, Berlin, Germany* [3] *Crete Innovation Centre, Heraklion, Greece* [4] *ECTE, Rethimno, Greece*
ID350	**Design and Learning-Outcome Analysis of Stackable Multi-Level Microcredentials in Smart Electricity Sector** **Emmanuel Karapidakis**[1], Spyridon Apostolakis [1], Marini Markaki[1], Rodos Androulakis[2], Jesús Rosel[3], and Barbara Archesso [4] [1] *Hellenic Mediterranean University, Heraklion, Greece* [2] *LDI UG Co, Berlin, Germany* [3] *Mondragon Lingua-Alecop, S.Coop., Basque Country, Spain* [4] *ENAIP NET, Padova, Italy*

ONLINE

Thursday, November 26, 2026

Session:	Smart Telecommunications, Industry and Services 2	Time:	14:15 - 15:45
Chair:	Grigor MIHAYLOV, Bulgaria		
Hall:	Online	Virtual room:	VR_Hall 2

№	Paper
ID42	**Business Process Reengineering for Intelligent Gas Distribution Networks: An Architectural Framework** **Antoaneta P. Ivanova-Bares** *University of Telecommunications and Post, Sofia, Bulgaria*
ID43	**Sector-Wide Empirical Benchmarking of the 19 Active Gas Distribution Operators in Bulgaria** **Antoaneta P. Ivanova-Bares** *University of Telecommunications and Post, Sofia, Bulgaria*
ID44	**A Conceptual and Methodological Model for the Architecture of a Marketing and Logistics Collaboration Platform** Svetlana Dimitrakieva, Siyka Demirova, and **Dobromira Ivanova** *Technical University of Varna, Varna, Bulgaria*
ID47	**Digital Logistics as a Strategic Driver of Emerging B2B and B2C Marketing** Siyka Demirova, Svetlana Dimitrakieva, and **Nikolay Sharaliev** *Technical University of Varna, Varna, Bulgaria*
ID100	**Assessing Adoption Intentions for Digital Wallet Implementation in the European Blockchain Services Infrastructure (EBSI) Based on Latent Factors in Information and Communication Systems** Rusen Gigov**, Ivan Dimitrov,** and Adile Dimitrova *Burgas State University "Prof. Dr. Asen Zlatarov", Burgas, Bulgaria*
ID101	**Autonomous Intelligent Agents as Market Intermediaries: A Readiness Model for SMEs** Nadezhda Koprinkova-Noncheva**, Ivan Dimitrov,** and Adile Dimitrova *Burgas State University "Prof. Dr. Asen Zlatarov", Burgas, Bulgaria*
ID102	**Outsourced Logistics Services and Logistics Efficiency in Bulgarian Manufacturing: An Activity-Level Analysis** **Ivan Dimitrov,** and Adile Dimitrova *Burgas State University "Prof. Dr. Asen Zlatarov", Burgas, Bulgaria*
ID120	**AI-Enabled Project Management for Research Organisations** **David Katana**, Velizar Shalamanov, and Ivan Lalev *Institute of Information and Communication Technologies, Bulgarian Academy of Sciences, Sofia, Bulgaria*
ID136	**Technological Responsibility in the use of Artificial Intelligence in High-tech Companies: An Empirical Study** **Gergana Sl. Dimcheva** *University of Telecommunications and Post, Sofia, Bulgaria*
ID250	**Artificial Intelligence in Operations Management: Applications and Effects on Key Performance Indicators** **Daniel Maier** [1], Emil Papazov [2], and Lyudmila Mihaylova [3] [1] *Business School, Technische Hochschule, Ingolstadt, Germany* [2] *University of National and World Economy, Sofia, Bulgaria* [3] *University of Ruse, Ruse, Bulgaria*
ID340	**Implementation of Logistic Diffusion Models for Satisfying Consumers' Demands Efficiently in Small Gas Distribution Networks** **Antoaneta P. Ivanova-Bares**, and Nina N. Naydenova *University of Telecommunications and Post, Sofia, Bulgaria*

ONLINE

Thursday, November 26, 2026

Session:	Automotive and Industrial Engineering 3	Time:	16:00 - 17:30
Chair:	Jacob FANTIDIS, Greece		
Hall:	Online	Virtual room:	VR_Hall 1

№	Paper
ID108	**Determining the Additional Material Consumption in Elevator Casings for Various Geometric Cross-sections** **Aleksandrina Bankova**, Stefan Tenev, Asparuh Atanasov, and Anastas Yangyozov *Technical University of Varna, Varna, Bulgaria*
ID153	**A Transformer-Based Model for Data Imputation in Vehicle Telemetry: BERT4Vehicle** Omar Sharif [1], Katherine Smith [1], **Murat Kuzlu** [1], Ferhat Ozgur Catak [2], Adel El-Shahat [1] [1] *Old Dominion University, Norfolk, VA, USA* [2] *University of Stavanger, Rogaland, Norway*
ID179	**Developing a Decentralised Traffic Control System with Neighbour-to-Neighbour Communication** **Slavi Slavchev**, and Krasimir Kolev *University of Food Technology, Plovdiv, Bulgaria*
ID191	**Reliability Analysis of the Luxonis OAK-D Camera for ITS Applications** **Boyan Karamilev** *Technical University of Varna, Varna, Bulgaria*
ID253	**Measurement and analysis of vibration in the "Berti" mulching machine** **Vasil Dimitrov**, Aleksandrina Bankova, and Radostina Yankova *Technical University of Varna, Varna, Bulgaria*
ID260	**Experimental Investigation of the Dimensional Accuracy of the Inner Rotor of a Gerotor Hydraulic Motor Produced by Direct Metal Printing (DMLS) from LaserForm® Maraging Steel (B)** Emil Velev, Velislava Raydovska, **Miroslav Aleksiev**, and Petar Georgiev *The University of Plovdiv "Paisii Hilendarski", Plovdiv, Bulgaria*
ID279	**Statistical Evaluation of Dimensional Accuracy, Repeatability and Stability of the FDM Process in Sequential Production** **Anton Bashev**, and Velko Rupetsov *University of Plovdiv "Paisii Hilendarski", Plovdiv, Bulgaria*
ID319	**Investigation of the Indicated Parameters of a Diesel Engine Operating with Biodiesel-diesel Blends** **Velichka Georgieva** [1], Radostin Dimitrov [1], and Simeon Iliev [2] [1] *Technical University of Varna, Varna, Bulgaria* [2] *University of Ruse, Ruse, Bulgaria*
ID320	**Research of Cycle by Cycle variation of Diesel Engine Operating with Alcohol-diesel Blends** Velichka Georgieva [1], Radostin Dimitrov [1], Simeon Iliev[2], and **Stanimir Tsanov** [1] [1] *Technical University of Varna, Varna, Bulgaria* [2] *University of Ruse, Ruse, Bulgaria*
ID164	**Analytical Modeling of Friction Mechanics and Torque Distribution in Threaded Joints** **Kiril Lengerov,** and Ivan Tashev *Technical University of Sofia, Plovdiv, Bulgaria*
ID305	**Factorial Study of the Change in the Roughness Parameters in Textured Laser Coating on 65G Steel** **Georgi Komitov** [1], Ivan Ivanov [2], Kiril Lengerov [1], Emil Yankov [3], Karlis Pigoznis [4], and Vladimir Kotev [5] [1] *Technical University of Sofia branch Plovdiv, Plovdiv, Bulgaria;* [2] *Technical University of Sofia, Sofia, Bulgaria* [3] *University of Ruse, Ruse, Bulgaria;* [4] *Riga Technical University Rezekne Academy, Rezekne, Latvia* [5.] *University of National and World Economy, Sofia, Bulgaria*

ONLINE

Thursday, November 26, 2026

Session:	Telecommunication Systems 3	Time:	16:00 - 17:30
Chair:	Adem KORKMAZ, Türkiye		
Hall:	Online	Virtual room:	VR_Hall 2

№	Paper
ID18	**Reinforcement Learning and Optimal Scheduling for Smart Meter mMTC Uplinks in 5G NR Bandwidth Regimes,** Muhammed Al-Ali[1], Esteban Inga[2], Juan Inga[2], and **Elias Yaacoub**[1] [1] *Qatar University, Doha, Qatar* [2] *Universidad Politécnica Salesiana, Cuenca, Ecuador*
ID20	**Deep Learning–Based Delay–Doppler Super-Resolution for Communication–Centric OFDM ISAC** **Ural Mutlu** *Niğde Ömer Halisdemir University, Niğde, Türkiye*
ID55	**Methodological Evaluation Through Simulation and Experimental Measurement of Yagi-Uda, Microstrip Patch, and Planar Yagi-Uda Antennas** Kelvin Cruz, Franklin Galo, and **Daniel Flores** *National Autonomous University of Honduras, Tegucigalpa, Honduras*
ID66	**Conceptual RFID Preview and Trigger Framework for Infrastructure-Assisted Autonomous Maneuvering** **Svetozar Stefanov,** and Valentina Markova *Technical University of Varna, Varna, Bulgaria*
ID86	**Energy and Spectral Efficiency Analysis of Polar-Coded Massive MIMO Systems** **Ana-Maria Grigoras Oanca**[1], Mihaela Andrei[2], and Daniela Tarniceriu[1] [1] *"Gheorghe Asachi" Technical University of Iasi, Romania* [2] *"Dunarea de Jos" University of Galati, Romania*
ID129	**A Decentralized Communication-Aware Multi-Agent Algorithm for Self-Reorganizing Drone Swarms in Urban FANETs** Denislav Kanev[1], **Magdalena Garvanova**[1], Ivan Garvanov[2], Petar Trifonov[1], Daniela Borissova[3], and Deyan Daneshki[4] [1] *University of Library Studies and Information Technologies, Sofia, Bulgaria* [2] *Institute of Mathematics and Informatics, Bulgarian Academy of Sciences, Sofia, Bulgaria* [3] *Institute of Information and Communication Technologies, Bulgarian Academy of Sciences, Sofia, Bulgaria* [4] *Technical University of Sofia, Sofia, Bulgaria*
ID159	**Multiple-Context Coding for Reversible Data Hiding in Encrypted Images** **Hsiang-Cheh Huang** [1], Chun-Yu Chang Chien [1], and Feng-Cheng Chang [2] [1] *National University of Kaohsiung, Taiwan, R.O.C* [2] *Tamkang University, Taiwan, R.O.C.*
ID168	**Data-Driven Discrete Event Simulation Framework for Mixed Traffic Flows via Predictive Look-Ahead Dispatching** **Todor Dobrev,** and Valentina Markova *Technical University of Varna, Varna, Bulgaria*
ID203	**Pretrained Speech Recognition and Zero-Shot Voice Cloning for Speech Semantic Communication** Asma Mahgoub, and **Elias Yaacoub** *Qatar University, Doha, Qatar*
ID278	**A Contemporary Perspective on Secure Signal Transmission Using Chaos** **Hristina Stoycheva**, and Stanimir Sadinov *Technical University of Gabrovo, Gabrovo, Bulgaria*

ONLINE

Thursday, November 26, 2026

Session:	Information Technologies and Artificial Intelligence 5	Time:	17:45 - 19:15
Chair:	Stanislav PENCHEV, Greece		
Hall:	Online	Virtual room:	VR_Hall 1

№	Paper
ID36	**Web-based Donation System with QR Codes and Blockchain** **Denis Mehmed**, Veneta Aleksieva, and Hristo Valchanov *Technical University of Varna, Varna, Bulgaria*
ID81	**Comparative Analysis of Strategies to Improve Hierarchical Coastal Mapping with Sentinel-2 data** **Nikolay Dimitrov,** and Valentina Markova *Technical University of Varna, Varna, Bulgaria*
ID103	**Identifying AI Misuse in Remote Examinations** **Nikolai Scerbakov**[1], Vadim Pak[2], and Vladimir Muliukha[2] [1] *Graz University of Technology, Graz, Austria* [2] *Peter the Great St. Petersburg Polytechnic University, St. Petersburg, Russia*
ID104	**AI-Based Grading System** **Nikolai Scerbakov**[1], Vadim Pak[2], and Vladimir Muliukha[2] [1] *Graz University of Technology, Graz, Austria* [2] *Peter the Great St. Petersburg Polytechnic University, St. Petersburg, Russia*
ID175	**Segregation of Duties Across Security, Audit, and Identity Management: A Systematic Review of a Fragmented Literature** Sanzhar Rakishev [1], **Dinargul Mukhammejanova** [2], Assel Mukasheva [1], and Jeong Won Kang [4] [1] *Kazakh-British Technical University, Almaty, Kazakhstan* [2] *Al-Farabi Kazakh National University, Almaty, Kazakhstan* [3] *Engineering Korea National University of Transportation, Uiwang-Si, Republic of Korea*
ID297	**Real-time Vehicle Detection System using Artificial Intelligence** **Gergana Spasova**, and Iliyan Boychev *Technical University of Varna, Varna, Bulgaria*
ID300	**Evidence-First Multi-Agent Orchestration for Auditable Neural Cryptanalysis** **Andrii Burtso**, and Uliana Marikutsa *Lviv Polytechnic National University, Lviv, Ukraine*
ID302	**Detection of Attacks on the UAV Command and Control Link Based on Deterministic Telemetry Packet Analysis** Nawras Al Bukhari [1], Arman Uzbekbayev [1], Abu-Alim Ayazbay [1], **Gulzhamal Tursunbayeva** [1], Gani Sergazin [2], Dina Satybaldina [1], Saken Tleuberdin [1], Nurlan Tashatov [1], and Eldor Egamberdiyev [1] [1] *L.N. Gumilyov Eurasian National University, Astana, Kazakhstan* [2] *ALT University named after M. Tynyshpayev, Almaty, Kazakhstan*
ID337	**A Systematic Mapping of Evaluation Practice in Host-Based Ransomware Detection** **Nordaliela Mohd Rusli** [1], Tan Soo Fun [1], Minakshi Ashok Ramteke [2], and Pallavi Sambhare [2] [1] *Universiti Malaysia Sabah, Kota Kinabalu, Malaysia* [2] *G.H Raisoni College of Engineering, Nagpur, India*
ID110	**Analysis and Prediction of Surface Chlorophyll-a Using Machine Learning Models** Dimitrios Kazolis [1], Christos Dionyshs Fotakis [1], and **Theodosia Kazoli** [2] [1] *Democritus University of Thrace Kavala, Greece* [2] *University of Macedonia, Thessaloniki, Greece*
ID239	**AI-Powered Extended Reality Architectures: A Review, Taxonomy, and Research Gap Analysis** Ivaylo Chenchev *University of Telecommunications and Post, Sofia, Bulgaria*

ONLINE

Thursday, November 26, 2026

Session:	Electronics, Power Electronics and EMC 3	Time:	17:45 - 19:15
Chair:	Boris EVSTATIEV, Bulgaria		
Hall:	Online	Virtual room:	VR_Hall 2

№	Paper
ID68	**Throttle-Dependent Electrical Response of an Unloaded Hub Motor from Passive CAN Telemetry** **Magnus Hiie,** and Tormi Lillerand *Estonian University of Life Sciences, Tartu, Estonia*
ID125	**Necessity to Study the Level of Network Security of Power Electronic Devices** **Georgi Georgiev** *South – West University "Neofit Rilski", Blagoevgrad, Bulgaria*
ID174	**A Study of the Operation of SI and GaN Transistors in an AC/DC Industrial Power Supply** **Dobroslav Dankov,** and Tsvetomir Getov *Technical University of Gabrovo, Gabrovo, Bulgaria*
ID195	**Optimal Virtual Inertia and Damping Tuning of Grid-Forming VSG-BESS Considering Transient Frequency and Power Support in a Diesel-PV Microgrid** Adi Soeprijanto, Ni Ketut Aryani**, Muhammad Rifqi Febrian,** Wahyuning Rasyidah, and Ferlita Rizka Yoranda *Sepuluh Nopember Institute of Technology, Surabaya, Indonesia*
ID310	**A Grounded Electronically Tunable Flux-Controlled Memtranstor Emulator Using CFDITA and CCII+** **Mustafa Konal** *Giresun University, Giresun, Turkey*
ID314	**Design and Implementation of a Four-Channel Isolated PWM-Based DDV Driver for Aerospace Actuator Testing** **Muhammed Emre Ercin**, Alisan Ozkaya, Munevver Baba, Yusuf Samil Atar, Baran Arda Dolancay, Bunyamin Tamyurek *Gazi University, Ankara, Türkiye*
ID341	**A Low-Cost & High-Precision LC Meter Design** George A. Adamidis [1], and **Manolis G. Tampouratzis** [2] [1] *Hellenic Mediterranean University, Chania, Greece* [2] *Hellenic Mediterranean University, Heraklion, Greece*
ID247	**Networked Microgrids: Plug-and-Play Architecture and Stability Analysis** **Hien Hoang** [1], Duong Trinh [2], Tu N. Nguyen[1], Hieu T. Nguyen[3] and Thanh Long Vu [4] [1] *Kennesaw State University, Marietta, GA, USA* [2] *1ST Merchant Solutions LLC, USA* [3] *North Carolina Agricultural and Technical State University, Greensboro, NC, USA* [4] *Pacific Northwest National Laboratory, Richland, WA, USA*
ID283	**Nanocrystalline Magnetic Materials in Power Electronics - Comparative Study and Applications** Vencislav Valchev, and **Hristina Gancheva** *Technical University of Varna, Varna, Bulgaria*

Friday, November 27, 2026

Session:	Information Technologies and Artificial Intelligence 6	Time:	09:00 - 10:30
Chair:	Dimitrios KAZOLIS, Greece		
Hall:	Online	Virtual room:	VR_Hall 1

№	Paper
ID53	**Achieved results in Shadow Strike 2026 Live-Fire Cyber Exercise** **Radostin Dimov** *National Military University "Vasil Levski", Shumen, Bulgaria*
ID105	**Strategic Impacts of Artificial Intelligence on the IT Labor Market: Scenario Modeling** **Tarana Aliyeva** [1], **Shamil Humbatov** [2], **and Reyhan Azizova** [1] [1] *Azerbaijan State University of Economics, Baku, Azerbaijan* [2] *Qarabağ University, Khankendi, Azerbaijan*
ID155	**Comparative Evaluation of Random Forest and YOLOv8 for Individual-Plant Rice–Weed Discrimination at Early Growth Stages** **Ioannis Glykos**[1], Raoul Jean van Esdonk[2], Dimitrios Vlotsos[1], Konstantinos G. Arvanitis[1], Demosthenis Chachalis[3], and Gerassimos G. Peteinatos [4] [1] *Agricultural University of Athens, Athens, Greece* [2] *International Hellenic University, Thessaloniki, Greece* [3] *Benaki Phytopathological Institute, Athens, Greece* [4] *Hellenic Agricultural Organisation—DIMITRA, Athens, Greece*
ID160	**High-Capacity Reversible Data Hiding in Encrypted Images Using Two-Dimensional Markov Context Modeling of the Location Map** **Hsiang-Cheh Huang** [1], Bo-Rui Chen [1], and Feng-Cheng Chang [2] [1] *National University of Kaohsiung, Taiwan, R.O.C* [2] *Tamkang University, Taiwan, R.O.C.*
ID162	**Dual Prime Lossless Visual Secret Sharing** **Hsiang-Cheh Huang** [1], Chia-Hung Shen [1], and Feng-Cheng Chang [2] [1] *National University of Kaohsiung, Taiwan, R.O.C* [2] *Tamkang University, Taiwan, R.O.C.*
ID172	**Auditing Evidence Use in Lightweight Open Source Intelligence Verification** **Yordan Terziev,** and Velizar Shalamanov *Institute of Information and Communication Technologies, Bulgarian Academy of Sciences, Sofia, Bulgaria*
ID218	**Artificial Intelligence and Digital Transformation Discourse in Sustainability Reporting: A Non-Parametric Analysis of Turkish Textile Firms** **Selma Bulut** [1], Beyza Buzol Mülayim [1], and Bozhana Stoycheva [2] [1] *Kırklareli University, Kırklareli, Türkiye* [2] *University of Ruse, Ruse, Bulgaria*
ID220	**Machine-Hard is Not Human-Hard: Detector Difficulty and Human Difficulty are Uncorrelated in Machine-Generated Text Detection** Hossain Md Niaze Motaher[1], Mohammed Navid Izhar[2], Md Abrar Jamil[2], Md Arifur Rahman[2], and **Abdul Hasib** [3] [1] *Lamar University, USA;* [2] *Houston Independent School District, USA;* [3] *University of Frontier Technology, Bangladesh*
ID334	**Large Language Models for Multi-Framework IT Security Audits: A Review of Tool Requirements and Future Directions** **Ebru Resul**, Mădălin-Corneliu Frunzete, Răzvan Rughiniș, and Emilia-Felicia Cosniță *National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania*
ID347	**Probabilistic Information Security Risk Assessment in Internet of Things Communication Networks** **Andrian Prisacaru,** Ludmila Peca, Mihai-Daniel Chiroiu, and Pavel Nistiriuc *Technical University of Moldova, Chisinau, Moldova*

ONLINE

Friday, November 27, 2026

Session:	Energy and Renewable Sources 3	Time:	09:00 - 10:30
Chair:	Ventsislav KESEEV, Bulgaria		
Hall:	Online	Virtual room:	VR_Hall 2

№	Paper
ID52	**A Study of a Method for Tracking the Maximum Power Point in Photovoltaic Panels** **Hristo Antchev,** and Dimitar Borisov *University of Chemical Technology and Metallurgy, Sofia, Bulgaria*
ID82	**Study of the Impact of Tip Speed Ratio on the Hydrodynamic Performance of Hydrokinetic Turbines** **Rositsa Velichkova,** Rangel Sharkov, Aleksandar Stanilov, Iskra Simova, and Angel Alexandrov *Technical University of Sofia, Sofia, Bulgaria*
ID96	**Offshore Wind Readiness in the Balkans: A Comparative Assessment of Greece, Croatia, Romania and Bulgaria** **Athina-Danai Vardaka,** and Jacob G. Fantidis *Democritus University of Thrace, Kavala, Greece*
ID145	**Sensitivity of Distribution Reliability Indices to Time Thresholds and Scenario-Based Assessment of Remote Service Restoration** **Anton Filipov** [1], Mediha Mehmed-Hamza [2], and Milena Ivanova [1] [1] *Technical University of Varna, Varna, Bulgaria* [2] *Medical University of Varna, Varna, Bulgaria*
ID147	**Ridge-Stacked Ensemble Framework for 15-Minute-Ahead Short-Term Load Forecasting** **Aarav Karumanchi** [1], Pranav Kulkarni [2], and Anaiy Somalwar [3] [1] *Independent Researcher, Austin, TX, United States* [2] *Stanford University, Stanford, CA, United States* [3] *University of California, Berkeley, CA, United States*
ID148	**eleniaEMS: An Open-Source Energy Management System for Research Use Cases** **Eike Niehs**, Julien Essers, Johannes Rothert, and Bernd Engel *Technische Universität, Braunschweig, Germany*
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ID89	**Optimizing Azimuth and Tilt Angles for Bifacial Photovoltaic Systems under Varying Surface Albedo** **Ventsislav Keseev** *University of Ruse "Angel Kanchev", Ruse, Bulgaria*

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Chair:	Teodor ILIEV, Bulgaria		
Hall:	Online	Virtual room:	VR_Hall 1

№	Paper
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ID77	**Models of Effective Learning Environments in Virtual Reality** Slavena Tihova, and **Emiliyan Petkov** *St. Cyril and St. Methodius University of Veliko Tarnovo, Veliko Tarnovo, Bulgaria*
ID112	**AI Adoption in Higher Education: A SWOT Analysis from Lecturers' Perspectives** Diana Ilieva, Victor Gladchenko, and **Dimitar Kolev** *University of Telecommunications and Post, Sofia, Bulgaria*
ID152	**Visual Prompt Injection for AI-Resilient Digital Assessment. A Conceptual Framework for Reducing Unauthorized Use of Generative AI** **Donika Valcheva,** Teodor Kalushkov, and Georgi Shipkovenski *St. Cyril and St. Methodius University, Veliko Tarnovo, Bulgaria*
ID192	**Exploring the Possibilities of Cloud Services as an Educational Technology through the Integration of Project-based Activities** **Neli Vasileva,** and Mariyana Nikolova *University of Veliko Turnovo "St Cyril and St. Methodius", Veliko Tarnovo, Bulgaria*
ID331	**Integration of Colour Sensing and ESP32 Joystick Control in Educational Robots** Fatima Sapundzhi [1,2], Elizabet Simeonova[1], **Peter Tsonkov**[1], Antonina Ivanova[2], Slavi Georgiev [3,4], Venelin Todorov [4], Ivan Georgiev [3,4], Salih Sapundzhi [1,4], Metodi Popstoilov[1] [1] *South-West University "Neofit Rilski", Blagoevgrad, Bulgaria* [2] *Varna Free University "Chernorizets Hrabar", Varna, Bulgaria* [3] *University of Ruse, Ruse, Bulgaria* [4] *Institute of Mathematics and Informatics, Bulgarian Academy of Sciences, Sofia, Bulgaria* [5] *High School of Natural Sciences and Mathematics "Academician Sergey Korolyov", Blagoevgrad, Bulgaria*
ID209	**A Simple Cyberphysical Greenhouse Weed Control System in Scale for Educational Purposes** Dimitrios Loukatos [1], Ilias Michalopoulos [1], **Ioannis Glykos** [1], Ioannis-Vasileios Kyrtopoulos [1], Dimitrios Piromalis [2], Konstantinos G. Arvanitis [1] [1] *Agricultural University of Athens, Athens, Greece* [2] *University of West Attika, Athens, Greece*
ID359	**Detection of Asymmetric Delay Attacks in Entanglement-Based Two-Way Time Transfer over Buried and Aerial Fiber: A Simulation Study** **Ivelin Penkov** [1], Teodor Iliev [1], Gani Balbayev [2] [1] *University of Ruse, Ruse, Bulgaria* [2] *ALT University, Almaty, Kazakhstan*

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Friday, November 27, 2026

Session:	Energy and Renewable Sources 4	Time:	10:45 - 12:00
Chair:	Ivaylo STOYANOV, Bulgaria		
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№	Paper
ID83	**Selecting Historical Memory for Probabilistic Shoulder-Season Electricity Load Forecasting** **Nikolay Nikolov,** and Iliyan Vasilev *University of Architecture, Civil Engineering and Geodesy, Sofia, Bulgaria*
ID97	**Impact of High PV Penetration level on Stability of Large-Scale Power System** **Ahmed A. Al-Katheri,** Ghazi A. Ghazi, and Essam A. Al-Ammar *King Saud University, Riyadh, Saudi Arabia*
ID132	**Duty Cycle Space Scanning and XGBoost-Assisted MPPT Initialization Under Partial Shading** **Volkan Kiziloğlu**, and Nagihan Severoğlu *Erzurum Technical University, Erzurum, Türkiye*
ID138	**Pilot Projects for Integrating Renewable Energy Sources into an Energy-efficient Building** **Jumayev Aganiyaz Yagshiyevich**, and Atayev Merdan Charymyradovich *State Energy Institute of Turkmenistan (SEIT), Mary, Turkmenistan*
ID146	**Multicriteria Method for Preliminary Assessment of Automation Opportunities on Radial Medium Voltage Feeders** **Anton Filipov** [1], Mediha Mehmed-Hamza [2], and Milena Ivanova [1] [1] *Technical University of Varna, Varna, Bulgaria* [2] *Medical University of Varna, Varna, Bulgaria*
ID208	**Experimental Study of the Contact System of a High-Voltage SF_6 Circuit Breaker Using Dynamic Contact Resistance** Ivan Malamov [1], **Ivan Hadzhiev** [2], Valentin Mateev [3], and Dimitar Dimitrov [1] [1] *Electricity System Operator, Sofia, Bulgaria* [2] *Technical University of Sofia, Plovdiv Branch, Plovdiv, Bulgaria* [3] *Technical University of Sofia, Sofia, Bulgaria*
ID258	**Beyond Generation: A Multi-Criteria Assessment of Green Energy Transition and Grid Flexibility Performance in EU Countries** **Ayşe Nuray Canat** *Istanbul Sabahattin Zaim University, Istanbul, Turkiye*
ID317	**Parametric Analysis and Techno-Economic Evaluation of Residential Hybrid PV Systems Utilising PERC and TOPCon Technologies** **Ondrej Hosticka** [1], Milan Belik [1], and Olena Rubanenko [2] [1] *University of West Bohemia, Pilsen, Czech Republic* [2] *Vinnytsia National Technical University, Kyiv, Ukraine*

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Friday, November 27, 2026

Session:	Closing ceremony	Time:	12:00 - 12:10
Chair:	Teodor ILIEV, Bulgaria		
Hall:	Online	Virtual room:	VR_Hall 1

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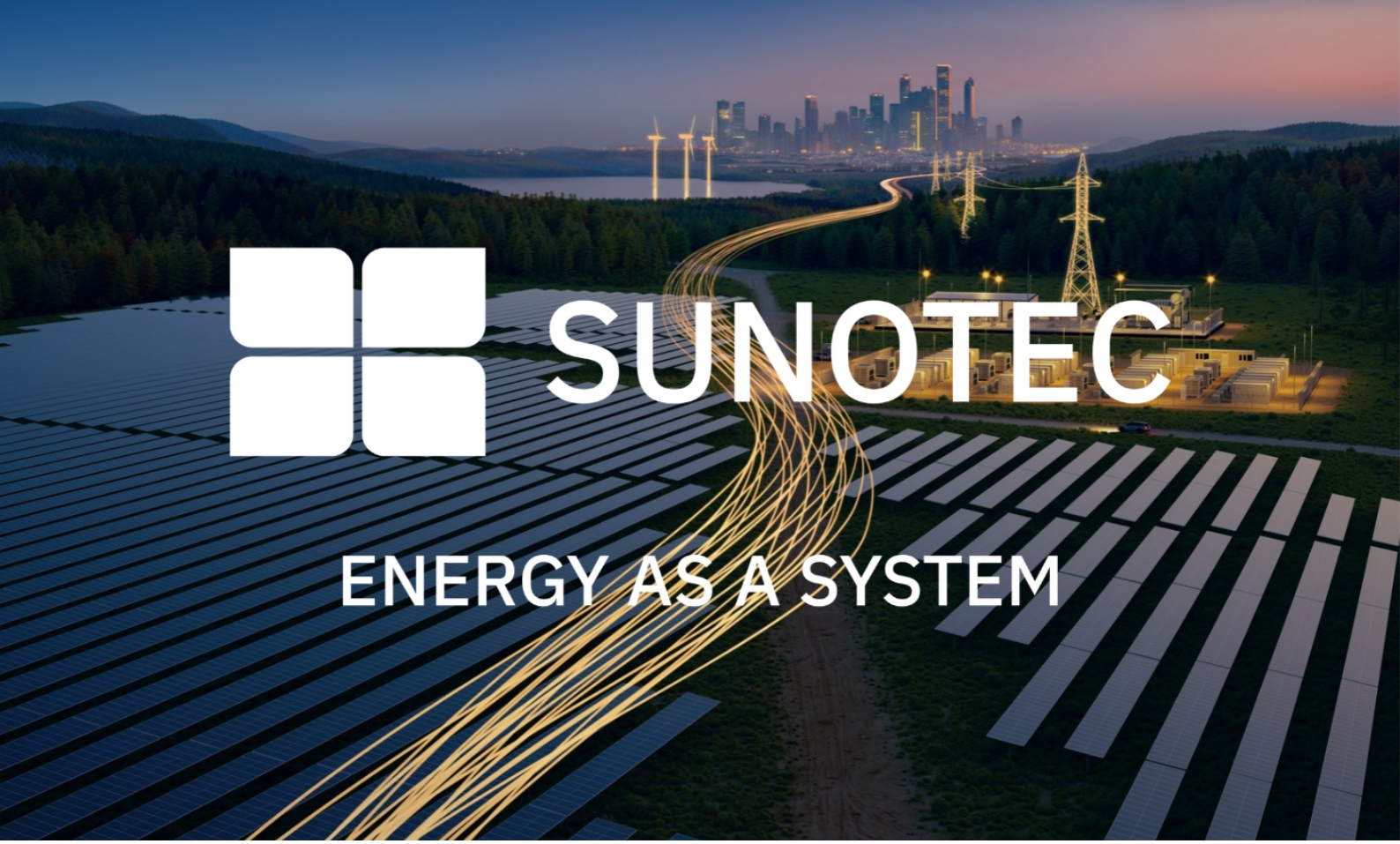
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