

15th INTERNATIONAL CONFERENCE
on
ELECTRONICS, COMPUTERS
and ARTIFICIAL INTELLIGENCE
ECAI 2023, June 29– June 30, 2023



PROGRAM

hosted by

POLITEHNICA UNIVERSITY OF BUCHAREST, Bucharest, Romania:

- Faculty of Electronics, Telecommunications and Information Technology

- Faculty of Automatic Control and Computers

Organizers:

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The papers will be published in the ECAI proceedings, indexed in IEEE Xplore® and submitted to ISI Web of Knowledge databases. The selected papers will be sent to the appropriate IEEE IAS journals (up to 10%) and MDPI journals for publishing, after those papers will be further reviewed as normal.

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Text processing: Adriana-Gabriela Schiopu
Organizing committee: Mohammed Sallah, Adriana-Gabriela Schiopu

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Emil Simion	Mihail Aurel Titu	Viorel Nicolae
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Florentina Magda Enescu	Mircea Raceanu	Zdzislaw Polkowski
Florin Birleanu	Mironela Pirnau	

Thursday, June 29th

08:00-08:50 Authors Registration

LOCATION: [Desk Hall](#)

09:00-09:40 Session 1: ECAI-2023 OPENING CEREMONY

CHAIR: [Nicu Bizon](#) (University of Pitesti, Romania)

LOCATION: [Room 2.1.](#)

09:00 [Nicu Bizon](#) (University of Pitesti, Romania)

Welcome message

09:05 [Mihnea Cosmin Costoiu](#) (Politehnica University of Bucharest, Romania)

Welcome message from Politehnica University of Bucharest

09:10 [Dumitru Chirlesan](#) (University of Pitesti, Romania)

Welcome message from University of Pitesti

09:15 [Mihnea Udrea](#) (Politehnica University of Bucharest, Romania)

Welcome message from Faculty of Electronics, Telecommunications and Information Technology, POLITEHNICA University of Bucharest

09:20 [Laurentiu-Mihai Ionescu](#) (University of Pitesti, Romania)

Welcome message from Faculty of Electronics, Communication and Computers, University of Pitesti

09:25 [Lucian Toma](#) (Politehnica University of Bucharest, Romania)

Welcome message from the Romanian IEEE section

09:30 [Takeshi Yamakawa](#) (Kyushu Institute of Technology, Japan)

Welcome message of Takeshi YAMAKAWA, Honorary Chair of the ECAI conference

09:35 [Gabriel Papuc](#) (ORANGE Romania, Romania)

Welcome message of Sponsors

09:40-11:00 Session 2: KEYNOTE LECTURERS I

KEYNOTE LECTURERS I

CHAIRS:

[Nicu Bizon](#) (University of Pitesti, Romania)

[Phatiphat Thounthong](#) (King Mongkut's University of Technology North Bangkok, Thailand)

LOCATION: [Room 2.1.](#)

09:40 [Constantin Paleologu](#) (Politehnica University of Bucharest, Romania)

A Perspective on the Identification of Acoustic Impulse Responses ([abstract](#))

10:20 [Dorin Neacsu](#) (Gheorghe Asachi Technical University of Iasi, Romania)

State Space based Control as an Alternative to Conventional Loop Design in Power Converters for Microprocessors ([abstract](#))

11:00-11:30Coffee Break

Coffee break

11:35-12:15 Session 3: KEYNOTE LECTURERS II

KEYNOTE LECTURERS II

CHAIRS:

[Dorin Neacsu](#) (Gheorghe Asachi Technical University of Iasi, Romania)

[Constantin Paleologu](#) (University Politehnica of Bucharest, Romania)

LOCATION: [Room 2.1.](#)

11:35 [Phatiphat Thounthong](#) (King Mongkut's University of Technology North Bangkok, Thailand)

Introduction to Hamiltonian-Energy Control Law to Solve Stability Issue in Distributed System: Case Study-DC/DC Boost Converter

12:15-14:00 ORANGE EVENTS

Brokerage events

LOCATION: [Desk Hall](#)

12:15-13:45 Session 4A: SESIUNEA DE COMUNICĂRI ȘTIINȚIFICE a Filiala Pitești a C.R.I.F.S.T. - Academia Română

CHAIRS:

[Sebastian Parlac](#) (CRIFST Arges, Romania)

[Lucian Sipiridon](#) (CRIFST – ACADEMIA ROMÂNĂ, Romania)

LOCATION: [Room 2.1.](#)

12:15-14:00 Session 4B: ROUND TABLE

“INNOVATIVE SMART DIGITAL PLATFORM [ISDP]”, Cod SMIS 142654 - Bogdan-Adrian ENACHE

The general objective of the project is to diversify the company's activities by researching and developing an innovative software application for automatic monitoring and comprehensive analysis of all information received from IoT devices. The application will have the capability to analyze and process parameters, monitor logs, and correlate events. This application, called Innovative Smart Digital Platform (ISDP), aims to meet the various requirements of identified potential markets.

“E SAFETY DRIVING APPLICATION” COD SMIS 142406 - Bogdan-Adrian ENACHE

The general objective of the project is to diversify the company's activity, through the research and development of an innovative software application for monitoring the traffic of the vehicle operator, E-SAFETY DRIVING APPLICATION (ESDA), which will meet the various requirements of the identified potential markets.

LOCATION: [Desk Hall](#)

14:00-15:30 Lunch Break

15:30-17:00 Session 5A: Control, robotics and mechatronics

ECAI Afternoon sections

REGULAR SESSION DAY 1 - 1

CHAIRS:

[Alexandru Savulescu](#) (Universitatea Petrol-Gaze din Ploiești, Romania)

[Serkan Budak](#) (Konya Technical University, Turkey)

LOCATION: [Room 2.1.](#)

15:30 [Serkan Budak](#) (Konya Technical University, Turkey)

[Firat Bozkaya](#) (Konya Technical University, Turkey)

[Mustafa Yasin Akmaz](#) (Konya Technical University, Turkey)

[Şükrücan Tiglioglu](#) (Konya Technical University, Turkey)

[Cansel Boynukara](#) (Konya Technical University, Turkey)

[Okan Kazanci](#) (Konya Technical University, Turkey)

[Zülal Hilal Yıldız Budak](#) (Konya Technical University, Turkey)

[Akif Durdu](#) (Konya Technical University, Turkey)

[Cemil Sungur](#) (Konya Technical University, Turkey)

Use of Yolo Algorithm for Traffic Sign Detection in Autonomous Vehicles and Improvement Using Data Replication Methods ([abstract](#))

PRESENTER: [Serkan Budak](#)

15:45 [Cosmin Bucur](#) (Ovidius University of Constanta, Faculty of Engineering, Romania)

[Alexandru Andrei](#) (Faculty of Industrial Engineering and Robotics, Romania)

[Sorin Tasu](#) (Ovidius University of Constanta, Faculty of Engineering, Romania)

Controlling industrial robots with Simulink ([abstract](#))

PRESENTER: [Alexandru Andrei](#)

- 16:00 [Zahidi Rahman](#) (MIMOS Berhad, Malaysia)
[Wen Chek Leong](#) (Staff Researcher, MIMOS Berhad, Malaysia, Malaysia)
Path Planning Optimization of Automated Guided Vehicles using Chaotic Marine Predators Algorithm ([abstract](#))
 PRESENTER: [Wen Chek Leong](#)
- 16:15 [Marius Constantin Marica](#) (Doctoral School of Electronics, Telecommunications and Information Technology Politehnica University of Bucharest, Romania)
[Nicu Bizon](#) (Department of Electronics, Communications and Computers University of Pitesti, Romania)
[Ionel Bostan](#) (Department of Electronics, Communications and Computers University of Pitesti, Romania)
Upgrading Legacy Automation Equipment to Achieve Industry 4.0 Compatibility ([abstract](#))
 PRESENTER: [Marius Constantin Marica](#)
- 16:30 [Alexandru Savulescu](#) (Petroleum Gas University of Ploiesti, Romania)
[Alina Daniela Handra](#) (Petroleum Gas University of Ploiesti, Romania)
[Cristina Pupaza](#) (University of Petrosani, Romania)
Study of the influence of frequency converters on electrical power quality indicators ([abstract](#))
 PRESENTER: [Alexandru Savulescu](#)

15:30-17:00 Session 5B: Signal and image processing

ECAI Afternoon sections

REGULAR SESSION DAY 1 - 2

CHAIRS:

[Coanda Henri](#) (Valahia University of Targoviste, Romania)

[Ovidiu-Constantin Novac](#) (University of Oradea, Romania)

LOCATION: [Room 2.2.](#)

- 15:30 [Andrei Cosmin Jitaru](#) (AIMultimediaLab, UPB, Romania)
[Bogdan Ionescu](#) (AIMultimediaLab, UPB, Romania)
High Density Crowd Scene Detection in Untrimmed Streaming Videos for Surveillance Purpose ([abstract](#))
- 15:45 [Cristian Stanescu](#) (Valahia University of Targoviste, Romania)
[Eduard Gabriel Militaru](#) (University Valahia of Targoviste, Romania)
[Predusca Gabriel](#) (University Valahia of Targoviste, Romania)
[Liana Denisa Circiumarescu](#) (Valahia University of Targoviste, Romania)
[Nicoleta Angelescu](#) (Valahia University of Targoviste, Romania)
[Dan Constantin Puchianu](#) (Valahia University of Targoviste, Romania)
VoIP system for Wi-Fi networks and smart terminals ([abstract](#))
 PRESENTER: [Cristian Stanescu](#)
- 16:00 [Miguel Santos Marques](#) (2Ai – School of Technology, IPCA, Portugal)
[Ricardo Gomes Faria](#) (Mobileum, Portugal)
[Pedro Santos](#) (Mobileum, Portugal)
[José Henrique Brito](#) (2Ai – School of Technology, IPCA, Portugal)
Soccer Pitch Areas Segmentation with Hierarchical U-Net on the SoccerNet Dataset ([abstract](#))
 PRESENTER: [Miguel Santos Marques](#)
- 16:15 [Robert-Alexandru Dobre](#) (University Politehnica of Bucharest, Romania)
[Constantin Paleologu](#) (University Politehnica of Bucharest, Romania)
[Jacob Benesty](#) (INRS-EMT, University of Quebec, Canada)
[Felix Albu](#) (Valahia University of Targoviste, Romania)
On the Decomposition Parameter of the RLS Algorithm Based on the Nearest Kronecker Product ([abstract](#))
 PRESENTER: [Constantin Paleologu](#)

- 16:30 [Doru Florin Chiper](#) ("Gheorghe Asachi" Technical University of Iasi, Romania)
[Radu Matei](#) ("Gheorghe Asachi" Technical University of Iasi, Romania)
Polyphase Implementation for Gaussian 2D FIR Filters with Circular Symmetry ([abstract](#))
 PRESENTER: [Doru Florin Chiper](#)
- 16:45 [Alin Bobeica](#) (Valahia University of Targoviste, Romania)
[Ioan Catalin Dragoi](#) (Valahia University of Targoviste, Romania)
[Henri-George Coanda](#) (Valahia University of Targoviste, Romania)
[Dinu Coltuc](#) (Valahia University of Targoviste, Romania)
Adapting the PPVO framework for Audio Reversible Data Hiding ([abstract](#))
 PRESENTER: [Alin Bobeica](#)

15:30-17:00 Session 5C: Software, databases, and computer applications I

ECAI Afternoon sections

REGULAR SESSION DAY 1 - 3

CHAIRS:

[Mihail Aurel Titu](#) (Lucian Blaga University of Sibiu, Romania)
[Gheorghe Grigoras](#) (The "Gheorghe Asachi Technical University from Iasi, Romania)

LOCATION: [Room 2.3.](#)

- 15:30 [Aurel Mihail Titu](#) (Lucian Blaga University of Sibiu, Romania)
[Radu Costin Moisescu](#) (Politehnica University of Bucharest, Romania)
[Mihai Dragomir](#) (Technical University of Cluj Napoca, Romania)
Databases restoration processes in intellectual property organizations ([abstract](#))
- 15:45 [Radu Costin Moisescu](#) (Politehnica University of Bucharest, Romania)
[Constantin Oprean](#) (Lucian Blaga University of Sibiu, Romania)
[Aurel Mihail Titu](#) (Lucian Blaga University of Sibiu, Romania)
Data management in intellectual property organizations ([abstract](#))
- 16:00 [Aurel Mihail Titu](#) (Lucian Blaga University of Sibiu, Romania)
[Dorin Vasile Deac Suteu](#) (Politehnica University of Bucharest, Romania)
[Maria Popa](#) ("1 December 1918" University of Alba Iulia, Romania)
[Alina Bianca Pop](#) (Technical University of Cluj Napoca, Romania)
[Diana Dragomir](#) (Technical University of Cluj Napoca, Romania)
IT integration concept for Integrated Local and area public Interest Service providers ([abstract](#))
- 16:15 [Dorin Vasile Deac Suteu](#) (Politehnica University of Bucharest, Romania)
[Aurel Mihail Titu](#) (Lucian Blaga University of Sibiu, Romania)
[Maria Popa](#) ("1 December 1918" University of Alba Iulia, Romania)
[Alina Bianca Pop](#) (Technical University of Cluj Napoca, Romania)
[Diana Dragomir](#) (Technical University of Cluj Napoca, Romania)
Provision of IT security access to integrated applications for Local and Regional Utility Service providers approach ([abstract](#))
- 16:30 [Gheorghe Grigoras](#) ("Gheorghe Asachi" Technical University of Iasi, Romania)
[Bogdan-Constantin Neagu](#) ("Gheorghe Asachi" Technical University of Iasi, Romania)
[Vasilica Dandea](#) ("Gheorghe Asachi" Technical University of Iasi, Romania)
Two-Stage Framework for Steady-State Analysis of Low Voltage Electric Distribution Networks Integrating Photovoltaic Prosumers ([abstract](#))
 PRESENTER: [Gheorghe Grigoras](#)
- 16:45 [Bogdan Constantin Neagu](#) ("Gheorghe Asachi" Technical University of Iasi, Romania)
[Grigoras Gheorghe](#) ("Gheorghe Asachi" Technical University of Iasi, Romania)
[Razvan-Petru Livadariu](#) (Gheorghe Asachi Technical University of Iasi, Romania, Romania)

Additional Power Losses Estimation in Harmonic Polluted LV Distribution Grid using a Ward's Hierarchical Clustering Method ([abstract](#))

PRESENTER: [Bogdan Constantin Neagu](#)

15:30-17:00 Session 5D: Artificial Intelligence and expert systems I

ECAI Afternoon sections

REGULAR SESSION DAY 1 - 4

CHAIRS:

[Vasile-Gabriel Iana](#) (University of Pitesti, Romania)

[Victor-Emil Neagoe](#) (Polytechnic University of Bucharest, Romania)

LOCATION: [Room 3.2.](#)

15:30 [Iulia-Ramona Macașoi](#) (Polytechnic University of Bucharest, Romania)

[Victor-Emil Neagoe](#) (Polytechnic University of Bucharest, Romania)

Breast Cancer Detection using Thermal Infrared Image Analysis based on Dempster-Shafer Decision Fusion of CNN Classifiers ([abstract](#))

PRESENTER: [Victor-Emil Neagoe](#)

15:45 [Gabriela-Loredana Ghenea](#) (Polytechnic University of Bucharest, Romania)

[Victor-Emil Neagoe](#) (Polytechnic University of Bucharest, Romania)

Classification of Chest CT Images for COVID-19 Detection Using an Ensemble of Twin CNNs with Decision Fusion ([abstract](#))

PRESENTER: [Gabriela-Loredana Ghenea](#)

16:00 [Liviu Rujan](#) (Polytechnic University of Bucharest, Romania)

[Victor-Emil Neagoe](#) (Polytechnic University of Bucharest, Romania)

A Novel Approach for Hyperspectral Image Classification using Bat Algorithm to Optimize a CNN Classifier ([abstract](#))

PRESENTER: [Liviu Rujan](#)

16:15 [Yuxin Huang](#) (Xiamen University Malaysia, Malaysia)

[Shaidah Jusoh](#) (Xiamen University Malaysia, Malaysia)

Sentiment Detection through Emotion Classification Using Deep Learning Approach for Chinese Text ([abstract](#))

16:30 [Daniela Andreea Coman](#) (University of Pitesti, Romania)

[Silviu Ionita](#) (University of Pitesti, Department of Electronics, Computers and Electrical Engineering, Romania)

[Ioan Lita](#) (University of Pitesti, Department of Electronics, Computers and Electrical Engineering, Romania)

Experimental Research for the Analysis and Classification of EEG Signals With the Aim of Identifying Brain Activity Under the Mental Calculation Tasks ([abstract](#))

PRESENTER: [Daniela Andreea Coman](#)

16:45 [Bogdan Leu](#) (Transelectrica, Romania)

[George Seritan](#) (Politehnica University of Bucharest, Faculty of Electrical Engineering, Romania)

[Bogdan Enache](#) (Politehnica University of Bucharest, Faculty of Electrical Engineering, Romania)

[Gabriel Tănăsescu](#) (Simtech International, Romania)

[Radu Porumb](#) (Politehnica University of Bucharest, Faculty of Energy Engineering, Romania)

[Irina Vilciu](#) (Politehnica University of Bucharest, Faculty of Electrical Engineering, Romania)

Power transformers loss of life evaluation using winding insulation resistance calculation model ([abstract](#))

PRESENTER: [Bogdan Leu](#)

ECAI Afternoon sections

REGULAR SESSION DAY 1 - 5

CHAIRS:

[Felix Albu](#) (Valahia University of Targoviste, Romania)

[Paul Ryan Santiago](#) (Ateneo de Manila University, Philippines)

LOCATION: [Room 4.2.](#)

- 15:30 [Carlos Oppus](#) (Ateneo de Manila University, Philippines)
[Paul Ryan Santiago](#) (Ateneo de Manila University, Philippines)
[Justin Bryce Torres](#) (Ateneo de Manila University, Philippines)
[Neil Angelo Mercado](#) (Ateneo Innovation Center, Philippines)
[Paul Cabacungan](#) (Ateneo Innovation Center, Philippines)
[Reymond Cao](#) (Ateneo Innovation Center, Philippines)
[Nerissa Cabacungan](#) (Ateneo Innovation Center, Philippines)
[Gregory Tangonan](#) (Ateneo Innovation Center, Philippines)

A Digital Twin Approach of A-vent Wireless Sensor for Real-Time and Predictive Monitoring of Patient Ventilator Asynchrony ([abstract](#))

PRESENTER: [Paul Ryan Santiago](#)

- 15:45 [Florentina Magda Enescu](#) (University of Pitesti - UPIT, Romania)
[Cosmin-George Nicolăescu](#) (Department of Electronics, Communications and Computers University of Pitesti, Romania)
[Nicu Bizon](#) (University of Pitesti; University Politehnica of Bucharest, Romania)

Smart System using Blockchain for Medical Diagnosis ([abstract](#))

PRESENTER: [Cosmin-George Nicolăescu](#)

- 16:00 [Robert-Nicolae Boștinăru](#) (Politehnica University of Bucharest, Romania)
[Nicu Bizon](#) (Politehnica University of Bucharest, Romania)
[Sebastian Drăgușin](#) (Politehnica University of Bucharest, Romania)
[Florin-George Gionea](#) (Technical University of Civil Engineering Bucharest, Romania)

A brief Overview of Electrical Fire Extinguishing, Detection and Signalling Equipment: Current and Future Technologies ([abstract](#))

PRESENTER: [Sebastian Drăgușin](#)

- 16:15 [Popescu Mihai](#) (Doctoral School of Faculty of Electronics and Telecommunications Polytechnic University of Bucharest UPB, Romania)
[Ravariu Cristian](#) (Dept. of Electronic Devices Circuits and Architectures, BioNEC Group Polytechnic University of Bucharest, Romania)
[Babarada Florin](#) (Dept. of Electronic Devices Circuits and Architectures, ETTI, Polytechnic University of Bucharest, Romania)

Neural Circuits and Their Electronic Models ([abstract](#))

PRESENTER: [Popescu Mihai](#)

- 16:30 [Ion Caciula](#) (Valahia University of Targoviste, Romania)
[Giorgian Marius Ionita](#) (Valahia University of Targoviste, Romania)
[Henri George Coanda](#) (Valahia University of Targoviste, Romania)
[Nicoleta Angelescu](#) (Valahia University of Targoviste, Romania)
[Daniela Hagiescu](#) (Advanced Slisys SRL, Romania)
[Felix Albu](#) (Valahia University of Targoviste, Romania)

Low Cost Sensor-based Gait Monitoring System ([abstract](#))

PRESENTER: [Felix Albu](#)

16:45 [Sebastian Dragusin](#) (University of Pitesti, Romania)
[Nicu Bizon](#) (University of Pitesti, Romania)
[Robert Bostinaru](#) (University of Pitesti, Romania)

A Brief Overview Of Current Encryption Techniques Used In Embedded Systems: Present And Future Technologies ([abstract](#))

PRESENTER: [Sebastian Dragusin](#)

15:30-17:00 Session 5F: E-SESSION I

ECAI Afternoon sections

E-SESSION 1

CHAIRS:

[Pham Dai](#) (TLU, Viet Nam)

[Srinivas Ramavath](#) (KIIT University, India)

LOCATION: [E-Session Room 1](#)

15:30 [Srinivas Ramavath](#) (KIIT University, India)
[Bhargav Appasani](#) (KIIT University, India)
[Nicu Bizon](#) (University of Pitesti, Romania)
[Umesh Chandra Samal](#) (KIIT University, India)

Closed form of the Power Spectral Density for GFDM signals ([abstract](#))

PRESENTER: [Srinivas Ramavath](#)

15:45 [Pham Dai](#) (TLU, Viet Nam)

Sequential Convex Program for Variable Speed Pump Scheduling in Water Distribution Systems ([abstract](#))

16:00 [Pham Duc Dai](#) (Thuyloi University, Viet Nam)

An Efficient Mixed Integer Nonlinear Program Model for Optimal Localization of Pressure Reducing Valves in Water Distribution Systems ([abstract](#))

16:15 [Nguyen Hoang Viet](#) (ThuyLoi University, Viet Nam)

[Pham Duc Dai](#) (Thuyloi University, Viet Nam)

Predictive Current Control with Vector Selection of a Voltage Source Inverter ([abstract](#))

PRESENTER: [Nguyen Hoang Viet](#)

16:30 [Ibtihaj Ahmad](#) (School of Computer Science, Northwestern Polytechnical University Xi'an, PR.China, China)

[Mian Aitazaz Ahmad](#) (School of Computer Science, Northwestern Polytechnical University Xi'an, PR.China, China)

[Sadia Jabbar Anwar](#) (School of Computer Science, Northwestern Polytechnical University Xi'an, PR.China, China)

Transfer Learning and Dual Attention Network Based Nuclei Segmentation in Head and Neck Digital Cancer Histology Images ([abstract](#))

PRESENTER: [Ibtihaj Ahmad](#)

16:45 [Umar Saleem](#) (School of Automation NorthWestern Polytechnical University, China)

[Weilin Li](#) (School of Automation NorthWestern Polytechnical University, China)

[Weinjie Liu](#) (School of Automation NorthWestern Polytechnical University, China)

[Ibtihaj Ahmad](#) (School of Computer Science NorthWestern Polytechnical University, China)

[Muhammad Mobeen Aslam](#) (School of Automation NorthWestern Polytechnical University, China)

[Hafiz Umair Lateef](#) (School of Automation NorthWestern Polytechnical University, China)

Investigation of Deep Learning Based Techniques for Prognostic and Health Management of Lithium-Ion Battery ([abstract](#))

PRESENTER: [Umar Saleem](#)

CHAIRS:

[Jaouhar Fattahi](#) (Laval University, Canada)

[Emil Pricop](#) (Petroleum-Gas University of Ploiesti, Romania)

LOCATION: [IWSSS-Hybrid](#)

- 15:30 [Riya Kakkar](#) (Department of Computer Science and Engineering Institute of Technology, Nirma University, India)
[Rajesh Gupta](#) (Department of Computer Science and Engineering Institute of Technology, Nirma University, India)
[Smita Agrawal](#) (Department of Computer Science and Engineering Institute of Technology, Nirma University, India)
[Sudeep Tanwar](#) (Department of Computer Science and Engineering Institute of Technology, Nirma University, India)
[Emil Pricop](#) (Petroleum-Gas University of Ploiesti, Romania)

Game-based Resource Allocation for Secure UAV Communication in Wireless Networks ([abstract](#))

PRESENTER: [Emil Pricop](#)

- 15:45 [Pronaya Bhattacharya](#) (Department of Computer Science and Engineering, Amity University, Kolkata, India, India)
[Anwesha Mukherjee](#) (Department of Computer Science, Mahishadal Raj College, Mahishadal, India, India)
[Sudeep Tanwar](#) (Department of Computer Science & Engineering, Nirma University, Ahmedabad, India, India)
[Emil Pricop](#) (Petroleum-Gas University of Ploiesti, Romania)

Zero-Load: A Zero Touch Network based router management scheme underlying 6G-IoT ecosystems ([abstract](#))

PRESENTER: [Emil Pricop](#)

- 16:00 [Elyes Manai](#) (Université Laval, Canada)
[Mohamed Mejri](#) (Université Laval, Canada)
[Jaouhar Fattahi](#) (Université Laval, Canada)

Impact of Feature Encoding on Malware Classification Explainability ([abstract](#))

PRESENTER: [Elyes Manai](#)

- 16:15 [Tanisha Gupta](#) (Central University of Jammu, India)
[Ajay Kumar Sharma](#) (Central University of Jammu, India)
[Arvind Selwal](#) (Central University of Jammu, India)

A Lightweight Image Cryptography Approach via Invertible Transformation ([abstract](#))

PRESENTER: [Tanisha Gupta](#)

- 16:30 [Cristina-Oana Rafailă](#) (Academia Tehnică Militară "Ferdinand I", Romania)
[Florina Gurzău](#) (Academia Tehnică Militară "Ferdinand I", Romania)
[Constantin Grumăzescu](#) (Academia Tehnică Militară "Ferdinand I", Romania)
[Ion Bica](#) (Academia Tehnică Militară "Ferdinand I", Romania)

MTAFinder - Unified OSINT platform for efficient data gathering ([abstract](#))

- 16:45 [Zeenat Zahra](#) (Central University of Jammu, India)
[Arvind Selwal](#) (Central University of Jammu, India)
[Deepika Sharma](#) (Central University of jammu, India)

Deep Learning-Assisted Iris Liveness Detection Mechanisms ([abstract](#))

PRESENTER: [Zeenat Zahra](#)

17:30-18:30 CULTURAL PROGRAM - Visit to the Research Center

Visit to the Research Center / Desk information

LOCATION: [Desk Hall](#)

18:00-20:00 WELCOME DINNER

WELCOME DINNER

LOCATION: [Lunch zone](#)

Friday, June 30th

09:00-09:30 Authors Registration

Authors Registration

LOCATION: [Desk Hall](#)

09:15-09:30 Session 6: ORANGE EVENTS

Welcome message of Sponsors

CHAIR:

[Gabriel Papuc](#) (ORANGE Romania, Romania)

LOCATION: [Room 2.2.](#)

09:15 [Razvan Mihai](#) (ORANGE Romania, Romania)

Orange 5G Labs ecosystem for research projects

09:30-11:00 Session 7: KEYNOTE LECTURERS III

KEYNOTE LECTURERS III

CHAIRS:

[Nicu Bizon](#) (University of Pitesti, Romania)

[Cristian Ravariu](#) (Politehnica University of Bucharest, Romania)

LOCATION: [Room 2.2.](#)

09:30 [Mihai Gabriel Constantin](#) (Politehnica University of Bucharest, Romania)

How well can AI handle subjective data? Understanding the human perception of multimedia

10:10 [Cristian Ravariu](#) (Politehnica University of Bucharest, Romania)

Nano-scale Transistors in the Ultimate-MOS Era

11:00-11:30 Coffee Break

Coffee break

11:30-14:00 Session 8A: Electrical engineering applications

ECAI Morning sections

CHAIRS:

[Ovidiu-Constantin Novac](#) (University of Oradea, Romania)

[Bogdan-Adrian Enache](#) (University Politehnica of Bucharest, Romania)

LOCATION: [Room 2.1.](#)

11:30 [Luminita Constantinescu](#) (University of Pitesti, Romania)

[Bogdan-Adrian Enache](#) (University Politehnica of Bucharest, Romania)

[Georgiana Dogaru](#) (University of Pitesti, Romania)

[Teodor-Iulian Voicila](#) (University Politehnica of Bucharest, Romania)

[Irina Vilciu](#) (Universitatea Politehnica din Bucuresti, Romania)

[Silvia Vasile](#) (Transelectrica S.A., Romania)

Statistical Analysis of Capacity Loss for Stored Batteries ([abstract](#))

PRESENTER: [Teodor-Iulian Voicila](#)

11:45 [Cristina Gabriela Sărăcin](#) (University POLITEHNICA of Bucharest, Romania)

[Bogdan-Adrian Enache](#) (University POLITEHNICA of Bucharest, Romania)

Design and Implementation of an Experimental Model for the Control and Telemonitoring of a 27.5kV High Voltage Bipolar Circuit Breaker with Vacuum Switching ([abstract](#))

PRESENTER: [Bogdan-Adrian Enache](#)

- 12:00 [*George Seritan*](#) (University Politehnica of Bucharest, Romania)
[*Bogdan-Adrian Enache*](#) (University Politehnica of Bucharest, Romania)
[*Radu Porumb*](#) (University Politehnica of Bucharest, Romania)
[*Daniel Balaci*](#) (Transelectrica S.A., Romania)
[*Irina Clima*](#) (Electrica S.A., Romania)
[*Cristinel-Bogdan Bărbulescu*](#) (Electrica S.A., Romania)
Guidelines for Developing a Power-Grid Cybersecurity Database in Europe ([abstract](#))
 PRESENTER: [*Bogdan-Adrian Enache*](#)
- 12:15 [*Cosmin Bucur*](#) (Universitatea Ovidius din Constanta, Facultatea de Ingineria Mecanica, Industrială, Maritima, Romania)
[*Sorin Tasu*](#) (Universitatea Ovidius din Constanta, Facultatea de Ingineria Mecanica, Industrială, Maritima, Romania)
Reinforcement learning continuous controller of DC motor ([abstract](#))
 PRESENTER: [*Cosmin Bucur*](#)
- 12:30 [*Marius Codrean*](#) (University of Oradea, Romania)
[*Mihaela Cornelia Novac*](#) (University of Oradea, Romania)
[*Mihaela Codrean*](#) (University of Oradea, Romania)
[*Cornelia Emilia Gordan*](#) (University of Oradea, Romania)
[*Ovidiu Constantin Novac*](#) (University of Oradea, Romania)
[*Gyongyi Bujdosó*](#) (University of Debrecen, Romania)
[*Francisc Slovac*](#) (University of Oradea, Romania)
Numerical solution of the problem of turbulent currents that occur in the case of edge hardening ([abstract](#))
 PRESENTER: [*Ovidiu Constantin Novac*](#)
- 12:45 [*Mihaela Cornelia Novac*](#) (University of Oradea, Romania)
[*Marius Codrean*](#) (University of Oradea, Romania)
[*Mircea Gordan*](#) (University of Oradea, Romania)
[*Mihaela Codrean*](#) (University of Oradea, Romania)
[*Mihai Oproescu*](#) (University of Pitesti, Romania)
[*Ovidiu Constantin Novac*](#) (University of Oradea, Romania)
[*Francisc Slovac*](#) (University of Oradea, Romania)
The Optimal Shape of the Surface Hardening Head Obtained by Numerical Modeling ([abstract](#))
 PRESENTER: [*Ovidiu Constantin Novac*](#)

11:30-14:00 Session 8B: Energy & Environmental issues

ECAI Morning sections

CHAIR: [*Claudiu Pirnau*](#) ("Politehnica" University of Bucharest, Romania)

LOCATION: [Room 2.2.](#)

- 11:30 [*Ioana Udrea*](#) (University POLITEHNICA of Bucharest, Romania)
[*Viorel Ionut Gheorghe*](#) (University POLITEHNICA of Bucharest, Romania)
[*Cristian Gabriel Alionte*](#) (University POLITEHNICA of Bucharest, Romania)
[*Angel Madalin Dogeanu*](#) (Technical University of Civil Engineering Bucharest, Romania)
[*Laurențiu Adrian Cartal*](#) (University POLITEHNICA of Bucharest, Romania)
IoT solution for thermal comfort and air quality monitoring ([abstract](#))
 PRESENTER: [*Ioana Udrea*](#)
- 11:45 [*Al Hasheme Jaleel*](#) (University POLITEHNICA of Bucharest, Romania)
[*Lucian Toma*](#) (University POLITEHNICA of Bucharest, Romania)
[*Mircea Eremia*](#) (University POLITEHNICA of Bucharest, Romania)
Battery Energy Storage System for Frequency Control in Power System ([abstract](#))
 PRESENTER: [*Al Hasheme Jaleel*](#)

- 12:00 [Aurel Ștefan Pica](#) (Doctoral School of Electrical Engineering, Politehnica University of Bucharest, Romania)
[Isabela Elena Bănescu](#) (Faculty of Electrical Engineering, Electronics, Information Technology, Valahia University of Targoviste, Romania)
Survey of Electrical Ambient Intelligence (AmI) Devices Built for Environmental Monitoring ([abstract](#))
PRESENTER: [Isabela Elena Bănescu](#)
- 12:15 [Cosmin-George Nicolăescu](#) (University of Pitesti - master's student, Romania)
[Florentina Magda Enescu](#) (University of Pitesti, Romania)
[Nicu Bizon](#) (University of Pitesti, University Politehnica of Bucharest, Romania)
[Ana-Maria Țugulea](#) (SNSPA, University Politehnica of Bucharest, Romania)
[Valeriu Manuel Ionescu](#) (University of Pitesti, Romania)
Intelligent System for Monitoring and Controlling the Energy Consumed ([abstract](#))
PRESENTER: [Cosmin-George Nicolăescu](#)
- 12:30 [Fadelallah Issa](#) (Valahia University of Targoviste, Romania)
[Mihaita Nicolae Ardeleanu](#) (Valahia University of Targoviste, Romania)
[Emil Diaconu](#) (Valahia University of Targoviste, Romania)
Effective solution to extend the lifespan of the LIFEPO4 battery by minimizing temperature variation ([abstract](#))
PRESENTER: [Fadelallah Issa](#)
- 12:45 [Claudiu Pirnau](#) ("Politehnica" University of Bucharest, Romania)
[Liviu Daniel Ghiculescu](#) ("Politehnica" University of Bucharest, Romania)
[Mironela Pirnau](#) ("Titu Maiorescu" University, Romania)
[Marian Florentin Ghena](#) ("Politehnica" University of Bucharest, Romania)
The dimensions balance of the energy trilemma and the current energy crisis ([abstract](#))
PRESENTER: [Claudiu Pirnau](#)

11:30-14:00 Session 8C: Software, databases, and computer applications II

ECAI Morning sections

REGULAR SESSION DAY 2 - 3

CHAIRS:

[Valeriu Manuel Ionescu](#) (University of Pitesti, Romania)

[Vasile-Gabriel Iana](#) (University of Pitesti, Romania)

LOCATION: [Room 2.3.](#)

- 11:30 [Ovidiu Constantin Novac](#) (University of Oradea, Romania)
[David Ghiurău](#) (University of Oradea, Romania)
[Mihaela Cornelia Novac](#) (University of Oradea, Romania)
[Cornelia Emilia Gordan](#) (University of Oradea, Romania)
[Mihai Oproescu](#) (University of Pitesti, Romania)
[Gyongyi Bujdosó](#) (University of Debrecen, Hungary)
[Vlad Ovidiu Mihalca](#) (University of Oradea, Romania)
Comparison of Node.Js and Spring Boot in Web Development ([abstract](#))
PRESENTER: [Ovidiu Constantin Novac](#)
- 11:45 [Andrei Darii](#) (University of the Bundeswehr Munich, Germany)
[Maximilian Moll](#) (University of the Bundeswehr Munich, Germany)
[Marian Sorin Nistor](#) (University of the Bundeswehr Munich, Germany)
[Ștefan Pickl](#) (University of the Bundeswehr Munich, Germany)
[Ovidiu Constantin Novac](#) (University of Oradea, Romania)
[Cornelia Mihaela Novac](#) (University of Oradea, Romania)
[Ioan Mircea Gordan](#) (University of Oradea, Romania)
[Cornelia Emilia Gordan](#) (University of Oradea, Romania)

Analysis, Combination and Integration of Neuroevolution and Backpropagation Algorithms for Gaming Environment ([abstract](#))

PRESENTER: [Ovidiu Constantin Novac](#)

12:00 [Ciprian-Ionut Nutescu](#) (University Politehnica Bucharest, Romania)

[Mariana Mocanu](#) (University Politehnica Bucharest, Romania)

Creating personality model using genetic algorithms and behavioral psychology ([abstract](#))

PRESENTER: [Ciprian-Ionut Nutescu](#)

12:15 [Cristian Stanescu](#) (Valahia University of Targoviste, Romania)

[Apostol Florin Georgian](#) (Ericsson, Romania)

[Predusca Gabriel](#) (University Valahia of Targoviste, Romania)

[Liana Denisa Circiumarescu](#) (Valahia University of Targoviste, Romania)

[Nicoleta Angelescu](#) (Valahia University of Targoviste, Romania)

[Dan Constantin Puchianu](#) (Valahia University of Targoviste, Romania)

IoE simulation with Cisco Packet Tracer ([abstract](#))

PRESENTER: [Cristian Stanescu](#)

12:30 [Florentina Magda Enescu](#) (University of Pitesti, Romania)

[George-Cătălin Flintașu](#) (University of Pitesti - student, Romania)

[Mariana Mirela Jătaru](#) (University of Pitesti - student, Romania)

[Nicu Bizon](#) (University of Pitesti, Romania)

[Valeriu Manuel Ionescu](#) (University of Pitesti, Romania)

System for Smart Blood Donation and Stimulation with Blockchain ([abstract](#))

PRESENTER: [George-Cătălin Flintașu](#)

12:45 [George Cosmin Stanica](#) (University of Pitesti, Romania)

[Petre Anghelescu](#) (University of Pitesti, Romania)

Theory and application of reversible cellular automata in cryptography ([abstract](#))

PRESENTER: [George Cosmin Stanica](#)

13:00 [Maftai Alexandru](#) ("Stefan cel Mare" University of Suceava, Romania)

[Lavric Alexandru](#) ("Stefan cel Mare" University of Suceava, Romania)

[Petriariu Adrian Ioan](#) ("Stefan cel Mare" University of Suceava, Romania)

[Valentin Popa](#) ("Stefan cel Mare" University of Suceava, Romania)

Performance Evaluation of Block Size Influence on Blockchain-Enabled IoT Data Storage ([abstract](#))

PRESENTER: [Maftai Alexandru](#)

13:15 [Ana-Maria Dinca](#) (Faculty of Electronics, Telecommunications and Information Technology, University POLITEHNICA of Bucharest, Romania)

[Sabina-Daniela Axinte](#) (Faculty of Electronics, Telecommunications and Information Technology, University POLITEHNICA of Bucharest, Romania)

[Ioan C. Bacivarov](#) (Faculty of Electronics, Telecommunications and Information Technology, University POLITEHNICA of Bucharest, Romania)

In-Memory Versus On-Disk Databases: Best practices, Use Cases and Architectural Designs ([abstract](#))

PRESENTER: [Ana-Maria Dinca](#)

13:30 [Valeriu Manuel Ionescu](#) (University of Pitesti, Romania)

[Madalin Ciprian Enescu](#) (PhD Student - Political Sciences National School of Political and Administrative Studies, Romania)

Using ChatGPT for Generating and Evaluating Online Tests ([abstract](#))

PRESENTER: [Valeriu Manuel Ionescu](#)

13:45 [Cosmin-Ioan Roșu](#) (Computer Science Dept., Military Technical Academy, Romania)

[Mihai Togan](#) (Computer Science Dept., Military Technical Academy, Romania)

A Modern Paradigm for Effective Software Development: Feature Toggle Systems ([abstract](#))

PRESENTER: [Cosmin-Ioan Roşu](#)

11:30-14:00 Session 8D: Artificial Intelligence and expert systems II

ECAI Morning sections

REGULAR SESSION DAY 2 - 4

CHAIRS:

[Maria Viorela Muntean](#) (1 Decembrie 1918 University of Alba Iulia, Romania, Romania)

[Valentina Marascu](#) (Low Temperature Plasma Department, National Institute for Laser, Plasma and Radiation Physics, Romania)

LOCATION: [Room 3.2.](#)

11:30 [Teodor-Cristian Radoi](#) (Web Vortex, Romania)

Artificial Intelligence in Data Analysis for Open-Source Investigations ([abstract](#)) 

11:45 [Alexandru Pohontu](#) (Politechnica University of Bucharest, Romania)

[Robert Gheorghe](#) (Romanian Navy, Romania)

[Constantin Vertan](#) (Politechnica University of Bucharest, Romania)

Outlier Detection Approach for Discovering Anomalous Maritime Profiles ([abstract](#))

PRESENTER: [Alexandru Pohontu](#)

12:00 [Swati Goel](#) (Central University of Jammu, India)

[Arvind Selwal](#) (Central University of Jammu, India)

Web- Services Scheduled Outage Modeling ([abstract](#))

PRESENTER: [Swati Goel](#)

12:15 [Andrei Dugăeşescu](#) (University Politehnica of Bucharest, Romania)

[David Iancu](#) (University Politehnica of Bucharest, Romania)

Feature selection using genetic algorithms for improving accuracy in image classification tasks ([abstract](#))

12:30 [Cristian-Bogdan Pătraşcu](#) (University Politehnica of Bucharest, Romania)

[David Iancu](#) (University Politehnica of Bucharest, Romania)

NEAT algorithm for simple games ([abstract](#))

12:45 [Shaidah Jusoh](#) (Xiamen University Malaysia, Malaysia)

[Hejab Al Fawareh](#) (Xiamen University Malaysia, Malaysia)

AI Games and Algorithms: An Overview of Categories ([abstract](#))

13:00 [Marius Iulian Mihăilescu](#) ("Spiru Haret" University, Romania)

[Stefania Loredana Nita](#) (Military Technical Academy "Ferdinand I", Romania)

[Marius Rogobete](#) ("Titu Maiorescu" University, Romania)

[Valentina Marascu](#) (Low Temperature Plasma Department, National Institute for Laser, Plasma and Radiation Physics, Romania)

Unveiling Threats: Leveraging User Behavior Analysis for Enhanced Cybersecurity ([abstract](#))

PRESENTER: [Valentina Marascu](#)

13:15 [Maria Viorela Muntean](#) (1 Decembrie 1918 University of Alba Iulia, Romania, Romania)

Improving Air Pollution Forecasting in Smart Cities using Clustering Techniques ([abstract](#))

13:30 [Mădălin-Ciprian Enescu](#) (National School of Political and Administrative Studies, Bucharest, Romania, Romania)

[Cosmin-George Nicolăescu](#) (Department of Electronics, Communications and Computers, Pitesti, Romania, Romania)

[Cosmin Stirbu](#) (University of Pitesti, Romania)

Intelligent System of Analysis of the Level of Gain of Development Hegemony for Great Powers ([abstract](#))

PRESENTER: [Cosmin-George Nicolăescu](#)

ECAI Morning sections

Industrial and AI-based applications and secure systems and communications in the era of Future Networks and beyond

CHAIRS:

[Octavian Fratu](#) (University POLITEHNICA of Bucharest, Romania)

[Simona Viorica Halunga](#) (University POLITEHNICA of Bucharest, Romania)

[Gabriel Papuc](#) (ORANGE Romania, Romania)

LOCATION: [Room 4.2.](#)

11:30 [Cristian Nicolae Capota](#) (University Politehnica of Bucharest, Romania)

[Vasile Madalin Popescu](#) (University Politehnica of Bucharest, Romania)

[Simona Halunga](#) (University Politehnica of Bucharest, Romania)

[Octavian Fratu](#) (University Politehnica of Bucharest, Romania)

Challenges in Spoofing Bluetooth Low Energy devices in an IOT environment ([abstract](#))

11:45 [Eduard Badula](#) (Doctoral School of Electronics, Telecommunications and Information Technology, Romania)

[Simona Halunga](#) (Faculty of Electronics, Telecommunications and Information Technology, Romania)

[Octavian Fratu](#) (Faculty of Electronics, Telecommunications and Information Technology, Romania)

[Mircea Popescu](#) (National Institute for Research and Development in Electrical Engineering ICPE-CA, Romania)

Intelligent blocking system for mobile communications initiated by unauthorized users ([abstract](#))

12:00 [Antonela Toma](#) (University POLITEHNICA Bucharest, Department of Mathematical Methods and Models, Romania)

[Theodor Fratu-Halunga](#) (University POLITEHNICA Bucharest, ETTI Faculty, Romania)

[Andrei Beliciu](#) (University POLITEHNICA Bucharest, ETTI Faculty, Romania)

Pre-AI Musical Style Analysis Via Their Spectral Distributions ([abstract](#))

PRESENTER: [Andrei Beliciu](#)

12:15 [Dumitru Abrudan](#) (Telecommunications Department, University Politehnica of Bucharest, Romania)

[Ana-Maria Drăgulescu](#) (Telecommunications Department, University Politehnica of Bucharest, Romania)

[Nicolae Vizireanu](#) (Telecommunications Department, University Politehnica of Bucharest, Romania)

Recognition of Handwritten Mathematical Symbols Affected by Noise using DNN ([abstract](#))

PRESENTER: [Dumitru Abrudan](#)

12:30 [Gabriel Papuc](#) (Orange Romania and POLITEHNICA UNIVERSITY OF BUCHAREST, Romania)

[Nicolae Vizireanu](#) (Telecommunication Department University Politehnica of Bucharest, Romania)

Importance of Land Use Maps in Statistical Studies of Urban Mobility Based on Signaling Information Provided by Mobile Devices ([abstract](#))

PRESENTER: [Gabriel Papuc](#)

12:45 [Gabriel Papuc](#) (Orange Romania and POLITEHNICA UNIVERSITY OF BUCHAREST, Romania)

[Nicolae Vizireanu](#) (Telecommunication Department University Politehnica of Bucharest, Romania)

Types of mobile telecommunications user location errors encountered in urban mobility statistical analyses ([abstract](#))

PRESENTER: [Gabriel Papuc](#)

13:00 [Cristian Patachia](#) (Orange Romania, Gheorghe Asachi Technical University of Iasi, Romania)
[Razvan Mihai](#) (Orange Romania, Romania)
[Marius Iordache](#) (Orange Romania, Romania)

6G Initial Developments for Flagship Applications Experiments ([abstract](#))

PRESENTER: [Razvan Mihai](#)

13:15 [Malin Stefan](#) (PhD student SD-ETTI, Polytechnic University of Bucharest, Romania)
[Mandita Dragos](#) (PhD student SD-ETTI Polytechnic University of Bucharest, Romania)
[Chirana Paul](#) (PhD student SD-ETTI Polytechnic University of Bucharest, Romania)
[Babarada Florin](#) (DCAE-ETTI, Polytechnic University of Bucharest, Romania)

Security Considerations at the Service Level Agreement in Cloud Computing Services ([abstract](#))

PRESENTER: [Malin Stefan](#)

13:30 [Alina Florina Glavan](#) (University POLITEHNICA of Bucharest, Romania)
[Victor Croitoru](#) (University POLITEHNICA of Bucharest, Romania)

Autoencoders and AutoML for intrusion detection ([abstract](#))

PRESENTER: [Alina Florina Glavan](#)

13:45 [Joseph Wewasse Mahomy](#) (University Politehnica Bucharest, Guinea)
[Maria Ioana Oproiu](#) (University POLITEHNICA of Bucharest, Romania)

Scalable Web-based Application for Dynamic Multi-Tenant Hotel Reservation Management ([abstract](#))

PRESENTER: [Maria Ioana Oproiu](#)

11:30-14:00 Session 8F: E-SESSION II

ECAI Morning sections

E-SESSION 2

CHAIR:

[Mihai Oproescu](#) (University of Pitesti, Romania)

LOCATION: [E-Session Room 1](#)

11:30 [Sai Priyanka Surapaneni](#) (Indian Institute of Technology Palakkad, India)
[M.Sabarimalai Manikandan](#) (Indian Institute of Technology Palakkad, India)

Graph Signal Processing Based Classification of Noisy and Clean PPG Signals Using Machine Learning Classifiers for Intelligent Health Monitor ([abstract](#))

PRESENTER: [Sai Priyanka Surapaneni](#)

11:40 [Hamid Reza Chavoshi](#) (K. N. Toosi University of Technology., Iran)
[Amir Hossein Salasi](#) (K. N. Toosi University of Technology., Iran)
[Omid Payam](#) (K. N. Toosi University of Technology., Iran)
[Hamid Khaloozadeh](#) (K. N. Toosi University of Technology., Iran)

Experimental Comparison of STR and PI Controllers on a Nonlinear Liquid-Level Networked Control System ([abstract](#))

PRESENTER: [Amir Hossein Salasi](#)

11:50 [Fyodor Amanov](#) (New Uzbekistan University, Uzbekistan)
[Aneesh Pradeep](#) (New Uzbekistan University, Uzbekistan)

The Significance of Artificial Intelligence in the Second Scientific Revolution A Review ([abstract](#))

PRESENTER: [Fyodor Amanov](#)

12:00 [Abdusamad Nigmatov](#) (New Uzbekistan University, Uzbekistan)
[Aneesh Pradeep](#) (New Uzbekistan University, Uzbekistan)
[Nafisa Musulmonova](#) (New Uzbekistan University, Uzbekistan)

Blockchain Technology in Improving Transparency and Efficiency in Government Operations ([abstract](#))

PRESENTER: [Abdusamad Nigmatov](#)

- 12:10 [*Aneesh Pradeep*](#) (New Uzbekistan University, Uzbekistan)
[*Mironshokh Bakoev*](#) (New Uzbekistan University, Uzbekistan)
[*Nazokat Akhroljonova*](#) (New Uzbekistan University, Uzbekistan)
A Reliability Analysis of Self-Driving Vehicles: Evaluating the Safety and Performance of Autonomous Driving Systems ([abstract](#))
PRESENTER: [*Nazokat Akhroljonova*](#)
- 12:20 [*Akmaljon Latifov*](#) (New Uzbekistan University, Uzbekistan)
[*Aneesh Pradeep*](#) (New Uzbekistan University, Uzbekistan)
Design and Implementation of a LoRa-based Home Monitoring System with Heltec ESP32 Gateway ([abstract](#))
PRESENTER: [*Akmaljon Latifov*](#)
- 12:30 [*Yalagala Sivanjaneyulu*](#) (School of Electrical Sciences, Indian Institute of Technology Bhubaneswar, Bhubaneswar, Odisha-752050, India., India)
[*M. Sabarimalai Manikandan*](#) (Department of Electrical Engineering, Indian Institute of Technology, Palakkad, Kerala-678623, India., India)
[*Srinivas Boppu*](#) (School of Electrical Sciences, Indian Institute of Technology Bhubaneswar, Bhubaneswar, Odisha-752050, India., India)
Compressive Sensing-Based Automatic PPG Signal Quality Assessment Using CNN for Energy-Constrained Medical Devices ([abstract](#))
PRESENTER: [*Yalagala Sivanjaneyulu*](#)
- 12:40 [*Jomole Varghese V*](#) (Indian Institute Of Technology Palakkad, Kerala,.India)
[*M. Sabarimalai Manikandan*](#) (Indian Institute Of Technology Palakkad, Kerala, India)
[*Linga Reddy Cenkeramaddi*](#) (Information and Communication Technology University of Agder, Grimstad, Norway, Norway)
Compressed ECG Sensing Based Fast/Slow HR and Regular/Irregular Rhythm Recognition for Resource-Constrained Health Monitoring Devices ([abstract](#))
PRESENTER: [*Jomole Varghese V*](#)
- 12:50 [*P N Sivaranjini*](#) (Indian Institute of Technology Palakkad, India)
[*M Sabarimalai Manikandan*](#) (Indian Institute of Technology Palakkad, India)
[*Linga Reddy Cenkeramaddi*](#) (University of Agder, Grimstad, Norway)
Fast Quality-Aware AMDF Based Pulse Rate Estimation from Compressed PPG Measurements for Wearable Vital Signs Monitor ([abstract](#))
PRESENTER: [*P N Sivaranjini*](#)
- 13:00 [*Hayder K. Fatlawi*](#) (Eötvös Loránd University, Hungary)
[*Attila Kiss*](#) (Eötvös Loránd University, Hungary)
Handling Delayed Labeling of EEG Data Stream using Semi-Supervised Label Propagation ([abstract](#))
PRESENTER: [*Hayder K. Fatlawi*](#)
- 13:10 [*Murtadha Al-Kaabi*](#) (University POLITEHNICA of Bucharest, Romania)
[*Virgil Dumbrava*](#) (University POLITEHNICA of Bucharest, Romania)
[*Mircea Eremia*](#) (University POLITEHNICA of Bucharest, Romania)
Application of Harris Hawks Optimization in single objective optimal power flow ([abstract](#))
PRESENTER: [*Murtadha Al-Kaabi*](#)
- 13:20 [*Syed Safdar Hussain*](#) (National University of Sciences and Technology, NUST Islamabad, Pakistan, Pakistan)
[*Syed Sajjad Haider Zaidi*](#) (National University of Sciences and Technology, NUST Islamabad, Pakistan, Pakistan)
Remaining Useful Life Prediction Method for the Rolling Element of an Electrical Machine Using Linear Regression Analysis of the Vibration Signal of a Faulted Bearing ([abstract](#))
PRESENTER: [*Syed Safdar Hussain*](#)

13:30 [Abdela A.S Esmeil](#) (Department of Electrical-Electronics Engineering - Karabuk University, Turkey)
[Selim Oncu](#) (Department of Electrical-Electronics Engineering - Karabuk University, Turkey)
[Necmi Altin](#) (Department of Electrical-Electronics Engineering, Faculty of Technology - Gazi University, Turkey)
Solar Water Pumping System With Modified CSS-INC MPPT Algorithm ([abstract](#))
PRESENTER: [Abdela A.S Esmeil](#)

11:30-14:00 Session 8G: POSTER SESSION

ECAI Morning sections

POSTER SESSION 2

CHAIRS:

[Elena-Luminita Stirbu](#) (www.calitateonline.ro, Romania)
[Ionut Iacob](#) (Georgia Southern University, United States)

LOCATION: [Poster Hall](#)

[Elena-Luminita Stirbu](#) (www.calitateonline.ro, Romania)
[Cosmin Stirbu](#) (University of Pitesti, Romania)
[Nadia Ionescu-Belu](#) (University of Pitesti, Romania)
[Laurentiu-Mihai Ionescu](#) (University of Pitesti, Romania)
[Iuliana Grecu](#) (University Politehnica of Bucharest, Romania)

Statistical Control Process Becomes a Common Tool in the Chassis Industry Improvement Process in the Information Era ([abstract](#))

PRESENTER: [Elena-Luminita Stirbu](#)

[Mihai Oproescu](#) (University of Pitesti, Romania)
[Ion Mihaila](#) (University of Pitesti, Romania)
[Nicu Bizon](#) (University of Pitesti, Romania)
[Dumitru Tudosoiu](#) (University of Pitesti, Romania)
[Vasile-Gabriel Iana](#) (University of Pitesti, Romania)
[Leonard Julien Fleancu](#) (University of Pitesti, Romania)
[Florin Cojanu](#) (University of Pitesti, Romania)
[Vladimir Potop](#) (University of Pitesti, Romania)
[Ilie Mihai](#) (UNIVERSITY OF PITESTI, Romania)
[Daniela Corina Popescu](#) (UNIVERSITY OF PITESTI, Romania)

Detection and Analysis of Motricity and Somato-Functional Indices of 3X3 Basketball Players to Customize Sports Training ([abstract](#))

PRESENTER: [Mihai Oproescu](#)

[Dumitru Abrudan](#) (Telecommunications Department, University Politehnica of Bucharest, Romania)
[Ana-Maria Drăgulinescu](#) (Telecommunications Department, University Politehnica of Bucharest, Romania)
[Nicolae Vizireanu](#) (Telecommunications Department, University Politehnica of Bucharest, Romania)

Pinewood Knot Detection Method Using Color Analysis ([abstract](#))

PRESENTER: [Dumitru Abrudan](#)

[Laurentiu-Mihai Ionescu](#) (University of Pitesti, Romania)
[Nadia Ionescu](#) (University of Pitesti, Romania)
[Elena-Luminita Stirbu](#) (CalitateOnLine, Romania)
[Nicoleta Rachieru](#) (University of Pitesti, Romania)
[Cosmin Stirbu](#) (University of Pitesti, Romania)
[Alin Gheorghita Mazare](#) (University of Pitesti, Romania)

Intelligent solution for associating problems with lessons learned used in automotive manufacturing ([abstract](#))

[Maria-Elena Stanciu](#) (University of Pitesti, Romania)
[Rodica-Mihaela Teodorescu](#) (University of Pitesti, Romania)

Grigore-Adrian Iordachescu (University of Pitesti, Romania)

Daniel-Alexandru ViŞan (University of Pitesti, Romania)

Transmission Techniques in Data Acquisition Systems using Arduino and ESP32 ([abstract](#))

PRESENTER: Maria-Elena Stanciu

Dragos Mandita (PhD student SD-ETTI Polytechnic University of Bucharest, Bucharest, Romania, Romania)

Stefan Malin (PhD student SD-ETTI Polytechnic University of Bucharest, Bucharest, Romania, Romania)

Paul Chirana (PhD student SD-ETTI Polytechnic University of Bucharest, Bucharest, Romania, Romania)

Florin Babarada (DCAE-ETTI Polytechnic University of Bucharest, Bucharest, Romania, Romania)

Optical Communication Systems for Vehicles Light Units ([abstract](#))

PRESENTER: Dragos Mandita

George Suciu (BEIA Consult International, Romania)

Ioana Petre (SC BEIA CONSULT INTERNATIONAL SRL, Romania)

Cosmina Stalidi (BEIA Consult International, Romania)

Urban transformation processes and material stock techniques to facilitate circular economy and urban resilience ([abstract](#))

PRESENTER: Ioana Petre

Valentin Pîrvu (University Polytechnica of Bucharest, Romania)

Dumitru Titi Cicic (University Polytechnica of Bucharest, Romania)

Corneliu Rontescu (University Polytechnica of Bucharest, Romania)

Ana Maria Bogatu (University Polytechnica of Bucharest, Romania)

Research on establishing correlations between the requirements of EN ISO 9001:2015 and EN ISO 3834-2:2021 standards for welded structure manufacturing organizations ([abstract](#))

PRESENTER: Valentin Pîrvu

Daniel Bekker (Georgia Southern University, United States)

Ionut Iacob (Georgia Southern University, United States)

A Novel Approach to Extract Digital Signatures from Handwritten Character Images ([abstract](#))

PRESENTER: Daniel Bekker

11:30-14:00 Session 8H: IoT, Energy Internet, Blockchain Technology and Smart Contracts-IoT'23

ECAI Afternoon sections

IoT, Energy Internet, Blockchain Technology and Smart Contracts-IoT'23

CHAIRS:

Maria Simona Raboaca (Icsi, Romania)

Pravin Dhawale (Lovely Professional University (LPU), Punjab, India, India)

LOCATION: [Hybrid Room](#)

11:30 Anusha G (Lovely Professional University, Punjab, India, India)

Krishan Arora (Lovely Professional University, Punjab, India, India)

Himanshu Sharma (Lovely Professional University, Punjab, India, India)

Surya Prakash Thota (G.Narayanamma Institute of Technology and Science, Hyderabad, India, India)

Chaman Verma (Dept. of Media and Educational Informatics Faculty of Informatics, Eötvös Loránd University, Budapest, Hungary, Hungary)

Maria Simona Raboaca (ICSI Energy Department, National Research and Development Institute for Cryogenics and Isotopic Technologies, Romania, Romania)

Constantin Filote (Faculty of Electrical Engineering and Computer Science, Stefan cel Mare University of Suceava, Romania, Romania)

Performance Comparison of 15-Level Multilevel Inverter Topologies ([abstract](#))

PRESENTER: Anusha G

11:45 Kanishk Barhanpurkar (Thomas J. Watson College of Engineering and Applied Science, Binghamton University, USA, United States)

[Nikita Mandlik](#) (Thomas J. Watson College of Engineering and Applied Science, Binghamton University, USA, United States)

[Anand Singh Rajawat](#) (School of Computer Sciences & Engineering, Sandip University, Nashik 422213, India)

[S.B. Goyal](#) (Faculty of Information Technology, City University, Petaling Jaya, 46100, Malaysia, Malaysia)

[Constantin Filote](#) (FEECS, Stefan cel Mare University of Suceava, Universităţii Street, No.13, 720229 Suceava, Romania, Romania)

[Chaman Verma](#) (Department of Media and Educational Informatics, Eötvös Loránd University, 1053 Budapest, Hungary)

[Maria Simona Raboaca](#) (ICSI Energy Department, NRD for Cryogenics and Isotopic Technologies, 240050 Ramnicu Valcea, Romania, Romania)

Unveiling the Post-Covid Economic Impact Using NLP Techniques ([abstract](#))

PRESENTER: [Nikita Mandlik](#)

12:00 [Piyush Pant](#) (School of Computer Science & Engineering, Sandip University, Nashik, India)

[Anand Singh Rajawat](#) (School of Computer Science & Engineering, Sandip University, Nashik, India)

[S.B. Goyal](#) (Faculty of Information Technology, City University, Petaling Jaya, 46100, Malaysia)

[Baharu Bin Kemat](#) (City Graduate School, City University, Petaling Jaya, Malaysia)

[Traian Candin Mihălţan](#) (FBS, Technical University of Cluj-Napoca, 40033 Cluj-Napoca, Romania)

[Chaman Verma](#) (Faculty of Informatics, DMEI, Faculty of Informatics, Eötvös Loránd University, 1053 Budapest, Hungary)

[Maria Simona Răboacă](#) (ICSI Energy Department, National Research and DICIT, 240050 Ramnicu Valcea, Romania)

Machine Learning Techniques for Analysis of Mars Weather Data ([abstract](#))

12:15 [Pravin Dhawale](#) (Lovely Professional University (LPU), Punjab, India, India)

[Vikram Kumar](#) (University of Calgary Calgary, Canada, India)

[Sk Bath](#) (Maharaja Ranjit Singh Punjab Technical University, Bhatinda, India, India)

[Chaman Verma](#) (Eötvös Loránd University, Budapest, Hungary, Hungary)

[Maria Raboaca](#) (ICSI Energy Department, National Research and Development Institute for Cryogenics and Isotopic Technologies, Romania)

[Constantin Filote](#) (Faculty of Electrical Engineering and Computer Science, Stefan cel Mare University of Suceava, Romania)

[Deepak Kumar](#) (Apex Institute of Technology, Chandigarh University, Mohali, India, India)

Optimal Sizing of Security Constrained Unit Commitment Problem Integrated with Renewable Energy Sources and PEVs ([abstract](#))

PRESENTER: [Pravin Dhawale](#)

12:30 [Lijia Fang](#) (Department of Engineering and Applied Sciences Sophia University, Japan)

[Hardeep Singh](#) (University of Windsor, Ontario, Canada)

[Mitsuhisa Ichiyonagi](#) (Department of Engineering and Applied Sciences Sophia University, Japan)

[Takashi Suzuki](#) (Department of Engineering and Applied Sciences Sophia University, Japan)

[Maria Simona Raboaca](#) (ICSI Energy Department National Research and Development Institute for Cryogenics and Isotopic Technologies, Romania)

[Chaman Verma](#) (Department of Media and Educational Informatics, Faculty of Informatics, Eötvös Loránd University, India)

[Constantin Filote](#) (FEECS, Stefan cel Mare University of Suceava, Romania)

Prediction of Heat Energy Release Rate for Ammonia Combustion in a Constant Volume Combustion Chamber: A Machine Learning Approach ([abstract](#))

PRESENTER: [Lijia Fang](#)

12:45 [Vikram Kumar Kamboj](#) (Schulich School of Engineering, University of Calgary, Alberta, Canada, Canada)

[Ardhala Bala Krishna](#) (Department of Electrical and Electronics Engineering, Malla Reddy

Engineering College for Women, Hyderabad, India, India)

[Chaman Verma](#) (Department of Media and Educational Informatics Faculty of Informatics Eötvös Loránd University Budapest, Hungary, Hungary)

[Maria Simona Raboaca](#) (ICSI Energy Department National Research and Development Institute for Cryogenics and Isotopic Technologies, Romania)

[Constantin Filote](#) (Faculty of Electrical Engineering and Computer Science Stefan cel Mare University of Suceava, Romania)

[Maria Stepanova](#) (Computer Science Department, Bauman Moscow State Technical University, Russia, Russia)

Chaotic American zebra search optimization algorithm for benchmark challenges ([abstract](#))

PRESENTER: [Ardhala Bala Krishna](#)

13:00 [Anand Singh Rajawat](#) (School of Computer Science & Engineering, Sandip University, Nashik, India, India)

[S.B. Goyal](#) (Faculty of Information Technology, City University, Petaling Jaya, Malaysia, Malaysia)

[Ramkumar Solanki](#) (School of Computer Science & Engineering, Sandip University, Nashik, India, India)

[Maria Simona Raboaca](#) (ICSI Energy Department National Research and Development Institute for Cryogenics and Isotopic Technologies, Romania)

[Traian Candin Mihaltan](#) (Faculty of Building Services, Technical University of Cluj-Napoca, Romania)

[Zoltan Illies](#) (Department of Media and Educational Informatics, Faculty of Informatics, Eötvös Loránd University, Hungary)

[Chaman Verma](#) (Department of Media and Educational Informatics, Faculty of Informatics, Eötvös Loránd University, Hungary)

Blockchain-based Security Framework for Metaverse: A Decentralized Approach ([abstract](#))

13:15 [Anand Singh Rajawat](#) (School of Computer Science & Engineering, Sandip University, India)

[S.B. Goyal](#) (Faculty of Information Technology, City University, Petaling Jaya, Malaysia, Malaysia)

[Aarti Goyal](#) (Mind Intellect Technology ,Indore ,India, India)

[Kavita Rajawat](#) (Mind Intellect Technology ,Indore ,India, India)

[Maria Simona Raboaca](#) (ICSI Energy Department National Research and Development Institute for Cryogenics and Isotopic Technologies, Romania)

[Chaman Verma](#) (Department of Media and Educational Informatics, Faculty of Informatics, Eötvös Loránd University, Hungary)

[Traian Candin Mihaltan](#) (Faculty of Building Services, Technical University of Cluj-Napoca, Romania)

Enhancing Security and Scalability of Metaverse with Blockchain-based Consensus Mechanisms ([abstract](#))

13:30 [Mihai Culcer](#) (ICSI Energy Department, National Research and Development Institute for Cryogenics and Isotopic Technologies, Romania)

[Mariana Iliescu](#) (ICSI Energy Department, National Research and Development Institute for Cryogenics and Isotopic Technologies, Romania)

[Maria Simona Raboaca](#) (ICSI Energy Department, National Research and Development Institute for Cryogenics and Isotopic Technologies, Romania)

[Mircea Raceanu](#) (National Research and Development Institute for Cryogenic and Isotopic Technologies, Romania)

[Adrian Enache](#) (National Research and Development Institute for Cryogenic and Isotopic Technologies, Romania)

[Elena Carcadea](#) (National Research and Development Institute for Cryogenic and Isotopic Technologies, Romania)

P2G2P SYSTEM - CASE STUDY FOR A 5 MW PHOTOVOLTAIC PARK ([abstract](#))

PRESENTER: [Maria Simona Raboaca](#)

ECAI Morning sections

E-SESSION 3

CHAIR:

[Avireni Srinivasulu](#) (K. R. Mangalam University, Gurugram-122103, Haryana (State), India, India)

11:30 [Moola Vamsi Krishna Reddy](#) (Mohan Babu University, India)

[Nusum Raja Sekhar Reddy](#) (Mohan Babu University, India)

[Pinnepalli Naveen Kumar](#) (Mohan Babu University, India)

[Ramireddy Praneeth Kumar Reddy](#) (Mohan Babu University, India)

[Musala Sarada](#) (Vignan University, India)

[Dr Avireni Srinivasulu](#) (Mohan Babu University, Tirupati, India, India)

Modified Low Power High Speed Approximate Adders For Energy Efficient Arithmetic Applications ([abstract](#))

11:45 [Ilisha Walia](#) (Samsung Electronics, India)

[Mayank Mangla](#) (Samsung Electronics, India)

[Manjula Gupta](#) (Samsung Electronics, India)

[Ankita Dixit](#) (Samsung Electronics, India)

An AI Based Enhanced and Customized Doodler-Bot with Vector Mutation And Clustering ([abstract](#))

PRESENTER: [Ilisha Walia](#)

12:00 [Asrorbek Eraliev](#) (Andijan Machine Building Institute, Uzbekistan, Uzbekistan)

[Uktam Salomov](#) (Fergana Polytechnic Institute, Uzbekistan, Uzbekistan)

Development of energy efficient WSN based smart monitoring system ([abstract](#))

PRESENTER: [Asrorbek Eraliev](#)

12:15 [Hamza Alrajoubi](#) (Karabuk University, Turkey)

[Selim Oncu](#) (Karabuk University, Turkey)

PV fed water pump system with golden section search and incremental conductance algorithms ([abstract](#))

PRESENTER: [Hamza Alrajoubi](#)

12:30 [Harsha Vijayakumar](#) (sp jain school of global management, United States)

Revolutionizing Customer Experience with AI: A Path to Increase Revenue Growth Rate ([abstract](#))

12:45 [Cagdas Hisar](#) (Gazi University, Turkey)

[Guven Balta](#) (Erzurum Technical University, Turkey)

[Necmi Altin](#) (Gazi Unbiversity, Turkey)

[Ibrahim Sefa](#) (Gazi University, Turkey)

An Improved Fast Terminal Sliding Mode Control for Step-Down Converter ([abstract](#))

PRESENTER: [Cagdas Hisar](#)

13:00 [Elanur Ekici](#) (Adana Alparslan Turkes Science and Technology University, Turkey)

[Tahsin Koroglu](#) (Adana Alparslan Turkes Science and Technology University, Turkey)

[Doğan Çelik](#) (Van Yuzuncu Yıl University, Turkey)

An Isolated High-Power Bidirectional Five-Level NPC Dual Active Bridge DC-DC Converter with Anti-Windup PI Controller for Electric Vehicle-to-Home Application ([abstract](#))

PRESENTER: [Elanur Ekici](#)

13:15 [Fatih Durmus](#) (Ondokuz Mayıs University Electrical and Electronics Engineering, Turkey)

[Serap Karagol](#) (Ondokuz Mayıs University Electrical and Electronics Engineering, Turkey)

Electro-Thermal Equivalent Circuit of Lithium-Ion Battery Using COMSOL ([abstract](#))

PRESENTER: [Fatih Durmus](#)

13:30 [Ninghao Pu](#) (Southeast University, China)

[Zhongxin Wu](#) (Southeast University, China)

[Ao Wang](#) (Southeast University, China)
[Hanshi Sun](#) (Southeast University, China)
[Zijin Liu](#) (Southeast University, China)
[Hao Liu](#) (Southeast University, China)

Arrhythmia Classifier Based on Ultra-Lightweight Binary Neural Network ([abstract](#))

PRESENTER: [Ninghao Pu](#)

13:45 [Pham Duc Dai](#) (Thuyloi University, Viet Nam)

[Uong Huy Hiep](#) (Vietnam Academy for Water Resources, Viet Nam)

[Dang Khoa Nguyen](#) (Faculty of Applied Sciences, International School, Vietnam National University, Hanoi, Viet Nam)

[Quang Huong Bui](#) (National Center for Water Resources Planning and Investigation (NAWAPI), Viet Nam)

Development of Tools for Decision Support System Based MIKE simulation and IoT System for Water Irrigation Canal ([abstract](#))

PRESENTER: [Pham Duc Dai](#)

11:30-14:00 Session 8J: ROUND TABLE

"AUTOMATED MONITORING & ANALYSIS PLATFORM (AMAP)", Cod SMIS 142811 - Ruxandra Elena VADUVA

The general objective of the project is to diversify the company's activity, through the research and development of an innovative software application for automatic monitoring and comprehensive analysis of all information received from ICT equipment with the possibility of analyzing and processing parameters, monitoring logs and correlating events, Automated Monitoring & Analysis Platform (AMAP), to meet the various requirements of the identified potential markets.

"E-CIRCLE - Platforma Inovativa pentru Economia Circulara", COD SMIS 129143 - Ruxandra Elena VADUVA & Tudor GORCIA

The general objective of the project is to support innovation and increase the productivity of Vertet Oil S.R.L. by creating a new profit center through the development of a complex innovative product and innovative services based on this product. The aim is to create an innovative platform (E-CIRCLE) for integrated waste management in order to implement the concept of a circular economy using four digital components: OPEN DATA and OPEN PLATFORM, AI (ARTIFICIAL INTELLIGENCE), as well as CLOUD COMPUTING.

"IoT MEDICAL ASSET MANAGEMENT SOFTWARE", COD SMIS 129993 - George Bogdan ANA & Andrei BUTCU

The general objective of the project is to increase the economic competitiveness of the company IMADO SRL through innovation activities and the integration of ICT technologies, as well as the development of a new innovative product. This will be achieved by creating innovative software applications for asset management in hospitals and optimizing their utilization by interested stakeholders.

LOCATION: [Desk Hall](#)

14:00-15:30Lunch Break

Lunch

REGULAR SESSION DAY 2 - 1

CHAIRS:

[Valentin Alexandru Stan](#) (University Politehnica of Bucharest, Romania)

[Ştefan-George Roşu](#) (Universitatea Politehnica din Bucuresti, Romania)

LOCATION: [Room 2.2.](#)

15:30 [Fadelallah Issa](#) (Valahia University of Targoviste, Romania)

[Mihaita Nicolae Ardeleanu](#) (Valahia University of Targoviste, Romania)

[Emil Diaconu](#) (Valahia University of Targoviste, Romania)

IoT ESP32 device for remote experiment manipulation within a LiFePO4 energy storage study ([abstract](#))

PRESENTER: [Fadelallah Issa](#)

15:45 [Florin Bădău](#) (POLITEHNICA University of Bucharest, Romania)

[Valentin Alexandru Stan](#) (POLITEHNICA University of Bucharest, Romania)

[Razvan Andrei Gheorghiu](#) (POLITEHNICA University of Bucharest, Romania)

Energy efficiency analysis of relay railway interlockings ([abstract](#))

16:00 [Victor Stoica](#) (POLITEHNICA University of Bucharest, Romania)

[Valentin Alexandru Stan](#) (POLITEHNICA University of Bucharest, Romania)

[Razvan Andrei Gheorghiu](#) (POLITEHNICA University of Bucharest, Romania)

Industrial PCB design for an H-bridge ([abstract](#))

16:15 [Victor Stoica](#) (POLITEHNICA University of Bucharest, Romania)

[Valentin Iordache](#) (POLITEHNICA University of Bucharest, Romania)

[Razvan Andrei Gheorghiu](#) (POLITEHNICA University of Bucharest, Romania)

Sensor redundancy for monitoring of sensitive transports ([abstract](#))

PRESENTER: [Valentin Iordache](#)

16:30 [Dragos Ioan Sacaleanu](#) (University POLITEHNICA of Bucharest, Romania)

[Irina-Petra Manciu](#) (University POLITEHNICA of Bucharest, Romania)

[Ştefan-George Roşu](#) (Universitatea Politehnica din Bucuresti, Romania)

[Lucian-Andrei Perisoara](#) (University Politehnica of Bucharest, Romania)

[Adil Tannouche](#) (Higher School of Technology of Béni Mellal Sultan Moulay Slimane University, Morocco)

[Loredana-Elisabeta Stelian Creţu](#) (University of Agronomic Sciences and Veterinaty Medicine of Bucharest, Romania)

GSM Wireless Sensor Node Prototype for Infield Environmental Parameters Acquisition ([abstract](#))

PRESENTER: [Irina-Petra Manciu](#)

16:45 [Basit Asipita Jimoh](#) (Universitatea Politehnica din Bucuresti, Romania)

[Ştefan-George Roşu](#) (Universitatea Politehnica din Bucuresti, Romania)

Single-Phase AC-DC PFC Converters for EV Chargers: An Overview ([abstract](#))

PRESENTER: [Ştefan-George Roşu](#)

REGULAR SESSION DAY 2 - 4

CHAIRS:

[Adriana-Gabriela Schiopu](#) (University of Pitesti, Romania)

[Mohammed Sallah](#) (Mansoura University, Egypt)

LOCATION: [Room 2.3.](#)

15:30 [Mihai Oproescu](#) (University of Pitesti, Romania)

[Omar Ahmed](#) (University of Pitesti, Romania)

[Vasile-Gabriel Iana](#) (University of Pitesti, Romania)

[Maria Magdalena Dicu](#) (University of Pitesti, Romania)

[Ancuța Mihaela Balteanu](#) (University of Pitesti, Romania)

[Monica Baldea](#) (University of Pitesti, Romania)

Trends and Advantages in Using Nanomaterials for Air Filtration ([abstract](#))

15:40 [Gheorghe Vasile](#) (University of Pitesti, Romania)

[Cosmin Paunescu](#) (University of Pitesti, Romania)

Study on Thermal Behavior of Composite Materials with Polymeric Matrix ([abstract](#))

PRESENTER: [Gheorghe Vasile](#)

15:50 [Ciobanu Nicolae Tiberiu](#) (Institute for Nuclear Research, Romania)

Experimental studies on binary system Er-H ([abstract](#))

16:00 [Razvan Constantin Olteanu](#) (University of Petrosani, Romania)

[Alina Daniela Handra](#) (Universitatea Petrol-Gaze din Ploiești, Romania)

[Cristina Pupaza](#) (University of Petrosani, Romania)

[Alexandru Savulescu](#) (Universitatea Petrol-Gaze din Ploiești, Romania)

A method of analyzing the supply and demand for mining equipment ([abstract](#))

PRESENTER: [Razvan Constantin Olteanu](#)

16:10 [Denisa Toma](#) (RATEN ICN Pitesti, Romania)

[Nicu Bizon](#) (University of Pitesti, Romania)

[Alexandru Ionut Nitu](#) (RATEN ICN Pitesti, Romania)

[Vasile Viorel Ionescu](#) (RATEN ICN Pitesti, Romania)

[Vasile Radu](#) (RATEN ICN Pitesti, Romania)

[Livia Nicoleta Stoica](#) (RATEN ICN Pitesti, Romania)

[Alexandra Georgiana Jinga](#) (RATEN ICN Pitesti, Romania)

[Valentin Nicolae Oлару](#) (RATEN ICN Pitesti, Romania)

[Mirela Matei](#) (RATEN ICN Pitesti, Romania)

Study on the Finite Element Modeling of the Mechanical Stresses of the Samples of Nuclear Structural Materials ([abstract](#))

PRESENTER: [Denisa Toma](#)

16:20 [Adriana-Gabriela Schiopu](#) (University of Pitesti, Romania)

[Mihai Oproescu](#) (University of Pitesti, Romania)

[Ionut Bulgaru](#) (University of Pitesti, Romania)

[Ovidiu Constantin Novac](#) (University of Oradea, Romania)

[Mihaela Cornelia Novac](#) (University of Oradea, Romania)

[Gabriel Vasile Iana](#) (University of Pitesti, Romania)

Formation of Specific Competences in the Engineering Career by Educational Software – methodological landmarks applied to the “Initiation in research” discipline ([abstract](#))

PRESENTER: [Adriana-Gabriela Schiopu](#)

16:30 [Maria Magdalena Dicu](#) (University of Pitesti, Romania)

[Ancuța Mihaela Bâlteanu](#) (University of Pitesti, Romania)

[Monica Bâldea](#) (University of Pitesti, Romania)

Preparing students for university and research careers in science and engineering ([abstract](#))

PRESENTER: [Monica Bâldea](#)

16:40 [Cosmin Paunescu](#) (University of Pitesti, Romania)

[Gheorghe Vasile](#) (University of Pitesti, Romania)

The Study of Creep in the Case of Pressure Vessels ([abstract](#))

PRESENTER: [Gheorghe Vasile](#)

16:50 [Denisa Toma](#) (RATEN ICN Pitesti, Romania)

[Alexandru Ionut Nitu](#) (RATEN ICN Pitesti, Romania)

[Nicu Bizon](#) (Universitatea din Pitesti, Romania)

[Livia Stoica](#) (RATEN ICN Pitesti, Romania)

[Vasile Radu](#) (RATEN ICN Pitesti, Romania)

[Viorel Ionescu](#) (RATEN ICN Pitesti, Romania)

[Alexandra Jinga](#) (RATEN ICN Pitesti, Romania)

[Valentin Olaru](#) (RATEN ICN Pitesti, Romania)

[Mirela Matei](#) (RATEN ICN Pitesti, Romania)

Preliminary Study on the Application for Monitoring Work Parameters in the Experimental Testing Facility under the Operating Conditions Generation IV Nuclear Reactors ([abstract](#))

PRESENTER: [Denisa Toma](#)

15:30-17:00 Session 9C: Industrial and AI-based applications and secure systems and communications in the era of Future Networks and beyond

ECAI Afternoon sections

REGULAR SESSION DAY 2 - 5

CHAIRS:

[Gabriel Papuc](#) (ORANGE Romania, Romania)

[Simona Viorica Halunga](#) (University POLITEHNICA of Bucharest, Romania)

[Octavian Fratu](#) (University POLITEHNICA of Bucharest, Romania)

LOCATION: [Room 3.2.](#)

15:30 [Alpha Amadou Balde](#) (University Politehnica of Bucharest, Guinea)

[Constantin Viorel Marian](#) (University Politehnica of Bucharest, Romania)

Optimized Architecture for Modular Online Store Based on Microservices for Heavy Load Transactional User Traffic ([abstract](#))

PRESENTER: [Alpha Amadou Balde](#)

15:45 [Maria Ioana Oproiu](#) (University Politehnica of Bucharest, Romania)

[Constantin Viorel Marian](#) (University POLITEHNICA of Bucharest, Romania)

Multiple Usage Virtual Reality Based Application - Example Scenario for Medical Purposes ([abstract](#))

PRESENTER: [Maria Ioana Oproiu](#)

16:00 [Catalin Iordache](#) (University POLITEHNICA of Bucharest, Romania)

[Constantin Viorel Marian](#) (University POLITEHNICA of Bucharest, Romania)

Industrial Expert System for Intelligent Traffic Lane Allocation Using Machine Learning and Pattern Recognition ([abstract](#))

PRESENTER: [Catalin Iordache](#)

16:15 [Cosmina Stalidi](#) (Beia Consult International & ETTI/UPB, Romania)

[Eduard-Cristian Popovici](#) (POLITEHNICA University of Bucharest, Romania)

[George Suciu](#) (BEIA Consult International, Romania)

Preliminary Architecture and a Pilot Implementation for a Malicious Emails Detection Solution ([abstract](#))

PRESENTER: [Cosmina Stalidi](#)

16:30 [Teodor BĂrbuceanu](#) (Politehnica University of Bucharest, Romania)
[Răzvan CrĂciunescu](#) (Politehnica University of Bucharest, Romania)
[Eduard-Cristian Popovici](#) (Politehnica University of Bucharest, Romania)

Data Protection Device ([abstract](#))

PRESENTER: [Eduard-Cristian Popovici](#)

15:30-17:00 Session 9D: E-SESSION IV

ECAI Afternoon sections

E-SESSION IV

CHAIRS:

[Hossein Shayeghi](#) (Iran, Iran)

LOCATION: [E-Session Room 1](#)

15:30 [Milica Vukovic](#) (Faculty of Electrical Engineering, University of East Sarajevo, Bosnia and Herzegovina)
[Vladimir Vujovic](#) (Faculty of Electrical Engineering, University of East Sarajevo, Bosnia and Herzegovina)
[Zorana Staka](#) (Faculty of Electrical Engineering, University of East Sarajevo, Bosnia and Herzegovina)
[Snjezana Milinkovic](#) (Faculty of Electrical Engineering, University of East Sarajevo, Bosnia and Herzegovina)

Domain-Specific Language for Modeling Fluent API ([abstract](#))

PRESENTER: [Milica Vukovic](#)

15:42 [Zorana Staka](#) (Faculty of Electrical Engineering, University of East Sarajevo, Bosnia and Herzegovina)
[Vladimir Vujovic](#) (Faculty of Electrical Engineering, University of East Sarajevo, Bosnia and Herzegovina)
[Milica Vukovic](#) (Faculty of Electrical Engineering, University of East Sarajevo, Bosnia and Herzegovina)
[Snjezana Milinkovic](#) (Faculty of Electrical Engineering, University of East Sarajevo, Bosnia and Herzegovina)

Markup language model transformation with ATL ([abstract](#))

PRESENTER: [Zorana Staka](#)

15:54 [Hussein Jafrouni](#) (Karabuk University, Turkey)
[Mohamed Almaktar](#) (College of Electrical and Electronics Technology, Libya)
[Faisal A. Mohamed](#) (Authority of Natural Science Research and Technology, Libya)
[A. M. Elbreki](#) (Authority of Natural Science Research and Technology, Libya)
[Zakaria Rajab](#) (Benghazi University, Libya)

Optimal Placement and Sizing of Static Var Compensators in Radial Distribution Networks Using Artificial Intelligence Techniques ([abstract](#))

16:06 [Hamza Gasmî](#) (Laboratoire de Contrôle Avancé (LABCAV) Department of Electronic and Telecommunication, Université 8 Mai 1945 Guelma, Algeria)
[Sofiane Mendaci](#) (Laboratoire de Contrôle Avancé (LABCAV) Department of Electronic and Telecommunication, Université 8 Mai 1945 Guelma, Algeria)
[Habib Benbouhenni](#) (Department of Electrical & Electronics Engineering, Nisantasi University, Istanbul, Turkey, Algeria)
[Bizon Nicu](#) (Faculty of Electronics Communication and Computers, University of Pitesti, 110040 Pitesti, Romania., Romania)

Field-Oriented Control Based on Nonlinear Techniques for Wind Energy Conversion Systems ([abstract](#))

PRESENTER: [Hamza Gasmî](#)

16:18 [Hossein Shayeghi](#) (University of Mohaghegh Ardabili, Iran)
[Nafiseh Taati](#) (University of Mohaghegh Ardabili, Iran)

[Seyedjalal Seyedshenava](#) (University of Mohaghegh Ardabili, Iran)

[Alireza Rahnama](#) (University of Mohaghegh Ardabili, Iran)

[Nicu Bizon](#) (University of Pitesti, Romania)

Optimum Energy Management of the Price-Maker Virtual Power Plant including Electric Vehicles ([abstract](#))

PRESENTER: [Alireza Rahnama](#)

16:30 [Dalal Zellouma](#) (Department of Electrical Engineering, University of El Oued, LEVRES Laboratory, P.O. Box789, El Oued 3900, Algeria, Algeria)

[Youcef Bekakra](#) (Department of Electrical Engineering, University of El Oued, LEVRES Laboratory, P.O. Box789, El Oued 3900, Algeria, Algeria)

[Habib Benbouhenni](#) (Department of Electrical & Electronics Engineering, Nisantasi University, Istanbul, Turkey, Algeria)

[Nicu Bizon](#) (Faculty of Electronics Communication and Computers, University of Pitesti, 110040 Pitesti, Romania., Romania)

A New Field-Oriented Control for Induction Motor Drive Using a Synergetic-Super Twisting Algorithm ([abstract](#))

PRESENTER: [Dalal Zellouma](#)

16:42 [Hossein Shayeghi](#) (University of Mohaghegh Ardabili, Iran)

[Reza Mohajery](#) (University of Mohaghegh Ardabili, Iran)

[Nicu Bizon](#) (University of Pitesti, Romania)

Optimal Design of a Hybrid Controller for DC-DC Buck Converter ([abstract](#))

PRESENTER: [Reza Mohajery](#)

17:00-17:30 Coffee Break

Coffee break

17:30-18:00 Session 10: ECAI-2023 CLOSING CEREMONY

ECAI-2023 CLOSING CEREMONY

CHAIR:

[Mihai Oproescu](#) (University of Pitesti, Romania)

LOCATION: [Room 2.1.](#)

18:30-20:30 GALA DINNER

GALA DINNER

LOCATION: [Lunch zone](#)

Visiting suggestions in Bucharest:

Known for its wide, tree-lined boulevards, glorious Belle Époque buildings and a reputation for the high life (which in the 1900s earned its nickname of "Little Paris"), Bucharest, Romania's largest city and capital, is today a bustling metropolis. Romanian legend has it that the city of Bucharest was founded on the banks of the Dambovitza River by a shepherd named Bucur, whose name literally means "joy." His flute playing reportedly dazzled the people and his hearty wine from nearby vineyards endeared him to the local traders, who gave his name to the place.

The Arch of Triumph

Initially built of wood in 1922 to honor the bravery of Romanian soldiers who fought in World War I, Bucharest's very own Arc de Triomphe was finished in Deva granite in 1936. Designed by the architect, Petre Antonescu, the Arc stands 85 feet high. An interior staircase allows visitors to climb to the top for a panoramic view of the city. The sculptures decorating the structure were created by leading Romanian artists, including Ion Jalea, Constantin Medrea and Constantin Baraschi.

Revolution Square

The square gained worldwide notoriety when TV stations around the globe broadcasted Nicolae Ceausescu's final moments in power on December 21, 1989. It was here, at the balcony of the former Communist Party Headquarters, that Ceausescu stared in disbelief as the people gathered in the square below turned on him. He fled the angry crowd in his white helicopter, only to be captured outside of the city a few hours later. The square's importance stretches back long before the dramatic events of the 1989 Revolution. On the far side of the square stands the former **Royal Palace**, now home to the **National Art Museum**, the stunning **Romanian Athenaeum** and the historic **Athenee Palace Hotel**. At the south end of the square, you can visit the small, but beautiful, **Kretzulescu Church**.

The Romanian Athenaeum

The work of French architect Albert Galleron, who also designed the National Bank of Romania, the Athenaeum was completed in 1888, financed almost entirely with money donated by the general public. One of the preeminent public fundraising campaigns ever in Romania, the "Give a penny for the Athenaeum" campaign saved the project after the original patrons ran out of funds. With its high dome and Doric columns, the Athenaeum resembles an ancient temple. The lobby has a beautifully painted ceiling decorated in gold leaf, while curved balconies cascade in ringlets off a spiral staircase. A ring of pink marble columns is linked by flowing arches where elaborate brass lanterns hang like gems from a necklace. Inside the concert hall, voluptuous frescoes cover the ceiling and walls. Renowned worldwide for its outstanding acoustics, it is Bucharest's most prestigious concert hall and home of the Romanian George Enescu Philharmonic.

Manuc's Inn

Built between 1804 and 1808 by the wealthy Armenian trader Emanuel Marzaian (called by the Turks, Manuc Bey), the inn was witness in 1812 to the preliminary talks of the Peace Treaty that put an end to the Russian - Turkish War (1806-1812). A favorite meeting and resting place for tradesmen in those times, Manuc's Inn has preserved to this day its old style and flavor. It now serves as a hotel with a restaurant, a wine cellar and a pastry shop.

University Square

Buzzing with crowds and traffic from early morning until late at night, this area is one of the most popular meeting places in Bucharest. The square brings together some remarkable architectural masterpieces on each of its four corners, starting with the **University of Bucharest's** School of Architecture, the **Bucharest National Theatre**, the neoclassical **Coltea Hospital** and its lovely **church** (1702-1794) and the **Sutu Palace**, now home to the Bucharest History Museum. In the middle of the square, on a little island, 10 stone crosses pay respect to those killed during the 1989 revolution. Below the square is an underground passage with shops and eateries, allowing pedestrians to cross from one side of the square to another and to access the subway station.

Parliament Palace

Built by Communist Party leader, Nicolae Ceausescu, the colossal Parliament Palace (formerly known as the People's Palace) is the second largest administrative building in the world after the Pentagon. It took 20,000

workers and 700 architects to build. The palace boasts 12 stories, 1,100 rooms, a 328-ft-long lobby and four underground levels, including an enormous nuclear bunker.

The Palace of Parliament is the world's second-largest office building in surface (after the Pentagon) and the third largest in volume (after Cape Canaveral in the U.S. and the Great Pyramid in Egypt). The crystal chandelier in the Human Rights Hall (Sala Drepturilor Omului) weighs 2.5 tons. Some of the chandeliers have as many as 7,000 light bulbs. When construction started in 1984, the dictator intended it to be the headquarters of his government. Today, it houses Romania's Parliament and serves as an international conference centre. Built and furnished exclusively with Romanian materials, the building reflects the work of the country's best artisans. A guided tour takes visitors through a small section of dazzling rooms, huge halls and quarters used by the Senate (when not in session). The interior is a luxurious display of crystal chandeliers, mosaics, oak paneling, marble, gold leaf, stained-glass windows and floors covered in rich carpets.

Village Museum

Founded by royal decree in 1936, this fascinating outdoor museum, the largest in Europe, covers some 30 acres on the shores of Lake Herastrau in Herastrau Park. It features a collection of 50 buildings representing the history and design of Romania's rural architecture. Steep-roofed peasant homes, thatched barns, log cabins, churches and watermills from all regions of the country were carefully taken apart, shipped to the museum and rebuilt in order to recreate the village setting. Throughout the year, the Village Museum hosts special events where you will have a chance to witness folk artisans demonstrating traditional skills in weaving, pottery and other crafts. Folk arts and crafts are available at the museum gift shop.

Mogosoia Palace & Brancovenesc Museum

Located in the village of the same name on the shore of Mogosoia Lake, this palace reflects the Brancovenesc architectural style, featuring traditional Romanian staircase balconies, arcades and columns. Built by the Walachian prince Constantin Brancoveanu between 1698 and 1702 as a summer residence, the palace features a beautiful Venetian-style loggia on the facade facing the lake and a balcony with intricate Brancovenesc-style carvings overlooking the main courtyard. Today, the palace houses the **Brancovenesc Museum** with exhibits of valuable paintings, wood and stone sculptures, gold and silver embroideries, rare books and precious manuscripts. Inside the complex, there is also a church built in 1688 and decorated by a team of Greek artists. The original interior murals have been well-preserved, including a painting showing Constantin Brancoveanu with his wife, Maria, and their four sons and seven daughters, all wearing royal dress.

Snagov Monastery

Where: 25 miles north of Bucharest; Access: car, bus, taxi

In 1458 - more than one hundred years after the church was built (1364) - Romanian prince Vlad Tepes (Vlad the Impaler) added thick defending walls and a dungeon. A plaque on the floor inside the church marks the grave with the presumed remains of the world-known count.

The monastery is located on an island on lake Snagov, and can be accessed on a pedestrian bridge or by boat.

ECAI 2023, June 29 – June 30, 2023, Timetable and Program

Date	Time	Session or activity	Location	
June 29	8:00-8:50	Authors Registration	Desk Hall	
	9:00-9:40	ECAI Opening Ceremony	Room 2.1.	
	9:40-11:00	ECAI KEYNOTE LECTURES I (part I)	Room 2.1.	
	11:00-11:30	Coffee break & Brokerage events	Desk Hall	
	11:35-12:15	ECAI KEYNOTE LECTURES I (part II)	Room 2.1.	
	12:15-14:00	ORANGE Events	Desk Hall	
	12:15-14:00	SESIUNEA DE COMUNICĂRI ȘTIINȚIFICE a Filiala Pitești a C.R.I.F.S.T.- Academia Română	Room 2.1.	
	12:15-14:00	ROUND TABLE "AUTOMATED MONITORING & ANALYSIS PLATFORM (AMAP)", Cod SMIS 142811 "E SAFETY DRIVING APPLICATION" COD SMIS 142406	Desk Hall	
	14:00-15:30	Lunch	Lunch zone	
	15:30-17:00	ECAI Afternoon sessions		
		Control, robotics and mechatronics	Room 2.1.	
		Signal & image processing	Room 2.2.	
		Software, databases, and computer applications I	Room 2.3.	
		Artificial Intelligence and expert systems I	Room 3.2.	
		Bio-medical applications and biomaterials & Electronic circuits and equipment	Room 4.2.	
		E-session - I	E – session room	
17:00-17:30	International Workshop on Systems Safety & Security-IWSSS 2023	E – session room		
17:00-17:30	Coffee break & Brokerage events	Desk Hall		
17:30-18:30	CULTURAL PROGRAM - Visit to the Research Center	Desk information		
18:30-20:30	ECAI Welcome dinner	Desk information		
June 30	9:00-9:30	Authors Registration	Desk Hall	
	9:15-9:30	ORANGE EVENTS	Room 2.2.	
	9:30-11:00	ECAI KEYNOTE LECTURES III	Room 2.2.	
	11:00-11:30	Coffee Break & Brokerage events	Desk Hall	
	11:30-14:00	ECAI morning sessions		
		Electrical engineering applications	Room 2.1.	
		Energy & Environmental issues	Room 2.2.	
		Software, databases, and computer applications II	Room 2.3.	
		Artificial Intelligence and expert systems II	Room 3.2.	
		Industrial and AI-based applications and secure systems and communications in the era of Future Networks and beyond	Room 4.2.	
		E-session - II	E – session room	
		POSTER session	Desk Hall	
		IoT, Energy Internet, Blockchain Technology and Smart Contracts-IoT'23	E – session room	
		E-session III	E – session room	
	14:00-15:30	ROUND TABLE "AUTOMATED MONITORING & ANALYSIS PLATFORM (AMAP)", Cod SMIS 142811 "E SAFETY DRIVING APPLICATION" COD SMIS 142406	Desk Hall	
	14:00-15:30	Lunch	Lunch zone	
15:30-17:00	ECAI Afternoon sessions			
	Electronic circuits and equipment	Room 2.2.		
	IWTME'23 & IWTOEC'23	Room 2.3.		
	Industrial and AI-based applications and secure systems and communications in the era of Future Networks and beyond	Room 3.2.		
17:00-17:30	E-session IV	E – session room		
17:00-17:30	Coffee Break & Brokerage events	Desk Hall		
17:30-18:00	ECAI Closing Solemnity	Room 2.2.		
18:00-20:00	ECAI Gala Dinner	Gala Diner Restaurant		
20:00-23:00	Free time (shopping & sightseeing)			

International Workshop in Systems Safety & Security – IWSSS; International Workshop on Technology and Materials Engineering-IWTME'23, International Workshop on Trends and Opportunities in Engineering Career-IWTOEC'23