IEEE MELECON 2024
22nd IEEE Mediterranean Electrotechnical Conference
25 – 27 June 2024 ◆ Porto, Portugal

Call for Papers

IEEE MELECON is one of the flagship conferences of IEEE Region 8 and will be held in Portugal, Porto on 25-27 June 2024, supported by the IEEE Portugal Section. IEEE MELECON 2024 is a major international forum presenting design methodologies, techniques, and experimental results in emerging electro-technologies. It is one of the flagship conferences of the IEEE Region 8 (the largest region of IEEE including Europe, Africa, and the Middle East). It is expected to bring together researchers and practitioners from different fields of Electrical Engineering. The technical program will include plenary sessions, regular technical sessions, special sessions, panels, tutorials, and special events devoted to Students and Young Professionals, Women in Engineering, Entrepreneurs, and Industries. The technical sessions will be organized into four main tracks:

TRACK 1 – Power, Energy, and Power Electronics	TRACK 2 - Smart Industry and Manufacturing
1.1 Conversion and Control of Sustainable Energy Sources	2.1 Materials and Sensors for Industry 4.0
1.2 Power Electronics and Control in Smart Grids	2.2 Sustainable Industrial Processes and Products
1.3 Energy Storage Systems	2.3 Advanced Products and Manufacturing Processes
1.4 Electrical Machines and Drives	2.4 Digital and Additive Manufacturing Technologies and Applications
1.5 Renewable Energy Systems	2.5 AI for Manufacturing and Industrial Systems
1.6 Energy Management, Smart Metering, and Distributed Energy Resources	2.6 Autonomous Systems: From Robots to Drones
1.7 Electric Mobility: Challenges, Trends, Safety, and EMI issues	2.7 Collaborative Machines and Systems
1.8 Artificial Intelligence and Big Data in Electric and Multi-Energy Systems	2.8 Augmented and Virtual Reality in Industry
1.9 Energy Harvesting	2.9 Smart Farming and Precision Agriculture: Technology and Solutions
1.10 Cyber Security and Failure Analysis for Smart Grids	2.10 Digital Distributed Manufacturing: From Data Collection to Intelligent Systems
1.11 Applications of Superconductors in Electric Energy Systems	2.11 Aerospace Technologies
1.12 Wireless Energy Transfer	2.12 Metrology for process control and innovative processes certification
1.13 Power Electronics	2.13 Human-centric Manufacturing Technologies
	2.14 Resilient and Secure Manufacturing Systems
	2.15 Distributed Ledger Technologies (DLT) for Industrial Traceability
	2.16 Novel Architectures for the Industrial Internet of Things (IIoT)

	2.17 Asset Management and Condition Monitoring
	2.18 Robotic Systems in Intralogistics
TRACK 3 - Future Healthcare	**TRACK 4 - Digital Transformation**
3.1 Services, Applications, and Solutions	4.1 Sensors and Electronics
3.2 Health Informatics and Big Data	4.2 Signal and Image Processing
3.3 Telemedicine and E-health	4.3 Artificial Intelligence
3.4 Personalized Medicine and IoT	4.4 6G and Beyond Communications Systems
3.5 Neural Engineering	4.5 Computer Networks and Cloudification
3.6 Bioinstrumentation: Advanced Devices and Sensors	4.6 IoT and Blockchain
3.7 Physiological Processes Modelling	4.7 Education Technologies
3.8 Micro and Nano Technology in Bioengineering	4.8 Semantic Web and Big Data Analytics
3.9 Artificial Intelligence & Machine Learning in Health	4.9 Smart Living Technologies
	4.10 Smart Mobility and Transportation
3.10 Biomedical Robotics	4.11 Remote Sensing and Edge-Computing
3.11 Biomedical Signal and Image Processing	4.12 Digital Twins and Metaverse
3.12 Biomaterials and Tissue Engineering	4.13 Cybersecurity
3.13 Therapeutic Applications of Robotics and Immersive Systems	4.14 Human-Computer Interaction
	4.15 Sustainability: From Green IoT to Responsible AI

Prospective Authors of papers are invited to submit a paper (typically 4-6 pages in standard IEEE two-column format) via **EDAS** by suggesting the related Track and Technical Session. The paper should contain a complete description of the proposed contribution along with results, suitably framed in the related state of the art. Each paper will be reviewed in terms of relevance with respect to the scope of the event, originality, quality of the technical content, overall organization, and writing style. Papers must be prepared according to the Author's instructions reported on the MELCON2024 website: **https://2024.ieee-melecon.org/**. Submission of papers implies the intention to register and present the related content at the conference. Proceedings papers presented at the Conference will be submitted for inclusion in the IEEE Xplore Digital Library.

Important Dates:

Special Session/Workshop Proposal – October 17, 2023
Tutorials Proposal – February 25, 2024
Papers Submission – January 15, 2024
Notification of Acceptance – March 15, 2024
Camera-Ready Papers Submission – March 31, 2024
Early Registration – March 31, 2024
Conference - 25-27 June, 2024

General Chairs:
Ana Madureira, Institute of Engineering (ISEP/P.PORTO)
Catarina Silva, University of Coimbra
Rodolfo Oliveira, Nova University of Lisbon