

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

- 1.1 Conversion and Control of Sustainable Energy Sources
- 1.2 Power Electronics and Control in Smart Grids
- 1.3 Energy Storage Systems
- 1.4 Electrical Machines and Drives
- 1.5 Renewable Energy Systems
- 1.6 Energy Management, Smart Metering, and Distributed Energy Resources
- 1.7 Electric Mobility: Challenges, Trends, Safety, and EMI issues
- 1.8 Artificial Intelligence and Big Data in Electric and Multi-Energy Systems
- 1.9 Energy Harvesting
- 1.10 Cyber Security and Failure Analysis for Smart Grids
- 1.11 Applications of Superconductors in Electric Energy Systems
- 1.12 Wireless Energy Transfer
- 1.13 Power Electronics

TRACK 2 - Smart Industry and Manufacturing

- 2.1 Materials and Sensors for Industry 4.0
- 2.2 Sustainable Industrial Processes and Products
- 2.3 Advanced Products and Manufacturing Processes
- 2.4 Digital and Additive Manufacturing Technologies and Applications
- 2.5 AI for Manufacturing and Industrial Systems
- 2.6 Autonomous Systems: From Robots to Drones
- 2.7 Collaborative Machines and Systems
- 2.8 Augmented and Virtual Reality in Industry
- 2.9 Smart Farming and Precision Agriculture: Technology and Solutions
- 2.10 Digital Distributed Manufacturing: From Data Collection to Intelligent Systems
- 2.11 Aerospace Technologies
- 2.12 Metrology for process control and innovative processes certification
- 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 3.1 Services, Applications, and Solutions 3.2 Health Informatics and Big Data 3.3 Telemedicine and E-health 3.4 Personalized Medicine and IoT 3.5 Neural Engineering 3.6 Bioinstrumentation: Advanced Devices and Sensors 3.7 Physiological Processes Modelling 3.8 Micro and Nano Technology in Bioengineering 3.9 Artificial Intelligence & Machine Learning in Health 3.10 Biomedical Robotics 3.11 Biomedical Signal and Image Processing 3.12 Biomaterials and Tissue Engineering 3.13 Therapeutic Applications of Robotics and Immersive Systems	TRACK 4 - Digital Transformation 4.1 Sensors and Electronics 4.2 Signal and Image Processing 4.3 Artificial Intelligence 4.4 6G and Beyond Communications Systems 4.5 Computer Networks and Cloudification 4.6 IoT and Blockchain 4.7 Education Technologies 4.8 Semantic Web and Big Data Analytics 4.9 Smart Living Technologies 4.10 Smart Mobility and Transportation 4.11 Remote Sensing and Edge-Computing 4.12 Digital Twins and Metaverse 4.13 Cybersecurity 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:

Papers Submission – January 15, 2024

Special Session/Workshop Proposal – December 31, 2023

Tutorials Proposal – February 25, 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