

# IEEE MELECON 2024

22<sup>nd</sup> IEEE Mediterranean Electrotechnical Conference

25 – 27 June 2024 ♦ Porto, Portugal



## Call for Special Technical Sessions

The IEEE MELECON 2024 Technical Sessions focus on challenging and emerging issues in the fields of 1) Power, Energy, and Power Electronics, 2) Smart Industry and Manufacturing, 3) Future Healthcare, and 4) Digital Transformation. They cover new developments in theory, analytics, numerical simulation and modeling, experimentation, advanced deployment and case studies, results of laboratory or field operational tests, and other related creative endeavors. The Technical program topics include, but are not limited to:

<p><b>TRACK 1 – Power, Energy, and Power Electronics</b></p> <ul style="list-style-type: none"> <li>1.1 Conversion and Control of Sustainable Energy Sources</li> <li>1.2 Power Electronics and Control in Smart Grids</li> <li>1.3 Energy Storage Systems</li> <li>1.4 Electrical Machines and Drives</li> <li>1.5 Renewable Energy Systems</li> <li>1.6 Energy Management, Smart Metering, and Distributed Energy Resources</li> <li>1.7 Electric Mobility: Challenges, Trends, Safety, and EMI issues</li> <li>1.8 Artificial Intelligence and Big Data in Electric and Multi-Energy Systems</li> <li>1.9 Energy Harvesting</li> <li>1.10 Cyber Security and Failure Analysis for Smart Grids</li> <li>1.11 Applications of Superconductors in Electric Energy Systems</li> <li>1.12 Wireless Energy Transfer</li> <li>1.13 Power Electronics</li> </ul>	<p><b>TRACK 2 - Smart Industry and Manufacturing</b></p> <ul style="list-style-type: none"> <li>2.1 Materials and Sensors for Industry 4.0</li> <li>2.2 Sustainable Industrial Processes and Products</li> <li>2.3 Advanced Products and Manufacturing Processes</li> <li>2.4 Digital and Additive Manufacturing Technologies and Applications</li> <li>2.5 AI for Manufacturing and Industrial Systems</li> <li>2.6 Autonomous Systems: from Robots to Drones</li> <li>2.7 Collaborative Machines and Systems</li> <li>2.8 Augmented and Virtual Reality in Industry</li> <li>2.9 Smart Farming and Precision Agriculture: Technology and Solutions</li> <li>2.10 Digital Distributed Manufacturing: from Data Collection to Intelligent Systems</li> <li>2.11 Aerospace Technologies</li> <li>2.12 Metrology for process control and innovative processes certification</li> <li>2.13 Human-centric Manufacturing Technologies</li> <li>2.14 Resilient and Secure Manufacturing Systems</li> <li>2.15 Distributed Ledger Technologies (DLT) for Industrial Traceability</li> <li>2.16 Novel Architectures for the Industrial Internet of Things (IIoT)</li> <li>2.17 Asset Management and Condition Monitoring</li> <li>2.18 Robotic Systems in Intralogistics</li> </ul>
<p><b>TRACK 3 - Future Healthcare</b></p> <ul style="list-style-type: none"> <li>3.1 Services, Applications, and Solutions</li> <li>3.2 Health Informatics and Big Data</li> <li>3.3 Telemedicine and E-health</li> <li>3.4 Personalized Medicine and IoT</li> <li>3.5 Neural Engineering</li> <li>3.6 Bioinstrumentation: Advanced Devices and Sensors</li> <li>3.7 Physiological Processes Modelling</li> <li>3.8 Micro and Nano Technology in Bioengineering</li> <li>3.9 Artificial Intelligence &amp; Machine Learning in Health</li> <li>3.10 Biomedical Robotics</li> <li>3.11 Biomedical Signal and Image Processing</li> <li>3.12 Biomaterials and Tissue Engineering</li> <li>3.13 Therapeutic Applications of Robotics and Immersive Systems</li> </ul>	<p><b>TRACK 4 - Digital Transformation</b></p> <ul style="list-style-type: none"> <li>4.1 Sensors and Electronics</li> <li>4.2 Signal and Image Processing</li> <li>4.3 Artificial Intelligence</li> <li>4.4 6G and Beyond Communications Systems</li> <li>4.5 Computer Networks and Cloudification</li> <li>4.6 IoT and Blockchain</li> <li>4.7 Education Technologies</li> <li>4.8 Semantic Web and Big Data Analytics</li> <li>4.9 Smart Living Technologies</li> <li>4.10 Smart Mobility and Transportation</li> <li>4.12 Remote Sensing and Edge-Computing</li> <li>4.11 Digital Twins and Metaverse</li> <li>4.12 Cybersecurity</li> <li>4.13 Human-Computer Interaction</li> <li>4.14 Sustainability: from Green IoT to Responsible AI</li> </ul>

Prospective organizers of Special Technical Sessions for IEEE MELECON 2024 are invited to submit their proposals by sending an email to [melecon2024@ieee-pt.org](mailto:melecon2024@ieee-pt.org). Proposals should include:

- title of the proposed Special Technical Session
- short description (less than 300 words) of the topic
- session organizer(s) name(s), affiliation(s), short biography and contact information (including email)

Each Special Technical Session proposal is limited to no more than two organizers. It will be carefully evaluated at the time it is received based on its pertinence to the scope of the Conference, the timeliness of the topic, and the qualifications of organizers and contributors. Once approved, it will immediately be announced on the Conference website, and the organizers will be invited to join the Technical Committee as Special Technical Session Co-Chairs. Moreover, they will be requested to propose a list of qualified peer-reviewers that will be submitted to the IEEE MELECON 2024 TPC chairs for approval.

Organizers will be welcome to promote their Special Technical Session. Prospective authors will be able to submit their papers to the approved Special Technical Sessions by selecting the corresponding track in EDAS. All submitted manuscripts will undergo the same review process as regular papers. Papers accepted and presented at the Conference will be submitted for inclusion in the IEEE Xplore digital library.

Each Special Technical Session should contain a minimum of 5 accepted papers (typically 6 papers). The IEEE MELECON 2024 TPC chairs reserve the right to cancel any Technical Session if deadlines are missed or an insufficient number of attendees is preregistered.

**Proposals must have been received by the deadline of December 31, 2023, for consideration.**