



# IEEE MELECON 2022

The 21<sup>st</sup> IEEE Mediterranean Electrotechnical Conference  
Palermo, Italy, 14-16 June 2022

Organized by the IEEE Italy Section and University of Palermo - <https://www.melecon2022.org>

## CALL FOR PAPERS

IEEE MELECON 2022 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 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. For this edition, the technical sessions are organized into four main tracks.

TRACK 1: SMART ENERGY Chairs Carlo Cecati, IES Italy Chapter Chair Fabio Viola, University of Palermo Hadi Kanaan, Saint Joseph Univ. Beirut, Lebanon	TRACK 2: SMART INDUSTRY Chairs Giambattista Grusso, Politecnico di Milano Federico Baronti, University of Pisa	TRACK 3: SMART HEALTHCARE Chairs Sergio Cerutti, EMB Italy Chapter Chair Thomas Penzel, Charité University Hospital, Berlin, Germany	TRACK 4: SMART DIGITAL COMMUNITIES Chairs Barbara Masini, CNR-IEIT Francesco Masulli, CI Italy Chapter Chair Alexey Vinel, Halmstad University, Sweden
1.1. Conversion and Control of Sustainable Energy Sources 1.2. Power Electronics and Control in Smart Grids, Industry and e-Transportation 1.3. Energy Storage Systems and their Control 1.4. Electrical Machines and Drives for Industry and Renewable energy Systems 1.5. Energy Management, Smart Metering and Distributed Energy Resources 1.6. Electric Mobility: challenges, trends, safety and EMI issues 1.7. Application of Machine Learning and Artificial Intelligence in Smart Grids 1.8. Energy Harvesting, Wireless Power transfer and Power Electronics Systems 1.9. Cyber Security and Big Data Issues for Smart Grid Systems	2.1. Smart Materials & Smart Sensor for Industry 4.0 2.2. Sustainable Industrial Processes and Products 2.3. Modelling and Simulation of Advanced Products and Manufacturing Processes 2.4. Additive Manufacturing Technologies, Applications and Measurement 2.5. Smart Systems and Artificial Intelligence for Manufacturing 2.6. Smart Technology for Autonomous Systems: from Robots to Drone 2.7. Collaborative Machines and Systems 2.8. Augmented Reality-Based and Virtual Reality 2.9. Agriculture 4.0: Technology and Solution 2.10. Digital Manufacturing: from Data Collection to Intelligent Systems	3.1. Services, Applications and Solutions in Smart Healthcare 3.2. Big Data Integration and Personalised Medicine 3.3. E-Health and IoT for Smart HealthCare 3.4. Neural and Cognitive Engineering 3.5. Advances in Medical Informatics for HealthCare Applications 3.6. Biotechnologies: advanced Devices and Sensors 3.7. Bio-electromagnetic modelling 3.8. Nanostructured devices and smart materials for biophotonics applications	4.1. Smart Education Technologies 4.2. Cognitive Computing, Artificial Intelligence & Machine Learning 4.3. Semantic Web, Big data & Analytics 4.4. Smart Living Technologies 4.5. 5G and beyond Wireless Networks 4.6. Digital Twins for Smart Cities 4.7. 3D Networks (terrestrial and aerial) 4.8. Remote Sensing Methods and Applications 4.9. IoT and Smart Communications 4.10. Smart Mobility and Transportation

<b>Honorary Chair</b> Antonio Luque, IEEE R8 Director <b>General Chairs</b> Guido Ala, University of Palermo Sergio Rapuano, IEEE Italy Section Chair Tiziana Tambosso, IEEE R8 CoCSC Representative <b>Steering Committee Chairs</b> Bernardo Tellini, IEEE Italy Section Past-Chair Ermanno Cardelli, IEEE Italy Section National Association Liaison Committee Coordinator <b>National research associations</b> Riccardo Leonardi, Research Association GTTI Ermanno Cardelli, Research Association ET Paolo Carbone, Research Association GMEE Alfonso Damiano, Research Association CMAEL Emilio Ferrari, Research Association AIDI Nicola Paoone, Research Association GMMT Giuseppe Mazarella, Research Association SIEM Dario Zaninelli, Research Association GUSEE Paolo Atzeni, Research Association GII Giovanni Ghione, Research Association SIE Sauro Longhi, Research Association SIDRA Luca Formaggia, SIMAI <b>International Steering Committee</b> Maddalena Salazar Palma, Past-Director Region 8 Vincenzo Puri, Director-Elect Region 8 Habib Kamoun, R8 CoCSC Chair Mona Gassemian, UK&Ireland Session Chair Shmuel Auster, Israel Section Chair Chiara Boccaletti, IAS Meeting Department Chair EMBS Representative Mohammed El Mohajir, MELECON 2018 General Chair <b>Technical Program Committee Chair</b> Gianfranco Chicco, IEEE Italy Section Vice-Chair <b>Technical Program Committee co-Chair</b> Daniela Proto, IEEE Italy Section Conference Committee Coordinator <b>Publication Chairs</b> Pietro Romano, University of Palermo Gaetano Zizzo, University of Palermo	<b>Professional Activities</b> Stefano Massucco, IEEE Italy Section Professional Activity Committee Coordinator Federica Battisti, IEEE Italy Section YP-AG Chair <b>Publicity Chair</b> Stefano Ferrari, Italy Section Membership Development Committee Coordinator Salvatore Favuzza, Elisa Francomano, Vincenzo Di Dio, University of Palermo <b>Special Meeting and Exhibition for "innovative Start up and Entrepreneurship"</b> Tiziana Tambosso, IEEE Italy Section Entrepreneurship Committee Coordinator Vincenzo Puri, IEEE R8 Director-Elect Marios Antoniou, IEEE R8 Entrepreneurship Initiative <b>Women In Engineering Event</b> Dajana Cassioli, IEEE Italy Section WIE-AG Chair Patrizia Lamberti, IEEE Italy Section WIE-AG Vice-Chair R8 WIE SC Representative <b>Student and Young Professional Events</b> Paolo Maresca, IEEE Italy Section SAC Coordinator Federica Battisti, IEEE Italy Section YP-AG Chair Gaetano Zizzo, University of Palermo <p>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 and quality of the technical content, overall organization and writing style. Papers must be prepared according to the Author's instructions reported on the MELCON2022 website: <a href="https://www.melecon2022.org">https://www.melecon2022.org</a></p> <p>Submission of papers implies 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.</p>	R8 SAC Representative R8 YP SC Representative <b>Special Meeting with Industry</b> Dario Petri, Italy Section Industry Relation Committee Coordinator John Matogo R8 Action for Industry Chair <b>Tutorial Chair</b> Rossano Musca, University of Palermo <b>Treasurer</b> Pisana Placidi, IEEE Italy Section Treasurer, University of Perugia <b>Local Organizing Committee</b> Guido Ala, Gaetano Zizzo, Salvatore Favuzza, Fabio Viola, Giuseppe Rizzo, Pietro Romano, Antonino Imburgia, Giuseppe Schettino <b>Secretariat</b> Fabio Viola, University of Palermo <b>Webmaster</b> Gianluca Mazzilli, Athena srl Prospective	
		<b>IMPORTANT DATES</b>	
		<b>Deadline for Submission of Special Session Proposals</b> <b>Deadline for Submission of Papers</b> <b>Deadline for Submission of Tutorials</b> <b>Notification of Acceptance</b> <b>Deadline for Submission of Camera-Ready Papers</b> <b>Early Registration</b>	<b>17 December 2021</b>  <b>22 January 2022</b> <b>18 February 2022</b> <b>11 March 2022</b> <b>8 April 2022</b> <b>18 April 2022</b>
<p>Extended version of papers presented at the conference, which fall within the scope of the IEEE Industry Application Society (Technical Sponsor of IEEE MELECON 2022) may be submitted to the IEEE Transaction on Industry Application for publication. IEEE Transactions on Industry Applications is the peer-reviewed IAS "journal of record" and all papers presented in IAS Transactions have previously been presented at a technical conference.</p> <p>Extended version of the best papers presented at the conference, which fall within the scope of the IEEE Journal of Translational Engineering in Health and Medicine may be submitted for publication to the JTEHM.</p>			