IESES 2020
IEEE 2nd International Conference on Industrial Electronics for Sustainable Energy Systems

PROGRAMME 1-3 SEPTEMBER 2020 - CAGLIARI, SARDINIA - ITALY
MESSAGE
FROM THE CONFERENCE CHAIR

Dear Colleagues and Friends,
on behalf of the IESES 2020 organization, I would like to welcome
you to the 2nd Industrial Electronics for Sustainable Energy
Systems (IESES) conference held in Cagliari, Sardinia-Italy,
Electronic Society, is jointly organized by the universities of Cagliari
and Pisa.

As you know, we have all been (and still are) facing tough times
due to the Covid-19 outbreak worldwide. Many events have been
cancelled or postponed.

We have done all our best to overcome difficulties and offer a
safe and interesting conference where reinforcing our scientific
relationships and starting new ones. Unfortunately, due to the
uncertain pandemic situation in several countries, we cannot
welcome many colleagues we are close to. To keep together
our scientific community and overcome the physical barriers
created by Covid-19 outbreak the IEEE Industrial Electronic
Society has steered the development of hybrid conference in
order to guarantee the attendance of all the authors during the
IESES conference. For this reason, the authors that cannot attend
the conference due to Covid-19 safety limitation will present
their paper during the conference virtually, live answering to the
questions coming from the audience by web.

The conference will offer a rich technical program including
cutting-edge keynote lectures, oral presentation sessions, the
Women in IES workshop and the Industry forum. IESES 2020
aims at providing an open, inspiring and friendly environment to
share ideas, innovative solutions and research results related to
sustainable energy systems. The conference will feature both
industrial-driven and application-oriented sessions. We will bring
together practicing engineers, researchers and other professionals
for interactive and multidisciplinary discussions on the latest
advances in various industrial electronics technologies, such as
energy storage and conversion, power electronics, power systems,
electric transportation and embedded systems.

I am sure you will also appreciate Cagliari and its mix of history and
natural beauties. Our city offers monuments, old beautiful palaces,
Roman ruins, museums filled with prehistoric artefacts, centuries-
old churches. All around, beautiful sandy beaches with limpid blue
waters and wonderful naturalistic parks.

Finally, let me thank the scientific committee members for their
effort to compose such a high-quality technical program, the
organizing committee members for their hard work and dedication
and, of course, all attendees for being here and make this event
possible. I hope you will enjoy the conference and your stay in Sardinia.

Beni benius a totus!

Prof. Alfonso Damiano
COMMITTEES

HONORARY CHAIRS
Prof. Nihal Kularatna
University of Waikato, New Zealand
Prof. Carlo Cecati
University of L’Aquila, Italy
Prof. Xinghuo Yu
RMIT University, Australia
Prof. Terry Martin
University of Arkansas, USA

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North Carolina State University, USA
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Indian Institute of Technology, India

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University of Pisa, Italy
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University of Cagliari, Italy
Andrea Carlioni
University of Pisa, Italy
Antonio Colicelli
University of Pisa, Italy
Andrea Salimbeni
University of Cagliari, Italy

TECHNICAL TRACKS

TT1 Energy Storage Devices
Bharat Balagopal
North Carolina State University, USA
Roberto Di Rienzo
University of Pisa, Italy
Walter Zamboni
Università degli Studi di Salerno, Italy

TT2 Power Converters
Sergio Vazquez
University of Seville, Spain
Mauro Di Monaco
Università degli Studi di Cassino e del Lazio Meridionale, Italy
Thomas Strasser
AIT, Austria

TT4 Microgrids
Hao Ma
Zhejiang University, China
Emilio Ghiani
University of Cagliari, Italy
Hector Beltran
Universitat Jaume I, Spain

TT5 Resilience for Energy Systems
Craig Rieger
Idaho National Laboratory, USA
Ali Sari
Claude Bernard University Lyon 1, France
Valery Titov
Lulea University of Technology, Sweden

TT6 Transport Electrification
Gianmario Pellegrino
Politecnico di Torino, Italy
Fei Gao
University of Technology of Belfort-Montbéliard (UTBM), France
Xiaosong Hu
Chongqing University, China

TT7 IoT for Sustainable Energy Systems
Virginia Pilloni
University of Cagliari, Italy
Stamatis Kamoukos
SAP Research, Germany
Lucia Lo Bello
University of Catania, Italy

TT8 Smart Buildings
Carlo Vallati
University of Pisa, Italy
Jan Haase
Universität zu Lübeck, Germany
Huazhen Fang
University of Kansas, USA

SPECIAL SESSION

SS2 Advanced Semiconductor Devices for Battery Energy Storage
Francesco Iannuzzo,
Aalborg University, Denmark
Salvatore Musumeci,
Politecnico di Torino, Italy
Filippo Chimento,
ABB, Italy

IESES 2020 IEEE 2nd International Conference on Industrial Electronics for Sustainable Energy Systems
# Programme at a Glance

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TUESDAY SEPT 1
ROOM CASTELLO

9:00 Opening Ceremony
9:30 Keynote Speech
10:30 How the Electro-mobility will Reshape the Concept of Passenger Vehicles
Francesco Mastroandrea, AVL srl, Italy
10:30 Coffee break
11:00 Oral Session:

11:00 TT1 Energy Storage Devices
11:40 ND-001236 Empirical Law for Lithium-ion Batteries State of Charge Estimation for EV Applications
Mr. Hamza El Jebbari, LUSAC Laboratory, University of Caen Normandy, France
Dr. Raffaele Petrone, LUSAC Laboratory, University of Caen Normandy, France
Prof. Hamid Gualous, LUSAC Laboratory, University of Aix-Marseille, France
Mr. Cong-Sheng Huang, North Carolina State University, USA
Mr. Zheyuan Cheng, North Carolina State University, USA
Dr. Bharat Balagopal, North Carolina State University, USA
Prof. Mo-Yuen Chow, North Carolina State University, USA
11:20 ND-001228 A Battery Residual Capacity Indicator Based on the Battery Internal Resistance: an Experimental Study
Mr. Antonio Guaino, DIEE, Università degli Studi di Salerno, Italy
Prof. Walter Zamboni, DIEE, Università degli Studi di Salerno, Italy
Prof. Eric Monmasson, SATIE, Université de Cergy-Pontoise, France
11:20 ND-000221 Online Data-based Cell State Estimation of a Lithium-ion Battery
Prof. Rebecca Todd, The University of Manchester, Great Britain (UK)
Prof. Andrew Forsyth, The University of Manchester, Great Britain (UK)
Prof. Kai-Peter Birke, Universität Stuttgart, Germany
11:40 ND-001937 A Novel Most Significant Cell Methodology in a Battery Pack with Serial Cell Connection
Mr. Cong-Sheng Huang, North Carolina State University, USA
Mr. Zheyuan Cheng, North Carolina State University, USA
Dr. Bharat Balagopal, North Carolina State University, USA
Prof. Mo-Yuen Chow, North Carolina State University, USA
12:00 ND-001856 Experimental Analysis of Capacity Degradation in Lithium-ion Battery Cells with Different Rest Times
Mr. Brian Ospina Agudelo, UNISA-UCP, Italy
Prof. Alessandro Massi Pavan, UNISA-UCP, Italy
Prof. Walter Zamboni, UNISA, Italy
12:00 Lunch
12:30 Industry Forum (Regal Grid)
13:30 Coffee break
Mr. Raza Roush Arefzehi, University of Michigan-Shanghai Jiao Tong University Joint Institute, Shanghai Jiao Tong University, China
Dr. Bharat Babagopal, North Carolina State University, USA
Prof. Amro Alsabbagh, University of Michigan-Shanghai Jiao Tong University Joint Institute, Shanghai Jiao Tong University, China
Prof. Chengbin Ma, University of Michigan-Shanghai Jiao Tong University Joint Institute, Shanghai Jiao Tong University, China
Prof. Mo-Yuen Chow, North Carolina State University, USA
16:00 Oral Session: TT2 Power Converters

16:00 ND-000396 An Improved DTC Strategy for a Doubly Fed Induction Generator Using an Artificial Neural Network Controller
Dr. Ibrahim Yaichi, Djillali Liabes University, Algeria
Dr. Abdelhafid Semmah, Djillali Liabes University, Algeria
Prof. Wira Patrice, University of Haute Alsace, France

16:20 ND-001929 Selective Harmonics Elimination for Nine Level Inverter Based on Linear System Solution
Prof. Carlo Cecati, University of L’Aquila, Italy
Prof. Concettina Buccella, University of L’Aquila, Italy
Prof. Maria Gabriella Cimoroni, University of L’Aquila, Italy

16:40 ND-000205 Master-slave with Droop Control for MTDC Grids
Mr. Hadi Alyami, College of Technology in Tabuk, Saudi Arabia

17:00 ND-001279 Analysis of the Impact of the Operating Parameters on the Variation of the Dynamic On-state Resistance of GaN Power Devices
Dr. Giuseppe Mauromicale, University of Catania, Italy
Dr. Santi A. Rizzo, University of Catania, Italy
Prof. Nunzio Salerno, University of Catania, Italy
Dr. Giovanni Susini, University of Catania, Italy
Prof. Angela Raci, IM - Consiglio Nazionale delle Ricerche, Italy
Dr. Filadelfo Fusillo, STMicroelectronics, Italy
Dr. Agostino Palermo, STMicroelectronics, Italy
Dr. Rosario Scollo, STMicroelectronics, Italy

Mr. Zheyuan Cheng, North Carolina State University, USA
Prof. Mo-Yuen Chow, North Carolina State University, USA

18:00 Welcome reception

19:00 Mr. Pascal Pommier-Petit, France
Mr. Paul Albuin, France

TUESDAY SEPT 1
ROOM STAMPACE

11:00 Oral Session: TT4 Microgrids

11:00 ND-000371 Scalability and Replicability Analysis of an Island Microgrid Concept
Ms. Barbara Hemmler, AIT, Austria

Prof. Fabrizio Pilo, University of Cagliari, Italy
Dr. Giuditta Pisano, University of Cagliari, Italy
Dr. Simona Ruggeri, University of Cagliari, Italy
Mr. Matteo Troncia, University of Cagliari, Italy

Mr. Zheyuan Cheng, North Carolina State University, USA
Prof. Mo-Yuen Chow, North Carolina State University, USA

12:00 ND-001929 A Policy for Efficient Utilization of a Shared Energy Back-up System
Prof. Mohamed Abdelali, Isr, Palestine
Prof. Georg Frey, Saarland University, Germany

13:00 Lunch

14:00 Oral Session: TT7 IoT for Sustainable Energy Systems

14:00 ND-000275 A Technoeconomical Evaluation of a Hybrid AC/DC Microgrid - The University of Cyprus Nanogrid
Mr. Chrysanthos Charalambous, University of Cyprus/FOSS, Cyprus

14:20 ND-002194 A Policy for Efficient Utilization of a Shared Energy Back-up System
Prof. Mohamed Abdelali, Isr, Palestine
Prof. Georg Frey, Saarland University, Germany

15:00 ND-000418 Impact of Regional Redispatching Cooperation and Involvement of Distributed Electricity Prosumers
Mr. Milan Vukasovic, Austrian Power Grid, Austria
TUESDAY SEPT 1
ROOM STAMPACE

17:00 ND-000515 Evaluation of Energy-saving Control Method for Multi Source District Heating and Cooling System
Ms. Michki Nakano, Akiti, Ltd., Japan
Dr. Takashi Fukumoto, Hitachi Ltd., Japan
Prof. Nonhisa Komoda, Code Solutions Co. Ltd., Japan

17:20 ND-000647 Towards an Occupancy Count Functionality for Smart Buildings – An Industrial Perspective
Dr. Christian Groß, ABB Corporate Research, Germany
Mr. Reuben Borrison, ABB Corporate Research, Germany
Dr. Johannes Schmitt, ABB Corporate Research, Germany
Dr. Markus Althoj, ABB Corporate Research, Germany

19:00 Welcome reception

WEDNESDAY SEPT 2
ROOM CASTELLO

9:30 Oral Session:

10:30 ND-000426 Experimental verification of Supercapacitor Assisted Sub Module Inverter (SCASMI)
Mr. Nalin Bandara, Auckland University of Technology, New Zealand
Dr. Kosala Gunawardane, Auckland University of Technology, New Zealand
Prof. Nihal Kularatna, The University of Waikato Hamilton, New Zealand

10:50 ND-001848 Techno-economic Comparison of Biomass Combustion and Anaerobic Digestion Systems for Hybridization of CSP Plants
Dr. Mario Petrelllese, University of Cagliari, Italy
Mr. Joseph Oyekale, University of Cagliari, Italy
Prof. Giorgio Cau, University of Cagliari, Italy
Prof. Daniele Cocco, University of Cagliari, Italy

11:10 ND-001953 Assessment of a Hydrogen Production, Storage and Utilization System in a Demonstrative Microgrid
Dr. Fabio Serra, Piattaforma Energie Rinnovabili Sardegna Ricerche, Italy

17:00 ND-000515 Evaluation of Energy-saving Control Method for Multi Source District Heating and Cooling System
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Mr. Reuben Borrison, ABB Corporate Research, Germany
Dr. Johannes Schmitt, ABB Corporate Research, Germany
Dr. Markus Althoj, ABB Corporate Research, Germany

19:00 Welcome reception
Dr. Marialaura Lucariello, Piattaforma Energie Rinnovabili Sardegna Ricerche, Italy
Dr. Mario Petrollese, University of Cagliari, Italy
Prof. Giorgio Cau, University of Cagliari, Italy

Coffee break

12:00 Industry Forum (Typhoon)
1. EV Real-time Simulation: Grid-to-vehicle, Vehicle-to-grid, and UPS Mode
Presenter: Dusan Kostic
2. Enabling Industrial Energy Storage Controllers for Microgrid System-level Studies
Presenter: Simisa Simic
Lunch

Keynote Speech
Resilient Networked Microgrids Energy Management System
Prof. Mo-Yuen Chow, North Carolina State University, USA

Coffee break

14:30 Oral Session: TT2 Power Converters
16:00 ND-001864 Performance Comparative Assessment of Grid-connected Power Converters Control Strategies Mr. Giacomo Piero Schiaparelli, University of Genoa, Italy Dr. Fabio D’Agostino, University of Genoa, Italy Prof. Stefano Massucco, University of Genoa, Italy Prof. Federico Silvestro, University of Genoa, Italy Prof. Mario Padone, École Polytechnique Fédérale de Lausanne, Switzerland

16:20 ND-002356 Experimental Validation of Maximum Constant Boost Control and Switching Frequency Optimal for Three-phase Quasi-Z-source Converters Dr. Giuseppe Schettino, University of Palermo, Italy Prof. Rosario Miceli, University of Palermo, Italy Prof. Renato Rizzo, University of Naples Federico II, Italy Prof. Fabio Viola, University of Palermo, Italy Dr. Filippo Pellitteri, University of Palermo, Italy

16:40 ND-001961 Parallel Operation of Voltage Source Converters without Filter Inductors: Control of the Circulating Current Prof. Alessandro Soldati, University of Palermo, Italy Mr. Vishaal Unde, University of Parma, Italy Prof. Carlo Concari, University of Parma, Italy Prof. Basim A. Alsayid, Palestine Technical University, Palestine

WEDNESDAY SEPT 2
ROOM CASTELLO

16:00 ND-001104 A Robust Compensation Method for Megahertz Wireless Power Transfer Based on Rectifier Input Impedance Analysis Dr. Huan Zhang, Shanghai Jiao Tong University, China Dr. Yaoxia Shao, Shanghai Jiao Tong University, China Dr. Ming Liu, Princeton University, USA Prof. Chengbin Ma, Shanghai Jiao Tong University, China

17:00 ND-001805 Current Pulse Generation Methods for Li-ion Battery Chargers Mr. Francesco La Franco, University of Bologna, Italy Dr. Mattia Rocchi, University of Bologna, Italy Mr. Riccardo Mandrini, University of Bologna, Italy Mr. Aleksandr Viatkin, University of Bologna, Italy Prof. Gabriele Grandi, University of Bologna, Italy

17:40 ND-002364 Modeling the Load Equivalent Resistance of a Series-series Inductive-coupled Resonant Wireless Power Transfer System Mr. Andrea Carloni, University of Pisa, Italy Prof. Federico Baronti, University of Pisa, Italy Dr. Roberto Di Rienzo, University of Pisa, Italy Prof. Roberto Roncella, University of Pisa, Italy

20:30 Social dinner Bus transfer will be provided from conference venue at 19:45.

Prof. Muhammad H. Dradi, Palestine Technical University, Palestine
Prof. Roberto Saletti, University of Pisa, Italy
Prof. Roberto Saletti, University of Pisa, Italy
Oral Session: TT1 Energy Storage Devices

9:30
ND-001341 Battery Management System with Testing Protocols for Kw-Class Vanadium Redox Flow Batteries
Mr. Andrea Trovò, Università degli Studi di Padova, Italy
Prof. Massimo Guarnieri, Università degli Studi di Padova, Italy

9:50
ND-000604 Reduction of Battery-Aging of a Hybrid Lithium-Ion and Vanadium-Redox-Flow Storage System in a Microgrid Application
Mr. Simon Reisch, Friedrich-Alexander University Erlangen-Nürnberg (FAU), Germany
Prof. Matthias Luther, Friedrich-Alexander University Erlangen-Nürnberg (FAU), Germany

10:10
ND-001031 Experimental Analysis of Efficiencies of a Large Scale Energy Storage System
Mr. Seya Mori, University of Sheffield, United Kingdom
Dr. Matthew J. Smith, University of Sheffield, United Kingdom
Dr. Daniel T. Gladwin, University of Sheffield, United Kingdom
Prof. David A. Stone, University of Sheffield, United Kingdom

10:30
ND-002208 A Smart Energy Management System of a Highly-Integrated Battery-Ultracapacitor System
Dr. Andrea Salimbeni, University of Cagliari, Italy
Dr. Mario Porr, University of Cagliari, Italy
Prof. Alfonso Damiano, University of Cagliari, Italy
Dr. Alessandra Serpa, University of Cagliari, Italy

10:50
ND-002399 Passive Balancing Algorithm for Charge Equalization of Series Connected Battery Cells
Dr. Roberto Di Renzo, University of Pisa, Italy
Dr. Marco Zen, University of Pisa, Italy
Prof. Federico Baronti, University of Pisa, Italy
Prof. Roberto Roncella, University of Pisa, Italy
Prof. Roberto Saletti, University of Pisa, Italy

11:10
ND-002089 Heuristic Approach for the Characterization of Thermal Transient in Batteries
Dr. Pasquale De Falco, University of Naples Parthenope, Italy
Dr. Luigi Pio Di Noia, University of Naples Federico II, Italy
Prof. Andrea Del Pizzo, University of Naples Federico II, Italy
Prof. Renato Rizzo, University of Naples Federico II, Italy

11:30 Coffee break

13:00 Lunch

16:00 Oral Session: TT3 Renewable Energy Systems

16:00
ND-001538 Battery Energy Storage based Approach for Grid Voltage Regulation in Renewable Rich Distribution Networks
Mr. Vimukthi Gamage, University of Moratuwa, Sri Lanka
Mr. Nishan Withana, University of Moratuwa, Sri Lanka
Mr. Channa Silva, University of Moratuwa, Sri Lanka
Dr. Rasara Samaratunga, University of Moratuwa, Sri Lanka

16:20 ND-001023 Design and Economic Assessment of a RES-based Microgrid for an Energy Community
Prof. Alfonso Damiano, University of Cagliari, Italy
Dr. Efisio A. Scano, Sardegna Ricerche, Italy
Dr. Alberto Varone, CRIS, Italy

16:40 ND-000492 A Genetic Algorithm Approach for Sizing Integrated PV-BESS Systems for Prosumers
Prof. Saman Korjani, University of Cagliari, Italy
Dr. Alessandro Serpi, University of Cagliari, Italy
Prof. Alfonso Damiano, University of Cagliari, Italy

17:00 ND-002054 A Random-weighted Privacy-preserving Distributed Algorithm for Energy Management in Microgrid with Energy Storage Devices
Mr. Feng Ye, Southeast University, China
Mr. Zheyuan Cheng, North Carolina State University, USA
Prof. Mo-Yuen Chow, North Carolina State University, USA
Prof. Xianghui Cao, Southeast University, China
Prof. Mo-Yuen Chow, North Carolina State University, USA

17:20 ND-001783 Aggregated Demand Analysis and Forecasting Methodology for the Iberian Electricity Market
Mr. Jorge Segarra-Taranc, Universitat Jaume I, Spain
Dr. Emilio Perez, Universitat Jaume I, Spain
Dr. Enrique Bieringer, Universitat Jaume I, Spain
Mr. Javier Cano-Miota, Universitat Jaume I, Spain
Prof. Hector Beltran, Universitat Jaume I, Spain

17:40 ND-000957 Permeance Based Model for the Coupled-Inductor Utilized in the Supercapacitor Assisted Surge Absorber (SCASA) and its Experimental Validation
Mr. Sadeeshvara Silva Thotabaddadurage, University of Waikato, New Zealand
Prof. Nihal Kularatna, University of Waikato, New Zealand
Prof. D. Alistair Steyn-Ross, University of Waikato, New Zealand

20:30 Social dinner
Bus transfer will be provided from conference venue at 19:45.
IESES 2020 IEEE 2nd International Conference on Industrial Electronics for Sustainable Energy Systems

**WEDNESDAY SEPT 2 ROOM VILLANOVA**

9:30 Workshop

Women in IES
Organizers: Prof. Lucia Lo Bello, University of Catania, Italy
Prof. Concettina Buccella, University of L’Aquila, Italy

The Women in IES Initiative
Prof. Lucia Lo Bello, University of Catania, Italy

Fundamental Frequency Modulation Techniques for Multilevel Inverters
Prof. Concettina Buccella, University of L’Aquila, Italy

My Experience as a Researcher in Automatic Control
Prof. Carla Seatzu, University of Cagliari, Italy

On Promoting Gender Balance in Engineering
Prof. Manigliazota Dotoli, Politecnico di Bari, Italy

Interweaving Different Expertise in Doing Research, a Women-working-on-microgrids Approach
Prof. Norma Anglani, University of Pavia, Italy

11:30 Coffee break

**THURSDAY SEPT 3 ROOM CASTELLO**

9:30 Keynote Speech

Power Electronics Based on Wide-bandgap Semiconductors: Opportunities and Challenges
Prof. Giuseppe Iannaccone, University of Pisa, Italy

10:30 Coffee break

11:00 Oral Session: TT6 Transport Electrification

11:00 ND-000532 Real-time Multi-Objective Energy Management for Fuel Cell Hybrid Electric Vehicles
Mr. Yang Zhou, FEMTO-ST (UMR CNRS 6174), FCLAB (FR CNRS 3539), Univ. Bourgogne Franche-Comté, UTBM, France
Prof. Alexandre Ravey, FEMTO-ST (UMR CNRS 6174), FCLAB (FR CNRS 3539), Univ. Bourgogne Franche-Comté, UTBM, France
Prof. Marie-Cécile Pera, FEMTO-ST (UMR CNRS 6174), FCLAB (FR CNRS 3539), Univ. Bourgogne Franche-Comté, UTBM, France

11:20 ND-002437 Thermal Analysis of Battery Cables for Electric Vehicles
Prof. Luigi Pro Di Noia, University of Naples Federico II, Italy
Prof. Renato Rizza, University of Naples Federico II, Italy

11:40 ND-001899 Hybrid-electric Solutions for the Propulsion of a Luxury Sailing Yacht
Prof. Vittorio Bucci, University of Trieste, Italy
Prof. Francesco Mauro, University of Trieste, Italy
Prof. Andrea Vernozzi, University of Trieste, Italy
Prof. Daniele Bosich, University of Trieste, Italy
Prof. Giorgio Sulligoi, University of Trieste, Italy
THURSDAY SEPT 3
ROOM CASTELLO

Polytechnic University, Hong Kong
Prof. Junnian Wang, Jilin University, China

12:40 ND-001201 A New Dual-PM Excited Doubly Salient Machine for Traction Applications
Dr. Qingsong Wang, Coventry University, United Kingdom
Prof. Petar Igic, Coventry University, United Kingdom
Dr. Shuangxia Niu, Hong Kong Polytechnic University, Hong Kong
Prof. Junnian Wang, Jilin University, China

13:00 Lunch

14:00 Workshop (Sardegna Ricerche)

15:00 Closing Ceremony

16:30 Technical tour to the Sardegna Ricerche facilities (to be confirmed).

THURSDAY SEPT 3
ROOM STAMPACE

12:00 Oral Session: SS2 Advanced Semiconductor Devices for Battery Energy Storage

11:00 ND-000876 Modeling Techniques and Virtual Prototyping of Silicon Carbide MOSFET Power Modules
Dr. Gaetano Bazzano, STMicroelectronics, Italy
Dr. Daniela Cavallaro, STMicroelectronics, Italy
Dr. Alessandra Raffa, STMicroelectronics, Italy
Dr. Filippo Di Giovanni, STMicroelectronics, Italy
Dr. Alessandra Manzitto, STMicroelectronics, Italy
Dr. Alessandra Casco, STMicroelectronics, Italy

12:20 ND-001333 Comparison Between Innovative TO-247 IGBT Copacked with SiC Diode and SiC MOSFET in Bidirectional Boost Converter
Dr. Santi A. Rizzo, University of Catania, Italy
Prof. Giacomo Scelba, University of Catania, Italy
Dr. Giovanni Susinni, CNR-IMM HQ, Italy
Dr. Domenico Paternostro, STMicroelectronics, Italy
Dr. Rosario Scollo, STMicroelectronics, Italy

12:40 ND-002313 Preliminary Test on a Cascode Switch for High-Frequency Applications
Dr. Filippo Pellitteri, University of Palermo, Italy
Mr. Vincenzo Castiglia, University of Palermo, Italy
Prof. Antonino Oscar Di Tommaso, University of Palermo, Italy
Prof. Rosario Miceli, University of Palermo, Italy
Prof. Luigi Schirone, University of Rome La Sapienza, Italy
Prof. Giorgio Vassallo, University of Palermo, Italy

13:00 Lunch

15:30 Coffee break

16:30 Technical tour to the Sardegna Ricerche facilities (to be confirmed).

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Dr. Rosario Scollo, STMicroelectronics, Italy

11:40 ND-001384 Statistical Electrothermal Simulation for Lifetime Prediction of Parallel SiC MOSFETs and Modules
Mr. Alessandro Borghese, University of Naples Federico II, Italy

12:00 ND-000671 Electrical Characterization of Gate Oxide Current in a Silicon Power MOS Subjected to Uniaxial Mechanical Stress
Dr. Lorenzo M. Setgi, STMicroelectronics, Italy
Prof. Antonella Scutalo, CNR-IMM HQ, Italy
Dr. Michele Calabretta, STMicroelectronics, Italy
Dr. Alessandro Sitta, STMicroelectronics, Italy
Dr. Giuseppe D’Arrigo, CNR-IMM HQ, Italy

12:20 ND-001791 Trench-Gate MOSFET Application as Active Fuse in Low Voltage Battery Management System
Dr. Salvatore Musumeci, Politecnico di Torino, Italy
Mr. Filippo Scrimizzi, STMicroelectronics, Italy
Mr. Giuseppe Longo, STMicroelectronics, Italy
Mr. Carmelo Mistani, STMicroelectronics, Italy
Ms. Daniela Cavallaro, STMicroelectronics, Italy

12:40 ND-002313 Preliminary Test on a Cascode Switch for High-Frequency Applications
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Prof. Rosario Miceli, University of Palermo, Italy
Prof. Luigi Schirone, University of Rome La Sapienza, Italy
Prof. Giorgio Vassallo, University of Palermo, Italy

13:00 Lunch
THE CONFERENCE VENUE
The conference will be held at the Hotel Regina Margherita - viale Regina Margherita, 44.

CONFERENCE ROOMS AND AREAS
Room Castello (underground floor), Room Stampace (ground floor), Room Villanova (ground floor), Secretariat desk, sponsors’ display tables and catering area will be located in the hotel lobby.

INSTRUCTIONS FOR PRESENTERS
Speakers are required to be in the meeting room at least 10 minutes before their session begins. Sessions are tightly scheduled, the allotted time (15 minutes for presentation + 3 minutes for discussion) must be strictly observed.
Each conference room will be equipped with computers. Presentations on USB stick must be loaded in advance (e.g. during breaks) on the conference room laptops. For further information, presenters are required to apply to session chairs or conference staff at the session meeting rooms. For organizational reasons, use of personal laptops for presentations is discouraged.

REGISTRATION
Pre-registered participants can collect their conference kit and personal name badge at the Organizing Secretariat desk located in the lobby of the congress venue as of Tuesday September 1, 08:00 a.m.

BADGES
All delegates and exhibitors are kindly requested to always wear their name badge. Entrance to meeting rooms will be limited to regularly enrolled participants.

LANGUAGE
Official language will be English. No simultaneous translation will be provided.

WOMEN IN IES WORKSHOP
The IES WiE Workshop will be a venue to foster joint R&D activities between women engaged in research activities, in companies and in academia. The Workshop, that is supported by the Industrial Electronics Society, targets women engineers, from industry and academia, and female students (MD, PhD) working in the fields covered by IES. The Workshop programme will offer a series of keynote speeches by prominent female scientists and professionals and a panel discussion with open forum (see the scientific programme at pag. 18).

POST-CONFERENCE TECHNICAL TOUR
A technical tour to the Sardegna Ricerche facilities, the regional agency for innovation, is scheduled on Thursday September 3.
in the afternoon. Participation (free-of-charge) will be limited to a maximum of 15 people. Participation requests will be accepted on a first-come-first-served basis. For organizational and safety reasons, this event is still to be confirmed. Notification of tour confirmation will be given to interested attendees as soon as possible (at latest on the conference opening day).

GENERAL INFORMATION

CURRENCY
Euro is the national currency. Automatic cash dispenser and bank exchanges are plentiful. Most hotels, restaurants and shops accept the usual credit cards.

BANKS
The nearest bank with cash dispenser is the Banco di Sardegna located in Via Roma 25.

POST OFFICE
The nearest post office is located in via Francesco Fara, 11. Opening times, from Monday to Friday: from 8:30 to 14:00.

TOURIST INFORMATION
Tourist Office
Town Hall, via Roma 145 - 09124 Cagliari
From Monday to Sunday: 9.00 a.m. - 8.00 p.m
Tourist Info
(+39) 070 6778173
(+39) 070 6777397
(+39) 338 6498498
infopoint@comune.cagliari.it
www.facebook.com/cagliariturismo
www.instagram.com/cagliariturismo
www.twitter.com/cagliariturismo

COVID-19 MAIN RULES AT THE CONFERENCE VENUE
The safety of attendees is the conference main priority. The conference will take place according to national and local guidelines and WHO recommendations to mitigate the infectious risk. All attendees are kindly required to carefully respect the safety measures. For more information please see the conference information sheet on Covid guidelines or apply to the conference secretariat desk.

- A self-declaration (absence of Covid-19 symptoms, contact with confirmed cases) will be required. A specific form to be filled in and signed will be available onsite.
- Entrance will not be allowed if you have a temperature of over 37.5° (if you have a fever please do not come to the conference venue).
- Always wear a face mask during the meeting both in the rooms or the hotel common areas.
- Avoid contact and keep at least one meter apart from other people.
- Wash your hand regularly with soap and water or use the gels from the dispensers which will be available at the conference venue.
- Make sure you stick to the routes and follow the signs (respect your distance floor sign when queuing).
- Safety measures (e.g. social distancing, masks) will always be taken in case of bus transfer and social events.

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LIABILITY
Registered conference participants agree that neither the Organizing Committee nor the conference Secretariat are liable or assume any responsibility for damage or injuries to persons or property during the conference. Participants are advised to arrange for their own health, travel and personal insurances. The conference organization does not cover individuals against cancellation of bookings, theft or damage to belongings.

Disclaimer
All best endeavours will be made to present the conference programme as published. However, the conference Organizing Committee and the Secretariat reserve the right to alter or cancel, without prior notice, any arrangements, timetables, plans or other items relating directly or indirectly to the conference, for any cause beyond our reasonable control. The conference Organizing Committee and the Secretariat are not liable for any loss or inconvenience caused as a result of such alteration.

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