110th Edition

AEIT 2018 INTERNATIONAL Annual Conference

FINAL PROGRAMME

Organised by

AEIT 1897

AEIT 1897 Sezione PUGLIESE

Bari, Italy 3-5 October 2018

Under the patronage of

Politecnico di Bari

Comune di Bari

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OIBA Ordine degli Ingegneri della Provincia di Bari

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La partecipazione al Convegno darà diritto agli Iscritti all'Ordine degli Ingegneri il riconoscimento di CFP secondo i criteri stabiliti dalla normativa vigente

La partecipazione, con obbligo di firma in ingresso ed uscita, alle Technical Sessions, all'Opening Plenary Session, ai Keynote Speech, e ai Case Histories dà diritto ai crediti formativi professionali ai sensi del Regolamento adottato dal Consiglio Nazionale dell'Ordine dei Periti Industriali e Periti Industriali Laureati, pubblicato sul bollettino ufficiale del Ministero della Giustizia in data 31 dicembre 2013, secondo quanto previsto dall'art. 7, comma 3 del DPR 7 agosto 2012 n. 137, recante riforma degli ordinamenti professionali, a norma dell'articolo 3, comma 5, del decreto-legge 13 agosto 2011, n. 138, convertito con modificazioni, dalla Legge 14 settembre 2011, n. 148. Revisionato il 27/05/2016 e pubblicato definitivamente sul bollettino ufficiale del Ministero della Giustizia in data 15/07/2016)

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Overview

In recent years, we are seeing a growing synergy among infrastructures and systems for the production, transmission, distribution and conversion of electricity, telecommunications, and computing technologies that provide for the intelligence of the whole system.

The ever-increasing dependence on electricity for carrying out daily activities, increasingly employing smart devices, and the need for an intelligent management of the power grid in presence of a distributed generation from renewable sources, both are creating a tight interdependent system.

Cloud computing, big data, large bandwidth interconnections support modern knowledge-based society paradigms.

AEIT 2018 will be an international forum to point out the challenges needs to face with in order to stimulate innovative entrepreneurial initiatives, and increase country's competitiveness.

The conference will host both technical and scientific contributions in the wide fields of electricity, automation, telecommunications and information technology.

It will also be the venue for hosting panels and speeches from national and international stakeholders for discussing those strategies useful to increasing competitiveness, and lay the foundations for the creation of new scientific as well as technical initiatives.

TECHNICAL PROGRAMME

Wednesday, October 3, 2018

08,30 Registration

09,00 • 11,30 Tutorials

Tutorial A

The Smart Transformer: Impact on the electric grid and technology challenges • Marco Liserre, Giovanni De Carne - *Christian-Albrechts-University of Kiel - Chair of Power Electronics, Germany*

Tutorial B

Redefining Ethernet Network Performance and Security With Software-Defined Networks • Amandeep Singh Kalra - *Schweitzer Engineering Laboratories, USA*

11,30 • 13,30 Student's Contest Poster Session

11,30 • 13,30 Technical Sessions

Room A - Technical Session A1

• Methods and technologies for electricity transmission systems

Room B - Technical Session B1

• Safety and power quality in electrical systems

Room C - Special Session C1

• Smart Cities and Smart Enterprises

Room D - Technical Session D1

• Electrical Machines and Drives

13,30 • 14,30 Lunch

14,30 • 15,00 Welcome Statements

Debora Stefani - *Presidente Generale AEIT*
Eugenio Di Sciascio - *Rettore Politecnico di Bari*
Antonio Decaro - *Sindaco di Bari e Città Metropolitana di Bari, Presidente ANCI*
Domenico De Bartolomeo - *Presidente Confindustria Puglia*
Alessandro Ambrosi - *Presidente Camera di Commercio di Bari*
Roberto Masciopinto - *Presidente OIBA - Ordine degli Ingegneri della Provincia di Bari*
Maria Franca Spagnoletti - *Presidente Collegio Territoriale dell'Ordine dei Periti Industriali e Periti Industriali Laureati delle Province di Bari e BAT*
Giuseppe Cafaro - *Presidente AEIT Sezione Pugliese*
Carlo Cecati - *Presidente Comitato Scientifico AEIT 2018*

15,00 • 17,30 Opening Plenary Session

Chair: Carlo Cecati - *AEIT 2018 Technical Program General Chair*

- **Digital grids for Europe: Yes, in my backyard?** • Gianluca Fulli - *European Commission, Joint Research Centre, Deputy Head Energy Security, Distribution and Markets Unit*
- **Greening the Italian power system: a resilient portfolio of tailor made solutions** • Luigi Michi - *Terna, Head of Strategy, Development and System Operation*
- **Key challenges and future role of Distribution Network** • Christian D'Adamo - *e-distribuzione, Head of Network Development*
- **Recent Innovations for Energy and Communications** • Flavio Casiraghi - *Prysmian, Director of Materials Development*
- **Public interest research for the Italian power system: the importance of collaboration between researchers, decision-makers and industry** • Romano Ambrogi - *Ricerca Sistema Energetico - RSE, Strategy and Communication manager*
- **HVDC technologies and their application in prominent Euro-Mediterranean projects** • Bruno Cova - *CESI, Systems Planning - Director - Consulting, Solutions & Services Division*
- **Trends in electrical networks and industrial applications** • Enrico Ragaini - *ABB, R&D Systems and Applications - Business Unit Protection and Connection - Electrification Products*
- **Energiewende in Germany: lessons learnt** • Edmund Handschin - *Technical University Dortmund, Institute for Energy Systems, Energy Efficiency and Energy Economics*

17,30 • 17,50 AEIT Young Members Group

Mattia Monte - *AEIT Chair of AEIT Young Members Group, Sezione Friuli-Venezia Giulia*

17,50 • 18,10 AEIT Digital Task Force

Davide Minervini - *AEIT Digital Task Force*

18,10 • 18,30 AEIT for STEM • Michela Longo - *AEIT*

18,30 • 18,40 Presentation of "La trazione ferroviaria" • Fabrizio Marignetti - *AEIT Sezione di Cassino*

18,40 • 19,00 Young Award Ceremony

Thursday, October 4, 2018

9,00 • 10,30 Technical Sessions

Room A - Technical Session A2
- Studies and innovations in electrical distribution systems

Room B - Special Session B2
- Experiences of Smart Grid Living Laboratories I

Room C - Special Session C2
- E-mobility & Shipboard Applications I

Room D - Technical Session D2
- Power Converters and their Modulation and Control I

Room E - Session
- Sustainability

10,30 • 10,45 Break

10,45 • 12,30 Technical Sessions

Room A - Technical Session A3
- Measurements and analysis on Components of the electrical system

Room B - Special Session B3
- Experiences of Smart Grid Living Laboratories II

Room C - Special Session C3
- E-mobility & Shipboard Applications II

Room D - Technical Session D3
- Power Converters and their Modulation and Control II

Room E - Session
- 5G and ultra-broadband

12,30 • 13,40 Lunch

13,40 • 14,20 Keynote Speech
- **Increasing the Energy Efficiency of Medium Voltage Drives** • Joachim Holtz - *Life-Fellow, IEEE, University of Wuppertal, Germany*

14,20 • 15,00 Keynote Speech
- **Telecommunications Services and Networks Architecture Evolution** • Gianfranco Ciccarella - *Consultant on Telecommunication strategy, IP Services and Networks, Italy*

15,00 • 15,40 Keynote Speech
- **Unlocking the Hidden Capacity of the Electrical Grid through Power Electronics** • Marco Liserre - *Professor and Head of the Chair of Power Electronics, Kiel University, Germany*

15,40 • 16,00 Break

16,00 • 18,00 Case Histories

Chairs: Giuseppe Cafaro - *AEIT Sezione Pugliese* • Massimo La Scala - *AEIT Sezione Pugliese*

- **RES & system security: can the two tango?** • Enrico Maria Carlini - *Terna Rete Italia, Director of Dispatching*
- **Deep Challenge – cables for the Mediterranean sea** • Marco Marelli - *Prysmian, Head of System Design Engineering, Projects - Submarine and HV Business Unit*
- **The Italian PV industry: a general analysis and the role of EF Solare Italia** • Sara Di Mario - *EF Solare Italia, Chief Operating Officer*
- **Counteracting wind farms aging - an example of repowering in Italy** • Enzo Dalpane - *E2i Energie Speciali, Chief Technical Officer*
- **Trends in Wind Energy Technology** • Francesco Picaro - *Vestas, Technical Bid Specialist*
- **The RSE perspectives on the DC Distribution Grid** • Chiara Gandolfi - *Ricerca sul Sistema Energetico - RSE, Project Manager DC transmission and distribution grid*
- **Modular Multilevel Converters (MMC) for smart grids, distributed generation, drives for industry and e-transportation** • Carlo Cecati - *Digipower, Chief Technical Officer*; Pietro Ciammaichella - *Digipower, Head of HW Laboratory*
- **ABB Smart Lab: Integration test and demonstration of distributed measurements in power distribution** • Enrico Ragaini - *ABB, R&D Systems and Applications - Business Unit Protection and Connection - Electrification Products*

18,00 • 19,15 Start Up Plenary Session

Chair: Massimo La Scala - *Politecnico di Bari, Italy*

How Industry4.0 solutions face the new energy efficiency and optimization challenges: Idea75's success stories • Giuseppe Leonardo Cascella - *Idea75, CEO & Founder*

Kimeme: a cloud based optimization platform for multi-industry applications • Chiara Carulli - *Cyber Dyne, Application Engineer*

TrafficLight 2.16: IOT and Smart Cities for the emergencies • Atish Andrea Rambaran - *Alfa Centauri Technology, CEO*; Carmine Rodio - *Alfa Centauri Technology, Cofounder*

20,30 Conference Dinner

Friday, October 5, 2018

8,30 • 10,30 Technical Sessions

Room A - Special Session **A4**

- Projects related to Activities concerning Research and Development for the National Electrical Energy System

Room B - Special Session **B4**

- HVDC Developments in the Mediterranean Area

Room C - Session

- Smart Systems

Room D - Technical Session **D4**

- Energy Storage Systems and their control

10,30 • 10,45 Break

10,45 • 12,45 Technical Sessions

Room A - Technical Session **A5**

- Control and management aspects in electrical systems

Room B - Special Session **B5**

- Resilience of Electrical Grid: Events and Solutions

Room C - Technical Session **C4**

- Smart Systems and Emerging Technologies

Room D - Technical Session **D5**

- Sensors and signals for ICT

12,45 • 13,00 Closing Session

TECHNICAL SESSIONS

Wednesday, October 3, 2018

11,30 • 13,30 Room A - Technical Session A1

• Methods and technologies for electricity transmission systems

Chair: Michele Trovato - *Politecnico di Bari, Italy*

A1.1 • Time Synchronization Attack in Synchrophasors-based Dynamic Thermal Rating Assessment: Impact and Analysis • G. Coletta, A. Pepiciello, A. Vaccaro, D. Villacci - *Università of Sannio, Italy*; G. Giannuzzi - *Terna, Italy*

A1.2 • Transmission network expansion planning: towards enhanced renewable integration • L. Michi, M. Migliori, A. Caldarulo Bugliari, B. Aluisio, G.M. Giannuzzi, E.M. Carlini - *Terna, Italy*

A1.3 • 2018 Pan-European coordinated TSO planning • F. Vedovelli, C. Giordano, C. Vergine - *Terna, Italy*

A1.4 • The effects of new 2030 scenario: reduction of short-circuit power and widening of voltage dips • L. Michi, E. Carlini, L. Caciolli, D. Polinelli, P. Capurso, A. Proietti - *Terna, Italy*; A. Berizzi, C. Bovo - *Politecnico di Milano, Italy*

A1.5 • A new approach for seasonal outlook adequacy evaluation • L. Michi - *Terna, Italy*; E. Carlini - *Terna Rete Italia, Italy*; M. Bonanni, F. Quaglia, P. Capurso, L. Nuccio - *Terna, Italy*; S. Biondi - *ENTSO-E, Italy*; B. Cova, D. Canever, L. Giorgi - *CESI, Italy*

A1.6 • Enhancement of Slovenian Electricity Transmission System Resilience spurred by experience and new approach • M. Hrast, K. Bakic - *ELES - National TSO, Slovenia*; M. Babuder - *Electroinstitute Milan Vidmar, Slovenia*

A1.7 • Electric vehicle grid impacts • A. Urbanelli, A. Sallati, B. Aluisio, C. Vergine, F. Ciasca, M. Pietrucci, L. Zeni - *Terna, Italy*; G. Forte, M. Trovato - *Politecnico di Bari, Italy*

A1.8 • Solving Uncertain Power Flow Problem by Affine Arithmetic • G. Coletta, A. Vaccaro, D. Villacci, A. Zollo - *University of Sannio, Italy*

11,30 • 13,30 Room B - Technical Session B1

• Safety and power quality in electrical systems

Chair: Mircea Buzdugan - *Technical University of Cluj-Napoca, Romania*

B1.1 • Rail Potential Calculation: Impact of the Chosen Model on the Safety Analysis • P. Colella, E. Pons - *Politecnico di Torino, Italy*; Andrea Tortora - *Gruppo Torinese Trasporti, Italy*

B1.2 • Smartening hospital electrical distribution for enhancing resilience • A. Prudenzi, A. Fioravanti - *University of L'Aquila, Italy*; M. Regoli - *University of Rome "Tor Vergata", Italy*

B1.3 • Review of Some Effects of Harmonics in Nonsinusoidal Systems • M. Buzdugan - *Technical University of Cluj-Napoca, Romania*

B1.4 • A.C. Arc Flash Analysis: a new derivation method • P.A. Scarpino, A. Reatti, F. Grasso - *University of Florence, Italy*

B1.5 • A Low-Voltage Power Quality Signal Generator • M. Spadavecchia, F. Adamo, F. Attivissimo, G. Cavone, A. Di Nisio, P. Pappalardi - *Politecnico di Bari, Italy*

B1.6 • Power Quality Assessment of Grid Connected Photovoltaic System on Power Factor • F.A. Haris - *University of Technology MARA, Malaysia*; S.Z.M. Noor, A.M. Omar - *UiTM, Malaysia*

B1.7 • Effects of the aging time on CFL and LED lamps: experimental tests on the electrical and photometric quantities • G. Susinni, A. Raciti, S.A. Rizzo, S. Di Mauro - *Università di Catania, Italy*; S. Musumeci - *Politecnico di Torino, Italy*

B1.8 • Measurement of Electric Power Quantities and Efficiency in Nonsinusoidal Systems • F. Grasso, A. Luchetta, S. Manetti - *University of Florence, Italy*; F. Cenghialta, E. D'Antuono, S. De Giorgis - *Energia Europa, Italy*

11,30 • 13,30 Room C - Special Session C1

• Smart Cities and Smart Enterprises

Chair: Donato Impedovo - *University of Bari, Italy*

C1.1 • Customer segmentation through multiple correspondence analysis • A.M. D'Uggento, N. Convertini, F. Manca - *University of Bari, Italy*

C1.2 • Project IAAP: An Overview on Optimizing Business Process in Smart Enterprises • M. D'Aloia, A. Longo, F. De Carlo - *MASVIS, Italy*; P. De Leonardis, P. Rizzi - *Group Service Energy, Italy*; M. Rizzi - *Politecnico di Bari, Italy*

C1.3 • Recommendation System using Hybrid Fuzzy Association Rules for Human Smart Cities • T. Palmisano, V. Convertini - *University of Bari, Italy*; N. Logrillo - *Wolters Kluwer Italia, Italy*; F. Manca- *University of Bari, Italy*

C1.4 • New Evaluation Metrics for Electrical Demand Forecasting: Application to the Residential Sector • I. Ihsane, L. Miegeville, N. Aït-Ahmed, P. Guerin - *Université de Nantes, France*

C1.5 • Neural Networks for Automated Smart Health Platforms oriented on Heart Predictive Diagnostic Big Data Systems • A. Massaro, V. Maritati, N. Savino, A.M. Galiano - *Dyrecta Lab, Italy*

C1.6 • Smart Energy Management of a Prosumer for a Better Environment Safeguard • F. Muzi - *University of L'Aquila, Italy*; L. Calcara, S. Sangiovanni, M. Pompili - *Sapienza University of Rome, Italy*

C1.7 • Genetic algorithm based control for unbalanced low voltage networks • E. Vega-Fuentes, C. Oramas-Piñero, F. Deniz - *University of Las Palmas de Gran Canaria, Spain*

C1.8 • Smart Program Management in Smart City • D. Caivano, V.S. Barletta, M.T. Baldassarre - *University of Bari, Italy*

C1.9 • Smart Farms for a Sustainable and Optimized Model of Agriculture • D. Impedovo - *University of Bari, Italy*, F. Balducci - *University of Modena and Reggio Emilia, Italy*, D. Fornarelli, A. Longo, G. Pirlo - *University of Bari, Italy*

11,30 • 13,30 Room D - Technical Session D1

• Electrical Machines and Drives

Chair: Francesco Cupertino - *Politecnico di Bari, Italy*

D1.1 • High-Speed Machines: Typologies, Standards, and Operation Under PWM Supply • V.G. Monopoli, R. Leuzzi, F. Cupertino - *Politecnico di Bari, Italy*, G. Brando, A. Dannier, I. Spina, A. Del Pizzo - *University of Naples Federico II, Italy*, A.O. Di Tommaso, V. Castiglia, G. Schettino, C. Nevoloso, R. Miceli - *University of Palermo, Italy*

D1.2 • Concept Analysis and Design of a 9-Phase Permanent Magnet Synchronous Machine • L. Tippe, J. Kammermann, I. Bolvashenkov, H.-G. Herzog - *Technical University of Munich, Germany*

D1.3 • Electromagnetic and NVH study for low power Synchronous Reluctance Machine • F.-A. Pop-Piglesan, R. Martis, C. Martis - *Technical University of Cluj-Napoca, Romania*, C. Faria, F. Chauvicourt - *Siemens Industry Software NV, Belgium*

D1.4 • Sensorless Closed-Loop Control of Solenoid Actuators Using IDIM Technique • N. König, E. Grasso, M. Nienhaus - *Saarland University, Germany*

D1.5 • Reliability Analysis of a Three-Phase Interior Permanent Magnet Synchronous Motor Under some Internal Faults • I. Bolvashenkov, J. Kammermann, T. Lahlou, H.G. Herzog - *Technical University of Munich, Germany*; A. Viatkin - *University of Bologna, Italy*

D1.6 • Aeronautical hybrid propulsion for More Electric Aircraft: a case of study • F. Fugaro, M. Palmieri, G.L. Cascella, F. Cupertino - *Politecnico di Bari, Italy*

D1.7 • Principal Component Analysis for Computation of the Magnetization Characteristics of Synchronous Reluctance Machine • M. Nutu, H. Pop - *University Babel Bolyai, Romania*; C. Martis, R. Martis - *Technical University of Cluj-Napoca, Romania*

D1.8 • Condition monitoring of gas-turbine electric power units using the H-infinity Kalman Filter • G. Rigatos, N. Zervos - *ISI - Industrial Systems Institute, Greece*; D. Serpanos, V. Siadimas - *University of Patras, Greece*; P. Siano - *University of Salerno, Italy*; M. Abbaszadeh - *General Electric, USA*

Thursday, October 4, 2018

9,00 • 10,30 Room A - Technical Session A2

• Studies and innovations in electrical distribution systems

Chair: Roberto Caldon - *University of Padova, Italy*

A2.1 • GIS-based urban distribution networks planning with 2-step ladder topology considering electric power cable joints • A. Bosisio, A. Berizzi, E. Amaldi, C. Bovo - *Politecnico di Milano, Italy*; S. Fratti - *Unareti, Italy*

A2.2 • The impact of MVDC links on distribution networks • R. Zuelli, R. Chiumeo, C. Gandolfi, A. Cerci - *RSE - Ricerca sul Sistema Energetico, Italy*; S. Pugliese, S. Fratti, M. Garocchio - *Unareti, Italy*

A2.3 • Assessment of Energy Storage Systems Installation in Smart Distribution Networks • G. Pisano, G. Celli, F. Pilo, G.G. Soma - *University of Cagliari, Italy*; R. Vailati, L. Lo Schiavo - *ARERA, Italy*

A2.4 • Challenges in Microgrid Control Systems Design. An application case • G. Invernizzi, G. Vielmini - *Schweitzer Engineering Laboratories, Italy*

A2.5 • A software for residential Multi-DER microgrids design • G. Graditi, G. Adinolfi, R. Ciavarella, V. Palladino - *ENEA, Italy*

A2.6 • A Virtual Synchronous Machine Control applied to Photovoltaic Generation in Decentralized Microgrid • A. Cervi, R. Stecca, A. Vian, F. Bignucolo - *University of Padova, Italy*

9,00 • 10,30 Room B - Special Session B2

• Experiences of Smart Grid Living Laboratories I

Chair: Massimo La Scala - *Politecnico di Bari, Italy*

B2.1 • The University of Genoa Smart City Demo Site • S. Bracco, M. Brignone, F. Delfino, P. Laiolo, R. Procopio - *University of Genova, Italy*

B2.2 • The Smart Grid Labs of e-distribuzione • M. Rubino, A. Cammarota, G. Sapienza, S. Riva, G. Bianco - *e-distribuzione, Italy;* M. Rubino - *Enel Italia, Italy*

B2.3 • Advancements of field tests in PrInCE lab experimental microgrid • G. Forte, B. Aluisio, M. Dicorato, M. Trovato, A. Cagnano, R. Sbrizzai, E. De Tuglie - *Politecnico di Bari, Italy*

B2.4 • Functions and technologies for energy optimization of users and districts: lab test • D. Moneta, V. Angelucci, R. Urban, P. Gramatica - *RSE Ricerca sul Sistema Energetico, Italy*

B2.5 • First activities and power-hardware-in-the-loop tests at the public research laboratory LabZERO • G. Giannoccaro, S. Bruno, M. La Scala, G. Lopopolo - *Politecnico di Bari, Italy*

B2.6 • Networks of public research laboratories in Puglia • A. Fiore - ARTI - *Regional Technology and Innovation Agency, Italy*

9,00 • 10,30 Room C - Special Session C2

• E-mobility & Shipboard Applications I

Chair: Federica Foiadelli - *Politecnico di Milano, Italy*

C2.1 • Long duration simulations of railway AC Electrified lines • M. Ceraolo - *Università di Pisa, Italy*

C2.2 • Application of Dynamic Programming for Active Noise Reduction of PMSM by Reducing Torque Ripple and Radial Force Harmonics • J. Nägelkrämer - *Porsche AG, Germany*; N. Parspour - *University of Stuttgart, Germany*; A. Heitmann - *Porsche AG, Germany*

C2.3 • Simulink Models for the Prediction of Electromagnetic Transients in DC Traction Systems • M. Longo, F. Foiadelli, M. Brenna - *Politecnico di Milano, Italy*; M. Quaglini, M. Albertini - *Colas Rail Italia, Italy*

C2.4 • Impedance bonds: Analysis and Development • G. Falaschi, E. Fedeli, N. Bologna - *Rete Ferroviaria Italiana, Italy*

C2.5 • A methodologic approach to define the railway junctions capacity • R. Lamedica, A. Ruvio - *Sapienza University of Rome, Italy*; C. Spalvieri - *RFI, Italy*

C2.6 • Electric Vehicles under Slip Constraints: Experimental Results • D. Antonelli - *University of Rome Tor Vergata, Italy*; L. Pasquale - *University of Nottingham, Italy*; A. Salvatore, M. Tiberti, C.M. Verrelli - *University of Rome Tor Vergata, Italy*

9,00 • 10,30 Room D - Technical Session D2

• Power Converters and their Modulation and Control I

Chair: Gerardo Vazquez Guzman - *ITESI, Mexico*

D2.1 • Solar electric vehicles: state-of-the-art and perspectives • G. Susinni, S.A. Rizzo, A. Raciti, S. Di Mauro, S. Conti - *University of Catania, Italy*; S. Musumeci, A. Tenconi - *Politecnico di Torino, Italy*

D2.2 • Diode Assisted Quasi Z-source Inverter with Discontinuous Current: Analysis and Simulation • E. Babaei - *University of Tabriz, Iran*; S. Laali - *Niroo Research Institute, Tehran, Iran*; C. Buccella, C. Cecati - *University of L'Aquila, Italy*

D2.3 • A Modulation Strategy for a Single-Phase Transformerless Multilevel Inverter with Dual Bidirectional Switch • G. Vazquez Guzman, J. Sosa Zuñiga, M. Juarez Balderas - *ITESI, Mexico*; P. Martinez Rodriguez - *School of Sciences, UASLP, Mexico*; G. Escobar Valderrama - *Modelo University, MU, Mexico*

D2.4 • High frequency converter topologies suitable for more electric aircraft • A. Dannier, G. Brando, I. Spina - *University of Napoli Federico II, Italy*; A. Raciti, S.A. Rizzo, G. Susinni - *University of Catania, Italy*

D2.5 • State of the art and emerging solid-state power devices in the perspective of more electric aircraft • S.A. Rizzo, N. Salerno, A. Raciti, G. Susinni - *University of Catania, Italy;* C. Buccella, C. Cecati, M. Tinari - *University of L'Aquila, Italy*

D2.6 • A Cascade a Multilevel Configuration for Commercial Transport Aircraft • C. Buccella, C. Cecati, M.G. Cimoroni - *University of L'Aquila, Italy*; A. Damiano, S. Korjani, M. Porru, A. Serpi - *University of Cagliari, Italy*

9,00 • 10,30 Room E - Session

• Sustainability

Chair: Vittorio Cecconi - *ASTRI Society of AEIT, Italy*

• Valori giuridici delle norme tecniche • Vittorio Cecconi - *ASTRI Society of AEIT*

• Sostenibilità sociale nella realizzazione di grandi opere • Adel Motawi - *ASTRI Society of AEIT*

• Sostenibilità nella gestione di reti elettriche con la tecnologia IoT • Giuseppe Parise - *ASTRI Society of AEIT*

• Sostenibilità di un sistema formativo capace di essere apprezzato dal mondo industriale • Giovanni Cancellieri - *ASTRI Society of AEIT*

• aeit.it: progetto sostenibilità • Stefano Pirani - *ASTRI Society of AEIT*

10,30 • 10,45 Break

10,45 • 12,30 Room A - Technical Session A3

• Measurements and analysis on Components of the electrical system

Chair: Enrico De Tuglie - *Politecnico di Bari, Italy*

A3.1 • A.RI.EL: A structural integrity condition based method for renewal assessment of pylons in overhead transmission lines • G. Ricci, R. Bertella, S. Prato - *Terna, Italy*; M. Zippo - *CESI, Italy*

A3.2 • Life Cycle Assessment of a 132 kV Gas Insulated Switchgear Substation using LCA methodology • A.G. Palumberi - *Terna Rete Italia, Italy*; M. Rebolini - *Terna, Italy*; P. Bonci, A. Giorgi, F. Grasso - *University of Florence, Italy*

A3.3 • Different Screen Arrangements of Distribution Insulated Cables • R. Benato, S. Dambone Sessa, G. Rinzo - *University of Padova, Italy*; O. Marchese, L. Tanzi, R. Zapelloni - *e-distribuzione, Italy*

A3.4 • Capri-Torre Annunziata 150 kV Three-Core Armoured Submarine Cable: a First 3D Multiconductor Cell Analysis Confirmation • R. Benato, S. Dambone Sessa - *University of Padova, Italy*; L. Guizzo, F. Palone - *Terna Rete Italia, Italy*

A3.5 • Charging Transient for Fault Location: Analytical Method versus Artificial Neural Network • R. Benato, S. Dambone Sessa, G. Rinzo - *University of Padova, Italy*; M. Poli - *Terna, Italy*

A3.6 • Optimal discretization of grounding systems applying Maxwell's subareas method • P. Montegiglio, G. Cafaro, F. Torelli - *Politecnico di Bari, Italy*; P. Colella, E. Pons - *Politecnico di Torino, Italy*

10,45 • 12,30 Room B - Special Session B3

• Experiences of Smart Grid Living Laboratories II

Chair: Massimo La Scala - *Politecnico di Bari, Italy*

B3.1 • Collected experiences from the Fraunhofer Institute IFF's Smart Grid Laboratory • P. Lombardi, S. Balischewski, C. Wenge, P. Komarnicki - *Fraunhofer IFF, Germany*

B3.2 • A Living Lab and Testing Infrastructure for the Development of Innovative Smart Energy Solutions: the eLUX Laboratory of the University of Brescia • A. Flammini, S. Rinaldi, M. Pasetti, P. Bellagente, A. Ciribini, L. Tagliabue, L. Zavanella, S. Zanoni, G. Oggioni, G. Pedrazzi - *University of Brescia, Italy*

B3.3 • Smart Grid Technology Lab - A Full-Scale Low Voltage Research Facility at TU Dortmund University • A. Spina, K. Rauma, C. Aldejohann, M. Holt, J. Maasmann, P. Berg, J. Rettberg, U. Haeger, C. Rehtanz - *TU Dortmund University, Germany*

B3.4 • Recent research conducted at the SGILab towards an efficient and interoperable smart grid • E. Kotsakis, A. Lucas, N. Andreadou, G. Fulli - *European Commission, Joint Research Centre, Italy*; M. Masera - *European Commission, The Netherlands*

B3.5 • A Collaborative Laboratory for Shipboard Microgrid: Research and Training • F. Silvestro - *University of Genova, Italy*; E. Ragaini - *ABB, Italy*; F. D'Agostino, A. Boveri, G. Schiapparelli - *University of Genova, Italy*; D. Patuelli - *ABB Marine, Italy*

B3.6 • Redundant Directional Zone Selectivity for Marine Electrical Installations • E. Ragaini - *ABB, Italy*; H. Bardideh - *Politecnico di Milano, Italy*; A. Fidigatti - *ABB, Italy*

B3.7 • Dynamic modeling of the PrInCE Lab experimental microgrid • R. Turri, A. Vian, F. Bignucolo - *University of Padova, Italy*; E. De Tuglie, A. Cagnano - *Politecnico di Bari, Italy*

10,45 • 12,30 Room C - Special Session C3

• E-mobility & Shipboard Applications II

Chair: Massimo Ceraolo - *University of Pisa, Italy*

C3.1 • Preliminary analysis of Hybrid-Electric propulsion system integrated in a regional aircraft • L.P. Di Noia, M.C. Cameretti, A. Del Pizzo, M. Ferrara - *University of Naples Federico II, Italy*

C3.2 • Use of passive filters connected to the AC side of railway substations supplied in medium voltage • G. Guidi Buffarini - *Ferrovie dello Stato & Italferr, Italy*; G. Trezza - *Italferr, Italy*; C. Spalvieri, M. Stellin - *RFI, Italy*

C3.3 • Harmonic Analysis of High-Speed Railway System for Different Configurations of the Traction Power Line • L. Alfieri, F. Mottola, M. Pagano, D. Proto - *University of Naples Federico II, Italy*

C3.4 • A simulation environment for railway dynamics and signalling, aimed to European certification of safe vital computers • L. Caccamo, S. Vetruccio, C. Zappacosta, G. Mancini, L. Bocciolini - *Italcertifer, Italy*

C3.5 • Dependability analysis of cyber security in All-Electric Ships • A. Colavitto, A. Vicenzutti - *University of Trieste, Italy*; M. Chiandone - *University of Trieste & Chiandone, Italy*; G. Sulligoi - *University of Trieste, Italy*

10,45 • 12,30 Room D - Technical Session D3

• Power Converters and their Modulation and Control II

Chair: Fabrizio Caracciolo - *Rete Ferroviaria Italiana, Italy*

D3.1 • Developed Quasi Z-Source Inverter Based on Diode-Cells: Analysis and Simulation • E. Babaei - *University of Tabriz, Iran*; S. Laali - *Niroo Research Institute, Iran*; C. Buccella, C. Cecati - *University of L'Aquila, Italy*

D3.2 • Artificial Intelligence Based Fuzzy-MPPT Technique of H-Bridge Inverter Grid Connected Photovoltaic System • F.A. Haris, S.Z.M. Noor, A.M. Omar - *University of Technology MARA, Malaysia*; M.A.M. Radzi - *University Putra Malaysia, Malaysia*

D3.3 • A Simple and Effective Active Damping Design for Three Phase LCL Filters • M. Bierhoff - *University of Applied Sciences Stralsund, Germany*; J. Espinoza, M. González Vallejos - *Universidad de Concepcion, Chile*; R. Soliman - *University of Applied Sciences, Stralsund, Germany*

D3.4 • Voltage Ripple Minimization in Modular Multilevel Converters using Modified Rotative PWM Scheme • D. Ronanki, S. Williamson - *University of Ontario Institute of Technology, Canada*

D3.5 • Smart Transformer and Low Frequency Transformer Comparison • J. Chen, R. Zhu, T. O'Donnell, M. Liserre - *Christian-Albrechts-Universität zu Kiel, Germany*

D3.6 • Single-Phase Chebyshev Algorithm for Harmonics Mitigation in CHB Five-Level Inverters • C. Buccella, M.G. Cimoroni, C. Cecati, M. Tinari - *University of L'Aquila, Italy*; S.A. Rizzo, G. Susinni, A. Raciti - *University of Catania, Italy*

10,45 • 12,30 Room E - Session

• 5G and ultra-broadband

Chair: Andrea Penza - *AICT Society of AEIT, Italy*

- **Introduction** • Andrea Penza - *AICT Society of AEIT, Italy*
- **5G Bari-Matera: Upcoming challenges for use cases and impacts on the Telco business** • Luca Piccinelli - *Marketing Senior Manager Huawei Italia, Italy*
- **The 5G radio technology and related electromagnetic radiation assessment** • Francesco Pugliese - *PuglieseProgettazioni, Italy*
- **Digital Transformation and 5G Digital Services** • Massimiliano Gattoni - *Chief Innovation and Digital Officer Open Fiber, Italy*
- **Manufacturing technologies (excavation, laying and optical junction)** • Vincenzo Cortese - *Project Manager Sirti, Italy*
- **Evaluation of IoT and videosurveillance applications in a 5G Smart City: the Italian 5G experimentation in Prato** • F. Nizzi, T. Pecorella, M. Bertini, R. Fantacci - *University of Florence, Italy*; M. Bastianini, C. Cerboni, A. Buzzigoli - *Estra, Italy*; M. Gattoni, A. Fratini - *OpenFiber, Italy*
- **Conclusion**

Friday, October 5, 2018

8,30 • 10,30 Room A - Special Session A4

• Projects related to Activities concerning Research and Development for the National Electrical Energy System

Chair: Stefano Massucco - *University of Genova, Italy*

A4.1 • The PODCAST project - optimizing distribution networks with renewable energy sources • E. Bessone - *AMAIE, Italy*; C.A. Nucci - *University of Bologna, Italy*; S. Bianchi - *Softeco Sismat, Italy*; M. Pentolini - *SDI, Italy*; S. Massucco - *University of Genova - IEES Lab., Italy*; F. Raco - *Toshiba, Italy*

A4.2 • Evaluation of Joule power losses reduction in overhead lines with innovative conductors • R. Benato, R. Caldon, M. Coppo, S. Dambone Sessa, G. Rinzo - *University of Padova, Italy*; D. Mimo - *Deangeli Prodotti, Italy*

A4.3 • The ELECTRA Web-of-Cells control architecture concept for the future power system operation • M. Cabiati, C. Tornelli, L. Martini - *Ricerca sul Sistema Energetico-RSE, Italy*

A4.4 • DEMAND Project: Bottom-Up Aggregation of Prosumers in Distribution Networks • D. Arnone, M. Mammina - *Engineering, Italy*; S. Favuzza, M. Ippolito, E. Riva Sanseverino, E. Telaretti, G. Zizzo - *University of Palermo, Italy*

A4.5 • Energetic and economical analysis for a LVDC residential district • L. Pellegrino, R. Lazzari - *RSE - Ricerca sul Sistema Energetico, Italy*; F. Almasio - *Politecnico di Milano, Italy*

A4.6 • Comparing control systems performance in increasing the Hosting Capacity of distribution networks • G. Viganò, M. Rossi, D. Moneta - *RSE - Ricerca sul Sistema Energetico, Italy*

A4.7 • Study of a Universal Power SMES Compensator for LV Distribution Grid • C. Gandolfi, R. Chiumeo - *RSE - Ricerca sul Sistema Energetico, Italy*; R. Faranda, D. Raggini - *Politecnico di Milano, Italy*; A. Morandi - *Università di Bologna, Italy*; C. Ferdeghini - *CNR SPIN, Italy*; M. Tropeano - *Columbus Superconductor, Italy*; S. Turtù - *ICAS, Italy*

8,30 • 10,30 Room B - Special Session B4

• HVDC Developments in the Mediterranean Area

Chair: Angelo L'Abbate - *RSE - Ricerca sul Sistema Energetico, Italy*

B4.1 • Updates on HVDC penetration in the European power system: goals and applications by TSOs • A. L'Abbate - *RSE - Ricerca sul Sistema Energetico, Italy*; C. Vergine, F. Vedovelli, M. Rebolini - *Terna, Italy*

B4.2 • Integrated approach for the techno-economic evaluation of transmission infrastructures: application to the HVDC SA.CO.I. project • A. L'Abbate, R. Calisti - *RSE - Ricerca sul Sistema Energetico, Italy*

B4.3 • Pulsed Electro-Acoustic Method for specimens and cables employed in HVD systems: some feasibility considerations • A. Imburgia, P. Romano, E. Riva Sanseverino - *University of Palermo, Italy*; L. De Rai, S. Franchi Bononi, I. Troia - *Prysmian Group, Italy*

B4.4 • Consolidating a Secure and Sustainable Electricity Infrastructure in the Mediterranean Region - The Mediterranean Project of Med-TSO • A. Iliceto - *Terna Rete Italia, Italy*; A. Ferrante - *MedTso, Italy*

B4.5 • HVDC Cables Along with Highway Infrastructures: the "Piedmont-Savoy" Italy-France Intertie • S. Dambone Sessa, R. Benato, A. Chiarelli - *University of Padova, Italy*; M. Pazienza, R. De Zan, M. Rebolini - *Terna, Italy*

B4.6 • Study of interactions among control, defense, and protection systems in small systems with HVDC links and large penetration of renewables • D. Cirio, E. Ciapessoni, A. Pitto, A. Iaria, M. Rapizza - *Ricerca sul Sistema Energetico - RSE, Italy*; G. Giannuzzi - *Terna, Italy*; A. Iliceto, R. Zaottini - *Terna Rete Italia, Italy*

B4.7 • Regulatory options to support electricity transmission network investments in the Mediterranean region • V. Lenzi, S. Colakoglu, M. Lambicchi, B. Hoxha - *Mediterranean Energy Regulators, Italy*

B4.8 • HVDC Land and Submarine Cables in the Mediterranean Area • E. Zaccone - *Advisor, Italy*; L. Colla - *Prysmian Industry, Italy*

8,30 • 10,30 Room C - Session

• Smart Systems

Chair: Livio Baldi - *AMES Society of AEIT, Italy*

• Next generation urban mining • Alice Tori - *OSAI, Italy*

• Building an Innovative Roadmap on System Design and Heterogeneous Integration • Danilo Demarchi - *Politecnico di Torino, Italy*

• Giving Eyes to Smart Systems • Roberto Bez - *Lfoundry, Italy*

• IoT Trends and Innovative Applications, including AI • Roberto Zafalon - *STMicroelectronics, Italy*

• EV charging infrastructure: the Enel case • Giovanni Coppola - *Enel X E-Mobility, Italy*

8,30 • 10,30 Room D - Technical Session D4

• Energy Storage Systems and their control

Chair: Antonino Oscar Di Tommaso - *University of Palermo, Italy*

D4.1 • New State of Energy estimator for a lead-acid battery • L. Pellegrino - *RSE, Italy*; G. Alimonti - *INFN - Università degli Studi di Milano, Italy*; M. Redaelli - *Università degli Studi di Milano, Italy*

D4.2 • Grid Models for Use with Cascaded H-Bridge Multilevel Inverter Based Battery Energy Storage System • T. Lahlou, M.A. Aslam, I. Bolvashenkov, J. Kammermann, H.-G. Herzog - *Technical University of Munich TUM, Germany*

D4.3 • Use of electrochemical storage to enhance energy and cost efficiency of a railway node • G. Lutzemberger, M. Ceraolo, M. Perrotta - *University of Pisa, Italy*

D4.4 • Batteries for Aerospace: a Brief Review • A. Damiano, M. Porru, A. Salimbeni, A. Serpi - *University of Cagliari, Italy*; V. Castiglia; A.O. Di Tommaso, R. Miceli; G. Schettino - *University of Palermo, Italy*

D4.5 • Towards an AMTEC-like device based on non-alkali metal for efficient, safe and reliable direct conversion of thermal to electric power • G. Tumminelli - *University of Palermo, Italy*; R. Candia, A. Collura - *Istituto Nazionale di Astrofisica, Italy*; S. Ferruggia Bonura - *University of Palermo, Italy*; U. Lo Cicero - *Istituto Nazionale di Astrofisica, Italy*; L. Sciortino - *University of Palermo, Italy*; F. Santoro - *Archimede, Italy*; M. Barbera - *Università di Palermo, Italy*

D4.6 • A Kalman Filter-based disturbance observer for state-of-charge estimation in EV batteries • G. Rigatos - *Industrial Systems Institute, Greece*; K. Busawon - *Northumbria University, United Kingdom*; P. Siano - *University of Salerno, Italy*; M. Abbaszadeh - *General Electric, USA*

D4.7 • A novel synchronizer for a 17.9ps Nutt Time-to-Digital Converter implemented on FPGA • R. Machado, L.A. Rocha, J. Cabral - *University of Minho, Portugal*

10,30 • 10,45 Break

10,45 • 12,45 Room A - Technical Session A5

• Control and management aspects in electrical systems

Chair: Michele Benini - *Ricerca sul Sistema Energetico - RSE, Italy*

A5.1 • Pilot projects on Battery Energy Storage Systems in the Transmission grid: regulatory framework and first results • M. Benini - *Ricerca sul Sistema Energetico - RSE, Italy*; L. Lo Schiavo - *ARERA, Italy*

A5.2 • Load Flexibility Supply via Participation in the Italian Balancing Market: Preliminary Economic Evaluations • S. Canevese, M. Benini, A. Cavaliere, A. Gatti - *Ricerca sul Sistema Energetico - RSE, Italy*

A5.3 • Optimal automatic parameter tuning for innovative grid frequency regulation functions • M. Rapizza, S. Canevese, A. Iaria - *Ricerca sul Sistema Energetico - RSE, Italy*

A5.4 • A new concept for Italian dispatching market: decision 300/2017 • M.S. Pasquadibisceglie, A. Galliani - *ARERA, Italy*

A5.5 • Robust Optimal Bidding of Wind Energy in the Electricity Markets • F. De Caro, D. Villacci - *University of Sannio, Italy*; E. Carlini - *Terna Rete Italia, Italy*

A5.6 • Under Frequency Load Shedding Plan in Active Power Systems: Analysis and Innovative Proposals • F. Grasso, A. Giorgi, G. Rossi - *University of Florence, Italy*; T. Baffa Scirocco - *Terna Rete Italia, Italy*; G. Bruno - *Terna, Italy*; L. Caciolli - *Terna Rete Italia, Italy*; G. Giannuzzi - *Terna, Italy*; R. Zaottini - *Terna Rete Italia, Italy*

A5.7 • INTAS experiences on identification, selection and evaluation of power transformers for market surveillance purposes • A. Baggini - *University of Bergamo, Italy*; I. Weiss - *WIP Renewable Energies, Germany*; N. Ruiz, F. Zuloaga - *European Environmental Citizens' Organisation for Standardisation, Belgium*; T. Jezdinsky - *European Copper Institute, Belgium*; F. Bua - *Engineering Consulting and Design, Italy*

A5.8 • VIRTUALENERGY: A project for testing ICT for virtual energy management • E. Ghiani, S. Mocci, M. Franceschelli, M. Anedda, C. Desogus, M. Murroni - *University of Cagliari, Italy*

10,45 • 12,45 Room B - Technical Session B5

• Resilience of Electrical Grid: Events and Solutions

Chair: Massimo Pompili - *Sapienza University of Rome, Italy*

B5.1 • Towards the Resilience Assessment of Electric Distribution System to Earthquakes and Adverse Meteorological Conditions • M. Pompili, L. Calcara - *Sapienza Università di Roma, Italy*; A. Di Pietro - *ENEA, Casaccia Research Centre, Italy*; S. Giovinazzi - *Canterbury University, New Zealand*; M. Pollino - *ENEA, Casaccia Research Centre, Italy*

B5.2 • Raising awareness on climate-change related hazards that might impact electric infrastructures • P. Faggian, R. Bonanno - *Ricerca sul Sistema Energetico RSE, Italy*

B5.3 • Assessment and possible solution to increase the resilience of Terni distribution Grid: the ice sleeves formation threat • T. Bragatto, M. Maccioni, F.M. Gatta, A. Geri - *Sapienza University of Rome, Italy*; M. Paulucci, M. Cresta - *TDE, ASM Terni, Italy*

B5.4 • Assessment of the resilience of the electrical distribution grid: e-distribuzione approach • E. Amicarelli, L. Ferri, M. De Masi, A. Suich, G. Valtorta - *e-distribuzione, Italy*

B5.5 • Improvement the resilience of the regional power system in Croatia • A. Andric, M. Mesić, B. Markota - *Croatian Tranmission Operator, Croatia*

B5.6 • Model based resilience assessment and threats mitigation: a sensitivity based approach • E. Ciapessoni, D. Cirio, A. Pitto - *Ricerca sul Sistema Energetico RSE, Italy;* S. Massucco - *University of Genova, Italy;* M. Sforna - *Terna, Italy;* P. Marcacci - *Ricerca sul Sistema Energetico RSE, Italy*

B5.7 • A new approach for WET SNOW Resilience Index • C. Vergine, A. Sallati, S. Pierazzo, F. Ciasca - *Terna, Italy*; G. Pirovano, M. Lacavalla, P. Marcacci - *RSE - Research on the Energy System, Italy*

10,45 • 12,45 Room C - Technical Session C4

• Smart Systems and Emerging Technologies

Chair: Giuseppe Gattavari - *AMES Society of AEIT, Italy*

C4.1 • Alternating Current Waveform Control Method for BLDCMs Using Repetitive Control Techniques • H.-J. Guo, T. Kobayashi - *Tohoku Gakuin University, Japan*; I. Tadashi - *Fukushima University, Japan*

C4.2 • Parameter Estimation and Synchronization of Vaidyanathan Hyperjerk Hyper-Chaotic System via Integral Sliding Mode Control • N. Siddique - *University of Gujrat - Capital University of Science and Technology, Pakistan*; F. urRehman - *Capital University of Science and Technology, Pakistan*; M. Wasif - *University of Gujrat, Pakistan*; W. Abbasi, Q. Khan - *Capital University of Science and Technology, Pakistan*

C4.3 • Smooth Super Twisting Sliding Mode Control Based Stabilization for Nonholonomic Mechanical Systems: A Firetruck Example • W. Abbasi - *The University of Lahore, Islamabad Campus, Pakistan*; I. Shah, F. urRehman, N. Siddique, U. Rafique - *Capital University of Science and Technology, Pakistan*

C4.4 • Fast trajectory tracking based on flatness control for a high voltage AC-DC-AC power system • W.M.F.A.B. Wan Mohammad, J.-L. Marques, C. Hillermeier - *Bundeswehr University Munich, Germany*

C4.5 • Nonlinear optimal control for hydro-power generation units • G. Rigatos - *Industrial Systems Institute, Greece*; P. Siano - *University of Salerno, Italy*; C. Cecati - *University of L'Aquila, Italy*; M. Abbaszadeh - *General Electric, USA*

C4.6 • A Framework for Edge Computing on Smart Meters • I. Satoh - *National Institute of Informatics, Japan*

C4.7 • Solid State Rectifier as Terahertz Detector • F. Palma, S. Massaioli, R. Rao - *Sapienza Università di Roma, Italy*

C4.8 • Tests results of innovative 3kVDC electric traction substation booster equipped • F. Caracciolo, E. Fedeli, D. Difino - *Rete Ferroviaria Italiana, Italy*

10,45 • 12,45 Room D - Technical Session D5

• Sensors and signals for ICT

Chair: Giovanni Cancellieri - *AEIT, Italy*

D5.1 • Impact of the Deployment Costs on the Cloud and Bandwidth Resource Problems in Multi-Providers NFV Environment • V. Eramo, F.G. Lavacca - *Sapienza Università di Roma, Italy*

D5.2 ECG Signal Denoising using Wavelet for the VLP effective detection on FPGA • C. Guaragnella, A. Giorgio - *Politecnico di Bari, Italy*

D5.3 Optical chemosensors for transformers'oil degradation monitoring: case studies • L. De Maria - *RSE Research on Energetic System, Italy*; N. Cennamo, L. Zeni - *Università della Campania "Luigi Vanvitelli", Italy*; F. Scatiggio - *Terna Rete Italia, Italy*; M. Pesavento - *University of Pavia, Italy*

D5.4 Development of a Sensor for Leak Detection in Underground Water Pipelines • N. Giaquinto, G.M. D'Aucelli, R. D'Ingillo, F. Prudenzano, F. Attivissimo - *Polytechnic of Bari, Italy*

D5.5 FOG-oriented Joint Computing and Networking: the GAUChO Project Vision • F. Nizzi, T. Pecorella, A. Bonadio, F. Chiti, R. Fantacci - *University of Florence, Italy*; D. Tarchi, W. Cerroni - *University of Bologna, Italy*

D5.6 NLOS mmWave Propagation Measurements through Vegetation in Urban Area: a Case Study • M. Vaser - *University of Rome "Tor Vergata", Italy*; M. Celidonio, E. Fionda - *Fondazione Ugo Bordoni, Italy*; E. Restuccia - *MISE, Italy*

D5.7 Reduced Power Multi-Cell Multicast Transmission • D. Marabissi, G. Bartoli, R. Fantacci, M. Gherardelli - *University of Florence, Italy*

STUDENT'S CONTEST Poster Session

SC.1 • A personal healthcare system for contact-less estimation of cardiovascular parameters • V. Pasquadibisceglie, G. Zaza, G. Castellano - *University of Bari, Italy*

SC.2 • A Sliding Mode Observer for Sensorless Operation of Low Power PMS Machines • S. Fabbri, M. Nienhaus, E. Grasso, N. König - *Saarland University, Germany*

SC.3 • A reliable architecture based on Precision Time Protocol for WAMPAC synchronization • A. Pepiciello, A. Vaccaro - *University of Sannio, Italy*

SC.4 • Day-ahead operation planning for microgrids emebedding Battery Energy Storage Systems. A case study on the PrInCe Lab microgrid • P. Gibilisco, G. Ieva, F. Marcone, G. Porro, E. De Tuglie - *Polytechnic University of Bari, Italy*

SC.5 • Optimal Network Planning for Smart Metering Networks • K. Patrzek - *Technical University of Munich, Germany,* M. Kuba - *University of Applied Sciences Kempten, Germany*

SC.6 • A joint Multi Criteria - Cost Benefit Analysis for project selection on smart grids • M. Troncia, N. Chowdhury, F. Pilo - *University of Cagliari, Italy*

Conference Venue

Politecnico di Bari
Via Edoardo Orabona, 4 • Bari, Italy

On Site Secretariat

The conference Secretariat wil be open at the conference venue as follows

WEDNESDAY, October 3, 2018 • **8,30-19,00**
THURSDAY, October 4, 2018 • **8,30-19,00**
FRIDAY, October 5, 2018 • **8,00-13,00**

Conference Dinner

The Conference Dinner will be held • **THURSDAY, October 4 - 20,30** •
La Locanda di Federico • Piazza Mercantile 63, Bari

Conference Secretariat

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