

AEIT2025 International Annual Conference
10-12 September 2025

PRELIMINARY TECHNICAL PROGRAMME

Wednesday, 10 September

8:30-9:15 **Registration**

9:15-9:30 **MAIN ROOM**
Welcome Statements

9:30-10:30 **Parallel Special and Technical Sessions**

ROOM A

TS01 Energy transition

Chair: Maurizio Fauri - *University of Trento*

TS01_01 Critical Areas and Lines Identification on the HV and EHV Grid: New Microzona

Mauro Caprastianca, Federico Quaglia (Terna, Italy); Maria Carmen Falvo (Sapienza University of Rome, Italy); Chiara Giordano, Andrea Zollo, Viviana Rossetti, Lorenzo Del Rio, Rachid Jammal, Sergio Andrea Femia (Terna, Italy)

TS01_02 Connection of RES and Storage to the Italian Transmission Grid: Authorization Process Evolution and a Real Case Study

Mauro Caprastianca, Federico Quaglia (Terna, Italy); Maria Carmen Falvo (Sapienza University of Rome, Italy); Chiara Giordano, Lorenzo Del Rio, Carla Conti, Lidia La Maestra, Lorenzo Nuccio, Valentina Minicucci, Sara Fortunati (Terna, Italy)

TS01_03 Impact of the Energy Transition on the Planning of Rome's Low Voltage Distribution Network

Simona Sellitto, Giacomo Viganò, Chiara Michelangeli, Marco Rossi, Diana Moneta (Ricerca sul Sistema Energetico-RSE, Italy); Gabriele Fedele, Angela Irlandese, Fabio Di Zazzo, Lorenzo Centini, Paolo Sancioni (Areti, Italy)

TS01_04 Future cross-border electrical interconnection behavior under uncertainty conditions

Enrico Maria Carlini, Corrado Gadaleta, Francesca Longobardi, Gianfranco Luongo, Eliana Mangiardi, Alessandro Uncini, Michela Migliori (Terna, Italy)

ROOM B

TS02 Cybersecurity

Chair: Alessandro Vizzarri - *AEIT-AICT*

TS02_01 Security Assurance Methodology and Testing Challenges in 5G Core Network Products

Vittorio Bagini, Francesco D'Alterio, Renato Menicocci, Marco Rotunno, Leonardo Sagratella, Marina Settembre (Fondazione Ugo Bordoni, Italy)

TS02_02 Cybersecurity Challenges in Electric Vehicles Charging Infrastructure

Antonino Laudani, Stefania Conti (University of Catania, Italy)

TS02_03 Developing a Smart Key: Enhancing Autonomous Vehicle Security

Jananga Chiran Wickramaarchchi, Omer Albalushi, Chamal Jayasinghe, Inuka Wanigasekara, Kavinga Abeywardena, Hansika Mahaadikara (Sri Lanka Institute of Information Technology, Sri Lanka)

TS02_04 Transformer-Based Framework for Phishing Detection and URL Analysis with VirusTotal

Raaghashree M, Arul Lincy A and Angayarkanni S A (SRM Institute of Science and Technology, India); Rajaram V (SRM, India); Balakiruthiga B (SRM Institute of Science and Technology, India); S. Jhansi Ida (Anna University, India)

10:30-13:00 MAIN ROOM

Panel: Idroelettrico: generazione e pompaggio

13:00-14:00 Lunch

14:00-16:00 MAIN ROOM

Workshop IRIS LAB

16:00-16:30 Coffee Break

16:30-18:30 MAIN ROOM

Keynote Speech: Le reti wireless 6G per abilitare una nuova Smart Energy

Panel on ICT: Paradigmi innovativi tra ICT ed energia: opportunità e sfide

16:30-18:30 Parallel Special and Technical Sessions

ROOM A

TS03 Social Innovation & Customer Engagement

Chair: Daniele Menniti - *University of Calabria*

TS03_01 The Social Impact Assessment of Renewable Energy Communities: Methodological Framework and Preliminary Validation

Debora Cilio, Matteo Zulianello, Valerio Angelucci, Federico Aleotti, Antonino Rollo, Enrico Morandini, Paolo Serafini, Luca Ventola (Ricerca sul Sistema Energetico-RSE, Italy)

TS03_02 Social and Economic Determinants of Renewable Energy Communities in Italian Municipalities

Kimberly Celestiano, Antonio Fuso, Alessandro Rubino (University of Bari, Italy)

TS03_03 Measuring and Mitigating Energy Poverty: Developing a New Index and Assessing the Impact of Renewable Energy Communities on Energy Poverty

Simona Stoklin (Ordine degli Ingegneri della Provincia di Latina, Italy); Massimiliano Zanchiello (Ordine degli Ingegneri di Roma, Italy)

TS03_04 A Data-Driven Approach to Labour Market Alignment with Renewable Innovation in the UK and US

Alina Kumachova, Daniil Hulak, Nigar Hazhimzade (Brunel University London, United Kingdom)

TS03_05 Sailing Toward Energy Efficiency by Wearable AI for Demand Response in Cruise Ship Passengers: a Conversational LLM-RAG Approach for Energy Optimization

Pietro Orciuolo, Davide Severini, Daniele Bosich (University of Trieste, Italy)

TS03_06 Laboratory Implementation of a DLT-Supported Framework for Decentralized Provision of Ancillary Services

Robert Jahn, Alfio Spina, Julia Schmeing (TU Dortmund University, Germany)

TS03_07 On-Device AI and Green Communications

Massimo Battaglion, Giovanni Cancellieri (Università Politecnica delle Marche, Italy)

TS03_08 Opportunity Charging for Public Transport: Technical Standards and Future Perspectives

Alessandro Ruvio, Tommaso Bragatto, Alfredo Di Silvio (Sapienza University of Rome, Italy)

ROOM B

TS04 Automotive and mobility - Special Session

Chair: Antonio Imbruglia - AEIT-AMES

TS04_01 Annual load profiling of public electric vehicle charging stations in Italy and implications for the future power system

Massimo Ceraolo (Università di Pisa, Italy); Giovanni Lutzemberger, Gianluca Pasini and Davide Poli (University of Pisa, Italy); Emanuele Regalini (ARERA Autorità di Regolazione per Energia Reti e Ambiente, Italy); Claudio Scarpelli (University of Pisa, Italy)

TS04_02 On the Use of Vehicle-to-Grid for Enhancing Voltage Stability in Distribution Grids

Antony Vasile, Davide Astolfi, Marco Pasetti (University of Brescia, Italy); Gaetano Zizzo, Eleonora Riva Sanseverino (University of Palermo, Italy); Alessandra Flammini (University of Brescia, Italy)

TS04_03 A Simulator of EV Charging Stations for the optimization of the Management Strategy

Antonino Laudani, Giovanni Aiello, Salvatore Coco, Santi Agatino Rizzo, Nunzio Salerno, Stefania Conti (University of Catania, Italy)

TS04_04 3D Electromagnetic Simulation Methodology for Detailed Characterization of Small Electric Motor for Motorcycle Applications

Lorenzo Fazzini, Giuseppe Edoardo Antonio Porto (HPE Group, Italy); Giovanni Franceschini, Stefano Nuzzo (University of Modena and Reggio Emilia, Italy); Giovanni Malchiodi (University of Bologna, Italy); Nicola Matteazzi (Blue Matter, Italy); Davide Barater (University of Modena and Reggio Emilia, Italy)

TS04_05 Comparative Assessment of EV Hosting Capacity in Distribution Grids under Various Operational Constraints

Iqrar Hussain, Giovanni Mercurio Casolino, Pietro Varilone, Paola Verde (University of Cassino and Southern Lazio, Italy)

TS04_06 Vehicle-to-Grid (V2G) Technology Infrastructure implemented in an University LVAC Microgrid Lab

Lorenzo Frattale Mascioli, Andrea Golino, Riccardo Loggia, Cristina Moscatiello, Maria Carmen Falvo, Luigi Martirano (Sapienza University of Rome, Italy)

TS04_07 DC Shipboard Power System to Endure a Failure in Power Load: Design and HIL Emulation Test

Tiziano Coletto, Andrea Alessia Tavagnutti, Daniele Bosich, Giorgio Sulligoi (University of Trieste, Italy)

TS04_08 Preventing Side Collisions due To Sudden Vehicle Cut-Ins

Shritha TA Shritha (Nitte Meenakshi Institute of Technology, India)

18:30-20:00 MAIN ROOM

SME and Start Up Session

Thursday, 11 September

8:30-10:30 Parallel Special and Technical Sessions

MAIN ROOM

TS05 Resilience of Distribution and Transmission Electrical Systems in the times of Climate Changes and Green Energy Transition - Special Session

Chairs: Massimo Pompili - *Sapienza University of Rome*, Emanuele Ciapessoni - *Ricerca sul Sistema Energetico - RSE*, Luigi Calcara - *Sapienza University of Rome*

TS05_01 A Model for Analyzing the Impact of External Influences on Microgrids' Resilience

Salvatore Favuzza, Giulia Marcon, Andrea Marletta, Salar Moradi, Gaetano Zizzo (University of Palermo, Italy); Maria Valenti (ENEA, Italy)

TS05_02 Influence of the Shield Wire on the Apparent Impedence Measurement of Distance Protection on HV Lines

Luca Buono, Francesco Palone, Roberto Spezie, Mattia Boiani, Davide Rufini, Pierluigi Vacante (Terna, Italy)

TS05_03 Probabilistic Indexes for Power System Vulnerability Assessment

Emanuele Ciapessoni, Diego Cirio, Andrea Pitto (Ricerca sul Sistema Energetico RSE, Italy)

TS05_04 A Vulnerability-Based Approach to Quantify the Grid Asset Failure Return Periods in Case of Hydrogeological Threats

Emanuele Ciapessoni, Diego Cirio, Andrea Pitto, Giovanni Pirovano (Ricerca sul Sistema Energetico-RSE, Italy); Enrico Maria Carlini, Alessandro Lazzarini, Federico Falorni, Giuseppe Berrettoni, Laura Bianco, Francesca Scavo (Terna, Italy)

TS05_05 Dielectric Measurement Protocols on Medium Voltage Cable Joints at Variable Temperatures

Luigi Calcara (Sapienza University of Rome, Italy); Andrea Mazza (Politecnico di Torino, Italy); Massimo Pompili (Sapienza University of Rome, Italy)

TS05_06 Heatwaves and Duration Of Distribution System Faults: A Comparison of Different Indexes

Andrea Mazza, Haoke Wu (Politecnico di Torino, Italy)

TS05_07 Impacts of climate change on the wind power potential of an offshore wind turbine: three case studies from Sicily

Claudio F. Nicolosi, Giuseppe M. Tina (University of Catania, Italy)

TS05_08 Partial Discharge Behavior in Medium Voltage Cables at Different Loads and Temperature

Manuel Sozzi, Sergio Chiarello, Giovanni Pirovano, Johnny Borghetto (Ricerca sul Sistema Energetico-RSE, Italy); Alfredo Contin (University of Trieste, Italy); Andrea Pegoiani (Unareti, Italy)

ROOM A

Telecommunication

Chair: Alessandro Vizzarri - AEIT-AICT

TS06_01 Physical Unclonable Functions' Reliability Modeling for Wireless Sensor Networks

Marco Grossi, Martin Omana, Cecilia Metra, Andrea Acquaviva (University of Bologna, Italy)

TS06_02 Topology Intelligence: GNN-Powered 5G V2X

Giambattista Amati, Federica Mangiatordi, Emiliano Pallotti, Simone Angelini, Pierpaolo Salvo (Fondazione Ugo Bordoni, Italy)

TS06_03 Digital Twin-Aided Optimized Access Point Placement and Switch-on in Cell-Free Massive MIMO Systems

Francesca Di Murro (Consorzio nazionale interuniversitario per le telecomunicazioni, Italy); Marcello Folli, Pierpaolo Salvo, Francesco Matera (Fondazione Ugo Bordoni, Italy); Stefano Buzzi (University of Cassino and Lazio Meridionale and Politecnico di Milano, Italy)

TS06_04 Towards 6G Architectures for Leveraging Synergies Between Artificial Intelligence and Networking

Francesco Matera, Marina Settembre (Fondazione Ugo Bordoni, Italy); Daniele Ronzani (Hewlett Packard Enterprise, Italy); Sergio Barbarossa, Stefania Colonnese (Sapienza University of Rome, Italy); Antonia Tulino (Bell Labs, USA & University of Naples Federico II, Italy); Vincenzo Norman Vitale (University of Naples Federico II, Italy); Dania Marabissi (University of Florence, Italy); Andrea Detti (University of Rome Tor Vergata, Italy); Jaime Llorca (University of Trento & New York University, USA); Fabrizio Granelli (University of Trento, Italy)

TS06_05 5G High-Resiliency Management Functions for Energy Networks: Design and Evaluation

Francesco D'Alterio, Marcello Folli (Fondazione Ugo Bordoni, Italy); Carlo Tornelli, Roberta Terruggia, Renato Urban (Ricerca sul Sistema Energetico-RSE, Italy)

TS06_06 Resource Orchestration in a Terrestrial and Non-Terrestrial Framework

Davide Borsatti (University of Bologna, Italy); Simone Morosi, Daniele Tarchi (University of Florence, Italy); Nicola Sambo (Scuola Superiore Sant'Anna, Italy); Arcangela Rago, Giuseppe Piro, Luigi Alfredo Grieco (Politecnico di Bari, Italy); Francesco Matera, Marina Settembre, Pierpaolo Salvo (Fondazione Ugo Bordoni, Italy); Claudio Sacchi (University of Trento, Italy); Giuseppe Araniti, Sara Pizzi, Federica Rinaldi (University Mediterranea of Reggio Calabria, Italy); Alberto Gotta (CNR-ISTI, Italy); Fabio Patrone (University of Genoa, Italy)

TS06_07 A Comparative Study for Ray Tracing Tools Assessment in 5G scenarios: from Numerical to Experimental Analysis

Francesca Lodato (University of Naples Federico II, Italy); Andrea Garzia (Fondazione Ugo Bordoni, Italy); Antonio Iodice (University of Naples Federico II, Italy); Simona Valbonesi (Fondazione Ugo Bordoni, Italy); Giuseppe Ruello (University of Naples Federico II, Italy); Pierpaolo Salvo, Marcello Folli (Fondazione Ugo Bordoni, Italy); Riccardo Suman (Vodafone, Italy); Rita Massa (University Naples Federico II, Italy)

TS06_08 High Frequency Wireless RESTART Spoke3 Laboratories: from Devices to Networks

Umberto Spagnolini, Christian Mazzucco, Matteo Oldoni, Davide Scazzoli, Eugenio Moro, Maurizio Magarini, Guido Gentili, Francesco Linsalata, Marouan Mizmizi, Ilario Filippini (Politecnico di Milano, Italy); Miriam Serena Vitiello, Leonardo Viti (CNR, Istituto Nanoscienze, Italy); Riccardo Suman, Stefano D'Elia (Vodafone, Italy); Daniele Ronzani (Hewlett Packard Enterprise, Italy); Francesco Matera, Andrea Garzia, Simona Valbonesi,

Pierpaolo Salvo, Marina Settembre (Fondazione Ugo Bordon, Italy); Rita Massa, Francesca Lodato, Giuseppe Ruello, Daniele Riccio (University of Naples Federico II, Italy); Antonio D'Alessandro, Carlo Santini (Sapienza University of Rome, Italy); Olga Zeni, Maria Rosaria Scarfi, Valentina Peluso (CNR-IREA, Italy); Marco Simone, Ahsan U. Khan, Federica Anfuso, Davide Guarnera, Nunzio Salerno, Gianluca Giustolisi, Egidio Ragonese, Santi C. Pavone, Gino Sorbello (University of Catania, Italy); Andrea Massa, Giacomo Oliveri, Paolo Rocca, Marco Salucci (University of Trento, Italy); Serena Fiocchi, Silvia Gallucci (CNR IEIT, Italy); Piergiuseppe Di Marco, Roberto Alesii, Fortunato Santucci (University of L'Aquila, Italy); Adolfo Di Serio, Riccardo Ghiani, Riccardo Bersan, Michele Capobianco (Adant Technologies, Italy)

ROOM B

TS07 Power System Analysis and Control

Chair: Enrico Maria Carlini - *Terna*

TS07_01 Real Event of Uncontrolled Island on Distribution Network in Italy

Luigi D'Orazio, Roberto Calone (Enel Grids, Italy); Alberto Cerretti (Huawei, China)

TS07_02 Loadability of AC Export Cables in Off-Shore Wind Farms by means of Power-Flow-based Capability Charts

Roberto Benato (University of Padua, Italy); Giulia Lo Bianco, Alessandra Nobili (NINFEA rinnovabili, Italy); Francesco Sanniti (University of Padua, Italy); Antonio Zingales (SAET, Italy)

TS07_03 Comparison of LCC/VSC-HVDC systems for power/frequency control in interconnected grids

Francesco Puddu, Emilio Ghiani, Gianni Celli (University of Cagliari, Italy); Roberto Gnudi, Giorgio Maria Giannuzzi (Terna, Italy); Fabrizio Pilo (University of Cagliari, Italy)

TS07_04 Assessment of Secondary Frequency Control and Synthetic Inertia Contribution of RES to Sicily's Frequency Stability

Mohammad Qawaqneh, Gaetano Zizzo, Antony Vasile, Salvatore Favuzza (University of Palermo, Italy); Angelo L'Abbate, Lorenzo Carmine Vitulano (Ricerca sul Sistema Energetico-RSE, Italy)

TS07_05 FCR and Mechanical Inertia in the Recent Operation of the Italian Power System

Silvia Canevese and Antonio Gatti (Ricerca sul Sistema Energetico-RSE, Italy)

TS07_06 Magnetic field induction and loadability curves of the innovative "7-Phases" overhead lines

Mattia Boiani, Luca Buono, Francesco Palone, Davide Rufini, Roberto Spezie, Gabriele Tresso (Terna, Italy)

TS07_07 Voltage and current asymmetries effects in the distance protection relay of the new "5-Phases" and "7-Phases" overhead lines

Mattia Boiani, Luca Buono, Francesco Palone, Roberto Spezie, Davide Rufini (Terna, Italy)

TS07_08 Countdown to Collapse: Stability Dynamics Observed Before the 2025 Iberian Power System Blackout

Andrea Pomarico, Alberto Berizzi (Politecnico di Milano, Italy); Guido Moraes, Diego Issicaba, Ildemar Decker (Federal University of Santa Catarina, Brazil)

10:30-11:00 Coffee Break

11:00-13:00 MAIN ROOM

Round Table:

*Competenze professionali nell'ingegneria specialistica:
le gallerie stradali*

13:00-14:00 Lunch

14:00-16:00 MAIN ROOM

Keynote Speech

Panel: Strategie e tecnologie per l'evoluzione energetica

16:00-16:30 Coffee Break

16:30-18:30 MAIN ROOM

Panel on Energy:

*L'impatto della transizione energetica sulla sicurezza e continuità della
alimentazione*

18:30-19:00 Premio Isabella Sassi Bonadonna a studenti UNICAL/A2A

21:00 Cena del Convegno

Friday, 12 September

8:30-10:30 Parallel Special and Technical Sessions

MAIN ROOM

TS08 Power Electronics

Chair: Paola Verde - Università di Cassino e del Lazio Meridionale

TS08_01 Selection of Captive Transformer Rating for Direct-On-Line Motor Starting

Paolo Marini, Katherine Mariana Andrade (Tecnimont, Italy); Alessandro Bosisio (University of Pavia, Italy)

TS08_02 Analysis of Asymmetrical Perturbations in MVDC Integrated Power Electronics Power Distribution Systems

Samuele Sbuelz, Daniele Bosich, Andrea Vicenzutti, Andrea Alessia Tavagnutti, Giorgio Sulligoi (University of Trieste, Italy)

TS08_03 Research on High Step-Up DC-DC Converters With Three-Winding Coupled Inductor

Faezeh Mahavarpour, Ingo Hahn (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany)

TS08_04 Overcoming Observability Issues in State Estimation of Switched Converters: the Average Kalman Filter

Pasquale Franzese, Giulio de Notaristefani di Vastogirardi, Diego Iannuzzi, Adolfo Dannier, Santolo Meo (University of Naples Federico II, Italy)

TS08_05 Incomplete Suppression of DC-Link Power Oscillations in Fault Ride-Through Control of Grid-Connected Converters

Antonio Di Pasquale, Emanuele Fedele, Mario Pagano, Renato Rizzo (University of Naples Federico II, Italy)

TS08_06 Cost-Based Adaptive Coordination of Battery Energy Storage Systems in DC Microgrid

Mohammad Rajabi Nasab (Politecnico di Bari, Italy); Faezeh Esmaeili (Azad University of Shahrood, Iran); Sergio Bruno, Massimo La Scala (Politecnico di Bari, Italy)

TS08_07 Robust synchronization control and parameter estimation of Brushless DC motors using Adaptive integral sliding mode control

Nazam Siddique, Rizwan Bashir (University of Gujrat, Pakistan)

TS08_08 Hybrid SVPWM Based 3 Phase Inverter

Dhanraj S. Pandit, Nirav Deepak Mehta, Ashish P. Patel (Vishwakarma Government Engineering College Chandkheda, India)

ROOM A

TS09 Forecasting and planning

Chair: Fabrizio Pilo - *University of Cagliari*

TS09_01 An Integrated Tool for Power System Planning: Adequacy Evaluation and Economic Assessment

Francesca Curinga, Maria Vittoria Cazzol, Lorenzo Carmine Vitulano (Ricerca sul Sistema Energetico-RSE, Italy)

TS09_02 Modeling the Italian Extra-High Voltage Grid for Linear Optimal Power Flow Applications

Francesca Curinga, Maria Vittoria Cazzol, Lorenzo Carmine Vitulano (Ricerca sul Sistema Energetico-RSE, Italy)

TS09_03 Target Capacity Assessment and relevant sensitivity analysis in medium-long term horizons: the 2025 edition

Enrico Maria Carlini, Corrado Gadaleta, Francesca Ferretti, Flavius Strimbei, Eliana Mangiardi, Alessandro Uncini, Michela Migliori (Terna, Italy)

TS09_04 Offshore bidding zones to collect wind generation: the role of Multi-purpose Interconnectors

Maria Carmen Falvo (Sapienza University of Rome, Italy); Elena Romano, Enrico Maria Carlini, Corrado Gadaleta, Michela Migliori, Antonio Conserva, Francesca Longobardi, Gianfranco Luongo (Terna, Italy)

TS09_05 AI-Driven Hydropower Forecasting: A Multivariate Machine Learning Approach

Sarah Di Grande, Mariaelena Berlotti, Salvatore Cavalieri (University of Catania, Italy); Roberto Gueli (Etna Hitech, Italy)

TS09_06 Interpretability and Accuracy of Short-Term Load Forecasting Including Temporal Features and Environmental Parameters

Dmitrii Vasenin, Davide Astolfi, Antony Vasile (University of Brescia, Italy); Nikita Savvin (HSE University, Russia); Marco Pasetti (University of Brescia, Italy)

TS09_07 Time-Series Forecasting of Screen Time Using Deep Learning Techniques

R. Jawahar, Nisha Varghese (Christ University, India)

TS09_08 Dual-Scenario Analysis and Iterative Grid Planning for Data Center Integration: A Real Case

Study Mauro Caprabanca, Federico Quaglia, Chiara Giordano, Chiara Antonini, Luca De Bellis, Matteo Ricciardi, Beatrice Vincenzi, Denise Giubilato (Terna, Italy)

ROOM B

TS10 Operation and Maintenance of RES based Power Systems

Chair: Nicola Sorrentino - *University of Calabria*

TS10_01 Real-time Control of Microgrids to Reduce the Risk of Blackouts in Distribution Networks with a High Share of Renewable Energy

Alessia Cagnano (Università degli Studi Mediterranea di Reggio Calabria, Italy)

TS10_02 Robust Coordinated Port-Ship Energy Management with Hydrogen and Renewables for Sustainable Low-Carbon Maritime Operations

Muhammad Muzammal Islam (Politecnico di Bari, Italy); Xueli Pan, Tianyou Yu (Shanghai Jiao Tong University, China); Massimo La Scala, Sergio Bruno (Politecnico di Bari, Italy); Ziqiang Wang (The Hong Kong Polytechnic University, Hong Kong); Jie Wang (Shanghai JiaoTong University, China)

TS10_03 Renewable self-consumption maximization in railway electrical substations: A comparative analysis of possible configurations

Alessandro Ruvio (Sapienza University of Rome); Guido Guidi Buffarini, Massimo Castellani, Marco Laurini, Alessandro Napolitano, Giovanni Basciani (Italferr, Italy)

TS10_04 Enhancing Frequency Stability in Low-Inertia Power Systems Through Distributed Grid-Forming Inverters

Daniele Menniti, Nicola Sorrentino (University of Calabria, Italy); Brusco Giovanni (Creta Energie Speciali, Italy); Giuseppe Barone, Giampiero Spena (University of Calabria, Italy); Angel Oswaldo Ocana Guevara (Creta Energie Speciali, Italy)

TS10_05 AI techniques for the optimization of distribution networks with renewable energy sources: the A-IsoIE project

Gian Giuseppe Soma (RESPECT, Italy); Giulia Pasquarelli, Massimo Pentolini (SDI Automazione Industriale, Italy); Cristina Dore, Francesco Martini (Abika, Italy); Andrea

Bagnasco, Andrea Vinci (IESolutions, Italy); Giulio Valfrè (Teknofield, Italy); Enrico Bessone (DEA, Italy); Matteo Saviozzi (University of Genoa, Italy)

TS10_06 Support mechanisms for new renewable installations: a case study

Federica Davò, Elena Vecil, Simona Soci, Elena Ferri, Claudia Checchi (MBS Consulting, Italy)

TS10_07 Enhancing Grid Stability with Synthetic Inertia and Damping via Distributed Inverters

Alessandro Ravera, Matteo Lodi, Alberto Oliveri, Matteo Saviozzi (University of Genoa, Italy); Federico Bizzarri, Angelo Brambilla (Politecnico di Milano, Italy)

TS10_08 Harnessing Machine Learning for Predictive Maintenance in Solar Energy Systems

Pramod Kanjalkar, Jyoti Kulkarni-Kanjalkar, Dattatray Kshirsagar, Payal Kudale, Manasi Rajesh Mhatre, Devraj Lokhande (Vishwakarma Institute of Technology, India)

10:30-11:00 Coffee Break

11:00-12:45 MAIN ROOM

Panel: Case Histories

11:00-12:30 Parallel Special and Technical Sessions

ROOM A

TS11 Evolution in sustainable electric systems on mountains - Special Session

Chair: Giorgio Sulligoi - *University of Trieste*

TS11_01 Proposal for the Development of a Failure Prevention and Operational Optimization System for Generating Units of the Jirau Hydroelectric Power Plant

Wanderson Rainer (Pontifical Catholic University of Goiás, Brazil)

TS11_02 Generator Technologies in Alpine Mini Hydropower Microgrids: a Review

Matteo Olivo, Andrea Vicenzutti, Massimiliano Chiandone, Giorgio Sulligoi, Alberto Tessarolo (University of Trieste, Italy)

TS11_03 Application Experience on UNI EN 12927-Section 14.3.5 in the Expertise of "Domenico Di Santolo" Laboratory at the University of Trieste

Cesare Ciriani, Gianandrea Gei, Alberto Tessarolo, Stefano Quaia (Università di Trieste, Italy)

TS11_04 Microgrid Operation in Alpine Areas with Renewable Integration and Storage

Andrea Alessia Tavagnutti, Gianandrea Gei, Daniele Bosich, Giorgio Sulligoi (University of Trieste, Italy)

TS11_05 E-Mobility in Alpine Regions: Charging Infrastructure for Cars, E-Bikes, and Public Mass Transport

Gianandrea Gei, Matteo Olivo, Andrea Alessia Tavagnutti, Giovanni Longo (University of Trieste, Italy)

TS11_06 AI for Operational Efficiency and Energy Savings in Ski Resorts

Gianandrea Gei, Giovanni Longo, Giorgio Sulligoi (University of Trieste, Italy)

ROOM B

TS12 Electromagnetic Models & Simulations

Chair: Antonio Imbruglia - AEIT-AMES

TS12_01 Characterization of in-car and in-train Penetration Loss: measurements and simulations

Simona Valbonesi, Claudia Carciofi, Andrea Garzia (Fondazione Ugo Bordonì, Italy)

TS12_02 Compensation Method to improve the Accuracy in Low-Dynamic PHIL Simulations of High-Power EV Charging Stations

Marcel Esser, Alfio Spina (TU Dortmund University, Germany)

TS12_03 EMC filter design for a GaN-based Totem Pole PFC converter

Michael Rizza, Ivan Clemente Massimiani (STMicroelectronics, Italy); Antonino Laudani, Santi Agatino Rizzo, Nunzio Salerno (University of Catania, Italy)

TS12_04 GaN low voltage DC-DC converter EMC analysis through the Near Field technique

Sebastiano Grasso, Antonino Laudani, Santi Agatino Rizzo, Nunzio Salerno (University of Catania, Italy)

12:45-13:00 MAIN ROOM

AEIT2025 International Annual Conference Closing Session