



FINAL PROGRAMME

Date & time	Event	Room
Tuesday 26 September 2017		
9.00-11.30 15.30-19.00	Registration (for the whole Conference, and first-day only)	Tutorial/Workshops area (morning), Foyer (afternoon)
9:00-11:00	Tutorial – Increasing the hosting capacity of the grid (part 1). Math Bollen, Luleå University of Technology, Skellefteå, Sweden	Room 1
9:00-11:00	Tutorial – Energy Internet: Concepts and Key Technologies, Yan Zhang, University of Oslo, Norway	Room 2
9:00-11:00	Tutorial – Smart metering architecture to enable and simulate novel services in smart grids. Edoardo Patti, Politecnico di Torino, Italy	Room 3
9:00-11:00	Workshop – Industry prospects for microprocessor based devices and energy storage solutions. Coordinated by Vahid Madani, Pacific Gas & Electric Co., USA – organised in collaboration with <i>IEEE Italy Section PES Chapter PE31</i>	Room 4
11:00-11:30	Coffee break	
11:30-13:30	Tutorial – Increasing the hosting capacity of the grid (part 1, continued). Math Bollen, Luleå University of Technology, Skellefteå, Sweden	Room 1
11:30-13:30	Tutorial – Energy Internet: Concepts and Key Technologies (continued), Yan Zhang, University of Oslo, Norway	Room 2
11:30-13:30	Workshop – RESERVE: Enabling 100% Renewables with new grid codes	Room 3
11:30-13:30	Tutorial – IEEE PES Awards. Vahid Madani, Pacific Gas & Electric Co., USA – organised in collaboration with <i>IEEE Italy Section PES Chapter PE31</i>	Room 4
11:30-13:30	Workshop – New deals for the consumers: innovations from design to smart operation. Coordinated by Roberto Napoli, Politecnico di Torino, Italy – organised in collaboration with the <i>Professional Association of the Engineers</i>	Room 5
13:30-14:30	Lunch	
14:30-16:30	Tutorial – Increasing the hosting capacity of the grid (part 2). Fainan Hassan, Turbo Power Systems, UK	Room 1
14:30-16:30	Tutorial – HVDC Transmission Systems, Neville Watson, University of Canterbury, New Zealand – organised in collaboration with <i>IEEE Italy Section PES Chapter PE31</i>	Room 2
14:30-16:30	Tutorial – Introduction to Detection of Non-Technical Losses using Data Analytics, Patrick Glauner, University of Luxembourg	Room 3
14:30-16:30	Workshop – SUCCESS: Securing the electrical network of the future	Room 4
14:30-16:30	Workshop – IEEE PES Careers & Scholarship Plus in Europe: an important opportunity for students of the Electrical Engineering Programs and for relevant Players. Coordinated by Carlo Alberto Nucci, University of Bologna, Italy	Room 5
16:30-17:00	Coffee break	
17:00-19:00	Tutorial – Increasing the hosting capacity of the grid (part 2, continued). Fainan Hassan, Turbo Power Systems, UK	Room 1
17:00-19:00	Tutorial – HVDC Transmission Systems (continued), Neville Watson, University of Canterbury, New Zealand	Room 2
17:00-19:00	Tutorial – Introduction to Detection of Non-Technical Losses using Data Analytics (continued), Patrick Glauner, University of Luxembourg	Room 3
17:00-19:00	Tutorial – IEEE PES Awards (repeat). Vahid Madani, Pacific Gas &	Room 4



	Electric Co., USA – organised in collaboration with <i>IEEE Italy Section PES Chapter PE31</i> logo	
17:00-19:00	Workshop – Global real-time superlab: EU-USA transatlantic co-simulation live demo	Energy Center
19:00	End of Tutorials and Workshops	
19:30-21:30	Welcome reception	
Wednesday 27 September 2017		
8:15-18:30	Registration	Foyer
9:00-10:10	Conference Opening	Aula Magna
10:10-10:50	Plenary Speech - Marcelo Masera (Joint Research Centre of the European Commission): Lessons learned from smart grids projects in Europe	Aula Magna
10:50-11:20	Coffee break	
11:20-13:00	Panel Session - Inside EU Project MIGRATE – Power Quality Challenges and Solutions at Very High Shares of Renewables in Transmission	Aula Magna
13:00-14:00	Lunch	
14:00-16:00	Parallel sessions	Rooms 1-7
	W11 – Special Session: The Control of Voltage and Frequency in Future Power Systems using the Web of Cells Concept – Contributions from the ELECTRA REX Researcher Mobility Scheme Chair: Graeme Burt	Room 1
1273	Development of a Planning Tool for Network Ancillary Services Using Customer-Owned Solar and Battery Storage <i>Antonio Del Giudice, Adrian Wills, Andrew Mears</i>	
1300	Adaptive Frequency Containment and Balance Restoration Controls in a Distribution Network <i>Evangelos Rikos, Mattia Cabiati, Carlo Tornelli</i>	
1328	A Case Study of an Adaptive Protection Scheme for the Web-of-Cells Concept <i>Maria Valov, Julia Merino</i>	
1272	Development of Measurement-Based Load Models for the Dynamic Simulation of Distribution Grids <i>Eleftherios Kontis, Mazheruddin Syed, Efren Guillo-Sansano, Theofilos Papadopoulos, Andreas Chrysoschos, Grigoris Papagiannis, Graeme Burt</i>	
1307	Experimental Validation of BDI Agents for Distributed Control of Electric Power Grids <i>Diego Issicaba, Alexander M. Prostejovsky, Mauro Augusto da Rosa, Henrik W. Bindner</i>	
1411	Multi-Goal Optimization of Competing Aggregators using a Web-of-Cells Approach <i>Pamela MacDougall, Bob Ran, George Huitema, Geert Deconinck</i>	
	W12 - Distribution System Models and Power Flow Calculations Chair: Luis (Nando) Ochoa	Room 2
1379	Algorithms of Renumbering Nodes in Distribution Systems for Fast Computation of Power Flow <i>Ryosuke Akiyoshi, Nobuyuki Yamaguchi</i>	
1184	Linear Power-Flow Models in Multiphase Distribution Networks <i>Andrey Bernstein, Emiliano Dall'Anese</i>	
1120	Improved Radial Load Flow for the Smart Distribution Grid <i>Esther Romero-Ramos, Angel Luís Trigo-García, José Antonio Romero-Romero</i>	
1289	On the Impact of Load Modelling on Distribution Network Studies <i>Benoît Bletterie, Aadil Latif, Paul Zehetbauer, Sergio Martínez Villanueva, Esther Romero-Ramos, Herwig Renner</i>	
1371	Probabilistic Modeling of Smart Residential Energy Systems <i>J. M. Lujano-Rojas, G. J. Osório, R. Dufo-López, J.L. Bernal-Agustín, Miadreza Shafie-khah, João Catalão</i>	
1245	Dynamic Equivalent Modelling of Active Distribution Networks for TSO-DSO Interactions <i>Federico Silvestro, Francesco Conte, Fabio D'Agostino, Stefano Massucco, Giovanni Palombo, Mattia Cabiati, Claudio Bossi</i>	
1188	Modeling and Design of Hybrid Distribution Network: Operational and Technical Features <i>Aysar Musa, Syed Muhammed Rehan, Lorenzo Sabug, Jr., Ferdinanda Ponci, Antonello Monti</i>	



W13 - Storage System Operation		Room 3
Chair: Andrea Mammoli		
1053	Mitigating Load Forecast Errors for Suppliers by Utilizing Energy Storage at a Substation Level <i>Xiaohe Yan, Qiuyang Ma, Heather Wyman-Pain, Ran Li, Chenghong Gu, Furong Li</i>	
1172	Active Operation of Hydrogen Fuelling Stations to Support Renewable Integration <i>Wei Sun, Gareth Harrison</i>	
1208	Ancillary Services Provided by BESS in a Scenario Characterized by an Increasing Penetration of Unpredictable Renewables <i>Morris Brenna, Federica Foiadelli, Michela Longo, Dario Zaninelli</i>	
1179	Comparative Analysis of Online Estimation Algorithms for Battery Energy Storage Systems <i>Nikos Michailidis, Napoleon Bezas, George Misyris, Dimitrios Doukas, Antonios Marinopoulos, Dimitris Labridis</i>	
1336	Optimal Management of an Electric Storage System with Multiple Network Connection Points <i>Claudio Carlini, Giacomo Viganò, Diana Moneta, Chiara Michelangeli</i>	
1157	Battery Capacity Estimation for Building-Integrated Photovoltaic System: Design Study of a Southern Norway ZEB House <i>Mohammed Yassin, Mohan Kolhe, Aimie Azmi</i>	
1308	Simulation and Optimization of Integration of Hybrid Renewable Energy Sources and Storages for Remote Communities Electrification <i>Morris Brenna, Michela Longo, Wahiba Yaici, Tamrat Demillie Abegaz</i>	
W14 - Phasor Measurement Units and Wide Area Control		Room 4
Chair: Vahid Madani		
1147	A White Rabbit Synchronized PMU <i>Reza Razzaghi, Asja Derviškić, Mario Paolone</i>	
1388	Fault-Tolerant PMU Placement using Algebraic Connectivity of Graphs <i>Mahmoud El Hosainy, Karim Seddik, Ayman Elezabi</i>	
1305	Assessment of Higher Harmonics Influence to PMU Measurement Accuracy <i>Mari Löper, Uku Salumäe, Jako Kilter</i>	
1074	Detection and Mitigation of Cascading Failures in Interconnected Power Systems <i>Evangelia Xypolytou, Tanja Zseby, Joachim Fabini, Wolfgang Gawlik</i>	
1385	Evaluation of a Dynamic Phasor PSS using a One-Machine Infinite Bus System <i>Syunya Kawakami, Nobuyuki Yamaguchi</i>	
1149	Designing New Proactive Control-Room Strategies to Decrease the Need for Automatic Reserves <i>Martin Nilsson, Lennart Söder, Robert Eriksson, Mehrdad Ghandari, Göran N. Ericsson</i>	
1232	Application of Wide-area Controls in Australian Power System <i>Arash Vahidnia, Gerard Ledwich, Rizah Memisevic, Lasantha Meegahapola</i>	
W15 - Customer Data and Load Profiles		Room 5
Chair: Ying-Yi Hong		
1339	Deep Learning Versus Traditional Machine Learning Methods for Aggregated Energy Demand Prediction <i>Nikolaos Paterakis, Elena Mocanu, Madeleine Gibescu, Bart Stappers, Walter van Alst</i>	
1363	Using Cluster Information to Predict Individual Customer Consumption <i>Adrian Spataru, Marc Frincu</i>	
1323	Shapelet based Classification of Customer Consumption Patterns <i>Bogdan-Petru Butunoi, Marc Frincu</i>	
1150	Parametrization of Stochastic Load Profile Modeling Approaches for Smart Grid Simulations <i>Daniel Gross, Pascal Wiest, Krzysztof Rudion, Alexander Probst</i>	
1152	Statistical Modelling of Load Profiles Incorporating Correlations using Copula <i>Raoul Bernards, Johan Morren, Han Slootweg</i>	
1252	Distribution Grid Topology Validation and Identification by Graph-based Load Profile Analysis <i>Mark Stefan, Mario Faschang, Stephan Cejka, Konrad Diwold, Alfred Einfalt, Albin Frischenschlager</i>	
1051	Modeling optimal deployment of smart home devices and battery system using MILP <i>Milan Vukasovic, Bojan Vukasovic</i>	
1198	Energy Disaggregation based on Semi-supervised Matrix Factorization using Feedback Information from Consumers <i>Ayumu Miyasawa, Masako Matsumoto, Yu Fujimoto, Yasuhiro Hayashi</i>	



W16 – Power Quality Chair: Angela Russo		Room 6
1052	Consequences of Smart Grids for Power Quality Overview of the Results from CIGRE Joint Working Group C4.24/CIREDD <i>Math Bollen, Sarah Rönnberg, Francisc Zavoda, Roberto Langella, Sasa Djokic, Philip Cuifo, Jan Meyer, Vladimir Cuk</i>	
1092	Impact of Residential PV on Harmonic Levels in New Zealand <i>Jeremy Watson, Neville Watson</i>	
1302	Analysis of the Impact on Power Quality During the Recharge of Electric Vehicles and Vehicle-to-Grid Functionality <i>Daniel Robson Pinto, Vitor Torquato Arioli, Gláucio Roberto, Tessmer Hax, Ricardo Torquato Borges, Wendell William Teixeira</i>	
1342	Experimental Evaluation and Classification of LED Lamps for Typical Residential Applications <i>Xiao Xu, Adam Collin, Sasa Djokic, Roberto Langella, Alfredo Testa, Jiri Drapela</i>	
1284	Design Recommendations for Future Household Devices concerning their High Frequency Emission in the Range between 2 kHz and 150 kHz <i>Thomas Wohlfahrt, Christian Waniek, Johanna Myrzik, Jan Meyer, Peter Schegner</i>	
1298	Supraharmonics: Root Causes and Interactions between Multiple Devices and the Low Voltage Grid <i>Christian Waniek, Thomas Wohlfahrt, Johanna Myrzik, Jan Meyer, Peter Schegner, Matthias Klatt</i>	
1020	Analysis of Solar Irradiance Variations as a Source of Flicker Associated with PV Systems <i>Antti Niemi, Matti Lehtonen, Hossam AbdelHadi</i>	
1112	Characterizing Three-Phase Unbalanced Dips through the Ellipse Parameters of the Space Phasor Model <i>Azam Bagheri, Math H.J Bollen</i>	
W17 – Transmission Systems Chair: Pierluigi Mancarella		Room 7
1086	Optimal Transmission Line Switching Incorporating Dynamic Line Ratings <i>Shang Zhang, Chen-Ching Liu, Xueping Gu, Tao Wang</i>	
1103	Methodology for the Determination of Real-Time Dynamic Line Ratings for Secure Operation of Overhead Conductors <i>Bonface Ngoko, Sugihara Hideharu, Funaki Tsuyoshi</i>	
1001	Study on the Mechanism of AC Tie-line Power Fluctuation for a Two-area Interconnected Power System <i>Weiwei Zhao, Bin Xiao, Zongxin Zhang, Ping Liang</i>	
1230	Optimal PV Curtailment using OPF with Transmission-Network Constraints Considering Locations of PV Systems <i>Taisuke Masuta, Junya Ito, Taku Kondo, Hideharu Sugihara, Nobuyuki Yamaguchi, Hoang Viet Nguyen</i>	
1236	Impact on Rotor Angle Stability with High Solar-PV Generation in Power Networks <i>Enkhtsetseg Munkhchuluun, Lasantha Meegahapola, Arash Vahidnia</i>	
1173	Searching for Plausible N-k Contingencies Endangering Voltage Stability <i>Tilman Weckesser, Thierry Van Cutsem</i>	
1175	Determination of Remedial Actions Taking into Account Various Operational Rules <i>Steffen Schlegel, Dirk Westermann</i>	
16:00-16:30	Coffee break	
16:30-18:30	Parallel sessions	Rooms 1-7
	W21 – Reliability Chair: Carmen Lucia Tancredo Borges	Room 1
3016	Evaluation of Reliability Indices Using Monte Carlo Simulation Accounting Time to Switch <i>Sajjad Asefi, Hossein Afrakhte</i>	
1100	Qualitative Comparison of Techniques for Evaluating Performance of Short Term Power System Reliability Management <i>Evelyn Heylen, Matthias Troffaes, Behzad Kazemtabrizi, Geert Deconinck, Dirk Van Hertem</i>	
1174	Optimization Approach for the Allocation of Remote-Controlled Switches in Real-scale Electrical Distribution Systems <i>Juan C. López, Marcos J. Rider, Ariovaldo V. Garcia, Patricia L. Cavalcante, Luana L. Martins, Luana F.</i>	



	<i>Miranda</i>	
1075	Smart Distribution and Optimisation of the Number and Position of Reclosers to Minimise Equipment Damage <i>Ewald Erasmus, Raj Naidoo</i>	
1078	Advanced Aging Failure Model for Overhead Conductors <i>Wilson Vasquez, Dilan Jayaweera, Jesus Jativa</i>	
1347	Reliability Evaluation Framework Considering OHL Emergency Loading and Demand Response <i>Mohamed Galeela, Konstantinos Kopsidas, Carlos Cruzat, Shuran Liu</i>	
1391	Techno-Economic Assessment of Distribution Network Reliability Services from Microgrids <i>Eduardo Alejandro Martinez Cesena, Nicholas Good, Angeliki Lydia Antonia Syrris, Pierluigi Mancarella</i>	
W22 - Voltage and Reactive Power Control in Distribution Systems Chair: Takeshi Nagata		Room 2
1123	Swarm Behavior for Distribution Grid Control <i>Sonja Kolen, Timo Isermann, Stefan Dähling, Antonello Monti</i>	
1320	Coordinated Voltage Control of Distributed PV Inverters for Voltage Regulation in Low Voltage Distribution Networks <i>Karthikeyan Nainar, Basanta Raj Pokhrel, Jayakrishnan Radhakrishna Pillai, Birgitte Bak-Jensen</i>	
1025	Modified Modal Analysis Approach for Distribution Power Systems <i>Ahvand Jalali, Mohammad Aldeen</i>	
1055	Identification of Reactive Power Provision Boundaries of a Distribution Grid with DFIGs to a Transmission Grid <i>Stefan Stankovic, Lennart Söder</i>	
1248	Competitiveness of Reactive Power Compensation using PV Inverter in Distribution System <i>Oktoviano Gandhi, Carlos David Rodriguez Gallegos, Dipti Srinivasan, Thomas Reindl</i>	
1023	Improvement of RES Hosting Capacity Using a Central Energy Storage System <i>Poria Hasanpor Divshali, Lennart Söder</i>	
1193	A Comprehensive Solar PV Hosting Capacity in MV and LV Radial Distribution Networks <i>Bryan Navarro, Maricar Navarro</i>	
1261	Reactive Power Management Analyses based on Generic Distribution Grid Models <i>Steffen Garske, Christoph Blaufuß, Marcel Sarstedt, Lutz Hofmann</i>	
W23 - Storage Optimisation Chair: Ozan Erdinc		Room 3
1356	Probabilistic Storage Modeling and Suboptimal Sizing of Renewable Energy Microgrids <i>Imane Biyya, Ghassane Aniba, Mohamed Maaroufi</i>	
1057	Dynamic Optimal Power Flow for Dimensioning and Operating Quarter Based Storage in Low Voltage Grids <i>Nico Meyer-Huebner, Marco Haas, Martin Uhrig, Michael Suriyah, Thomas Leibfried</i>	
1090	Optimal Charging Schedules for Thermal Electric Storage in the Absence of Communication <i>Muhammad Bashir Anwar, Daniel Burke, Mark O'Malley</i>	
1146	Smart Charging of Community Storage Units Using Markov Chains <i>Tarek AlSkaif, Wouter Schram, Geert Litjens, Wilfried van Sark</i>	
1166	Embedding Energy Storage for Multi-Energy Microgrid Optimal Operation <i>Benedetto Aluisio, Maria Dicorato, Giuseppe Forte, Michele Trovato</i>	
1283	Design of a Novel Mode-based Energy Storage Controller for Residential PV Systems <i>Gonzague Henri, Ning Lu, Carlos Carrejo</i>	
3001	An Evolutionary Optimization Algorithm to Planning the Time of Delivery Schedule and Factor in a Hydroelectric Power Plant with Battery Energy Storage Capability <i>Paulo Eduardo Malaquias, Sebastião Orlando Nascimento Filho, Rogério Andrade Flauzino, Ivan Nunes da Silva, Danilo Hernani Spatti, Marel Ayres de Araújo</i>	
1070	Battery Storage Services that Minimize Wind Farm Operating Costs: A Case Study <i>Stephan Balischewski, Christoph Wenge, Ines Hauer, Pio Lombardi, Przemyslaw Komarnicki, Martin Wolter</i>	
W24 - Power System Protections Chair: Kimmo Kauhaniemi		Room 4
1039	Impact of DFIG-Based Wind Farms on Generator Distance Phase Backup Protection	



	<i>Fei Sun, Yongzheng Zhang, Keaton Wheeler, Sherif Faried, Mohamed Elsamahy</i>	
1135	Distance Protection with Fault Impedance Compensation for Distribution Network with DG <i>Konstantin Pandakov, Hans Kristian Høidalen</i>	
1003	Setting of Relay Protection of Electric Power Systems Using Its Mathematical Models, <i>Mikhail Andreev, Alexander Gusev, Almaz Sulaymanov, Yury Borovikov</i>	
1118	Analysis of Line Current Differential Protection Considering Inverter-Interfaced Renewable Energy Power Plants <i>Yanbin Li, Ke Jia, Tianshu Bi, Renfu Yan, Wei Li, Bohan Liu</i>	
1108	Reliability Assessment of Communication-based Relay Protection with Multi-state Networks <i>Ruiwen He, Jianhua Deng, Yifei Wang, Haoliang Yuan</i>	
1275	Inverse-Time Protection Scheme for Active Distribution Network Based on User-Defined Characteristics <i>Yahong Li, Hui Ren, Jiaheng Li, Lidong Zhou, Fei Wang</i>	
W25 - Customer Data and Demand Response Chair: Matti Lehtonen		Room 5
1380	Linear Load Model for Robust Power System Analysis <i>Marko Jereminov, Amritanshu Pandey, Hyun Ah Song, Bryan Hooi, Christos Faloutsos, Larry Pileggi</i>	
1364	SVD-based Visualization and Approximation For Time Series Data in Smart Energy Systems <i>Abdolrahman Khoshrou, André Dorsman, Eric Pauwels</i>	
1278	An Optimal Differential Pricing in Smart Grid Based on Customer Segmentation <i>Fanlin Meng, Behzad Kazemtabrizi, Xiao-Jun Zeng, Chris Dent</i>	
1362	Power Systems Data Fusion based on Belief Propagation <i>Francesco Fusco, Seshu Tirupathi, Robert Gormally</i>	
1340	Demand Response for Thermostatically Controlled Loads using Belief Propagation <i>Alexandros Kleidas, Mirsad Cosovic, Dejan Vukobratovic, Aristides Kiprakis</i>	
1369	Short-Term Scheduling of Microgrids in the Presence of Demand Response <i>Saber Talari, Miadreza Shafie-khah, Mahmoud R. Haghighat, Mohsen Yazdanejad, João Catalão</i>	
1398	Development of a Novel Multi-Agent System for Residential Voltage Control Using Demand Response based on Customer Behavior <i>Sima Davarzani, Ioana Pisica, Gareth A. Taylor</i>	
1412	The Effect of Altruism in Automated Demand Response for Residential Users <i>Marilena Minou, George Stamoulis, Thanasis Papaioannou</i>	
W26 - Power Electronics Applications Chair: Mark Sumner		Room 6
1029	Quasi-resonant Multilevel Converter for Supercapacitor Energy Storage Systems <i>Federico Ibanez</i>	
1143	Simple Diagnostic Technique of Switch Failure Modes of VSI Power Converter <i>Azam Bagheri, Math H.J. Bollen</i>	
1171	A Structure-Preserving Time-Domain Analysis for Power Electronic-Interfaced Systems <i>Dewu Shu, Qirong Jiang, Chunpeng Zhang</i>	
1199	A Novel Topology of DC Distribution Network with Fault Current Limiting Static Synchronous Series Compensator <i>Zhenliang Wu, Daozhuo Jiang, Dejie Lao, Qunmin Ying, Yi Du</i>	
1319	Virtual Synchronous Machine Control with Virtual Resistor for Enhanced Short Circuit Capability <i>Christoph Glöckler, Daniel Duckwitz, Friedrich Welck</i>	
1331	Design of a Microgrid Transition Controller I: For Smooth Transition Operation Under Normal Conditions <i>Jing Wang, Bouna M. Cisse, Derek Brown</i>	
1401	Bidirectional Quasi Y-source inverter Control for Electrical Vehicles <i>Emad Shehata</i>	
3005	An active power management in LV distribution network by using the multi-terminal power electronic devices <i>Tomas Hornik, Ian McDonald, David Charlton, Steve Mitchell, Fainan Hassan, Nigel Jakeman, Ian Johnson, Tony Lakin, Peter Lang</i>	
W27 - Forecasting Chair: Taisuke Masuta		Room 7



	1210	Feature Extraction of Numerical Weather Prediction Results Toward Reliable Wind Power Prediction <i>Kazutoshi Higashiyama, Yu Fujimoto, Yasuhiro Hayashi</i>	
	1064	The Role of Principal Component Analysis in Neural-based Wind Power Forecasting <i>Fabrizio De Caro, Alfredo Vaccaro, Domenico Villacci</i>	
	1044	Short-Term Load Forecasting using A Long Short-Term Memory Network <i>Chang Liu, Zhijian Jin, Jie Gu, Caiming Qiu</i>	
	1145	Short-term Industrial Load Forecasting: A Case Study in an Italian Factory <i>Antonio Bracale, Guido Carpinelli, Pasquale De Falco, Tao Hong</i>	
	1063	Medium-Term Electricity Demand Forecasting Based on MARS <i>Engin Ilseven, Murat Gol</i>	
	1375	Short-term Forecast of Automatic Frequency Restoration Reserve from a Renewable Energy Based Virtual Power Plant <i>Simon Camal, Andreas Liebelt, Andrea Michiorri, Georges Kariniotakis</i>	
	1018	A Machine Learning Based Demand Charge Management Solution <i>Ali Hooshmand, Ramin Moslemi, Ratnesh Sharma</i>	
18:30	End of sessions – free evening		
Thursday 28 September 2017			
8:15-18:30	Registration		Foyer
8:45-9:30	Plenary Speech - Lilia Consiglio (e-distribuzione, Italy): Automatic fault selection and self-healing techniques on Medium Voltage networks: first results from e-distribuzione large pilot experience of the new “Smart Fault Selection algorithms”		Aula Magna
9:30-10:50	Panel Session - Defining Planning and Operation Guidelines for Future Smart Distribution Grids – The SmartGuide Project		Aula Magna
10:50-11:20	Coffee break		
11:20-13:00	Panel Session - IEEE EPPI Working Group on Energy: Challenges for Energy Policy in Europe: a technologists’ approach		Aula Magna
13:00-14:00	Lunch		
14:00-16:00	Parallel sessions		Rooms 1-8
	T11 - Special Session: Innovative Planning Strategies to Enable Renewable-based Smart Grids Chair: Ali Arefi		Room 1
	3003	Roadmap for Developing a Distribution System Platform <i>Jason Taylor, Mark McGranaghan, Dave Crudele</i>	
	1010	Regulating Grid Voltage with PV using Modified Consensus <i>Aminmohammad Saberian, Gerard Ledwich, Hossein Sagha, Houman Pezeshki, Geoffrey Walker</i>	
	1061	Optimal Capacity Planning of Solar PV Inverters for Distribution System with Reactive-power Transaction <i>Jian-Tang Liao, Chien-Hsuan Liu, Hong-Tzer Yang</i>	
	1165	A Monte-Carlo Based Procedure for Optimal Sizing of Integrated Electric Vehicle Supply Infrastructure <i>Benedetto Aluisio, Maria Dicorato, Giuseppe Forte, Michele Trovato</i>	
	1126	Risk-Averse Joint Capacity Evaluation of PV Generation and Electric Vehicle Charging Stations in Distribution Networks <i>Huimiao Chen, Zechun Hu, Yinghao Jia, Zuo-Jun Max Shen</i>	
	T12 - Distribution System Automation Chair: Andrea Mazza		Room 2
	1231	A Gap Analysis between Logical Nodes and Functions of Distribution Automation Systems <i>Tetsuo Otani, Noriyuki Senke, Eiji Ohba, Shigeo Yamamoto, Hideo Nomura, Hideki Wada</i>	
	1073	Principles of Power Management in a Smart Microgrid Based on Std. IEC 61850 <i>Omid Palizban, Kimmo Kauhaniemi</i>	
	1240	Faulty Section Location Scheme for Distribution Grid with Inverter Interfaced Distributed Generation <i>Yinachao Li, Guibin Zou, Jingjina Yana, Huihin Sui</i>	



1054	Wavefront-based Protection for Active Distribution Grids <i>Nadezhda Davydova, Gabriela Hug</i>
1164	Combining Fault Location Estimates for a Multi-Tapped Distribution Line <i>Hayder Jahanger, Mark Sumner, David Thomas</i>
1049	Locating High-Impedance Fault in a Smart Distribution System Using Wavelet Entropy and Hybrid Self-Organizing Mapping Network <i>Ying-Yi Hong, Wei-Shun Huang, Yung-Ruei Chang, Yih-Der Lee, Der-Chuan Ouyang</i>
1257	Traveling Wave Based Autoreclosure Scheme for Multi-Terminal Lines <i>Neethu George, OD Naidu</i>
1081	Determination of the future actuator demand of adaptive Smart low voltage Grids <i>Philippe Steinbusch, Jan Meese, Roman Uhlig, Jan Mehlich, Marcus Stötzel, Markus Zdrallek, Wolfram Heldmaier, Stefan Blanaru, Wolfgang Friedrich, Uwe Schlüter</i>
T13 - Electric Vehicle Charging and Aggregate Models	
Chair: Valentin A. Boicea	
Room 3	
1138	Spatial Load Forecasting of Electric Vehicle Charging using GIS and Diffusion Theory <i>Fabian Heymann, Carlos Alberto Pereira, Filipe Joel Soares, Vladimiro Miranda</i>
1065	Minimization of Queuing Time of Electric Vehicles at a Fast Charging Station <i>Farhan Malik, Matti Lehtonen</i>
1036	Autonomous Electric Vehicle Fleet Charging in Cities: Optimal Utility Estimates and Monte Carlo Simulations <i>Joakim Munkhammar, Mahmoud Shepero</i>
1341	Coordinated Charging of Electric Vehicles Connected to a Net-Metered PV Parking Lot <i>Alyona Ivanova, Julian Alberto Fernandez, Curran Crawford, Ned Djilali</i>
1279	Stochastic Characterization of V2G Parking Areas for the Provision of Ancillary Services <i>Giuseppe Graber, Francesco Lamberti, Vito Calderaro, Vincenzo Galdi, Antonio Piccolo</i>
1370	Seasonal Impacts on the Storage Capacity of EV Parking Lots <i>Sitki Guner, Aydogan Ozdemir</i>
1221	Modelling the Aggregated Dynamic Response of Electric Vehicles <i>Charalampos Ziras, Junjie Hu, Shi You, Henrik W. Bindner</i>
1242	The Temporal-spatial Stochastic Model of Plug-in Hybrid Electric Vehicles <i>He Jiang, Hui Ren, Chenjun Sun, David Watts</i>
T14 - Cyber-physical Systems and State Estimation	
Chair: Enrico Pons	
Room 4	
1132	Centralized Versus Distributed State Estimation for Hybrid AC/HVDC Grid <i>Pontus Grahn, Viktor Briggner, Linus Johansson, Davood Babazadeh, Lars Nordström</i>
1163	Intelligent Architecture for Enhanced Observability for Active Distribution System <i>Basanta Raj Pokhrel, Karthikeyan Nainar, Birgitte Bak-Jensen, Jayakrishnan Radhakrishna Pillai</i>
1056	Spatial-Temporal State Estimation using CMCGD Applied to Distribution Networks <i>Mehdi Shafiei, Ali Arefi, Ghavameddin Nourbakhsh, Gerard Ledwich</i>
1311	Agent Based Distributed Control of Islanded Microgrid – Real-Time Cyber-Physical Implementation <i>Tung Lam Nguyen, Quoc Tuan Tran, Raphael Caire, Catalin Gavrilita, Van Hoa Nguyen</i>
1200	A Cyber Attack Resilient Control for Distributed Energy Resources <i>Sasan Gholami, Sajeeb Saha, Mohammad Aldeen</i>
1094	Measurement Re-Ordering Attacks on Power System State Estimation <i>Ammara Gul, Stephen D. Wolthausen</i>
1326	STRIDE-based Threat Modeling for Cyber-Physical Systems <i>Rafullah Khan, Kieran McLaughlin, David Laverty, Sakir Sezer</i>
3008	The Art of Defending Critical Infrastructures <i>Peter Eder-Neuhauser, Tanja Zseby</i>
T15 - Power System Simulation	
Chair: Ettore Bompard	
Room 5	
1022	Methodology for Validation of Electric Power System Simulation Tools <i>Aleksey Suvorov, Mikhail Andreev, Nikolay Ruban, Ruslan Ufa</i>
1040	Embedding Spatial Decomposition in Parareal in Time Power System Simulation <i>Nan Duan, Aleksandar Dimitrovski, Srdjan Simunovic, Kai Sun, Junjian Qi, Jianhui Wang</i>
1059	Using Power-Hardware-in-the-Loop Experiments together with Co-simulation for the Holistic



	Validation of Cyber-Physical Energy Systems <i>Van Hoa Nguyen, Yvon Besanger, Quoc Tuan Tran, Cedric Boudinnet, Tung Lam Nguyen, Ron Brandl, Thomas I. Strasser</i>	
1338	Application of a MW-Scale Motor-Generator Set to Establish Power-Hardware-in-the-Loop Capability <i>Qiteng Hong, Ibrahim Abdulhadi, Andrew Roscoe, Campbell Booth</i>	
1386	Practical Approach of a Simulation System Using Different Model Basis <i>Teng Jiang, Benjamin Schönfeld, Steffen Schlegel, Dirk Westermann, Christoph Brosinsky, Benjamin Fischer, Steffen Prinz, Steffen Nicolai</i>	
1306	Integration of Bottom-up Statistical Models of Loads on a Residential Feeder with the GridLAB-D Distribution System Simulator, and Applications <i>Victor Ayon, Matthew Robinson, Andrea Mammoli, Andrew Fisher, Jason Fuller</i>	
1084	Identifying Low-Order Frequency-Dependent Transmission Line Model Parameters <i>Niclas Johannesson, Tetiana Bogodorova, Luigi Vanfretti</i>	
1387	Studies on Stabilizing a Massive PV Penetrated Power System using VSG <i>Shingo Sakaeda, Asano Mitsutoshi, Shigeyuki Sugimoto, Suresh Chand Verma, Ryosuke Uda, Kenichi Kuroda</i>	
T16 - Grid Converter Control Chair: Sherif Faried		Room 6
1121	Current-Limiting Droop Controller with Fault-Ride-Through Capability for Grid-Tied Inverters <i>Alexandros Paspatis, George Konstantopoulos, Martin Mayfield, Vassilis Nikolaidis</i>	
1404	A Comparison of PI and Fuzzy Logic Control Schemes for Field Oriented Permanent Magnet Synchronous Generator Wind Turbines <i>Ahmed Al-Toma, Gareth Taylor, Maysam Abbod, Ioana Pisica</i>	
1218	Double Synchronous Controller for Integration of Large-Scale Renewable Energy Sources into a Low-Inertia Power Grid <i>Edris Pouresmaeil, Majid Mehrasa, Radu Godina, Ionel Vechiu, Rubén L. Rodríguez, João P. S. Catalão</i>	
1219	Synchronous Active Proportional Resonant-Based Control Technique for High Penetration of Distributed Generation Units into Power Grids <i>Majid Mehrasa, Edris Pouresmaeil, Radu Godina, Ionel Vechiu, Rubén L. Rodríguez, João P. S. Catalão</i>	
1392	Development of a Voltage-dependent Stabilizer for a Converter Dominated Distribution Grid <i>Teng Jiang, Michael Schärferberg, Steffen Schlegel, Dirk Westermann</i>	
1372	Comparison of Two Control Strategies in an Autonomous Hybrid Microgrid <i>Ebrahim Rokrok, Miadreza Shafie-khah, João Catalão</i>	
1317	Study on Power Exchange Node and Its Application <i>Dejia Lao, Daozhuo Jiang, Zhenliang Wu, Tianqi Yu, Shuai Huang</i>	
1128	Decentralized Stochastic Control of Microgrids to Improve System Frequency Stability <i>Pietro Ferraro, Emanuele Crisostomi, Marco Raugi, Federico Milano</i>	
T17 - Energy System Optimisation Chair: Florian Steinke		Room 7
1378	Economic Analysis of Nuclear Power Plant's Operation Modes in Power System with High Wind Integration <i>Wenkai Gao, Yong Wang, Wenwen Liu, Ying Ding, Changhui Ma, Zhe Jiang</i>	
1382	Assessing the Impact of Wind Variability on the Long-Term Operation of a Hydro-Dominated System <i>Jose Lenin Morillo Carrillo, Juan Fernando Perez Bernal, Luckny Zéphyr, Lindsay Anderson, Angela Cadena</i>	
1114	Generalization of the Lambda-Method for Decentralized Economic Dispatch Considering Reactive Resources <i>Pedro P. Vergara, Hamid R. Shaker, Bo Norregaard Jørgensen, Luiz C. P. da Silva</i>	
1359	Optimal Sizing and Siting of Distributed Generation and EV Charging Stations in Distribution Systems <i>Ozan Erdinc, Akin Tascikaraoglu, Nikolaos Paterakis, Ilker Dursun, Murat Can Sinim, João Catalão</i>	
1167	Multi-Commodity Support in Profile Steering <i>Martijn H. H. Schoot Uiterkamp, Gerwin Hoogsteen, Marco E. T. Gerards, Johann L. Hurink, Gerard J. M. Smit</i>	
1277	A Study of Operation Strategy of Small Scale Heat Storage Devices in Residential Distribution Feeders	



	<i>Mostafa Bakhtvar, Carlos Andrade Cabrera, Giuseppina Buttitta, Olivier Neu, Andrew Keane</i>	
1292	Demand Side Management in the Smart Grid: an Efficiency and Fairness Tradeoff <i>Paulin Jacquot, Olivier Beaudé, Stéphane Gaubert, Nadia Oudjane</i>	
1091	Dynamic Tariff Design for a Robust Smart Grid Concept: An Analysis of Global vs. Local Incentives <i>Oliver Lutz, Vicente Olavarria, Raphael Hollinger, Christof Wittwer, Barbara Koch</i>	
T18 - Electricity Markets Chair: Julian Barquin		Room 8
1156	Impact of a Coal Power Plant Closure on a Multi-region Wholesale Electricity Market <i>Amin Masoumzadeh, Ehsan Nekouei, Tansu Alpcan</i>	
1067	An Exact Solution to the Market Clearing Problem with Uniform Purchase Price <i>Iacopo Savelli, Antonio Giannitrapani, Simone Paoletti, Antonio Vicino</i>	
1134	Optimal Bidding for Risk-Averse Hybrid Power Station Producers in Insular Power Systems: An MPEC Approach <i>Anastasios Bakirtzis, Andreas Ntomaris</i>	
1080	Market Integration Vs Temporal Granularity: How to Provide Needed Flexibility Resources? <i>Olivier Borne, Yannick Perez, Marc Petit</i>	
1176	Flexibility Service Market for Active Congestion Management of Distribution Networks using Flexible Energy Resources of Microgrids <i>Elvira Amicarelli, Tuan Quoc Tran, Seddik Bacha</i>	
1035	Peer-To-Peer Market Clearing Framework for DERs Using Knapsack Approximation Algorithm <i>Mohsen Khorasany, Yateendra Mishra, Gerard Ledwich</i>	
1216	Estimation of Frequency Support Market Indices using Monte Carlo Simulation for Wind Power Generation <i>Ayman Attya, Jose Luis Dominguez-Garcia, Olimpo Anaya-Lara</i>	
16:00-16:30	Coffee break	
16:30-18:30	Parallel sessions	Rooms 1-7
	T21 - Distributed Generation Chair: Radu Porumb	Room 1
1217	A Probabilistic Approach to the Evaluation of Energy Availability of Fixed and Variable Speed Wind Turbines <i>Carmen Borges, Chanan Singh, Maynara Aredes</i>	
1222	Irradiance Forecasting for Microgrid Energy Management <i>Emilien Duverger, Frédéric Thiery, Dorian Gachon, Thierry Talbert, Carolina Penin, Philippe Alexandre</i>	
1243	Assessment of Storage and Photovoltaic Short-term Forecast Contribution to Off-grid Microgrid Operation <i>Thai Phuong Do, Franck Bourry, Xavier Le Pivert</i>	
3009	Development of an Advection Model for Solar Forecasting based on Ground Data <i>Shinichi Inage, Yoko Kojima</i>	
1102	Data-Driven Characterisation of Solar PV Panel Performance <i>Sue Ann Chen, Arun Vishwanath, Saket Sathe</i>	
1124	Impact of Photovoltaic Self-consumption on Power Losses and Voltage Levels of MV Distribution Networks <i>Javier Garcia-Villalobos, Pablo Eguia, Esther Torres, Agurtzane Etxegarai</i>	
1390	Smart Microgrid Monitoring: Evaluation of Key Performance Indicators for a PV Plant Connected to a LV Microgrid <i>Stefano Bracco, Michela Longo, Federico Delfino, Federica Foiadelli</i>	
1394	Network Code on Requirements for Generators – a Discussion. Resynchronizing with paradigm shifts <i>Mihai Sanduleac, Lucian Toma, Gianfranco Chicco, Mihaela Albu</i>	
	T22 - Distribution System Reconfiguration and Planning Chair: Gerard Ledwich	Room 2
1260	An Integrated Optimization Approach for Multi-Voltage Level Network Expansion Planning <i>Dennis Klein, Lars Hackstein, Sebastian Stütz, Christian Rehtanz</i>	
1098	Expansion Planning of Active Power Supply Systems <i>Konstantin Suslov, Elena Stashkevich, Ilia Shushpanov, Nikolai Voropai, Pham Trung Son</i>	
1409	Stochastic Approach for Power Generation Optimal Sizing and Scheduling on Ships	



	<i>Alessandro Boveri, Paola Gualeni, Diego Neroni, Federico Silvestro</i>	
1008	A Relax and Reduce Sequential Decomposition Rolling Horizon Algorithm to Value Dynamic Network Reconfiguration in Smart Distribution Grid <i>Florin Capitanescu</i>	
1227	Optimal Reconfiguration and DG Allocation in Active Distribution Networks Using a Probabilistic Approach <i>Mina Naguib, Waild Omran, Hossam Talaat</i>	
1158	Application of a logistical Optimization Method to optimize existing Low-Voltage Grids <i>Gerrit Schlömer, Lutz Hofmann</i>	
1168	Distribution Feeder Hosting Capacity Analysis <i>Alison O'Connell, Jeff Smith, Andrew Keane</i>	
1282	The long-term Effect of Incentives on the Development of DGPV Considering the Interaction among DGPs' Investors and Distribution System <i>Chenjun Sun, Hui Ren, David Watts, Zengqiang Mi, Jialin Zhou, Kangping Li</i>	
T23 - Electric Vehicles: Grid Integration and Economics Chair: Anastasios Bakirtzis		Room 3
1024	Multi-objective optimization for smart EV charging <i>Nuno Rodrigues, Tristan Kuijpers</i>	
1027	Marketing Potential of EV's Charging Flexibility Using a Distribution Grid Automation System <i>Roman Uhlig, Marcus Stötzel, Markus Zdrallek, Sebastian Harnisch</i>	
1366	Investigation of Smart Distribution Network Response to Operation Performance of Plug-in Hybrid Electric Vehicles <i>Jamshid Aghaei, Ehsan Bagheri, Alireza Heidari, Gerardo J. Osório, Miadreza Shafie-khah, Juan M. Lujano-Rojas, João Catalão</i>	
1405	Demand Response Capability of V2G Based Electric Vehicles in Distribution Networks <i>Yu Liu, Shan Gao, Xin Zhao, Song Han, Haiqian Wang, Qun Zhang</i>	
1246	Static Volume-Based and Control-Based Contracts for Coordinating Vehicle-to-Grid Supply in a Microgrid <i>Esther H. Park Lee, Zofia Lukszo, Paulien Herder</i>	
1066	Identification of Conflicts between Transmission and Distribution System Operators when Acquiring Ancillary Services from Electric Vehicles <i>Antonio Zecchino, Katarina Knezović, Mattia Marinelli</i>	
1397	Stochastic Market Clearing Model with Probabilistic Participation of Wind and Electric Vehicles <i>Nilufar Neyestani, Filipe J. Soares, Jose P. Iria</i>	
1291	Data-Driven Planning of Plug-in Hybrid Electric Taxi Charging Stations in Urban Environments: A Case in the Central Area of Beijing <i>Huimiao Chen, Yinghao Jia, Zechun Hu, Guanglei Wu, Zuo-Jun Max Shen</i>	
T24 - Frequency Oscillations and Inertia Chair: Stefano Massucco		Room 4
1099	Impact of Fast Primary Regulation and Synthetic Inertia on Grid Frequency Control <i>Silvia Canevese, Adriano Iaria, Marco Rappizza</i>	
1290	Impact of Energy Storage Systems on the Stability of Low Inertia Power Systems <i>Atia Adrees, Jovica Milanovic</i>	
1012	Electricity Consumption Contribution to Power System Inertia - Case Electric Vehicles and Thermostatically Controlled Loads in Finland <i>Antti Alahäivälä, Matti Lehtonen</i>	
1111	Economic Value of Inertia in Low-Carbon Power Systems <i>Luis Badesa, Fei Teng, Goran Strbac</i>	
1349	Impact Studies of the Effect of Large-scale Wind Integration in the Mexican Power Grid <i>Rafael Castellanos, Miguel Ramirez, Guillermo Calderon, Arturo Messina</i>	
1116	GA-Optimized Fuzzy Logic Self-Tuning PID Controller in Multi-Source and Multi-Area Power Systems for Load Frequency Control <i>Davar Mirabbasi, Sajjad Ahmadi, Adel Akbari Majd</i>	
1177	Impact of Frequency Estimation for VSC-based Devices with Primary Frequency Control <i>Álvaro Ortega Manjavacas, Federico Milano</i>	
1247	Coordinated Tuning of Synchronous Generator Controllers for Power Oscillation Damping <i>Amer Mešanović, Ulrich Münz, Rolf Findeisen</i>	
T25 - ICT for Smart Grids		Room 5



Chair: Mikhail Simonov		
1299	Smart Grid Communication Comparison <i>Bo Petersen, Henrik Bindner, Bjarne Poulsen, Shi You</i>	
1144	Choosing Communication Technologies for Distributed Energy Management in the Smart Grid <i>Daniel Hölker, Daniel Brettschneider, Ralf Toenjes, Michael Sonnenschein</i>	
1271	Impact of Transport Layer Protocols on Reliable Information Access in Smart Grids <i>Kamal Shahid, Aamir Saeed, Thomas le Fevre Kristensen, Rasmus L. Olsen</i>	
1113	Big Data from Smart Grids <i>Azam Bagheri, Math H.J Bollen, Irene Y.H. Gu</i>	
1251	Prosumer Centric Innovation System and how it is influenced by Multi-Regime Interactions: Exploratory Interviews <i>Jussi Valta, Kirsi Kotilainen, Saku J. Mäkinen, Pertti Järventausta</i>	
1169	On the Design of an Energy and User Aware Study Room <i>Fulvio Corno, Luigi De Russis, Juan Pablo Saenz</i>	
1205	Determining Occupancy From a WiFi Router's Electric Power Consumption in an Office Environment <i>Tin Petrovic, Kazuya Echigo, Hiroyuki Morikawa</i>	
T26 - HVDC Systems		Room 6
Chair: Neville Watson		
1192	Fast Frequency Support Control in the GB Power System using VSC-HVDC Technology <i>Luis Orellana Montaña, Víctor Matilla Togores, Sheng Wang, Oluwole Daniel Adeyemi, Carlos E. Ugalde Loo</i>	
1322	Effective Damping Support through VSC-HVDC Links with Short-Term Overload Capability <i>Inmaculada Martinez Sanz, Paul Judge, Claudia Spallarossa, Balarko Chaudhuri, Tim Green, Goran Strbac</i>	
1324	On the Design and Placement of a Supplementary Damping Controller in an Embedded VSC-MTDC Network <i>Omar Kothb, Mehrdad Ghandhari, Javier Renedo, Luis Rouco, Robert Eriksson</i>	
1239	Protection Scheme for MMC-HVDC DC Lines Based on Boundary Current Signals <i>Cheng Lv, Nengling Tai, Xiaodong Zheng, Kaiwen Zha</i>	
1249	On Implementation of Primary Frequency Control in MMC-HVDC Transmission Systems <i>Yannick Rink, Lukas Held, Simon Wenig, Michael Suriyah, Thomas Leibfried</i>	
1009	Multilevel Converter Topologies Evaluation for Superconducting DC Transmission Systems <i>Dimitrios Doukas, Sofia Kalpatsinidou, Dimitris Labridis</i>	
T27 - Energy Management		Room 7
Chair: Lucian Toma		
1131	Electrical Energy Network Efficiencies Evaluation as Milestones for Smart Grids Development: Italy's case study <i>Carlos Enrique Gomez Camacho, Giancarmine Muto, Bernardo Ruggeri</i>	
3000	The Prosumer Role in the Global Decarbonization <i>Massimo Pompili, Francesco Muzi, Luigi Calcara, Zagdkhorol Bayasgalan, Silvia Sangiovanni</i>	
1288	A Holistic Study of Energy Network Hybridization in a Northern European City <i>Tobias Jacobs, Sebastien Nicolas, Tae-Gil Noh, Anett Schuelke, Daniel Schwabeneder, Daniele Basciotti, Sawsan Henein, Olatz Terreros, Edmund Widl, Hans Auer</i>	
1047	Development of a Water Heater Population Control for the Demand-side Frequency Control <i>Zeyad Assi Obaid, Liana M. Cipcigan, Saif Sabah Sami, Mazin T. Muhssin</i>	
1105	Using Reinforcement Learning for Demand Response of Domestic Hot Water Buffers: a Real-Life Demonstration <i>Oscar De Somer, Ana Soares, Tristan Kuijpers, Koen Vossen, Koen Vanthournout, Fred Spiessens</i>	
1381	Smart Management System of Customer's Battery and Heat Pump Water Heater, considering the Japanese New Rule for Curtailment of PV Output <i>Eitaro Omine, Hiroyuki Hatta, Naoyuki Takahashi, Tsuyoshi Ueno</i>	
1212	Mini-grid Policy Directions for Decentralized Smart Energy Models in Sub-Saharan Africa <i>Joan Nkiriiki, Taha Selim Ustun</i>	
1360	Smart Railway Station Energy Management Considering Regenerative Braking and ESS <i>Ibrahim Sengor, Hasan Can Kilickiran, Huseyin Akdemir, Bedri Kekezoglu, Ozan Erdinc, João Catalão</i>	



18:30	End of sessions	
19:45	Buses for Gala Dinner	
20:30	Gala Dinner – Automobile Museum Torino	
24:00	Buses from the Gala Dinner site	
Friday 29 September 2017		
8:15-17.00	Registration	Foyer
8:50-9:30	Plenary Speech – Jianhui Wang (Argonne National Laboratory, and Southern Methodist University, USA): Grid Modernization: Challenges, Opportunities, and Solutions	Aula Magna
9:30-10:10	Plenary Speech – Pierluigi Mancarella (University of Melbourne, Australia, and The University of Manchester, UK): Reliability and resilience in low-carbon, low-inertia power systems: challenges, opportunities, and role of smart grid technologies	Aula Magna
10:10-10:50	Plenary Speech – Paolo Perani (ANIE Energia, Italy): Industry contribution and readiness to cope with the current challenges in electrical grids: Technologies and Systems	Aula Magna
10:50-11:20	Coffee break	
11:20-13:00	Panel Session – Understanding system resilience in critical infrastructures	Aula Magna
13:00-14:00	Lunch	
14:00-16:00	Parallel sessions	
	Rooms 1-7	
	F11 - Special Session: Smart Metering	
	Chair: Gianluca Zanetto	
	1178	Feasibility Study of OFDM-MFSK Modulation Scheme for Smart Metering Technology <i>Ghaith Al-Juboori, Angela Doufexi, Andrew Nix</i>
	1125	Agent-based Protection of Event-based Smart Meters <i>Mikhail Simonov, Gianluca Zanetto</i>
	1181	An MPC-based Protocol for Secure and Privacy-Preserving Smart Metering <i>Mustafa A. Mustafa, Sara Cleemput, Abdelrahaman Aly, Aysajan Abidin</i>
	1253	An Innovative Cost-Effective Smart Meter with embedded Non Intrusive Load Monitoring <i>Matteo Nardello, Maurizio Rossi, Davide Brunelli</i>
	F12 - Distribution Transformers and Voltage Control	
	Chair: Grigoris Papagiannis	
	1361	An Autonomous Voltage Control for Distribution Power System using Pole-Transformer <i>Takeshi Nagata, Shinya Kuris, Hikaru Kamigaichi</i>
	1238	Method for Determining Voltage Control Parameters of Low-Voltage Regulator Using Forecast Interval of Photovoltaic Output <i>Masaya Kobayashi, Hiroshi Kikusato, Jun Yoshinaga, Yu Fujimoto, Nao Kumekawa, Shinji Wakao, Yasuhiro Hayashi, Noriyuki Motegi, Yusuke Yamashita</i>
	1183	Impacts of Tap Stagger on Currents of Power Transformers <i>Dongmiao Wang, Linwei Chen, Haiyu Li, Zhongdong Wang, Victoria Turnham</i>
	1402	Influence and Optimal Use of OLTC in Wind Power Plants for Reactive Power Capability Requirement Compliance <i>Sanna Uski</i>
	1315	Distributed Automation Solution and Voltage Control in MV and LV Distribution Networks <i>Hannu Reponen, Anna Kulmala, Ville Tuominen, Sami Repo</i>
	1046	Results of the Laboratory Tests of a novel Regulator for meshed Low-Voltage Networks <i>Stefan Lang, Haiyan Ma, Wolfram H. Wellssow</i>
	1255	Photovoltaic Hosting Capacity of Feeders with Reactive Power Control and Tap Changers <i>Oguzhan Ceylan, Sumit Paudyal, Bishnu P. Bhattarai, Kurt Myers</i>
	F13 - Storage Planning and Economics	
	Chair: Rogério Andrade Flauzino	
1229	Interruption Reduction in Secondary Substations using Battery Energy Storage Systems <i>Arun Narayanan, Tero Kaipia, Jarmo Partanen</i>	



1266	Feasibility of a Battery Storage System for a Renewable Energy Park Operating with Price Arbitrage <i>Adam Daggett, Meysam Qadrdan, Nick Jenkins</i>	
1083	Environmental Impacts of different Battery Technologies in Renewable Hybrid Micro-Grids <i>Manuel Baumann, Carolina Marcelino, Jens Peters, Marcel Weil, Paulo Almeida, Elizabeth Wanner</i>	
1393	Optimal Dimensioning and Operation of a Grid-Supporting Energy Storage System <i>Ouafa Laribi, Pascal Wiest, Krzysztof Rudion</i>	
1026	Probabilistic Optimal Storage Allocation and Operation to Ensure Voltage Stability Margin <i>Ahvand Jalali, Mohammad Aldeen</i>	
1408	Planning of Energy Storage Systems in Unbalanced Microgrids <i>Fabio Mottola, Daniela Proto, Angela Russo, Pietro Varilone</i>	
1329	Cost Ratio Analysis Evaluating the Potential of an Ice Storage Unit in a Multi-Energy Microgrid <i>Stefan Bschorer, Maren Kuschke, Kai Strunz</i>	
1373	Market integration of renewables and multi-service storage applications <i>Nuno Pinho da Silva, Ricardo Pastor, João Esteves, Rui Pestana</i>	
F14 - Energy System Services Chair: Filippo Spertino		Room 4
1186	Modular Modeling Concept and Multi-Domain Simulation for Smart Cities <i>Ivelina Stoyanova, Erdem Gümrükcü, Antonello Monti</i>	
1368	The Role of Power-to-Transport via Hydrogen and Natural Gas Vehicles in Decarbonising the Power and Transportation sector <i>Stephen Clegg, Lingxi Zhang, Pierluigi Mancarella</i>	
1130	Provision of Ancillary Services in Future Low-carbon UK Electricity System <i>Fei Teng, Marko Aunedi, Goran Strbac, Vincenzo Trovato, Anes Dallagi</i>	
1136	Security-Constrained Dynamic Curtailment Method for Renewable Energy Sources in Grid Planning <i>Pascal Wiest, Daniel Groß, Krzysztof Rudion, Alexander Probst</i>	
1294	A Load Management Algorithm for PCC Interface Breaker <i>Francesco Adinolfi, Stefano Massucco, Matteo Saviozzi, Federico Silvestro, Antonio Fidigatti, Fabio Monachesi, Enrico Ragaini</i>	
3019	The Virtual Storage Plant: aggregation and optimization tools for the advanced monitoring and control of a multi-technology Battery Energy Storage System <i>Maura Musio, Rosario Maria Polito, Marco Pietrucci, Ester Mocci, Giorgio Maria Giannuzzi, Luca Ortolano, Cristiano Martarelli, Francesco Palone, Roberto Cantoni</i>	
1376	Fourier Transform Based Procedure for Investigations on the Grid Frequency Signal <i>Francesco Arrigo, Marco Merlo, Ferdinando Parma</i>	
F15 - Integrated Energy Systems Chair: Nobuyuki Yamaguchi		Room 5
1088	Comparative Study of Integrated Energy System Modelling <i>Konstantinos Katsavounis, Peng Hou, Weihao Hu, Zhe Chen</i>	
1089	Optimized Control of a Residential Heat Pump <i>Konstantinos Katsavounis, Peng Hou, Weihao Hu, Zhe Chen</i>	
1133	Analysis of Water Booster Pressure Systems as Dispatchable Loads in Smart-Grids <i>Cesar Diaz, Fredy Ruiz, Diego Patino</i>	
1069	Assessment of Available Thermal Capacity of District Heating Systems for Increased Medium- and Short-Term Flexibility of Multi-Modal Power Systems <i>Jonas Hinker, Stefan Kippelt, Johanna Myrzik, Nicolas Witte, Angelika Heinzl</i>	
1191	Multi-Period Power Management Optimization for Operating Isolated Hybrid Microgrids <i>Marc Galceran-Feixas, Mónica Aragués-Peñalba, Eduard Bullich-Massagué, Josep-Andreu Vidal-Clos, Oriol Gomis-Bellmunt</i>	
1256	Auxiliary Service Utilization of CHP Generation in Hybrid Electric Power and Natural Gas Systems <i>Yu Liu, Shan Gao, Xin Zhao, Hucheng Li, Liang Chen, Xiaodong Yuan, Wei Guo</i>	
F16 - Predictive Control Chair: Sasa Djokic		Room 6
1396	Predictive Control of Demand and Storage for Residential Prosumers <i>Sergio Bruno, Giovanni Giannoccaro, Massimo La Scala</i>	
1154	Constrained Model Predictive Control for Operation of a Building-Integrated Microgrid	



	<i>Kritchai Wittheephanch, Samira Roshany-Yamchi, Alan McGibney, Susan Rea</i>	
1345	Distributed Model Predictive Control for Building Energy Systems in Distribution Grids <i>Michael Kramer, Akhila Jambagi, Vicky Cheng</i>	
1250	A Comprehensive MPC based Energy Management Framework for Isolated Microgrids <i>Yan Zhang, Fanlin Meng, Rui Wang</i>	
1259	Storage System Control for Fault Protections of Single Phase Loads in Inverter-Dominated Grids <i>Paolo Azzaroli, Matteo Corti, Samuele Grillo, Luigi Piegari, Enrico Tironi</i>	
1048	Optimal Peer to Peer Market Operation for Microgrids with Hybrid Energy Storage System using Distributed Model Predictive Control <i>Felix Garcia-Torres, Carlos Bordons, Miguel Angel Ridao</i>	
1021	The Swiss Potential of Model Predictive Control for Building Energy Systems <i>Paul Stadler, Luc Girardin, François Maréchal</i>	
F17 – Microgrids		Room 7
Chair: Quoc Tuan Tran		
1045	Improved Primary Regulation for Minimum Energy Losses in Islanded Microgrids <i>E. Riva Sanseverino, G. Zizzo, M.L. Di Silvestre, S. Favuzza, Q.T.T. Tran, T.N. Pham, T. H. Kieu</i>	
1101	Dynamic Droop Control in Microgrid for Stability Enhancement Considering RES Variation <i>Awan Uji Krismanto, Nadarajah Mithulananthan, Lomi Abraham</i>	
1142	Islanding Detection using Mathematical Morphology for Distributed Generation <i>Aneesa Farhan, K Shanti Swarup</i>	
1182	A Port-Hamiltonian Approach to Secondary Voltage Control of Microgrids <i>Mahya Adibi, Jacob van der Woude, Dimitri Jeltsema</i>	
1285	Adaptive Islanding Detection and Diagnosis Using Wide Area Monitoring <i>Mark Rafferty, Xueqin (Amy) Liu, David Laverty, Lei Xie, Sean McLoone</i>	
1346	Fair Control of Distributed PV Plants in Low Voltage Grids <i>Numa Gueissaz, Konstantina Christakou, Jean-Yves Le Boudec, Mario Paolone</i>	
3017	Agent-Based Model for Distributed Optimization of Microgrids Operation <i>Riccardo Remo Appino, Kim Daniel Listmann, Gianfranco Chicco</i>	
16:00	Coffee break	
16:00-16:30	Conference Closure	Room 1
16:30	End of the Conference	