
Monday 14h00

Voltage control & reactive power management *Cervin*

PAPER PRESENTATION

Chair : Costas Vournas, NTUA

A5176JR

A Novel Multi-Objective Optimizer to Handle Reactive Power

Medina M. M.(CINVESTAV, Mexico), **Ramirez J.M.**(UNIVERSIDAD AUTONOMA DE OCCIDENTE - CINVESTAV, Mexico),
Coello Coello C. A.(CINVESTAV, Mexico)

A5422IV

Reactive Power- and Voltage Regulation in Smart Grid Environment

Vokony I.(BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS, Hungary), **Dan A.**(BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS, Hungary)

A5989GT

Voltage Control of UK Residential Customers for Power Reduction

Tsagarakis G.(THE UNIVERSITY OF EDINBURGH, United Kingdom), **Collin A.J.**(THE UNIVERSITY OF EDINBURGH, United Kingdom), **Kiprakis A.E.**(THE UNIVERSITY OF EDINBURGH, United Kingdom), **McLaughlin S.**(HERIOT-WATT UNIVERSITY, United Kingdom)

A5992PP

Voltage Level Control in Medium-Voltage Networks Supported by a Solid-State Transformer

Pachanapan P.(UNIVERSITY OF STRATHCLYDE, United Kingdom), **Anaya-Lara O.**(UNIVERSITY OF STRATHCLYDE, United Kingdom), **Lo K.L.**(UNIVERSITY OF STRATHCLYDE, United Kingdom)

A6003RT

Coordinated Voltage Control in MV and LV Distribution Networks with Inverter-Interfaced Users

Caldon R.(UNIVERSITY OF PADOVA, Italy), **Coppo M.**(UNIVERSITY OF PADOVA, Italy), **Turri R.**(UNIVERSITY OF PADOVA, Italy)

Monday

14h00

Contribution of wind farms to grid management

Everest

PAPER PRESENTATION

Chair : Kai Strunz, TUB

A5727WH

Ancillary Frequency Control of Direct Drive Full-Scale Converter Based Wind Power Plants

Hu W.(AALBORG UNIVERSITY, Denmark), **Su C.**(AALBORG UNIVERSITY, Denmark), **Fang J.**(AALBORG UNIVERSITY, Denmark), **Chen Z.**(AALBORG UNIVERSITY, Denmark), **Hu Ya.**(GLYNDWR UNIVERSITY, United Kingdom)

A5631Ra

Experimental Assessment of the Wind Turbine Contribution to the Primary Frequency Control in an Isolated Power System

Andriamalala R.N.(L2EP - ECOLE CENTRALE DE LILLE, France), **Wang Y.**(EDF R&D, F-92140 CLAMART, France), **Colas F.**(ARTS ET METIERS PARISTECH LILLE, France), **Francois B.**(L2EP - ECOLE CENTRALE DE LILLE, France), **Guillaud X.**(L2EP - ECOLE CENTRALE DE LILLE, France), **Semail E.**(ARTS ET METIERS PARISTECH LILLE, France)

A5327JV

Impacts of Squirrel-Cage and DFIG Wind Turbines on Long-Term Power System Voltage Stability

Londero R.R.(FEDERAL UNIVERSITY OF PARÁ, Brazil), **Afonso C.M.**(FEDERAL UNIVERSITY OF PARÁ, Brazil), **Vieira J. P. A.**(FEDERAL UNIVERSITY OF PARÁ, Brazil), **Bezerra U. H.**(FEDERAL UNIVERSITY OF PARÁ, Brazil)

A5588CM

Optimisation of Wind Farm Reactive Power for Congestion Management

Murphy C.(UNIVERSITY COLLEGE DUBLIN, Ireland), **Keane A.**(UNIVERSITY COLLEGE DUBLIN, Ireland)

A5189MS

Reactive Power Capability of DFIG Based Wind Turbine around Synchronous Operating Point with Two-Level and Three-Level NPC Converter

Sujod M. Z.(UNIVERSITY OF DUISBURG-ESSEN, Germany), **Erlich I.**(UNIVERSITY OF DUISBURG-ESSEN, Germany)

Monday

14h00

HVDC I

GEM - A303

PAPER PRESENTATION**Chair : Bruno Luscan, Alstom Grid****A5552SD****Coordination of Multiple HVDC Links in Transmission Systems during Emergency Situations****De Boeck S.**(KATHOLIEKE UNIVERSITEIT LEUVEN, Belgium), **Van Hertem D.**(KATHOLIEKE UNIVERSITEIT LEUVEN, Belgium)**A5277AM****Integration of a Multi Terminal DC Grid in an Interconnected AC Network****Marten A.-K.**(ILMENAU UNIVERSITY OF TECHNOLOGY, Germany), **Westermann D.**(ILMENAU UNIVERSITY OF TECHNOLOGY, Germany), **Luginbühl M.**(UNIVERSITY OF APPLIED SCIENCES HES-SO, Switzerland), **Sauvain H. F.**(UNIVERSITY OF APPLIED SCIENCES HES-SO, Switzerland)**A5522FG****Impact of DC Control Strategy on Dynamic Behaviour of Multi-Terminal Voltage-Source Converter-Based HVDC after the Loss of Converter****Gonzalez-Longatt F.M.**(COVENTRY UNIVERSITY, United Kingdom), **Roldan J.M.**(UNIVERSIDAD DE SEVILLA, Spain), **Rueda J.L.**(UNIVERSITY OF DUISBURG-ESSEN, Germany)**A5304PT****Smart Transmission System by HVDC and FACTS****Thepparat P.**(SIEMENS AG, Germany), **Retzmann D.**(SIEMENS AG, Germany), **Ogée E.**(SIEMENS AG, Germany), **Wiesinger M.**(SIEMENS AG, Germany)**A5076LY****Voltage Sensitivity Based Reactive Power Control on VSC-HVDC in a Wind Farm Connected Hybrid Multi-Infeed HVDC System****Yan L.**(AALBORG UNIVERSITY, Denmark), **Zhe C.**(AALBORG UNIVERSITY, Denmark)

Monday

14h00

Special session Transmission grid R&D perspectives ENTSOE

Amphitheater

PAPER PRESENTATION

Chair : Sébastien Henry, RTE

European Electricity Grid Initiative

Van Hove P.(European Commission)

Transmission Grids R&D perspectives

Henry S. (RTE)

Twenties' achievements

Unai Búrdalo García.(REE)

iTesla : An ongoing FP7 project

Lemaitre L (RTE)

Advanced Grid Modeling and Applied Mathematics

Anitescu M.(US DOE Initiative, Argonne National Lab.)

Monday

14h00

Renewable energies and smart homes : risk assessment and forecasting

GEM - A306

PAPER PRESENTATION**Chair : Xavier Brunotte, Vesta System****A5828ME****Determining the Risk Operation States of Power Systems in the Presence of Wind Power Plants****Răzuși P.-C.**(UNIVERSITY "POLITEHNICA" OF BUCHAREST, Romania), **Eremia M.**(UNIVERSITY "POLITEHNICA" OF BUCHAREST, Romania), **Miranda V.**(INESC TEC, Portugal)**A6029yh****Canopea, an Energy-Smart Home Integrable into a Smart-Grid****HadjSaid Y.**(G-SCOP - GRENOBLE INSTITUTE OF TECHNOLOGY, France), **Ploix S.**(GRENOBLE INSTITUTE OF TECHNOLOGY (GRENOBLE INP), France), **Galmiche S.**(VESTA SYSTEM, France), **Bergeon S.**(VESTA SYSTEM, France), **Brunotte X.**(VESTA SYSTEM, France)**A5517HK****Three Dimensional Clustering in Wind Farms with Storage for Reliability Analysis****Kim Ha.**(TEXAS A&M UNIVERSITY, United States), **Singh C.**(TEXAS A&M UNIVERSITY, United States)**A5060AS****A Modified Approach for Residential Load Scheduling Using Smart Meters****Bahrami Sh.**(SHARIF UNIVERSITY OF TECHNOLOGY, Iran), **Sheikhi A.**(SHARIF UNIVERSITY OF TECHNOLOGY, Iran), **Parniani M.**(SHARIF UNIVERSITY OF TECHNOLOGY, Iran)**A5739CN****Inclusion of Temporal Effects in Forecasting Building Electrical Loads for Demand Resource Planning****Berardino J.**(DREXEL UNIVERSITY, United States), **Nwankpa C.**(DREXEL UNIVERSITY, United States)

Monday

14h00

Modeling and parameters estimation

Kilimandjaro

PAPER PRESENTATION**Chair : Carlo Alberto Nucci, Univ. Bologna****A5907MS****An Efficient Approach for Parameter Estimation of PV Model Using DE and Fuzzy Based MPPT Controller****Sheraz M.**(KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS, Saudi Arabia), **Abido M.A.**(KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS, Saudi Arabia)**A4959JR****Identification of Power System Dynamic Equivalents based on Mean-Variance Mapping Optimization****Cepeda J. C.**(UNIVERSIDAD NACIONAL DE SAN JUAN, Argentina), **Rueda J.L.**(UNIVERSITY OF DUISBURG-ESSEN, Germany), **Erllich I.**(UNIVERSITY OF DUISBURG-ESSEN, Germany)**A5725MN****Development of Generic Dynamic Models for Generators in Smart Grids and Microgrids****Nemati M.**(UNIVERSITÄT STUTTGART (IEH), Germany), **Tenbohlen S.**(UNIVERSITÄT STUTTGART (IEH), Germany), **Braun M.**(FRAUNHOFER INSTITUTE FOR WIND ENERGY AND ENERGY SYSTEM TECHNOLOGY (IWES) & UNIVERSITY OF KASSEL, Germany), **Imran M.**(SIEMENS AG, Germany), **Meyer B.**(SIEMENS AG, Germany), **Mueller H.**(SIEMENS AG, Germany)**A5673FR****Application of Dynamic Equivalence Techniques to Derive Aggregated Models of Active Distribution Network Cells and MicroGrids – Part I: A Critical Overview****Resende F.O.**(INESC-TEC, Portugal), **Matevosyan J.**(ELECTRIC RELIABILITY COUNCIL OF TEXAS, United States), **Milanović J.V.**(THE UNIVERSITY OF MANCHESTER, United Kingdom)**A6044KJ****A Power System Redution Method for the Torsional Torque Analysis of Turbine-Generator Shafts****Kim J.-M.**(MYONGJI UNIVERSITY, Korea), **Min S.K.**(MYONGJI UNIVERSITY, Korea), **Kang S.H.**(MYONGJI UNIVERSITY, Korea)

Monday

14h00

Power systems reconfiguration*La Meije*

PAPER PRESENTATIONChair : **Matthieu Terenti**, ERDF**A5239AD****Study of Markov Decision Process-Based Optimal Switching Algorithm Performance for Small Power Systems****Deese A.S.**(THE COLLEGE OF NEW JERSEY, United States)**A5984AM****Comparison of Multi-Objective Optimization Approaches for Distribution System Reconfiguration****Mazza A.**(POLITECNICO DI TORINO, Italy), **Chicco G.**(POLITECNICO DI TORINO, Italy), **Russo A.**(POLITECNICO DI TORINO, Italy)**A5670ST****Benders' Decomposition for Voltage Profile Management of Distribution Network with Distributed Generators****Touré S.**(G2ELAB - GRENOBLE INSTITUTE OF TECHNOLOGY, France), **Caire R.**(G2ELAB - GRENOBLE INSTITUTE OF TECHNOLOGY, France), **Bésanger Y.**(G2ELAB - GRENOBLE INSTITUTE OF TECHNOLOGY, France)**A5496DS****Combining Subpopulation Tables, Non-Dominated Solutions and Strength Pareto of MOEAs to Treat Service Restoration Problem in Large-Scale Distribution Systems****Sanches D.S.**(FEDERAL TECHNOLOGICAL UNIVERSITY OF PARANÁ, France), **Delbem A.C.B.**(SÃO PAULO STATE UNIVERSITY (UNESP), Brazil), **London Jr. J.B.A.**(SÃO PAULO STATE UNIVERSITY (UNESP), Brazil)**A5627IB****Real-time Overloads Management in Active Distribution Systems: an Optimization Approach Including Network Switching****Bilibin I.**(UNIVERSITY OF LUXEMBOURG, Luxembourg), **Capitanescu F.**(UNIVERSITY OF LUXEMBOURG, Luxembourg), **Sachau J.**(UNIVERSITY OF LUXEMBOURG, Luxembourg)

Monday

14h00

Offshore wind farms I*Mont Blanc*

PAPER PRESENTATION**Chair : Xavier Guillaud, L2EP****A5514RB****A Comparison of WECS Based on Medium Frequency AC-Link for Offshore DC Wind Park****Barrera-Cardenas R.**(NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (NTNU), Norway), **Molinas M.**(NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (NTNU), Norway)**A5575MT****DC Fault Performance and Cost Analysis of DC Grids for Connecting Multiple Offshore Wind Farms****Taherbaneh M.**(UNIVERSITY OF ABERDEEN, United Kingdom), **Jovcic D.**(UNIVERSITY OF ABERDEEN, United Kingdom), **Taisne J.-P.**(RTE, France), **Nguefeu S.**(RTE, France)**A5240MR****Dynamic Analysis of Offshore Wind Farm with PM Wind Generators Using Simplified Model****Rosyadi M.**(KITAMI INSTITUTE OF TECHNOLOGY, Japan), **Umemura A.**(KITAMI INSTITUTE OF TECHNOLOGY, Japan), **Takahashi R.**(KITAMI INSTITUTE OF TECHNOLOGY, Japan), **Tamura J.**(KITAMI INSTITUTE OF TECHNOLOGY, Japan), **Park M.**(CHANGWON NATIONAL UNIVERSITY, Republic of Korea)**A5423DI****Large Offshore Wind Farm: Potential Evaluation of Network Services****Ikni D.**(UNIVERSITÉ DU HAVRE, France), **Dakyo B.**(UNIVERSITÉ DU HAVRE, France), **Bagre A.O.**(INTERNATIONAL INSTITUTE FOR WATER AND ENVIRONMENTAL ENGINEERING, Burkina Faso)**A5683SD****Optimal Active Power Control of Large Scale Offshore Wind Farms****De Rijcke S.**(KATHOLIEKE UNIVERSITEIT LEUVEN, Belgium), **Driesen J.**(KATHOLIEKE UNIVERSITEIT LEUVEN, Belgium), **Meyers J.**(KATHOLIEKE UNIVERSITEIT LEUVEN, Belgium)

Monday 16h00

State estimation I Cervin

PAPER PRESENTATION

Chair: Lamine Mili, Virginia Tech

A5384RF

An Event Triggered Tracking State Estimator for Power Systems with Integrated Wind Generation

Francy R.(MASDAR INSTITUTE OF SCIENCE AND TECHNOLOGY, United Arab Emirates), **Farid A.M.**(MASDAR INSTITUTE OF SCIENCE AND TECHNOLOGY, United Arab Emirates), **Youcef-Toumi K.**(MIT, United States)

A5562AA

Development of State Estimator for Low Voltage Networks Using Smart Meters Measurement Data

Abdel-Majeed A.(UNIVERSITÄT STUTT GART (IEH), Germany), **Tenbohlen S.**(UNIVERSITÄT STUTT GART (IEH), Germany), **Schöllhorn D.**(ENBW REGIONAL AG, Germany), **Braun M.**(FRAUNHOFER INSTITUTE FOR WIND ENERGY AND ENERGY SYSTEM TECHNOLOGY (IWES) & UNIVERSITY OF KASSEL, Germany)

A5616PV

An Algorithm for Improving the Power System State Estimation Using PMU Measurements

Presada V.I.(UNIVERSITY "POLITEHNICA" OF BUCHAREST, Romania), **Toma L.**(UNIVERSITY "POLITEHNICA" OF BUCHAREST, Romania), **Eremia M.**(UNIVERSITY "POLITEHNICA" OF BUCHAREST, Romania)

A6021NS

Hierarchical State Estimation Based on State & Topology Coestimation at Substation Level

Silva N.S.(FEDERAL UNIVERSITY OF SANTA CATARINA, Brazil), **Simoes Costa A.**(FEDERAL UNIVERSITY OF SANTA CATARINA, Brazil), **Clements K.**(FEDERAL UNIVERSITY OF SANTA CATARINA, Brazil)

Monday

16h00

Electricity demand characterization and forecasting

Everest

PAPER PRESENTATION

Chair : Noël Schulz, IEEE

A5122BA

Day-Ahead Residential Load Forecasting with Smart Meter Data

Asare-Bediako B.(EINDHOVEN UNIVERSITY OF TECHNOLOGY, Netherlands), **Kling W.L.**(EINDHOVEN UNIVERSITY OF TECHNOLOGY, Netherlands), **Ribeiro P.F.**(EINDHOVEN UNIVERSITY OF TECHNOLOGY, Netherlands)

A5830SW

Distributed Residential Load Control of Binary Behaving Loads

Weckx S.(KATHOLIEKE UNIVERSITEIT LEUVEN, Netherlands), **Driesen J.**(KATHOLIEKE UNIVERSITEIT LEUVEN, Belgium), **D'hulst R.**(VITO, Netherlands)

A5289KS

Electricity Demand and Management Capabilities of an Industrial Enterprise and Technical and Economic Preconditions for Their Implementation

Stepanov V.(IRKUTSK STATE TECHNICAL UNIVERSITY, Russia), **Suslov K.**(IRKUTSK STATE TECHNICAL UNIVERSITY, Russia), **Kozlova E.**(IRKUTSK STATE TECHNICAL UNIVERSITY, Russia), **Styczynski Z.A.**(OTTO VON GUERICKE UNIVERSITY MAGDEBURG, Germany)

A5359PK

Electricity Demand Characterization for Analyzing Residential LV Distribution Networks

Kadurek P.(EINDHOVEN UNIVERSITY OF TECHNOLOGY, Netherlands), **Kling W.L.**(EINDHOVEN UNIVERSITY OF TECHNOLOGY, Netherlands), **Ribeiro P.F.**(EINDHOVEN UNIVERSITY OF TECHNOLOGY, Netherlands), **Cobben J. F. G.**(ALLIANDER & EINDHOVEN UNIVERSITY OF TECHNOLOGY, Netherlands)

Monday

16h00

HVDC II

GEM - A303

PAPER PRESENTATION

Chair : Tuan Tran Quoc, CEA

A5965SC**HVDC Line Placement for Maximizing Social Welfare - An Analytical Approach****Chatzivasileiadis S.**(ETH ZÜRICH, Switzerland), **Krause T.**(ETH ZÜRICH, Switzerland), **Andersson G.**(ETH ZÜRICH, Switzerland)**A5904HL****Impacts of Large-Scale Wind Farm Integration on Power System through VSC-HVDC****Liu H.**(AALBORG UNIVERSITY, Denmark), **Chen Z.**(AALBORG UNIVERSITY, Denmark)**A5307ZM****Design and Simulation of Multiple Terminal Unified Power Quality Conditioner****Zhao Y.**(NORTH CHINA ELECTRIC POWER UNIVERSITY, China), **Ren Y.**(NORTH CHINA ELECTRIC POWER UNIVERSITY, China), **Zhou M.**(NORTH CHINA ELECTRIC POWER UNIVERSITY, China), **Li G.**(NORTH CHINA ELECTRIC POWER UNIVERSITY, China)**A5241ME****A Novel Hybrid STATCOM for Economical System Installation with Proven Dynamic and Transient Response****El Moursi M.S.**(MASDAR INSTITUTE OF SCIENCE AND TECHNOLOGY, United Arab Emirates), **Alobaidli K. A.**(MASDAR INSTITUTE OF SCIENCE AND TECHNOLOGY, United Arab Emirates), **Zeineldin H.**(CAIRO UNIVERSITY, Egypt)**A5469PR****Investigation on Interactions between AC and DC Grids****Rault P.**(L2EP, ECOLE CENTRALE DE LILLE, France), **Guillaud X.**(L2EP - ECOLE CENTRALE DE LILLE, France), **Colas F.**(ARTS ET METIERS PARISTECH LILLE, France), **Nguefeu S.**(RTE, France)

Monday

16h00

Advanced modeling and optimization techniques

GEM - A306

PAPER PRESENTATION**Chair : Konstantinos Kopsidas, Univ. Manchester****A5749RF****Characteristic Frequency of Travelling Waves Applied for Fault Location in Transmission Lines****Iurinic L.U.**(FEDERAL UNIVERSITY OF RIO GRANDE DO SUL, Brazil), **Ferraz R.G.**(FEDERAL UNIVERSITY OF RIO GRANDE DO SUL, Brazil), **Bretas A.S.**(FEDERAL UNIVERSITY OF RIO GRANDE DO SUL, Brazil)**A5531PO****Intelligent Micro Grid Management using a Multi-Agent Approach****Oliveira P.**(POLYTECHNIC INSTITUTE OF PORTO (ISEP/IPP), Portugal), **Pinto T.**(POLYTECHNIC INSTITUTE OF PORTO (ISEP/IPP), Portugal), **Praça I.**(POLYTECHNIC INSTITUTE OF PORTO (ISEP/IPP), Portugal), **Vale Z.**(POLYTECHNIC INSTITUTE OF PORTO (ISEP/IPP), Portugal), **Morais H.**(POLYTECHNIC INSTITUTE OF PORTO (ISEP/IPP), Portugal)**A5367CS****An Optimization Tool to Assess Smart Grids****Spataru C.**(UCL ENERGY INSTITUTE, United Kingdom), **Barrett M.**(UCL ENERGY INSTITUTE, United Kingdom)**A5326TV****Dynamic Simulations of Combined Transmission and Distribution Systems using Decomposition and Localization****Aristidou P.** (UNIVERSITY OF LIÈGE, Belgium), **Van Cutsem T.** (UNIVERSITY OF LIÈGE, Belgium)**A5292RS****Design of a Simulation System for Analyzing Smart Grid Architectures****Schwerdfeger R.** (ILMENAU UNIVERSITY OF TECHNOLOGY, Germany), **Westermann D.** (ILMENAU UNIVERSITY OF TECHNOLOGY, Germany)

Monday

16h00

Benchmarking and models validation

Kilimandjaro

PAPER PRESENTATION**Chair : Rachid Cherkaoui, EPFL****A5439HR****Development of Tests and Procedures for Evaluating Phasor Data Concentrators**

Phadke A.(VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY, United States), **Retty H.**(VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY, United States), **Delpont J.**(VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY, United States), **Centeno V.**(VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY, United States)

A5822LF**A 3D Architecture Platform Dedicated to High-Speed Computation for Power System**

Fabre L.(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), **Sallin D.**(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), **Lanz G.**(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), **Kyriakidis T.**(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), **Nagel I.**(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), **Cherkaoui R.**(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), **Kayal M.**(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland)

A5543AK**Evaluation and Validation of Norton Approaches for Nonlinear Harmonic Models**

Koch A.S.(TU DORTMUND UNIVERSITY, Germany), **Myrzik J.M.A.**(TU DORTMUND UNIVERSITY, Germany), **Wiesner T.**(RWE GROUP, Germany), **Jendernalik L.**(RWE GROUP, Germany)

A5511JD**Benchmark Low Voltage Distribution Networks Based on Cluster Analysis of Actual Grid Properties**

Dickert J.(TU DRESDEN, Germany), **Domagk M.**(TU DRESDEN, Germany), **Schegner P.**(TU DRESDEN, Germany)

A5382JB**Updated and Validated Power Flow Model of the Main Continental European Transmission Network**

Hutcheon N.(MOTT MACDONALD, United Kingdom), **Bialek J.W.**(DURHAM UNIVERSITY, United Kingdom)

Monday

16h00

Production planning, unit commitment and dispatch*La Meije*

PAPER PRESENTATION

Chair : João P. S. Catalão, UBI

A5438XW**A Two-Stage Robust Optimization for PJM Look-Ahead Unit Commitment**

Wang Q.(ALSTOM GRID, United States), **Wang X.**(ALSTOM GRID, United States), **Cheung K.W.**(ALSTOM GRID, United States), **Guan Y.**(UNIVERSITY OF FLORIDA, United States), **Frederick S.**(PJM INTERCONNECTION, United States)

A5410RP**Spinning Reserve Allocation Using Game Theory**

Petrichenko R.(RIGA TECHNICAL UNIVERSITY, Latvia), **Sauhats A.**(RIGA TECHNICAL UNIVERSITY, Latvia), **Chuvychin V.**(RIGA TECHNICAL UNIVERSITY, Latvia)

A5597TB**Minimizing Communication Cost for Demand Response using State Estimation**

Borsche T.(ETH ZÜRICH, Switzerland), **Oldewurtel F.**(ETH ZÜRICH, Switzerland), **Andersson G.**(ETH ZÜRICH, Switzerland)

A5713MZ**Model Predictive Control Applied to the Long-Term Hydrothermal Scheduling of the Brazilian Power System**

Zambelli M.S.(UNIVERSITY OF CAMPINAS (UNICAMP), Brazil), **Martins L.S.A.**(UNIVERSITY OF CAMPINAS (UNICAMP), Brazil), **Soares S.**(UNIVERSITY OF CAMPINAS (UNICAMP), Brazil)

A5858JP**Stochastic Unit Commitment with Load Uncertainty by Joint Chance-Constrained Programming**

Peralta J.J.(DEP. OF ELECTRICAL ENGINEERING. UNIVERSITY OF MALAGA, Spain), **Pérez-Ruiz J.**(UNIVERSIDAD DE MALAGA, Spain), **de la Torre S.**(UNIVERSIDAD DE MALAGA, Spain)

Monday

16h00

Energy storage systems for power grids I*Mont Blanc*

PAPER PRESENTATION**Chair : Abdelkrim Benchaib, Alstom grid****A6030PH****Aging-Aware NaS Battery Model in a Stochastic Wind-Storage Simulation Framework****Haessigy P.**(SATIE-CNRS, ENS CACHAN, France), **Multon B.**(SATIE-CNRS, ENS CACHAN, France), **Ben Ahmed H.**(SATIE-CNRS, ENS CACHAN, France), **Lascaudy S.**(EDF R&D, France), **Jamy L.**(EDF R&D, France)**A5780CN****Hardware Platform for Testing Battery Storage Systems in the Presence of Renewables****Hill J.**(DREXEL UNIVERSITY, United States), **Nwankpa C.**(DREXEL UNIVERSITY, United States)**A5316PK****Integration of Large Battery Storage System into Distribution Grid with Renewable Generation****Manjunatha A.P.**(ABB AUTOMATION PRODUCTS GMBH, Germany), **Korba P.**(ZURICH UNIVERSITY OF APPLIED SCIENCES, Switzerland), **Stauch V.**(SWISS FEDERAL OFFICE OF METEOROLOGY AND CLIMATOLOGY, Switzerland)**A5630MK****Optimal Operation of a Battery Energy Storage System Considering Degradation Costs****Koller M.**(ETH ZÜRICH, Switzerland), **Borsche T.**(ETH ZÜRICH, Switzerland), **Ulbig A.**(ETH ZÜRICH, Switzerland), **Andersson G.**(ETH ZÜRICH, Switzerland)**A5468GF****The Effects of Coupling Energy Storage to Wind Generation in Italian Electricity Market****Dicorato M.**(POLITECNICO DI BARI, Italy), **Forte G.**(POLITECNICO DI BARI, Italy), **Trovato M.**(POLITECNICO DI BARI, Italy)

Tuesday

9h00

Invited Speakers

Amphitheater

PAPER PRESENTATION

Chair : Nouredine Hadjsaid, G2ELAB

The Birth of PMUs

Phadke A.G.(Virginia Tech, USA)

A Multi-Layer Approach to the Modelling and Assessment of Smart Electricity Systems

Masera M. (JRC-European Commission)

The Three Pillars of Smart Distribution Realized by IEC 61850 Communication

Styczynski Z. (Otto-von-Guericke-Universität Magdeburg, Germany and M. Buchholz , Siemens, Germany)

Tuesday 11h00

Microgrids *Cervin*

PAPER PRESENTATION

Chair : Ion Etxeberria, Ikerlan

A5817HJ

Residential Microgrid Model for Disaster Recovery Operations

Hurt J.(VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY, United States), **Mili L.**(VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY, United States)

A5391MT

Feeder Reconfiguration Using Charged Search System with Real Number Strings

Chu C.C.(NATIONAL TAIPEI UNIVERSITY OF TECHNOLOGY, Taiwan (ROC)), **Tsai M.S.**(NATIONAL TAIPEI UNIVERSITY OF TECHNOLOGY, Taiwan (ROC))

A5961SS

Evaluation of the System Parameters Degree of Influence on the Stability of a DC-AC Microgrid

Sanchez S.(NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (NTNU), Norway), **Molinas M.**(NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (NTNU), Norway)

A5935SD

The Virtual Synchronous Machine and its Equivalence to Droop Control in Converter-based Microgrids

D'Arco S.(SINTEF ENERGY RESEARCH, Norway), **Suu J. A.**(NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (NTNU), Norway)

A5745CM

Microgrids Emergency Management Exploiting EV, Demand Response and Energy Storage Units

Gouveia C.(INESC TEC, Portugal), **Moreira C.L.**(INESC TEC, Portugal), **Peças Lopes J.A.**(INESC TEC, Portugal)

Tuesday

11h00

Energy storage systems for power grids II

Everest

PAPER PRESENTATION**Chair : Marion Perrin, CEA****A5658HD****An Energy Supervision for Distributed Storage Systems to Optimize the Provision of Multiple Services****Dutrieux H.**(EDF R&D, France), **Delille G.**(EDF R&D, France), **Malarange G.**(EDF R&D, France), **Francois B.**(L2EP - ECOLE CENTRALE DE LILLE, France)**A6041IE****Analysis and Comparison of Battery Energy Storage Technologies for Grid Applications****Saez-de-Ibarra A.**(IK4-IKERLAN TECHNOLOGY RESEARCH CENTRE, SPAIN), **Milo A.**(IK4-IKERLAN TECHNOLOGY RESEARCH CENTRE, SPAIN), **Gaztañaga H.**(IK4-IKERLAN TECHNOLOGY RESEARCH CENTRE, SPAIN), **Etxeberria-Otadui I.**(IK4-IKERLAN TECHNOLOGY RESEARCH CENTRE, SPAIN), **Rodríguez P.**(TECHNICAL UNIVERSITY OF CATALONIA, Spain), **Bacha S.**(G2ELAB - UNIVERSITE JOSEPH FOURIER, France), **Debusschère V.**(G2ELAB - GRENOBLE INSTITUTE OF TECHNOLOGY, France)**A5308EI****Development of Battery Aggregation Technology for Smart Grid****Isono E.**(TOSHIBA CORPORATION, Japan), **Ebata Y.**(TOSHIBA CORPORATION, Japan), **Isogai T.**(TOSHIBA CORPORATION, Japan), **Hayashi H.**(TOSHIBA CORPORATION, Japan)**A5611MF****Loss Minimization in MV Distribution Grids by Optimal Management of Energy Storage Device****Farrokhifar M.**(POLITECNICO DI MILANO, Italy), **Grillo S.**(POLITECNICO DI MILANO, Italy), **Tironi E.**(POLITECNICO DI MILANO, Italy)**A5310Rd****Smart Storage: Embedding Local Storage in the Distribution Grid****de Groot R.J.W.**(EINDHOVEN UNIVERSITY OF TECHNOLOGY, Netherlands), **Karaliolios P.**(EINDHOVEN UNIVERSITY OF TECHNOLOGY, Netherlands), **Slootweg J.G.**(EINDHOVEN UNIVERSITY OF TECHNOLOGY, Netherlands), **de Jong E.C.W.**(DNK KEMA, Netherlands), **van Overbeeke F.**(EMFORCE POWER EQUIPMENT B.V., Netherlands)

Tuesday

11h00

Interaction between AC and DC grids

GEM - A303

PAPER PRESENTATION**Chair : Martin Stötzer, Univ. Magdeburg****A5547LC****Optimal Operation of HVDC Links Embedded in an AC Network****Castaing L.**(RTE, France), **Debry M.-S.**(RTE, France), **Bareux G.**(RTE, France), **Beck O.**(RTE, France)**A6066MM****Challenges of Extruded Cable for HVAC and HVDC Power Transmission****Mammeri M.**(SILEC CABLES, France), **Dhuicq B.**(SILEC CABLES, France)**A5590GP****On the Analysis of the DC Dynamics of Multi-Terminal VSC HVDC Systems using Small Signal Modeling****Pinares G.**(CHALMERS UNIVERSITY OF TECHNOLOGY, Sweden), **Bertling Tjernberg L.**(CHALMERS UNIVERSITY OF TECHNOLOGY, Sweden), **Anh Tuan L.**(CHALMERS UNIVERSITY OF TECHNOLOGY, Sweden), **Breitholtz C.**(CHALMERS UNIVERSITY OF TECHNOLOGY, Sweden), **Abdel-Aty E.**(QUANTA TECHNOLOGY, United States)**A5339JR****Distribution Systems Equipped with Power Electronic Transformers****Contreras J.P.**(UNIVERSIDAD AUTONOMA DE OCCIDENTE - CINVESTAV, Mexico), **Ramirez J.M.**(UNIVERSIDAD AUTONOMA DE OCCIDENTE - CINVESTAV, Mexico), **Marin J.V.**(UNIVERSIDAD NACIONAL DE COLOMBIA, Colombia), **Correa G. R.E.**(UNIVERSIDAD NACIONAL DE COLOMBIA, Colombia)**A5637MH****Reactive Current Optimisation for High Power Dual Active Bridge DC/DC Converter****Rahman M.I.**(UNIVERSITY OF ABERDEEN, United Kingdom), **Jovcic D.**(UNIVERSITY OF ABERDEEN, United Kingdom), **Ahmed K.H.**(UNIVERSITY OF ABERDEEN, United Kingdom)

Tuesday

11h00

Combined modeling and assessment of distribution systems

GEM - A305

PAPER PRESENTATION**Chair : François Cochet, Nexans****A5729JS****ICT and Power Distribution Modeling using Complex Networks****Sanchez J.**(G2ELAB - GRENOBLE INSTITUTE OF TECHNOLOGY, France), **Caire R.**(G2ELAB - GRENOBLE INSTITUTE OF TECHNOLOGY, France), **Hadjsaid N.**(G2ELAB - GRENOBLE INSTITUTE OF TECHNOLOGY, France)**A5441SC****Evaluating the Grid Impact of Plug-in Electric Vehicles using Dynamic Commuting Profiles****Chakraborty S.V.**(VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY, United States), **Shukla S.K.**(VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY, United States), **Thorp J.**(VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY, United States)**A5269TV****Control of Dispersed Generation to Regulate Distribution and Support Transmission Voltages****Valverde G.**(UNIVERSITY OF LIÈGE, Belgium), **Van Cutsem T.**(UNIVERSITY OF LIÈGE, Belgium)

Tuesday

11h00

Advanced power system actuators and monitoring

GEM - A306

PAPER PRESENTATION**Chair : Jacques Goudeau, Nexans****A6007MR****Synchronization Method for Synchronous Generator Based on UPFC**

Paz M.C.R.(UFRGS, Brazil), **Obadowski V. N.**(UFRGS, Brazil), **Oliveira M. O.**(UFRGS, Brazil), **Bretas A.S.**(FEDERAL UNIVERSITY OF RIO GRANDE DO SUL, Brazil), **Cruz M. F.**(IFSUL, Brazil), **Braatz L.A.**(IFSUL, Brazil), **Riechel T. L.**(IFSUL, Brazil), **Ugoski P. E. M.**(IFSUL, Brazil), **Richter C. M.**(IFSUL, Brazil), **Lerm A. A. P.**(IFSUL, Brazil), **Severo S.L. S.**(IFSUL, Brazil), **Franco D. T.**(FURG, Brazil), **de F. Ciarelli W.**(AES-TIETE COPMPANY, Brazil)

A5334RC**Intelligent Integral Advanced Metering Infrastructure – iAMI**

Cespedes R.(RCONSULTING GROUP, Colombia), **Parra E.**(RCONSULTING GROUP, Colombia)

A5371CT**A High Speed Control Network Synchronization Jitter Evaluation for Embedded Monitoring and Control in Modular Multilevel Converter**

Toh C.L.(NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (NTNU), Norway), **Norum L.E.**(NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (NTNU), Norway)

A5507SA**Transient Analysis on Different Types of Super Conducting Fault Current Limiters**

Alaraifi S. (MASDAR INSTITUTE OF SCIENCE AND TECHNOLOGY, United Arab Emirates), **El Moursi M.S.** (MASDAR INSTITUTE OF SCIENCE AND TECHNOLOGY, United Arab Emirates), **Zeineldin H.** (CAIRO UNIVERSITY, Egypt)

Tuesday

11h00

Dynamical models

Kilimandjaro

PAPER PRESENTATION**Chair: Lucian Toma, CPB****A5526MP****Simulating the Smart Grid**

Pochacker M.(ALPEN-ADRIA UNIVERSITÄT KLAGENFURT, Austria), **Sobe A.**(UNIVERSITE DE NEUFCHÂTEL, Switzerland), **Elmenreich W.**(UNIVERSITÄT PASSAU, Germany)

A5728AT**A Game Theory Approach on Virtual Synchronous Generator Coordination**

Tzavellas A.(EINDHOVEN UNIVERSITY OF TECHNOLOGY, Netherlands), **Nguyeny P.**(EINDHOVEN UNIVERSITY OF TECHNOLOGY, Netherlands), **Ribeiro P.F.**(EINDHOVEN UNIVERSITY OF TECHNOLOGY, Netherlands), **Klingx W.**(EINDHOVEN UNIVERSITY OF TECHNOLOGY, Netherlands), **Gibescu M.**(DELFT UNIVERSITY OF TECHNOLOGY, Netherlands)

A5782IH**Non-Unique Equilibria in Wind Turbine Models**

Hiskens I.A.(UNIVERSITY OF MICHIGAN, United States)

A5824FZ**Real-Time Voltage Events Detection and Classification Based on Wavelet Transform**

Zaro F.R.(KFUPM, Saudi Arabia), **Abido M.A.**(KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS, Saudi Arabia)

A5583TS**An Environment for the Coordinated Simulation of Power Grids Together with Automation Systems**

Andren F.(AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH, Austria), **Stifter M.**(AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH, Austria), **Strasser T.**(AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH, Austria)

Tuesday

11h00

System planning and renewable integration*La Meije*

PAPER PRESENTATION**Chair : Sébastien Henry, RTE****A5461TM****Wind Power Simulation in Power System Planning Tasks**

Turcik M.(INSTITUTE OF PHYSICAL ENERGETICS, Latvia), **Oleinikova I.**(INSTITUTE OF PHYSICAL ENERGETICS, Latvia), **Kolcun M.**(TUKE FEI KEE, Slovakia)

A5898MA**Maximal DG Indicator to Quantify the Efficiency of Smart Grid Solutions Regarding Renewable Penetration**

Alvarez-Hérault M.C.(G2ELAB - GRENOBLE INSTITUTE OF TECHNOLOGY, France), **Battegay A.**(G2ELAB - GRENOBLE INSTITUTE OF TECHNOLOGY, France), **Gandioli C.**(G2ELAB - GRENOBLE INSTITUTE OF TECHNOLOGY, France), **Descoux J.**(G2ELAB & RTE, France), **Hadjsaid N.**(G2ELAB - GRENOBLE INSTITUTE OF TECHNOLOGY, France), **Tixador P.**(G2ELAB - GRENOBLE INSTITUTE OF TECHNOLOGY, France)

A5660MG**Integrating Smart Solutions into Distribution Network Planning Optimization**

Grond M.O.W.(EINDHOVEN UNIVERSITY OF TECHNOLOGY, Netherlands), **Morren J.**(EINDHOVEN UNIVERSITY OF TECHNOLOGY, Netherlands), **Slootweg J.G.**(EINDHOVEN UNIVERSITY OF TECHNOLOGY, Netherlands)

A5246BR**A Multiobjective Model for Distribution System Planning Based on Tabu Search**

Rodrigues Pereira Junior B.(SÃO PAULO STATE UNIVERSITY (UNESP), Brazil), **Sanches Mantovani J.R.**(SÃO PAULO STATE UNIVERSITY (UNESP), Brazil), **Marcos Cossi A.**(SÃO PAULO STATE UNIVERSITY (UNESP), Brazil), **Contreras J.**(UNIVERSIDAD DE CASTILLA-LA MANCHA, Spain)

A5722VL**Network Extension Planning Considering the Uncertainty of Feed-in from Renewable Energies**

Liebenau V.(TU DORTMUND UNIVERSITY, Germany), **Schwippe J.**(TU DORTMUND UNIVERSITY, Germany), **Kuch S.**(TU DORTMUND UNIVERSITY, Germany), **Rehtanz C.**(TECHNICAL UNIVERSITY DORTMUND, Germany)

Tuesday

11h00

Onshore wind farms*Mont Blanc*

PAPER PRESENTATION**Chair : Mircea Eremia, CPB****A5600AE****Comparison of Short Circuit Current Contribution Between Doubly-Fed Induction Generator Based Wind Turbines and Synchronous Generator****Elnaggar A.K.**(UNIVERSITY OF DUISBURG-ESSEN, Germany), **Rueda J.L.**(UNIVERSITY OF DUISBURG-ESSEN, Germany), **Erlich I.**(UNIVERSITY OF DUISBURG-ESSEN, Germany)**A5684MP****Frequency Support by Wind Farms in Islanded Power Systems with High Wind Power Penetration****Persson M.**(CHALMERS UNIVERSITY OF TECHNOLOGY, Sweden), **Chen P.**(CHALMERS UNIVERSITY OF TECHNOLOGY, Sweden), **Carlson O.**(CHALMERS UNIVERSITY OF TECHNOLOGY, Sweden)**A5752HP****Wind Farms Participation in Frequency Regulation and its Impact on Power System Damping****Pulgar-Painemal H.**(UNIVERSIDAD TECNICA FEDERICO SANTA MARIA, Chile), **Galvez-Cubillos R.**(UNIVERSIDAD TECNICA FEDERICO SANTA MARIA, Chile)**A5680PA****Wind Generation Impact on Isolated Power Systems: The Case of Cyprus****Andrianesis P.**(UNIVERSITY OF THESSALY, Greece), **Liberopoulos G.**(UNIVERSITY OF THESSALY, Greece), **Varnavas C.**(ELECTRICITY AUTHORITY OF CYPRUS, Cyprus)**A5983CB****Wind Power Plants – Challenges for Romanian Power System****Boamba C.E.**(UNIVERSITY "POLITEHNICA" OF BUCHAREST, Romania), **Eremia M.**(UNIVERSITY "POLITEHNICA" OF BUCHAREST, Romania)

Tuesday

14h00

Special Session on Analysis and Simulation of Very Large Power Systems in IEEE TPWRS*Amphitheater*

PAPER PRESENTATION

Chair : Jovica Milanovic, Univ. Manchester

A7978VC**Analysis of Interarea Oscillations Including Governor Effects and Stabilizer Design in South-Eastern Europe****Mantzaris J.**(NATIONAL TECHNICAL UNIVERSITY OF ATHENS (NTUA), Greece), **Metsiou A.**(NATIONAL TECHNICAL UNIVERSITY OF ATHENS (NTUA), Greece), **Vournas C.**(NATIONAL TECHNICAL UNIVERSITY OF ATHENS (NTUA), Greece)**A7975DF****Accelerated and Localized Newton Schemes for Faster Dynamic Simulation of Large Power Systems****Fabozzi D.**(IMPERIAL COLLEGE LONDON, United Kingdom), **Chieh A.S.**(UNIVERSITY OF LIÈGE, Belgium), **Haut B.**(UNIVERSITY OF LIÈGE, Belgium), **Van Cutsem T.**(UNIVERSITY OF LIÈGE, Belgium)**A7977PP****Contingency Ranking with Respect to Overloads in Very Large Power Systems Taking into Account Uncertainty, Preventive and Corrective Actions****Fliscounakis S.**(RTE, France), **Panciatici P.**(RTE, France), **Capitanescu F.**(UNIVERSITY OF LUXEMBOURG, Luxembourg), **Wehenkel L.**(RTE, France)**A7979GM****Tight and Compact MILP Formulation for the Thermal Unit Commitment Problem****Morales G.**(UNIVERSIDAD PONTIFICIA COMILLAS, Spain), **Latorre J.M.**(UNIVERSIDAD PONTIFICIA COMILLAS, Spain), **Ramos A.**(UNIVERSIDAD PONTIFICIA COMILLAS, Spain)**A7976PB****European Market Integration with Mixed Network Representation Schemes****Biskas P.N.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece), **Chatzigiannis D.I.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece), **Dourbois G.A.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece), **Bakirtzis A.G.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece)

Tuesday 14h00

Demand response for grid energy management *Cervin*

PAPER PRESENTATION

Chair : Rene Kamphuis, TNO

A5378SW

Optimal Frequency Support by Dynamic Demand

Weckx S.(KATHOLIEKE UNIVERSITEIT LEUVEN, Netherlands), **Driesen J.**(KATHOLIEKE UNIVERSITEIT LEUVEN, Belgium), **D'hulst R.**(VITO, Netherlands)

A5931NM

Control Strategies and Infrastructure for a Dynamic Energy Management System (DEMS)

Moskalenko N.(OTTO VON GUERICKE UNIVERSITY MAGDEBURG, Germany), **Lombardi P.**(FRAUNHOFER INSTITUTE FOR FACTORY OPERATION AND AUTOMATION (IFF), Germany), **Komarnicki P.**(FRAUNHOFER INSTITUTE FOR FACTORY OPERATION AND AUTOMATION (IFF), Germany)

A5855AB

Power Quality Disturbances Caused by Modern Lighting Equipment (CFL and LED)

Blanco A.M.(TECHNISCHE UNIVERSITEAT DRESDEN, Germany), **Stiegler R.**(TECHNISCHE UNIVERSITEAT DRESDEN, Germany), **Meyer J.**(TECHNISCHE UNIVERSITEAT DRESDEN, Germany)

A5448NM

Smart Grids and Reliability of Power Supply: Demand Response Impact on Future Power Mixes

Bouckaert S.(MINES PARISTECH, France), **Mazauric V.**(SCHNEIDER ELECTRIC, France), **Assoumou E.**(MINES PARISTECH, France), **Maizi N.**(MINES PARISTECH, France)

A5237MZ

An Event-Driven Energy Management System for Planned Control of Thermostatic Loads

Alparslan Zehir M.A.(ISTANBUL TECHNICAL UNIVERSITY, Turkey), **Batman A.**(ISTANBUL TECHNICAL UNIVERSITY, Turkey), **Bagriyanik M.**(ISTANBUL TECHNICAL UNIVERSITY, Turkey)

Tuesday

14h00

**Advanced technologies for Smart Grids issues - smart protections,
smart converters**

Everest

PAPER PRESENTATION

Chair : Mohamed Mammeri, General Cable

A5376CR**Dynamic Protection Security Assessment, a Technique for Blackout Prevention****Romeis C.**(FRIEDRICH ALEXANDER UNIVERSITY ERLANGEN-NUREMBERG, Germany), **Jaeger J.**(FRIEDRICH ALEXANDER UNIVERSITY ERLANGEN-NUREMBERG, Germany)**A5838MB****Optimal Converter Placement in the Interconnection of Railway Power System and Public Power Grid Based on Cost-Reliability Approach****Bozorg M.**(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), **Lopez D.**(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), **Cherkaoui R.**(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland)**A6040AF****Placement of HVDC Links for Power Grid Stabilization during Transients****Fuchs A.**(ETH ZÜRICH, Switzerland), **Morari M.**(ETH ZÜRICH, Switzerland)**A5411LN****Damping of Power Swings in Large-Scale AC Power System by Simultaneous Control of HVDC Links and Series FACTS Devices****Nogal L.**(WARSAW UNIVERSITY OF TECHNOLOGY, Poland)**A5595NN****Single End Self Clearing Transient Fault Location for Preventive Maintenance of Power Cable Systems****Nguyen Ngoc M.**(GRENOBLE INSTITUTE OF TECHNOLOGY (GRENOBLE INP), France), **Hadjsaid N.**(G2ELAB - GRENOBLE INSTITUTE OF TECHNOLOGY, France), **Cochet F.**(NEXANS, France)

Tuesday

14h00

Smart Grids modelling & optimisation*La Meije*

PAPER PRESENTATION**Chair : Oswaldo Kashny Schneider Electric****A5943FW****A Mixed AC/DC OPF Incorporating Multi-Terminal VSC-HVDC and its Application on Transmission Loss Minimization**

Feng W.(CHALMERS UNIVERSITY OF TECHNOLOGY, Sweden), **Bertling Tjernberg L.**(CHALMERS UNIVERSITY OF TECHNOLOGY, Sweden), **Anh Tuan L.**(CHALMERS UNIVERSITY OF TECHNOLOGY, Sweden), **Mannikoff A.**(SP TECHNICAL RESEARCH INSTITUTE OF SWEDEN, Sweden), **Bergman A.**(SP TECHNICAL RESEARCH INSTITUTE OF SWEDEN, Sweden)

A5792DT**Experimental Evidences of Redistribution Phenomenom in Supercapacitors and Consequent Dynamic Modeling Improvement**

Torregrossa D.(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), **Bahramipناه M.**(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), **Cherkaoui R.**(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), **Paolone M.**(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland)

A5913NK**Controller Design with Model Identification Approach in Wide Area Power System**

Kishor N.(AALTO UNIVERSITY, Finland), **Haarla L.C.**(AALTO UNIVERSITY, Finland), **Turunen J.**(AALTO UNIVERSITY, Finland)

A6047NK**Fixed-Order Controller for Reduced-Order Model for Damping of Power Oscillation in Wide Area Network**

Kishor N.(AALTO UNIVERSITY, Finland), **Haarla L.C.**(AALTO UNIVERSITY, Finland), **Seppänen J.M.**(AALTO UNIVERSITY, Finland)

A5343TP**Multi-Agent Approach for Power System Protection in a Smart Grid Context**

Abedini R.(POLYTECHNIC INSTITUTE OF PORTO (ISEP/IPP), Portugal), **Pinto T.**(POLYTECHNIC INSTITUTE OF PORTO (ISEP/IPP), Portugal), **Morais H.**(POLYTECHNIC INSTITUTE OF PORTO (ISEP/IPP), Portugal), **Vale Z.**(POLYTECHNIC INSTITUTE OF PORTO (ISEP/IPP), Portugal)

Tuesday

14h00

Advanced power electronics systems application for power grids

GEM - A303

PAPER PRESENTATION

Chair : Corinne Alonso, LAAS

A5769AL**A Digital PLL for Synchronization of Single Phase Sources with the Utility Grid****Braatz L.A.**(IFSUL, Brazil), **Schubert Severo S.L.**(IFSUL, Brazil), **Perleberg Lerm A.A.**(IFSUL, Brazil), **de Freitas Ciarelli W.**(AES - TIETE, Brazil)**A5686LM****Charging and Discharging Tests for Obtaining an Accurate Dynamic Electro-Thermal Model of High Power Lithium-Ion Pack System for Hybrid and EV Applications****Mihet-Popa L.**(TECHNICAL UNIVERSITY OF DENMARK, Denmark), **Camacho O.M.F.**(TECHNICAL UNIVERSITY OF DENMARK, Denmark), **Norgard P.B.**(TECHNICAL UNIVERSITY OF DENMARK, Denmark)**A5544HG****Impact of Battery Energy Storage System on Dynamic Properties of Isolated Power Systems****Guo H.**(THE UNIVERSITY OF MANCHESTER, United Kingdom), **Crossley P.A.**(THE UNIVERSITY OF MANCHESTER, United Kingdom), **Terzija V.**(THE UNIVERSITY OF MANCHESTER, United Kingdom)

Tuesday

14h00

Renewable energy, gas and storage impact assessment

GEM - A305

PAPER PRESENTATION**Chair : Olivier Métais, ENSE3****A5650CS****Evaluation of the Capacity Credit of RES: The Greek Case**

Simoglou C.K.(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece), **Biskas P.N.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece), **Bakirtzis E.A.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece), **Matenli A.N.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece), **Petridis A.I.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece), **Bakirtzis A.G.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece)

A5998CB**Impact of Natural Gas Supply, Renewable Penetration and Demand Trends on Power System Maintenance**

Baslis C.(HERON II VIOTIAS S.A., Greece), **Biskas P.N.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece), **Bakirtzis A.G.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece)

A5618AR**PV Farm Reliability: An Investigation**

Rajabi-Ghahnavieh R. (SHARIF ENERGY RESEARCH INSTITUTE, Iran)

A5278CB**Impact of Natural Gas Network Reliability on Power Generation Availability**

Machado R.H.S.(EPE - BRAZILIAN ENERGY RESEARCH COMPANY, Brazil), **Borges C.L.T.**(FEDERAL UNIVERSITY OF RIO DE JANEIRO, Brazil)

A5759JL**The Influence of Climate Change on Hydro Generation in Brazil**

Scianni L.A.(MARANGON CONSULTORIA & ENGENHARIA, Brazil), **Queiroz A.R.**(MARANGON CONSULTORIA & ENGENHARIA, Brazil), **Marangon Lima L.M.**(MARANGON CONSULTORIA & ENGENHARIA, Brazil), **Lima J. W. M.**(UNIVERSIDADE FEDERAL DE ITAJUBÁ, Brazil)

Tuesday

14h00

Smartgrids issues and T&D stability

GEM - A306

PAPER PRESENTATION**Chair : Stéphane Biscaglia, Ademe****A5601IJ****Integrated and Autonomous Smart Grid Concept in Practice – The Frankfurt Experience with a Focus on Active Voltage and Load Flow Management****Birkner P.**(MAINOVA AG, Germany), **Antoni J.**(MAINOVA AG, Germany), **Jeromin I.**(MAINOVA AG, Germany)**A5766JM****Power System Stabilizer Design Using Multi-Scenarios****Menezes J. C. Y.**(FEDERAL UNIVERSITY OF SANTA CATARINA, Brazil), **Dill G.K.**(FEDERAL UNIVERSITY OF SANTA CATARINA, Brazil), **Silveira e Silva A.**(FEDERAL UNIVERSITY OF SANTA CATARINA, Brazil)**A5325MP****Reliability Analysis of Defense Plans Against Slow and Fast Cascading Phenomena****Panteli M.**(THE UNIVERSITY OF MANCHESTER, United Kingdom), **Crossley P.A.**(THE UNIVERSITY OF MANCHESTER, United Kingdom), **Kirschen D.S.**(UNIVERSITY OF WASHINGTON, United States)**A5545JP****Lightnings Excite Isolated High Voltage Networks to Swing****Plesch J.**(GRAZ UNIVERSITY OF TECHNOLOGY, Austria), **Pack S.**(GRAZ UNIVERSITY OF TECHNOLOGY, Austria), **Fickert L.**(GRAZ UNIVERSITY OF TECHNOLOGY, Austria), **Raunig C.**(GRAZ UNIVERSITY OF TECHNOLOGY, Austria), **Achleitner G.**(AUSTRIAN POWER GRID AG, Austria)

Tuesday

14h00

Electromagnetic models

Kilimandjaro

PAPER PRESENTATION**Chair : Rafael Mihalic, Univ. Ljubljana****A5945CR****A New Approach for the Estimation of Interference Phenomena Between Coupled Transmission Lines**

Raunig C.(GRAZ UNIVERSITY OF TECHNOLOGY, Austria), **Schmautzer E.**(GRAZ UNIVERSITY OF TECHNOLOGY, Austria), **Fickert L.**(GRAZ UNIVERSITY OF TECHNOLOGY, Austria), **Achleitner G.**(AUSTRIAN POWER GRID AG, Austria)

A5685GP**On the Use of the Finite Conductor Length Approach for the Calculation of Electromagnetic Transients in Overhead Transmission Lines**

Chrysochos A.I.(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece), **Kaloudas C.G.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece), **Papadopoulos T.A.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece), **Papagiannis G.K.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece)

A5199RR**On the Use of Electromagnetic Time Reversal to Locate Faults in Series-Compensated Transmission Lines '**

Razzaghi R.(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), **Lugrin G.**(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), **Paolone M.**(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), **Rachidi F.**(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland)

A5568LW**Equivalent Single-Layer Power Cable Sheath for Transient Modeling of Double-Layer Sheaths**

de Bruyn B.J.H.(EINDHOVEN UNIVERSITY OF TECHNOLOGY, Netherlands), **Wu L.**(EINDHOVEN UNIVERSITY OF TECHNOLOGY, Netherlands), **Wouters P.A.A.F.**(EINDHOVEN UNIVERSITY OF TECHNOLOGY, Netherlands), **Steennis E.F.**(EINDHOVEN UNIVERSITY OF TECHNOLOGY, Netherlands)

Tuesday

14h00

Offshore wind farms II*Mont Blanc*

PAPER PRESENTATION

Chair : Zita Vale, ISEP

A5842MS**A Redundancy Optimization Model Applied to Offshore Wind Turbine Power Converters**

Shafiee M.(CHALMERS UNIVERSITY OF TECHNOLOGY AND UNIVERSITY OF GOTHENBURG, Sweden), **Patriksson M.**(CHALMERS UNIVERSITY OF TECHNOLOGY AND UNIVERSITY OF GOTHENBURG, Sweden), **Strömberg A.-B.**(CHALMERS UNIVERSITY OF TECHNOLOGY AND UNIVERSITY OF GOTHENBURG, Sweden), **Bertling Tjernberg L.**(CHALMERS UNIVERSITY OF TECHNOLOGY, Sweden)

A5974AJ**Offshore Wind Farm Inter-Array Cable Layout**

Jenkins A.M.(MOTT MACDONALD, United Kingdom), **Scutariu M.**(MOTT MACDONALD, United Kingdom), **Smith K.S.**(MOTT MACDONALD, United Kingdom)

A5401KT**Adaptive Secondary Voltage Control Strategy for Grid Interface of Large Scale Wind Park**

Torchyan K.(MASDAR INSTITUTE OF SCIENCE AND TECHNOLOGY, United Arab Emirates), **Elmoursi M.S.**(MASDAR INSTITUTE OF SCIENCE AND TECHNOLOGY, United Arab Emirates), **Xiao W.**(MASDAR INSTITUTE OF SCIENCE AND TECHNOLOGY, United Arab Emirates)

A5481FG**Optimal Offshore Wind Farms' Collector Design Based on the Multiple Travelling Salesman Problem and Genetic Algorithm**

Gonzalez-Longatt F.M.(COVENTRY UNIVERSITY, United Kingdom)

A5624DO**Optimization of the Internal Grid of an Offshore Wind Farm Using Genetic Algorithm**

Dahmani O.(UNIVERSITY OF NANTES, France), **Bourguet S.**(UNIVERSITY OF NANTES, France), **Rhein P.**(STX FRANCE SOLUTIONS, France), **Josse L.**(STX FRANCE SOLUTIONS, France), **Guerin P.**(UNIVERSITY OF NANTES, France), **Machmoum M.**(UNIVERSITY OF NANTES, France)

Tuesday

16h00

Distributed generation management

Cervin

PAPER PRESENTATION

Chair : Christophe Plaud, ERDF

A5957FB**Advanced Simulation Tool for the Optimal Management of Photovoltaic Generation in Combined Systems****Bourry F.**(CEA-INES, France), **Ha D.L.**(CEA-INES, France)**A6002SP****Development of Control Strategies for Low Voltage Networks with High Penetration Level of Distributed Generation****Palis S.**(UNIVERSITY OF MAGDEBURG, Germany), **Kopp O.**(UNIVERSITY OF MAGDEBURG, Germany), **Höme S.**(UNIVERSITY OF MAGDEBURG, Germany), **Palis D.**(MOSCOW POWER ENGINEERING INSTITUTE, Russia)**A5372XS****Transient Analysis and Control for Distributed Generation Operation Mode Switching****Han M.**(NORTH CHINA ELECTRIC POWER UNIVERSITY, China), **Su X.**(NORTH CHINA ELECTRIC POWER UNIVERSITY, China), **Lin Sh.**(NORTH CHINA ELECTRIC POWER UNIVERSITY, China), **Zhao Z.**(NORTH CHINA ELECTRIC POWER UNIVERSITY, China)**A5197JS****Investigating the Effect of Distributed Generators on Traditional Protection in Radial Distribution Systems****Sa'ed J. A.**(UNIVERSITY OF PALERMO, Italy), **Favuzza S.**(UNIVERSITY OF PALERMO, Italy), **Ippolito M. G.**(UNIVERSITY OF PALERMO, Italy), **Massaro F.**(UNIVERSITY OF PALERMO, Italy)**A5893NL****Control Strategies of a Hybrid PV-Diesel-Battery System in Different Operation Modes****Luu N.A.**(CEA-INES, France), **Tran-Quoc T.**(CEA-INES, France), **Bacha S.**(G2ELAB - UNIVERSITE JOSEPH FOURIER, France)

Tuesday

16h00

T&D security, reliability, self healing

Everest

PAPER PRESENTATION

Chair : Lina Bertling, Chalmers

A5232JQ**A Graph Theory Based New Approach for Power System Restoration****Quirós-Tortós J.**(THE UNIVERSITY OF MANCHESTER, United Kingdom), **Terzija V.**(THE UNIVERSITY OF MANCHESTER, United Kingdom)**A5799ZR****Dynamic Security Assessment of Danish Power System Based on Decision Trees: Today and Tomorrow****Rather Z.H.**(AALBORG UNIVERSITY & KK-ELECTRONIC.COM, Denmark), **Liu C.**(AALBORG UNIVERSITY, Denmark), **Chen Z.**(AALBORG UNIVERSITY, Denmark), **Bak C.L.**(AALBORG UNIVERSITY, Denmark), **Thøgersen P.**(INNOVATION CENTER KK-ELECTRONIC A/S, Denmark)**A5926GO****A Recursive Harmony Search Algorithm for Security Constrained Transmission Expansion Planning****Orfanos G. A.**(NATIONAL TECHNICAL UNIVERSITY OF ATHENS (NTUA), Greece), **Georgilakis P. S.**(NATIONAL TECHNICAL UNIVERSITY OF ATHENS (NTUA), Greece), **Hatziargyriou N. D.**(NATIONAL TECHNICAL UNIVERSITY OF ATHENS (NTUA), Greece)**A5625TF****Application of Modal Estimation Techniques for Small Signal Stability Assessment in Distribution Systems Considering Measurement Noise****Fernandes T.C.C.**(UNIVERSITY OF SAO PAULO, France), **Geraldi E.L.**(UNIVERSITY OF SAO PAULO, France), **Ramos Jr. R.A.**(UNIVERSITY OF SAO PAULO, France)

Tuesday

16h00

Advanced protective devices for Power Systems

GEM - A303

PAPER PRESENTATION**Chair : Arun Phadke, Virginia Tech****A5519WG****Development and Operation in Live-Grid of 220kV Superconductive Fault Current Limiter**

Gong W.Z.(INNOPOWER SUPERCONDUCTOR CABLE CO., LTD., China), **Wang H.Z.**(INNOPOWER SUPERCONDUCTOR CABLE CO., LTD., China), **Sun Y.W.**(INNOPOWER SUPERCONDUCTOR CABLE CO., LTD., China), **Hong H.**(INNOPOWER SUPERCONDUCTOR CABLE CO., LTD., China), **Xin Y.**(INNOPOWER SUPERCONDUCTOR CABLE CO., LTD., China)

A5528AE**Investigation of the Effect of Current and Voltage Transformers' Errors on Operation of a Differential-Like Impedance Relaying Algorithm**

El-Hadidy A.(TU DORTMUND UNIVERSITY, Germany), **Rehtanz C.**(TECHNICAL UNIVERSITY DORTMUND, Germany), **Tusche M.**(RUHR UNIVERSITY BOCHUM, Germany), **Langesberg C.**(RUHR UNIVERSITY BOCHUM, Germany)

A5589HE**Leveraging Advances in Wide Area Analytics in Grid Operations**

Endow H.(ALSTOM T&D INDIA LTD., India), **Bandyo I.**(ALSTOM T&D INDIA LTD., India), **Folkes R.**(PSYMETRIX LTD, Scotland), **McNAbb Patrick**(PSYMETRIX LTD, Scotland), **Stearn N.**(PSYMETRIX LTD, Scotland)

A5549FL**Performance Assessment of Special Protection Schemes Introduced by Renewable Energy Network Integration**

Lazar F.(ELIA ENGINEERING, Belgium), **Uytersprot L.**(ELIA ENGINEERING, Belgium)

A5977EB**Results of Modern Pilot Schemes Tests for General Electric Line Protection Devices**

Bartosiewicz E.(WARSAW UNIVERSITY OF TECHNOLOGY, Poland), **Januszewski M.**(WARSAW UNIVERSITY OF TECHNOLOGY, Poland), **Rasolomampionona D.D.**(WARSAW UNIVERSITY OF TECHNOLOGY, Poland)

Tuesday

16h00

Power system monitoring and control (results from the FP7 Real-Smart project)

GEM - A305

PAPER PRESENTATION

Chair : Luigi Vanfretti, KTH

A5651MW**Damping Low Frequency Oscillations with Hydro Governors****Weixelbraun M.**(UNIVERSITY OF TECHNOLOGY GRAZ, Austria), **Renner H.**(UNIVERSITY OF TECHNOLOGY GRAZ, Austria), **Kirkeluten O.**(STATNETT SF, Norway), **Lovlund S.**(STATNETT SF, Norway)**A5561LP****A Test System Model for Stability Studies of UK Power Grid****Kunjumammed L.P.**(IMPERIAL COLLEGE LONDON, United Kingdom), **Pal B.C.**(IMPERIAL COLLEGE LONDON, United Kingdom), **Thornhill N.F.**(IMPERIAL COLLEGE LONDON, United Kingdom)**A5472JS****Modal Analysis of Power Systems with Eigendecomposition of Multivariate Autoregressive Models****Seppänen J.M.**(AALTO UNIVERSITY, Finland), **Haarla L.C.**(AALTO UNIVERSITY, Finland), **Turunen J.**(AALTO UNIVERSITY, Finland)**A5473NT****Monitoring and Management of Power Transmission Dynamics in an Industrial Smartgrid****Thornhill N.F.**(IMPERIAL COLLEGE LONDON, United Kingdom), **Fabozzi D.**(IMPERIAL COLLEGE LONDON, United Kingdom), **Pal B.C.**(IMPERIAL COLLEGE LONDON, United Kingdom)**A5861AM****Survey of Measurement- and Intelligence-Based Applications in Power Systems****Marinakos A.**(ABB CORPORATE RESEARCH, Switzerland), **Larsson M.**(ABB CORPORATE RESEARCH, Switzerland)

Tuesday

16h00

Stochastic and techno-economical approaches

GEM - A306

PAPER PRESENTATION

Chair : Luc Philippot, Netceler

A5594HA**Stochastic Scheduling for a Price-Maker Hydro Producer Considering Forward Trading****Abgottspon H.**(ETH ZÜRICH, Switzerland), **Andersson G.**(ETH ZÜRICH, Switzerland)**A6013CR****A Stochastic Economic Dispatch Model Considering Demand and Generating Uncertainties****Arriagada E.**(UNIVERSIDAD CATOLICA DE LA SANTISIMA CONCEPCION, Chile), **López E.**(UNIVERSIDAD DE CONCEPCION, Chile), **López M.**(PONTIFICA UNIVERSIDAD CATOLICA DE VALPARAISO, Chile), **Vannier J.-C.**(SUPÉLEC E3S, France), **Roa C.**(UNIVERSIDAD DE CONCEPCION, Chile)**A5655SL****Voltage Control Capabilities of Biogas Plants in Parallel Operation – Technical and Economical Assessment****Löther S.**(FRAUNHOFER INSTITUTE FOR WIND ENERGY AND ENERGY SYSTEM TECHNOLOGY (IWES), Germany), **Stetz T.**(FRAUNHOFER INSTITUTE FOR WIND ENERGY AND ENERGY SYSTEM TECHNOLOGY (IWES), Germany), **Braun M.**(FRAUNHOFER INSTITUTE FOR WIND ENERGY AND ENERGY SYSTEM TECHNOLOGY (IWES) & UNIVERSITY OF KASSEL, Germany)**A5914TS****Use of Economic Index for Optimal Storage Dimensioning with an Autonomous Power System****Sokolnikova T.**(NR IRKUTSK STATE TECHNICAL UNIVERSITY, Russia), **Suslov K.**(IRKUTSK STATE TECHNICAL UNIVERSITY, Russia), **Lombardi P.**(FRAUNHOFER INSTITUTE FOR FACTORY OPERATION AND AUTOMATION (IFF), Germany), **Hauer I.**(OTTO VON GUERICKE UNIVERSITY MAGDEBURG, Germany), **Styczynski Z.A.**(OTTO VON GUERICKE UNIVERSITY MAGDEBURG, Germany)

Tuesday

16h00

Forecasting and probabilistic methods

Kilimandjaro

PAPER PRESENTATION**Chair : Stéphane Plois, GSCOP****A5353jm****Quantification of Aleatory and Epistemic Uncertainty in Bulk Power System Reliability Evaluation****Awadallah S.K.E.**(THE UNIVERSITY OF MANCHESTER, United Kingdom), **Milanović J.V.**(THE UNIVERSITY OF MANCHESTER, United Kingdom)**A5447VK****Hybrid Genetic Algorithms for Forecasting Power Systems State Variables****Kurbatsky V.**(ISEM SB RAS, Russia), **Tomin N.**(ENERGY SYSTEMS INSTITUTE, SB RAS, Russia), **Sidorov D.**(ISEM SB RAS, Russia), **Spiryaev V.**(ISEM SB RAS, Russia)**A5416FK****Determining Load Profiles with Artificial Evolution****Krüger F.**(UNIVERSITÉ DE STRASBOURG - ELECTRICITÉ DE STRASBOURG, France), **Wagner D.**(ELECTRICITE DE STRASBOURG, France), **Collet P.**(UNIVERSITÉ DE STRASBOURG, France)**A5450PB****An Approach for Self Evolving Neural Network Based Algorithm for Fault Prognosis in Wind Turbines****Bangalore P.**(CHALMERS UNIVERSITY OF TECHNOLOGY, Sweden), **Tjernberg L.B.**(CHALMERS UNIVERSITY OF TECHNOLOGY, Sweden)**A5527CB****ANN Techniques for Power Consumption Forecasting****Barbulescu C.**(POLITEHNICA UNIVERSITY OF TIMISOARA, Romania), **Kilyeni S.**(POLITEHNICA UNIVERSITY OF TIMISOARA, Romania), **Simo A.**(POLITEHNICA UNIVERSITY OF TIMISOARA, Romania), **Pop O.**(POLITEHNICA UNIVERSITY OF TIMISOARA, Romania), **Oros C.**(POLITEHNICA UNIVERSITY OF TIMISOARA, Romania), **Schiopu R.**(POLITEHNICA UNIVERSITY OF TIMISOARA, Romania), **Deacu A.**(POLITEHNICA UNIVERSITY OF TIMISOARA, Romania)

Tuesday

16h00

Smart Grids components optimal management*La Meije*

PAPER PRESENTATION**Chair : Arnaud Allais, NEXANS****A5379WZ****Customer Power Consumption Optimization Based on Intelligent Assessing Model**

Zhao W.(IBM RESEARCH - CHINA, China), **Zhou G.**(IBM RESEARCH - CHINA, China), **Lv H.**(IBM RESEARCH - CHINA, China), **Jin F.**(IBM RESEARCH - CHINA, China), **Ma J.**(IBM RESEARCH - CHINA, China), **Yin W.**(IBM RESEARCH - CHINA, China), **Han Mi.**(IBM RESEARCH - CHINA, China), **Yu H.**(IBM RESEARCH - CHINA, China), **Dong J.**(IBM RESEARCH - CHINA, China)

A5492LH**Fuzzy and Parametric Method for Selfconfiguration of Home Energy Manager System**

Guillemin S.(CEA, France), **Ha D.L.**(CEA-INES, France)

A5994AU**Impacts of Forecast Accuracy on Grid Integration of Renewable Energy Sources**

Lenzi V.(ETH ZÜRICH, Switzerland), **Ulbig A.**(ETH ZÜRICH, Switzerland), **Andersson G.**(ETH ZÜRICH, Switzerland)

A6063RC**Optimal Location and Sizing of Distributed Storage Systems in Active Distribution Networks**

Nick M.(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), **Hohmann M.**(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), **Cherkaoui R.**(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), **Paolone M.**(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland)

A5617YO**Optimal Operation Scheduling and Economical Evaluation Method of Battery Energy Storage System in Power System with a Large Penetration of Photovoltaic Generation**

Oka Y.(THE UNIVERSITY OF TOKYO, Japan), **Yokoyama A.**(THE UNIVERSITY OF TOKYO, Japan)

Tuesday

16h00

Grid integration and management of renewable energy systems I*Mont Blanc*

PAPER PRESENTATION**Chair : Alain Mallot, Schneider Electric****A5421YH****Active Voltage Control of Distribution Networks with Distributed Generation****Yujun H.**(SUPÉLEC E3S, France), **Petit M.**(SUPÉLEC E3S, France)**A5244BC****Benchmark Networks for Grid Integration Impact Studies of Large PV Plants****Crăciun B.I.**(AALBORG UNIVERSITY, Denmark), **Kerekes T.**(AALBORG UNIVERSITY, Denmark), **Sér D.**(AALBORG UNIVERSITY, Denmark), **Teodorescu R.**(AALBORG UNIVERSITY, Denmark), **Timbus A.**(ABB CORPORATE RESEARCH, ZÜRICH, Switzerland)**A5735JR****Design and Implementation of Battery Management System by Estimating the SOC and SOH Online****Ramirez J.M.**(UNIVERSIDAD AUTONOMA DE OCCIDENTE - CINVESTAV, Mexico), **Salome B.J.**(CINVESTAV, Mexico), **Salome B.A.**(CINVESTAV, Mexico)**A5580AM****Energy Storage Integration Into Grid Connected Utility-Scale Photovoltaic Systems****Doukas D.I.**(ABB AB, CORPORATE RESEARCH, Sweden), **Bakas P.**(ABB AB, CORPORATE RESEARCH, Sweden), **Marinopoulos A.**(ABB AB, CORPORATE RESEARCH, Sweden), **Kim H.**(ABB AB, CORPORATE RESEARCH, United States)

Wednesday 9h00

Energy flow management Cervin

PAPER PRESENTATION

Chair: Ali Abur, Northeastern University Boston

A5554SB

Available Power Calculation in the LV Grid and its Use for Energy Balancing

Groenbaek J.(FTW TELECOMMUNICATIONS RESEARCH CENTER, Austria), **Bessler S.**(FTW TELECOMMUNICATIONS RESEARCH CENTER, Austria), **Wallentin L.**(ALCATEL LUCENT, Austria), **Sitter H.**(KELAG-NETZ GMHB, Austria)

A5656VI

Advanced Functions for DSOs Control Center

Berizzi A.(POLITECNICO DI MILANO, Italy), **Bovo C.**(POLITECNICO DI MILANO, Italy), **Ilea V.**(POLITECNICO DI MILANO, Italy), **Merlo M.**(POLITECNICO DI MILANO, Italy), **Monfredini G.**(POLITECNICO DI MILANO, Italy), **Subasic M.**(POLITECNICO DI MILANO, Italy), **Arrigoni C.**(SIEMENS SPA, Italy), **Zanellini F.**(SIEMENS SPA, Italy), **Corti F.**(SIEMENS SPA, Italy), **Rochiran I.**(SIEMENS SPA, Italy)

A6025CB

Deterministic Optimal Power Flow for Smart Grid Short-Term Predictive Energy Management

Benoit C.(G2ELAB - GRENOBLE INSTITUTE OF TECHNOLOGY, France), **Mercier A.**(G2ELAB - GRENOBLE INSTITUTE OF TECHNOLOGY, France), **Bésanger Y.**(G2ELAB - GRENOBLE INSTITUTE OF TECHNOLOGY, France), **Wurtz F.**(G2ELAB - CNRS, France)

A5489YJ

Millener Project

Chardin-Segui T.(SCHNEIDER ELECTRIC, France), **Mathiou S.**(SCHNEIDER ELECTRIC, France), **Jeanjean Y.**(SCHNEIDER ELECTRIC, France)

A5985rk

A Power Flow Control Strategy for High Energy Efficient Smart LED Lighting System Powered by PV and MPPT Controlled DC Grid

Kadri R.(HEI LILLE - L2EP, France), **Saudemont C.**(HEI LILLE - L2EP, France), **Robyns B.**(HEI LILLE - L2EP, France), **Passchier E.**(EIFFAGE ENERGIE, France), **Millecamps A.**(EIFFAGE ENERGIE, France), **Grave J.-M.**(EIFFAGE ENERGIE, France)

Wednesday

9h00

Power System frequency/ voltage stability & control

Everest

PAPER PRESENTATION

Chair: Patrick Pantiatucci, RTE

A5582YT**An Intelligent Load Shedding Mechanism for Maintaining Frequency Stability****Tofis Y.**(UNIVERSITY OF CYPRUS, Cyprus), **Hadjidemetriou L.**(UNIVERSITY OF CYPRUS, Cyprus), **Kyriakides E.**(UNIVERSITY OF CYPRUS, Cyprus)**A5272TV****Exploiting Localization for Fast Power System Dynamic Simulations****Aristidou P.**(UNIVERSITY OF LIÈGE, Belgium), **Fabozzi D.**(IMPERIAL COLLEGE LONDON, United Kingdom), **Van Cutsem T.**(UNIVERSITY OF LIÈGE, Belgium)**A5900CL****Voltage Stability Monitoring and Control Studies in the Hellenic Interconnected System****Lambrou C.**(NATIONAL TECHNICAL UNIVERSITY OF ATHENS (NTUA), Greece), **Vournas C.**(NATIONAL TECHNICAL UNIVERSITY OF ATHENS (NTUA), Greece), **Christoforidis G.**(INDEPENDENT POWER TRANSMISSION OPERATOR, Greece), **Kambouris J.**(INDEPENDENT POWER TRANSMISSION OPERATOR, Greece)**A5357KK****Study on Short-Term Voltage Stability Improvement Using Batteries on Extra-High Voltage Network****Kawabe K.**(THE UNIVERSITY OF TOKYO, Japan), **Yokoyama A.**(THE UNIVERSITY OF TOKYO, Japan)**A5662GD****Taking Advantage of Load Voltage Sensitivity to Stabilize Power System Frequency****Delille G.**(EDF R&D, France), **Yuan J.**(EDF R&D, France), **Capely L.**(EDF R&D, France)

Wednesday

9h00

Energy markets design and price behavior*Mont Blanc 3&4*

PAPER PRESENTATION

Chair : Gerard Doorman, NTNU

A5284PC**A Multi-Objective Price-Based Model in a Combined Market of Energy with Uncertain Capacity Availability****Felix T.A.**(UNIVERSITY OF BRASILIA, Brazil), **Cuervo P.**(UNIVERSITY OF BRASILIA, Brazil)**A5467LM****Voltage Dependent Pricing in DC Distribution Grids****Mackay L.**(ETH ZÜRICH, Switzerland), **Imhof M.**(ETH ZÜRICH, Switzerland), **Wiget R.**(ETH ZÜRICH, Switzerland),
Andersson G.(ETH ZÜRICH, Switzerland)**A5895YS****Economic Dispatch Model Considering Policy-Guided Carbon Trading Mechanism****Song Y.**(THE UNIVERSITY OF HONG KONG, China), **Zhong J.**(THE UNIVERSITY OF HONG KONG, China), **Liu J.**(GUANGDONG POWERGRID CORPORATION, China), **Li P.**(GUANGDONG POWERGRID CORPORATION, China)**A5696GK****Optimal Bidding in Sequential Physical Markets – a Literature Review and Framework Discussion****Klæboe G.**(NTNU, Norway), **Fosso O.B.**(NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (NTNU), Norway)**A5536TH****Welfare Assessment of Decentralized Pricing of Operating****Haring T.**(ETH ZÜRICH, Switzerland), **Lygeros J.**(ETH ZÜRICH, Switzerland), **Andersson G.**(ETH ZÜRICH, Switzerland)

Wednesday

9h00

Loads and flows modeling

Kilimandjaro

PAPER PRESENTATION**Chair : Konstantin Suslov, ISTU****A5324jm****On Adequacy of Superposition Method for Probabilistic Assessment of Unbalance in Distribution Network****Liu Zhi.**(THE UNIVERSITY OF MANCHESTER, United Kingdom), **Milanović J.V.**(THE UNIVERSITY OF MANCHESTER, United Kingdom)**A5944DF****Load Modeling for Power System Simulation: a Tradeoff Between Accuracy and Usability****Folliot D.**(EDF R&D, France), **Delille G.**(EDF R&D, France), **Capely L.**(EDF R&D, France)**A5692GP****New Adequacy Measures for the Evaluation of the Load Profiling Process****Panapakidis I.P.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece), **Alexiadis M.C.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece), **Papagiannis G.K.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece)**A5494AS****Fast Assessment of Eigenvalue Sensitivities to Topology Changes and Injection Perturbations****Stanković A.M.**(TUFTS UNIVERSITY, United States), **Sarić A.T.**(UNIVERSITY OF NOVI SAD, Serbia)**A5445IC****Impact of Loss Calculations in Loss Allocation****Yiasemi Y.**(UNIVERSITY OF CYPRUS, Cyprus), **Ciornei I.**(UNIVERSITY OF CYPRUS, Cyprus), **Asprou M.**(UNIVERSITY OF CYPRUS, Cyprus), **Kyriakides E.**(UNIVERSITY OF CYPRUS, Cyprus)

Wednesday

9h00

Communicative advanced protective devices for Power Systems*La Meije*

PAPER PRESENTATION**Chair: Desire D. Rasolomampionona, Univ. Warsaw****A5259HH****Coordination Assessment of Overcurrent Relays in Distribution Feeders with High Penetration of PV Systems****Hooshyar H.**(NC STATE UNIVERSITY, United States), **Baran M. E.**(NC STATE UNIVERSITY, United States), **Vanfretti L.** (KTH ROYAL INSTITUTE OF TECHNOLOGY, Sweden)**A5558FK****Development of a Prototype Wide-Area Monitoring, Protection and Control (WAMPAC) System Based Upon International Standards****Kawano F.**(TOSHIBA INTERNATIONAL (EUROPE) LIMITED, United Kingdom), **Beaumont P.**(TOSHIBA INTERNATIONAL (EUROPE) LIMITED, United Kingdom), **Tada Y.**(TOKYO ELECTRIC POWER COMPANY, Japan), **Ishibashi A.**(TOSHIBA CORPORATION, Japan), **Hamamatsu K.**(TOSHIBA CORPORATION, Japan), **Serizawa Y.**(CENTRAL RESEARCH INSTITUTE OF ELECTRIC POWER INDUSTRY, Japan)**A5397XJ****Novel Overcurrent Protection Based on Wide Area Measurements in Smart Grid****Jing X.**(THE UNIVERSITY OF HONG KONG, China), **Zhong J.**(THE UNIVERSITY OF HONG KONG, China), **Lin S.**(GUANGDONG POWERGRID CORPORATION, China), **Zhan C.**(GUANGDONG POWERGRID CORPORATION, China)**A5789DM****Phase Distance Relaying for Transmission Systems****Marzec D.P.**(FEDERAL UNIVERSITY OF RIO GRANDE DO SUL, Brazil), **Bretas A.S.**(FEDERAL UNIVERSITY OF RIO GRANDE DO SUL, Brazil)**A5565JD****Protection Plan for Multi-Terminal Direct Current Grids****Descloux J.**(G2ELAB & RTE, France), **Raison B.**(G2ELAB - UNIVERSITE JOSEPH FOURIER, France), **Curis J.-B.**(RTE, France)

Wednesday

9h00

Power System transient stability & control

Makalu

PAPER PRESENTATION**Chair : Mario Rios Mesias, Univ. LOS ANDES****A5291TK****A Transient Stability Assessment Method using Post-Fault Trajectories**

Kyriakidis T.(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), **Lanz G.**(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), **Cherkaoui R.**(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), **Kayal M.**(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland)

A5354jm**Index for Ranking Generators Based on Risk of Subsynchronous Resonance in the Network**

Adrees A.(THE UNIVERSITY OF MANCHESTER, United Kingdom), **Milanović J.V.**(THE UNIVERSITY OF MANCHESTER, United Kingdom)

A5074SF**Power System Dynamic Enhancement Using Phase Imbalanced Series Capacitive Compensation and DFIG-Based Wind Farms**

Zhang J.(UNIVERSITY OF SASKATCHEWAN, Canada), **Faried S.**(UNIVERSITY OF SASKATCHEWAN, Canada), **Li C.**(UNIVERSITY OF SASKATCHEWAN, Canada)

A5226mj**Sensitivity of Accuracy of On-line Prediction of Transient Stability Using Decision Tree Method to Different Uncertainties**

Guo T.(THE UNIVERSITY OF MANCHESTER, United Kingdom), **Milanović J.V.**(THE UNIVERSITY OF MANCHESTER, United Kingdom)

A5796NR**Voltage Oscillation of Power Distribution Networks in Presence of DFIGs and Induction Motor Loads**

Roy N.K.(UNIVERSITY OF NEW SOUTH WALES, Australia), **Pota H.R.**(UNIVERSITY OF NEW SOUTH WALES, Australia), **Sayeeef S.**(CSIRO ENERGY TECHNOLOGY, Australia)

Wednesday

9h00

Renewable energy for power grids challenges*Mont Blanc*

PAPER PRESENTATION**Chair : Sébastien Henry, RTE****A5649HM****Availability of Thermal Loads to Provide Reserve Services****Heleno M.**(INESC TEC, Portugal), **Matos M.A.**(INESC TEC, Portugal), **Peças Lopes J.A.**(INESC TEC, Portugal)**A5455IN****Midterm Hydrothermal Generation Scheduling Using Nonlinear Dynamic Programming****Nechaev I.**(MELENTIEV ENERGY SYSTEM INSTITUTE SB RAS, Russia), **Palamarchuk S.**(MELENTIEV ENERGY SYSTEMS INSTITUTE OF SIBERIAN BRANCH OF THE RUSSIAN ACADEMY OF SCIENCES, Russia)**A6016RV****The Small Hydropower Plant Operating Regime Optimization by the Income Maximization****Varfolomejeva R.**(RIGA TECHNICAL UNIVERSITY, Latvia), **Umbrasko I.**(RIGA TECHNICAL UNIVERSITY, Latvia), **Mahnitko A.**(RIGA TECHNICAL UNIVERSITY, Latvia)**A5620VB****Water Networks Contribution to Demand Response****Boutin V.**(SCHNEIDER ELECTRIC, France), **Bergerand J.L.**(SCHNEIDER ELECTRIC, France)**A5959FB****Conversion Architecture for Combined Photovoltaic Storage System : Modeling and Efficiency Analysis****Bourry F.**(CEA-INES, France), **Martin J.**(CEA-INES, France), **Boyra M.**(ALSTOM GRID, France)

Wednesday

9h00

Dynamic decision making in energy investments

Amphitheater

PAPER PRESENTATION

Chair : Jean-Pascal Combonne, Université de Toulouse

A5742ZV**Stochastic Framework for Strategic Decision-Making of Load-Serving Entities for Day-Ahead Market**

Fotouhi Ghazvini M.A.(POLYTECHNIC INSTITUTE OF PORTO (ISEP/IPP), Portugal), **Faria P.**(POLYTECHNIC INSTITUTE OF PORTO (ISEP/IPP), Portugal), **Morais H.**(POLYTECHNIC INSTITUTE OF PORTO (ISEP/IPP), Portugal), **Vale Z.**(POLYTECHNIC INSTITUTE OF PORTO (ISEP/IPP), Portugal), **Ramos S.**(POLYTECHNIC INSTITUTE OF PORTO (ISEP/IPP), Portugal)

A5458HE**Identification of Power Injection Capabilities for Transmission System Investment Optimization**

Ergun H.(KATHOLIEKE UNIVERSITEIT LEUVEN, Belgium), **Van Hersem D.**(KATHOLIEKE UNIVERSITEIT LEUVEN, Belgium), **Belmans R.**(KATHOLIEKE UNIVERSITEIT LEUVEN, Belgium)

A5664Jv**Investment Strategies as a Portfolio of Real Options for Distribution System Planning under Uncertainty**

von Haebler J.(TECHNICAL UNIVERSITY DORTMUND, Germany), **Osthues M.**(TECHNICAL UNIVERSITY DORTMUND, Germany), **Rehtanz C.**(TECHNICAL UNIVERSITY DORTMUND, Germany), **Blanco G.**(UNIVERSIDAD NACIONAL DE ASUNCION, Paraguay)

A5964HS**Determination of When to Island by Analysing Dynamic Characteristics in Cascading Outages**

Shao H.(DURHAM UNIVERSITY, United Kingdom), **Norris S.**(DURHAM UNIVERSITY, United Kingdom), **Lin Z.**(DURHAM UNIVERSITY, United Kingdom), **Bialek J.W.**(DURHAM UNIVERSITY, United Kingdom)

A5085JC**Risk-Constrained Scheduling and Offering Strategies of a Price-Taker Hydro Producer under Uncertainty**

Pousinho H.M.I.(UNIV. BEIRA INTERIOR, Portugal), **Catalão J.P.S.**(UNIV. BEIRA INTERIOR, Portugal), **Contreras J.**(UNIVERSIDAD DE CASTILLA-LA MANCHA, Spain), **Bakirtzis A.G.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece)

Wednesday

11h00

Diagnosis & reliability II

Cervin

PAPER PRESENTATION**Chair: Aydogan Ozdemir, Istanbul Technical University****A5609MC****Off-line Detection, Identification and Correction of Power System Branch Parameter Errors Using SCADA and Synchronized Phasor Measurements****Castillo M. R. M.**(UNIVERSITY OF SÃO PAULO, Brazil), **London Jr. J.B.A.**(SÃO PAULO STATE UNIVERSITY (UNESP), Brazil)**A6067AB****A New Approach for the Solution of Non-Linear Equations with the Possibility of Gross Error Presence****Bretas N.G.**(UNIVERSITY OF SAO PAULO, Brazil), **Bretas A.S.**(FEDERAL UNIVERSITY OF RIO GRANDE DO SUL, Brazil)**A5449CB****Effects of Variation of Temporal Resolution on Domestic Power and Solar Irradiation Measurements****Bucher C.**(ETH ZÜRICH, Switzerland), **Betcke J.**(UNIVERSITY OF OLDENBURG, Germany), **Andersson G.**(ETH ZÜRICH, Switzerland)**A5281AA****Identifying Vulnerabilities of State Estimators Against Cyber-Attacks****Göl M.**(NORTHEASTERN UNIVERSITY, United States), **Abur A.**(NORTHEASTERN UNIVERSITY, United States)**A5243ZB****Power System Reliability Assessment: Implementation of Common Cause Failures****Bricman Rejc Z.**(UNIVERSITY OF LJUBLJANA, Slovenia), **Cepin M.**(UNIVERSITY OF LJUBLJANA, Slovenia)

Wednesday

11h00

Planning and operation I

Everest

PAPER PRESENTATION

Chair : John McDonald, EDF R&D

A5333MI**Increasing of Short Circuit Current in Shore Connection Distribution Grid**

Ion M.(SCHNEIDER ELECTRIC AND GRENOBLE ELECTRICAL ENGINEERING LABORATORY, France), **Megdiche M.**(SCHNEIDER ELECTRIC, France), **Radu D.**(SCHNEIDER ELECTRIC, France), **Bacha S.**(G2ELAB - UNIVERSITE JOSEPH FOURIER, France), **Hadbi D.**(GRENOBLE INSTITUTE OF TECHNOLOGY (GRENOBLE INP), France)

A5490CT**Assessing Optimal Conductor Utilization under N-1 Overload Security Studies**

Tumelo-Chakonta C.(THE UNIVERSITY OF MANCHESTER, United Kingdom), **Kopsidas K.**(THE UNIVERSITY OF MANCHESTER, United Kingdom)

A5584YG**Benefits of Cross-Border Reserve Procurement Based on Pre-Allocation of Transmission Capacity**

Gebrekiros Y.T.(NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (NTNU), Norway), **Doorman G.L.**(NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (NTNU), Norway), **Farahmand H.**(SINTEF ENERGY RESEARCH, Norway), **Jaehnert S.**(SINTEF ENERGY RESEARCH, Norway)

A6000SC**Supergrid or Local Network Reinforcements, and the Value of Controllability - An Analytical Approach**

Chatzivasileiadis S.(ETH ZÜRICH, Switzerland), **Krause T.**(ETH ZÜRICH, Switzerland), **Andersson G.**(ETH ZÜRICH, Switzerland)

A5634IC**Composite Reliability Evaluation Combining Adequacy and Security Aspects**

Costa I.C.(INESC TEC, Portugal), **da Rosa M.A.**(INESC TEC, Portugal), **Sumaili J.**(INESC TEC, Portugal), **de Magalhães Carvalho L.**(UNIVERSITY OF PORTO, Portugal), **Issicaba D.**(UNIVERSITY OF PORTO, Portugal)

Wednesday

11h00

Advanced Distribution Automation*Kilimandjaro*

PAPER PRESENTATION**Chair : Nicolas Flechon, GEG****A5419PR****Reduction Method for Active Distribution Networks****Raboni P.**(AALBORG UNIVERSITY, Denmark), **Chen Z.**(AALBORG UNIVERSITY, Denmark)**A5661SA****Coordinated Control of Generation for MV Network Voltage Management****Abbott S.R.**(QUEEN'S UNIVERSITY BELFAST, United Kingdom), **Fox B.**(QUEEN'S UNIVERSITY BELFAST, United Kingdom), **Morrow D.J.**(QUEEN'S UNIVERSITY BELFAST, United Kingdom)**A5535MK****Distribution State Estimation for Smart Distribution System****Karimi M.**(UNIVERSITY OF MALAYA, Malaysia), **Mokhlis H.**(UNIVERSITY OF MALAYA, Malaysia), **Bakar A.H.A.**(UNIVERSITY OF MALAYA, Malaysia), **Shahriari A.**(UNIVERSITY OF MALAYA, Malaysia)**A5413GR****Decision Making Methodology Based on Expert Systems for Minimizing Economic Impact of Voltage Sags in Industrial Power Systems****Espana Forero J.M.**(UNIVERSIDAD DE LOS ANDES, Colombia), **Ramos G.**(UNIVERSIDAD DE LOS ANDES, Colombia), **Ovalle A.**(UNIVERSIDAD DE LOS ANDES, Colombia)**A5896PD****On Implementing a Spectral Clustering Controlled Islanding Algorithm in Real Power Systems****Demetriou P.**(UNIVERSITY OF CYPRUS, Cyprus), **Quirós-Tortós J.**(THE UNIVERSITY OF MANCHESTER, United Kingdom), **Kyriakides E.**(UNIVERSITY OF CYPRUS, Cyprus), **Terzija V.**(THE UNIVERSITY OF MANCHESTER, United Kingdom)

Wednesday

11h00

Advanced devices and schemes for voltage improvements*La Meije*

PAPER PRESENTATION**Chair : Rachid Cherkaoui, EPFL****A5147LC****A Combination Method for the Detection of SSR Caused by Fixed Series Compensation****Haifeng L.**(NORTH CHINA ELECTRIC POWER UNIVERSITY, China), **Chongru L.**(NORTH CHINA ELECTRIC POWER UNIVERSITY, China)**A5485CM****Comparative Analysis Between Conventional Voltage Regulation Using G Reactors and Continuous Voltage Regulation Using TCR in Dynamic Operation State****Mirea C.**(UNIVERSITY "POLITEHNICA" OF BUCHAREST, Romania), **Eremia M.**(UNIVERSITY "POLITEHNICA" OF BUCHAREST, Romania), **Toma L.**(UNIVERSITY "POLITEHNICA" OF BUCHAREST, Romania)**A5682AM****Decentralized Coordinated Secondary Voltage Control of Multi-Area Highly Interconnected Power Grids****Morattab A.**(ECOLE DE TECHNOLOGIE SUPERIEURE, Canada), **Saad M.**(ECOLE DE TECHNOLOGIE SUPERIEURE, Canada), **Akhrif O.**(ECOLE DE TECHNOLOGIE SUPERIEURE, Canada), **Dalal A.**(INSTITUT DE RECHERCHE D'HYDRO-QUEBEC, Canada), **Lefebvre S.**(INSTITUT DE RECHERCHE D'HYDRO-QUEBEC, Canada)**A5801YL****Scott Transformer Based Voltage Balancing in Low Voltage Distribution Networks****Li Y.**(THE UNIVERSITY OF MANCHESTER, United Kingdom), **Crossley P.A.**(THE UNIVERSITY OF MANCHESTER, United Kingdom)**A5831PP****Smart Grid : LV Monitoring in the Transformer Substation , New Technology Rises to the Challenge****Pipet P.**(SCHNEIDER ELECTRIC, France), **Deschamps P.**(SCHNEIDER ELECTRIC, France), **Wild J.**(SCHNEIDER ELECTRIC, France)

Wednesday

11h00

Costs and benefits for power transmission*Makalu*

PAPER PRESENTATION

Chair : Jean-Pascal Combonne, Univ. Toulouse

A5341CM**Allocation of Transmission Costs considering User's Different Security Preferences****Martins C.R.**(FEDERAL UNIVERSITY OF MARANHÃO (UFMA), Brazil), **Saavedra O.R.**(FEDERAL UNIVERSITY OF MARANHÃO (UFMA), Brazil)**A5723cc****GreenLys WP2: Estimating the Benefits and Costs of a Smart Electrical System in French Urban Areas in 2020-2030****Chardonnet C.**(GDF SUEZ, France), **de Boissezon B.**(GDF SUEZ, France)**A5635BI****Cost-Benefit Analysis of Central and Local Voltage Control Provided by Distributed Generators in MV Networks****Idlbi B.**(FRAUNHOFER IWES, Germany), **Diwold K.**(FRAUNHOFER IWES, Germany), **Stetz T.**(FRAUNHOFER INSTITUTE FOR WIND ENERGY AND ENERGY SYSTEM TECHNOLOGY (IWES), Germany), **Wang H.**(FRAUNHOFER IWES, Germany), **Braun M.**(FRAUNHOFER INSTITUTE FOR WIND ENERGY AND ENERGY SYSTEM TECHNOLOGY (IWES) & UNIVERSITY OF KASSEL, Germany)**A5951AM****On Direct Controlled Cost Function Based DSM Strategies****Molderink A.**(UNIVERSITY OF TWENTE, Netherlands), **Bakker V.**(UNIVERSITY OF TWENTE, Netherlands), **Hurink J. L.**(UNIVERSITY OF TWENTE, Netherlands), **Smit G.J.M.**(UNIVERSITY OF TWENTE, Netherlands)

Wednesday

11h00

Photovoltaic power systems*Mont Blanc*

PAPER PRESENTATION**Chair: Yahia Baghzouz, UNLV****A5509NS****A Scheduling Optimization Model for Sun Tracking of an Autonomous Heliostat**

Suclla Fernandez N.(PONTIFICAL CATHOLIC UNIVERSITY OF RIO DE JANEIRO, Brazil), **Street A.**(PONTIFICAL CATHOLIC UNIVERSITY OF RIO DE JANEIRO, Brazil), **Montenon A.**(LAPLACE - TOULOUSE UNIVERSITY, France), **Maussion P.**(LAPLACE - TOULOUSE UNIVERSITY, France)

A5966FS**Accurate Measurements of Solar Irradiance for Evaluation of Photovoltaic Power Profiles**

Spertino F.(POLITECNICO DI TORINO, Italy), **Di Leo P.**(POLITECNICO DI TORINO, Italy), **Cocina V.**(POLITECNICO DI TORINO, Italy)

A5393GL**Evaluation of PV Module Characteristics Under Partial Shading Conditions**

Dolara A.(POLITECNICO DI MILANO, Italy), **Leva S.**(POLITECNICO DI MILANO, Italy), **Manzolini G.**(POLITECNICO DI MILANO, Italy), **Lazaroiu G.C.**(UNIVERSITY "POLITEHNICA" OF BUCHAREST, Romania)

A6027SD**Measurement-Based Modelling and Validation of PV Systems**

Islam M.(THE UNIVERSITY OF EDINBURGH, United Kingdom), **Djokic S.**(THE UNIVERSITY OF EDINBURGH, United Kingdom), **Desmet J.**(ELEKTROTECHNICAL EXPERTISE CENTER OF HOWEST, Belgium), **Verhelst B.**(ELEKTROTECHNICAL EXPERTISE CENTER OF HOWEST, Belgium)

A6001EG**On the Performance Ratio of Photovoltaic Installations**

Ghiani E.(UNIVERSITY OF CAGLIARI, Italy), **Pilo F.**(UNIVERSITY OF CAGLIARI, Italy), **Cossu S.**(ESSEI SERVIZI SRL, Italy)

Wednesday

14h00

Real-time simulation PHIL

Amphitheater

PAPER PRESENTATION

Chair : Georg Lauss, AIT

A5330GR**Adaptive Protection Testbed Using Real Time and Hardware-In-the-Loop Simulation****Montoya L.A.**(UNIVERSIDAD DE LOS ANDES, Colombia), **Montenegro D.**(UNIVERSIDAD DE LOS ANDES, Colombia), **Ramos G.**(UNIVERSIDAD DE LOS ANDES, Colombia)**A5942AM****Application of Non-intrusive Polynomial Chaos Theory in Real Time Simulation****Tang J.**(E.ON ENERGY RESEARCH CENTER, RWTH AACHEN, Germany), **Ni F.**(E.ON ENERGY RESEARCH CENTER, RWTH AACHEN, Germany), **Togawa K.**(E.ON ENERGY RESEARCH CENTER, RWTH AACHEN, Germany), **Ponci F.**(E.ON ENERGY RESEARCH CENTER, RWTH AACHEN, Germany), **Monti A.**(E.ON ENERGY RESEARCH CENTER, RWTH AACHEN, Germany)**A5912MM****Real-Time Out-Of-Step Protection for TNB System****Mohd Armin M.K.N.**(TNB RESEARCH SDN. BHD., Malaysia), **Sheikh Abdullah S.K.**(TNB RESEARCH SDN. BHD., Malaysia), **Nik Yusof N.S.**(TNB RESEARCH SDN. BHD., Malaysia), **Nakawiro W.**(KING MONGKUT'S INSTITUTE OF TECHNOLOGY, Thailand)**A5899GL****Safety Issues for PHIL Simulations****Lauss G.**(AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH, Austria), **Lehfuß F.**(AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH, Austria)**A5283DM****Real Time Observability Analysis for Distribution Networks****Montenegro D.**(UNIVERSIDAD DE LOS ANDES, Colombia), **Ramos G.**(UNIVERSIDAD DE LOS ANDES, Colombia)

Wednesday

14h00

Power flow analysis and security issues for large systems*Cervin*

PAPER PRESENTATION

Chair : Roberto Napoli, Poly. Torino

A5305OM**Propagation of Power Flows from Wind Power in Neighboring Control Areas in Multi-Area Power Systems****Mäkelä O.**(ETH ZÜRICH, Switzerland), **Andersson G.**(ETH ZÜRICH, Switzerland)**A5346MA****Estimation of Line Parameters Using the Hybrid State Estimator****Asprou M.**(UNIVERSITY OF CYPRUS, Cyprus), **Kyriakides E.**(UNIVERSITY OF CYPRUS, Cyprus)**A5668CC****Power Flow Control Solutions in the Romanian Power System Under High Wind Generation Conditions****Constantin C.**(UNIVERSITY "POLITEHNICA" OF BUCHAREST, Romania), **Toma L.**(UNIVERSITY "POLITEHNICA" OF BUCHAREST, Romania), **Eremia M.**(UNIVERSITY "POLITEHNICA" OF BUCHAREST, Romania)**A5451CC****Stochastic Contingency Analysis for the Unit Commitment with Natural Gas Constraints****Correa-Posada C.M.**(COMPANIA DE EXPERTOS EN MERCADOS, Colombia), **Sánchez-Martín P.**(COMILLAS PONTIFICAL UNIVERSITY , Spain)**A5604JH****Fault Location on Mixed Overhead Line and Cable Transmission Networks****Han J.**(THE UNIVERSITY OF MANCHESTER, United Kingdom), **Crossley P.A.**(THE UNIVERSITY OF MANCHESTER, United Kingdom)

Wednesday

14h00

Diagnosis & reliability I

Everest

PAPER PRESENTATION

Chair: Arturo Bretas, Federal University of Rio Grande do Sul

A5264ED**Simulation Based Optimum High Voltage Bushing Design****Dokur E.**(BILECIK S.E. UNIVERSITY, Turkey), **Ozdemir A.**(ISTANBUL TECHNICAL UNIVERSITY, Turkey), **Ilhan S.**(ISTANBUL TECHNICAL UNIVERSITY, Turkey)**A5695GP****Three-Stage Clustering Procedure for Deriving the Typical Load Curves of the Electricity Consumers****Panapakidis I.P.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece), **Alexiadis M.C.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece), **Papagiannis G.K.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece)**A5698JI****Two-End Fault Location on Long Transmission Lines with In-Line Shunt Reactors****Kawa M.**(SCHNEIDER ELECTRIC ENERGY POLAND, Poland), **Izykowski J.**(WROCLAW UNIVERSITY OF TECHNOLOGY, Poland)**A5857HK****Scenario Selection by Unsupervised Learning in Reliability Analysis of Transmission Networks****Kile H.**(NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (NTNU), Norway), **Uhlen K.**(NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (NTNU), Norway), **Kjølle G.**(SINTEF ENERGY RESEARCH, Norway)

Wednesday

14h00

Electrical vehicle charging/discharging management I*Mont Blanc 3&4*

PAPER PRESENTATION**Chair : Marc Petit, Supelec****A5905TT****Energetic Analysis of SOFC Co-Generation System Integrating with Charging Stand for Electric Vehicle**

Kamiko H.(IBARAKI UNIVERSITY, Japan), **Tanaka T.**(IBARAKI UNIVERSITY, Japan), **Bando T.**(IBARAKI UNIVERSITY, Japan), **Zaffirah A.**(IBARAKI UNIVERSITY, Japan), **Kakimoto N.**(IBARAKI UNIVERSITY, Japan), **Inui Y.**(THE UNIVERSITY OF SHIGA PREFECTURE, Japan)

A5866VN**Fast Charging Control for Electric Vehicles to Reduce the Harmonic Distortion**

Nguyen V.-L.(G2ELAB - GRENOBLE INSTITUTE OF TECHNOLOGY, France), **Bacha S.**(G2ELAB - UNIVERSITE JOSEPH FOURIER, France), **Tran-Quoc T.**(CEA-INES, France)

A5331MG**Integrating Renewable Energy Forecast Uncertainty in Smart-Charging Approaches for Plug-in Electric Vehicles**

Gonzalez Vaya M.(ETH ZÜRICH, Switzerland), **Andersson G.**(ETH ZÜRICH, Switzerland)

A5506MT**Simulation and Evaluation of Charging Control Systems for Electric Vehicle Car Parks**

Yeh Y.C.(NATIONAL TAIPEI UNIVERSITY OF TECHNOLOGY, Taiwan (ROC)), **Meyer G.G.**(NATIONAL TAIPEI UNIVERSITY OF TECHNOLOGY, Taiwan (ROC)), **Meyer-Zhao Z.**(NATIONAL TAIPEI UNIVERSITY OF TECHNOLOGY, Taiwan (ROC)), **Tsai M.S.**(NATIONAL TAIPEI UNIVERSITY OF TECHNOLOGY, Taiwan (ROC))

A5380NH**Exploitation of Vehicle-to-Grid in Regulation Market**

Tehrani N.H.(NANYANG TECHNOLOGICAL UNIVERSITY, Singapore), **Wang P.**(NANYANG TECHNOLOGICAL UNIVERSITY, Singapore)

Wednesday

14h00

Optimal power flow

Kilimandjaro

PAPER PRESENTATION**Chair : Jean-Christophe Passelergue, Alstom grid****A5559SA****A Criticality Criterion to Decrease the Computational Burden in Multistage Distribution System Optimal Power Flow****Abdelouadoud S.Y.**(MINES PARISTECH, France), **Girard R.**(MINES PARISTECH, France), **Neirac F.-P.**(MINES PARISTECH, France), **Thierry G.**(CSTB, France)**A5460LR****Analytical Reformulation of Security Constrained Optimal Power Flow with Probabilistic Constraints****Roald L.**(ETH ZÜRICH, Switzerland), **Oldewurtel F.**(ETH ZÜRICH, Switzerland), **Krause T.**(ETH ZÜRICH, Switzerland), **Andersson G.**(ETH ZÜRICH, Switzerland)**A5702MV****Probabilistic Security-Constrained AC Optimal Power Flow****Vrakopoulou M.**(ETH ZÜRICH, Switzerland), **Katsampani M.**(ETH ZÜRICH, Switzerland), **Margellos K.**(ETH ZÜRICH, Switzerland), **Lygeros J.**(ETH ZÜRICH, Switzerland), **Andersson G.**(ETH ZÜRICH, Switzerland)**A6065MZ****Speeding-up an OPF Solution with Graph-based Heuristics in ADDRESS****Xu B.**(ABB SCHWEIZ AG, Switzerland), **Zima M.**(ABB SCHWEIZ AG, Switzerland), **Timbus A.**(ABB SCHWEIZ AG, Switzerland), **Naso F.**(ENEL DISTRIBUZIONE, Italy), **Morozova O.**(ENEL DISTRIBUZIONE, Italy)**A5734JG****A Robust Power Flow Approach Using Synthetic Dynamics And Optimal Multiplier****Gutierrez J.F.**(UNIVERSITY OF CAMPINAS (UNICAMP), Brazil), **Bedriřana M.F.**(UNIVERSITY OF CAMPINAS (UNICAMP), Brazil), **Castro C.A.**(UNIVERSITY OF CAMPINAS (UNICAMP), Brazil)

Wednesday

14h00

T&D Planning and design*La Meije*

PAPER PRESENTATION

Chair: Wil Kling, EINDHOVEN Univ.

A5148ZP**Expansion Planning of Distribution Networks with Distributed Generation Using Hybrid Simulated Annealing - Mathematical Programming Algorithm****Popović Ž. N.**(ELECTIC POWER COMPANY OF SERBIA, ELEKTROVOJVODINA, Serbia), **Kerleta V. Dj.**(TECHNICAL FACULTY "MIHAILO PUPIN", Serbia)**A5671WP****Power System Stabilizers Tuning using Bio-Inspired Algorithm****Peres W.**(FEDERAL UNIVERSITY OF JUIZ DE FORA (UFJF), Brazil), **Oliveira E.J.**(FEDERAL UNIVERSITY OF JUIZ DE FORA (UFJF), Brazil), **Passos Filho J.A.**(FEDERAL UNIVERSITY OF JUIZ DE FORA (UFJF), Brazil), **Arcanjo D.N.**(FEDERAL UNIVERSITY OF JUIZ DE FORA (UFJF), Brazil), **Silva Júnior I.C.**(FEDERAL UNIVERSITY OF JUIZ DE FORA (UFJF), Brazil), **Oliveira L.W.**(FEDERAL UNIVERSITY OF JUIZ DE FORA (UFJF), Brazil)**A5078SL****Transmission Expansion Planning using an Efficient Version of Benders' Decomposition. A Case Study.****Lumbreras S.**(UNIVERSIDAD PONTIFICIA COMILLAS, Spain), **Ramos A.**(UNIVERSIDAD PONTIFICIA COMILLAS, Spain)**A5667SB****Designing a Transmission Line Using Pareto Approach****Berjokkina S.**(RIGA TECHNICAL UNIVERSITY, Latvia), **Sauhats A.**(RIGA TECHNICAL UNIVERSITY, Latvia), **Neimane V.**(VATTENFALL, Sweden)**A5972AL****Transmission Expansion Planning in Presence of Large RES Penetration: the Case of Italy****L'Abbate A.**(RSE SPA, Italy), **Careri F.**(RSE SPA, Italy), **Migliavacca G.**(RSE SPA, Italy)

Wednesday

14h00

Energy regulation and planning*Makalu*

PAPER PRESENTATION**Chair : Julien Janès, CRE****A5398EV****Centralized and Decentralized Balance Group Optimization in Electricity Markets with Demand Response****Vrettos E.**(ETH ZÜRICH, Switzerland), **Oldewurtel F.**(ETH ZÜRICH, Switzerland), **Vasiraniy M.**(ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), **Andersson G.**(ETH ZÜRICH, Switzerland)**A5440PD****Analysis of a Variant of Development of the Unified Electrical Network with the Market Model****Drachev P.**(ENERGY SYSTEMS INSTITUTE, SB RAS, Russia)**A5632DC****A Market Splitting Approach For The European Electricity Market Integration****Biskas P.N.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece), **Chatziyiannis D.I.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece), **Bakirtzis A.G.**(ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece)**A5548KA****Decentralized Dispatch with Price Consistency in Predominantly Hydro Systems****Cicconet F.**(UNIVERSIDADE FEDERAL DE SANTA CATARINA, Brazil), **Almeida K.C.**(UNIVERSIDADE FEDERAL DE SANTA CATARINA, Brazil)**A5356DP****Decentralized Optimization of Flexible Loads' Use in Electricity Markets****Papadaskalopoulos D.**(IMPERIAL COLLEGE LONDON, United Kingdom), **Strbac G.**(IMPERIAL COLLEGE LONDON, United Kingdom)

Wednesday

14h00

Ancillary services provision*Mont Blanc*

PAPER PRESENTATION**Chair : Daniel Souque, EDF DTG****A5516MB****Assessment of Capacity Factor and Dispatch Flexibility of Concentrated Solar Power Units****Dallmer-Zerbe K.**(OTTO VON GUERICKE UNIVERSITY MAGDEBURG, Germany), **Bucher M.A.**(ETH ZÜRICH, Switzerland), **Ulbig A.**(ETH ZÜRICH, Switzerland), **Andersson G.**(ETH ZÜRICH, Switzerland)**A5663IL****Coordinated Voltage Control in Medium and Low Voltage Distribution Networks with Wind Power and Photovoltaics****Leisse I.**(LUND UNIVERSITY, Sweden), **Samuelsson O.**(LUND UNIVERSITY, Sweden), **Svensson J.**(LUND UNIVERSITY, Sweden)**A5981BO****Distributed Load Interruption and Shedding Against Voltage Delayed Recovery or Instability****Otomega B.**(UNIVERSITY "POLITEHNICA" OF BUCHAREST, Romania), **Van Cutsem T.**(UNIVERSITY OF LIÈGE, Belgium)**A6018MA****Emergency Reserve from Flexible Loads and Impact on Existing Plant Portfolio****Akmal M.**(ABU DHABI UNIVERSITY, United Arab Emirates), **Fox B.**(QUEEN'S UNIVERSITY BELFAST, United Kingdom), **Morrow D.J.**(QUEEN'S UNIVERSITY BELFAST, United Kingdom)**A5707HB****Technical and Economical Assessment of Reactive Power Provision from Distributed Generators: Case Study Area of East Denmark****Barth H.**(FRAUNHOFER INSTITUTE FOR WIND ENERGY AND ENERGY SYSTEM TECHNOLOGY (IWES), Germany), **Hidalgo D.**(FRAUNHOFER INSTITUTE FOR WIND ENERGY AND ENERGY SYSTEM TECHNOLOGY (IWES), Germany), **Pohlemann A.**(FRAUNHOFER INSTITUTE FOR WIND ENERGY AND ENERGY SYSTEM TECHNOLOGY (IWES), Germany), **Braun M.**(FRAUNHOFER INSTITUTE FOR WIND ENERGY AND ENERGY SYSTEM TECHNOLOGY (IWES) & UNIVERSITY OF KASSEL, Germany), **Hansen L.H.**(DONG ENERGY WIND POWER, Denmark), **Knuds H.**(DONG ENERGY WIND POWER, Denmark)

Wednesday 16h00

Active networks Cervin

PAPER PRESENTATION

Chair: Fabrizio Pilo, Univ. of Cagliari

A5550MB

Network Partition for Coordinated Control in Active Distribution Networks

Biserica M.(ALSTOM GRID, France), **Foggia G.**(ALSTOM GRID, France), **Chanzy E.**(ALSTOM GRID, France),
Passelergue J.C.(ALSTOM GRID, France)

A5940RL

Enhancing Distributed Generation Penetration in Smart Grids through Dynamic Ratings

Lopez R.(ALSTOM GRID, France), **Coullon J.-L.**(ALSTOM GRID, France)

A5952SK

Flexible Dimensioning of Control Reserves

Kippelt S.(TU DORTMUND UNIVERSITY, Germany), **Schlüter T.**(TU DORTMUND UNIVERSITY, Germany), **Rehtanz C.**(TECHNICAL UNIVERSITY DORTMUND, Germany)

A5937PI

Power Quality of a Voltage Source Converter in a Smart Grid

Ivry P. M.(THE UNIVERSITY OF NOTTINGHAM, United Kingdom), **Rawa M.J.**(THE UNIVERSITY OF NOTTINGHAM, United Kingdom), **Thomas D. W. P.**(THE UNIVERSITY OF NOTTINGHAM, United Kingdom), **Sumner M.**(THE UNIVERSITY OF NOTTINGHAM, United Kingdom)

A5287KS

Development and Operation of Isolated Systems in Russia

Suslov K.(IRKUTSK STATE TECHNICAL UNIVERSITY, Russia)

Wednesday

16h00

Advanced Distribution Automation functions & self-healing

Everest

PAPER PRESENTATION

Chair : Olivier Huet, ERDF

A5486RM**A Probabilistic Fault Localization Method for Distribution Networks Using Fault Indicators****Marguet R.**(G2ELAB - GRENOBLE INSTITUTE OF TECHNOLOGY, France), **Raison B.**(G2ELAB - UNIVERSITE JOSEPH FOURIER, France)**A5570jw****Decentralized Self Healing Solution Tested in the Framework of GREENLYS Smart grid Project****Chollot Y.**(SCHNEIDER ELECTRIC, France), **Wild J.**(SCHNEIDER ELECTRIC, France), **Berry T.**(SCHNEIDER ELECTRIC, France), **Jourdan A.**(SCHNEIDER ELECTRIC, France), **Houssin J.**(GEG, France), **Joubert R.**(GEG, France), **Raison B.**(G2ELAB - UNIVERSITE JOSEPH FOURIER, France), **Marguet R.**(G2ELAB - GRENOBLE INSTITUTE OF TECHNOLOGY, France)**A5605TL****Directional Relays Without Voltage Sensors for Distribution Grids: Optimal Boundaries for Fault Direction Estimation****Le T.D.**(E3S SUPELEC SYSTEMS SCIENCES, France), **Petit M.**(SUPÉLEC E3S, France)**A5689LS****NiceGrid: Smart Grid Pilot Demonstrating Innovative Distribution Network Operation****Lannez S.**(ALSTOM GRID, France), **Foggia G.**(ALSTOM GRID, France), **Muscholl M.**(ALSTOM GRID, France), **Passelergue J.C.**(ALSTOM GRID, France), **Lebosse C.**(ERDF DISTRIBUTION, France), **Mercier K.**(ERDF DISTRIBUTION, France)**A5603CJ****Protection Scheme Based on non Communicating Relays Deployed on MV Distribution Grid****Jecu C.**(OPEN GROUPE - SCHNEIDER ELECTRIC, France), **Raison B.**(G2ELAB - UNIVERSITE JOSEPH FOURIER, France), **Caire R.**(G2ELAB - GRENOBLE INSTITUTE OF TECHNOLOGY, France), **Alibert P.**(SCHNEIDER ELECTRIC, France), **Deschamps P.**(SCHNEIDER ELECTRIC, France), **Chilard O.**(EDF R&D, France), **Grenard S.**(EDF R&D, France)

Wednesday

16h00

Electrical vehicle decision & market models*Mont Blanc 3&4*

PAPER PRESENTATION

Chair : Bruno Meyer, RTE

A5659PS**Day Ahead and Intraday Stochastic Decision Model for EV Charging Points****Sánchez-Martín P.**(COMILLAS PONTIFICAL UNIVERSITY , Spain), **Alberdi-Alén A.**(COMILLAS PONTIFICAL UNIVERSITY , Spain)**A5586AB****Minimization Energy Transmission Cost and CO2 Emissions using Coordination of Electric Vehicle and Wind Power (W2V)****Bouallaga A.**(L2EP- HEI LILLE/ SEOLIS, France), **Merdassi A.**(HEI LILLE - L2EP, France), **Davigny A.**(HEI LILLE - L2EP, France), **Robyns B.**(HEI LILLE - L2EP, France), **Courtecuisse V.**(GEREDIS, France)**A5279AC****A Multi-Scale Optimization Model to Assess the Benefits of a Smart Charging Policy for Electrical Vehicles****Chammas M.**(ARTELYS, France), **Chiche A.**(ARTELYS, France), **Fournié L.**(ARTELYS, France), **Nuno Fidalgo J.**(INESC TEC, Portugal), **Couto M.J.**(INESC TEC, Portugal)**A5340JC****A New Model to Improve the Behavior of PIEVs Aggregator Considering the Customers' Motivation****Shafie-khah M.**(UNIV. BEIRA INTERIOR, Portugal), **Catalão J.P.S.**(UNIV. BEIRA INTERIOR, Portugal), **Parsa Moghaddam M.**(TARBIAT MODARES UNIVERSITY, Iran), **Sheikh-El-Eslami M.K.**(TARBIAT MODARES UNIVERSITY, Iran)

Wednesday

16h00

Power systems protection

Kilimandjaro

PAPER PRESENTATION

Chair : Eric Martin, Schneider Electric

A5581XD**The Study on Real Time Model Predictive based SIPS in Power System****Du X.**(THE UNIVERSITY OF MANCHESTER, United Kingdom), **Crossley P.A.**(THE UNIVERSITY OF MANCHESTER, United Kingdom)**A5344DR****Laboratory Test Results of Travelling Wave Fault Location Scheme****Glik K.**(WARSAW UNIVERSITY OF TECHNOLOGY, Poland), **Rasolomampionona D.D.**(WARSAW UNIVERSITY OF TECHNOLOGY, Poland)**A5504AU****Current-Only Directional Overcurrent Protection for Distribution Automation Using Neural Network****Ukil A.**(ABB CORPORATE RESEARCH, Switzerland), **Ramesh Kamalab A.**(ABB, India)**A5644DG****A Hybrid Impedance and Transient Based Analysis Technique for Fault Location in Distribution Networks****Gazzana D.S.**(UFRGS UNIVERSITY, Brazil), **Ferreira G.D.**(UFRGS UNIVERSITY, Brazil), **Bretas A.S.**(FEDERAL UNIVERSITY OF RIO GRANDE DO SUL, Brazil), **Bettiol A.L.**(A VERO DOMINO CONSULTING AND RESEARCH, Brazil), **Carniato A.**(A VERO DOMINO CONSULTING AND RESEARCH, Brazil), **Nascimento Passos L.F.**(A VERO DOMINO CONSULTING AND RESEARCH, Brazil), **Ferreira A.H.**(EFLJC, Brazil), **Mendes Silva J.E.**(EFLJC, Brazil)**A6033MO****Three-Phase Line Impedance and Load Level Effects on Fault Current****García F.H.**(FEDERAL UNIVERSITY OF RIO GRANDE DO SUL, Brazil), **Bretas A.S.**(FEDERAL UNIVERSITY OF RIO GRANDE DO SUL, Brazil), **Oliveira M.O.**(NATIONAL UNIVERSITY OF MISIONES (UNaM), Argentina)

Wednesday

16h00

Communication networks for power system protection Scheme and operation*La Meije*

PAPER PRESENTATION

Chair : Daniel Georges, Atos Worldgrid

A5424db**A Platform for Wide Area Monitoring and Control System ICT Analysis and Development**

Babazadeh D.(ROYAL INSTITUTE OF TECHNOLOGY (KTH), Sweden), **Chenine M.**(ROYAL INSTITUTE OF TECHNOLOGY (KTH), Sweden), **Zhu K.**(ROYAL INSTITUTE OF TECHNOLOGY (KTH), Sweden), **Nordström L.**(ROYAL INSTITUTE OF TECHNOLOGY (KTH), Sweden), **Al-Hammouri A.**(JORDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY, Jordan)

A5890MI**Enabling Decentralized Real-Time Analysis of Smart Distribution Systems Using Wireless Communication**

Ibrahim M.(UNIVERSITY OF WATERLOO, Canada), **Salama M. M. A.**(UNIVERSITY OF WATERLOO, Canada)

A5229NP**Communication Network for a Wide-Area Special Protection System**

Torres A.(UNIVERSIDAD DE LOS ANDES, Colombia), **Peña N.**(UNIVERSIDAD DE LOS ANDES, Colombia), **Pérez F.**(UNIVERSIDAD DE LOS ANDES, Colombia)

A5726NH**Development of the IEC 61850-9-2 Software Merging Unit IED Test and Training Platform**

Honeth N.(ROYAL INSTITUTE OF TECHNOLOGY (KTH), Sweden), **Ali Khurram Z.**(ROYAL INSTITUTE OF TECHNOLOGY (KTH), Sweden), **Zhao P.**(ROYAL INSTITUTE OF TECHNOLOGY (KTH), Sweden), **Nordström L.**(ROYAL INSTITUTE OF TECHNOLOGY (KTH), Sweden)

Energy Sectors and ICT Serving Together the Next-Generation Power Grid

Hugoo B. (Schneider-Electric, T&D Europe, France)

Wednesday

16h00

Network developpement and market integration

Makalu

PAPER PRESENTATION**Chair : Patrick Pruvot, EDF****A5430CZ****Active Power Economic Dispatch of Wind Farm Cluster Based on Integer Linear Programming**

Lin L.(NORTH CHINA ELECTRIC POWER UNIVERSITY, China), **Zhu C.**(NORTH CHINA ELECTRIC POWER UNIVERSITY, China), **Wang Qi.**(GUANGDONG POWERGRID CORPORATION, China), **Zeng J.**(GUANGDONG POWERGRID CORPORATION, China)

A5847EM**Trading Wind Power in the UK Using an Imbalance Penalty Reduction Strategy**

Martinez Cesena E.A.(THE UNIVERSITY OF MANCHESTER, United Kingdom), **Mutaleb J.**(THE UNIVERSITY OF MANCHESTER, United Kingdom)

A5740CF**Economic Assessment of Using FACTS Technology to Integrate Wind Power: A Case Study**

Fernandes C.(UNIVERSIDAD PONTIFICIA COMILLAS, Spain), **Vallés M.**(UNIVERSIDAD PONTIFICIA COMILLAS, Spain), **Frías P.**(UNIVERSIDAD PONTIFICIA COMILLAS, Spain)

A6020MW**Coordinated Trading of Solar and Thermal Energy Including V2G Services.**

Waqas Khalid M.(KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS, Saudi Arabia), **Al-Awami A.T.**(KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS, Saudi Arabia)

A5383YL**Economic Operation Research for Wind-PV-ES Hybrid Micro-grid**

Liu Y.(NORTH CHINA ELECTRIC POWER UNIVERSITY, China), **Zhang N.**(NORTH CHINA ELECTRIC POWER UNIVERSITY, China), **Zhang X.**(NORTH CHINA ELECTRIC POWER UNIVERSITY, China)

Wednesday

16h00

Demand response and load / generation control I*Mont Blanc*

PAPER PRESENTATION**Chair : Lamine Mili, Virginia Tech****A5827ZV****Consumers Performance Evaluation of the Participation in Demand Response Programs Using Baseline Methods**

Antunes P.(POLYTECHNIC INSTITUTE OF PORTO (ISEP/IPP), Portugal), **Faria P.**(POLYTECHNIC INSTITUTE OF PORTO (ISEP/IPP), Portugal), **Vale Z.**(POLYTECHNIC INSTITUTE OF PORTO (ISEP/IPP), Portugal)

A5497LS**Effectiveness of a Building Energy Management System for the Integration of net Zero Energy Buildings into the Grid and for Providing Tertiary Control Reserve**

Spitalny L.(TU DORTMUND UNIVERSITY, Germany), **Unger D.**(TU DORTMUND UNIVERSITY, Germany), **Teuwsen J.**(TU DORTMUND UNIVERSITY, Germany), **Liebenau V.**(TU DORTMUND UNIVERSITY, Germany), **Myrzik J.M.A.**(TU DORTMUND UNIVERSITY, Germany), **Van Reeth B.**(DAIKIN EUROPE NV, Belgium)

A5721MB**Heat Pumps as Important Contributors to Local Demand Side Management**

Brunner M.(UNIVERSITY OF STUTT GART, Germany), **Tenbohlen S.**(UNIVERSITÄT STUTT GART (IEH), Germany), **Braun M.**(FRAUNHOFER INSTITUTE FOR WIND ENERGY AND ENERGY SYSTEM TECHNOLOGY (IWES) & UNIVERSITY OF KASSEL, Germany)

A6012KL**Hourly Load Modelling of Non-Residential Building Stock**

Lindberg K.B.(NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (NTNU), Norway), **Doorman G.L.**(NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (NTNU), Norway)

A5566FS**Intelligent Load Management for a Trade Center Building**

Adinolfi F.(UNIVERSITY OF GENOA, Italy), **Massucco S.**(UNIVERSITY OF GENOA, Italy), **Silvestro F.**(UNIVERSITY OF GENOA, Italy), **De Danieli A.**(ABB SACE, Italy), **Fidigatti A.**(ABB SACE, Italy), **Ragaini E.**(ABB SACE, Italy)

Wednesday

16h00

Phasor Measurement Units

Amphitheater

PAPER PRESENTATION**Chair : Zbigniew Styczynski, Univ. Magdeburg****A5407LV****A Software Development Toolkit for Real-Time Synchrophasor Applications**

Vanfretti L.(ROYAL INSTITUTE OF TECHNOLOGY (KTH), Sweden), **Aarstrand V.H.**(STATNETT SF, Norway), **Shoaib Almas M.**(ROYAL INSTITUTE OF TECHNOLOGY (KTH), Sweden), **Perić V.S.**(ROYAL INSTITUTE OF TECHNOLOGY (KTH), Sweden), **Gjerde J.O.**(STATNETT SF, Norway)

A6064TB**Error Analysis Methods for PMU Static and Dynamic Performances Evaluation**

Hu Y.(ELECTRIC POWER RESEARCH INSTITUTE OF GUANGDONG POWER GRID, China), **Wang Yi.**(ELECTRIC POWER RESEARCH INSTITUTE OF GUANGDONG POWER GRID, China), **An R.**(ELECTRIC POWER RESEARCH INSTITUTE OF GUANGDONG POWER GRID, China), **Bi T.**(NORTH CHINA ELECTRIC POWER UNIVERSITY, China), **Feng Q.**(NORTH CHINA ELECTRIC POWER UNIVERSITY, China), **Wang Fa.**(NORTH CHINA ELECTRIC POWER UNIVERSITY, China)

A5405NL**Modern Test Bed for PMU Testing**

Balabin M.(SIBERIAN ELECTRIC POWER RESEARCH INSTITUTE, Russia), **Lavrushenko N.**(SIBERIAN ELECTRIC POWER RESEARCH INSTITUTE, Russia), **Naumkin R.**(SIBERIAN ELECTRIC POWER RESEARCH INSTITUTE, Russia)

A5406LV**Spectral Estimation of Low-Frequency Oscillations in the Nordic Grid using Ambient Synchrophasor Data under the Presence of Forced Oscillations**

Vanfretti L.(ROYAL INSTITUTE OF TECHNOLOGY (KTH), Sweden), **Bengtsson S.**(ROYAL INSTITUTE OF TECHNOLOGY (KTH), Sweden), **Perić V.S.**(ROYAL INSTITUTE OF TECHNOLOGY (KTH), Sweden), **Gjerde J.O.**(STATNETT SF, Norway)

A5556AE**Synchrophasor-Based Anti-Islanding Detection**

Pena P.(UNIVERSITY OF THE BASQUE COUNTRY (UPV/EHU), Spain), **Etxegarai A.**(UNIVERSITY OF THE BASQUE COUNTRY (UPV/EHU), Spain), **Valverde L.**(UNIVERSITY OF THE BASQUE COUNTRY (UPV/EHU), Spain), **Zamora I.**(UNIVERSITY OF THE BASQUE COUNTRY (UPV/EHU), Spain), **Cimadevilla R.**(ZIV AUTOMATION SL, Spain)

Thursday

9h00

T&D management issues

Amphitheater

PAPER PRESENTATION**Chair : Jean-François Faugeras, EDF R&D****A5621NS****Considering Voltage Stability in Preventive Islanding****Norris S.**(DURHAM UNIVERSITY, United Kingdom), **Shao H.**(DURHAM UNIVERSITY, United Kingdom), **Bialek J.W.**(DURHAM UNIVERSITY, United Kingdom)**A5429HM****Feasibility Study Of An Intentional Islanding Operation With A New Adaptive Load Shedding****Hasmaini M.**(UNIVERSITY OF MALAYA, Malaysia), **Hazlie M.**(UNIVERSITY OF MALAYA, Malaysia), **Mazaher K.**(UNIVERSITY OF MALAYA, Malaysia), **Ab Halim A B.**(UNIVERSITY OF MALAYA, Malaysia), **Hew W. P.**(UNIVERSITY OF MALAYA, Malaysia)**A6022PD****Identification and Influence of the External Elements on the Transmission System Operator's Responsibility Area****Domingues dos Santos e Abreu P.I.**(POLYTECHNIC INSTITUTE OF COIMBRA/INSTITUTE OF ENGINEERING OF COIMBRA, Portugal), **Machado Ferreira C.**(POLYTECHNIC INSTITUTE OF COIMBRA/INSTITUTE OF ENGINEERING OF COIMBRA, Portugal), **Pestana R.**(REDE ELECTRICA NACIONAL, Portugal), **Maciel Barbosa F.P.**(REDE ELECTRICA NACIONAL, Portugal)**A4893MR****Procedure of Fault Management in Distribution Networks with Distributed Generation****Botero A. F.**(UNIVERSIDAD DE LOS ANDES, Colombia), **Rios M. A.**(UNIVERSIDAD DE LOS ANDES, Colombia)**A6008SK****New Approaches of Static Stability Research of Unified Electric Power Systems****Kovalenko S.**(RIGA TECHNICAL UNIVERSITY, Latvia), **Georgiev G.**(RIGA TECHNICAL UNIVERSITY, Latvia), **Zicmane I.**(RIGA TECHNICAL UNIVERSITY, Latvia),

Thursday

9h00

Planning and operation II

Everest

PAPER PRESENTATION**Chair : Thales Sousa, Federal University of ABC****A5500SB****Estimating the Line Performance of Voltage Upgraded Overhead Lines****Berlijn S.**(STATNETT SF, Norway), **Lundquist J.**(STRI, Sweden), **Gislason S.**(EFLA, Iceland)**A5646GC****Innovative Solutions for Distribution Network Planning****Celli G.**(UNIVERSITY OF CAGLIARI, Italy), **F. Pilo**(UNIVERSITY OF CAGLIARI, Italy), **Soma G.G.**(UNIVERSITY OF CAGLIARI, Italy), **Cicoria R.**(RSE SPA, Italy), **Mauri G.**(RICERCA SUL SISTEMA ENERGETICO – RSE S.P.A, Italy), **E. Fasciolo**(A2A RETI ELETTRICHE SPA, Italy), **Fogliata G.**(A2A RETI ELETTRICHE SPA, Italy)**A5587CL****Planning the Future European Power System****Schabram J.**(AACHEN UNIVERSITY (RWTH) , Germany), **Wiernes P.E.**(AACHEN UNIVERSITY (RWTH) , Germany), **Linnemann C.**(AACHEN UNIVERSITY (RWTH) , Germany), **Kraemer C.**(AACHEN UNIVERSITY (RWTH) , Germany), **Moser A.**(AACHEN UNIVERSITY (RWTH) , Germany), **Mercado P.E.**(NATIONAL UNIVERSITY OF SAN JUAN, Argentina)**A5480AB****A Set of KPIs to Quantify Environmental & Technical Benefits of Renewing Actions on Transmission Grids****Bonfiglio A.**(UNIVERSITY OF GENOVA, Italy), **F. Delfino**(UNIVERSITY OF GENOVA, Italy), **Denegri G.B.**(UNIVERSITY OF GENOVA, Italy), **Invernizzi M.**(UNIVERSITY OF GENOVA, Italy), **Procopio R.**(UNIVERSITY OF GENOVA, Italy), **Amann G.**(T&D EUROPE, Belgium), **Bessède J-L.**(T&D EUROPE, Belgium), **Charnah R.**(T&D EUROPE, Belgium), **Luxa A.**(T&D EUROPE, Belgium), **Margarone M.**(T&D EUROPE, Belgium), **Monizza G.**(T&D EUROPE, Belgium)**A5704NA****Concept, Architecture and Components of a Smart Distribution Control Center****Hauer I.**(OTTO VON GUERICKE UNIVERSITY MAGDEBURG, Germany), **Röhrig C.**(OTTO VON GUERICKE UNIVERSITY MAGDEBURG, Germany), **Rudion K.**(OTTO VON GUERICKE UNIVERSITY MAGDEBURG, Germany), **Styczynski Z.A.**(OTTO VON GUERICKE UNIVERSITY MAGDEBURG, Germany), **Naumann A.**(INSTITUTE FOR FACTORY OPERATION AND AUTOMATION IFF, Germany), **Komarnicki P.**(FRAUNHOFER INSTITUTE FOR FACTORY OPERATION AND AUTOMATION (IFF), Germany)

Thursday

9h00

Applications of optimization

Kilimandjaro

PAPER PRESENTATION

Chair : Florent Cadoux, Fondation INP

A5335PC

Engineer the Energy Efficiency using Optimisation and Simulation (EFFORTS / SUSTAINS projects)

Chaumès P.(CORYS T.E.S.S., France), **Mouillac S.**(CORYS T.E.S.S., France), **Fournié L.**(ARTELYS, France), **Aron R.**(ARTELYS, France), **Roberts J.**(AREVA TA, France), **Augustin X.**(AREVA TA, France), **Honegger J-L.**(ANTEA, France)

A5755WU

Evolutionay Optimization Algorithms Applied to Demand Dispatch via Stochastic-Mixed Integer Programming

de Fátima Araújo T.(FEDERAL UNIVERSITY OF MINAS GERAIS, Brazil), **Uturbey W.**(FEDERAL UNIVERSITY OF MINAS GERAIS, Brazil)

A5606HL

Probabilistic Power Flow Calculation Method for Low-Voltage Microgrid

Liu Ha.(HOHAI UNIVERSITY, China), **Huang C.**(HOHAI UNIVERSITY, China), **Chen Y.**(HOHAI UNIVERSITY, China), **Hou Y.**(THE UNIVERSITY OF HONG KONG, China)

A5525CB

PSO Techniques for Optimal Power Flow. Parameters Tuning by Mathematical Test Functions

Cristian D.(POLITEHNICA UNIVERSITY OF TIMISOARA, Romania) , **Simo A.**(POLITEHNICA UNIVERSITY OF TIMISOARA, Romania), **Barbulescu C.**(POLITEHNICA UNIVERSITY OF TIMISOARA, Romania), **Kilyeni S.**(POLITEHNICA UNIVERSITY OF TIMISOARA, Romania), **Solomonesc F.**(POLITEHNICA UNIVERSITY OF TIMISOARA, Romania), **Cornoiu M.**(POLITEHNICA UNIVERSITY OF TIMISOARA, Romania)

A5988VD

Automated Parameters Retrieval for Energetic Model Identification of Servers in Data Centers

Warkozek G.(G2ELAB - GRENOBLE INSTITUTE OF TECHNOLOGY, France), **Debusschère V.**(G2ELAB - GRENOBLE INSTITUTE OF TECHNOLOGY, France), **Bacha S.**(G2ELAB - UNIVERSITE JOSEPH FOURIER, France)

Thursday

9h00

Renewable energy markets*La Meije*

PAPER PRESENTATION**Chair : Julia Matevosjana, ERCOT****A5610NS****Reflexe: Managing Commercial and Industrial Customer Flexibilities in a Market Environment**

Siebert N.(ALSTOM GRID, France), **Foggia G.**(ALSTOM GRID, France), **Lannez S.**(ALSTOM GRID, France), **Muscholl M.**(ALSTOM GRID, France), **Passelegue J.C.**(ALSTOM GRID, France), **Moreau A.**(VEOLIA ENVIRONNEMENT, France), **Letendre S.**(VEOLIA ENVIRONNEMENT, France), **Bertone Y.**(VEOLIA ENVIRONNEMENT, France)

A5540JS**Pan-European Market and Network Simulation Model**

Schwippe J.(TU DORTMUND UNIVERSITY, Germany), **Seack A.**(TU DORTMUND UNIVERSITY, Germany), **Rehtanz C.**(TECHNICAL UNIVERSITY DORTMUND, Germany)

A6011LT**Economic Operation of Distributed Energy Resources in a Microgrid**

Toma L.(UNIVERSITY "POLITEHNICA" OF BUCHAREST, Romania), **Eremia M.**(UNIVERSITY "POLITEHNICA" OF BUCHAREST, Romania), **Bica D.**(PETRU MAJOR UNIVERSITY OF TARGU MURES, Romania)

A5626HM**Smart Grid Market Using Joint Energy and Ancillary Services Bids**

Soares T.(POLYTECHNIC INSTITUTE OF PORTO (ISEP/IPP), Portugal), **Morais H.**(POLYTECHNIC INSTITUTE OF PORTO (ISEP/IPP), Portugal), **Faria P.**(POLYTECHNIC INSTITUTE OF PORTO (ISEP/IPP), Portugal), **Vale Z.**(POLYTECHNIC INSTITUTE OF PORTO (ISEP/IPP), Portugal)

A5991AL**Optimal Energy Storage Usage for Electricity Market Operations**

Lamadrid A.J.(LEHIGH UNIVERSITY, United States), **Mount T.**(CORNELL UNIVERSITY, United States), **Zimmerman R.D.**(CORNELL UNIVERSITY, United States)

Thursday

9h00

Electrical vehicle grid impact and integration*Makalu*

PAPER PRESENTATION**Chair : François Colet, Renault****A5329RK****Constrained Capacity Management and Cost Minimisation of EV-Charging in a Parking Garage****Kamphuis R.**(TNO, Netherlands), **Macdougall P.**(TNO, Netherlands), **van der Veen W.**(ESSENT INNOVATION, Netherlands), **Bakker E.**(ICT AUTOMATISERING, Netherlands), **van de Velde J.**(ICT AUTOMATISERING, Netherlands)**A5602MS****Dynamic Simulation of Power System Interaction with Large Electric Vehicle Fleet Activities****Stifter M.**(AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH, Austria), **Übermasser S.**(AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH, Austria)**A5385DI****Large Scale Electric Vehicle (EV) Integration and its Impact on the Estonian Power System****Imre D.**(TALLINN UNIVERSITY OF TECHNOLOGY, Estonia), **Rosin A.**(TALLINN UNIVERSITY OF TECHNOLOGY, Estonia), **Landsberg M.**(ELERING AS, Estonia), **Jako K.**(ELERING AS, Estonia)**A5687MS****Concept and Potential of Electric Vehicle Fleet Management for Ancillary Service Provision****Stötzer M.**(OTTO VON GUERICKE UNIVERSITY MAGDEBURG, Germany), **Styczynski Z.A.**(OTTO VON GUERICKE UNIVERSITY MAGDEBURG, Germany), **Hänsch K.**(INSTITUTE FOR FACTORY OPERATION AND AUTOMATION IFF, Germany), **Naumann A.**(INSTITUTE FOR FACTORY OPERATION AND AUTOMATION IFF, Germany), **Komarnicki P.**(FRAUNHOFER INSTITUTE FOR FACTORY OPERATION AND AUTOMATION (IFF), Germany)

Thursday

9h00

Demand response and load / generation control II*Mont Blanc*

PAPER PRESENTATION**Chair : Jovica Milanovic, Univ. Manchester****A5414HY****A Load Forecasting Method for HEMS Applications**

Yang H.T.(NATIONAL CHENG KUNG UNIVERSITY, Taiwan (ROC)), **Liao J.T.**(NATIONAL CHENG KUNG UNIVERSITY, Taiwan (ROC)), **Lin C.I.**(NATIONAL CHENG KUNG UNIVERSITY, Taiwan (ROC))

A5328HB**Load Shifting of the Households in the E-Energy Project E-DeMa**

Belitz H.-J.(INSTITUTE OF ENERGY SYSTEMS, ENERGY EFFICIENCY AND ENERGY ECONOMICS, Germany), **Winter S.**(AACHEN UNIVERSITY (RWTH) , Germany), **Rehtanz C.**(TECHNICAL UNIVERSITY DORTMUND, Germany)

A5851ID**Alkaline Electrolyzer and V2G System DlgSILENT Models for Demand Response Analysis in Future Distribution Networks**

de Cerio Mendaza I.D.(AALBORG UNIVERSITY, Denmark), **Bak-Jensen B.**(AALBORG UNIVERSITY, Denmark), **Chen Z.**(AALBORG UNIVERSITY, Denmark)

A5636PB**Fuel Cell System as Part of the Smart Grid**

Bernstein P.A.(OTTO VON GUERICKE UNIVERSITY MAGDEBURG, Germany), **Heuer M.**(OTTO VON GUERICKE UNIVERSITY MAGDEBURG, Germany), **Wenske M.**(OTTO VON GUERICKE UNIVERSITY MAGDEBURG, Germany)

A5690BB**Optimisation of LV Networks with High Photovoltaic Penetration – Balancing the Grid with Smart Meters**

Bletterie B.(AUSTRIAN INSTITUTE OF TECHNOLOGY, Austria), **Kadam S.**(AUSTRIAN INSTITUTE OF TECHNOLOGY, Austria), **Stifter M.**(AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH, Austria), **Pitz R.**(SIEMENS AG, Austria), **Abart A.**(ENERGIE AG OBERÖSTERREICH NETZ, Austria)

Thursday

09h00

Security issues in Smart Grids

Cervin

PAPER PRESENTATION

Chair : Lina Bertling, Chalmers

A5454JM**Application of EBIOS for the Risk Assessment of ICT Use in Electrical Distribution Sub-Stations**

McDonald J.(EDF R&D, France), **Oualha N.**(CEA-LIST, France), **Pucetti A.**(CEA-LIST, France), **Hecker A.**(TELECOM PARIS TECH, France), **Planchon F.**(FP CONSEIL, France)

A5954SH**Service Level Agreements: An Approach Towards Coordination and Trustworthiness in Smart Grid Services**

Hussain S.(ROYAL INSTITUTE OF TECHNOLOGY (KTH), Sweden), **Gustavsson R.**(ROYAL INSTITUTE OF TECHNOLOGY (KTH), Sweden), **Saleem A.**(ROYAL INSTITUTE OF TECHNOLOGY (KTH), Sweden), **Nordström L.**(ROYAL INSTITUTE OF TECHNOLOGY (KTH), Sweden)

A5389EC**An Integrated Framework for Power and ICT System Risk-based Security Assessment**

Ciapessoni E.(RSE - Ricerca sul Sistema Energetico, Italy), **Cirio D.**(RSE - Ricerca sul Sistema Energetico, Italy), **Pitto A.**(RSE - Ricerca sul Sistema Energetico, Italy), **Kjølle G.**(SINTEF ENERGY RESEARCH, Norway), **Sforna M.**(TERNA, Italy)

A5475RG**Ancillary Services for Smart Grids - Power Quality Markets**

Gustavsson R.(ROYAL INSTITUTE OF TECHNOLOGY (KTH), Sweden), **Hussain S.**(ROYAL INSTITUTE OF TECHNOLOGY (KTH), Sweden), **Saleem A.**(ROYAL INSTITUTE OF TECHNOLOGY (KTH), Sweden)

A5420RL**Transmission Performance Estimation of Power Line Communication Systems on Distribution Networks**

Lefort R.(SÉOLIS, France), **Vauzelle R.**(UNIVERSITE DE POITIERS, France), **Poussard A.-M.**(UNIVERSITE DE POITIERS, France), **Courtecuisse V.**(GEREDIS, France)

Thursday

11h00

T&D Advanced methods on control and analysis*Amphitheater*

PAPER PRESENTATION**Chair: Stefano Massuco, Univ. Genoa****A5290UR****A Method of Detecting the Time of Arrival for an Electromechanical Wave in Large Power Systems****Rudez U.**(UNIVERSITY OF LJUBLJANA, Slovenia), **Mihalic R.**(UNIVERSITY OF LJUBLJANA, Slovenia)**A5286FL****Artificial Immune Systems Applied to Voltage Disturbance Diagnosis in Distribution Electrical Systems****Lima F. P. A.**(UNESP - UNIVERSIDADE ESTADUAL PAULISTA, Brazil), **Lotufo A. D. P.**(UNESP - UNIVERSIDADE ESTADUAL PAULISTA, Brazil), **Minussi C.R.**(UNESP - UNIVERSIDADE ESTADUAL PAULISTA, Brazil)**A5533FC****Time Domain Analysis for Stability Reserve Identification in Large Power Systems****Ciausiu F.E.**(TRACTEBEL ENGINEERING, Romania), **Eremia M.**(UNIVERSITY "POLITEHNICA" OF BUCHAREST, Romania)**A5732DI****Improving Forecast of Smart Meter Groups via Energy Storage Mechanisms****Ilic D.**(SAP RESEARCH, Germany), **Karnouskos S.**(SAP RESEARCH, Germany), **Da Silva P.G.**(SAP RESEARCH, Germany)

Thursday

11h00

State estimation II

Cervin

PAPER PRESENTATION

Chair : Newton Bretas, Univ. São Paulo

A5428AG**Results of Modified State Estimation for Improvement of Interconnected Power System Control Efficiency****Glazunova A.M.**(MELENTIEV ENERGY SYSTEM INSTITUTE SB RAS, Russia), **Aksaeva E.S.**(MELENTIEV ENERGY SYSTEM INSTITUTE SB RAS, Russia)**A5369FC****Adaptive Phasor Estimators based on Recursive Least-Squares****Costa F.F.**(FEDERAL UNIVERSITY OF ABC, Brazil), **dos Santos R.C.**(FEDERAL UNIVERSITY OF ABC, Brazil), **Ferreira R.R.**(FEDERAL UNIVERSITY OF ABC, Brazil), **Fernandes D.A.**(FEDERAL UNIVERSITY OF PARAIBA, Brazil), **de Almeida L.A.L.**(FEDERAL UNIVERSITY OF BAHIA, Brazil)**A5488GK****A Two-Stage State Estimator for Power Systems with PMU and SCADA Measurements****Manousakis N.M.**(NATIONAL TECHNICAL UNIVERSITY OF ATHENS (NTUA), Greece), **Korres G.N.**(NATIONAL TECHNICAL UNIVERSITY OF ATHENS (NTUA), Greece), **Aliprantis J.N.**(NATIONAL TECHNICAL UNIVERSITY OF ATHENS (NTUA), Greece), **Vavourakis G.P.**(NATIONAL TECHNICAL UNIVERSITY OF ATHENS (NTUA), Greece), **Makrinas G.-C. J.**(NATIONAL TECHNICAL UNIVERSITY OF ATHENS (NTUA), Greece)**A5404GP****Co-Simulation of Distribution Active Management and Distribution State Estimation to Reduce Harmful Effects of Inaccuracies****Attilio Pegoraro P.**(UNIVERSITY OF CAGLIARI, Italy), **Pilo F.**(UNIVERSITY OF CAGLIARI, Italy), **Pisano G.**(UNIVERSITY OF CAGLIARI, Italy), **Ruggeri S.**(UNIVERSITY OF CAGLIARI, Italy), **Sulis S.**(UNIVERSITY OF CAGLIARI, Italy)**A5365JL****State Estimation of Distribution Networks Through Real-Time Measurements of the Smart Meters****Leite J.B.**(UNESP - UNIVERSIDADE ESTADUAL PAULISTA, Brazil), **Sanches Mantovani J.R.**(SÃO PAULO STATE UNIVERSITY (UNESP), Brazil)

Thursday

11h00

Blackout prevention

Everest

PAPER PRESENTATION**Chair : Nikolai Voropai, Energy Systems Institute of Russian Academy of Sciences****A5572EI****Evaluation of a Risk-Based Criterion for Secure System Operation****Iggland E.**(ETH ZÜRICH, Switzerland), **Andersson G.**(ETH ZÜRICH, Switzerland)**A5336NT****Intelligent Approach for Preventing Large-Scale Emergencies in Electric Power Systems****Negnevitsky M.**(UNIVERSITY OF TASMANIA, Australia), **Kurbatsky V.**(ISEM SB RAS, Russia), **Tomin N.**(ENERGY SYSTEMS INSTITUTE, SB RAS, Russia), **Panasetsky D.**(ENERGY SYSTEMS INSTITUTE, SB RAS, Russia)**A5211DF****Frequency Restoration Reserve Control Scheme with Participation of Industrial Loads****Fabozzi D.**(IMPERIAL COLLEGE LONDON, United Kingdom), **Thornhill N.F.**(IMPERIAL COLLEGE LONDON, United Kingdom), **Pal B.C.**(IMPERIAL COLLEGE LONDON, United Kingdom)**A5212VC****Underfrequency Load Shedding in Large Interconnection****Sauhats A.**(RIGA TECHNICAL UNIVERSITY, Latvia), **Chuvychin V.**(RIGA TECHNICAL UNIVERSITY, Latvia), **Strelkovs V.**(RIGA TECHNICAL UNIVERSITY, Latvia), **Petrichenko R.**(RIGA TECHNICAL UNIVERSITY, Latvia), **Antonov E.**(RIGA TECHNICAL UNIVERSITY, Latvia)**A5301MS****The Diversification Benefit of Additional Transmission Capacity****Sarfati M.**(ROYAL INSTITUTE OF TECHNOLOGY (KTH), Sweden), **Hesamzadeh M.R.**(ROYAL INSTITUTE OF TECHNOLOGY (KTH), Sweden)

Thursday

11h00

Systems design and expansion planning

Kilimandjaro

PAPER PRESENTATION**Chair : Lina Ruiz, Maia Eolis****A5534BD****Transmission Expansion Optimization Via Constructive Heuristic Technique**

Mendonça I.M.(FEDERAL UNIVERSITY OF JUIZ DE FORA (UFJF), Brazil), **Ivo C. S. Junior**(FEDERAL UNIVERSITY OF JUIZ DE FORA (UFJF), Brazil), **Marcato A.L.M.**(FEDERAL UNIVERSITY OF JUIZ DE FORA (UFJF), Brazil), **Dias B.H.**(FLUMINENSE FEDERAL UNIVERSITY, Brazil)

A5415CC**Multiobjective Environmental Transmission Network Expansion Planning**

Correa C.A.(UNIVERSIDAD DE LA SALLE, Colombia), **Bolanos R.**(ISA, Colombia), **Garces A.**(UNIVERSIDAD TECNOLÓGICA DE PEREIRA, Colombia), **Molina A.**(UNIVERSIDAD TECNOLÓGICA DE PEREIRA, Colombia)

A5425WB**Study of Particle Swarm Optimization Variations Applied to Transmission Expansion Planning**

Barreto W.E.(UNIVERSITY OF CAMPINAS (UNICAMP), Brazil), **Torres S.P.**(UNIVERSITY OF CAMPINAS (UNICAMP), Brazil), **Castro C.A.**(UNIVERSITY OF CAMPINAS (UNICAMP), Brazil)

A5777RC**Applications of a Reference Model to Smarter Electrical Energy Systems**

Cespedes R.(RCONSULTING GROUP, Colombia)

A05456JS**Transmission Expansion Planning – A Multiyear PSO Based Approach Considering Load Uncertainties**

Saraiva J.M. (INESC-TEC, Portugal), **Costeira da Rocha M.** (UNIVERSITY OF PORTO, Portugal)

Thursday

11h00

Central generation challenges*La Meije*

PAPER PRESENTATION

Chair: Joël-Remy Nicolas, EDF DTG

A5720HS**Combining Start-Up Costs with Non-Linear Head Optimization of Hydro Storage**

Skjelbred H.I.(SINTEF ENERGY RESEARCH, Norway)

A5352jm**Design, Implementation and On-site Performance of Coordinated Intra-Plant Reactive Power–Voltage Controller****Dragosavac J.**(UNIVERSITY OF BELGRADE, Serbia), **Janda Z.**(UNIVERSITY OF BELGRADE, Serbia), **Milanović J.V.**(THE UNIVERSITY OF MANCHESTER, United Kingdom), **Arnautović D.**(UNIVERSITY OF BELGRADE, Serbia), **Mihajlović L.**(THERMAL POWER PLANTS, Serbia), **Radojičić B.**(THERMAL POWER PLANTS, Serbia)**A5280DR****Selected Problems of Frequency Control for a Multi-Area Power System with Heterogeneous Generation Structure****Robak S.**(WARSAW UNIVERSITY OF TECHNOLOGY, Poland), **Rasolomampionona D.D.**(WARSAW UNIVERSITY OF TECHNOLOGY, Poland), **Piekarczyk M.**(WARSAW UNIVERSITY OF TECHNOLOGY, Poland), **Szymankiewicz L.**(WARSAW UNIVERSITY OF TECHNOLOGY, Poland)

Thursday

11h00

Electrical vehicle charging/discharging management II*Makalu*

PAPER PRESENTATION**Chair : Mathias Stifter, AIT****A5758FS****Controlling Electric Vehicles in Quasi-Real-Time****Soares F.J.**(INESC TEC, Portugal), **Peças Lopes J.A.**(INESC TEC, Portugal)**A5753CM****INESC Porto Experimental SMART GRID: Enabling the Deployment of EV and DER****Gouveia C.**(INESC TEC, Portugal), **Rua D.**(INESC TEC, Portugal), **Ribeiro F.**(INESC TEC, Portugal), **Moreira C.L.**(INESC TEC, Portugal), **Peças Lopes J.A.**(INESC TEC, Portugal)**A5615MP****Plug-in Vehicles for Primary Frequency Regulation : How to Build a Virtual Power Plant?****Petit M.**(SUPÉLEC E3S, France), **Perez Y.**(UNIVERSITE PARIS SUD 11, France)**A5149SA****Electric Vehicles Charging in a Smart Microgrid Supplied with Wind Energy****Allard S.**(GRENOBLE INSTITUTE OF TECHNOLOGY (GRENOBLE INP), France), **See P. C.**(NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (NTNU), Norway), **Molinas M.**(NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (NTNU), Norway), **Fosso O.B.**(NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (NTNU), Norway), **Foosnæs J.A.**(NTE NETT AS, Norway)**A5628XC****Estimation of Capacity for Charging Electric Vehicles****Chen X.**(THE UNIVERSITY OF MANCHESTER, United Kingdom), **Crossley P.A.**(THE UNIVERSITY OF MANCHESTER, United Kingdom), **Cotton I.**(THE UNIVERSITY OF MANCHESTER, United Kingdom)

Thursday

11h00

Grid integration and management of renewable energy systems II*Mont Blanc*

PAPER PRESENTATION**Chair : Nicole Mermilliod, CEA****A5706AR****Coordinated Control of Active Devices in an Overlay Grid to Facilitate the Integration of Renewable Energy Sources in Europe****Roehder A.**(AACHEN UNIVERSITY (RWTH) , Germany), **Natemeyer H.**(AACHEN UNIVERSITY (RWTH) , Germany), **Winter S.**(AACHEN UNIVERSITY (RWTH) , Germany), **Schnettler A.**(AACHEN UNIVERSITY (RWTH) , Germany)**A5908JM****ERCOT Reserve Adequacy Study for the Future System Development Scenarios with Large Share of Renewable Energy Resources****Matevosyan J.**(ELECTRIC RELIABILITY COUNCIL OF TEXAS, United States), **Thurnher G.**(ERCOT, United States), **Katzenstein W.**(DNV KEMA, United States), **Stryker A.**(DNV KEMA, United States)**A5484IG****Profitable Increases in Cross Border Transmission Capacities in a European Power System with Large Shares of Renewables****Graabak I.**(SINTEF ENERGY RESEARCH, Norway), **Wolfgang O.**(SINTEF ENERGY RESEARCH, Norway), **Bakken B.**(SINTEF ENERGY RESEARCH, Norway)**A5691LG****Half-Wavelength Transmission Lines for Connecting Power Plants in Amazon to the Brazilian System****Gomes L.C.F.**(UNIVERSITY OF CAMPINAS (UNICAMP), Brazil), **da Silva L.C.P.**(UNIVERSITY OF CAMPINAS (UNICAMP), Brazil), **Tavares M.C.**(UNIVERSITY OF CAMPINAS (UNICAMP), Brazil)**A6037MM****High Efficiency Modified Dual-Active Bridge Converter for Photovoltaic Integration****Ahmad Zaffar N.**(LAHORE UNIVERSITY OF MANAGEMENT SCIENCES, Pakistan), **Muneeb Ur Rehman M.**(LAHORE UNIVERSITY OF MANAGEMENT SCIENCES, Pakistan), **Hassan R.**(LAHORE UNIVERSITY OF MANAGEMENT SCIENCES, Pakistan)