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

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

A5327JV
Impacts of Squirrel-Cage and DFIG Wind Turbines on Long-Term Power System Voltage Stability
Londero R.R. (FEDERAL UNIVERSITY OF PARÁ, Brazil), Affonso 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)
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-Infed 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
Răzuşi 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

Modeling and parameters estimation

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), Erlich 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 Reduction 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)
Power systems reconfiguration

La Meije

PAPER PRESENTATION

Chair: Matthieu Terenti, ERDF

Study of Markov Decision Process-Based Optimal Switching Algorithm Performance for Small Power Systems

Deese A.S. (THE COLLEGE OF NEW JERSEY, United States)

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)

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)

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, Brazil), Delbem A.C.B. (SÃO PAULO STATE UNIVERSITY (UNESP), Brazil), London Jr. J.B.A. (SÃO PAULO STATE UNIVERSITY (UNESP), Brazil)

Real-time Overloads Management in Active Distribution Systems: an Optimization Approach Including Network Switching

Billibin I. (UNIVERSITY OF LUXEMBOURG, Luxembourg), Capitanescu F. (UNIVERSITY OF LUXEMBOURG, Luxembourg), Sachau J. (UNIVERSITY OF LUXEMBOURG, Luxembourg)
Monday 14h00

Offshore wind farms I

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 STUTTGART (IEH), Germany), Tenbohlen S. (UNIVERSITÄT STUTTGART (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  

**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*

Schwerdtfeiger 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), Delport 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)
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

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
Hurtt 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

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), Rodriguez 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
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), Dhuiqc 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. (DELT 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), Descloux 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

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

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)
Demand response for grid energy management  

PAPER PRESENTATION

Chair : Rene Kamphuis, TNO

A537SW
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), Mazl 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

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 Phenomenon in Supercapacitors and Consequent Dynamic Modeling Improvement
Torregrossa D. (ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), Bahramipanah 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

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), Bourquet 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

PAPER PRESENTATION

Chair: Lina Bertling, Chalmers

A523JQ
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), Hatzigiroyi 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), Uyttersprot 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)
Power system monitoring and control (results from the FP7 Real-Smart project)

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
Kunjumuhammed 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
Marinakis A.(ABB CORPORATE RESEARCH, Switzerland), Larsson M.(ABB CORPORATE RESEARCH, Switzerland)
Tuesday
16h00

Stochastic and techno-economical approaches

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

PAPER PRESENTATION

Chair: Stéphane Plois, GSCOP

A535jm
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. (ELECTRICITÉ 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
Bangaloren P. (CHALMERS UNIVERSITY OF TECHNOLOGY, Sweden), Tjernberg L.B. (CHALMERS UNIVERSITY OF TECHNOLOGY, Sweden)

A5527CB
ANN Techniques for Power Consumption Forecasting
Barbuescu 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  

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. (ÈCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), Hohmann M. (ÈCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), Cherkaoui R. (ÈCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), Paolone M. (ÈCOLE 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, ZURICH, Switzerland)

A5735JR
Design and Implementation of Battery Management System by Estimating the SOC and SOH Online
Ramírez 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
Wednesday 9h00

Energy flow management Cervin

PAPER PRESENTATION

Chair: Ali Abur, Northeastern University Boston

A554SB
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
Wednesday  9h00

Power System frequency/ voltage stability & control  Everest

PAPER PRESENTATION

Chair: Patrick Pantiaticci, 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

Loads and flows modeling

**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), Sayeef 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)
Dynamic decision making in energy investments

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 Hertem 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 SÃO 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)
Planning and operation I

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

PAPER PRESENTATION

Chair: Nicolas Flechon, GEG

A5419PR
Reduction Method for Active Distribution Networks
Raboni P. (AALBORG UNIVERSITY, Denmark), Chen Z. (AALBORG UNIVERSITY, Denmark)

A5535MK
Distribution State Estimation for Smart Distribution System
Karimi M. (UNIVERSITY OF MALAYA, Malaysia), Mokhli 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), Quiros-Tortós J. (THE UNIVERSITY OF MANCHESTER, United Kingdom), Kyriakides E. (UNIVERSITY OF CYPRUS, Cyprus), Terzija V. (THE UNIVERSITY OF MANCHESTER, United Kingdom)
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

Costs and benefits for power transmission

**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

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), Monta 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 ZURICH, Switzerland), Andersson G. (ETH ZURICH, 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 PONTIFICIAL 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

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), Bedriñana M.F. (UNIVERSITY OF CAMPINAS (UNICAMP), Brazil), Castro C.A. (UNIVERSITY OF CAMPINAS (UNICAMP), Brazil)
Wednesday

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 "MIHAIO 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
Lumbreras S.(UNIVERSIDAD PONTIFICIA COMILLAS, Spain), Ramos A.(UNIVERSIDAD PONTIFICIA COMILLAS, Spain)

A5667SB
Designing a Transmission Line Using Pareto Approach
Berjozkina 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 ZURICH, Switzerland), Oldewurtel F. (ETH ZURICH, Switzerland), Vasiraniy M. (ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), Switzerland), Andersson G. (ETH ZURICH, 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), Chatzigiannis 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

Advanced Distribution Automation functions & self-healing

**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 PONTIFICIAL UNIVERSITY, Spain), Alberdi-Alén A.(COMILLAS PONTIFICIAL UNIVERSITY, Spain)

A5586AB
Minimization Energy Transmission Cost and CO2 Emissions using Coordination of Electric Vehicle and Wind Power (W2V)

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)

A5346JC
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-EI-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
Garcia 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

Communication networks for power system protection Scheme and operation

**PAPER PRESENTATION**

Chair: Daniel Georges, Atos Worlgrid

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)
Network development and market integration

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 Q. (GUANGDONG POWERGRID CORPORATION, China), Zeng J. (GUANGDONG POWERGRID CORPORATION, China)

A5847EM
Trading Wind Power in the UK Using an Imbalance Penalty Reduction Strategy
Martínez 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
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), Teuwen 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 STUTTGART, Germany), Tenbohlen S. (UNIVERSITÄT STUTTGART (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 Daniele 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
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

Planning and operation II

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. Pilò (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), Komaricki P. (FRAUNHOFER INSTITUTE FOR FACTORY OPERATION AND AUTOMATION (IFF), Germany)
Thursday 9h00

Applications of optimization  

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

Evolutionary 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

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), Passelergue 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**

*Paper Presentation*

**Chair:** François Colet, Renault

**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)

**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)

**Large Scale Electric Vehicle (EV) Integration and its Impact on the Estonian Power System**


**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)
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), Kjolle 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

State estimation II

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

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 TECNOLOGICA DE PEREIRA, Colombia), Molina A. (UNIVERSIDAD TECNOLOGICA 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), Piekarz M. (WARSAW UNIVERSITY OF TECHNOLOGY, Poland), Szymankiewicz L. (WARSAW UNIVERSITY OF TECHNOLOGY, Poland)
Thursday 11h00

Electrical vehicle charging/discharging management II

**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

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), Wolgang 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)