



**16th International Conference on  
Intelligent Systems Application to  
Power Systems**

# Conference Schedule

**Sunday, September 25, 2011**

4:00 pm - 8:00 pm	Registration to Conference, optional Tours and Gala Dinner
8:00 pm - 10:00 pm	Welcome Cocktail

**Monday, September 26, 2011**

8:00 am - 9:00 pm	Registration		
9:00 am - 10:45 am	<p style="text-align: center;">Welcome</p> <p style="text-align: center;">Opening Speech</p> <p style="text-align: center;">Interconnection of Crete to the mainland Greece</p> <p style="text-align: center;">Speaker: Michalis Papadopoulos, President of Hellenic TSO</p> <p style="text-align: center;">Keynote Speech</p> <p style="text-align: center;"><i>Wind Energy Development in Europe.</i></p> <p style="text-align: center;">Keynote Speaker: Arthuros Zervos, President of European Wind Energy Association</p>		
10:45 am - 11:00 am	Coffee Break		
11:00 am - 12:30 pm	<p style="text-align: center;">Paper Session 1</p> <p style="text-align: center;">RES Integration</p>	<p style="text-align: center;">Paper Session 2</p> <p style="text-align: center;">Load Forecasting</p>	<p style="text-align: center;">Paper Session 3</p> <p style="text-align: center;">Power Quality</p>
12:30 pm - 13:00 pm	Coffee Break		
13:00 pm - 14:30 pm	<p style="text-align: center;">Paper Session 4</p> <p style="text-align: center;">Optimal Capacitor Placement</p>	<p style="text-align: center;">Panel 1</p> <p style="text-align: center;">Active Houses and SmartGrids</p> <p style="text-align: center;">Organized by Aris Dimeas</p>	<p style="text-align: center;">Paper Session 5</p> <p style="text-align: center;">Intelligent Optimization</p>
14:30 pm - 15:30 pm	Lunch Break		
15:30 pm - 16:45 pm	<p style="text-align: center;">Paper Session 6</p> <p style="text-align: center;">RES Forecasting I</p>	<p style="text-align: center;">Paper Session 7</p> <p style="text-align: center;">Fault Diagnosis -Protection I</p>	<p style="text-align: center;">Paper Session 8</p> <p style="text-align: center;">Intelligent Control I</p>
16:45 pm - 17:00 pm	Coffee Break		
17:00 pm - 18:30 pm	<p style="text-align: center;">Paper Session 9</p> <p style="text-align: center;">RES Forecasting II</p>	<p style="text-align: center;">Paper Session 10</p> <p style="text-align: center;">Fault Diagnosis - Protection II</p>	<p style="text-align: center;">Paper Session 11</p> <p style="text-align: center;">Intelligent Control II</p>
18:45 pm - 23:00 pm	Official Dinner and entertainment program		

Accompanying Persons Tour : Visit to Lychnostatis museum of folklore <http://www.lychnostatis.gr/>, Archanes traditional village, and Boutari local winery (Fantaxometocho) <http://www.boutari.gr/?TGVmdE1bnU9NiwxMCZMQ5HPVVOJlBhZ2VJZD04> Transportation and guided tour free of charge. Entry fees to museum (4.5 €/person) and winery (5 €/person) are not included.

## Tuesday, September 27, 2011

8:30 am - 10:00 am	<p align="center"><b>Keynote Speech</b></p> <p align="center">Sustainable Electric Power Systems in the 21<sup>st</sup> Century: <i>Requirements, Challenges, and the Role of Intelligence Systems.</i></p> <p align="center">Keynote Speaker: Dr. Prabha S. Kundur</p>		
10:00 am - 10:30 am	Coffee Break		
10:30 am - 12:00 pm	<p align="center"><b>Paper Session 12</b></p> <p align="center">Stability and Security</p>	<p align="center"><b>Paper Session 13</b></p> <p align="center">Wide Area Measurement Systems</p>	<p align="center">Wind Power Forecasting Workshop - Organized by G. Kariniotakis</p>
12:00 pm - 12:15 pm	Coffee Break		
12:15 pm - 14:00 pm	<p align="center"><b>Paper Session 14</b></p> <p align="center">Power System Control</p>	<p align="center"><b>Paper Session 15</b></p> <p align="center">Energy Markets</p>	<p align="center">Wind Power Forecasting Workshop -</p>
14:00 pm - 15:00 pm	Lunch Break		
16:00 pm - 18:30 pm	<p align="center"><b>Tour:</b> Knossos Archeological Site. Transportation and guided tour free of charge. Entry fee to the site (6 € per person) is not included.</p>		
18:30 pm - 20:00 pm	<p align="center"><b>Technical Visit :</b> Tour of Linoperamata Test Station presented by Public Power Corp.</p>		
20:00 pm - 23:00 pm	<p align="center"><b>Dinner</b> at Rogdia village (panoramic view of Heraklion)</p>		

## Wednesday, September 28, 2011

8:30 am - 10:00 am	<p align="center"><b>Keynote Speech</b></p> <p align="center"><i>The three pillars of Smart Distribution realized by IEC 61850 communications</i></p> <p align="center">Keynote Speaker: Dr. Bernd Buchholz</p> <p align="center">Invited Speech</p> <p align="center">Complex Systems</p>		
10:00 am - 10:30 am	Coffee Break		
10:30 am - 12:00 pm	<p align="center"><b>Paper Session 16</b></p> <p align="center">Microgrids</p>	<p align="center"><b>Paper Session 17</b></p> <p align="center">Demand Side Management</p>	<p align="center"><b>Panel 2</b></p> <p align="center">Integration of EVs organized by Mladen Kezunovic</p>
12:00 pm - 12:15 pm	Coffee Break		
12:15 pm - 14:15 pm	<p align="center"><b>Paper Sessions 18</b></p> <p align="center">Multi - Agents</p>	<p align="center"><b>Paper Session 19</b></p> <p align="center">Smart Grids</p>	<p align="center"><b>Paper Session 20</b></p> <p align="center">Distribution Systems</p>
14:15 pm - 15:00 pm	Conference Closing		
15:00 pm - 16:00 pm	Lunch Break		
17:00 pm - 22:00 pm	<p align="center"><b>Technical Visit :</b> Plastica Kritis Wind Park</p> <p align="center">Visit to Plaka village across of which one can see the Spinalonga island. Free time for swimming, coffee, dinner, etc.</p>		

## Paper ID per Session

<u>Paper Session 1</u>	<u>Paper Session 2</u>	<u>Paper Session 3</u>	<u>Paper Session 4</u>
#46, #149, #25, #123, #104, #144	#6, #44, #48, #129, #139	#76, #88, #113, #22, #74, #120, #32	#29, #135, #127, #134, #65, #66
<u>Paper Session 5</u>	<u>Paper Session 6</u>	<u>Paper Session 7</u>	<u>Paper Session 8</u>
#55, #140, #105, #52, #43, #138, #79, #101	#24, #34, #45, #50	#3, #17, #38, #68, #89, #126,	#5, #83, #98, #122, #153
<u>Paper Session 9</u>	<u>Paper Session 10</u>	<u>Paper Session 11</u>	<u>Paper Session 12</u>
#53, #60, #124, #7	#108, #142, #42, #148, #169, #172, #19,	#73, #177, #160, #156, #158	#85, #86, #111, #141, #159, #57
<u>Paper Session 13</u>	<u>Paper Session 14</u>	<u>Paper Session 15</u>	<u>Paper Session 16</u>
#100, #102, #106, #112, #130, #137	#47, #109, #117, #99, #75, #71	#69, #115, #136, #110, #131, #49	#33, #92, #107, #178
<u>Paper Session 17</u>	<u>Paper Session 18</u>	<u>Paper Session 19</u>	<u>Paper Session 20</u>
#41, #72, #84, #116, #118, #132	#21, #26, #97, #1 #14, #128, #133, #150	#40, #63, #152, #161, #166, #121, #151	#10, #64, #80, #96, #31, #59, #119, #28

## **Monday 26/9/2011**

### **Paper Session 1 -RES Integration**

Monday 11:00 am - 12:30 pm

# 25 Ant Colony Optimization and Analysis of Time Step Resolution in Transmission Expansion Computations for Wind Power Integration  
Ida Fuchs, Terje Gjengedal

# 46 Integrating High Levels of Wind in Island Systems: Lessons from Hawaii  
Nicholas Miller, Leon Rosse, Devon Manz, Harjeet Johal, James Griffin

#104 Anemos.Rulez: Rule based Extreme Event Prediction and Alarming to Support the Integration of Wind Power  
Hans-Peter Walddl, Philipp Brandt

#123 Onshore Wind Farm planning and System Simulation Analysis under Low-Carbon-Island Project at Penghu  
Yuan-Kang Wu, Ching-Yin Lee, Shao-Hong Tsai

#144 Finding Representative Wind Power Scenarios and their Probabilities for Stochastic Models  
Jean Sumaili, Hrvoje Keko, Vladimiro Miranda, Zhi Zhou, Audun Botterud

#149 Assessment and Economic Analysis of Wind Generation on the Ancillary Services and the Unit Commitment Process for an Isolated System  
Alex Papalexopoulos, Isidoros Vitellas, Nikos Hatziaargyriou, Charles Hansen, Aris Dimeas

### **Paper Session 2 -Load Forecasting**

Monday 11:00 am - 12:30 pm

#6 Power System Load Prediction based on Modified Shuffled Frog Leaping Algorithm and Artificial Neural Network  
Abdollah Kavousifard, Haidar Samet

#44 Short-Term Load Forecasting with SOM Neural Networks and its Application to the Electrical Spanish Market  
MIGUEL LÓPEZ, SERGIO VALERO, CAROLINA SENABRE, JUAN APARICIO, ANTONIO GABALDON

#48 A Pareto Optimization Approach of a Gaussian Process Ensemble for Short-Term Load Forecasting  
Miltiadis Alamaniotis, Andreas Ikonopoulos, Lefteri Tsoukalas

#129 Short-Term Electricity Load Forecasting With Generalized Additive Models  
Amandine PIERROT, Yannig GOUDE

#139 A load forecasting hybrid method for an isolated power system  
GEORGE SIDERATOS, Ioannis Vitellas, NIKOLAOS HATZIARGYRIOU

### **Paper Session 3 -Power Quality**

Monday 11:00 am - 12:30 pm

#22 Adaptive Wavelet Neural Network Based Harmonic Estimation of Single-Phase Systems  
Sachin K. Jain, S. N. Singh

#32 Recording and Managing Field Leakage Current Waveforms in Crete. Installation, Measurement, Software Development and Signal Processing  
Dionisios Pylarinos, Kiriakos Siderakis, Emmanuel Thalassinakis, Isidoros Vitellas, Eleftheria Pyrgioti

#74 Neural Adaptive Notch Filter to Harmonic Detection  
Rondineli Rodrigues Pereira, Carlos Henrique da Silva, Luiz Eduardo Borges da Silva, Germano Lambert-Torres

#76 Harmonic Monitoring Data Preparation for Application of Data Mining  
Ali Asheibi, David Stirling, Danny Sutanto

#88 Analysis of Transient Overvoltages during Capacitor Banks Switching  
Iman Sadeghkhan, Nima Haratian, Abbas Ketabi, Rene Feuillet

#120 Invasive Weed Optimization Feature in Market-Based Transmission Expansion Planning  
Monazzah Ebrahimi Gardeshi, Ashkan Rahimi Kian

#113 Single Channel ICA-based Method for Power Quality Disturbance Analysis  
Danton Ferreira, José Seixas, Augusto Cerqueira

### **Paper Session 4 -Optimal Capacitor Placement**

Monday 13:00 pm - 14:30 pm

#29 Reactive Power Optimization using Evolutionary Techniques: Differential Evolution and Particle Swarm.

Florin Catalin Ionescu, Constantin Bulac, Mircea Eremia

#65 GA-based Method for Optimal Allocation of Fixed and Switchable Capacitors in Distribution Systems with Multi Level Load

Mahmoud reza Haghifam, Alireza Salehinia, Majid Shahabi, Faezeh Mahdloo

#66 Loss Reduction and Voltage improvement in Distribution System with DGs Using GA-based Optimal Capacitor Placement

Mahmoud reza Haghifam, Alireza Salehinia, Majid Shahabi, Faezeh Mahdloo

#127 Reconfiguration and Capacitor Placement in Radial Distribution Systems for Loss Reduction and Reliability Enhancement

Pooya Rezaei, Mehdi Vakilian, Ehsan Hajipour

#134 Genetic Algorithms for the Capacitor Placement Problem in Distribution Networks

Luis Vargas, Guillermo Jimenez-Estevéz

#135 A Memetic Algorithm Based on Mixed Ant Colony Optimization and Genetic Algorithm for Optimal Capacitor Placement

Max Chianca Pimentel Filho, Manoel Firmino Medeiros Jr.

### **Paper Session 5 -Intelligent Optimization**

Monday 13:00 pm - 14:30 pm

#43 Double Branch Outage Modeling and Its Solution Using Differential Evolution Method

Oguzhan CeylanAydogan Ozdemir, Hasan Dag

#52 Natural Optimization Applied to Medium-Term Hydrothermal Coordination

Vitor Hugo Ferreira, Gabriel Henrique Clemente e Silva

#55 Two-Layered EPSO for Maximizing Loadability with FACTS Devices

Hiroyuki Mori, Hajime Fujita

#79 Transmission Expansion Planning by Enhanced Differential Evolution

George Orfanos Pavlos Georgilakis, George Korres, Nikos Hatziargyriou

#101 Application of Fuzzy Inference Systems for Evaluation of Failure Rates of Power System Components

Yong Liu, Chanan Singh

#105 A GPU Accelerated PSO with Application to Economic Dispatch Problem

Stelios Papadakis, Anastasios Bakirtzis

#138 ASISTO: An Integrated Intelligent Assistant System for Power Plant Operation and Training

Alberto Reyes, Pablo H. Ibarguengoytia ,Francisco Elizalde, Liliana Sánchez, Alondra Nava

#140 Wind Farm and Pumped Storage Integrated in Generation Scheduling Using PSO

hassan siahkali

### **Paper Session 6 -RES Forecasting I**

Monday 15:30 pm - 16:45 pm

#24 Utilising Numerical Weather Forecast for Planning Electricity Production in Cogeneration Plant.

Miron Kurska, Łukasz Ligowski, Sławomir Walkowiak, Witold R. Rudnicki

#34 A Data Mining Based Methodology for Wind Forecasting

Sérgio Ramos, João Soares, Zita Vale, Hugo Morais

#45 Input Variable Selection Using Supervised Learning: Application to Short-term River Stream-flow Forecasting

Victor Hinojosa

#50 Short-Term Wind Power Forecasting using a Hybrid Evolutionary Intelligent Approach

Joao Catalao, Gerardo Osorio, Hugo Pousinho

### **Paper Session 7 -Fault Diagnosis and Protection I**

Monday 15:30 pm - 16:45 pm

#3 Controlling of Artificial Neural Network for Fault Diagnosis of Photovoltaic Array

Syafaruddin Syafaruddin, Engin Karatepe,  
Takashi Hiyama

#38 An Automated Classifier for  
Asynchronous Diagnosis of Partial Discharge  
Defects  
Pete Baker, Alex Mair, Martin Judd

#68 A Bayesian Network Approach to Fault  
Diagnosis and Prognosis in Power Transmission  
Systems  
Raimundo Teive, Jorge Coelho, Celso Camargo,  
Paulo Charles, Thales Lange

#89 Novel Method to Mitigate Overvoltages  
during Shunt Reactor Energization  
Iman Sadeghkhan, Arezoo Mortazavian, Abbas  
Ketabi, Rene Feuillet

#126 SPS Generator Tripping Planning Using  
Immune Algorithm  
Chao-Rong Chen, Wen-Ta Tsai, Chin-Yin Lee,  
Zhen-Fa Lin

### **Paper Session 8 -Intelligent Control I**

Monday 15:30 pm - 16:45 pm

#5 WRBF Network Based Control Strategy  
for PMSG Wind Generation System  
Chiung-Hsing Chen, Chih-Ming Hong, Ting-Chia  
Ou

#83 Adaptive Power Control Modeling and  
Simulation of a Hydraulic Turbine  
Teofana Puleva, Emil Garipov, Georgi Ruzhekov

#98 Model Analysis and Intelligent-ANFIS  
Control Design for PWM-regulated ac/dc  
Converters  
Michael Bourdoulis, John Spanomichos, Antonio  
Alexandridis

#122 Pond Head Level Control in a Run-of-  
River Hydro Power Plant using Fuzzy Controller  
Omkar Yadav, Nand Kishor, Jesus Fraile-  
Ardanuy, Soumya R Mohanty, Juan I. Pérez

#153 Increase Efficiency Power Supplies With  
Using Adaptive Control Method  
Vahid Reza Seirafian, saeid Eshtehardiha,  
Mohammad Bayati Poudeh, Erfan Shojaei  
Barjuei

### **Paper Session 9 -RES Forecasting II**

Monday 17:00 pm - 18:30 pm

#7 Weather Pattern Classification and  
Relationships with Observational Wind Speed  
over Iberia

Alvaro Pascual, Francisco Valero, M. Luisa  
Martin, Javier Sanz, M. Yolanda Luna

#53 Autonomous Neural Models Applied to  
Medium-Term Water Inflow Forecasting  
Vitor Hugo Ferreira, Caio Monteiro Leocádio

#60 Prediction of Wind Power by Artificial  
Intelligence Techniques  
Petre-Cristian Razusi, Mircea Eremia

#124 Technology Analysis on Short-Term  
Wind Power Forecasting  
Yuan-Kang Wu, Ching-Yin Lee, Shao-Hong Tsai

### **Paper Session 10 -Fault Diagnosis and Protection II**

Monday 17:00 pm - 18:30 pm

#19 Smart meters from the angles of  
consumer protection and public service  
obligations  
Geert Deconinck, Bram Delvaux, Klaas De  
Craemer, Zhifeng Qiu, Ronnie Belmans

#42 An Ontology Model for Intelligent Tools  
Applied to Transformer Condition Evaluation  
Filipe Giacomelli, Thiago Inoue, Diego Morais,  
Jacqueline Rolim

#108 On-line diagnosis of a power generation  
process using probabilistic models  
Pablo H. Ibarguengoytia ,Alberto Reyes

#142 A Novel Fault Classification Approach  
Using Manifold Learning Algorithm  
Yufan Guan, Mladen Kezunovic

#148 Transformer fault diagnosis based on  
autoassociative neural networks  
Adriana Castro, Vladimiro Miranda, Shigeaki  
Lima

#169 A Novel and fast Moving Window Based  
Technique for Transformer Differential  
Protection  
Hassan Abniki

#172 Accurate Fault Classification and  
Section Identification Scheme in TCSC  
Compensated Transmission Line using SVM

Pushkar Tripathi      Abhishek      Sharma  
Gopinath Pillai      Indra Gupta

### **Paper Session 11 -Intelligent Control II**

Monday 17:00 pm - 18:30 pm

#73    Fault Tolerant Control scheme with PID's

Marino Sanchez-Parra, Dionisio A. Suarez, Cristina Verde

#156    New Combination Technique for DC Voltage Control STATCOM and Increase Efficiency by Artificial Neural Networks  
saeid Eshtehardiha, Vahid Reza Seirafian, Erfan Shojaei Barjuei, Omid Ghanaati, Mohammad Bayati Poudeh

#158    Optimal Design of Power Broadband Filter via Reinforcement Learning Automata  
Milad Khaleghi, A.A. Gharaveisi, Mohsen Mohammadian

#160    The Parameters Change Effects on Operation of Iterative Learning Controller  
Mohsen Rezaei, A.A. Gharaveisi, Mohsen Mohammadian, A.A. Rezaei

#177    MODELING AND IMPLEMENTATION OF HYDRO TURBINE POWER ADAPTIVE CONTROL BASED ON GAIN SCHEDULING TECHNIQUE  
Georgi Ruzhekov, Tsonyo Slavov, Teofana Puleva

### **Paper Session 12 -Stability and Security**

Tuesday 10:30 pm - 12:00 pm

#57    Design of Fuzzy Damping Controllers for Transient-Stability Improvement of a DFIG-based Offshore Wind Farm Using a SMES Unit  
Li WangShiang-Shong Chen, Sheng-Wen Wang, Yi-Ting Chen

#85    Design of Real-Time Predictor for Frequency Security Assessment of Power System  
Rui Zhang, Yan Xu, Zhao Yang Dong, Kit Po Wong

#86    Decision Tree-Based Power System Static Security Assessment Using PMU Measurements

Bernard Bernardes, Werbeston Douglas Oliveira, João Paulo Abreu Vieira,IVALDO OHANA, Ubiratan Holanda Bezerra

#111    Geometric Properties of the Loadability Surface at SNB-SLL Intersections and Tangential Intersection Points

Magnus Perninge, Lennart Söder

#141    Power System Voltage Stability Analysis Using ANN and Continuation Power Flow Methods

Balasubramanian R, Rhythm Singh

#159    Optimal Tuning of OLTC and RPCE to Improve Power System Voltage Stability based on Ant colony

Milad Khaleghi, Mohsen Mohammadian, A.A Gharaveisi, Reza Azimi

### **Paper Session 13 -Wide Area Measurement Systems**

Tuesday 10:30 pm - 12:00 pm

#100    Impact of GPS Signal Quality on the Performance of Phasor Measurements

yong liu, yong jia, zhenzhi lin, yingchen zhang, lei wang

#102    Power System Islanding Detection Based on Wide Area Measurement Systems

Zhenzhi Lin, Tao Xia, Yanzhu Ye, Ye Zhang, Lang Chen

#106    Distributed MPC of wide-area electromechanical oscillations of large-scale power systems

Da Wang, Mevludin Glavic, Louis Wehenkel

#112    Wide-Area Measurement System Control to Coordinate HVDC Links in Large Scale Power Systems

Robert Eriksson, Lennart Söder

#130    Optimal Placement of Phasor Measurement Units: A Literature Review

Nikolaos Manousakis, George Korres, Pavlos Georgilakis

#137    Optimal PMU Placement for Power System Observability Using Differential Evolution

Ali Al-Mohammed, M. A. Abido, M. M. Mansour

**Paper Session 14 -Power System****Control**

Tuesday 12:15 pm - 14:00 pm

#47 Transforming Continuous Attributes using GA for Applications of Rough Set Theory to Control Centers

Germano Lambert-Torres, Marcos Alberto Carvalho, Carlos Henrique Valério Moraes, Luiz Eduardo Borges da Silva

#71 Control Strategy for an Autonomous Energy System with Electricity and Heat Flows

Victor Velezm, Laura Ramirez-Elizondo, G.C.Bob Paap

#75 A Novel Approach for Automatic Generation Control of a Multi-Area Power System

Swasti Khuntia

#99 An Intelligent Voltage Control System -- Training, Learning, and Control

Haomin Ma, Dan Lin, Mei Tao

#109 Intelligent Behavior in a Cyber-Ambient Training System for Control Center Operators

Luiz Faria, António Silva, Carlos Ramos, Luís Gomes, Zita Vale

#117 Intelligent Monitoring and Control of Power Transmission Grid with Integrated Renewable Energy Sources

Srdjan Skok, Kristijan Frlan, Zoran Zbunjak

**Paper Session 15 -Energy Markets**

Tuesday 12:15 pm - 14:00 pm

#49 Application of an Intelligent System based on EPSO and ANFIS to Price Forecasting

Joao Catalao, Gerardo Osorio, Hugo Pousinho

#69 Preventing Loop Flows Using Fuzzy Set Theory and Differential Evolution

Gulcihan Ozdemir Dag, Mustafa Bagriyanik

#110 Cost Dependent Strategy for Electricity Markets Bidding Based on Adaptive Reinforcement Learning

Tiago Pinto, Zita Vale, Fátima Rodrigues, Isabel Praça, Hugo Morais

#115 Supporting services for real time wheeling transactions requests

Andreas Vlachos, Pandelis Biskas

#131 Regional power trade modeling  
Peter KADAR

#136 Multi-Objective Particle Swarm Optimization for Optimal Power Flow in a Deregulated Environment

Fouad Zaro, M. A. Abido

**Paper Session 16 -MicroGrids**

Wednesday 10:30 pm - 12:00 pm

#33 Design Tool for Isolated Micro-Grids Based on Methods of Computational Intelligence

Maike Stark, Gerhard Krost

#92 Smart Optimal Control of DC-DC Boost Converter for Intelligent PV Systems

Mohamed Elshaer, Ahmad Mohamed, Osama Mohammed

#107 Independent and Clean Electricity Supply for a Hospital in Palestine Controlled by Fuzzy Rules and Time Estimator

Mohammed Mushtaha, Gerhard Krost

#178 Adapting EV-Microgrid Concepts to European Grid Standards Related to Power Quality

Marios Moschakis, Evangelos Karfopoulos, Erietta Zountouridou, Stavros Papathanassiou

**Paper Session 17 -Demand Side****Management**

Wednesday 10:30 pm - 12:00 pm

#41 Contextual Intelligent Load Management with ANN Adaptive Learning Module

Luis Gomes, Filipe Fernandes, Tiago Sousa, Marco Silva, Hugo Morais

#72 Implementation and Test of Demand Response using Behaviour Descriptions

Daniel Kullmann, Oliver Gehrke, Henrik Bindner

#84 DSM Impact Prediction Through a Model of the Italian Residential End-Use

Alberto Prudenzi, Andrea Silvestri, Giuseppe Lucci

#116 Decentralized, agent-mediated participation of flexible thermal loads in electricity markets  
Dimitrios Papadaskalopoulos, Pierluigi Mancarella, Goran Strbac

#118 Impact of Large-Scale Integration of Intelligent Meters to the Operation of the Power System of Crete  
Georgia Asimakopoulou, Emmanouil Voumvoulakis, Aris Dimeas, Nikos Hatziargyriou

#132 Demand Response Programs Definition Supported by Clustering and Classification Techniques  
Sérgio Ramos, Hugo Morais, Pedro Faria, Zita Vale, João Soares

### **Paper Session 18 -Multi-Agents**

Wednesday 12:15 pm - 14:15 pm

21 An Autonomous Distributed Agent Approach to Power System Restoration  
Takeshi Nagata, Shinnosuke Fukunaga

#26 Coordinating a Society of Switch Agents for Power Distribution Service Restoration in a Smart Grid  
Wan-Yu Yu, Von-Wun Soo, Men-Shen Tsai, Yen-Bo Peng

#97 Simulation Results of Cogeneration Units as System Reserve Power Source Using Multiagent Modeling  
Dániel Divényi, András Dán

#114 Detecting Cyber Intrusions in SCADA Networks Using Multi-Agent Collaboration  
Ahmed F.Shosha, Pavel Gladyshev, Shinn-Shyan Wu, Chen-Ching Liu

#128 Knowledge based support for real time application of multiagent control and automation in electric power systems  
Arshad Saleem, Lars Nordström, Morten Lind

#133 Trustworthy Injection/Curtailment of DER in Distribution Network Maintaining Quality of Service  
Shahid Hussain, Nicholas Honeth, Rune Gustavsson, Claes Sandels, Arshad Saleem

#150 Scheduling Algorithms for Agent Based Control and Scheduling of Microgrids

Despoina Koukoula, Aris Dimeas, Nikos Hatziargyriou

### **Paper Session 19 -Smart Grids**

Wednesday 12:15 pm - 14:15 pm

#40 General Communication Strategy for Control of Distributed Energy Resources in Smart Grids via International Standards  
Samer Jaloudi, Egon Ortjohann, Andreas Schmelter, Worpong Sinsukthavorn, Paramit Wirasanti

#63 Smart Grid Information Clearinghouse: A Content Collection and Knowledge Discovery Model  
Saifur Rahman, Manisa Pipattanasomporn

#121 Situation-Aware Demand Response in the Smart Grid  
Babis Magoutas, Dimitris Apostolou, Gregoris Mentzas

#151 Gossip Based Message Dissemination in Future Power Systems  
Aleksandra Krkoleva, Vesna Borozan, Aris Dimeas, Nikos Hatziargyriou

#152 Engineering of Trustworthy Smart Grids Implementing Service Level Agreements  
Shahid Hussain, Rune Gustavsson, Lars Nordström

#161 Symbolic Integration and Autonomous State Estimation: Building Blocks for an Intelligent Power Grid  
Sakis Meliopoulos, George Cokkinides, Sungyun Choi, Evangelos Farantatos, Renke Huang

#166 Heuristic Optimal Restoration Based on Constructive Algorithms for Future Smart Grids  
Sarina Adhikari, Fangxing Li, Qinran Hu, Zhenyuan Wang

### **Paper Session 20 -Distribution Systems**

Wednesday 12:15 pm - 14:15 pm

#10 Applications of Hybrid EP-ACO for Power Distribution System Loss Minimization under Load Variations  
Men-Shen Tsai, Chieh-Cheng Chu

#28 Electrical Consumers Data Clustering Through Optimum-Path Forest

Caio Ramos, Andre Souza, Rodrigo Nakamura,  
Joao Papa

#31 Intelligent Monitoring of the Health and  
Performance of Distribution Automation  
Susan Rudd, John Kirkwood, Euan Davidson,  
Scott Strachan, Victoria Catterson

#59 A Framework for evaluating possible  
contribution from integration of storage units in  
a Centralised Voltage Control System for active  
MV Distribution Networks  
Diana Moneta, Claudio Carlini, Mario Belotti,  
Paolo Mora

#64 Logic Programming and Fuzzy Monte  
Carlo for Distribution Network Reconfiguration  
Zita Vale, Bruno Canizes, João Soares, Pedro  
Oliveira, Tiago Sousa

#80 A Study on Hierarchic Voltage Profile  
Control in High and Low Voltage Distribution  
System  
Takao Tsuji, Yu Furudate, Tsutomu Oyama,  
Takuhei Hashiguchi, Tadahiro Goda

#96 Feeder Reconfiguration for  
Accommodating Distributed Generations  
Interconnection  
Rung-Fang Chang, Ya-Chin Chang, Chan-Nan Lu

#119 Distribution System to Fault  
Classification Using Negative Sequence and  
Intelligent System  
Angelo Oliveira, Paulo Augusto Garcia,  
Leonardo Oliveira, Jose Luiz Pereira, Hleio Silva