



2 - 5 November 2014



**Athens
Greece**



Med Power 2014

**CONFERENCE
PROGRAMME**



**9th Mediterranean Conference
on Power Generation,
Transmission, Distribution
and Energy Conversion**



IET Hellas

IET Israel

IET Cyprus

In cooperation with



National Technical University of Athens

and

Technological Educational Institute of Piraeus



CONFERENCE

Med Power 2014

**9th Mediterranean Conference
on Power Generation, Transmission, Distribution
and Energy Conversion**

**2 – 5 November 2014
Athens, Greece**



Executive Organising Committee

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G. Kariniotakis (France)	J. A. Pecas Lopes (Portugal)	

Welcome Opening

It is our great pleasure and honour to welcome you to the 9th Mediterranean Conference and Exhibition on Power Generation, Transmission, Distribution and Energy Conversion (Med Power 2014). This is the ninth event in a series of conferences, that have established a major scientific platform in the region and continues the tradition started by three IET (former IEE) Sections, i.e. IET Cyprus, IET Hellas and IET Israel, in Nicosia, Cyprus in 1998. This year the conference is organised in Greece by the three founding IET Sections, the Electric Energy Systems Laboratory of the National Technical University of Athens (NTUA) and the Technological Educational Institute of Piraeus (TEI Piraeus). It is held at the Conference Center of TEI Piraeus in Athens on 2 – 5 November 2014.

In recent years, within the context of crisis, the need to develop and operate **Energy Systems**, balancing the three fundamental pillars of:

- High reliability and security of supply
- Efficiency and economy
- Environmental protection

has become, more than ever, of outmost importance. The objective of the Conference is to provide a major forum for state-of-the-art presentations by international experts, to give the opportunity to engineers and scientists working in the area of power systems to exchange information and experience and to promote international collaboration for the solution of the problems faced in the above direction. The Programme begins with the Welcome Session followed by five keynote speeches delivered by world-known experts in the fields of distributed energy systems, energy markets and the efficient handling of the large amounts of data currently available.

An overall number of 125 papers will be presented at the Conference in 20 paper Sessions providing high level R&D and practical experiences from more than 17 different countries. The papers included in the proceedings cover a wide range of Power Generation, Transmission, Distribution and Energy Conversion aspects and were accepted following a thorough review process of their abstracts by the Scientific Programme Committee. The programme also includes a Special Panel entitled “Enabling Technologies for wireless charging of electric vehicles”.

This Conference is the result of the strenuous efforts and contributions of many individuals. On behalf of the Executive Organising Committee, we wish to extend to each of them our appreciation and our warmest personal thanks.

In particular, we wish to thank the members of the International Advisory Committee, the Scientific Programme Committee, the Keynote Speakers, the Authors of the papers and the Session Chairpersons. Especially, we would like to thank our sponsors, the Public Power Corporation of Greece (PPC - DEI), the Hellenic Distribution Network Operator (HEDNO - DEDDIE) and the Independent Power Transmission Operator (HTSO – ADMIE) for their generous contributions that helped significantly the organisation of the Conference. Special thanks are also due to our Secretariat and in particular to F. Koutsogianni, E. Avlonitou and Nick Korres for their efficient work. Finally, we would like to thank you all for your interest in Med Power 2014 and wish you a fruitful Conference and an enjoyable stay in Athens.

Athens, November 2014

Prof. Evangelos Dialynas Prof. Nikos Hatzigryriou Prof. Apostolos Kokkosis
Conference Chairmen



1. General Theme

The 9th Mediterranean Conference on Power Generation, Transmission, Distribution and Energy Conversion belongs to a series of Conferences that have established a major energy platform in the region. The Conference will focus on topics of interest to the Electric Power Industry. It intends to address the vast technological changes in all areas of the electric energy including business, products, equipment and methods.

MedPower 2014 will provide power engineers and technicians opportunities to be updated on current academic and industry developments, achievements and trends through presentations and open discussions. Presentations will emphasise the regional needs and peculiarities of environmental aspects associated with electric power generation, transmission, energy conversion, distribution systems and modern control, as well as developments in electric energy markets.

This Conference will significantly benefit engineers and technicians through state-of-the-art presentations by invited speakers and discussions by international participants.



2. Scope

The preferential subjects of the Conference are:

- Planning and operation of power systems in competitive markets
- Renewable energy sources and storage systems
- Regulatory Issues
- Climate change and greenhouse gas emissions
- Distributed generation and microgrids
- Reliability assessment of power systems
- Security assessment and risk analysis
- Intelligent distribution networks
- Smart grids
- E-Mobility
- Power quality
- Energy efficiency
- Electromagnetic transients
- Power electronics
- FACTS
- Protection and safety
- Insulation co-ordination
- Cables and insulating material
- High voltage engineering
- Illumination techniques
- Electric machines and drives
- Information and communication technologies in power systems

3. Location

The 9th Mediterranean Conference on Power Generation, Transmission, Distribution and Energy Conversion will be held in Athens capital of Greece. Greece is a beautiful country with a large variety of landscape in a relatively small area, surrounded by sea studded with numerous and picturesque islands. Athens took its name from Athena, the goddess of wisdom and knowledge, while it is the symbol of freedom, art and democracy in the conscience of the civilised world. It is rich in historical and archaeological sites and monuments from the classical times and the Byzantine era. Today, it is a modern but romantic city, alive and on the go. According to the weather statistics, the average temperature in November ranges from 14°C to 20°C.



1. Thivon Entrance
2. Petrou Ralli Entrance
3. Conference Centre

4. Venue

The Conference will be held in the Conference Center of the Technological Educational Institute of Piraeus that is located very close to the Athens centre (<http://www.teipir.gr/googlemap/index.html>). It provides conference rooms for the technical sessions, exhibition area, smaller rooms for meetings, foyers and excellent hospitality. Internet facilities (WIFI) will be also available. The picture below shows the two entrances to the Technological Educational Institute of Piraeus.

5. Dates

Important dates to remember are:

- | | |
|-----------------|--|
| 02 May 2014 | Deadline to submit paper title and extended abstract. |
| 16 June 2014 | Notification of Acceptance will be mailed to authors. |
| 10 October 2014 | Deadline to submit the final manuscript.
Deadline for advance registration. |

6. Events

6.1 *Conference Welcome Reception*

Welcome Cocktail will take place on November 2nd, 2014 at Aegli Zappiou located in the heart of the city of Athens, in the Zappion Gardens and next to the Zappion Megaron (the first building designed to serve the needs of the Olympic Games, the construction of which was sponsored by Greece's major benefactor Evaggelo Zappa).

Arriving time: **19.30**

All registered participants and accompanying persons are invited to attend free of charge.

6.2 *Plenary Opening Session*

A Plenary Opening Session will be held on Monday, November 3, 2014 at 09.00 at the NEW AMPHITHEATRE of the Conference Centre of the Technological Educational Institute of Piraeus. It includes welcome and five keynote speeches on current issues provided by internationally distinguished experts. All Delegates and Accompanying Persons are warmly invited to attend.



Aegli Zappiou





Royal Olympic
Hotel



6.3 *Gala Dinner*

Gala Dinner will take place on November 4th, 2014 at the Roof Garden of the 'Royal Olympic Hotel' (28-34th Athanasiou Diakou str.) which has a unique view of the Acropolis, the famous Temple of Zeus and National Garden.

Arriving time: **20.00**

All registered participants and registered accompanying persons are invited to attend free of charge.

Additional tickets will be available at the Conference Secretariat till Monday November 3rd.

7. **Official Language**

The official language of the Conference will be English. All papers are written in English and the Proceedings are published in English. The presentations will also be given in English.

8. Proceedings

Each registered participant will receive a usb stick containing the full papers being presented at the Conference.

9. Technical Programme

The programme includes a plenary session together with invited and submitted papers organized in parallel sessions. The conference schedule together with the registration form are available on the internet site of the Conference.

10. Registration

Registrations will take place on Monday, November 3rd, 2014 from 08.00 until 17.00 at the Registration Desk. The registration will continue all other days of the Conference during the Conference hours. A name badge will be provided for each registered delegate, which will authorise access to sessions and other events. The registration fees per participant are as follows:

Early Registration (until 10 October 2014): **250 €**

Late Registration (after 10 October 2014 and on site): **350 €**

Students Early Registration (until 10 October 2014): **125 €**

Students Late Registration (after 10 October 2014 and on site): **180 €**

The registration fees include:

- Attendance of Plenary Panel and Paper Sessions
- One copy of the Conference Proceedings (USB STICK)
- Participation to the Welcome Cocktail Reception
- Participation to the Gala Dinner
- Coffee, tea, etc., at marked Coffee Breaks
- Lunches at market Breaks
- Hourly transfer with buses from the Egaleo Metro Station to the Venue of the Conference.

11. Hotel Accommodation

All suggested hotels are located in Athens downtown and are relatively close to the Metro Stations. A shuttle bus will transfer the Registered Delegates between the Metro Station Egaleo and the Conference venue every hour starting from 8.00am until 17.00pm. Detailed information is provided at the Conference site.

12. Practical Information

12.1 *City Transportation*

Athens has a large, modern mass transit system to serve the needs of residents and visitors. It consists of:

- City buses
- Electric trolley-buses
- Athens Metro
- Athens Tram, and
- Athens Suburban railway

Taxis are clearly marked in yellow color. You can share a taxi with other passengers, especially during rush hours. Taxi fares are according to the clock, about one Euro per kilometre starting from 1.19€, with a minimum fare of 3.16€. Extra surcharges apply after midnight until 5.00 in the morning and for rides to or from railroad station, airport, etc.

12.2 *Athens Airport*

Athens International Airport "Eleftherios Venizelos" is Greece's biggest airport and is located about 20 km to the east of central Athens. The airport's name honors the Greek statesman Eleftherios Venizelos.

Metro

The airport is accessible via Metro Line 3 "Aghia Marina - Athens International Airport".

Suburban Rail

Athens International Airport is connected via the Suburban Rail with:

- Athens Central Railway Station (Larissis Station)
- Port of Piraeus
- and Kiato

For further information regarding timetables, please call 14511.

Bus Services (OSY)

Four bus routes connect directly Athens and Piraeus with the airport. All buses set down passengers at the Departures Level and depart from the Arrivals Level, between Exits 4 and 5.

For further information, please call: 11 185.

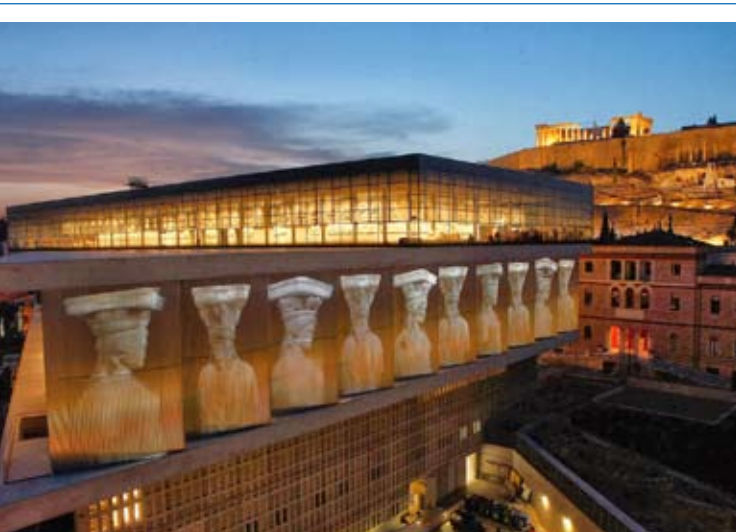
Regional Buses - KTEL Express Service

Five regional buses operate at the airport. All buses set down passengers at the Departures Level and depart from the Arrivals Level, between Exits 2 and 3, opposite the Airport Hotel (Sofitel).

For further information, please call: 14 505.

13. Tourist Visits

A number of tours to classical tourist sites in Greece is available to all Delegates and Accompanying Persons through the official Agent for Hotel Reservation of the Conference ERA Ltd.



Acropolis
Museum

PROGRAMME SCHEDULE

SUNDAY 2nd NOVEMBER

19.30 – 22.30 Welcome Reception

MONDAY 3rd NOVEMBER

08.30 All day Registration

09.00 – 11.00 Welcome speeches – Opening session

Chairpersons: N. HATZIARGYRIOY, E. DIALYNAS, A. KOKKOSIS, A. BRAUNSTEIN,
H. KARAVAS

Welcome Note by Prof. N. HATZIARGYRIOU, Conference Co-Chairman

Addresses by:

- Minister of Agriculture, Natural Resources and Environment of Cyprus, Mr N. KOUYIALIS
- National Technical University of Athens, Prof. I. GOLIAS, Rector*
- Technological Education Institute of Piraeus, Prof. L. VRIZIDIS, President
- IET Hellas Prof. A. KOKKOSIS Chairman
- IET Cyprus Mr M. AGROTIS Chairman
- IET Israel Prof. A. BRAUNSTEIN Chairman
- Public Power Corporation S.A., Prof. A. ZERVOS, Chairman and C.E.O.*
- Hellenic Electricity Distribution Network Operator S.A., Mr. K. ZONTANOS, Chairman & C.E.O.
- Independent Power System Operator S.A., Mr Y. YIARENTIS, Chairman & C.E.O.

Opening by:

- Mr C. CHRISTOU, IET

11.00 – 11.05 Short break

11.05 – 13.30 **Keynotes**

The Zero Energy Mountains of Cyprus

Venizelos Efthymiou

Chairman, Research Centre FOSS, University of Cyprus

Big Data: What, why, when and how

Mladen Kezunovic

Professor, Texas A & M University

Flexible operation and investment in smart distributed energy systems

Pierluigi Mancarella

Reader in Future Energy Networks University of Manchester, UK

Next Generation Energy Market Design Structures for Sustainable Development: Challenges and Solutions

Alex Papalexopoulos

President, CEO and Founder of ECCO International, San Francisco, CA

Renewable energy strategies for sustainable development in isolated systems

Andreas Poullikkas

Chairman of Cyprus Energy Policy Council, Associate Professor Cyprus University of Technology

13.30 – 14.30 Lunch

14.30 – 17.00 **Parallel Sessions**

NEW AMPHITHEATRE: **Electricity Markets**

CONFERENCE ROOM I: **Distribution Systems**

CONFERENCE ROOM II: **System Stability**

TUESDAY 4th NOVEMBER

09.00 – 11.00 **Parallel Sessions**

NEW AMPHITHEATRE: **Reliability and Power Quality**

CONFERENCE ROOM I: **Electric Vehicles**

CONFERENCE ROOM II: **Measurements and State Estimation**

11.00 – 11.30 Coffee Break

11.30 – 13.30 **Parallel Sessions**

NEW AMPHITHEATRE: **European and Regional Policies**

CONFERENCE ROOM I: **Enabling Technologies for wireless charging of electric vehicles**

(Special Panel)

CONFERENCE ROOM II: **Microgrids**

13.30 – 14.30 Lunch

14.30 – 17.00 **Parallel Sessions**

NEW AMPHITHEATRE: **Distributed Generation**

CONFERENCE ROOM I: **HVDC Technologies**

CONFERENCE ROOM II: **Operation and Control**

20.00 – 24.00 **GALA DINNER**

WEDNESDAY 5th NOVEMBER

09.00 – 11.00 **Parallel Sessions**

NEW AMPHITHEATRE: *Demand Response and Load Flexibility*
CONFERENCE ROOM I: *Planning*
CONFERENCE ROOM II: *Storage*

11.00 – 11.30 Coffee Break

11.30 – 13.30 **Parallel Sessions**

NEW AMPHITHEATRE: *Forecasting*
CONFERENCE ROOM I: *Protection*
CONFERENCE ROOM II: *High Voltage Engineering*

13.30 – 14.30 Lunch

14.30 – 17.00 **Parallel Sessions**

NEW AMPHITHEATRE: *Load Identification and Energy Efficiency*
CONFERENCE ROOM I: *Electric Machines*
CONFERENCE ROOM II: *Cables and Insulating materials*



PAPER SESSIONS

MONDAY, NOVEMBER 3, 2014

14.30 – 17.00 Parallel Sessions

—NEW AMPHITHEATRE—

Electricity Markets

Chair: **A. Bakirtzis**, Aristotle University of Thessaloniki, Greece

- 107 Evaluation of the Impact of the Hellenic Natural Gas Network Failure Events on the Hellenic Electricity Market
T. D. Diagoupis, P. Andrianesis
University of Thessaly, E. N. Dialynas, National Technical University of Athens, Greece
- 178 Interval Analysis to address Uncertainty in Multicriteria Energy Market Clearance
P. Kontogiorgos
National Technical University of Athens, Greece
M. N. Vrahatis
Department of Mathematics, University of Patras, Greece
G. P. Papavassilopoulos
National Technical University of Athens, Greece
- 101 Impact of Feed-in Generation in the Market Prices of the Iberian Electricity Market
Adelino J. C. Pereira
Instituto Politécnico de Coimbra, Saraiva Joao, FEUP and INESC Porto, Portugal
- 174 Bilevel Framework for Optimal Design of Incentives for Wind Investments
St. E. Mariamou, G. E. Asimakopoulou, and N. D. Hatziargyriou
National Technical University of Athens, Greece
- 163 Assessment of capacity auctioning mechanism for solar photovoltaic systems
Andreas Poullikkas
Cyprus University of Technology, Cyprus

- 207 [A Game Theory Decision Theoretical Tool for Assessing Electrical Power Distribution Markets](#)
N. Kakogiannis
National Technical University of Athens, Greece, Catalina Spataru, UCL, United Kingdom
- 185 [Evaluation of Locational Marginal Prices Variation in Isolated and Interconnected Power Systems – A Study of Rhodes and Crete Network using Real Data](#)
E. Sfiris, A. Anastasiadis, T. Tomtsi, N. Hatzargyriou
National Technical University of Athens, Greece

—CONFERENCE ROOM I—

Active Distribution Systems

Chair: **A. Safigianni**, Demokritus University of Thrace, Greece

- 203 [Development and Validation of Innovative Methods and Tools for the Management of Active Distribution Networks: the SmartGen project](#)
S. Bianchi, A. Borghetti, S. Massucco, F. Napolitano, C.A. Nucci, M. Pentolini, G. Petretto, S. Scalari, F. Silvestro, G. Troglio, G. Viani
Softeco Sismat, University of Bologna, Università degli Studi di Genova, Enel Ingegneria e Ricerca, Italy
- 136 [Distributed Generation Influence on Network Voltage Profile](#)
F.L. Pavlidou, A.S. Safigianni, C.K. Filelis-Papadopoulos, G.A. Gravvanis, V.C. Nikolaidis
Democritus University Thrace, Greece
- 114 [Mitigating Distribution Network Congestion due to High DG Penetration](#)
A. S. Bouhouras, Ch. Iraklis, G. Evmiridis and D. P. Labridis
Aristotle University of Thessaloniki, Greece
- 204 [Extension of EMS and DMS – SCADA Facilities by Extended Meter Reading \(On-line Meter Reading\)](#)
Catalin Chimirel
CNTEE Transelectrica SA
Mihai Sanduleac
SC ECRO SRL, Bucharest, Romania

- 220 Evaluation of Reliability Performance of Distribution Networks Implementing Demand Response Schemes
Angeliki Lydia Antonia Syrri, Pierluigi Mancarella
University of Manchester, UK
- 103 Optimal Mix of Wind Generation and Energy Storage Systems in Power Distribution Networks
A. D. Petropoulos, N. C. Koutsoukis, E. S. Karapidakis, P. S. Georgilakis
National Technical University of Athens, Technological Educational Institute of Crete, Greece

—CONFERENCE ROOM II—

System Stability

Chair: **C. Vournas**, National Technical University, Greece

- 190 Evaluation of Voltage Regulation Schemes for Photovoltaic Systems using a Simplified Grid Equivalent Model
M. Patsalides, V. Efthymiou, G. E. Georghiou
University of Cyprus
A. Stavrou
Electricity Authority of Cyprus, Cyprus
- 100 Stability Analysis of Time-Delayed Generator Excitation Control System with Power System Stabilizer
Şahin Sönmez and Saffet Ayasun
Nigde University, Turkey
- 171 Dynamic Stability Analysis of HVDC Interconnection of Autonomous Power System of Crete Island
D. Petropoulos, E. Voumvoulakis, N. Hatziaargyriou
National Technical University of Athens, Greece
- 122 Enhancement of Voltage Stability in Power System using STATCOM Devices
Vjollca KOMONI, Edita Bytyqi
University of Prishtina
- 111 Extended Summary Computation of Stabilizing PI Controller Parameters for a Single-Area Load Frequency Control System with Time Delays
Şahin Sönmez and Saffet Ayasun
Nigde University, Turkey

- 123 **Impact of Distributed Generation on Voltage Stability and reduce losses in Power Systems**
Arben Lekaj, Vjollca Komoni, Isuf Krasniqi, Gazmend Kabashi
University of Prishtina
- 197 **Methods for Stability evaluation of Power Hardware in the Loop Simulations**
D. Barakos, P. Kotsampopoulos, A. Vassilakis, V. Kleftakis, N. Hatziargyriou
National Technical University of Athens, Greece



TUESDAY, NOVEMBER 4, 2014

09.00 – 11.00 Parallel Sessions

—NEW AMPHITHEATRE—

Reliability and Power Quality

Chair: **T. Saraiva**, Universidade do Porto & INESC Porto, Portugal

- 224 Electricity Network Reliability Planning and Evaluation Considering Flexible Solutions
C. Tumelo-Chakonta, A. Kapetanaki, K. Kopsidas
University of Manchester, UK
- 205 Reliability Data Monitoring of Components in Electric Power Plants in order to obtain an Optimal Maintenance Strategy
E. Dialynas, L. Daoutis, F. Dialynas
National Technical University of Athens, Greece
- 121 Monitoring the Power Quality for Wind power Plant of Golesh
Rajmonda Bualoti, Arben Gjukaj, Astrit Bardhi
Polytechnic University of Tirana, Albania
- 233 Fuzzy Total Power Quality Index for Electric Networks
P.A. Langouranis, S.D. Kaminaris, G.A. Vokas, T.E. Raptis, G.Ch. Ioannidis
Technological Educational Institute of Piraeus, Greece
- 161 Power quality analysis for 3-phase standalone photovoltaic installations: a case study
N. P. Papanikolaou, Ch. A. Christodoulou
Democritus University of Thrace
I. F. Gonos
National Technical University of Athens, Greece
- 189 Power Quality Impact on Grid-Connected Wind Energy Conversion Systems
P. Tourou, M. Schael, C. Sourkounis
Ruhr-University Bochum, Germany

—CONFERENCE ROOM I—

Electric Vehicles

Chair: **G. Ageridis**, EA.IN.H.O., Greece

- 157 **Impact Assessment of a Massive Integration of Electric Vehicles through Fuzzy Power Flow Analysis**
M. Heleno, J. Meirinhos, J. Sumaili, M. A. da Rosa, M. A. Matos
INESC TEC and Faculdade de Engenharia, Universidade do Porto, Portugal, Universidade Federal de Santa Catarina, Brazil
- 199 **Efficient Operation of High Power Charging Stations in Weak Grids**
N. Becker, C. Sourkounis
Ruhr-University, Bochum, Germany
- 212 **Steady-State and Dynamic Impact Analysis of the Large Scale Integration of Plug-in EV to the Operation of the Autonomous Power System of Crete Island**
E. L. Karfopoulos, E. M. Voumvoulakis, N. Hatzigargyriou
National Technical University of Athens, Greece
- 141 **Solar Energy Exploitation Enhancing Driving Autonomy of Electric Vehicles**
A. G. Sarigiannidis, P. E. Kakosimos, and A. G. Kladas
National Technical University of Athens, Greece
- 198 **Conditioning of Weak Grids by Power Charging Stations**
C. Sourkounis, A. Boy
Ruhr-University Bochum
J. Wenske
Fraunhofer Institute for Wind Energy and Energy System Technology, Germany
- 148 **Assessment of electric losses minimization in commercial buildings with PV installation and EV charging stations**
S. I. Vagropoulos, A. G. Bakirtzis
Aristotle University of Thessaloniki, Greece
L. Hadjidemetriou, E. Kyriakides
KIOS Research Center, University of Nicosia, Cyprus

TIME - TABLE

DAY	TIME	NEW AMPHITHEATRE		
MONDAY 3 November 2014	08.30	REGISTRATION		
	09.00 – 11.00	WELCOME SPEECHES - OPENING		
	11.00 – 11.05	SHORT BREAK		
	11.05 – 13.30	KEYNOTE SPEECHES by Venizelos Efthymiou, Miladen Kezunovic, Pierluigi Mancarella, Alex Papalexopoulos and Andreas Poullitkkas		
	13.30 – 14.30	LUNCH BREAK		
	14.30 – 17.00	<table border="1"> <tr> <td>Session M1 Electricity Markets</td> <td>Session M2 Power Quality</td> <td>Session M3 Operational Planning - I</td> </tr> </table>	Session M1 Electricity Markets	Session M2 Power Quality
Session M1 Electricity Markets	Session M2 Power Quality	Session M3 Operational Planning - I		
TIME	CONFERENCE ROOMS			
TUESDAY 4 November 2014		NEW AMPHITHEATRE	CONFERENCE ROOM I	CONFERENCE ROOM II
	09.00 – 11.00	Session T1 Reliability and Power Quality	Session T2 Electric Vehicles	Session T3 Measurements and State Estimation
	11.00 – 11.30	COFFEE BREAK		
	11.30 – 13.30	Session T4 European and Regional Policies	Session T5 Special Panel Enabling Technologies for wireless charging of electric vehicles	Session T6 Microgrids
	13.30 – 14.30	LUNCH BREAK		
	14.30 – 17.00	Session T7 Distributed Generation	Session T8 HVDC Technologies	Session T9 Operation and Control
	20.00 – 24.00	GALA DINNER		

DAY	TIME	CONFERENCE ROOMS		
		NEW AMPHITHEATRE	CONFERENCE ROOM I	CONFERENCE ROOM II
WEDNESDAY 5 November 2014	09.00 – 11.00	Session W1 Demand Response and Load Flexibility	Session W2 Planning	Session W3 Storage
	11.00 – 11.30	COFFEE BREAK		
	11.30 – 13.30	Session W4 Forecasting	Session W5 Protection	Session W6 High Voltage Engineering
	13.30 – 14.30	LUNCH BREAK		
	14.30 – 17.00	Session W7 Load Identification and Energy Efficiency	Session W8 Electric Machines	Session W9 Cables and Insulating materials
	17.00 – 17.15	CLOSING SESSION		



—CONFERENCE ROOM II—

Measurements and State Estimation

Chair: **S. Mocci**, University of Cagliari, Italy

- 193 **Observability Analysis and Distributed State Estimation**
C. Pavlou, D. Koukoula, G. Korres, N. Hatziaargyriou
National Technical University of Athens, Greece
- 225 **System Identification Techniques for Power Systems Analysis using Distorted Data**
Th. A. Papadopoulos, El. O. Kontis, P. N. Papadopoulos, G. K. Papagiannis
Aristotle University of Thessaloniki, Greece
- 126 **Use of near real-time and delayed smart meter data for distribution system load and state estimation**
Th. C. Xygkis, G. D. Karlis, G. N. Korres
National Technical University of Athens, Greece
- 137 **A Detailed Bibliographic Analysis of Optimal PMU Placement Problem in Conventional and Smart Grids**
N. M. Manousakis, G. N. Korres, P. S. Georgilakis
National Technical University of Athens, Greece
- 226 **Optimal placement of PMUs in power systems using binary integer programming and genetic algorithm**
N. P. Theodorakatos, N. M. Manousakis, G. N. Korres
National Technical University of Athens, Greece
- 166 **Evaluation of Image Sensors for Lighting Control Applications using Fuzzy Logic**
P.A. Kontaxis
Technological Educational Institute of Athens
S.D. Kaminaris
Technological Educational Institute of Piraeus
F.V. Topalis
National Technical University of Athens, Greece

11.30 – 13.30 Parallel Sessions

—NEW AMPHITHEATRE—

European and Regional Policies

Chair: **V. Efthymiou**, FOSS Research Centre for Sustainable Energy, Cyprus

- 227 **Assessing Policies for Photovoltaic Net-Metering in Greece**
G.K. Papagiannis
Aristotle University of Thessaloniki
G. C. Christoforidis, I. P. Panapakidis, T.A Papadopoulos
Technological Education Institution of W. Macedonia Greece
G.E. Georghiou
University of Cyprus, Cyprus
- 173 **The Sardinian Power System with Full Electric Load Demand and Smart Grids**
G. Celli, S. Mocci, N. Natale, F. Pilo
University of Cagliari, Italy
- 195 **Best Practices of Rural Electrification in Developing Countries**
A. Dimitriou, P. Kotsampopoulos, N. Hatziaargyriou
National Technical University of Athens, Greece
- 147 **Theoretical Background and Properties of Advanced Lighting Applications used in Cyprus**
Marios Georgiou and Alexis Polycarpou
Frederick University, Cyprus
- 169 **Legislation, design and management of the electrical and electronic waste (e-waste) procedures**
S. Th. Tsitomeneas, A. Kokkosis, A. Charitopoulos
Technological Educational Institute of Piraeus, Greece
- 117 **Role of Waste to Energy facilities in the Energy Sector of EU**
P. Chaliki, C. S. Psomopoulos, G. Ch. Ioannidis, N. J. Themelis
TEI Piraeus Electrical Engineering Department, Greece

—CONFERENCE ROOM I – SPECIAL PANEL—

Enabling Technologies for wireless charging of electric vehicles

Organized by *E. Karfopoulos, I. Karakitsios, National Technical University of Athens, Greece*

Chair: **C. Sourkounis**, Ruhr-University Bochum, Germany

- 229 *A System for Precise Positioning of Vehicles Aiming at Increased Inductive Charging Efficiency*
Axel Barkow, Janek Hudecek, Jörg Küfen, Oliver Langen, Jens Dankert, Lutz Eckstein
 Germany
- 230 *Dynamic wireless charging for more efficient FEVs: The FABRIC project concept*
Angelos Amditis, Giannis Karaseitanidis, Ioannis G. Damousis
 Greece
- 235 *The FastInCharge project*
Iannis Karakitsios, Evangelos Karfopoulos, Nikos Hatziargyriou
 Greece
- 236 *Energy management of inductive chargers*
Evangelos Karfopoulos, Safalidis, Iannis Karakitsios, Andreas Kamarinopoulos, Nikos Hatziargyriou
 Greece

—CONFERENCE ROOM II—

Microgrids

Chair: **G. Lauss**, AIT Austrian Institute of Technology, Austria

- 110 *Aggregate load modeling in microgrids using online measurements*
Th. A. Papadopoulos
 Democritus University of Thrace
Em. N. Tzanidakis, P. N. Papadopoulos, G. K. Papagiannis
 Aristotle University of Thessaloniki, Greece
P. Crolla, Gr. M. Burt
 University of Strathclyde, UK

- 187 [How to Balance the Energy Production and Consumption in Energy Efficient Smart Neighbourhood – First Results of the e-balance Project](#)
Krzysztof Piotrowski
IHP GmbH, Germany
Juan Jacobo Peralta, Noemi Jiménez
CEMOSA S.A. Spain
Bożena Ewa Matusiak, Jerzy Zieliński
Un. of Lodz, Poland
Augusto Casaca
INOV/ Inesc-ID, Portugal
Krzysztof Krejtz, Wojciech Ciemniowski, Jarosław Kowalski
National Information Processing Institute, Poland
- 165 [A DC-Microgrid Control Strategy Using DC- Bus Signaling](#)
C. N. Papadimitriou, V. A. Kleftakis, A. Rigas, N. D. Hatziargyriou
National Technical University of Athens, Greece
- 164 [Optimization & Sensitivity Analysis of Microgrids using HOMER software - A Case Study](#)
D. I. Papaioannou, C. N. Papadimitriou, A. L. Dimeas, N. D. Hatziargyriou
National Technical University of Athens, Greece
- 170 [Contribution to frequency control by a PMSG Wind Turbine in a Diesel-Wind Turbine Microgrid for rural electrification](#)
V. Kleftakis, A. Rigas, C.N. Papadimitriou, N. Katsoulakos, P. Moutis, N. Hatziargyriou
National Technical University of Athens, Greece
- 177 [A Multi-Microgrid Laboratory Infrastructure for Smart Grid Applications](#)
G. Messinis, V. Kleftakis, A. Rigas, P. Kotsampopoulos, N. Hatziargyriou
National Technical University of Athens, Greece

14.30 – 17.00 Parallel Sessions

—NEW AMPHITHEATRE—

Renewable and Distributed Generation

Chair: **S. Tsitomeneas**, Technological Educational Institute of Piraeus, Greece

- 237 **Challenges of integration of renewable generation in SE Europe - Current situation and future trends**
Goran Vukojevic
Parsons Brinckerhoff, Serbia
- 228 **Integration of Different Solar Generation Technologies in B&H**
Bojan Zečević, Omer Hadžić, Meludin Veledar, Senad Hadžić, Goran Vukojević, Tomo Martinović, Miloš Mitrović
Independent System Operator, Bosnia&Herzegovina
- 234 **Functional characteristics of a typical grid photovoltaic system with various topologies and inverter type**
G. E. Tsokolas, G. A. Vokas
Technological Educational Institute of Piraeus, Greece
- 186 **Operational, environmental and financial aspects of high Renewable Energy penetration on the autonomous island of Amorgos**
G. P. Kondylis, A. G. Anastasiadis, N. D. Hatziaargyriou
National Technical University of Athens, Greece
- 206 **Floating Wind Parks Technology**
E. I. Zountouridou, G. C. Kiokes, C. N. Papadimitriou, A. L. Dimeas, N. D. Hatziaargyriou
National Technical University of Athens, Hellenic Air-Force Academy, Greece
- 140 **Combination of building applied PV panels with thermoelectric generation and geothermal cooling**
N. Papanikolaou, M. Loupis, A. Kyritsis, G. Maliaris, V. Nikolaidis
Democritus University of Thrace, Technological Educational Institute of Central Greece, Centre for Renewable Energy Sources and Saving, Greece

- 196 Laboratory education on distributed energy resources making use of an advanced infrastructure
P. Kotsampopoulos, G. Messinis, A. Vassilakis, V. Kleftakis, A. Rigas, N. Hatziargyriou
National Technical University of Athens, Greece

—CONFERENCE ROOM I—

High Voltage Direct Current Technologies

Chair: **A. Georgopoulos**, Independent Power System Operator (ADMIE), Greece

- 142 Interconnection of Island Networks and Offshore Wind Farms to the Greek Mainland Grid: Transmission Technologies and Future Research Needs
S. Nanou, St. Papathanassiou, M. Papadopoulos
National Technical University of Athens, Greece
- 181 On the integration of self-commutated HVDC links into the European high-voltage transmission system
Volker Staudt, Carsten Heising, Andreas Steimel
Ruhr-University Bochum, Avasition GmbH, Dortmund, Germany
- 146 Interconnection of Crete's power system and further wind power utilization
E. Karapidakis, D. Christakis, D. Katsaprakakis
Technological Educational Institute of Crete
A. Stamatelos
TERNA ENERGY S.A., Greece
- 180 Influence of converter topology on fault mitigation in HVDC links
Volker Staudt, Roman Bartelt, Daniel Meyer, Carsten Heising
Ruhr-University Bochum, Avasition GmbH, Dortmund, Germany
- 179 Test-bench layout emulating a MMC-based HVDC transmission system
Michael Kohlmann, Volker Staudt, Andreas Steimel
Ruhr-University Bochum, Germany

—CONFERENCE ROOM II—

Operation and Control

Chair: **F. Silvestro**, University of Bologna, Italy

- 158 Energy Control Centers and Electricity Markets in the Greek Non-Interconnected Islands
A. D. Papalexopoulos, P. Andrianesis
ECCO International Inc., USA
S. Papathanassiou
National Technical University of Athens, Greece
- 213 SIMO and MIMO PHIL methods for distributed generation in LV networks
Georg Lauss, Felix Lehfuss
AIT Austrian Institute of Technology, Vienna, Austria
- 182 Real-time control system and entire control structure for a test bench for a MMC-based HVDC transmission system
Martin Kleine Jäger, Michael Kohlmann, Volker Staudt, Andreas Steimel, Matthias Gorski
Ruhr-University Bochum, Avasition GmbH, Dortmund, Germany
- 132 Experimental-based improvements of the flexibility of RES and energy storage plants
D. Stimoniaris, D. Tsiamitros, N. Poulakis, T. Kottas
Technological Educational Institute of West Macedonia
E. Dialynas
National Technical University of Athens, Greece
- 215 Controlled Islanding of Power Networks Using Machine Learning Algorithms
D. Trakas, E. Voumvoulakis, N. Hatziargyriou
National Technical University of Athens, Greece
- 188 Comparison of Control Methods for Grid-connected Voltage Source Converters in Distributed Generation Systems
P. Tourou, Carles Solé Mendi, C. Sourkounis
Ruhr-University Bochum, Germany
- 184 Combined heat and power economic and environmental dispatch problem in a 14-unit system by harmony search algorithm
A. Anastasiadis, A. Papastefanakis, G. Kondylis, N. Hatziargyriou
National Technical University of Athens, Greece

WEDNESDAY, NOVEMBER 5, 2014

09.00 – 11.00 Parallel Sessions

—NEW AMPHITHEATRE—

Demand Response and Load Flexibility

Chair: **G. Papagiannis**, Aristotle University of Thessaloniki, Greece

- 192 Integration of Price Anticipation and Self-Elasticity for Hour-Ahead Electricity Bidding and Purchasing
Miltiadis Alamaniotis
University of Utah
Lefteri H. Tsoukalas
Purdue University, USA
- 159 Implementation of Price-based Demand Response Programs through a Load Pattern Clustering Process
I. P. Panapakidis, S. I. Frantza, G. K. Papagiannis
Aristotle University of Thessaloniki, Greece
- 113 Determination of the amount of cost-effective DSM/DR module
Nikola Lj. Rajakovic
Belgrade University
Vladimir M. Shiljkut
Public Enterprise Electrical Power Industry of Serbia, Serbia
- 156 Towards a “context aware” flexibility profiling mechanism for the energy management environment
Konstantinos Tsatsakis, Christos Malavazos
HYPERTECH S.A., Greece
- 211 The role of marketing segmentation and targeting offers for Smart Grid solutions - a Study of residential customers in Central Poland
Anna Pamula
University of Lodz, Faculty of Management, Lodz, Poland
- 124 Occupancy information in SW system for assessing energy flexibility
Marek Skokan
Technical University of Kosice, Slovakia
Konstantinos Tsatsakis
Hypertech SA, Greece
Anna Adamopoulou, Thanasis Tryferidis, Dimitrios Tzovaras
Information Technologies Institute, Centre for Research & Technology Hellas, Thessaloniki, Greece

—CONFERENCE ROOM I—

Planning

Chair: **P. Mancarella**, University of Manchester, UK

- 238 Expectations in Wind Power Integration – Croatian, Regional and European Perspective
Goran Majstrovic
Energy Institute Hrvoje Pozar, Croatia
- 134 Operation Planning of Hydro Power Plants Using Agent Based Models
José Carlos Sousa, João Tomé Saraiva
Universidade do Porto & INESC Porto, Portugal
- 116 Network Reinforcement Planning in a Smart Grid Environment
Ricardo Ferreira, Manuel Matos, João Peças Lopes
INESC TEC - INESC Technology, Portugal
- 120 Deterministic methodology of planning the enhancement of critical power system sections of Kosovo
Pula G., Kadriu K., Valon Sadiku
University of Kosovo in Prishtina
- 138 Optimal placement of PMUs considering SCADA measurements and fixed channel capacity by semidefinite programming
N. M. Manousakis, G. N. Korres
National Technical University of Athens, Greece

—CONFERENCE ROOM II—

Storage

Chair: **P. Georgilakis**, National Technical University of Athens, Greece

- 145 Contribution of Pump Storage Units in the operation of Crete's power system
M. Delimichalis, E. Karapidakis
Technological Educational Institute of Crete, Greece

- 176 Determination of Energy Storage Requirements in Relation to local RES Potential Characteristics for the Maximum Contribution of RES Power Generation in Aegean Sea Island Grids
D. Zafirakis, J.K. Kaldellis
Technological Educational Institute of Piraeus, Greece,
- 194 Control Methods of Dynamical Storage Systems in Wind Parks
C. Sourkounis, A. Broy
Ruhr-University Bochum, Germany
- 208 Impact of Lead-Acid based Battery Design Variations on a Model used for a Battery Management System
P. Dost, M. Martin, C. Sourkounis
Ruhr-University Bochum, Germany
- 104 Design of an Integrated Wind-Based Energy Storage & Desalination Solution for the Island of Amorgos
D. Zafirakis, C. Ntourou, C. Papapostolou, G. Nomikos, E.K. Kondili, J.K. Kaldellis
Technological Educational Institute of Piraeus, Greece

11.30 – 13.30 Parallel Sessions

—NEW AMPHITHEATRE—

Forecasting

Chair: **A. Braunstein**, Tel Aviv University, Israel

- 200 The development of a forecasting tool for predicting the energy yield from PV systems in Cyprus
I. Koumparou, N. Philippou, V. Efthymiou, M. Hadjipanayi, I. Papageorgiou, G. E. Georghiou
FOSS Research Centre for Sustainable Energy, Cyprus Energy Regulatory Authority, Electricity Authority of Cyprus, Cyprus
- 105 Prediction of Electricity Load Demand in a Mediterranean Island Environment Based on the Physiologically Equivalent Temperature and Artificial Neural Networks Modeling
K.P. Moustris, D. Zafirakis, A.I. Kokkosis, A.G. Paliatsos, J.K. Kaldellis
Technological Educational Institute of Piraeus, Greece

- 160 Monthly Load Forecasting Using Kernel Based Gaussian Process Regression
Miltiadis Alamaniotis, Stylianos Chatzidakis, Lefteri H. Tsoukalas
University of Utah, Purdue University, USA
- 119 Application of the load profiling methodology in bus short-term load forecasting
I.P. Panapakidis, G.K. Papagiannis
Aristotle University of Thessaloniki, Greece
- 135 Estimation of Percentage of Controllable Load in Total Demand at Bulk Supply Point
Yizheng Xu, Jovica Milanović
University of Manchester, UK

—CONFERENCE ROOM I—

Protection

Chair: **G. Korres**, National Technical University of Athens, Greece

- 222 Protection challenges for the overhead / underground / undersea double circuit 400 kV EHV GIS Aliveri - System transmission line
S. P. Sofroniou, A. D. Georgopoulos
(IPTO S.A.) Independent Power Transmission Operator S.A. (IPTO / Admie), Greece
- 127 Optimal coordination of directional overcurrent relays in distribution systems with distributed generation based on a hybrid PSO-LP algorithm
V. Papaspiliotopoulos, T. Kurashvili, G. Korres
National Technical University of Athens, Greece
- 118 A new algorithm for transformer ground fault protection
Jelisaveta Krstivojevic, Milenko Djurić
University of Belgrade - Faculty of Electrical Engineering, Serbia

- 128 Hardware-in-the-loop simulation for protection blinding and sympathetic tripping in distribution grids with high penetration of distributed generation
V. Papaspiliotopoulos, V. Kleftakis, P. Kotsampopoulos, G. Korres, N. Hatziargyriou
National Technical University of Athens, Greece
- 144 The effect of the fuse enclosure temperature rise on overhead conductor protection
C. D. Halevidis, P. I. Mouzakitis, A. D. Polykrati, P. D. Bourkas
National Technical University of Athens, Greece

—CONFERENCE ROOM II—

High Voltage Engineering

Chair: **C. Psomopoulos**, National Technical University of Athens, Greece

- 112 Simulation of partial discharges mechanism
Th. L. Athanassiadis, D. D. Dimitriadou, Aik. D. Polykrati, C. G. Karagiannopoulos
National Technical University of Athens, Greece
- 131 Dissolved Gas Analysis for the Evaluation of the Corrosive Sulphur activity in Oil Insulated Power Transformers
A. Papadopoulos, C. Psomopoulos
Technological Institute of Piraeus, Greece
- 223 Evaluation of the behavior of a PV module after a high impulse voltage stress
I. Naxakis, V. Perraki, E. Pyrgioti
University of Patras, Greece
- 150 Design of an Artificial Neural Network for Ground Resistance Forecasting
V. P. Androvitsaneas, G. J. Tsekouras, I. F. Gonos, I. A. Stathopoulos
National Technical University of Athens, Hellenic Naval Academy, Greece

- 183 **Grid fault generator for the assessment of loads under grid fault conditions**
K. Bouabana, M. Kohlmann, V. Staudt, C. Sourkounis
Ruhr-University Bochum, Germany

14.30 – 17.00 Parallel Sessions

—NEW AMPHITHEATRE—

Load Identification and Energy Efficiency

Chair: **M. Alamaniotis**, University of Utah, USA

- 115 **Feature Extraction for Load Identification by Means of CPC in Smart Grid**
Yuval Beck, Netzah Calamero, Gady Golan, Arie Braunstein
Holon Institute of Technology, Israel
- 221 **A novel approach for electric load curve holistic modelling and simulation**
T. Barbier, R. Girard, F-P. Neirac, N. Kong, G. Kariniotakis
MINES ParisTech, PSL - Research University, PERSEE - Centre for processes, renewable energy and energy systems, France
- 133 **Energy Efficiency in Public Buildings**
D. Stimoniaris, D. Tsiमितros, V. Zacharaki, F. Dialynas, T. Kottas, S. Maropoulos, M. Stefanovski, Z. Stepanovski, I. Milosovska, K. Micalevski, V. Karagiannis, T. Papatīs, E. Dialynas
Technological Educational Institute of West Macedonia, Greece
- 172 **Multi-Agent Control System to Coordinate Optimal Demand Response Actions in Active Distribution Networks**
S. Mocci, N. Natale, F. Pilo, S. Ruggeri
University of Cagliari, Italy
- 210 **Smart Solutions For Smart Neighborhoods**
F. D. Dova, L. Dimeas, L.G Alacreu, N. D. Hatziaaryriou, G. C. Kiokes
National Technical University of Athens, Hellenic Air-Force Academy, Greece, ETRA I+D, Spain

- 214 **Energy Management in Facilities: BEAMS**
R.G. Gogou, A. L. Dimeas, N. D. Hatziargyriou, G. Messinis, G. C. Kiokos
National Technical University of Athens, Greece
- 167 **Optimizing Energy Efficient Lighting using Fuzzy Logic Methodology**
S.D. Kaminaris, P.A. Kontaxis, F.V. Topalis
Technological Educational Institute of Piraeus, National Technical University of Athens, Technological Educational Institute of Athens, Greece

—CONFERENCE ROOM I—

Electric Machines

Chair: **St. Kaminaris**, Technological Institute of Piraeus, Greece

- 155 **On the Development of an On-Site Induction Motor Efficiency Estimator Framework**
Y. L. Karnavas, Ch. K. Vacharides, A. D. Karlis
Democritus University of Thrace, University of Ioannina, Greece
- 129 **Implementing the E.U. Ecodesign Directive on Distribution Transformers**
C. Charalampopoulos, C. Psomopoulos, G. Ioannidis
Technological Institute of Piraeus, Greece
- 168 **Investigation of transformerless topologies for renewable energy applications eliminating leakage currents**
P. E. Kakosimos, A. G. Sarigiannidis, M. E. Beniakar, A. G. Kladas
National Technical University of Athens, Greece
- 151 **Experimental and theoretical investigation of the harmonic distortion in high voltage 3-phase transformers**
D.A. Barkas, C.S. Psomopoulos, G.C. Ioannidis, S.D. Kaminaris
Technological Educational Institute of Piraeus, Greece

- 209 Reliability Centered Maintenance using a Predictable Strategy – Application for 20 kV DC Traction Transformers
V. Papada
Urban Transport Railways S.A.
E. N. Dialynas
National Technical University of Athens, Greece

—CONFERENCE ROOM II—

Cables and Insulating materials

Chair: **E. Thalassinakis**, Hellenic Distribution Network Operator (HED-NO), Greece

- 216 Thermal analysis of underground cable crossings at various crossing angles
L. Exizidis, V. Chatziathanasiou
Aristotle University of Thessaloniki, Greece
B. Hennuy
Laborelec GDF SUEZ, France
- 175 Polymer Insulators and Coatings in the Cretan Power System. The Transmission Line case
D. Pylarinos, E. Thalassinakis
Hellenic Electricity Distribution Network Operator
K. Siderakis, E. Koudoumas
Technological Educational Institute of Crete, Greece
- 219 Dielectric properties of Natural ester Nanofluid with surface modified Fe_2O_3 nanoparticles
G. D. Peppas, E. I. Polydoropoulou, E. C. Pyrgioti, D. P. Zagklis, C. A. Paraskeva, V. P. Charalampakos
University of Patras and Technological Educational Inst. of Patras, Greece
- 149 Thermal stress of bolted connectors used in medium voltage lines
D. D. Dimitriadou, Th. L. Athanasiadis, P. I. Mouzakititis, C. D. Halevidis, Aik. D. Polykrati
National Technical University of Athens, Greece

- 109 FDTD Analysis of Multiphase Power Cable Systems using Distributed Constant Parameters
Ch. Kaloudas, A. Chrysochos, G. Papagiannis
Aristotle University of Thessaloniki, Greece
- 108 Experimental investigation on the fusion of thin wire elements exposed in air and silicon oxide granules environments
N. Gounaridis, V. Douvris, C. Psomopoulos
Technological Institute of Piraeus, Greece
- 139 Study of the Fall of Molten Copper and Aluminum Beads in Interior Places
P. Mouzakis, D. D. Dimitriadou, C. D. Halevidis, A. D. Polykrati, P. D. Bourkas
National Technical University of Athens, Greece



Notes



Notes



Wind Empowerment Athens 2014 / 03-07 November
NTUA, Zografou campus

The Rural Electrification Research Group (RurERG) of SmartRUE of NTUA co-organises the 2nd meeting of the international network Wind Empowerment. Wind Empowerment is an association that is active in the development of small, self-constructed wind turbines to enable rural electrification. It is composed of 37 organizations in 28 different countries including manufacturers of small wind turbines, associations, NGOs, universities, social enterprises, cooperatives, test sites and individuals.

The entrance is free of charge

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