EVER’11 Final Program

Thursday, March 31, 2011

Welcome Speech and Plenary Session 1
09H00 - 10H00, Amphitheater Camille Blanc

Chairs: Bernard Fautrier (Monaco) and Ahmed Masmoudi (Tunisia)

EVER11-PS1 Design Considerations of Permanent Magnet Machines for Automotive Applications
Massimo Barcaro and Nicola Bianchi
University of Padova, Italy

10H00 - 10H30: Coffee Break

EV1: Lecture Session on Machine Design 1
10H30 – 12H30, Amphitheater Camille Blanc

Chairs: Grzegorz Ombach (Germany) and Rosario Miceli (Italy)

EVER11-38 Influence of Rotor Structure and Number of Phases on Torque and Flux Weakening Characteristics of V-shape Interior PM Electrical Machine
Bassel Aslan, Julien Korecki, Thimoté Vigier, and Eric Semail
École Nationale Supérieure d’Arts et Métiers Lille, France

EVER11-52 Analysis of a Fractional Slot Permanent Magnet Machine for a Series Hybrid Truck
M.F.J. Kremers, J.J.H. Paulides, T.E. Motoasca, and E.A. Lomonova
Eindhoven University of Technology, The Netherlands

EVER11-54 Design of a High Integrated Electric Machine for Aircraft Autonomous Taxiing
Michael Schier, Frank Rinderknecht, Andreas Brinner, and Heribert Hellstern
German Aerospace Center, Germany

EVER11-77 Contribution to the Sizing and Performance Analysis of an Interior Permanent Magnet (IPM) Motor for Propulsion Applications
Ikhlas Bouzidi and Ahmed Masmoudi
University of Sfax, Tunisia
Nicola Bianchi
University of Padova, Italy
EVER11-80 FEA Based Investigation of the Magnetic Forces Developed by Fractional Slot PM Synchronous Machines
Imen Abdennadher and Ahmed Masmoudi
University of Sfax, Tunisia

**EV2: Lecture Session on Fuel Cells**
**10H30 – 12H00, Room Auric 4**

Chairs: Juan Dixon (Chile) and Patrick Favier (France)

EVER11-08 Exergy Analysis of Polymer Electrolyte Membrane Fuel Cells
Brahim Laoun and Maiouf Belhamel
Research Centre of Renewable Energies Development, Algeria
Wahib Naceur
University of Sâad Dahleb of Blida, Algeria

EVER11-12 Theoretical Evaluation of the Efficiency of Centrifugal Electrolysis and Opportunity of its Use on Board the Vehicle
Igor Bolvashenkov, Christiane Bertram, Dominik Buecherl, and Hans-Georg Herzog
Technische Universitaet Muenchen, Germany

EVER11-30 Control of Size and Distribution of Pt Nano-particles for Fuel Cell Application
Joung Woon Kim, Seung Jun Hwang, Sung Jong Yoo, Tae-Hoon Lim, Suk Woo Nam, and Soo-Kil Kim
Korea Institute of Science and Technology, Korea
Oh Joong Kwon
University of Incheon, Korea
Jeong Sook Ha
Korea University, Korea

EVER11-31 TiO₂ Supported Pt Catalysts for Fuel Cell Application
Sung Jong Yoo, Soo-Kil Kim, Seung Jun Hwang, Joung Woon Kim, Suk Woo Nam, and Tae-Hoon Lim
Korea Institute of Science and Technology, Korea
Yung-Eun Sung
Seoul National University, Korea
RE1: Lecture Session on PV Systems Technology and Applications
10H30 – 12H00, Room Ravel

Chairs: Igor A. Levitsky (USA) and Kodjo Agbossou (Canada)

**EVER11-14** Experimental Study of Electricity Generation by PV/diesel Hybrid Systems without Storage for off Grid Areas in Sahelian Countries
Daniel Yamegueu and Yao Azoumah
Institut International d’Ingénierie de l’Eau et de l’Environnement, Burkina Faso
Xavier Py
Université de Perpignan, France

**EVER11-26** Energy and Economic Optimization of Bioclimatic Building in Tlemcen Site
M.A. Boukli Hacene, N.E. Chabane Sari, and S. Amara
University Abou Bekr Belkaid of Tlemcen, Algeria

**EVER11-28** Analysis of PV Panels Faults by Thermography
Florin Ancuta and Costin Cepisca
University Politehnica of Bucharest, Romania

**EVER11-51** Hybrid Photovoltaics from Si-Carbon Nanotubes
Pang-Leen Ong
Emitech, Inc. Fall River, USA
William B. Euler
University of Rhode Island, USA
Igor A. Levitsky
Emitech, Inc. Fall River and University of Rhode Island, USA

12H00 – 13H30: Lunch
EV3: Lecture Session on Traction System Technology
13H30 – 15H00, Room Auric 4

Chairs: Pascal Xavier (France) and Jacek Junak (Germany)

EVER11-11 Impact of Electrical Machine and Transmission Control on HEV Drive Train Behavior and its Optimal Configuration
Christiane Bertram, Dominik Buecherl, Igor Bolvashenkov, and Hans-Georg Herzog
Technical University of Munich, Germany

EVER11-33 A Study on the Design Criteria and Performance of the High Speed Traction Motors for the Deep-Underground GTX
Chan-Bae Park, Hyung-Woo Lee, Byung-Song Lee, and Ju Lee
Hanyang University, Korea

EVER11-56 Electric Propulsion Concept for a Energy-Efficient High Speed Train
Tobias Weiler
German Aerospace Center, Germany

EVER11-61 HAMSTER ELECTRICWAY 4WD- Plug-in Hybrid Vehicle
Danut Gabriel Marinescu, Ion Tabacu, Florin Serban, Stefan Tabacu, Viorel Nicolae, and Mircea Draghici
University of Pitesti, Romania

EVER11-62 How does Lightweight Design Affect Traction Energy Consumption of Railway Vehicles?
Holger Dittus
German Aerospace Center, Germany
**EV4: Lecture Session on Machine Design 2**

13H30 – 15H00, Room Raval

Chairs: Nicola Bianchi (Italy) and Jian-Xin Shen (China)

**EVER11-58** Comparison of Flux-Switching Machines and Permanent Magnet Synchronous Machines in an In-Wheel Traction Application
Eindhoven University of Technology, the Netherlands

**EVER11-76** Calculation and Efficiency of a Linear Generator for a Hybrid Vehicle Concept
Frank Rinderknecht
German Aerospace Center, Germany
Hans-Georg Herzog
Technische Universität München, Germany

**EVER11-122** 2D-FEA Assessment of Eddy-Current Losses in Fractional Slot PM Machines
Asma Masmoudi and Ahmed Masmoudi
University of Sfax, Tunisia

**EVER11-124** 3D-FEA Based Investigation of a Novel Hybrid Excited Brushless Claw Pole Machine
Rabeb Rebbi, Amina Ibala, and Ahmed Masmoudi
University of Sfax, Tunisia

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**Official Plenary Session in Presence of H.S.H. Prince Albert II**

15H00 - 16H00, Amphitheater Camille Blanc

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16H00 –16H30: Exhibition Visit in Presence of H.S.H. Prince Albert II
**EV5: Lecture Session on Machine Design 3**  
*16H30 – 18H00, Amphitheatre Camille Blanc*

**Chairs:** Zi-Qiang Zhu (United Kingdom) and Emilia Motoasca (The Netherlands)

**EVER11-34** *A Compact In-wheel Propulsion System for Personal Electric Vehicles*
Charles Guan and Shane Colton  
Department of Mechanical Engineering, Massachusetts Institute of Technology, USA  
Jed Storey  
Department of Aeronautics and Astronautics, Massachusetts Institute of Technology, USA

**EVER11-60** *An Improved Design of the Low-Speed Double Fed Induction Generator*
G. Dilevs, N. Levin, and V. Pugachev  
Institute of Physical Energetics, Latvia

**EVER11-65** *Parameter Identification and 2D FE Modeling of Existing Switched Reluctance Motors*
Adrian-Cornel Pop, Vlad Petrus, and Claudia Steluta Martis  
Technical University of Cluj-Napoca, Romania  
Johan Gyselinck  
Université Libre de Bruxelles, Belgium

**EVER11-126** *On the Cogging Torque Reduction Capability of Fractional Slot PM Machines*
Ghada Ben Hadamou, Mongi Ben Hamadou, and Ahmed Masmoudi  
University of Sfax, Tunisia

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**EV6: Lecture Session on Urban Transportation Trends**  
*16H30 – 18H30, Room Auric 4*

**Chairs:** Pietro Menga (Italy) and Olaf Böse (Germany)

**EVER11-09** *Required Characteristics of Future Vehicular Energy Storages*
Dominik Büchler, Christiane Bertram, Igor Bolvashenkov, and Hans-Georg Herzog  
Technische Universität Muenchen, Germany

**EVER11-44** *The Linkage between the Car Sharing and the Hydrogen Economy: a Possible Solution to the Main Problems of Urban Transportation*
Tamás Szabó, Ákos Kriston, and György Inzelt  
Eötvös Loránd University, Hungary
**EVER11-79** Ageing Behaviour of Ultra High Power Lithium Ion cells for Automotive Applications
Olaf Böse, Peter Birke, and Michael Schiemann
Continental Powertrain, Germany

**EVER11-88** Benefit Evaluation of Electric Vehicles in Specific Areas: A case of Freight Fleets
Pietro Menga and Roberto Buccianti
CEI-CIVES, Italy

**EVER11-119** Global Intelligent Transportation System
Vladimir Postnikov
Metso Automation, Russia

**EVER11-120** Electric Taxi for Mumbai City
Harish Changarath Balasubramanian and Kishor Munshi
Indian Institute of Technology, India

**EVER11-21** Using a Molecular Diffusion-based EGR with a Diesel Engine
Mohamed N. Saeed, Adel A. Abdel-Rahman, and Amr F. SharafEldin
Alexandria University, Egypt

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**RE2: Lecture Session on Grids and Micro-Grids**

16H30 – 18H30, Room Ravel

**EVER11-10** On the Connectivity of PV Panels to the Grid – Monitoring Systems
Ali Rachini and Imad Mougharbel
Lebanese University, Lebanon
Hadi Y. Kanaan
Saint-Joseph University, Lebanon
S. Tselepsis, J. Nicoletatos, and E. Rikos
Centre of Renewable Energy Sources and Saving, Greece

**EVER11-23** Design Criteria for Micro Combined Cooling-Heating-Power (mCCHP) Electric System
Mihaela Chefneux and Mihaela Scortescu
Research Institute for Electrical Engineering ICPE SA, Roumania

**EVER11-46** Simplified Voltage Model of the DC Microgrid
Piotr Biczel, Mariusz Kocemba, and Marcin Koniak
Warsaw University of Technology, Poland
**EVER11-53** Ultracapacitors and Batteries Integration for Power Fluctuations Mitigation in Wind-PV-Diesel Hybrid System  
M. A. Tankari, M.B.Camara, B. Dakyo, and C. Nichita  
University of Le Havre, France

**EVER11-64** Monitoring and Protection of Generators Connected to the Algerian Network 400 kV  
Mohamed Bouchahdane, Aïssa Bouzid, and Ilhem Bouchareb  
University of Constantine, Algeria

**EVER11-66** Improving Power Control of a Small Windmill Standalone Generator in Senegal  
Oumar BA and Pape Alioune Ndiaye  
University Cheikh Anta Diop, Senegal  
Daniel Depernet  
University of Technology of Belfort-Montbéliard, France  
Alain Berthon  
University of Franche-Comté, France

**EVER11-73** Distributed Tidal Generation in Southern Chile  
Robert E. Schacht and Juan Dixon  
Pontificia Universidad Católica, Chile

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**EV7: Lecture Session on Variable Speed Drives**  
18H00 – 19H30, Amphitheatre Camille Blanc

Chair: Jean-paul Bécar (France) and Ahmed Masmoudi (Tunisia)

**EVER11-20** Lyapunov-Function-Based Flux Observer for AC Induction Motor Control  
Hichem Hamdi  
Higher School of Sciences and Techniques of Tunis, Tunisia  
Moncef gossa and Abderrahmen Zaafouri  
Research Unit on Monitoring and Control Systems Dependability, Tunisia

**EVER11-24** A Sliding Mode Control for Dual-Stator Induction Motor Drives Fed by Matrix Converters  
Hocine Amimeur and Rachid Abdessemed  
University of Batna, Algeria  
Djamal Aouzellag and Kaci Ghedamsi  
University of Bejaia, Algeria

**EVER11-72** Bull-ET: an High Performance Electric Kart  
Eric Armando, Barbara Boazzo, Paolo Guglielmi, and PFRT  
Politecnico di Torino, Italy
**EVER11-87** An Approach to Eradicate the Demagnetization Problem Penalizing Low Speed Operation of IM Drives Under DTC
Badii Bouzidi, Abderrazak Yanguil, Bassem El Badi, and Ahmed Masmoudi
University of Sfax, Tunisia

**EVER11-127** Experimental Validation of the Effect of the Stator Resistance Misidentification on the Performance of the Induction Motor under DTC
Hassen Hasnaoui, Badii Bouzidi, and Ahmed Masmoudi
University of Sfax, Tunisia

18H30: Cocktail Reception
Friday, April 1st, 2011

**Plenary Session**
*09H00 - 10H00, Amphitheater Camille Blanc*

Chairs: Emilia Motoasca (The Netherlands) and Grzegorz Ombach (Germany)

**EVER11-PS2** Electrical Machines and Power-Electronic Systems for High-Power Wind Energy Generation Applications.
Zi-Qiang Zhu and Jiabing Hu
University of Sheffield, United Kingdom

**10H00 - 10H30: Coffee Break**

**EV8: Lecture Session on Fault Diagnosis**
*10H30 – 12H30, Amphitheatre Camille Blanc*

Chairs: Hamid A. Toliyat (USA) and Zi-Qiang Zhu (United Kingdom)

**EVER11-47** Rotor Asymmetry Analysis and Diagnosis in the Closed-Loop and Sensorless Controlled Induction Motor Drive
Piotr Kołodziejek
Gdańsk University of Technology, Poland

**EVER11-57** Study on Fault Tolerant Power Converter for Switched Reluctance Drive Using Coupled Circuit-FEM
Ilhem Bouchareb, Bachir Batoun, Amar Bentounsi, and Abdesselam Lebaroud
University Mentouri of Constantine, Algeria

**EVER11-63** Application of Wavelet Transform For Wind Energy Generator Diagnostic
Batoun Bachir, Amar Bentounsi, and Ilhem Bouchareb
University Mentouri of Constantine, Algeria
Nicolas Heraud
University of Corsica, France

**EVER11-89** Air Gap Eccentricity Fault Detection in DFIG-Based Wind Energy Conversion Systems
Vivek M. Sundaram and Hamid A. Toliyat
Texas A&M University, USA
EVER11-90 Modeling and Analysis of Broken Damper Bars in Synchronous Machines
Mina Rahimian and Karen Butler-Purry
Texas A&M University, USA
Seung Choi
Toshiba, USA

EVER11-97 Diagnosis and Detection Rotor Dynamic Eccentricity Fault in Induction Motor
Youcef Soufi
University of Tébessa, Algeria
Tahar Bahi, Mohamed Faouzi Harkat, and Hichem Merabet
University of Annaba, Algeria

**REV1: Special Session on the Integration of Power Electronic Converters in Sustainable Systems (Part 1)**

*10H30 – 12H30, Room Auric 4*

**Chairs:** Ahmed Masmoudi (Tunisia) and Juan Dixon (Chile)

EVER11-IPECS1 Optimal Power Control and Management of Fuel Cell / Supercapacitor Hybrid Electric Vehicles Using PSO Algorithm
Omar Hegazy and Joeri Van Mierlo
Vrije Universiteit Brussel, Belgium

EVER11-IPECS2 Large scale wind integration with HVDC
Frans Dijkhuizen and Staffan Norrga
ABB Corporate Research, Sweden

EVER11-IPECS3 A Novel Converter Design and Optimization for Solar Energy Systems
Ilhami Colak and Mehmet Demirtas
Gazi University, Turkey
Ersan Kabalci
Nevsehir University, Turkey

EVER11-IPECS4 Delta-Inverter Fed Six-Phase BDCM Drives: Analysis and Control
Asma Ben Rhouma and Ahmed Masmoudi
University of Sfax, Tunisia

EVER11-IPECS5 New Concept of 2-Phase Electronic Propulsion Systems for an EV Transport Application
Branislav Dobrucky, Michal Prazenica, and Pavol Spanik
University of Zilina, Slovak Republic
REV2: Special Session on Sustainable System Project Based Learning
10H30 – 12H30, Room Auric5

Chairs: Alain Berthon (France) and Shane Colton (USA)

**EVER11-SPBL1** An Electrical Go-Kart for Project Based Learning Platform
Jean-paul Bécar  
University of Valenciennes, France  
Thierry Lequeu  
University of Tours  
Shane Colton  
Massachusetts Institute of Technology, USA

**EVER11-SPBL2** A Fuzzy Logic Application for Go-Kart: a Battery Charger
Arnaud Sivert and Franck Betin  
University of Picardie, France  
Jean-Paul Bécar  
University of Valenciennes, France

**EVER11-SPBL3** Educational Equipment: a Sun Tracking Photovoltaic System for a Transversal Teaching Approach
Vincent Grennerat, Eric Chamberod, Jean-Marc Boggetto, and Pascal Xavier  
University Joseph Fourier, France

**EVER11-SPBL4** An Electrical Bike for Project Based Learning Platform
Arnaud Sivert and Franck Betin  
University of Picardie, France  
Jean-Paul Bécar  
University of Valenciennes, France

**EVER11-SPBL5** Problem-Based Learning at University of Artois: Students’ Projects in Renewable Energies
François Maeght, Pierre-Yves Cresson, and Patrick Favier  
Université d’Artois, France  
Désiré D. Rasolomampionona  
Warsaw University of Technology, Poland

**EVER11-SPBL6** eCARus – A Collegiate Project for Electric Vehicle Development and Operation
Christiane Bertram, Dominik Buecherl, Tom P. Kohler, Andreas Thanheiser, Florian Ruf, Kathrin Bach, Igor Bolvashenkov, and Hans-Georg Herzog  
Technical University of Munich, Germany
**EV9: Special Poster Session on Vehicle Design**

**10H30 – 12H30, Room Hall**

**Chairs:** Artur Grisanti Mausbach (Brasil) and Kishor Munshi (India)

**EVER11-VD1** *SABIÁ VI: a Case Study of an Eco-friendly Prototype Vehicle*
Jairo José Drummond Câmara and Lívia Galvão Fiuza
State University of Minas Gerais, Brazil
Róber Dias Botelho
Université de Cergy Pontoise, France

**EVER11-VD2** *A New Mobility ‘Fit for Life’*
Stéphane Schwarz
Stephane Schwarz Studio and Royal College of Art, United Kingdom

**EVER11-VD3** *Fiat New Uno Ecology*
Peter Fassbender
Brand Head for Fiat Style Center America Latina, Brazil

**EVER11-VD4** *Electric Vehicle Design Initiatives in India & some Case Studies*
Kishor Munshi
IIT Bombay, India

**EVER11-VD5** *Redesign the Myth of the Automobile*
Artur Grisanti Mausbach
University of Sao Paulo, Brazil

**EVER11-VD6** *The Art of Lightweight Vehicle Engineering: a Historical Perspective*
Max Fickel and Paul D. Ewing
Royal College of Art, United Kingdom

**EVER11-VD7** *Exploring the Requirements for a New Typology of Urban Electric Vehicle*
Lino Vital
Royal College of Art, United Kingdom
Chairs: Harald N. Røstvik (Norway) and Raoul Viora (Monaco)

**EVER11-TEA1 Welcome Speech**
Raoul Viora  
World Energy Council, Monaco

**EVER11-TEA2 Towards Energy Autonomy?**
Harald N. Røstvik  
Architect SunLab and Bergen School of Architecture, Norway

**EVER11-TEA3 Learning about the Low Carbon Society (LCS)**
Eva Schuepbach  
Bern University of Applied Sciences, Switzerland

**EVER11-TEA4 Toyota’ Road towards Energy Autonomy**
Ståle Oftedal  
Toyota Sørvest AS, Norway

**EVER11-TEA5 The Synergy of Plus-Energy Houses with E-Mobility: Total Energy Autonomy Is Now Feasible**
Urs Muntwyler  
Bern University of Applied Sciences, Switzerland

**EVER11-TEA6 Using Fouggara for Heating and Cooling Buildings in Sahara**
Sofiane Amara and Bo Lundell  
Luleå University, Sweden  
Boumediene Benyoucef  
University of Tlemcen, Algeria

*12H30 – 14H00: Lunch*
**REV3: Special Session on Towards Energy Autonomy (Part 2)**  
**13H30 – 14H30, Room Ravel**

**Chairs:** Harald N. Røstvik (Norway) and Raoul Viora (Monaco)

**EVER11-TEA7 World Power Grid from OTEC Energy Islands**  
Dominic Michaelis  
Architect Energy Islands Ltd, France

**EVER11-TEA8 Towards Energy Autonomy: Discussion, Conclusions and Outlook**  
Harald N. Røstvik  
Architect SunLab and Bergen School of Architecture, Norway  
Raoul Viora  
World Energy Council, Monaco

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**RE3: Lecture Session on Variable Speed Generating Systems**  
**14H30 – 16H00, Room Ravel**

**Chairs:** Mamadou L. Doumbia (Canada) and Xavier Py (France)

**EVER11-36 Study and Control of Wind Energy Conversion System Based Permanent Magnet Synchronous Generator Connected to the Grid**  
Aziz Remli, Djamal Aouzellag, and Kaci Ghedamsi  
University of Bejaia, Algeria

**EVER11-40 Modeling and Control of PMSG-Based Variable-Speed Wind Turbine Connected to the Grid**  
Mohamed Mansour, Mohamed Néjib Mansouri, and Mohamed Faouzi Mimouni  
University of Monastir, Tunisia

**EVER11-42 New Control Strategy of Wind Generator based on the Dual-Stator Induction Generator**  
Samira Chekkal, Djamal Aouzellag, and Kaci Ghedamsi  
Department of Electrical engineering, University of Bejaia, Algeria  
Hocine Amineur  
Department of Electrical engineering, University of Batna, Algeria

**EVER11-55 Modeling and Control of a Doubly-fed Induction Generator**  
Tahar Bahi, Azzeddine Dekhane, and Hichem Merabet  
University of Annaba, Algeria  
Youcef Soufi  
University of Tebessa, Algeria
REV1: Special Session on the Integration of Power Electronic Converters in Sustainable Systems (Part 2)
14H00 – 16H00, Room Auric 4

Chairs: Ahmed Masmoudi (Tunisia) and Juan Dixon (Chile)

**EVER11-IPECS6** 23-Level Inverter for EVs Using Only One Power Supply and Series Active Filters
Juan Dixon and Javier Pereda
Pontificia Universidad Católica, Chile

**EVER11-IPECS7** Harmonics Minimization of Multilevel Inverter Connecting Source Renewable Energy to Power System
Yousef Soufi
University of Tebessa, Algeria
Sihem Ghoudelbourk
University of Skikda, Algeria
Tahar Bahi and Hichem Merabet
University of Annaba, Algeria

**EVER11-IPECS8** Four-Switch Inverter Fed BDCM Drives: a Survey
Asma Ben Rhouma and Ahmed Masmoudi
University of Sfax, Tunisia

**EVER11-IPECS9** Modeling and Control of a Stand-Alone Doubly Fed Induction Generator (DFIG) Based Wind Energy Conversion System
T. Mesbahi, T. Ghennam, E.M. Berkouk, M. Meradj, and A. Benidder
Ecole Nationale Polytechnique El-Harrach, Algeria

**EVER11-IPECS10** Control Aspects of Novel Switched Step-Up-Down Converter for Low-Voltage Application
Sergey Ryvkin
Trapeznikov Institute of Control Sciences, Russia
Felix A. Himmelstoss
University of Applied Science Technikum Wien, Austria
**RE4: Special Session on Hybrid Green Energy Technologies (Part 1)**

14H00 – 16H00, Room Auric 5

**Chairs:** Ilhami Colak (Turkey) and Fujio Kurokawa (Japan)

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**EVER11-HGET1**  
*A Novel Technique for Power Factor Calculation Using a PLC*  
Ramazan Bayindir, Ilhami Colak, and Orhan Kaplan  
Gazi University, Turkey

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**EVER11-HGET2**  
*Islanding Detection Method for a Hybrid Renewable Distributed Generator*  
Mylène Robitaille, Kodjo Agbossou, Mamadou Lamine Doumbia, and Rémy Simard  
Université du Québec à Trois-Rivières, Canada

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**EVER11-HGET3**  
*Simulation and Control of a Doubly-Fed Induction Generator for Variable Speed Wind Energy Conversion Systems*  
Karim Belmokhtar, Mamadou Lamine Doumbia, and Kodjo Agbossou  
Université du Québec à Trois-Rivières, Canada

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**EVER11-HGET4**  
*The Dynamics of Diesel-Generator Unit in Isolated Electrical Network*  
Marija Mirošević and Daniel Pavlinović  
University of Dubrovnik, Croatia  
Zlatko Maljković  
Faculty of Electrical Engineering and Computing Zagreb, Croatia

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**EVER11-HGET5**  
*Review of Wind Energy Conversion Systems for Large Wind Turbines and Simulation of a back-to-back Electronic Power Converter*  
Dimitrios G. Giaourakis, and Athanasios N. Safacas  
University of Patras, Greece

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*16H00 - 16H30: Coffee Break*
EV10: Special Session on PM Motors for Automotive Drives
16H30 – 18H30, Room Auric 4

Chairs: Grzegorz Ombach (Germany) and Zi-Qiang Zhu (United Kingdom)

EVER11-PMAD1 Improved Energy Efficiency for Conventional Vehicles through an Enhanced Dual Voltage Architecture and New Components with an Attractive Cost-Benefit Ratio
Bob Simpkin (MIRA), Rosella Marco (CRF), Carlo D’Ambrosio (CRF), Marcus Abele (Bosch), Georg Heuer (Bosch), Dr. Antoni Ferré (LEAR), Ion Boldea (UPT), Sever Scridon (BEESPEED)

EVER11-PMAD2 Demagnetization Analysis of IPM Motor versus SPM Motor in Automotive Application
Wojciech Chlebosz, Grzegorz Ombach, and Jacek Junak
Brose Fahrzeugteile GmbH & Co. Kommanditgesellschaft, Germany

EVER11-PMAD3 Numerical Analysis of Brushless Motor Optimized for Block Voltage Control for Automotive Applications
Jacek Junak and Grzegorz Ombach
Brose Fahrzeugteile GmbH & Co. KG, Germany
Daniel Fiederling
Reinhold-Würth-Hochschule Künzelsau, Germany

EVER11-PMAD4 Challenges and Requirements to Design of PM Electric Motors for Automotive Application and High Volume
Jacek Junak and Grzegorz Ombach
Brose Fahrzeugteile GmbH & Co. KG, Germany

EVER11-PMAD5 Analysis of Permanent Magnet Losses by using Pulsed Field Magnetometer
Grzegorz Sawczuk and Grzegorz Ombach
Brose Fahrzeugteile GmbH & Co. KG, Germany
Luc Van Bockstal
Metis Instruments & Equipment, Belgium

EVER11-PMAD6 Sensorless Control of Interior Permanent Magnet Synchronous Motor Using Flux Observer
Jian-Xin Shen, He Hao, and Can-Fei Wang
Zhejiang University, China
RE4: Special Session on Hybrid Green Energy Technologies (Part 2)
16H30 – 18H30, Room Auric 5

Chairs: Ilhami Colak (Turkey) and Sergey Ryykin (Russia)

**EVER11-HGET6** Design and Performance Analysis of the Drive System in Fuel Cell Electric Vehicle
Savvas Tsotoulidis and Athanasios Safacas
University of Patras, Greece

**EVER11-HGET7** An Improved Transient Response of Power Turbine Generators as Heat Recovery Energy in Parallel Running on Ship-Board
Nobumasa Matsui
Choryo Control System Co., Ltd., Japan
Fujio Kurokawa
Nagasaki University, Japan

**EVER11-HGET8** A Novel Digital P-I-D Control LLC Resonant Converter
Fujio Kurokawa, Koji Murata, and Yuki Maeda
Nagasaki University, Japan

**EVER11-HGET9** Modeling and Control of Wind Power Conversion System with a Flywheel Energy Storage System
Seifeddine Belfedhal
University of Ibn Khaldoun Tiaret, Algeria
El-Madjid Berkouk
Ecole Nationale Polytechnique El-Harrach, Algeria

**EVER11-HGET10** Hybrid Green Energy Technologies: An Electric-free Solar Tracker
Chen-Wei, Feng
CN-J Technology Co. Ltd, Taiwan R.O.C

**EVER11-HGET11** Influence of Energy Production Technology on Electric Hybrid and Electric Vehicles
Zdenek Cerovsky and Pavel Mindl
Czech Technical University in Prague, Czech Republic
RE5: Special Session on Achievements Developed within the FP7 BeyWatch European Scientific Project
16H30 – 18H30, Room Ravel

Chairs: Rosario Miceli (Italy) and Frans Dijkhuizen (Sweden)

EVER11-FP7-BW1 The FP7 BeyWatch European Scientific Project: General Features and Design Criteria of the Combined Photovoltaic Solar (CPS) System within the BeyWatch System Architecture
C. Giaconia, G. Fertitta, D. La Cascia, F. Lo Bue, R. Miceli, and C. Rando
University of Palermo, Italy

EVER11-FP7-BW2 Efficiency Improvement of Permanent-magnet Synchronous Motor Drives for Household Appliances
A.O. Di Tommaso, R. Miceli, and G. Ricco Galluzzo
University of Palermo, Italy

EVER11-FP7-BW3 An Embedded System for the Integration of a Combined Photovoltaic Solar (CPS) System into a ZigBee Home Area Network
G. Fertitta, C. Giaconia, and F. Lo Bue
University of Palermo, Italy

EVER11-FP7-BW4 A New Control System Prototype for the Energy Production Maximization of a Unequally Irradiated PV System
V. Di Dio, D. La Cascia, C.Rando, and G. Ricco Galluzzo
University of Palermo, Italy

EVER11-FP7-BW5 Smart Grids: the Next Future of Electrical Distribution Systems
Salvatore Favuzza and Rosario Miceli
University of Palermo, Italy

20H30: Official Dinner