

EPE Newsletter June 2007

Newsletter contents

1. EPE 2007 registration open – Welcome to Aalborg – Monday 3 September will be devoted to WIND ENERGY
 2. Call for papers for EPE journal, included in ISI and Compendex
 3. Technically sponsored conferences
-

1. EPE 2007 registration open - Welcome to EPE'2007 in Denmark – Aalborg

Monday 3 September will be devoted to Wind Energy – Do not miss this event! An invitation letter from the Conference Chairman, Prof. Frede Blaabjerg, is attached. Do not hesitate to forward this information to your colleagues.

The provisional programme is available at <http://www.cborg.net/epe2007/programme.html>
or from
<http://www.epe2007.com>

Please note the organization of sessions devoted to Wind Energy in the frame of the

WIND DAY - Joint Meeting of EPE represented by the EPE Chapter on Wind Energy and IEEE represented by IEEE Joint IAS/PELS/IES Danish Chapter, IEEE Joint IAS/PELS/IES German Chapter and IEEE PES German Chapter

Provisional programme of the Wind day is as follows:

09:40 **LS1a topic 13 (Joint EPE and IEEE Wind day): Power electronics for wind energy**

Chair: Mr.Andreas LUXA, SIEMENS AG - POWER TRANSMISSION AND DISTRIBUTION, GERMANY
Co-Chair: Mr.Philip C. KJAER, VESTAS WIND SYSTEMS A/S, DENMARK

[0830 - Control of Back-to-Back-Connected Neutral-Point-Clamped Converters in Wind Mill Applications](#)
POU Josep, ZARAGOZA Jordi, ARIAS Antoni - TECHNICAL UNIVERSITY OF CATALONIA - SPAIN
ROBLES Eider, CEBALLOS Salvador, IBAÑEZ Pedro - ROBOTIKER-TECNALIA - SPAIN

[0946 - Reactive Power Generation by DFIG based Wind Farms with AC Grid Connection](#)
ERLICH Istvan, WILCH Michael, FELTES Christian - UNIVERSITY OF DUISBURG-ESSEN - GERMANY

[0951 - Estimation of the costs due to renewable energies for a transmission system operator](#)
HANDSCHIN Edmund, REHTANZ Christian, WANIEK Daniel, SCHULZ Woldemar, HÄGER Ulf, HORENKAMP Willi -
UNIVERSITY OF DORTMUND - GERMANY

11:00 **LS2a topic 13 (Joint EPE and IEEE Wind day): Power electronics for wind energy**

Chair: Mr.Jouko NIIRANEN, ABB OY, FINLAND
Co-Chair: Mr.John Godsk NIELSEN, VESTAS, DENMARK

[0608 - Performance Comparison of a Left Shunt UPQC and a Right Shunt UPQC applied to Enhance Fault-Ride-Through Capability of a Fixed Speed Wind Generator](#)
JAYANTI N. G, BASU MALABIKA, CONLON MICHAEL, GAUGHAN KEVIN - DUBLIN INSTITUTE OF TECHNOLOGY
- IRELAND

[0620 - control of doubly fed induction generator to ride through unsymmetrical voltage dip](#)
ZHOU Yi, BAUER P, FERREIRA J. A - DELFT UNIVERSITY OF TECHNOLOGY - NETHERLANDS
PIERIK J. - ENERGY RESEARCH CENTER OF NETHERLANDS - NETHERLANDS

[0144 - Control of Doubly-fed Induction Generators under Asymmetrical Grid Conditions](#)
RICHTER Marlies - TECHNICAL UNIVERSITY ILMENAU - GERMANY
NAVARRO Daniel - GAMESA EÓLICA, S.A. - SPAIN

12:10 **LS3a topic 13 (Joint EPE and IEEE Wind day): Power electronics for wind energy**

Chair: Mrs.Marta MOLINAS, NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY, NORWAY

Co-Chair: Mr.Andreas LINDEMANN, OTTO-VON-GUERICKE-UNIVERSITÄT , GERMANY

[0238 - A New Architecture for Offshore Wind Farms](#)

PRASAI Anish, DIVAN Deepak, KREIKEBAUM Frank - GEORGIA INSTITUTE OF TECHNOLOGY - UNITED STATES OF AMERICA

YIM Jung-Sik, SUL Seung-Ki - SEOUL NATIONAL UNIVERSITY - KOREA

BENDRE Ashish - DRS TECHNOLOGIES - UNITED STATES OF AMERICA

[0538 - Design and Comparison of Full-size Converters for Large Variable-Speed Wind Turbines](#)

ZENG Xiangjun, CHEN Zhe, BLAABJERG Frede - AALBORG UNIVERSITY - DENMARK

[0953 - Storage of fluctuating wind energy](#)

LERCH Edwin - SIEMENS AG - POWER TRANSMISSION AND DISTRIBUTION - GERMANY

14:40 **DS1.9 topic13 (Joint EPE and IEEE Wind day): Distributed, renewable energy systems**

Chair: Mr.Stephan MEIER, ROYAL INSTITUTE OF TECHNOLOGY, SWEDEN

[0159 - A Control Algorithm for Power Converters in the Field of Photovoltaic Application](#)

CHIMENTO Filippo, RACITI Angelo, MUSUMECI Salvatore, SAPUPPO Carmelo - UNIVERSITA' DI CATANIA - ITALY
DI GUARDO Mario - STMICROELECTRONICS - ITALY

[0955 - Fault Ride-through Capability Implementation in Wind Turbine Converters Using a Decoupled Double Synchronous Reference Frame PLL](#)

RODRIGUEZ P., LUNA A - TECHNICAL UNIVERSITY OF CATALONIA - SPAIN

TEODORESCU Remus, IOV Florin, BLAABJERG Frede - AALBORG UNIVERSITY - DENMARK

[0032 - A Single Sensor Type MPPT Control Method for PV Generation Systems](#)

ITAKO kazutaka - KANAGAWA INST. OF TECH. - JAPAN

[0080 - Control and Energy Management of a Wind-Photovoltaic Hybrid System](#)

DALI Mehdi, BELHADJ Jamel - LSE-ENIT - TUNISIA

ROBOAM Xavier, BLAQUIERE Jean-Marc - LEEI - FRANCE

[0098 - Photovoltaic Power System with Simplified Cascade Boost Choppers](#)

UTSUMI Ryosuke, MASUKAWA Shigeo, IIDA Shoji - TOKYO DENKI UNIVERSITY - JAPAN

[0146 - High-Resolution Phase Shift and Digital Implementation of a Fuel Cell Powered UPS System](#)

TAO Haimin, DUARTE Jorge, HENDRIX Marcel - EINDHOVEN UNIV. OF TECHNOLOGY - NETHERLANDS

[0194 - Inverter Power Sizing Considerations in Grid-Connected PV Systems](#)

VELASCO Guillermo, GUINJOAN Francesc, PIQUE Robert, CONESA Alfonso - UPC - SPAIN

[0212 - A Current-Mode Controlled Maximum Power Point Tracking Converter for Building Integrated Photovoltaics](#)

TAN Chee Wei, GREEN Tim C., HERNANDEZ-ARAMBURO Carlos A. - IMPERIAL COLLEGE LONDON - UNITED KINGDOM

[0237 - Fast On-Line Symmetrical Components Separation Method for Synchronization and Control Purposes in Three Phase Distributed Power Generation Systems](#)

ALEPUZ Salvador - EUPMT-UPC - SPAIN

BORDONAU JOSEP - UPC - SPAIN

PONNT Jorge, RODRIGUEZ Jose, SILVA Cesar - UNIVERSIDAD TECNICA FEDERICO SANTA MARIA - CHILE

[0259 - Modelling & Control of a Bidirectional Converter for a Stand-alone Photovoltaic Power Plant](#)

CHONG BENJAMIN VUI PING, ZHANG LI, DEGHANI ABBAS - THE UNIVERSITY OF LEEDS - UNITED KINGDOM

[0350 - Advanced modular communication concepts for data logging and conditioning in photovoltaic inverter systems](#)

MIELKE Jochen, IDE Peter - DELTA ENERGY SYSTEMS GMBH - GERMANY

0389 - Realization of Islanding Prevention for Grid-Connected PV Power System

CHEN Yaow-Ming - NATIONAL CHUNG CHENG UNIVERSIT - TAIWAN

0422 - Exercise Bike Powered Electric Generator for Fitness Club Appliances

BENYSEK Grzegorz, JARNUT Marcin - UNIVERSITY OF ZIELONA GÓRA - POLAND
STRZELECKI Ryszard - GDYNIA MARITIME UNIVERSITY - POLAND

0428 - Evaluation of Three-phase Transformerless PV Inverter Topologies

KEREKES Tamas, KLUMPNER Christian, SUMNER Mark - NOTTINGHAM UNIVERSITY - UNITED KINGDOM
TEODORESCU Remus - AALBORG UNIVERSITY - DENMARK
FLORICAU Dan - POLITEHNICA UNIVERSITY OF BUCHAREST - ROMANIA
RODRÍGUEZ Pedro - TECHNICAL UNIVERITY OF CATALONIA - SPAIN

0439 - Stationary Frame Voltage Harmonic Controller for Standalone Power Generation

KULKA Arkadiusz, UNDELAND Tore - NTNU,DEPT OF ELECT.POWER ENGIN - NORWAY
VAZQUEZ Sergio, FRANQUELO Leopoldo - ESCUELA SUPERIOR DE INGENIEROS - SPAIN

0441 - Centralized supervision of reactive power generation for a wind farm

FRANCOIS Bruno - L2EP - ECOLE CENTRALE DE LILLE - FRANCE
BEUGNIEZ Aurelien - L2EP - FRANCE
GHENNAM T, BERKOUK E.M - LABORATORY OF PROCESS CONTROL, POLYTECHN - ALGERIA
ROBYNS benoit - L2EP HEI - FRANCE

0452 - Balanced Grid Currents in Three-Level Voltage-Source Inverters Connected to the Utility under Distorted Condition using Symmetrical Components and Linear Quadratic Regulator

ALEPUZ Salvador - EUPMT-UPC - SPAIN
BUSQUETS Sergio, BORDONAU Josep - UPC - SPAIN
RODRIGUEZ Jose, PONTT Jorge, SILVA Cesar - UNIVERSIDAD TECNICA FEDERICO SANTA MARÍA - CHILE

0465 - Design and control of a Fuel Cell DC/DC Converter for Embarked Applications

NARJISS Abdellah, GUSTIN Frédéric, HISSEL Daniel, BERTHON Alain - UNIVERSITY OF FRANCHE COMTE - FRANCE
DEPERNET Daniel - UTBM - FRANCE

0481 - Contribution of Energy Storage Systems for Power Generation and Demand Balancing with Increasing Integration of Renewable Sources: Application to the Portuguese Power System

FAIAS Sérgio, SOUSA Jorge, - ISEL/DEEA - PORTUGAL
CASTRO Rui - IST / TECHNICAL UNIV LISBON - PORTUGAL

0514 - Precise Digital Control Method with Sinusoid based Model for SinglePhase Utility Interactive Inverter with FPGA based Hardware Controller

HAYASHI Kenta, TAKAMATSU Sayaka, YOKOYAMA Tomoki - TOKYO DENKI UNIVERSITY - JAPAN

0544 - A novel Parallel Active Filter for Current Pulsation Smoothing on Single Stage Grid-connected AC-PV Modules

KYRITSIS Anastasios, TATAKIS Emmanuel - UNIVERSITY OF PATRAS - GREECE
PAPANIKOLAOU Nikolaos - HELLENIC TRANSMISSION SYSTEM OPERATOR - GREECE

0569 - A NOVEL TOPOLOGY WITH HIGH EFFICIENCY FOR GRID CONNECTED PHOTOVOLTAIC PCS

MIN BYUNG DUK, LEE JONGPIL, KIM JONGHYUN, KIM TAEJIN, YOO DONG WOOK - KERI - KOREA

0692 - Studies on a LV DC network

DEACONU Dragos, CHIRILA Aurel, ALBU Mihaela, TOMA Lucian - UNIVE. "POLITEHNICA" BUCURESTI - ROMANIA

0700 - A Novel Maximum Power Point Tracker Controlling Several Converters Connected to Photovoltaic Arrays with Particle Swarm Optimization Technique

MIYATAKE Masafumi, TORIUMI Fuhito, ENDO Tsugio, FUJII Nobuhiko - SOPHIA UNIVERSITY - JAPAN

0704 - Improved STATCOM Operation Under Transient Disturbances for Wind Power Applications

ETXEBERRIA-OTADUI Ion, VISCARRET Unai - IKERLAN - SPAIN
ZAMAKONA Izaskun - OLDAR ELECTRÓNICA - SPAIN
ARENAL REDONDO Beatriz - JEMA - SPAIN
IBIRICU Javier - EÓLICAS DE EUSKADI - SPAIN

0709 - Control of a Fuel Cell System with Auxiliary Energy Storage for Bidirectional Power Flow
ZHOU HAIHUA, KHAMBADKONE ASHWIN M, KONG XIN - NUS - SINGAPORE

0722 - Association of wind turbine based dispersed generators and storage systems to participate in primary frequency control
COURTECUISSÉ Vincent, EL MOKADEM Mostafa, ROBYNS Benoit, FRANCOIS Bruno - HEI - FRANCE
PETIT Marc - SUPELEC - FRANCE
DEUSE Jacques - SUEZ-TRACTEBEL - BELGIUM

0745 - Phase-Locked Loop with Adaptive Signal Cancellation for Three-phase Network Side Voltage Source Inverter
ØSTREM Trond, SULKOWSKI Waldemar - NARVIK UNIVERSITY COLLEGE - NORWAY
NORUM Lars - NORWEGIAN UNIVERSITY OF SCIENCE AND TECH - NORWAY

0751 - Single-Phase Grid-Connected Photovoltaic Systems With Power Quality Conditioner Functionality
MASTROMAURO Rosa, LISERRE Marco, DELL'AQUILA Antonio - POLITECNICO DI BARI - ITALY

0768 - Modelling and control of a 100kW photovoltaic inverter with an LCL grid filter for distributed power systems
FIGUERES Emilio, GARCERA Gabriel, SANDIA Jesus, GONZALEZ-ESPIN Fran - UNIV. POLITECNICA DE VALENCIA - SPAIN
CALVO Jesus, VALES Manuel - NEXUN POWER ELECTRONICS S.L. - SPAIN

0771 - Using the model of the solar cell for determining the maximum power point of photovoltaic systems
HARTMANN Lucas - UNIVERSIDADE DE CAMPINA GRANDE - BRAZIL

0826 - A STAND-ALONE PHOTOVOLTAIC SYSTEM BASED ON DC-DC CONVERTERS IN A MULTI-STRING CONFIGURATION

IMHOFF Johninson, RODRIGUES Guilherme Fração, PINHEIRO José Renes, HEY Hélio Leães - FEDERAL UNIVERSITY OF SANTA MARIA - BRAZIL

0893 - A current-controlled fuel cell system with short-time storage for grid feeding application

MEHLICH Heiko, JÄHNERT Stefan, MEHLICH Jan, VEIT Bjorn, KÖNIG Stefan - CHEMNITZ UNIVERSITY OF TECHNOLOGY - GERMANY

0952 - A Simple Method for Analytical Evaluation of LVRT in Wind Energy for Induction Generators with STATCOM or SVC
MOLINAS Marta, UNDELAND Tore - NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY - NORWAY
SUUL Jon Are - SINTEF ENERGY RESEARCH - NORWAY

15:30 **Industrial session of the joint EPE and IEEE Wind day (EPE Chapter on Wind Energy and joint IAS/PELS/IES Danish and German Chapters)**

Chair: Mr.Philip C. KJAER, VESTAS WIND SYSTEMS A/S, DENMARK

Invited papers:

[Utility-Connected Power Electronic Compensators in Wind Power Applications](#)

Bud Kehrl, Michael Ross, American Superconductor,

[Grid Compliance Conditioning of Renewable Power Sources by means of Modern Power Electronics](#)

Reinhard Zingel, Convertteam

[Wind farm flexible AC transmission systems](#)

Guillaume de Preville, Jean-Sayed Askar, ArevaT&D,

[STATCOM: Utility-connected power electronic compensator](#)

Philippe Maibach, Jonas Wernli, ABB

Followed by a large panel discussion

The full EPE 2007 conference provisional programme is available at <http://www.cborg.net/epe2007/programme.html>
Full information and registration: <http://www.epe2007.com>

SEE YOU IN AALBORG!

2. Call for papers for EPE journal, included in ISI and Compendex

EPE Journal is included in the Science Citation Index as well as in the Compendex. Send your best technical papers for publication to bsnevers@vub.ac.be (pdf file, without any mention of authors, full coordinates in the mail message)

<http://www.epe-association.org>

3. Technically sponsored conferences

6 – 7 September 2007

“2nd ECPE SiC User Forum - Potential of SiC in Power Electronic Applications” in Copenhagen, Denmark

Technical Chairmen:

Prof. A. Lindemann, Otto-von-Guericke-University Magdeburg, Germany

Prof. H. Ohashi, National Institute of Advanced Industrial Science and Technology, Japan

After the first Silicon Carbide (SiC) User Forum organised by ECPE in 2006, technology has developed further - in particular new power electronic systems with SiC components and new SiC devices have been reported. Time has thus come to continue the exchange between experts involved in converter and device development: The second SiC User Forum will focus on typical power electronic systems the use of SiC is highly promising for -

i. e., electric drives, converters in transportation and power supplies; additionally an insight in recent material and device technology — which is the base for future system development — will be given. Renowned experts from all over the world have been invited to give an overview in keynotes, to in depth explain their research and development work in technical presentations and to share their knowledge in discussion forums as an indispensable part of the event.

The SiC User Forum is this way intended as a platform to share experience and ideas, to discuss and find out which power electronic systems are predestinated for usage of SiC and how to appropriately design-in those novel, almost ideal but also challenging components. It aims at finding and pointing out approaches to exploit the high potential of SiC and to support its beneficial introduction in power electronic systems.

SiC User Forum 2007 is scheduled to take place right after EPE conference 2007 in the Danish capital Copenhagen. Prof. Andreas Lindemann (Otto-von-Guericke-Universität Magdeburg, Germany) will chair the event together with Prof. Dr. Hiromichi Ohashi (National Institute of Advanced Industrial Science and Technology, Japan) and Mr. Thomas Harder (ECPE).

All presentations and discussions will be in English.

programme under: http://www.ecpe.org/download/seminars/Flyer_SiC_User_Forum_09_07.pdf

16 – 19 September 2007

The Sixth International Symposium on Linear Drives for Industrial Applications

LDIA2007 SECRETARIAT

Dr. S. Brisset

Ecole Centrale de Lille, Cité Scientifique - B.P.48, 59651

Villeneuve d'Ascq Cedex, France

Phone: +33(0)320 335 429

Fax: +33(0)320 335 454

E-mail: ldia2007@ec-lille.fr

26 – 27 September 2007

International Conference AUTOMOTIVE POWER ELECTRONICS

Salons de l'Aveyron – PARIS

List of addressed topics

1- Automotive Standards: technological trends

2- Design and modelling tools for mechatronics: power electronic design, thermal and EMC issues, simulation of electro-thermo-mechanical fatigue – *Special topic*

3- Power electronic vehicle architecture: powertrain alternative solutions, choice of network voltages, gateways between electrical and electronic networks

4- Power Semiconductor devices and modules

5- Packaging and integration of power converters: protection devices...

6- Static power converters and systems

7- Passive components – *Special topic*

8- Harnesses and connectors

9- Actuators and motors control and drives

10- Mechatronics integration

11- Power dissipation management / Cooling

12- Electro-magnetic issues: impact of power electronics fro in-vehicle architecture, new standards to come, electronic and harness design guidelines

13- Preventive diagnosis: failure prognosis, maintenance, thermal fatigue

14- Reliability, safety and test: limiting failure mechanisms, acceleration factors, high operating temperatures, test methods and tools, predictive reliability tools, dependability, robustness validation, requirement analysis– *Special topic*

15- Manufacturing tools and industrial processes

16- End of life, Recycling and Eco-design

Your contact

SIA – st4@sia.fr – Tel: +33 (0)1 41 44 93 75

October 22 – 26, 2007

The 7th International Conference on Power Electronics - ICPE '07

EXCO (Daegu Exhibition & Convention Center), Daegu, Korea

Call for papers still open

Important Dates

Author's Notification of Acceptance **June 15, 2007**

Deadline for Final Manuscripts **August 31, 2007**

Organized by

The Korean Institute of Power Electronics (KIPE)

First Call for Papers <http://www.icpe.or.kr>

For Further Information, Please Contact

ICPE'07 (KIPE)

Science & Technology B/D #408, 635-4, Yeoksamdong Kangnamku, Seoul, Korea, 135-703

Tel: +82-2-554-0184 / Fax: +82-2-554-0186

E-mail: kipe@kipe.or.kr / Web Site: <http://www.icpe.or.kr>