

EPE Newsletter July 2009

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➤ 1. EPE 2009, Barcelona 8-10 September 2009, Register now! Provisional programme available

EPE 2009: MORE INDUSTRIAL THAN EVER - BARCELONA 8-10 SEPTEMBER 2009

EPE 2009, the European Power Electronics and Applications Conference in Barcelona, sponsored by the EPE Association and the National Organizing Committee, goes strongly renewable and industrial. Do not miss an outstanding opportunity! Make sure you are there: www.epe2009.com!

EPE 2009 will offer, co-organised with ECPE, state-of-the-art keynotes and several industrial sessions, running in parallel with the regular conference sessions, with invited presentations from industry world leaders as well as from relevant academic institutions and round table meetings to discuss in depth and focus on future developments in new or emerging topics as well as advanced industrial applications, of special interest to the power electronics community.

Active and Passive Components will be discussed on the first day of the Conference. The day will begin with a *Keynote Presentation*, coming from the University of Bremen on the state-of-the-art and future of wide gap devices. After the keynote, industrial sessions will highlight *High Frequency Semiconductors for Industrial Power*, with contributions from Infineon, CREE and Mitsubishi, *High Power Semiconductors for Industrial Power*, with speakers from Siemens, ABB and Infineon Tech Bipolar and *Passives/Related Topics* with contributions from In-Power Systems, EPCOS and Semikron. The first Conference day will end with an *Invited Lecture*, coming from the Technical University of Chemnitz, on design for reliability with IGBT modules and a *Round Table* on the topic of the day.

Mass Transportation Technologies presentations will happen on the second Conference day. *Two Keynotes Speeches* are planned, the first one, coming from the University of Nottingham, is devoted to the more electrical aircraft and its future technologies. The second one, from the Technical University of Munich, is related to hybrid electrical vehicle, heavy duty, fuel economy and hybridization factor. The following industrial presentations will cover, *The More Electrical Aircraft Systems* with speeches from Rolls-Royce, Liebherr and GE Aviation, *Advanced Railway Systems*, with presentations coming from Siemens, Alstom Transport and Shinkansen R&D, and *The More Electrical Ship Technologies* with contributions from Convertteam, Ingeteam and Wartsila. The *Invited Presentation* of the afternoon, conducted by ECPE, will discuss reliability of power electronics systems ending, the second Conference day industrial sessions, with the corresponding *Round Table* discussion.

Technologies for Solar Power are the subject on the third Conference day. A *Keynote*, coming from the ISE Fraunhofer Institute, covers the topic of extreme efficiency PV-power converters. Industrial sessions will present *Advanced PV Power Systems*, with contributions from Altran, SMA and the Fraunhofer Institute for Solar Energy Systems ISE, and *The Grid of the Future*, with lectures coming from the University of Nottingham, the University of Kassel and Saft Baterias S.L. The third day industrial

sessions will end with an *Invited Lecture* on the future of high power electronics in transmission and distribution systems conducted by Areva -TD and the corresponding *Round Table* on the topic of the day.

During the conference, a commercial exhibition will be organized. This is a unique opportunity for you to see products and to have prolonged discussions with fellow specialists in the field of Power Electronics and Drives. The aim of the exhibition is to promote technical exchanges and business contacts.

The following six tutorials are organised on Monday 7 September:

1. Control Strategies of the Doubly Fed Induction Machine for Wind Energy Generation Applications,

Dr. Gonzalo Abad, The University of Mondragon, Dr. Miguel Ángel Rodríguez, Ingeteam Transmission & Distribution S.A., SPAIN; Dr. Grzegorz Iwanski, Warsaw University of Technology, POLAND.

2. Predictive Control in Power Electronics and Drives

Ralph Kennel, Technische Universität München, Lehrstuhl für Elektrische Antriebssysteme und Leistungselektronik, Munich, Germany; Marian Kazmierkowski, Institute of Control and Industrial Electronics, Warsaw University of Technology, Warsaw, Poland; José Rodríguez, Patricio Cortés, Departamento de Electrónica, Universidad Técnica Federico Santa María, Valparaíso, Chile

4. Power Electronics and Control for Renewable Energy Systems

Johanna Myrzik, Technische Universität Eindhoven Electrical Power Systems, The Netherlands
Mike Barnes, University of Manchester Department of Electrical Engineering & Electronics, United Kingdom
Mike Meinhardt, SMA Solar Technologie AG, Germany

6. Comparative Evaluation of Three-Phase AC-AC PWM Converter Systems

Prof. Dr. Johann W. Kolar, Thomas Friedli, ETH Zurich, Power Electronic Systems Laboratory, Zurich, Switzerland

7. Worldwide Grid Connection Requirements for Wind Farms and Solar Plants

Xavier Robe, Ana Morales, DIGSILENT Ibérica, S.L., Madrid, Spain

9. Controlling Conducted and Radiated EMI issues in Power Electronics Designs.

Dr. Supratim Basu, BOSE RESEARCH PVT. LTD., Bangalore 560 094, India; Prof. Tore. M. Undeland, NTNU, Department of Electrical Power Engineering, Trondheim, Norway

We are looking forward to see you all in Barcelona in the second week of September.
Welcome to Barcelona!.

Joan Peracaula
Honorary Chairman

Enrique J. Dede
Conference Chairman

➤ **2. 3rd EPE Wind Energy Chapter Symposium, Staffordshire University, Stafford, UK, 15 and 16 April 2010 – Call for papers**

List of topics

1. Wind Energy Conversion Technologies
2. Grid Compliance and wind power technology
3. Energy storage technologies
4. Wind System Coordination
5. Power electronics for integration and control of wind turbines in power systems
6. Future trends of wind energy conversion and power electronic applications
7. Protection of wind energy systems
8. Reliability of the electrical parts of Wind Energy Systems

Presentations from companies supplying wind turbines, wind turbine equipment, developers, utilities, etc.. are most welcome.

Presentation of papers

Contributions to the EPE Wind Energy Chapter must be presented either as a lecture presentation or as a dialogue presentation. As the aim of the seminar is orientated towards exchange of practical experience and discussion of the latest development, there will

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be no formal proceedings publication. Contributions to the seminar will be made available to the participants on the EPE Website with a password after the seminar.

Lecture presentations will be selected on the basis of wide audience appeal, ease of understanding and potential stimulation of broad ranging discussion.

Dialogue presentation will take place in the afternoon. No lecture session will be organized during the dialogue sessions.

Contributions for dialogue presentation will be selected on basis of potential for detailed discussion and networking.

Lecture papers will be presented in Power Point or pdf format, Dialogue papers will be presented as posters in pdf format.

Additional full paper publication is encouraged but not mandatory.

Content of synopses

Authors intending to present a contribution to the EPE Wind Energy Chapter must submit a proposal that will be evaluated by the EPE Wind Energy Chapter Advisory Board.

The proposal should consist of one of the followings:

- A Power Point/pdf presentation to be presented as such during the seminar;
- A poster project to be presented as such during the seminar;
- A one page synopsis presenting the main lines of the proposed contribution that will be either a Power Point/pdf presentation or a poster;
- a maximum 6 pages full paper, including an abstract with no more than 50 words;

The proposal will include full coordinates of the contact author, the topic number and indication of the preference for dialogue or lecture presentation.

The synopses will be submitted by e-mail to bsneyers@vub.ac.be.

A selection of the best conference papers will be published afterwards in the EPE Journal, which is an ISI registered journal.

Proceedings of the seminar will be available to the participants on the EPE Website with a password after the seminar.

Deadlines

Intending authors should note the following deadlines:

Receipt of synopses	15 December 2009
Notification of provisional acceptance	23 February 2010
Receipt of full typescript IEEEExplore ready, ppt or pdf presentation	on-site

Working Language

The working language of the conference is English, which will be used for all printed material, presentations and discussion.

EPE Wind Chapter Committees

EPE Wind Chapter Board

- Prof. Tore Undeland, NTNU, Trondheim, Norway:
Chairman
- Prof. Rik De Doncker, RWTH Aachen, Germany
- Prof. Braham Ferreira, Delft University of Technology, The Netherlands
- Prof. Sjoerd de Haan, Delft University of Technology, The Netherlands
- Dr Phillip C. Kjær, Vestas Wind Systems A/S, Denmark
- Prof. Hans-Peter Nee, The Royal Institute of Technology, Stockholm, Sweden
- Prof Sarath B Tennakoon, Staffordshire University, United Kingdom
- Prof. Torbjörn Thiringer, Chalmers University of Technology, Sweden
- Prof. Jean-Luc Thomas, Professeur Titulaire de Chaire, Conservatoire National des Arts et Métiers Electrotechnique / SUPELEC, Paris, France

EPE Wind Chapter Advisory Council

- Prof. Tore Undeland, NTNU, Trondheim, Norway:
Chairman
- Dr. Lars Helle, Vestas, Alsvej 21, DK - 8900 Randers, Denmark
- Dr. Philip C. Kjær, Vestas Wind Systems A/S, Denmark
- Richard Lund, Smartmotor, Norway
- Prof. Marta Molinas, NTNU, Trondheim, Norway
- Dr. Jouko Niiranen, ABB Oy, Helsinki, Finland
- Dr. Henk Polinder, Delft University of Technology, Delft, The Netherlands
- Prof. Tonny W. Rasmussen, Technical University of Denmark, Lyngby, Denmark
- Prof. Benoit Robyns, Ecole des Hautes Etudes d'Ingénieur (HEI), Lille, France
- Prof. Torbjörn Thiringer, Chalmers University of Technology, Göteborg, Sweden

EPE secretariat

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

➤ **3. EPE-PEMC 2010, 6-8 September 2010, Ohrid, Republic of Macedonia**

Call for papers**Contributions are invited in the following topics**

1. Semiconductor Devices and Packaging
2. Power Converters
3. Control of Power Converters
4. Electrical Machines and Actuators
5. Motion Control, Robotics, Adjustable Speed Drives
6. Application and Design of Power Electronic Systems
7. Measurements, Sensors and Observing Techniques
8. Electromagnetic Compatibility
9. Power Electronics in Transportation
10. Mechatronic Systems
11. Power Electronics in Electrical Energy Generation, Transmission and Distribution
12. Renewable Energy Sources
13. Active Filtering and Unity Power Factor Correction Circuits
14. Education
15. Related Topics

Paper Submissions:

Prospective authors are kindly invited to submit their manuscript in the form of 3-5 page Synopsis.

Special Session Proposals:

Proposals are sought from those wishing to organize a special session. A special session consists of five papers, which should present a unifying theme from a diversity of viewpoints.

Tutorial Proposals:

The Conference Committee intends to arrange tutorials to be held prior to the Conference, and solicits proposals for appropriate subjects.

Language:

The official language of the conference is English, both for the publications and for the oral presentation.

The submission of papers, proposals for tutorials and special sessions will be done electronically through the EPE-PEMC 2010 web site, where you can find detailed information on submission procedures and preparation of proposals. In case of any problems with the downloading system you can send the papers via official EPE-PEMC e-mail.

EPE-PEMC 2010 proceedings will be entitled to be published in the IEEEExplore and Engineering Index (Ei) Compendex databases.

In order to ensure compatibility of the systems, authors are asked to follow the IEEE guidelines offered through the conference web site.

Deadlines

- o Submission of Synopsis (3-5 pages): 22 November, 2009
- o Submission of proposals for special sessions and tutorials: 13 December, 2009
- o Notification of provisional acceptance: 15 March, 2010
- o Submission of final manuscripts: 24 May, 2010

➤ **4. EPE 2011: Birmingham, 30 August to 2 September 2011**

Our next EPE Conference will be held in the United Kingdom. Formal announcement will be in Barcelona. Mark your diaries already!

➤ **5. Position open at Ecole Polytechnique Fédérale de Lausanne, EPFL, Switzerland**

The EPFL just start a new Microengineering Institute in Neuchâtel, dedicated to Industry relations and Energy savings (Green Technology). We are now seeking for a new professor (Tenure track) in the area of micro-nano technology (MEMS/NEMS) or manufacturing of micro- and nano-systems and materials/components for energy generation and storage (harvesting).

The following link give you all the details on the new job.

<http://sti.epfl.ch/page80077.html> OR

http://sti.epfl.ch/webdav/site/sti/shared/pdf/EPFL_GreenTec_poster.pdf

Prof. Yves Perriard, Vice-Director

Ecole Polytechnique Fédérale de Lausanne (EPFL) Microengineering Institute (IMT) - Neuchâtel Rue Breguet 2 CH-2000 Neuchâtel Switzerland

➤ **6. Position open at Université Libre de Bruxelles, ULB, Belgium**

BEAMS Department – Research Unit Embedded Electronics from the Faculty of Applied Sciences of the Université Libre de Bruxelles is offering

A full time research position in the field of digital control for switch-mode power supplies for space applications. This position is also appropriate for a post-doc

Starting date : Octobre 1st 2009

Duration : 6 months

Description

The researcher will participate to a project financed by the ESA (European Space Agency) in the field of digital control for power supplies suited for space environment. The researcher will be hosted by two laboratories BEAMS (embedded electronics) and SAAS (automatic control) which are members of a consortium driven by Thalès Alenia Space in Charleroi.

The aim of this study is to demonstrate the feasibility of a digital electronic control offering the reliability required for space environment and peculiarly radiation-hardened. The researcher will contribute to the design of a demonstrator and will be in charge of the simulation of robust control algorithms.

Profile

Master in Electrical or Electromechanical Engineering with some experience in the field or PhD in engineering looking for a post-doctorate

Required qualifications

- MATLAB/SIMULINK development environment
- C language
- development on microcontroller and FPGA
- power electronics
- automatic control
- very good practice of English

To apply, please send a letter of motivation and a curriculum vitae by mail to Prof. Pierre MATHYS (pmathys@ulb.ac.be). Further information can be obtained at the same address.

➤ **7. The 5th IET International Conference on Power Electronics, Machines and Drives (PEMD 2010)**

19-21 April 2010: Thistle Hotel, Brighton, UK

www.theiet.org/pemd

Call for Papers

Join a stellar list of international engineers from industry, research and academia to discuss, debate and learn about recent developments and future trends in this important and fast changing area.

The organising committee is inviting abstracts in the following areas:

- More/All Electric Transport
- Generation, Transmission and Distribution
- Machines and Drives
- Power Electronics
- Renewable Energy Systems

Prospective authors should submit an abstract of no longer than two pages (including diagrams) using the online submission process at www.theiet.org/pemd, on or before 18 September 2009.

Successful authors will be invited to submit a full paper of up to six A4 pages, which will be published in the conference proceedings and indexed on INSPEC and IEEE Xplore.

For a full list of topics and to submit your paper, please visit the web site www.theiet.org/pemd

➤ **8. Industrial/PhD Course in Switch-mode audio power amplifiers (class-D) August 24-28, 2009**

Background and aim of the course

Linear (Class A/AB/B) amplification has been the standard for power amplification for many decades. During the last decade, interest in higher efficiency power amplification has increased, particularly in the audio industry.

The major driving force has been the need to provide fresh opportunities in audio design with the advantages that higher efficiency potentially offers, e.g. higher power with increased power density, savings in energy and battery life, potential cost savings and even potential performance improvement in audio reproduction. The interest in this new field is global and includes all major industrial segments, such as consumer electronics, cars, professional, mobile and/or portable audio fields. A paradigm shift seems to be on its way.

This course will present an overview and in-depth study of the current state-of-the-art in a broad perspective and address many of the new scientific disciplines involved in this emerging field.

Switch-mode audio power amplifiers are in more ways a combination of mixing otherwise complementary scientific fields as power electronics, analogue and digital signal processing, advanced analogue design, EMC and more.

The aim of the course is thus to address a new, complex and challenging era at an early stage.

Place

DTU Electrical Engineering
Technical University of Denmark
Elektrovej - Building 325 - room 007
DK-2800 Kgs. Lyngby
DENMARK
<http://www.elektro.dtu.dk/English/research/au/peg.aspx>

➤ **9. Thousands of papers are available on the database for download, for EPE members only.**

EPE Members may now browse through the EPE-PEMC 2008 papers using their ID and password.

Not member yet? Willing to have access to the database and have a discount on your EPE 2009 registration fee? E-mail the EPE secretariat: nlangsbe@vub.ac.be!

➤ **10. Call for papers for EPE journal, included in ISI and Compendex: impact factor is 0,435**

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>

➤ **11. Technically sponsored conferences**

September 8-10, 2009 Barcelona, Spain

EPE 2009

<http://www.epe2009.com>

November 10-12, 2009, American University of Sharjah,
UAE

International Conference on Electric Power and Energy
Conversion Systems

Contact : epecs09@aus.edu

Tel: +(971) 6 515 2927 - Fax: +(971) 6 515 2979

<http://www.epecs-conf.org/cop.html>

15 and 16 April 2010, Staffordshire University, Stafford,
UK

3rd EPE Wind Energy Chapter Symposium – Call for
papers

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

19-21 April 2010: Thistle Hotel, Brighton, UK
The 5th IET International Conference on Power
Electronics, Machines and Drives (PEMD 2010)

www.theiet.org/pemd

1-3 September 2010, Lille, France

VPPC 2010, Vehicle Power and Propulsion Conference –
Clean Tech for Transportation

<http://www.vppc2010.org>



➤ **12. ECPE Calendar of Events 2009**

Full programmes are available from http://www.ecpe.org/education/seminars_e.php

ECPE Tutorial “[Reliability of Power Electronic Systems](#)”

22 – 23 July 2009 in Prague, Czech Republic

Course Instructor: Prof. Eckhard Wolfgang, ECPE e.V., Germany

ECPE Tutorial “[Thermal Engineer](#)”; Part 1: Thermal Design and Verification

28 – 29 July 2009 in Erlangen, Germany

Course Instructors:

Dr. Martin Maerz, Fraunhofer Institute IISB, Germany

Dr. Uwe Scheuermann, Semikron Elektronik, Germany

10 -11 September 2009, Residencia d’Investigadors, Barcelona, Spain
3rd SiC User Forum

[Potential of SiC and other Wide Bandgap Semiconductors in Power Electronic Applications](#)

Chair of seminar:

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

Prof. J. Millan, CNM Barcelona

Thomas Harder, ECPE e.V.

ECPE Tutorial “[Thermal Engineer](#)”; Part 2: Thermal Management and Reliability

13 – 14 October 2009 in Nuremberg, Germany

Course Instructors:

Prof. Eckhard Wolfgang, ECPE e.V., Germany

Dr. Uwe Scheuermann, Semikron Elektronik, Germany