

EPE Newsletter January 2008

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!!Happy and fruitful year 2008!!

0. Wind Power to the Grid - EPE Wind Energy Chapter – 1st Seminar - 27-28 March 2008, Delft University of Technology - Delft - The Netherlands: Call for papers

Aim of the Seminar

As wind has become the most technically and commercially advanced as well as most promising source of renewable energy, the European Power Electronics and Adjustable Speed Drives Association (EPE) dedicated a special chapter on this issue: the EPE Wind Energy Chapter. After the successful gathering at the EPE 2007 Conference in Aalborg, it has been decided to organize a seminar dedicated to wind energy where experts can discuss various electrotechnical aspects related to the development of wind energy. This first EPE Wind Energy Chapter seminar will take place on 27 and 28 March 2008 in Delft, The Netherlands. The aim is to meet, discuss and get acquainted with the latest development of this fast developing technology.

Organisation and venue

The seminar will take place on 27 and 28 March 2008, at Delft University of Technology, Delft, The Netherlands. Plenary sessions, lecture and dialogue sessions will be organized in the best EPE tradition to provide maximum networking opportunities. Worldwide experts in the field are expected to take part in the event to exchange best practice and learn from experience with a special focus on industry and technology.

List of topics

1. Wind Energy Conversion Technologies

- 1.a. Permanent magnet generators for large offshore turbines
- 1.b. MW-class wind generator-converter technology for offshore applications
- 1.c. MW low-speed generator solutions
- 1.d. Small wind turbine systems for standalone and grid-connected applications
- 1.e. Geared and gear-less solutions for wind energy conversion. Gear-box issues.

2. Grid Compliance and wind power technology

- 2.a. Interconnection standards for distribution and transmission levels
- 2.b. Interconnections issues for wind turbines
- 2.c. Grid Interface: Grid connection for large wind farms. Reactive power/Voltage control
- 2.d. Ride Through Standards and Technical Solutions for Offshore Wind Farms
- 2.e. Ride-through capability of wind turbines with power electronic systems
- 2.f. Certification of Low Voltage Ride Through LVRT
- 2.g. Laboratory tests of LVRT
- 2.h. Stability analyses: small signal stability, transient stability, stability margin
- 2.i. Frequency control, active power control, runback schemes
- 2.j. Standardisation of simulation models for stability studies

3. Energy storage technologies

- 3.a. Short term: flywheel, super capacitors, batteries
- 3.b. Long term: pumped storage, dispatchable generation
- 3.c. Other storage

4. Wind System Coordination

- 4.a. Wind Farm Control
- 4.b. Real time information exchange required for harmonious operation of wind farms
- 4.c. Planning and configuration of wind farm power systems
- 4.d. Operation and control of doubly fed induction generator systems for wind turbines
- 4.e. Coordination between power electronic conversion characteristics and standard protection equipment characteristics
- 4.f. Fault monitoring and predictive maintenance of power electronic based wind turbine systems

5. Power electronics for integration and control of wind turbines in power systems

- 5.a. Power electronic interface including control for permanent-magnet and field excited synchronous generators
- 5.b. Topologies of Power Electronics Converters for wind turbines
- 5.c. Modelling and simulation of power electronic systems with wind turbines and wind farms
- 5.d. Protection of power electronic systems for wind turbines
- 5.e. Control of power converters for future dispersed generators with high degree of wind integration
- 5.f. Dedicated HVDC for wind power transmission

6. Future trends of wind energy conversion and power electronic applications

- 6.a. Reinforcement of power system for tapping wind power: FACTS, FACDS
- 6.b. Offshore wind turbines: floating and fixed
- 6.c. Power collection and integration of offshore wind farms

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 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 bsnevers@vub.ac.be.

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

The conference full papers will also be registered in IEEEXplore. (to be confirmed)

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 February 2008

Notification of provisional acceptance 15 March 2008

Receipt of full typescript IEEEExplore ready, ppt or pdf presentation on-site at the registration desk

Working Language

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

Programme and Registration

A provisional programme and registration form will be available on line some time before the seminar.

Additional information: <http://www.elkraft.ntnu.no/epewindchapter.htm>

Exhibition

There will be an exhibition integrated in the conference. If you would like to know more details please contact us via e-mail: bsneyers@vub.ac.be

Venue

The venue of the seminar is the campus of Delft University of Technology. The city of Delft is located about 50 km from Amsterdam airport. Delft can easily be reached from the airport by train, with a service every half hour.

The city is famous from the painter Johannes Vermeer, from Delft blue pottery and from links with the Dutch Royal Family. It has a nice historical centre with buildings from the 17th century, musea, canals and many small restaurants. The campus is located at walking distance from the city centre (20 min).

EPE Wind Chapter Committees

EPE Wind Chapter Board

- Prof. Tore Undeland, NTNU, Trondheim, Norway
- Prof. Rik De Doncker, Aachen, Germany
- Prof. Braham Ferreira, Delft University of Technology, The Netherlands
- Prof. Torbjörn Thiringer, Chalmers University of Technology, Sweden
- Dr Phillip C. Kjær, Vestas Wind Systems A/S, Denmark
- Prof. Sjoerd de Haan, Delft University of Technology, The Netherlands

EPE Wind Chapter Advisory Council

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- Prof. Marta Molinas, NTNU, Trondheim, Norway
- Dr. Henk Polinder, Delft University of Technology, The Netherlands
- Dr. Jouko Niiranen, ABB, Finland
- Dr. Philip C. Kjær, Vestas Wind Systems A/S, Denmark
- Prof. Torbjörn Thiringer, Chalmers University of Technology, Sweden

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<http://www.elkraft.ntnu.no/epewindchapter.htm>

1. Call for papers EPE-PEMC 2008, Poznan, 1-3 September 2008

13th International Power Electronics and Motion Control Conference

New Deadline for synopses: 25 January 2008

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 Electronics Systems
7. Measurements, Sensors and Observing Techniques
8. Electromagnetic Compatibility
9. Power Electronics in Transportation
10. Mechatronics Systems
11. Power Electronics in Electrical Energy Generation, Transmission and Distributions
12. Renewable Energy Sources
13. Active Filtering and Unity Power Factor Correction Circuits
14. Education
15. Related Topics

Working language is English

Paper submissions: Prospective authors are kindly invited to send synopses to the conference Secretariat. The synopses should consist of a 3 to 5 pages summary, including an abstract with no more than 50 words, key diagrams and reference list, topic number and indication of the preference for dialog or lecture presentation.

Special Session Proposals: Proposals are sought from those wishing to organize a special session. A special session consists of six 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.

The submission of synopses, proposals for tutorials and special sessions will be electronically done through the EPE-PEMC 2008 web site, where you can find detailed information on submission procedures and preparation of proposals

Contacts:

Poznan University of technology
Faculty of Electrical Engineering
EPE-PEMC 2008
Conference Secretariat
60-965 Poznan, Piotrowo 3A, Poland

Phone: + 48 61 665 2627, 2737
Fax: +48 61 665 2563
e-mail: pemc@put.poznan.pl
<http://www.epe-pemc2008.put.poznan.pl>

2. PhD and PostDoc vacant positions in Wind Power at Aalborg University

Vestas Power Programme is a strategic R&D alliance between Vestas Wind Systems the nr.1 worldwide in wind power industry and Aalborg University, Institute of Energy Technology a strong research institute, recently acknowledged by the European Power Electronics industry EPSMA (European Power Supply Manufacturers Association) as the second research institute in the top of 2007.

The 5 year programme will run between September 2007 and August 2012 and the research will be carried out by 10 PhD students, 2 PostDocs supervised by Remus Teodorescu, Vestas Professor in Power Electronics at Aalborg University. Highly acknowledged experts worldwide will be invited as guest professors during the programme

Through visionary and coordinated research, the Vestas Power Programme will push the wind power technology to even higher levels of reliability and functionality enabling higher renewable power generation and will cover three main topics: power electronics, power systems and electrical energy storage. The main targets are: to identify the most suitable converter technology and control strategy for large turbines in large wind farms, to assess the impact of large integration of wind power on utility stability and reliability and to determine the most suitable storage technology that will enable higher wind energy grid integration. We are targeting the best candidates worldwide with a high motivation for being part of unique research team doing world-class research in a highly prestigious research institute in close contact with the largest wind turbine manufacturer.

Right now we are opening 4 PhD and 2 PostDoc positions at Aalborg University. For application please follow the link:

<http://stillinger.aau.dk/liste.php?fak=Teknat&lang=English>

and check the following positions:

- [Wind power plant control for AC connection. \(PhD Stipend no. 562/06-14-27016\)](#)
- [Wind power plant control for HVDC connection. \(PhD Stipend no. 562/06-14-27017\)](#)
- [High power-density converters for Large Wind Turbines. \(PhD Stipend no. 562/06-14-27018\)](#)
- [Control of Grid-connected Converters for Wind Turbines in Large Wind Farms. \(PhD Stipend no. 562/06-14-27019\)](#)
- [Power plant and power system control and operation \(PostDoc position no. P27015\)](#)
- [Storage in Power Systems with Wind Penetration \(PostDoc position no. P27016\)](#)

The deadline for application is 21 January 2008

For more information please contact:

Remus Teodorescu - Vestas Professor of Power Electronics
Aalborg University - Institute of Energy Technology
Pontoppidanstraede 101/45 - 9220 Aalborg East
Tel: +45 9635 9249, Fax: +45 9815 1411, email: ret@iet.aau.dk
DENMARK

3. Open position of Full Professor in Power Electronics at the Technical University of Darmstadt

The Department of Electrical Engineering and Information Technology of Technischen Universität Darmstadt invites applications for a position of Full Professor for Power Electronics (reference number 375), effective October 1, 2009 or earlier. The search is for an outstanding candidate, who will be responsible for the research and the teaching in the above area. The candidate will also be expected to teach the basic principles of electrical engineering. The focus of the research should be in the areas of • Power electronics application in electrical power transmission and distribution (e.g. FACTS, HVDC) • New compact inverter topologies for automotive applications • Development of dynamic, low-loss power electronic circuits (e.g. resonant switching, matrix inverters) • Application of new types of power switches (e.g. silicon carbide) • Improvement of control strategies for power electronics e.g. for drive systems, active power filters, inductive melting The successful candidate will be an authority in at least one of the above research areas and will have proven teaching qualifications. Successful experience in industry or a research organisation is desirable. It is expected that the candidate will collaborate at a national and international level as well as with groups in one of the priority research areas of the university. The position is tenured with a remuneration package commensurate with experience and qualifications, following the German "W-Besoldung" category. The regulations for employment are specified under §§ 70 and 71 HHG (Hessisches Hochschulgesetz). Candidates who hold a public servant status (Beamtenverhältnis) can be re-appointed under the same status. Technische Universität Darmstadt wishes to increase the number of female faculty members and encourages female candidates to apply. Eligible disabled persons will be given priority.

Please submit applications with the usual attachments and three referee names, quoting the reference number 375 to:

Dekan des Fachbereichs 18,
Herrn Prof. Dr.-Ing. Volker Hinrichsen,
Merckstr. 25,
64283 Darmstadt,
Germany.

For further information please contact the Chair of the Search Committee, Prof. Dr.-Ing. Andreas Binder, Tel.: +49(0)6151/16-2867, E-Mail: abinder@ew.tu-darmstadt.de

Closing date: first week of March.

4. The Scuola Superiore of the University of Catania has created a new International Ph.D. on "Energy" that has Renewable Energies as one of its major topics.

The Ph.D. Course will start next January. The Scuola Superiore website can give some general information on the Course: <http://www.scuolasuperiorecatania.it/atric/phd.php>

5. Admission for Foreign Students at Politecnico di Torino for the Academic Year 2008/09

Since October 2007, Politecnico di Torino opened the on line application service for new foreign students for the academic year 2008/09 available on the web site <http://www.polito.it> > www.polito.it. It will be opened till February 10, 2008. Later clearance procedure will be also activated.

The call is for Bachelor, Master of Science, Ph.D and Executive Masters students and Torino offers a good school, students residences, financial support, courses in English, a good environment, a "warm and beautiful city" and many friends coming from 94 different countries!

6. 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>

7. Technically sponsored conferences

March 11-13, 2008, Nuremberg, Germany

CIPS 2008, 5th International Conference on Integrated Electronics Systems

Contact:

VDE Conference Services

Stresemannallee 15

D-60596 Frankfurt, Germany

Phone: +49 69 6308 275

Fax: +49 69 9631 5213

e-mail: conference-papers@vde.com

URL: <http://www.cips-conference.de>

March 11-13, 2008, Geneva, Switzerland

EET-2008

3rd European Ele-Drive Transportation Conference

On the Way to Sustainable Development and Market Opening

In cooperation with the International Advanced Mobility Forum

in conjunction with the Geneva International Motor Show

Contact:

European Association for Battery, Hybrid and Fuel Cell Electric Vehicles aisbl/ivzw

c/o VUB-FirW-ETEC Bd. de la Plaine, 2 -

B-1050 Brussels

Tel +32 2 629 23 63 - Fax +32 2 629 36 20

avere@vub.ac.be

September 8-10, 2009 Barcelona, Spain

EPE 2009

Call for papers to be released next May 2008

Deadline for receipt of synopses: November 2008

<http://www.epe2009.com>

8. EPE'2007 is now released at IEEEExplore and visible there.

The link is

<http://ieeexplore.ieee.org/xpl/tocresult.jsp?isnumber=4417197&isYear=2007>

for those who have access.

9. ECPE Calendar of Events 2008

Date	Location	Event	Topic
22-23 Jan. 2008	Zurich (CH)	ECPE Tutorial	Reliability of Power Electronic Systems Course instructor: Prof. E. Wolfgang (ECPE)
20-21 Feb. 2008	Munich (D)	ECPE Seminar	Digital Power Conversion Techn. Chairman: Prof. J. Cobos (TU Madrid) Co-Chairman: Dr. U. Kirchenberger (STMicroelectr.)
11-13 March 2008	Nuremberg (D)	ECPE Annual Event and Conference	ECPE Annual Event 2008 in conjunction with 5th Intern. Conf. on Integrated Power Electronics Systems (CIPS 2008) : <ul style="list-style-type: none"> • ECPE Member Meeting (13.03.2008) • ECPE Roadmap Session (13.03.2008)
18-19 March 2008	Coventry (UK)	ECPE Tutorial	Reliability of Power Electronic Systems Course instructor: Prof. E. Wolfgang (ECPE)
8-9 April 2008	Helsinki (FIN)	ECPE Tutorial	EMC in Power Electronics Course instructors: Dr. E. Hoene (Fraunhofer IZM) Dr. J. Laeuffer (F)
15-16 April 2008	Warsaw (PL)	ECPE Seminar	Towards Energy Gain and Savings - Emerging Drives and Generator Systems Techn. Chairman: Prof. Koczara (TU Warsaw)
27-29 May 2008	Nuremberg (D)	Conference and Exhibition	PCIM Europe Conference & Exhibition <ul style="list-style-type: none"> • ECPE Round Table Discussion on Passives in Power Electronics, PCIM Conference • ECPE Joint Stand, PCIM Exhibition
18-19 June 2008	Itzehoe (D)	ECPE Tutorial	Reliable Soldering in Power Electronics Manufacturing (with practical training) Course instructor: Dr. Ahrens, Dr. Poech (FhG ISIT)
25-26 June 2008	Toulouse (F)	ECPE Workshop	Built-in Reliability into Power Electr. Systems Techn. Chairman: Prof. E. Wolfgang (ECPE) Co-Chairman: Dr. M. Mermet-Guyennet (PEARL)
7-8 Oct. 2008	Stuttgart (D)	ECPE Seminar	Automotive Power Electronics (w. EC Projects) Techn. Chairman: Dr. M. Maerz (Fraunhofer IISB) Co-Chairman: Prof. E. Wolfgang (ECPE)
Oct./Nov. 2008	Nuremberg (D)	ECPE Tutorial	Power Electronics Packaging Course instructor: Prof. R. Eisele (UAS Kiel)
Nov. 2008	TBD	ECPE Workshop	Advanced Cooling Techniques (1 st day) Techn. Chairman: Prof. E. Wolfgang (ECPE) Power PCBs and Busbars (2 nd day) Techn. Chairman: NN
Nov./Dec. 2008	Nuremberg (D)	ECPE Tutorial	Power Semiconductor Devices & Technologies Course instructor: Prof. D. Silber (Univ. Bremen)

Further Power Electronics Events of the Bavarian Cluster: www.cluster-bayern-leistungselektronik.de (in German language).