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1. EPE'13 – ECCE Europe:

Call for Papers: **Deadline 1 December 2012!**

The 15th European Conference on Power Electronics & Applications

3 – 5 September 2013, Lille, France

EPE Association and the organizers of EPE 2013 – ECCE Europe have the pleasure to invite you to submit contributions for EPE 2013 – ECCE Europe, the 15th European Conference on Power Electronics and Applications. The conference will take place in Lille, France, from 3 to 5 September 2013.

Additional and complete information can be found on the website: www.epe2013.com

Contributions related to the following topics are most welcome:

List of topics:

1. Active devices
2. Passive components, system integration & packaging
3. Power system integration
4. Soft switching converters and control
5. Hard switching converters and control
6. Modulation strategies and specific control methods for static converters
7. Application of control methods to electrical systems
8. Measurements and sensors
9. Motion control, robotics, special drives, haptics, communication in drive systems
10. Electrical machines
11. Adjustable speed drives
12. High performance drives
13. Energy efficiency, energy saving issues in system components
14. Converters for rotating and linear generators
15. Non-rotating power generation and storage systems
16. Power electronics in transmission and distribution
17. Power supplies
18. Electrical systems in road vehicles
19. Electrical systems in aerospace, space, surface and marine transport (not road)
20. Industry specific energy conversion and conditioning technologies
21. Energy conversion and conditioning technologies in physics research and related applications
22. Education in electrical engineering

Working Language:

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

Please note the following deadlines:

Intending authors should note the following deadlines:

Receipt of synopses: 1st of December 2012: upload on time to avoid saturated server, the submission system is open!

Notification of provisional acceptance: 1st of March 2013

Receipt of full typescript for final review: 1st of June 2013

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2. Postdoc in DC power distribution systems and PhD Stipend in High-power high-voltage DC converter design at Aalborg University Denmark

At the Faculty of Engineering and Science, Department of Energy Technology two new positions, a postdoc in DC power distribution systems and a PhD stipend, are open for appointment from 01.12.2012 or soon thereafter. The postdoc position is available for a period of 2 years. The Department of Energy Technology is an expanding department covering most fields of Energy Technology ranging from electrical energy (Power Systems, Power Electronics, Electrical Machines to thermal energy including Energy Systems and Fluid Mechanics and Combustion but also mechatronic systems). The department has about 160 employees – out of them are more than 75 Ph.D. students. The laboratory-facilities are world-class and the research carried out are most often in collaboration with industry.

Job descriptions

Research areas will be within High Power Electronics where a new competence center and research program is underway at Aalborg University within high power & high voltage power electronics and its application in distribution and transmission of DC power. The program is scheduled to run 2013-2017, counting a team of 6-8 PhD and post-doc researchers and professors. Significant industrial collaboration is under establishment, and large-scale laboratory demonstration of the technology is emphasized.

Particular focus is on DC power distribution in the ranges of 10-100kV and 10-100MW, for applications spanning offshore wind power collection, power supply to oil/gas extraction fields, rail traction, large-scale PV generation and smart city in-feeds. DC power distribution has the potential to offer reduced cost through lower electrical losses and reduced bill-of-material.

The program will research among others across disciplines of high-voltage, high-power electronic converter and semiconductor design; high-frequency megawatt transformer design; and dc cables and cable network power flow control & protection.

Postdoc. Content

The starting point of a DC power distribution solution is to identify the power network at system level: To identify suitable DC network architectures; identify the electrical properties when operating, controlling and protecting such a network; develop methods to determine grounding and insulation levels and ultimately to specify rating of equipment in network. This includes modeling and simulating the important components such as power electronic converters, cables, power flow controllers, dc breakers, arrestors and fault detection. Models of component failure rates and total cost of ownership must be parameterized to allow identification of the optimal circuit solutions. The properties of such solutions must then be reported, not least with the help of circuit simulations. By nature, this post-doc research must interface with several PhDs that research more into details of specific converters and components.

The post-doc research is expected to build tools and methods that allow to analyze DC power collection system properties

w.r.t. power flow control, protection, equipment rating, grounding, insulation coordination. Mathematical modeling and representation of key components in simulation tools. Multi-objective optimization to identify best circuit solutions to simulation. The post-doc researcher will further assist to coordinate research across several PhDs, as well as be partly responsible for collaboration with industrial and other academic partners.

You may obtain further professional information from Prof. Philip C. Kjaer, e-mail pck@et.aau.dk, Phone +45-5139 3726:

Postdoc qualification requirements

Limited teaching within the area can be expected, but also in other study programs at the University.

Appointment as Postdoc presupposes scientific qualifications at PhD-level or similar scientific qualifications. The research potential of each applicant will be emphasized in the overall assessment. Appointment as a Postdoc cannot exceed a period of four years in total at Aalborg University (appointment at Postdoc level cannot exceed a period of eight years in total in Denmark, however max. six years at Assistant Professor level - which includes Postdoc - at the same institution).

The application must contain the following:

- A motivated text wherein the reasons for applying, qualifications in relation to the position, and intentions and visions for the position are stated.
- A current curriculum vitae.
- Education (copies of documentation for degrees obtained).
- Scientific qualifications. A complete list of publications must be attached with an indication of the works the applicant wishes to be considered. You may attach up to 5 publications.
- Dissemination qualifications, including participation on committees or boards, participation in organizations and the like.
- Additional qualifications in relation to the position.
- References/recommendations.
- Personal data.

The applications are only to be submitted online by using the "Apply online" button below.

An assessment committee will assess all candidates.

For further information concerning the application procedure please contact Hanne Skovrider by mail has@adm.aau.dk or phone (+45) 9940 9631.

PhD content: High-power high-voltage DC converter design

A DC converter circuit for use in the DC power distribution network must be identified among the many candidates. To predict how such a circuit performs at 2010-50kV 100kV and 10-50MW 100MW with any certainty, a reliable converter design tool and design guideline must be developed. This requires design and arrangement of semiconductors, drivers, cooling, passives, control/communication and more. Not least, the tool must be validated, with laboratory measurements on a scaled- or full-power rated prototype converter.

The research includes characterization of the converter circuit with means of simulation, tests and characterization of semiconductor and passives electrical losses and thermal performance, design and test of prototype to verify performance and losses. The PhD will interact with team members researching in detail on other elements in the DC power distribution program.

Expected results

Design guideline and tools for DC converter.

Down-selection of semiconductors, cooling, passives.

Design and arrange main circuit semiconductor, drivers, passives, control/communication.

Build and test prototype in demonstrator to validate design guideline.

Applicants for the PhD position should hold a Masters Degree in Electrical Engineering, Physics or Materials Science with a solid background in semiconductor physics/circuit theory and experience with experimental work will also be an advantage. Good skills in oral and written English are also required.

You may obtain further information Professor Philip C. Kjaer, phone: +45-5139 3726, email: pck@et.aau.dk concerning the scientific aspects of the PhD stipend.

PhD stipends are allocated to individuals who hold a Masters degree. PhD stipends are normally for a period of 3 years. It

is a prerequisite for allocation of the stipend that the candidate will be enrolled as a PhD student at the Doctoral School of the Faculty of Engineering and Science, in accordance with the regulations of Ministerial Order No. 18 of January 14, 2008 on the PhD Program at the Universities. According to the Ministerial Order, the progress of the PhD student shall be assessed every six months. It is a prerequisite for continuation of salary payment that the previous progress is approved at the time of the evaluation.

The qualifications of the applicant will be assessed by an assessment committee. On the basis of the recommendation of the assessment committee, the Dean of the Faculty of Engineering and Science will make a decision for allocating the stipend.

For further information about stipends and salary as well as practical issues concerning the application procedure contact Ms. Lisbeth Diinhoff, The Faculty of Engineering and Science, email: ld@adm.aau.dk , phone: +45 9940 9589.

3. Vestas Power Program / 5th Annual Symposium on GRID-INTEGRATION OF WIND POWER

04 - 07 December 2012 - Aalborg, Denmark

Location:

The Utzon Center, Slotspladsen 4, DK-9220 Aalborg, Denmark

Program:

- 08:30 Registration
- 09:00 Welcome to the 5th Annual Vestas Power Programme Symposium
Philip C. Kjær, Chief Specialist, Vestas Wind Systems
Remus Teodorescu, Prof, Aalborg University
- 09:30 Improved Inertial Response Control for WPPs
Müfit Altin, PhD, Aalborg University
- 09:50 Stability and Transfer Limits for Wind Turbine's Current Injection during Very Low Voltage Grid Faults
Ömer Göksu, PhD, Aalborg University
- 10:10 Evaluation of Damping Capabilities of Inter-Area Power System Oscillations using Full-Converter Based Wind Power Plants
Andrzej Adamczyk, PhD, Aalborg University
- 10:30 Coffee-Break. Poster Session - Vestas Power Program
- 11:00 Presentation of PhD work
Rodrigo da Silva, PhD, Aalborg University
- 11:20 Modelling the Lifetime of Li-ion Batteries for Virtual Power Plant Applications
Maciej Swierczynski, PhD, Aalborg University
- 11:40 Emulated inertial response from wind turbines: the bespoke case
Dr. Damian Flynn, Senior Lecturer, University College Dublin, Ireland
- 12:00 Lunch
- 13:00 Work on New IEC Standard on Electrical Simulation Models for Wind Power Generation
Poul Sørensen, Professor, Risø DTU, Denmark
- 13:30 Wind Turbines and Grid Disturbances
Olof Samuelsson, Associate Professor, Lund University, Sweden
- 14:00 Coffee-Break. Poster Session - Vestas Power Program
- 14:20 Technologies for Future Electrical Grids to realize the "Energiewende"
Rik de Donker, Professor, RWTH Aachen University
- 14:50 Alternative Converter Topologies for HVDC
Colin Oates, Alstom Grid, Power Electronics, UK
- 15:20 Panel Discussion
- 16:00 Closing

[4. ECPE: Calendar of Events 2012](#)

Date	Location	Event	Topic
21-22 November 2012	Delft, Netherlands	ECPE Workshop	Integrated Power Boards Chairmen: Prof. J.A. Ferreira (TU Delft), Dr. J. Popovic-Gerber (TU Delft), Prof. E. Wolfgang (ECPE)
27-28 November 2012	Aalborg, Denmark	ECPE Tutorial	EMC in Power Electronics Chairmen: Dr. E. Hoene (Fraunhofer IZM), Prof. J-J. Schanen (G2ELab)
12-13 December 2012	Munich, Germany	ECPE Workshop	Power Semiconductor Robustness – What kills Power Devices? Chairmen: Prof. Dr. Silber (University of Bremen), Prof. Leo Lorenz (ECPE)

Additional and complete information can be found on the website: www.ecpe.org

[5. More Power Electronics Conferences](#)

- United symposium: SLED 2013 and PRECEDE 2013, 17.-19. October 2013 - Munich, Germany
- EPE '14 - ECCE EUROPE, 26-28 August 2014, Lappeenranta, Finland
- ICEM, 1-3 September 2014, Berlin, Germany
- PEMC, 17-19 September 2014, Antalya, Turkey
- EPE '15 - ECCE EUROPE, 7-11 September 2015, Geneva, Switzerland