EPE Newsletter – April 2015

Newsletter contents

1. EPE Events

The EPE Conference Committee invites you to come to **EPE'15 ECCE Europe, the 17th European Conference on Power Electronics and Applications** (and Exhibition), to be held in **Geneva**, Switzerland, from 8 to 10 September 2015

⇒ For further information, please visit **www.epe2015.com** or contact **info.epe2015@cern.ch**

The EPE'15 ECCE event attracts delegates from the full range of professions, expertise and business within power electronics.

The Conference program at a glance: http://event-epe2015.web.cern.ch/content/conference

Hotel & venue at a glance: http://event-epe2015.web.cern.ch/content/venue

The EPE ECCE Europe exhibition showcases products and services out of the following fields: semiconductor components, passive components, instruments, busbars, software, education tools, etc.

ABB is the main industrial sponsor of the EPE'15 ECCE conference

Other sponsors: **Mersen, Plexim, teknoCEA/CITCEA-UPC, EEI Spo, …**

The exhibitors:
ABB, ECPE, Johan Lasslop GmbH, Mesago PCIM GmbH, Cedrat, applied magnetics, teknoCEA/CITCEA-UPC, ECPE, EPE'16 ECCE Europe, EPE'17 ECCE Europe, GaN Systems, IEEE Pels, MathWorks, Mersen, Opal–RT Technologies, Plexim, Power Electronic Measurements Ltd, Leclanché Capacitors, Triphase, Keysight Technologies, Stäubli, Typhoon Hil, ISE magnetics, OCEM Power Electronic, Lemsys, Yokogawa Europe, Thales Microelectronics, Boschman / APC, CAEN ELS, Ansys, Guangzhou Goaland Energy Conservation, Magna-Power Electronics GmbH, Imperix, Dewetron GmbH, Behlke Power Electronics GmbH, LEM International, SP Control Technologies, Teledyne LeCroy GmbH and Boige & Vignal

Do not miss such an opportunity!

The sponsoring at a glance: http://event-epe2015.web.cern.ch/content/sponsors-exhibitors

2. EPE ECCE Europe – Call for Proposals for the years 2018 and later

EPE Association on the one side and IEEE PELS on the other side have as their purpose the promotion and coordination of the exchange and the publication of technical, scientific and economic information in the field of Power Electronics and all its applications. In pursuance of such purpose they jointly organize the conference EPE ECCE Europe every year.

The conference will be organized in a European city with the strong support of the local university and industry.

In order to attract more participants from industry, it is proposed to associate one or two specific topics to each conference. This or these topics must be related to the country or city conference in terms of industry, research or university.

The conference will be held in the early fall, somewhere between 24 August and 10 September. The conference will normally last 3 days, preferably on Tuesday - Wednesday - Thursday. Special care will be taken to avoid overlap with conferences on related topics, as CIGRE and ICEM.

Guidelines to set-up a proposal can be obtained from the secretariat (bsneyers@vub.ac.be) or can be downloaded form the EPE association website.

Deadline for proposal: Monday 17 August 2015

3. EPE Chapter on Control Seminar

"Power electronics at the heart of tomorrow's power networks control and operations"

Aachen, Germany
Monday 22 June – Tuesday 23 June 2015

EPE Chapter on Control Seminar
Keynotes, group brainstorming, panel discussion

AC networks are operating ever closer to their limits. The warning signs are there. In 2003 blackouts cost the US economy $6 billion and were held responsible for four deaths in Italy, while the power failures across Western Europe in 2006 caused by a transmission line shutdown in Germany underlined the risks of outages crossing national boundaries.

The European Commission's energy trends show an exponential rise in energy demand from 2,800 TWh today to nearly 4,000 TWh by 2030. Electricity is the fastest rising demand – up 58 percent by 2030 and accounting for nearly 25 percent of the total energy demand. Higher production will require stronger protection, particularly as more and more renewable energy sources (RES) flow into the grid.

Therefore and based on market design taking into account flexibility as well as security of supply, novel control and operation philosophies need to be put in place in order to satisfy the new requirements.

The power electronics based actuators will play a key role in the power network of the future by helping the system increase stability margins as well as renewable energies penetration. The power electronics system will have to enhance flexibility by interconnecting HVDC links and storage systems, in the meantime to provide ancillary services such as inertial reserves.

Feeling the need of global solutions in which all communities can counteract, EPE control chapter will organize an event in which we will bring together actors from academia and industry. Keynotes, workshops on identified subjects as well as brainstorming sessions will be proposed in this workshop. Our aim is to highlight new power electronics systems functions (existing or not) that could contribute to the development of the power network of the 21st century.

Conference program:

Part 1: Understanding power generations/system
(Monday morning – plenary)
Part 2: Power electronics functionality
(Monday pm – plenary)
Part 3: Brainstorming on new functions needed from power electronics systems
(Monday pm)
Part 4: Work restitutions
(Tuesday morning – plenary)

Information and registration:

EPE Association: epe-association@vub.ac.be

4. ECPE: Calendar of Events 2015

Date	Location	Event	Topic
20 – 21 April 2015	Warwick, UK	**ECPE Workshop**	**6th ECPE SiC and GaN User Forum** Chairmen: Prof. P. Mawby (Univ. of Warwick), Prof. A. Lindemann (Univ. of Magdeburg), Prof. L. Lorenz (ECPE) and Technical Committee
29 - 30 April 2015	Graz, Austria	**ECPE Tutorial**	**Power Semiconductor Devices & Technologies** Chairman: Prof. D. Silber (Univ. of Bremen)
19 – 21 May 2015	Nuremberg, Germany	**Conference**	**PCIM Europe 2015**
25 – 29 May 2015	Gaeta, Italy	**Recruitment Event**	**16th European PhD School on ´Power Electronics for Electrical Machine and Energy Control**
29 – 30 June 2015	Hamburg, Germany	**ECPE Tutorial**	**Power Electronics Packaging** Chairmen: Prof. U. Scheuermann (Semikron), Dr. J. Popovic-Gerber (Delft University)
16 – 17 June 2015	Munich, Germany	**ECPE Workshop**	**"Power Electronics/PowerSoC: Powering Low-Power Systems** Chairmen: Prof. B. Allard (INSA de Lyon), Prof. J. Cobos (UPM), Prof. C. O'Mathuna (Tyndall)
21 – 22 July 2015	Erlangen, Germany	**ECPE Tutorial**	**Thermal Engineering of Power Electronic Systems - Part I (thermal design and verification)** Chairmen: Prof. U. Scheuermann (Semikron), D. Malipaard (Fraunhofer IISB)

The ECPE Calendar 2015 with all ECPE Workshops and Tutorials is available on the ECPE website www.ecpe.org for download.

5. Future EPE ECCE Europe and Technically Sponsored conferences

Invitation to The 6th International Symposium On Power Electronics for Distributed Generation Systems

Aachen, Germany, 22nd to 25th of June 2015

With the "Energiewende" (Energy Transition) towards more renewable and distributed generation in the power system on-going, the 6th International Symposium on Power Electronics for Distributed Generation Systems (PEDG2015) will be held from 22nd to 25th of June 2015 in Aachen, Germany. Following on the success of the five previous international symposia, the PEDG 2015 Symposium will provide a venue for experts to present the state-of-the-art in power electronics and distributed generation (DG) systems. The Symposium is sponsored by the IEEE Power Electronics Society and organized by the PELS Technical Committee on Sustainable Energy Systems. PEDG 2015 will feature keynote speeches, tutorials regular technical sessions and an Exhibition.

Please find more information: www.pedg2015.org

Upcoming events:

- ICPE 2015 – ECCE Asia in Seoul, Korea from 1 - 5 June 2015. http://www.icpe2015.org/
- EPE 2015 ECCE EUROPE, 7-11 September 2015, Geneva, Switzerland: http://www.epe2015.com
- EPE 2016 ECCE EUROPE, 05-08 September 2016, Karlsruhe, Germany. http://www.epe2016.com/
- EPE 2017 ECCE EUROPE, 11-14 September 2017, Warsaw, Poland

6. Other conferences

- **International Summer School EMR '15** "Modelling and control using - Energetic Macroscopic Representation – Application to hybrid electric vehicles and others"

  15 – 18 June 2015, University of Lille1, http://www.emrwebsite.org/

7. Vacancies:

- **"Assistant/Associate professor in the field of electromechanical energy conversion at TU Delft, the Netherlands":**

http://jobs.ieee.org/jobs/asst-assoc-professor-of-electromechanics-delft-zuid-holland-75839557-d

The Faculty of Electrical Engineering, Mathematics and Computer Science (EEMCS) is known worldwide for its high academic quality and the social relevance of its research programmes. The faculty's excellent facilities accentuate its international position in teaching and research. The faculty offers an interdisciplinary setting for its 500 employees, 400 PhD students and 1700 undergraduates. Together they work on a broad range of technical innovations in the fields of sustainable energy, telecommunications, microelectronics, embedded systems, computer and software engineering, interactive multimedia and applied mathematics. EEMCS: Your Connection to the Future. The research in the Department of Electrical Sustainable Energy is inspired by the technical, scientific and societal challenges originating from the transition towards a more sustainable society.
Research at the TU Delft Department of Electrical Sustainable Energy focuses on three areas:

- Photovoltaic Materials and Devices
- DC systems, Energy Conversion and Storage
- Intelligent Electrical Power Grids.

The Electrical Sustainable Energy Department provides expertise in each of these areas throughout the entire energy system chain. The DCE&S group is responsible for research and education in the fields of DC systems, high voltage technology, energy storage, power electronics, and electromechanics. Electromechanics is a multi-disciplinary field of research, exploring the conversion of electrical energy into mechanical energy and the other way around. The part of the DCE&S group working on electromechanics is currently active in applications such as electrification of mobility (high speed drives for aerospace applications) and renewable generation of electrical energy (wind and ocean wave energy).

Job description

As an Assistant/Associate Professor your focus will be on the following tasks:
1. Research in Electrical Sustainable Energy in the field of the design and control of electromechanical devices, including supervising PhD and Master students. The focus will be on innovative theoretical and experimental research on control of electromechanics. Breakthroughs are expected from system integration of the electromechanical devices, advanced real-time control and methods to increase reliability and availability.

2. Education: Contributions to teaching in the BSc Electrical Engineering programme and the MSc Electrical Sustainable Energy programme, with a focus on electrical drives.

3. Management: Acquisition and management of national and international research projects. Establishing strong collaborations with industrial partners.

4. Laboratory experience: Practical knowledge about real-time implementation of control of electrical drives in general will be positively evaluated.

5. Participation in international bodies such as IEEE. A holistic approach, in which design, implementation, deployment, and analysis are integrated, is strongly desired; we expect the applicant to actively collaborate with other researchers from academia and industry to realise this aim.

Requirements

You must have a PhD degree in Electrical Engineering related to electromechanics or control of electrical machines. Overall knowledge and experience with experimental implementation of real-time control of electrical machines, as well as previous work experience in one of these areas, is required. An excellent academic track record reflected by

publications in the leading international journals is required. You should have a demonstrated ability to initiate and direct research projects and to obtain external funding. Experience in teaching and mentoring students is considered an advantage. You also have an open personality and good communication skills. Demonstrated ability in written and spoken English is required. Knowledge of the Dutch language is an advantage.

Conditions of employment
The position offered is a tenure-track position for a period of five years. Based on performance indicators agreed upon at the start of the appointment, a decision will be made in the final year whether to offer you a permanent faculty position (www.tudelft.nl/tenuretrack). TU Delft offers an attractive benefits package, including a flexible work week and the option of assembling a customised compensation and benefits package (the 'IKA'). Salary and benefits are in accordance with the Collective Labour Agreement for Dutch Universities. TU Delft sets specific standards for the English competency of the teaching staff. TU Delft offers training to improve English competency. Inspiring, excellent education is our central aim. If you have less than five years of experience and have not yet obtained your teaching certificate, we allow you up to three years to complete this.

Information and application
For more information about this position, please contact Prof. P. Bauer, phone: +31 (0)15-2784654, e-mail: p.bauer@tudelft.nl. To apply, please e-mail a detailed CV along with a letter of motivation, a publication list, a research and education statement and at least three references by 1 May 2015 to C.J.C. Kohlmann van Noord, Hr-eemcs@tudelft.nl.
When applying for this position, please refer to vacancy number EWI2015-15.

- **"Professor/Associate professor in Power Electronics at NTNU in Trondheim, Norway":**

http://www.jobbnorge.no/ledige-stillinger/stilling/111265/professor-associate-professor-in-power-electronics

The Department of Electric Power Engineering at NTNU performs teaching and research within the entire field of electric power engineering, and has excellence in applications related to power electronics, renewable energy, oil and gas applications including subsea technology, also subsea HVDC in the North Sea for inter-country connections, for supplying hydro power to oil platforms and offshore wind energy connections, power system analysis in a deregulated power market etc, Currently there are 10 professors and 2 associate professors at the department. In addition there are 6 adjunct associate professors, 5 postdoctoral researchers, approx. 40 active PhD students, and 15 technical/administrative staff. Research activities are organized into three groups; Energy conversion, Electric power technology and Power systems. We have a tight cooperation with SINTEF Energy.

Field of research and teaching for the professorship/associate professorship:
The professor/associate professor is expected to play a leading role in research and education within the field of analysis and application of power electronic converters with conventional and wide band-gap power semiconductors. The candidate should be a specialist in design of topologies for power electronics converters and systems. The professorship/associate professorship shall cover the specific needs of the Norwegian industry, with application areas such as renewable energy, smart grid, and developments in the maritime and petroleum sectors. We have a tight cooperation with Norwegian industry and SINTEF Energy.
We are also open for applicants also from candidates for Associate Professor in Power Electronics. This means that young and outstanding candidates may apply. Qualifications for the full professorship and the associate professorship are found in the full announcement.