

EPE Newsletter September 2006

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To submit a paper to the evaluation procedure, send an anonymous pdf file of your paper to bsnevers@vub.ac.be
9. Technically sponsored conferences



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New: ePhysics v2 provides the ability to couple (static and transient) thermal and stress simulation.

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Our Mission

"To lead the high-performance segment of the EDA market by leveraging electromagnetics across component, circuit and system design."

1. EPE 2007: Call for papers: Deadline for the receipt of synopses: 1 November 2006

EPE 2007 Call for papers

All information is available from the conference Internet Site <http://www.epe2007.com>

Uploading synopses is available with a few clicks

DEADLINE: 1 November 2006

The sponsors:



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2. Research fellowship at NTNU, Trondheim, the Department of Electrical Power Engineering.

The PhD project will examine converters under high pressure and high temperature for sub sea oil exploration

<http://nettopp.ntnu.no/getfile.php/vedlegg/451a3b70225488.64164223/IME-060+.pdf>

Salary is above 300 000 Norwegian kroner a year in 4 years.

The candidate will work at <http://www.elkraft.ntnu.no/engelsk/> with the staff of the Energy Conversion Group

<http://www.elkraft.ntnu.no/eno/staff.html>

Sub sea and down hole high reliable frequency converters for operating motors in compressors, pumps and valve actuators. Sea depths can be more than 1000 m, and power rating above 10 MW. Topics for research include: Theory and laboratory verification of breakdown mechanism due to thermal cycling, high temperature and high pressure. Methods for designing and testing power electronics modules and converters are to be developed. This includes 1 atm chambers or when subjected to high hydrostatic

pressure which should include a minimum need for capacitors. The candidate should have a Masters degree in Electric Power Engineering, Power Electronics. Experience with power semiconductor modules and converter modelling, simulation and design is an advantage.

This technology is the future of offshore oil and gas development, applicable all over the world. Please Google **Shtokman**, the Russian gas field which is larger than all the gas fields of the North Sea combined. Also Google **Ormen Lange**, a gas field under development outside the Norwegian coast.

<http://www.hydro.com/ormenlange/en/>

http://www.presstogo.com/hydro_com/image_bank.show_detail?p_obt_id=62695

For any questions, please send an email to Prof. Tore Undeland. The department of electrical Power Engineering, NTNU.

E-mail : Tore.Undeland@elkraft.ntnu.no

Applications should be marked Jnr. IME-060-2006. Closing date: 30.10.06.

3. PhD Positions in Power Electronics at Division of Electric Power Engineering Chalmers University of Technology, S-412 96 Goeteborg, SWEDEN – Deadline for application: 16 October 2006

- a) Handling of voltage loss in a DFIG wind park
- b) High-frequency electrical and magnetic transients in wind parks.

We are looking for you with a M.Sc. exam in electrical engineering/physics engineering with a specialization towards, power electronics, microwave technology or control engineering. Ability to cooperate, ability to focus on important themes, as well as an interest for analytical work is a necessary prerequisite. Previous work experience is an advantage.

- a) This project deals with how wind energy converters of so called DFIG-type shall be controlled in the event of a sudden loss of voltage. Apart from theoretical studies an important task is to verify the results towards measurements
- b) This project deals with the generation and propagation of high-frequency voltage transients in wind park grids. Failures in transformers and generators in sea-based wind parks may originate from these phenomena. The work includes theoretical studies as well as measurements in the research laboratory and a real wind park.

The PhD projects are operated in cooperation with ABB and Vattenfall Power Consultant.

For more information, see www.chalmers.se and click on the available positions button and find the advertisements (96/2006) and (97/2006).

4. Post-Doc Position at the Power Electronic and Electrical Engineering Laboratory : L2EP (Lille, France)

The research group: "Energy Systems and Electrical Networks" (<http://www.univ-lille1.fr/l2ep/gp-res.htm>) is searching a junior researcher (a PhD is necessary). The researcher will participate in R&D projects (public funding) in relation with renewable energy based hybrid power stations.

Contact : bruno.francois@ec-lille.fr

(Ecole Centrale de Lille, Cité scientifique, BP 48, 59651 Villeneuve d'Ascq, France)

5. Industrial/Ph.D. Course in Power Electronics for Renewable Energy Systems – in theory and practice, Aalborg Nov 15-17, 2006, Institute of Energy Technology Denmark



There is a rapid development in the area of Distributed Power Generation Systems (DPGS) based on Renewable Energy Sources (RES) like Photovoltaics (PV), wind turbines (WT), micro-hydro and fuel-cells. Especially for grid-connected DPGS an exponential growth in terms of installation power can be observed, mainly due to the subventions given by governmental policies around the world for clean "green" electricity production. Countries like Germany, Japan, Spain, Italy, UK and USA have the highest penetration of RES.

The objectives of this course are to learn about the design and control, both basic and advanced (linear, non-linear controllers, active damping) of the power electronics converters used in single-phase and three-phase renewable energy systems mainly for photovoltaics and wind turbine systems connected to the utility grid.

Practical issues related to the design of the converter, placement of the sensors and design of the grid interface filter are addressed with industrial examples.

There will be increased focus on the compliance with the new grid codes standards for DGPS that impose stringent requirements in terms of power quality, grid monitoring and islanding.

Control design experience will be gained by using advanced simulation models in Simulink for both single-phase and three-phase grid converters

Hands-on experience will be provided in the state-of-the-art Green Power Laboratory where all the students will do experiments including solar cells characterization, control implementation for single-phase and three-phase grid converters controlled by dSPACE.

Keep yourselves updated at our web pages

http://www.iet.aau.dk/Research/research_prog/Green_Power_Converters/Folder_Peris_Nov06.pdf

Place

Aalborg University
Institute of Energy Technology
Pontoppidanstraede 101,
Room 23
DK-9220 Aalborg East
Denmark

Registration

Preferably now and no later than
October 23, 2006 by email to:
Susanne Hansen – skh@iet.aau.dk

Further information

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6. International Electric Machines and Drives conference, Antalya, Turkey, 3-5 May 2007

Announcement and Call for Papers

The IEEE International Electric Machines and Drives Conference provides an international forum for sharing experience, new ideas, and developments in design, operation, analysis, and practical application and optimization of electric drive systems and their components. IEMDC is a venue for users, designers and manufacturers, and analysts of electric machines and drives and their related power electronics and controls.

The conference is jointly sponsored by the IEEE Industrial Electronics, Industry Applications, Power Engineering, and Power Electronics Societies.

In addition to the subjects identified above, the conference will have plenary presentations by recognized experts to highlight various aspects of electric machines and drives, such as automotive applications, renewable energy applications, permanent magnet motor drive systems, fault tolerant operation and survivability, sensorless methods, and turbogenerator operation and maintenance. Papers addressing these topics are encouraged.

Information for Authors

Authors wishing to submit papers are invited to submit an abstract of 200 words or less and a digest of five pages or less, including text, tables, and figures, at the conference website: <http://www.iemdc07.org>. The Abstract and Digest should be in a single-column pdf format in 12 point serif text, such as Times New Roman on either A4 or US letter-size pages. Contact information for the corresponding author should be indicated on the abstract. No author information should appear on the Digest. Submissions should indicate a preference for oral or poster presentation. Acceptance notification will contain instructions for final paper preparation. Registration and payment of fees by at least one author is required for inclusion in the conference proceedings.

Contact Information

Contact information is posted on the conference website:

<http://www.iemdc07.org>.

The preferred mode of contact is e-mail. For general conference information, please address comments and questions to:

Professor Okyay Kaynak
General Chair, IEMDC'07
kaynak@boun.edu.tr

Professor Herbert L. Hess
Technical Chair, IEMDC'07
hhess@ieee.org

Conference Record

The papers presented during the conference will be posted on IEEE Xplore and be cited in EI (Engineering Index).

Author Deadlines

Submission of Abstracts and Digests: October 30, 2006

Notification of Acceptance January: 15, 2007

Submission of Final Papers: March 1, 2007

7. Contents of Vol. 16 of EPE Journal: <http://www.epe-association.org>

EPE Journal is included in the Science Citation Index

Vol 16 no 4: a series of peer reviewed papers

A novel split phase induction motor drive without harmonic filters and with linear voltage control for the full modulation range, K. K. Mphapatra, K. Gopakumar, CEDT, Indian Institute of Technology, India

Computer Aided Control Optimization of Power Converters, Federico Belloni, Piero Maranesi, Marco Riva, University of Milan, Italy

Sensorless Direct Instantaneous Torque Control for Switched Reluctance Machines, Nisai H. Fuengwarodsakul, Stefan E. Bauer, Christian P. Dick, Rik W. De Doncker, ISEA, Germany

Control of a stand-alone variable speed constant frequency generator based on a doubly-fed induction machine, Nicolas

Patin, Jean-Paul Louis, Satie, ENS de Cachan, Eric Monmasson, Satie, Université de Cergy-Pontoise, France

Steady state electrical design, power performance and economic modeling of offshore wind farms, M. Damen, P. Bauer, S.W.H.de Haan, Delft University of Technology; J.T.G.Pierik, Netherlands Energy Research Foundation, ECN, The Netherlands

Single-phase resonant converter in three-phase system in modular approach, M.R.Ramteke, H. M. Suryawanshi, K.L. Thakre, Visvesvaraya National Institute of Technology, India

Vol 17 : a series of peer reviewed papers, still to be programmed

A Five-Level Inverter Topology with Common-Mode Voltage Elimination for Induction Motor Drives, P. N. Tekwani, R. S. Kanchan, K. Gopakumar, CEDT, India; A. Vezzini, Berne University of Applied Science, Biel School of Engineering and Information Technologies, Biel, Switzerland

Comparison of the induction motors stator fault monitoring methods based on current negative symmetrical component, Abdesselam Lebaroud, Guy Clerc, Cegely –UCBL, France; Abdelmalek Khezzar, Ammar Bentounsi, Laboratoire d'Electrotechnique de Constantine, Université de Mentouri, Constantine, Algeria

Hybrid circuit breaker test bench, Guillaume Bats, CAPSIM ; Philippe Ladoux, Jean Marc Blaquièrre, INPT-ENSEEIH ; Marc Francis, AREVA TA, France

Modelling of the supercapacitors during self-discharge, Hamid Gualous, A. L2ES Univ. Franche Comté, P. Venet, Z. Ding, G. Rojat, CEGELY, France

Linearization of the multi-level SVPWM signal generation in the over-modulation region extending up to six-step mode using only the sampled amplitudes of reference phase voltages, R. S. Kanchan, P. N. Tekwani, K. Gopakumar, CEDT, India

8. Future issues of EPE Journal (included in the Science Citation Index):

To receive a copy of the issues: become a member of the EPE Association: epe-association@vub.ac.be

To submit a paper to the evaluation procedure, send an anonymous pdf file of your paper to bsnevers@vub.ac.be

9. Technically sponsored conferences

2-3 November 2006, Lausanne, Switzerland

ESSCAP'06

2nd European Symposium on Super Capacitors & Applications

Topic Areas

1. Materials and technologies
2. Diagnosis, reliability & safety
3. Power electronics and converters
4. Applications

Secretariat

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Fax: ++41 21 693 26 00
Website: <http://lei.epfl.ch/esscap2006>
E-mail: esscap2006@epfl.ch

4 – 6 November 2006

The First International Meeting on Electronics & Electrical Science and Engineering - University of Djelfa, ALGERIA

Further informations

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2-5 April 2007

PCC Nagoya – The 4th Power Conversion Conference – Nagoya, Japan

Paper Submission Office of PCC-Nagoya 2007

c/o ICS Convention Design., Inc.

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3-24, Kanda-Nishikicho, Chiyoda-ku,

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3-5 May 2007

International Electric Machines and Drives conference, Antalya, Turkey,

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Professor Herbert L. Hess

Technical Chair, IEMDC'07

hhess@ieee.org

<http://www.iemdc07.org>.

October 21 - 25, 2007

The 7th International Conference on Power Electronics

ICPE '07

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

Important Dates

Deadline for Digests **April 30, 2007**

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

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