

EPE Newsletter April 2007

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1. European Seminar on "Power Converters for the Future European Electricity Network": Vienna, Austria, 25 May 2007

On Friday 25 May 2007, the day after closing of CIRED 2007 Conference, EPE Association organizes a half-day seminar on the topic "Power Converters for the Future European Electricity Network".

Invited lectures from representatives of the European programmes Dispower, Fenix and UNIFLEX-PM will be presented and will lead to a workshop/panel discussion.

For information and registration: <http://www.eee.nott.ac.uk/uniflex>

2. Positions available at the University of Nottingham, School of Electrical and Electronic Engineering

Research Fellows in the Power Electronics, Machines and Control Research Group

Applications are invited for the post of Research Fellow to work in the Power Electronics, Machines and Control Group in the School of Electrical and Electronic Engineering at the University of Nottingham. These posts are an exciting opportunity to join a dynamic and internationally renowned research group currently numbering over 80 researchers. Opportunities exist in projects in a number of areas including Power Conversion for Electricity Grids, Power Conversion and Electrical Systems in Aerospace and High Power Converters for Drives.

Candidates should hold a good Honours degree in Electrical and/or Electronic Engineering or related discipline and have postgraduate (PhD) experience in the areas of Power Electronics, Power Conversion, Power Systems, Machine Control or related areas. Candidates should have the ability to undertake simulation and experimental project work, to work independently and have good interpersonal and IT skills.

The starting salary will be in the range of £20,842 - £28,009 per annum. Applicants should send, by email, a CV citing two referees by April 30th 2007 to Claire.parfitt@nottingham.ac.uk

3. Industrial/Ph.D. Course in Power Electronics for Renewable Energy Systems – in theory and practice, Aalborg, Denmark, May 9-11, 2007

Background of the course

There is a rapid development in the area of Distributed Power Generation Systems (DPGS) based on Renewable Energy Sources (RES) like Photovoltaics (PV) and Wind Turbines (WT). 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, Denmark, 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 (linear) and advanced (non-linear, robust, adaptive controllers) 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 control of the converter, grid filter and grid interaction 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, ride-through, fast P-Q control, grid monitoring and islanding detection.

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 control implementation for single-phase and three-phase grid converters including current control, harmonic compensation, grid synchronization, sag detection on setups controlled by dSPACE (DS1103)

Registration

Preferably now and no later than April 20, 2007 by email to: Susanne Hansen – skh@iet.aau.dk

Further information

Aalborg University, Institute of Energy Technology
Assoc. Prof. Remus Teodorescu
Pontoppidanstraede 101, DK-9220 Aalborg, Denmark
Phone +45 9635 9254, Fax +45 9815 1411
Email: ret@iet.aau.dk

4. 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)

5. Technically sponsored conferences

3-5 May 2007

International Electric Machines and Drives conference, Antalya, Turkey,

Contact: Professor Okyay Kaynak, General Chair, IEMDC'07, kaynak@boun.edu.tr
Professor Herbert L. Hess
Technical Chair, IEMDC'07
hhess@ieee.org; <http://www.iemdc07.org>.

16-19 September 2007

The Sixth International Symposium on Linear Drives for Industrial Applications

LDIA2007 SECRETARIAT

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26-27 September 2007

International Conference AUTOMOTIVE POWER ELECTRONICS

Salons de l'Aveyron – PARIS

List of addressed topics

- 1- **Automotive Standards:** technological trends
- 2- **Design and modelling tools for mechatronics:** power electronic design, thermal and EMC issues, simulation of electro-thermo-mechanical fatigue – *Special topic*
- 3- **Power electronic vehicle architecture:** powertrain alternative solutions, choice of network voltages, gateways between electrical and electronic networks
- 4- **Power Semiconductor devices and modules**
- 5- **Packaging and integration of power converters:** protection devices...
- 6- **Static power converters and systems**
- 7- **Passive components – Special topic**
- 8- **Harnesses and connectors**
- 9- **Actuators and motors control and drives**
- 10- **Mechatronics integration**
- 11- **Power dissipation management / Cooling**
- 12- **Electro-magnetic issues:** impact of power electronics fro in-vehicle architecture, new standards to come, electronic and harness design guidelines
- 13- **Preventive diagnosis:** failure prognosis, maintenance, thermal fatigue
- 14- **Reliability, safety and test:** limiting failure mechanisms, acceleration factors, high operating temperatures, test methods and tools, predictive reliability tools, dependability, robustness validation, requirement analysis– *Special topic*
- 15- **Manufacturing tools and industrial processes**
- 16- **End of life, Recycling and Eco-design**

Your contact

SIA – st4@sia.fr – Tel: +33 (0)1 41 44 93 75

October 22 - 26, 2007

**The 7th International Conference on Power Electronics - ICPE '07
EXCO (Daegu Exhibition & Convention Center), Daegu, Korea**

Call for papers still open

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

ICPE'07 (KIPE)

Science & Technology B/D #408, 635-4, Yeoksamdong Kangnamku, Seoul, Korea, 135-703

Tel: +82-2-554-0184 / Fax: +82-2-554-0186

E-mail: icpe@kipe.or.kr / Web Site: <http://www.icpe.or.kr>

6. Other Events

GaN : État de l'art et applications potentielles en électronique de puissance - Réunion plénière - Ecrin-Électronique de puissance / Conversion de l'énergie, Mercredi 25 avril 2007, CNAM, 292 rue Saint Martin, F-75003 Paris

Cette journée se propose de montrer quelles pourraient être les potentialités de composants GaN en électronique de puissance. Matériau à grand gap, les domaines visés, comme pour le SiC, sont les applications à haute température et la très haute tension. Aujourd'hui, les principaux développements concernent des applications pour l'électroluminescence et les hyperfréquences. Nous reviendrons sur ces applications pour montrer comment elles pourraient être éventuellement extrapolées en électronique de puissance.

Une des principales limitations à l'utilisation du GaN étant d'ordre technologique, la journée reviendra également sur l'état de l'art technologique (Substrats massifs et composites, épitaxies).

Contact :

Hélène Auger

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EET-2007 European Ele-Drive Conference - 30th May - 2nd June 2007, Brussels, Belgium

"On the Way to sustainable Development and Market Opening"

- Program & Registration now available online at <http://www.ele-drive.com/>
- 129 papers submitted from 29 countries
- Unique opportunity to discuss Battery, Hybrid and Fuel cell vehicle technologies
- Mobility and urban policy also highlighted
- Brussels venue, eve of the 7th Framework program, starting discussions on the Green Paper on "urban mobility" offering a set of opportunities
- A global platform to foster exchange of views between researchers, industry, authorities and NGOs
- Key note speeches and round-tables:
 - plug-in hybrids
 - market requirements
 - hydrogen and fuel cells
 - health and environment
- A ride and drive in the "cinquantaire park", combining a very central location and a relaxing place to test the vehicles
- A symbolic place since at the auto-world museum

Be part of the discussions leading to find out solutions to reduce greenhouse gases and energy dependence of Europe!

Contact and information:

Frédéric Vergels, AVERE Secretary-General

European Association for Battery, Hybrid and Fuel Cell Electric Vehicles aisbl/ivzw c/o VUB-FirW-ETEC Bd. de la Plaine, 2 - BE 1050 Brussels Tel +32 2 629 23 63 - Fax +32 2 629 36 20 <http://www.avere.org>

Industrial/PhD Course in Switch-mode audio power amplifiers (class-D) August 20-24, 2007

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

Ørsted·DTU, Automation

Technical University of Denmark

Elektrovej - Building 325 - room 007

DK-2800 Kgs. Lyngby

DENMARK

<http://www.oersted.dtu.dk/English/research/au/peg.aspx>

Organizer and further information

Project secretary Henriette Wolff Ørsted·DTU, Automation Technical University of Denmark Elektrovej, building 325 DK-2800 Kgs. Lyngby DENMARK Phone direct: (+45) 4525 3603 Fax: (+45) 4588 6111 E-mail: hw@oersted.dtu.dk

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