



ALSTOM

Call for Papers

<http://epe2003.inp-toulouse.fr>



10th European Conference on Power Electronics and Applications

2 - 4 September 2003 - Toulouse, France

EPE ASSOCIATION/VUB-TW-ETEC
Pleinlaan 2 - B 1050 Brussels (Belgium) - Fax : 32 2 629 36 20
epe-association@vub.ac.be - <http://www.epe-association.org>

Institut National Polytechnique - ENSEEIHT-LEEI
2, rue Camichel - BP 7122 - F 31071 Toulouse Cedex 7
Fax : 33 (0)5 61 63 88 75 - epe2003@leei.enseiht.fr

Organization and Venue

The EPE 2003 conference is sponsored by the EPE Association and will be held in Toulouse - Centre Pierre Baudis - on 2 to 4 September 2003. It is hosted by Institut National Polytechnique - ENSEEIHT-LEEI, Toulouse, France

Aims of Conference

EPE is the place for specialists in power electronics, systems and components, to present papers and attend sessions on state-of-the-art technology in this challenging and evolutionary sector. The conference aims to be a meeting forum for researchers, developers and specialists from the industry. Papers are encouraged on all topics described hereunder for interdisciplinary discussions of new ideas, research, development, applications and the latest advances in the field of power electronics.

Topics

Power Electronics has become the enabling technology for the majority of power processing engineering. It is used in all areas where electrical power conversion and control is needed. Special attention will be devoted this time to applications in aerospace, space and surface transport and to the emergence of SiC power semiconductor devices.

A special one day event will be devoted to SiC devices and their application. This will include a report of progress on the EC funded SiC ESCAPEE project.

Topic 1: Devices

- 1a. Passive components
- 1b. Power semiconductor devices
- 1c. Hybrid power integration
- 1d. Monolithic power integration
- 1e. Device characterization and applications
- 1f. Thermal design
- 1g. New devices
- 1h. Reliability of devices
- 1i. Simulation and modelling of power devices

Topic 2: Power electronic system design & packaging

- 2a. Thermal mechatronics
- 2b. Integrated design methodologies
- 2c. Interconnection methods
- 2d. Integration of FEA and lumped parameter methods
- 2e. Validation methods for design methodologies
- 2f. Integrated failure analysis and reliability methods

Topic 3: Power electronics converter circuits

- 3a. Soft switching converters (resonant, ZVS, ZCS)
- 3b. Power converter circuits and control
- 3c. Multilevel and matrix converters
- 3d. Modern line side converters
- 3e. Emerging topologies

Topic 4: Modulation strategies and specific control methods for static converter

- 4a. Converter control sets and modulation strategies
- 4b. Converter control, current/voltage control

Topic 5: Application of control methods to electrical systems

- 5a. Optimal control, robust control, non-linear control
- 5b. Fuzzy control, neuronal control
- 5c. Open and closed loop system control, fault handling strategies

Topic 6: Motion control and robotics

- 6a. Servo drives; stepping, linear and brushless drives
- 6b. Actuators, transducers
- 6c. Piezo and electrostatic actuators
- 6d. Fieldbus systems for drives
- 6e. Applications
- 6f. Modelling and simulation

Topic 7: Measurements and sensors

- 7a. Components
- 7b. Measurements techniques
- 7c. Software for measurements and virtual instruments
- 7d. Sensorless techniques
- 7e. Estimation techniques
- 7f. Design and diagnoses
- 7g. System integration and applications

Topic 8: Power supplies

- 8a. Uninterruptible Power Supplies (UPS)

- 8b. DC Power Supplies (hard&soft switching)
- 8c. Distributed Power Supplies
- 8d. Voltage Regulated Modules (VRM)
- 8e. Power Factor Correctors (PFC)
- 8f. EMI & over-voltage protection
- 8g. Modelling, simulation & control

Topic 9: Electrical machines and adjustable speed drives

- 9a. Permanent magnet machines and drives
- 9b. Reluctance machines and drives
- 9c. Linear machines and drives
- 9d. A.c. and d.c. machines and drives
- 9e. Adjustable speed drive systems
- 9f. Converter machine interactions
- 9g. Energy efficient drives
- 9h. Modelling and simulation

Topic 10: Power electronics and drives in aerospace and space

- 10a. Electric power generation
- 10b. On board networks
- 10c. EMC related phenomena
- 10d. Actuators, generators and drives
- 10e. Data transmission
- 10f. Modelling and simulation

Topic 11: Power electronics and drives in surface transport

- 11a. Road vehicles
- 11b. Rail vehicles
- 11c. Marine
- 11d. Energy sources control and management
- 11e. Batteries and fuel cells
- 11f. Data transmission
- 11g. EMC related phenomena
- 11h. Modelling and simulation

Topic 12: Power electronics in generation, transmission and distribution of electrical energy

- 12a. Distributed power, renewable energy systems and alternative energies
- 12b. HVDC
- 12c. FACTS
- 12d. Active filters and harmonics
- 12e. Power conditioning, power factor correction
- 12f. Adjustable speed generation systems
- 12g. Generator, excitation systems
- 12h. Modelling and simulation

Topic 13: Systems engineering

- 13a. Energy system management, user applications experiences, modelling and simulation
- 13b. Reliability
- 13c. Diagnostics
- 13d. Power electronics in the cement industry
- 13e. Power electronics in the steel industry
- 13f. Power electronics in other industries
- 13g. Power electronics in domestic applications

Topic 14: Education

- 14a. Education methodology
- 14b. Simulation software
- 14c. Education tools

Presentation of Papers

Contributions to EPE 2003 must be presented either as a lecture presentation or as a dialogue presentation. A manuscript must be submitted in English in both cases for inclusion in the Conference Proceedings (CD-ROM). Papers for lecture sessions will be strictly limited and 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.

Tutorials - Call for Proposal

Several tutorials will be held prior to the conference. Authors willing to propose a tutorial at EPE2003 are invited to send a proposal to the scientific secretariat (EPE Association, c/o VUB-TW, Pleinlaan 2, B-1050 Brussels, Belgium, e-mail: epe-association@vub.ac.be). The proposal will consist of a three-page summary including tutorial title, name and affiliation of the lecturer(s), tutorial objectives and audience, topical outline and provisional schedule of the tutorial. Tutorials will be organized at ENSEEIHT-LEEI on Monday September 1st, 2003

Content of Synopses

The synopses should consist of:

- a 2 to 3 pages **summary**, including an **abstract** with no more than 50 words; topic number and indication of the preference for dialogue or lecture presentation must be clearly mentioned;
- key diagrams;
- a references list.

The synopses will be submitted using the host of the conference on internet. A link to the site is available from <http://epe2003.inp-toulouse.fr>, a link from <http://www.epe-association.org> is available. Detailed information and guidelines can be downloaded from the site to help you preparing the needed material for submitting a synopsis. The site will be open for upload from 1 August 2002 onwards. One paper copy indicating the paper identification code, to be received with the confirmation of upload, will be sent to the scientific secretariat for control.

EPE Association, c/o VUB-TW-ETEC, Pleinlaan 2, B-1050 Brussels, Belgium

Authors of papers provisionally selected for presentation will receive a notification and can download the instructions for preparing the dialogue papers and/or the lecture papers from the internet site. Final selection will be based on the full paper. The paper will only be included in the Conference Proceedings after receipt of one full registration fee per paper in due terms. Student registration fee is only valid for student participants, not for authors. One single author may not present more than two (2) papers. In that case, the fee to present the two papers will be 3/2 of the registration fee.

A selection of outstanding conference papers will be published afterwards in the EPE Journal.

Deadlines

Intending authors should note the following deadlines:

Receipt of synopses	30 September 2002
Notification of provisional acceptance	10 February 2003
Receipt of full typescript for final review	15 April 2003

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 published a few months before the conference, and sent to all who submitted a synopsis – all authors & co-authors who completed their data sheet – and to all who requested a copy at the EPE secretariat by sending an e-mail with their coordinates to: epe-association@vub.ac.be. Additional information: <http://epe2003.inp-toulouse.fr>

Exhibition

There will be an exhibition integrated in the conference. If you would like to know more details please refer to <http://epe2003.inp-toulouse.fr> or contact us via e-mail: epe2003@leei.enseeiht.fr or epe-association@vub.ac.be

Venue

Toulouse will host the 10th European Conference on Power Electronics and Applications. Toulouse is located in the south of France, near Pyrénées and Spain, between "Massif central", Mediterranean Sea and Atlantic Ocean. It is very accessible by an international airport linked with the main European towns, by several motorways and by TGV. More than 40 flights per day connect Toulouse to Paris. Toulouse is the fourth town and the second university in France and it is the capital of aeronautic and space industry. Several electronic industries are located in Toulouse and its region as well. The nearby countryside offers splendid possibilities for vacation and recreation, e.g. mountain tours or stays at the seaside with nice and warm weather during this period.

The conference will take place in the "Pierre Baudis" Congress Center, located near the centre of the town and at a walking distance from the main hotels. This modern building offers a nice and functional sight.

Beyond the scientific aspects of the Conference, we will give our best to organize EPE 2003 in Toulouse as a pleasant meeting to improve our friendship and cooperation. We are looking forward to seeing you at the EPE 2003 in Toulouse and hope that you will enjoy the conference and the region, encouraging you to stay some time longer.

Conference Organizing Committee

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Secretariat

EPE secretariat

Brigitte Sneyers
EPE Association
c/o VUB-TW-ETEC
Pleinlaan 2
B-1050 Brussels, Belgium
Tel.: +32 2 629 28 19
Fax: +32 2 629 36 20
e-mail: epe-association@vub.ac.be

Local secretariat

Institut National Polytechnique
ENSEEIH-LEEI - EPE 2003
2 rue Camichel - BP 7122
F-31071 Toulouse Cedex 7
France
Tél: +33 (0) 561 58 84 80
Fax: +33 (0) 5 61 63 88 75
e-mail: epe2003@leei.enseeiht.fr

Most recent and additional information:

EPE Association: <http://www.epe-association.org>

The conference : <http://epe2003.inp-toulouse.fr>

Tourism: <http://www.toulouse-tourisme-office.com>

<http://www.toulouse-haute-garonne.com>

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