

EPE'11

30 August to 1 September 2011, Birmingham, UK
14th European Conference on Power Electronics and Applications



EPE 2011

14th European Conference on Power Electronics and Applications

Birmingham, August 30 - September 1, 2011

Exhibition and Sponsorship

Technical Secretariat
European Power Electronics Association
C/o Vrije Universiteit Brussel - IrW - ETEC
Pleinlaan 2
1050 Brussels, Belgium
Tel: +32 / (0)2 - 629.28.19.
Fax: +32 / (0)2 - 629.36.20.
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URL: www.epe2011.com



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WELCOME



The International Convention Centre

It is our pleasure to invite the whole of the Power Electronics Community to the 14th Conference on Power Electronics and Applications, EPE'11. EPE'11 will be held in Birmingham, UK from the 30th August to the 1st September 2010. This is an exciting and rewarding time to be involved in Power Electronics and we look forward to making this the most successful EPE conference so far.

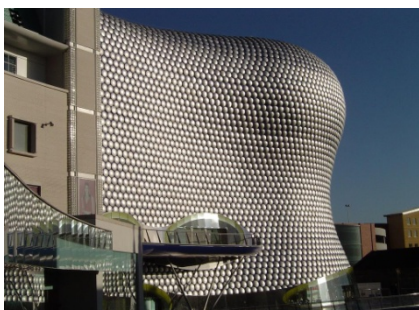
The EPE conference is held every two years and attracts about 1000 delegates from all European Countries, Asia and America. The delegates represent Industry and the major Academic Institutes involved in research into Power Electronics from across

the world. Many major contributions come from industry in the form of Technical Workshops and Keynote presentations covering the major trends in Power Electronics for all its applications.

Birmingham is a colourful and vibrant city in the heart of England which is well known for chocolate, cars, canals and custard! Birmingham is the second largest city in the UK and is only a one hour train journey away from London. The city has a lot to offer conference attendees and their families, from Cadbury World (home of the world famous milk chocolate brand) to the Iron Bridge George (the birthplace of the Industrial Revolution) and from the Science Exploratory to the best shopping in the UK outside of London (so we are told)! There will be a good social programme associated with the conference and tours will be organised to many of the local tourist attractions, including English castles, Stratford-upon-Avon (home of the famous playwright, William Shakespeare), Chatsworth House in the heart of the beautiful Peak District National Park and many more – see the conference web site for details (www.epe2011.com).



Warwick Castle



Selfridges

The conference itself will be held at the International Conference Centre (ICC), in Birmingham city centre. The exhibition will be held in the large hall, which will also be used for the provision of coffee and lunch as well as the display of poster presentations. The ICC is very close to restaurants, bars and shops as well as being very convenient for city centre hotels. The ICC provides excellent, high quality conference facilities and we are very fortunate to be able to hold this EPE conference in this prestigious location. The gala dinner will be held at the National Motorcycle Museum where guests will have the opportunity to walk around the historical and contemporary exhibits during pre-dinner drinks as well as sampling the sounds of some traditional English music

after the meal.

If anyone would like to book a meeting room at the ICC for side meetings, project meetings, seminars or dissemination events please contact one of us with your requirements. We welcome the hosting of parallel events, seminars and meetings before, during or after the main conference.



The conference will cover a wide range of topics relating to Power Electronics and applications including, but not limited to:

- Devices, packaging and integration
- Power converter topologies and design
- Control and measurement
- Electrical machines and drives
- Power electronics used in the generation, transmission and distribution of electrical energy
- Renewable energy and smart grids
- Power supplies
- Application of power electronics in automotive, aerospace, traction and marine applications
- Education in electrical engineering



Ironbridge Gorge

In addition to these wide ranging topics, each day the conference will have a theme for the Keynote presentation and industrial sessions. These themes are based on strong local industrial interests: Power Electronics for Smart Grids/Integration of Renewable Energy; Automotive applications and Aerospace Applications.

Please check out the conference web site for more details of the conference, including paper submission and hotel reservations, as well as discount vouchers for many of the areas tourist attractions and reduced costs tickets with our partner airline group, the Star Alliance.

We look forward to welcoming all our sponsors and exhibitors to Birmingham for this EPE conference. Please let any of the team know if there is anything we can assist you with.

We look forward to welcoming you to Birmingham!

Yours sincerely,



Philip Mawby

Patrick Wheeler

Colin Oates



OBJECTIVE OF THE COLLABORATION

The following options for collaboration are offered to the companies intending on being acknowledged as sponsors of the **14th European Conference on Power Electronics and Applications**.

The intention of the Organising Committee is to ensure that all Sponsoring Companies receive the highest recognition in return for their generous support to the Congress. EPE is an established and renowned Conference, and will be a useful meeting point for designers, users and engineers of the future, offering the perfect stage for the development of valuable relationships between companies and professionals.



EXHIBITION AND SPONSORSHIP

The EPE conference is held every two years and attracts about 1000 delegates from all European Countries, Asia and America. The delegates represent Industry and the major Academic Institutes involved in research into Power Electronics from across the world. Many major contributions come from industry in the form of Technical Workshops and Keynote presentations covering the major trends in Power Electronics for all its applications.

EXHIBITION

Companies can rent modular booths or spaces of 6 m², 12 m², 18 m² or 24 m²

Rate per 6m²: **€2,500 excluding VAT**

- Carpet, table, two chairs and electrical connections included
- Two exhibitors passes (coffee-break and lunch included)
- Four visitor tickets for the exhibition
- Additional furniture will be available for additional cost

SPONSORSHIP

Companies or organisations are welcome to sponsor the conference by sponsoring one of the social events (please ask for details), or based on the following packages:

Diamond: €75,000

- One exhibition space of 24m²
- Four EPE Conference registrations
- Eight visitor tickets for the exhibition
- Complimentary briefcase insert
- Company logo on sponsors page of Congress website, congress bag and CD Rom
- Advertisement in the final programme- two pages of an A5 booklet
- Company logo on final programme

Gold: €35,000

- One exhibition space of 18m²
- Three EPE Conference registrations
- Six visitor tickets for the exhibition
- Complimentary briefcase insert
- Company logo on sponsors page of Congress website
- Advertisement in the final programme - a page of an A5 booklet
- Company logo on final programme

Silver: €15,000

- One exhibition space of 12 m²
- Two EPE Conference registrations
- Four visitor tickets for the exhibition
- Complimentary briefcase insert
- Company logo on sponsors page of Congress website
- Advertisement in the final programme - half a page of an A5 booklet
- Company logo on final programme

Contributor: €6,000

- One exhibition space of 6m²
- One EPE Conference registration
- Four visitor tickets for the exhibition
- Complimentary briefcase insert
- Company logo on sponsors page of Congress website
- Company logo on final programme

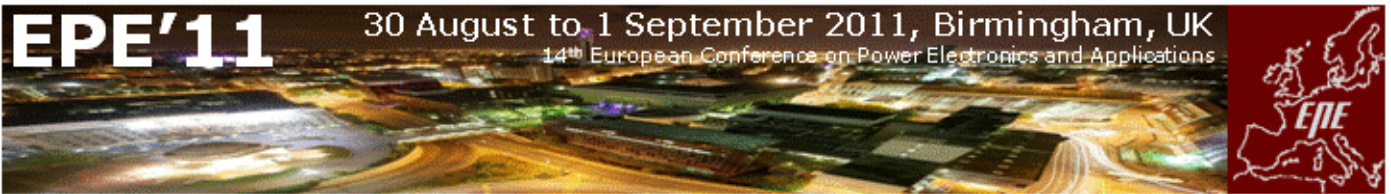
EPE'11

30 August to 1 September 2011, Birmingham, UK
14th European Conference on Power Electronics and Applications



EXHIBITION FLOOR PLAN

See PDF in attachment



APPLICATION AND PAYMENT FOR SPONSORSHIP AND EXHIBITION

Application

Please complete the attached form and return it to the Congress Secretariat as soon as possible, or contact them by email to discuss your requirements further.

Confirmation and Payment

Please fill in the enclosed form. Every effort will be made to assign the requested space. However, the organisation does not guarantee that the booth requested will be available and/or assigned. Assignments will be made only after receipt of the contract form and the appropriate payment (100% of total cost payable on application). Confirmation of your sponsorship and stand space will be mailed to you together with an accompanying invoice for the amount received.

VAT (TAX)

All companies are required to pay VAT at the prevailing rate.

Cancellation

In case of cancellation, the total amount paid will be charged as cancellation fees.

Insurance

Companies participating in the Congress are required to take out appropriate insurance.

If you would like to comment any of the items included in this proposal or any further suggestions, please contact:

EPE Association
Jessica Schmid
c/o VUB – IR – ETEC
Pleinlaan 2
B-1050 Brussels
Phone: 32 2 629 28 19
Fax: 32 2 629 36 20
E-mail: jessica.schmid@vub.ac.be

Local Secretariat
Rebecca Burns
Dept. of Electrical and Electronic Engineering
University of Nottingham
Nottingham
NG7 2RD
UK
E-mail: info@epe2011.com



SPONSORSHIP APPLICATION

We would like to sponsor at the following level

Company:

Address:

Zip Code:..... **City:**

Country:.....

Tel:

E-mail:.....

VAT N°

Contact Person:

Position:

Name that should appear on the booth front:.....

Request For Space:

Number of sqm **Preferred Booth[s]:**.....

Order N° (if special from your company, please attach) :

An invoice will be sent you.

On behalf of the Company, I consent and undertake to comply with the exhibition rules and my obligations to exhibit from the moment I sign this contract.

Signature & Company Stamp:

This form should be completed and returned as soon as possible to:

EPE Association
Jessica Schmid
c/o VUB – IR – ETEC
Pleinlaan 2
B-1050 Brussels
Phone: 32 2 629 28 19
Fax: 32 2 629 36 20
E-mail: jessica.schmid@vub.ac.be

Local Secretariat
Rebecca Burns
Dept. of Electrical and Electronic Engineering
University of Nottingham
Nottingham
NG7 2RD
UK
E-mail: info@epe2011.com



EXHIBITION APPLICATION

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Zip Code:..... **City:**

Country:.....

Tel:

E-mail:.....

VAT N°

Contact Person:

Position:

Name that should appear on the booth front:.....

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 Phone: 32 2 629 28 19
 Fax: 32 2 629 36 20
 E-mail: jessica.schmid@vub.ac.be

Local Secretariat
 Rebecca Burns
 Dept. of Electrical and Electronic Engineering
 University of Nottingham
 Nottingham
 NG7 2RD
 UK
 E-mail: info@epe2011.com



COMMITTEES AND ORGANIZATION

Local Conference Chairman:

Prof Patrick Wheeler, University of Nottingham, England
 Prof Philip Mawby, University of Warwick, England
 Dr Colin Oates, ALSTOM, Stafford

Local Conference Committee:

| Name | Affiliation |
|---------------------|----------------------------------|
| Tom Alexander | Emerson |
| Mike Barnes | University of Manchester |
| Roger Bassett | University of Warwick |
| Angus Bryant | Converteam |
| Alberto Castellazzi | University of Nottingham |
| Jon Clare | University of Nottingham |
| Roger Critchley | AREVA |
| David Drury | University of Bristol |
| Shankar Ekkanath | University of Sheffield |
| Steve Finney | University of Strathclyde |
| Martin Foster | University of Sheffield |
| Tim Green | Imperial College London |
| Nicholas Jenkins | University of Cardiff |
| Steve Jones | Semelab |
| Emil Levi | Liverpool John Moores University |
| Sean Loddick | Converteam |
| Adam McLoughlin | Rolls Royce |
| Phil Mellor | University of Bristol |
| Annette Muetze | University of Warwick |
| Patrick Palmer | University of Cambridge |
| Volker Pickert | University of Newcastle |
| Li Ran | University of Durham |
| Adrian Shipley | GE Aviation |
| Danielle Strickland | Aston University |
| Mark Sumner | University of Nottingham |
| Paul Taylor | Dynex |
| Alan Watson | University of Nottingham |
| Connel Williams | TRW |
| Ahmed Zobaa | University of Exeter |



GENERAL INFORMATION

CONFERENCE VENUE:

The ICC
Broad Street
Birmingham
United Kingdom
B1 2EA

DATES:

From August 30 to September 1, 2011

WEB SITE::

www.epe2011.com

TECHNICAL SECRETARIAT: Exhibition & Sponsorship

EPE Association

C/o Vrije Universiteit Brussel - IrW – ETEC
1050 Brussels, Belgium
Tel: +32 / (0)2 - 629.28.19. / Fax: +32 / (0)2 - 629.36.20.
E-Mail: jessica.schmid@vub.ac.be

LOCAL SECRETARIAT:

University of Nottingham

Rebecca Burns
Dept. of Electrical and Electronic Engineering
Nottingham
NG7 2RD
Email: info@epe2011.com

Hotel accommodation

Marketing Birmingham

Level 4, Millennium Point,
Curzon Street, Birmingham B4 7XG
Telephone +44 (0) 121 202 5115
Web site link: www.epe2011.com

WELCOME COCKTAIL:

Tuesday August 30, 2011
Exhibition Hall, ICC

GALA DINNER:

Wednesday August 31, 2011
National Motorcycle Museum

OFFICIAL LANGUAGE:

The official language of the Conference is English.
Simultaneous translation will not be provided



ORGANIZATION AND VENUE

The European Power Electronics and Adjustable Speed Drives community will gather in Birmingham, United Kingdom, from 30 August to 1 September 2011 to exchange views on research progresses and technological developments in the various topics described hereunder. The EPE 2011 conference is sponsored by the EPE Association and will be held in the International Convention Centre (ICC). Birmingham has been central to industry and the arts since the start of the industrial revolution, so it is an ideal place to learn more about the latest developments in the power electronics' field.

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 and adjustable speed drives.

TOPICS

In accordance with the European Commission's Action plan, the aim of energy policy seeks to enable the European Union to reduce greenhouse gases by at least 20%, to reduce energy consumption by 20%, and increase to 20% the share of renewable energies in energy consumption by 2020 (compared to the respective values in 1990). The demand for electricity is continuously growing and will continue to do so at a much faster rate than other energy sources. Today more than 20% of final energy consumption in the EU is electrical energy, but this is predicted to grow significantly in the next few decades. Efficient energy usage and increased generation of electricity from renewable sources are the main concerns for today's society. Power electronics systems and adjustable speed drives - also referred to as Energy Conversion and Conditioning Technologies (ECCT) - are the enabling and often only possible technologies to help us face these challenges. All fields of the electrical world will be affected by the required changes, starting from the generation of clean, CO₂-neutral electrical energy, up to the most remote applications in industry, households, transport systems and portable applications. To fit this changing environment, the EPE 2011 conference will address a full list of topics, especially highlighting smart grids and the integration of renewable energy, the automotive industry and the aerospace industry. The motto of this year's conference will be "Power Electronics and Adjustable Speed Drives: Towards the 20-20-20 target!"



LIST OF TOPICS EPE 2011

I. COMPONENTS AND SYSTEMS RELATED ISSUES

A. DEVICES, PACKAGING AND SYSTEM INTEGRATION

Topic 1: Active devices

- 1a. MOS controlled silicon power devices (e.g. IGBT, MOSFET)
- 1b. Silicon power diode and thyristor devices
- 1c. Monolithic integration, system on chip
- 1d. Wide bandgap power semiconductor devices (e.g. SiC, GaN, GaAs)
- 1e. Simulation, modelling and virtual prototyping
- 1f. Control and protection of power devices

Topic 2: Passive components, system integration & packaging

- 2a. Passive components and integrated passive components
- 2b. Materials and interconnection technologies
- 2c. Cooling, thermal management and thermal design
- 2d. Multichip module packaging technologies
- 2e. Reliability of components and integrated subsystems
- 2f. Simulation and modelling of integrated components and subsystems

Topic 3: Power system integration

- 3a. Modularity and standardization of converters
- 3b. Power electronic system integration methodology
- 3c. Stability and reliability of cascaded converters
- 3d. Integrated applied power systems
- 3e. EMC/EMI issues for integrated power systems, reliability issues

B. POWER CONVERTERS TOPOLOGIES AND DESIGN

Topic 4: Soft switching converters and control

- 4a. Soft switching converters: resonant, ZVS, ZCS
- 4b. Soft switching converters: circuits and control

Topic 5: Hard switching converters and control

- 5a. High power multilevel converters and voltage regulator modules
- 5b. Matrix converters
- 5c. Emerging topologies
- 5d. Failure tolerant systems or converters

C. MEASUREMENT AND CONTROL

Topic 6: Modulation strategies and specific control methods for static converter

- 6a. Converter control sets and modulation strategies
- 6b. Converter control, current/voltage control

Topic 7: Application of control methods to electrical systems

- 7a. Optimal control, robust control, non-linear control
- 7b. Fuzzy control, neuronal control
- 7c. Open and closed loop system control, fault handling strategies

Topic 8: Measurements and sensors

- 8a. Sensors and transducers
- 8b. Measurement methods and techniques
- 8c. Software for measurements and virtual instruments
- 8d. Estimation techniques
- 8e. System diagnoses



D. ELECTRICAL MACHINES AND DRIVE SYSTEMS

Topic 9: Motion control, robotics, special drives, haptics, communication in drive systems

- 9a. Servo drives; stepping and linear drives
- 9b. Electro-active systems
- 9c. Robotics and haptics
- 9d. Communications systems for drives, integration of MC, NC and PLC in drive systems
- 9e. Modelling, simulation and design methods of motion control systems

Topic 10: Electrical Machines

- 10a. Synchronous, permanent magnet synchronous and brushless d.c. motor
- 10b. Induction machines
- 10c. Switched reluctance machines
- 10d. Linear machines
- 10e. Integrated electrical machines

Topic 11: Adjustable speed drives

- 11a. General purpose a.c. and d.c. drives
- 11b. Converter machine/mains interactions
- 11c. Adjustable speed drive systems, Reliable and Fault-Tolerant drives
- 11d. Combined multi-motor drive systems

Topic 12: High performance drives

- 12a. DTC and other modulation strategies for high performance drives
- 12b. Advanced Control and other high performance drive systems issues
- 12c. Sensorless techniques

Topic 13: Energy efficiency; energy saving issues in system components

- 13a. Energy efficiency; energy saving issues in power electronics components
- 13b. Energy efficiency; energy saving issues in electrical machines and drives
- 13c. Special developments to achieve energy efficiency; energy savings

II. APPLICATIONS RELATED ISSUES

E. APPLICATIONS OF POWER ELECTRONICS IN GENERATION OF ELECTRICAL ENERGY, RENEWABLE ENERGY SYSTEMS, WIND, PV, TIDAL, WAVE, ETC...

Topic 14: Converters for rotating and linear generators

- 14a. Doubly fed generator control
- 14b. Full power generator converter control
- 14c. Fault ride through methods
- 14d. Excitation systems and their control
- 14e. Simulation and emulation of generator systems
- 14f. Reliability issues

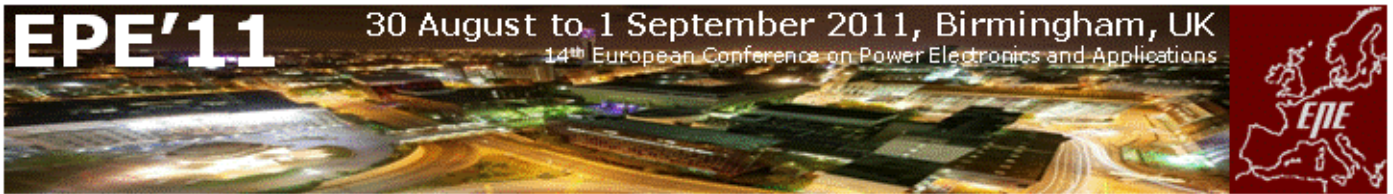
Topic 15: Non-rotating power generation and storage systems

- 15a. Fuel cell converters and their control
- 15b. Photovoltaic converters and their control
- 15c. Converters for energy storage and their control
- 15d. Reliability issues

F. APPLICATIONS OF POWER ELECTRONICS IN TRANSMISSION AND DISTRIBUTION OF ELECTRICAL ENERGY

Topic 16: Power electronics in transmission and distribution

- 16a. Microgrid control
- 16b. HVDC transmission
- 16c. FACTS (Incl. STATCOM, SVC) and distribution FACTS
- 16d. Active filtering and other advanced grid side converter control
- 16e. Low frequency harmonics and EMC (less than 9 kHz) mitigation



- 16f. Power electronic protection devices for transmission and distribution
- 16g. Reliability issues

G. APPLICATIONS OF POWER ELECTRONICS IN USERS DEVICES/PROCESSES

Topic 17: Power supplies

- 17a. Uninterruptible Power Supplies (UPS)
- 17b. DC Power Supplies (hard&soft switching)
- 17c. Distributed Power Supplies
- 17d. Voltage Regulated Modules (VRM)
- 17e. EMI & over-voltage protection
- 17f. Electronic ballasts and solid state lighting
- 17g. High power density system design
- 17h. Contactless Power Supply
- 17i. Power Factor Correction (PFC)

Topic 18: Electrical systems in Road Vehicles

- 18a. Electric propulsion systems for electrified vehicles
- 18b. Control strategies in hybrid vehicles
- 18c. Power converters for electrified vehicles
- 18d. On-Board energy management: fuel cells, storage, components, systems and control
- 18e. Communications and data transmission
- 18f. EMC related phenomena
- 18g. Modelling, simulation and design methods, reliability issues

Topic 19: Electrical systems in aerospace, space, surface and marine transport (not road)

- 19a. Power electronics in aerospace and space applications
- 19b. Rail vehicles
- 19c. Marine applications (Offshore and ships)
- 19d. On-Board energy management: generation (f.e. fuel cells), storage, components, systems and control
- 19e. Communications and data transmission
- 19f. EMC related phenomena
- 19g. Modelling, simulation and design methods, reliability issues

Topic 20: Industry specific energy conversion and conditioning technologies

- 20a. Energy conversion and conditioning technologies in the industry (cement, steel, paper, textile, mining, etc...)
- 20b. Power electronics and drives in buildings and household applications, including lighting and professional devices
- 20c. Power electronics and drives for low cost applications
- 20d. Electroheat and power electronics
- 20e. Reliability issues, diagnostics

Topic 21: Energy conversion and conditioning technologies in physics research and related applications

- 21a. Power converters for particle accelerators
- 21b. Application of power electronics to pulsed power (f.e. nuclear fusion research, microwaves, etc...)
- 21c. Other related applications

H. EDUCATION IN ELECTRICAL ENGINEERING

Topic 22: Education in electrical engineering

- 22a. Education methodology
- 22b. Education tools and e-learning
- 22c. Simulation software and design tools
- 22d. Education policy in Europe

EPE ASSOCIATION CONFERENCES

Previous Editions:

| | | | |
|---------|----------------------------|---------------------------------|-------|
| . 1985: | Brussels (Belgium). | N ^o of participants: | 650 |
| . 1987: | Grenoble (France). | N ^o of participants: | 750 |
| . 1989: | Aachen (Germany). | N ^o of participants: | 850 |
| . 1991: | Firenze (Italy). | N ^o of participants: | 1.000 |
| . 1993: | Brighton (United Kingdom). | N ^o of participants: | 750 |
| . 1995: | Seville (Spain). | N ^o of participants: | 800 |
| . 1997: | Trondheim (Norway). | N ^o of participants: | 975 |
| . 1999: | Lausanne (Switzerland). | N ^o of participants: | 1040 |
| . 2001: | Graz (Austria). | N ^o of participants: | 850 |
| . 2003: | Toulouse (France). | N ^o of participants: | 1.000 |
| . 2005: | Dresden (Germany). | N ^o of participants: | 805 |
| . 2007: | Aalborg (Denmark). | N ^o of participants: | 875 |
| . 2009: | Barcelona (Spain). | N ^o of participants: | 1130 |

Statistics from previous EPE conferences:

