

Registration (Fax Reply)

To: ECPE e.V.
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Register before **15 June 2007**

Participation fee:

- .. **€ 480,-***
- .. **€ 380,-*** for university members
The fee includes dinner, lunch, coffee/soft drinks and seminar handouts.
- .. **€ 120,-*** for students (shortened seminar package)

With the confirmation of seminar registration you will receive the invoice. (* plus 19 % VAT)
In case of cancellation after 15 June 2007 or non-attendance 50 % of the participation fee are payable.

Three participants from each ECPE member company free of charge. Allocation in sequence of registration.

Sender:

title, given name, name

company, department

full address

phone, fax

e-mail

date, signature

Organisational information

Organiser: ECPE e.V.
90443 Nürnberg, Germany
www.ecpe.org

Chair of seminar: Prof. R. W. De Doncker
Prof. D.U. Sauer,
RWTH Aachen University
Thomas Harder, ECPE e.V.

Organisation: Ingrid Bollens, ECPE e.V.
+49 (0)911 / 81 02 88 – 10
ingrid.bollens@ecpe.org

Place of seminar: Dorint Novotel Aachen City,
Peterstrasse 66,
52062 Aachen, Germany



Further information (hotel list and maps) will be provided after registration.



**ECPE European Center for
Power Electronics e.V.**

Seminar Energy Storage Technologies

**27 – 28 June 2007
Dorint Novotel,
Aachen, Germany**

in cooperation with



**EUROPEAN
POWER
ELECTRONICS
AND
DRIVES**

**RWTHAACHEN
UNIVERSITY**

Introduction

ECPE Seminar Energy Storage Technologies

27 – 28 June 2007
Aachen, Germany

Energy storage systems become more and more important in various applications. Presently, the introduction of storage systems in hybrid electric vehicles and in power grids is widely discussed. Thus, in-depth knowledge on the availability and the technology of storage systems is essential for designing future innovative solution. But, storage systems of any kind will be always integrated into the application via power electronics. Power electronics is responsible for power transfer from and to the storage technology including efficient charging strategies but beyond this basic function they have additional functions and impact. Additional functions are mainly those which give added value to the power quality of the grid or the end user such as supplying reactive power or compensation of flickers and harmonics. But also the harmonics and ripples from the power electronics affect the lifetime of the storage systems and are therefore of great relevance.

This seminar bridges the world of power electronics and the world of storage systems. Finally, energy storage systems are always a combination of the storage technology itself and the power electronic interface which finally defines its properties with regard to the application. This seminar is focusing on storage systems in vehicles and in modern power grids. Invited experts on storage technologies, power electronics and applications will present the challenges and opportunities for storage systems with a clear focus on the interfaces between storage technologies, power electronics and applications.

The seminar will be held in Aachen and is organised by ECPE and Institute for Power Electronics and Electrical Drives / RWTH Aachen University.

All presentations and discussions will be in English.

Programme

Wednesday, 27 June 2007

- 11.30 **Start of Registration and Light Lunch**
- 12.30 **Opening, Welcome Address**
T. Harder, ECPE
R.W. De Doncker/D.U. Sauer,
RWTH Aachen University
- 12.45 **Storage systems in the automotive sector including hybrid electric cars**
N.N., Volkswagen AG (D)
- 13:30 **Storage systems in stationary applications for an increase of power quality**
B Heyder, EnBW Energie Baden-Württemberg (D)
- 14:15 **Classification of storage technologies with regard to the requirements on power electronics**
R.W. De Doncker; RWTH Aachen University (D)
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- 15:00 Coffee Break
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- 15:30 **Power electronics and storage systems - an unbeatable team for power supply and power quality solutions**
P. Lundberg, ABB Sweden (SE)
- 16:15 **Flywheel energy storage systems**
F. Thoolen, E. Smits, CCM (NL)
- 17:00 End of 1st day's technical programme
- 18:00 **Guided city tour**
Meeting point: lobby Dorint Novotel
- 19:30 **Dinner** at restaurant of Dorint Novotel
Peterstrasse 66, 52062 Aachen
Phone: (+49)241/51590

Programme

Thursday, 28 June 2007

- 8:30 **Double-layer capacitors - technologies and applications**
P. Barrade, EPFL Lausanne (CH)
- 9:15 **Compressed air storage systems**
F. Crotogino, KBB Underground Technologies (D)
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- 10:00 Coffee Break
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- 10:30 **Pumped hydro power plants with controllable pumps**
G. Möhlenkamp, Convertteam GmbH (D)
- 11:15 **Lithium-ion batteries for stationary and mobile applications**
J.-M. Cocciantelli, Saft (F)
- 11:15 **Lead-acid batteries for stationary and traction applications**
N.N.
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- 12:45 **Lunch**
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- 13:45 **Simulation models and battery monitoring**
D. U. Sauer, RWTH Aachen University (D)
- 14:45 **End of technical programme and transfer to Institute for Power Electronics and Electrical Drives / RWTH Aachen University**
- 15:15 **Lab tour**
- 16:15 End