

## Registration (Fax Reply)

To: European Center for Power Electronics e.V.  
Att.: Ingrid Bollens

Fax: +49 (0)911 / 81 02 88 – 28

Register before **April 22, 2005**

**Participation fee:** €480,-- \* plus 25% Danish VAT  
€380,-- for university members  
The fee includes dinner, lunch  
and coffee/soft drinks, seminar  
handouts. With the confirmation  
of seminar registration you will  
receive the invoice.

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

Sender:

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title, given name, name

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company, department

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full address

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phone, fax

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e-mail

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date, signature

## Organisational information

Organiser: ECPE e.V.  
D-90443 Nuremberg  
www.ecpe.org

Chair of seminar: Frede Blaabjerg, Aalborg University  
Thomas Harder, ECPE

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

Place of seminar: Aalborg University  
Fibigerstraede 16,1.108  
9220 Aalborg East, Denmark

Aalborg University: Birthe Johansen  
+45 9635 9254, bj@iet.aau.dk

### How to reach Aalborg University, Denmark

Airport is Aalborg. Connecting flights from Copenhagen  
and Billund. It takes about 15 minutes from Aalborg airport  
to the city center and about 20 minutes to Aalborg  
University by taxi.

By car: see map below.



Taxa tlf.: 98 10 10 10

By motorway (E45) take exit 26  
by Th.Sauersvej/Egensevej

- 1 Kroghstræde/Myrdalstræde
- 2 Fibigerstræde
- 3 Pontoppidanstræde
- 4 Fredrik Bajers Vej
- 5 Langagervej
- 6 Sohngårdsholmsvej
- 7 Badehusvej/Strandvejen
- 8 Gl. Torv/Nytorv (Studen terhuset og Tinghuset, Østeraaagade, Bispensgade)
- 9 Niels Jernes Vej (NOVI)

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



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

# Advanced Power Conversion-Concepts for Motor Drives

**April 27-28, 2005  
at Aalborg University  
Denmark**

**ECPE Seminar  
in cooperation with  
Aalborg University**

## Introduction

### ECPE Advanced Power Conversion-Concepts for Motor Drives

**Seminar**  
April 27-28, 2005  
Aalborg University, Denmark

The power electronics technology is necessary for adjustable speed drives (ASD) and in the last 30 years the development has been significant. The key drivers are energy saving, automation and transport systems. New applications are becoming attractive too like automotive systems, renewable energy systems and last but not least the appliance systems. The main types of adjustable speed drives have been industrial drives where the competition between many players has been strong and pushed the technology to have a high power density with high performance with still a lower price. Also regulations for EMC have strengthened the drive system in a still harsher environment. This ECPE seminar will focus on power conversion technology for different key applications of adjustable speed drives and discuss it in a component and system context.

We are presenting some of these trends including emerging technologies and new applications. The goal of the seminar is to offer high level education and information. The presentations include tutorials, where some new issues are discussed in detail, and shorter technical papers that convey state-of-the-art technical information.

Prof. Frede Blaabjerg (Aalborg University, DK) will chair the seminar together with Mr. Thomas Harder (ECPE). All presentations and discussion will be in English.

## Program

### Wednesday, April 27, 2005

- 11:00 Venue and Registration  
12:00 *Lunch*  
12:45 Opening  
**T. Harder** (ECPE)  
Welcome address by host organisation  
**J.K. Pedersen** (Aalborg University)  
Introduction to the seminar  
**F. Blaabjerg** (Aalborg University)
- Large Power Drives – New performance and application**
- 13:15 Comparison of Medium Voltage Drives for Industry Applications  
**S. Bernet** (TU Berlin, Germany)
- 13:50 Power Electronics in Railway Applications  
**M. Steiner**  
(Bombardier Transportation, Germany)
- 14:25 Softswitching better for medium-voltage multi-level converters?  
**R. De Doncker**, (RWTH Aachen, Germany)
- 15:00 *Coffee break*
- 15:30 HVDC transmission and off-shore variable-speed drives just merged  
**P. C. Kjaer**  
(PCK Consultancy ApS, Denmark)
- 16:05 Series connecting and paralleling of power electronic building blocks  
**D. Schreiber** (Semikron Elektronik GmbH & Co. KG, Germany)
- 16:40 Recent Developments of High Power Converters and Applications  
**P. Barbosa** (ABB Switzerland Ltd.)
- 17.15 *End*
- 18.30 *Visit “Aalborg Tower”*
- 19:30 *Dinner at “Skydepavillonen” next to Tower*

## Program

### Thursday, April 28, 2005

- Industrial drives – towards lower price with better performance**
- 08:30 Adjustable speed drives – overview and trends  
**F. Blaabjerg** (Aalborg University, Denmark)
- 09:05 New emerging power converter solutions for ASD  
**J. W. Kolar** (ETH Zurich, Switzerland)
- 09:40 Modularization and integration of advanced ASD  
**P. Thoenes**,  
(Danfoss Drives A/S, Denmark)
- 10:15 *Coffee break*
- 10:45 Flexible AC Drives as Key Components in System Solutions  
**G. Heinemann** (Siemens AG, Germany)
- 11:20 Harmonic Mitigation Technique – A need for system understanding to reduce cost  
**S. Hansen**  
(Danfoss Drives A/S, Denmark)
- 12:00 *Lunch*
- Appliance applications – A break through for low power drives**
- 13:00 Integrated design for low-cost low-power drives  
**J. Jacobsen**,  
(Grundfos Management A/S, Denmark)
- 13:35 New technologies for integrating ASD in appliance  
**M. J. Youn**, (KAIST, Korea)
- 14:10 *Coffee break*
- 14:30 *Lab visit at Aalborg University*
- 16:00 *End*