

Registration (Fax Reply)

To: ECPE e.V.
Att.: Ingrid Bollens

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Register before **1 April 2008**

Participation fee:

.. €480,-* for industry

.. €380,-* for universities

The fee includes the seminar dinner, lunch, coffee/soft drinks and handouts.

With the confirmation of seminar registration you will receive the invoice. 50 % discount for ECPE Member Companies

Number of participants is limited to 35 attendees.

Sender:

title, given name, name

company, department

full address

phone, fax

e-mail

date, signature

Organisational information

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

Course instructor: Dr. Eckart Hoene,
Fraunhofer Institute IZM (D)
Dr. Jacques Laeuffer (F)

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

Place of seminar: Helsinki Congress Paasitorni
Paasivuorenkatu 5 A
FI – 00530 Helsinki



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



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

ECPE Tutorial

EMC in Power Electronics

**8 – 9 April 2008
in Helsinki
Finland**

Introduction

ECPE Tutorial “EMC in Power Electronics”

8 – 9 April 2008
Helsinki, Finland

Advantages in semiconductor technology drive power electronics to higher efficiencies and compact systems designs. This progress comes along with increasing effort to comply with EMC requirements. Integration as a response to the market demands intensifies the challenges. With dense placement electromagnetic coupling between components raises influence on system behavior. The design become more complex and leads to significantly higher development costs.

The EMC in Power Electronics tutorial is a response to the increasing importance of EMC. It provides an overview on EMC phenomena and introduces methodologies to handle EMC questions. The tutorial is a supplement to the EMC seminar and intended for the training of young engineers and engineers from neighboring disciplines.

The course instructors of the EMC tutorial are Dr. Eckart Hoene, Fraunhofer Institute IZM, Germany and Dr. Jacques Laeuffer, France.
All presentations and discussions will be in English.

Programme

Tuesday, 8 April 2008

9:00 *Begin of registration*

10:00 **Welcome, Opening**

10:15 **Introduction**

- Overview on EMC phenomena,
 - Examples of problems
- J. Laeuffer

11:00 **Semiconductors as interference source**

- Calculation of generated interference
- E. Hoene

11:45 **Conducted differential mode interference**

J. Laeuffer

12:15 *Lunch*

13:15 **Design of differential mode filters and component placement**

J. Laeuffer

14:00 **Conducted common mode interference**

E. Hoene

14:45 **Design of common mode filters and components placement**

E. Hoene

15:45 *Coffee break*

16:15 **Propagation of power along circuits**

J. Laeuffer

17:00 Wrap up 1st day

17:30 End

19:30 Dinner

Programme

Wednesday, 9. April 2008

9:00 Open questions from 1st day

9:15 **EMC Design of drive systems**

- inverter layout, communication, sensors,
 - power cables, shielding
- E. Hoene

10:15 *Coffee*

10:45 **Propagation of power inside components**

J. Laeuffer

11:15 **Passive filter components design**

- dimensioning inductors
 - soft magnetic materials
 - residual currents
- E. Hoene

12:15 *Lunch*

13:30 **Radiated emissions**

J. Laeuffer

14:45 Wrap up tutorial

15:30 End