

## Registration (Fax Reply)

To: ECPE e.V.  
Att.: Ingrid Bollens, [Ingrid.bollens@ecpe.org](mailto:Ingrid.bollens@ecpe.org)  
Please **e-mail** a scanned copy of the completed form or  
send a fax to: +49 (0)911 / 81 02 88 – 28

Register before **16 February 2011**

### Participation fee:

- ☐ € 530,- \* for industry
- ☐ € 395,- \* for universities/institutes
- ☐ € 120,- \* for students (shortened workshop package)

The fee includes dinner, lunch, coffee/soft drinks and a CD with the workshop presentations. A printed version of the workshop handout is available on request (€ 42,-\*).

With the confirmation of registration you will receive the invoice (\*plus VAT). In case of cancellation after 16 February 2011 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 Nuremberg, Germany  
[www.ecpe.org](http://www.ecpe.org)

**Chairman** Dr. Eckart Hoene  
Fraunhofer IZM  
Dipl.-Phys. Thomas Harder  
ECPE e.V.

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

**Workshop venue** Sorat Hotel Ambassador  
Bayreuther Str. 42-43,  
10787 Berlin, Germany



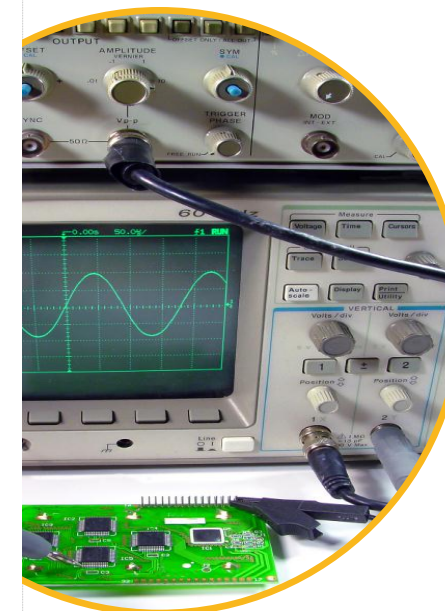
Further information (hotel list and maps) will be provided after registration.



## ECPE Workshop

## Parasitic Effects in Power Electronics

**23 – 24 February 2011**  
Sorat Hotel  
Ambassador  
Berlin, Germany



in cooperation with

Fraunhofer  
Institut  
Zuverlässigkeit und  
Mikrointegration



### Parasitic Effects in Power Electronics

23 – 24 February 2011  
Berlin, Germany

Parasitic effects are often the reason of unexpected behaviour of power electronic circuits, for example for higher losses, ringing effects and EMC problems. Handling them is cumbersome, as the location of parasitic capacities or inductances is not obvious. This seminar gives an overview about second and third order phenomena, mostly not documented in data sheets and seldom mentioned in textbooks. Solutions and prediction methods are discussed. Besides of the speakers the audience is invited to contribute own experience to complete the scope.

The workshop is chaired by Dr. E. Hoene (Fraunhofer IZM) and T. Harder (ECPE). All presentations and discussions will be in English.

## Programme

### Wednesday, 23 February 2011

- 10:00 Start of Registration**
- 10:40 Welcome, Opening**  
E. Hoene, Fraunhofer IZM  
T. Harder, ECPE e.V.
- 11:00 Introduction: Overview on Parasitic Effects**  
E. Hoene, Fraunhofer IZM
- 12:00 Lunch**
- 13:00 Power Circuit Design for Clean Switching and its Potential for Power Semiconductors**  
R. Bayerer, Infineon Technologies
- 14:00 Module Design and Paralleling Chips**  
A. Wintrich, Semikron
- 14:45 Coffee Break**
- 15:15 Power Module with Reduced Radiated Emissions**  
A. Domurat-Linde, Fraunhofer IZM
- 16:00 Using Stray Elements to Reduce EMI**  
J.-L. Schanen, Grenoble Inst. of Techn. (G2ELab)
- 16:45 PEEC-Based Modelling of EMI Filters including Parasitics and Geometrical Arrangement of Filter Elements**  
I. Kovacevic, T. Friedli, J.W. Kolar; ETH Zurich
- 17:15 End of 1<sup>st</sup> day**
- 19:30 Dinner**

## Programme

### Thursday, 24 February 2011

- 9:00 Open questions from 1<sup>st</sup> day**
- 9:15 Overview of Parasitic Inductivities**  
P. Mourick
- 10:00 Overview of Parasitic Oscillations**  
P. Mourick
- 10:45 Coffee Break**
- 11:15 Parasitic Oscillations in a Flyback Converter**  
S. Zeltner, Fraunhofer IISB
- 11:45 Magnetic Saturation of High Power Medium Frequency Transformers due to Semiconductor On-State Voltage Drop and Switching Time Tolerances**  
G. Ortiz, J. Muehlethaler, J.W. Kolar, ETH Zurich
- 12:15 Lunch**
- 13:30 Parasitic Capacities of Inductors**  
S. Weber, Fuss-EMV
- 14:00 Optimization of DC-link Capacitors**  
W. Grimm, Epcos AG
- 14:30 Discussion**  
Suggestion: Do we need Evaluation Boards for Switching Cells?
- 15:30 End of Workshop**