

Registration (Fax Reply)

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

Fax: +49 (0)911 / 81 02 88 – 28

Register before **23rd June 2010**

Participation fee:

- €480,- for industry
- €380,- for universities
- €150,- for students/Ph.D.

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

With the confirmation of seminar registration you will receive the invoice. 50 % discount for ECPE Member Companies. In case of cancellation after 23rd June 2010 or non-attendance 50 % of the participation fee are payable.

Number of participants is limited to 35 attendees.

Sender:

title, given name, name

company, department

full address

phone, fax

e-mail

date, signature

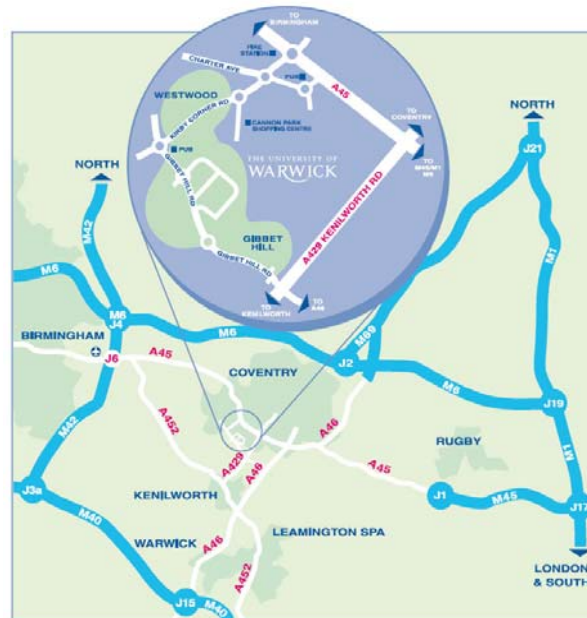
Organisational information

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

Course instructor: Prof. Phil Mawby,
University of Warwick
Prof. Dieter Silber,
University of Bremen
Prof. Florin Udrea
University of Cambridge

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

Place of seminar: University of Warwick
Gibbet Hill Road
Coventry CV4 7AL
United Kingdom



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



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

ECPE Tutorial

Power Semiconductor Devices & Technologies

**30th June – 1st July 2010
University of Warwick
Coventry, United Kingdom**

Introduction

ECPE Tutorial “Power Semiconductor Devices & Technologies”

30th June – 1st July 2010
Coventry, United Kingdom

The tutorial starts with the presentation of relevant basic principles of modern power semiconductor devices:

Blocking capability of the devices, unipolar and bipolar current transport and gate control will be discussed. Diodes, MOS transistors (including Cool MOS) and IGBTs will be treated in detail including their dynamical properties, safe operation and temperature limits. As a consequence, the benefits expected from wide band gap semiconductors (SiC, GaN) will be discussed.

This introductory part is also the base for the next part devoted to power device models and the increasing role of virtual prototyping in power electronics.

The following chapters will demonstrate the state-of-the art and development lines of monolithic smart power devices and intelligent IGBT/MOSFET control circuits. Finally a short overview of hybrid power electronic integration and the most relevant aspects (cooling, reliability and EMC problems) will be presented.

This tutorial is aimed at engineers who are engaged in power electronics and want to improve their knowledge and understanding of power devices including the developments expected in near future.

The course instructors are Prof. Phil Mawby, University of Warwick, Prof. Dieter Silber, University of Bremen and Prof. Florin Udrea, University of Cambridge.

All presentations and discussions will be in English.

Programme

Wednesday, 30 June 2010

- 9:30 *Start of registration*
- 10:00 Welcome, Opening**
P. Mawby, University of Warwick,
T. Harder, ECPE e.V.
- 10:15 **General Requirements on Power Devices**
D. Silber
- 11:00 **Basic Device Physics**
P. Mawby
- 12:30 *Lunch*

- 13:30 **Diodes, BJT, Thyristors**
D. Silber
- 15:00 **Power MOSFETs and Super Junction Devices:**
P. Mawby
- 16:00 *Coffee Break*

- 16:30 **Wide Bandgap Devices**
P. Mawby
- 17:30 End of 1st Day**
- 19:30 *Dinner*

Programme

Thursday, 1 July 2010

- 09:00 **Insulated Gate Bipolar Transistor (IGBT)**
F. Udrea
- 10:00 *Coffee Break*

- 10:30 **Power Integrated Circuits**
F. Udrea
- 12:30 *Lunch*

- 13:30 **Modules**
D. Silber
- 15:00 *Coffee Break*

- 15:30 **Device Models**
P. Mawby
- 16:30 *Wrap up, Final discussions*
- 17:00 End of Tutorial**