

Registration (Fax Reply)

To: ECPE e.V.
Att.: Ingrid Bollens, 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 **22 June 2011**

Participation fee:

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

The fee includes dinner, lunch, coffee/soft drinks and hand-outs.

With the confirmation of registration you will receive the invoice. 50 % discount for ECPE Member Companies. In case of cancellation after 22 June 2011 or non-attendance 50 % of the participation fee are payable.

Sender:

Title, given name, name

Company, department

Full address

Phone, fax

E-mail

Date, signature

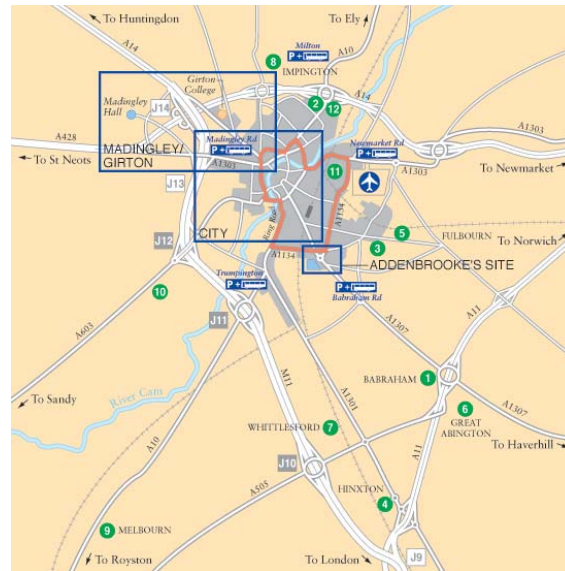
Organisational information

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

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

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

Venue University of Cambridge
CAPE Building
9, J.J. Thompson Avenue
Cambridge, CB3 0FA, UK



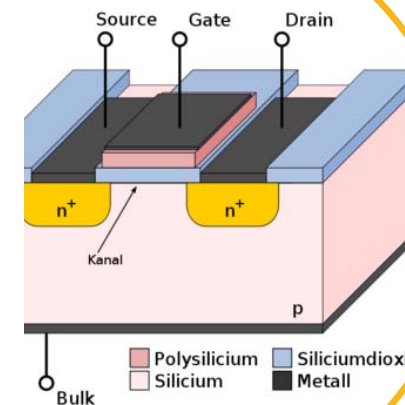
Further information (hotel list and maps) will be provided after registration.



ECPE
European Center for
Power Electronics e.V.

ECPE Tutorial

Power Semiconductor Devices & Technologies



27 – 28 June 2011
University of Cambridge
Cambridge, UK

Power Semiconductor Devices & Technologies

27 – 28 June 2011
Cambridge, UK

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. Florin Udrea, University of Cambridge, Prof. Phil Mawby, University of Warwick and Prof. Dieter Silber, University of Bremen.

All presentations and discussions will be in English.

Programme

Monday, 27 June 2011

- 9:30** **Start of Registration**
- 10:00** **Welcome, Introduction**
F. Udrea, University of Cambridge
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

Tuesday, 28 June 2011

- 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** **Power Modules**
D. Silber
- 15:00** Coffee Break
- 15:30** **Device Models**
P. Mawby
- 16:30** **Wrap up, Final discussion**
- 17:00** **End of Tutorial**