

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 **12 March 2012**

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 (*plus VAT). 50 % discount for ECPE Member Companies.

In case of cancellation after 12 March 2012 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. José Millan,
Centro Nacional de Microelectronica
(CNM), Barcelona
Prof. Dieter Silber
University of Bremen
Prof. Florin Udrea,
University of Cambridge

Organisation Ingrid Bollens, ECPE e.V.
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Venue UAB-Casa Convalescència
St. Antoni Maria Claret, 171
08041 Barcelona, Spain

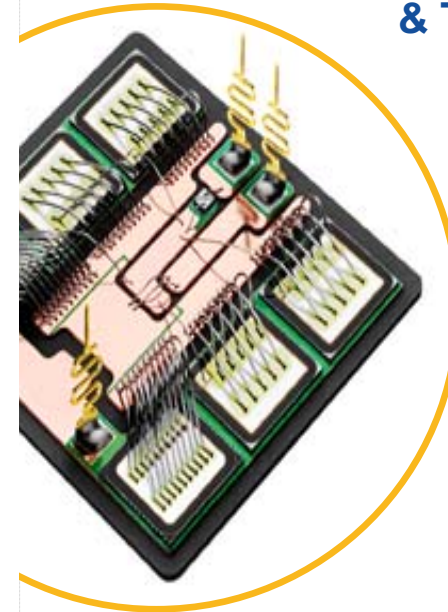


Further information (hotel list and maps) will be provided after registration.



ECPE Tutorial

Power Semiconductor Devices & Technologies



19 – 20 March 2012
Casa Convalescència
Barcelona, Spain

Power Semiconductor Devices & Technologies

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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. José Millan, Centro Nacional de Microelectronica, Prof. Dieter Silber, University of Bremen, Dr. Peter Tuerkes, Infineon Technologies and Prof. Florin Udrea, University of Cambridge.

All presentations and discussions will be in English.

Programme

Monday, 19 March 2012

- 9:30 Start of Registration**
10:00 Welcome, Introduction
J. Millan, Centro Nacional de Microelectronica (CNM)
T. Harder, ECPE e.V.
- 10:15 General Requirements on Power Devices**
D. Silber
- 10:50 Basic Device Physics**
D. Silber

12:20 Lunch

- 13:30 Si Diodes**
J. Millan
- 14:15 Si Power MOSFETs and Super Junction Devices**
F. Udrea

15:25 Coffee Break

- 16:00 Insulated Gate Bipolar Transistor (IGBT)**
F. Udrea
- 17:00 End of 1st Day**

20:30 Dinner

Programme

Tuesday, 20 March 2012

- 09:00 WBG Semiconductor Devices (SiC and GaN)**
J. Millan
- 10:15 Coffee Break**
- 10:45 Power Integrated Circuits**
F. Udrea
- 12:00 Lunch**
- 13:00 Device Models**
P. Tuerkes
- 15:00 Coffee Break**
- 15:30 Power Modules**
D. Silber
- 16:30 Wrap up, Final discussion**
- 17:00 End of Tutorial**