

Registration (Fax Reply)

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

Fax: +49 (0)911 / 81 02 88 – 28

Register before **2 September 2009**

Participation fee:

- .. €530,-*
- .. €395,-* for university members

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

- .. €120,-* for students (shortened seminar package)

With the confirmation of seminar registration you will receive the invoice. (* plus VAT)

In case of cancellation after 2 September 2009 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 Nürnberg, Germany
www.ecpe.org

Chair of seminar: Prof. A. Lindemann, Otto-von-Guericke-University Magdeburg
Prof. J. Millan, CNM Barcelona
Thomas Harder, ECPE e.V.

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

Place of seminar: Residencia d'Investigadors
Carrer de l'Hospital 64
088001 Barcelona, Spain



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



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

3rd SiC User Forum Potential of SiC and other Wide Bandgap Semiconductors in Power Electronic Applications

**10 -11 September 2009
Residencia d'Investigadors
Barcelona, Spain**

in cooperation with



**EUROPEAN
POWER
ELECTRONICS
AND
DRIVES**



**OTTO VON GUERICKE
UNIVERSITÄT
MAGDEBURG**

Introduction

3rd SiC User Forum Potential of SiC and other Wide Bandgap Semiconductors in Power Electronic Applications 10 – 11 September 2009 Barcelona, Spain

After the previous Silicon Carbide (SiC) User Forums organised by ECPE, new power electronic systems with wide bandgap components and new devices have been reported, which are based on SiC or recently also on GaN (Gallium Nitride) material. Time has thus come to continue the exchange between experts involved in converter and device development: The 3rd User Forum will focus on typical power electronic systems the use of wide bandgap – mainly SiC – semiconductors is highly promising for. Application examples come from electric drives including converters for transportation and power supplies including inverters for renewable energy. Additionally insights in recent SiC and GaN material and device technology — which is the base for future system development — will be given. International renowned experts have been invited to give an overview in keynotes, to in depth explain their research and development work in technical presentations and to share their knowledge in discussion forums as an indispensable part of the event.

The SiC User Forum is this way intended as a platform to share experience and ideas, to discuss and find out which power electronic systems are predestinated for usage of wide bandgap devices and how to appropriately design-in those novel, almost ideal but also challenging components.

SiC User Forum 2009 is scheduled to take place right after EPE conference 2009 in Barcelona. Prof. Andreas Lindemann (Otto-von-Guericke-University, Magdeburg, Germany) will chair the event together with Prof. José Millan (Centro Nacional de Microelectronica) and Mr. Thomas Harder (ECPE). All presentations and discussions will be in English.

Programme

Thursday, 10 September 2009

- 12:00 **Start of Registration and Light Lunch**
13:00 **Opening, Welcome Address**
L. Lorenz, T. Harder, ECPE
13:15 **3rd SiC User Forum: Motivation and Overview**
A. Lindemann, Uni Magdeburg, D
13:30 **Welcome of the host CNM**
J. Millan, CNM, E

SiC Power Electronic Systems

- 13:45 **Keynote:**
SiC Activities in Japan
H. Okumura, ESERL-AIST, JP

14:30 Coffee Break

Drives and Transportation

- 15:00 **Compact Drive Converter with SiC JFETs and Sinusoidal Output Voltages**
A. Orellana, Univ. Erlangen-Nuremberg/Daimler, D
15:30 **What is the Impact of Using SiC Components in Traction Drives: Advantages, Gains and Open Issues?**
M. Mermet-Guyennet, Alstom Transport, F
16:00 **Current Limiting Devices in SiC**
D. Tournier, INSA Lyon, F

16:30 Coffee Break

Power Supply

- 17:00 **Switched Mode Power Supplies with SiC Devices**
A. Stiedl, Emerson Network Power, A
17:30 **Converters for Renewable Energy with SiC Devices—Impact of Transistors and Diodes**
P. Zacharias, University Kassel, D
18:00 **Aircraft Application Needs, First Results on a High temperature 4 kW Power Core**
R. Meuret, Hispano-Suiza, F
18:30 End of 1st Day's Programme
19:00 Optional: Guided City Tour
20:30 **Dinner** at Restaurant "El Mussol"
Casp 19, Barcelona

Programme

Friday, 11 September 2009

- 8:30 **Forum:** *Moderator:* A. Lindemann
Panelist: B. Burger, Fraunhofer ISE, D;
J. Jordan, University of Valencia, E,
J. W. Kolar, ETH Zurich, CH, K.-M. Mayer, Robert Bosch GmbH, D,
- Introduction
 - System Review
 - Statements

Applications Aspects of High Bandgap Semiconductor Device Technology

- 9:30 **Keynote: Basic Facts Concerning the Beneficial Application of Wide Bandgap Devices - an Overview**
D. Silber, N. Kaminski, University Bremen, D

10:15 Coffee Break

SiC Device Technology

- 10:45 **Packaging for SiC-Power Electronic Building Blocks - Results from the European Project HOPE**
K. Kriegel, Siemens, D
11:15 **SiC Material and Related Devices**
G. Mills, Cree, USA
11:45 **SiC Power Devices – Semiconductors and Packages**
P. Friedrichs, SiCED, R. Rupp, Infineon, D

12:15 **Lunch**

- 13:15 **GaN Material for Power Electronics**
A. Dadgar, Azzurro, D
13:45 **State of the Art GaN HV Technology - Beyond Single Device On-chip**
E. Sönmez, MicroGaN, D
14:15 **Forum:** *Moderator:* A. Lindemann,
previous panelist plus J. Millan, CNM, E.,
D. Sheridan, Semisouth, USA, S. Coffa,
STMicroelectronics, I, M. Reimark, TranSiC, SE,
L. Merlin, Vishay, I
- Introduction
 - Device Review
 - Statements
- Wrap up: A. Lindemann
16:00 End of Programme