

## Registration (Fax Reply)

To: ECPE e.V.  
Att.: Sabrina Haberl, [sabrina.haberl@ecpe.org](mailto:sabrina.haberl@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 **25 August 2011**

### Participation fee:

- ☐ €530,- for industry
- ☐ €395,- for universities/institutes
- ☐ €120,- for students/PhDs  
(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. In case of cancellation after 25 August 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

F09-030811

## Organisational information

**Organiser** ECPE e.V.  
90443 Nuremberg, Germany  
[www.ecpe.org](http://www.ecpe.org)

**Chairman** Prof. Andreas Lindemann  
Otto-von-Guericke-University  
Magdeburg  
Prof. Phil A. Mawby  
University of Warwick  
Dipl.-Phys. Thomas Harder  
ECPE e.V.

**Organisation** Sabrina Haberl, ECPE e.V.  
+49 (0)911 / 81 02 88 – 13  
[sabrina.haberl@ecpe.org](mailto:sabrina.haberl@ecpe.org)

**Venue** The ICC  
Broad Street  
Birmingham  
United Kingdom  
B1 2EA

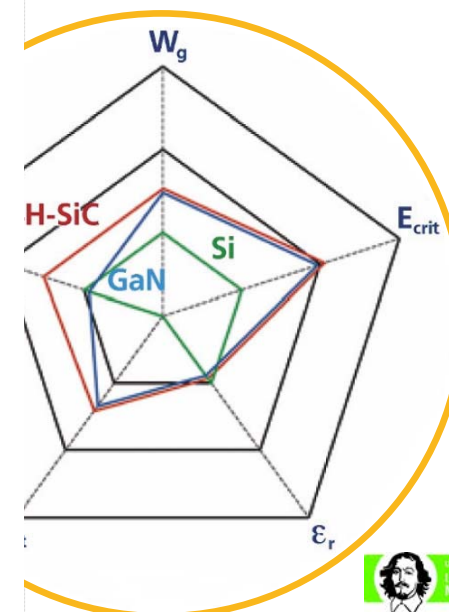


Further information (hotel list and maps) will be provided after registration.



## ECPE SiC & GaN User Forum

### Potential of Wide Bandgap Semiconductors in Power Electronic Applications



1 - 2 September 2011  
Birmingham, U.K.

in cooperation with



THE UNIVERSITY OF  
WARWICK



## ECPE User Forum

### SiC & GaN User Forum - Potential of Wide Bandgap Semiconductors in Power Electronic Applications

1 - 2 September 2011  
Birmingham, U.K.

After the previous Silicon Carbide (SiC) or Wide Bandgap Semiconductor User Forums organised by ECPE, new power electronic systems with wide bandgap components and new devices have been reported in the areas of research and also commercially on the market. They use SiC, which in the meantime has reached a high level of maturity, or recently also GaN (Gallium Nitride) material. Time has thus come to seize on this recent development and to continue the exchange between experts involved in converter and device development:

The 4<sup>th</sup> ECPE User Forum will focus on typical power electronic systems, the use of wide bandgap semiconductors is highly promising for. Application examples will 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 & GaN 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 & GaN User Forum 2011 is scheduled to take place right after EPE conference 2011 in Birmingham. Prof. Andreas Lindemann (Magdeburg University, Germany) will chair the event together with Prof. Phil A. Mawby (University of Warwick) and Mr. Thomas Harder (ECPE).

## Programme

### Thursday, 1 September 2011

13:30 Light Lunch

14:00 Start of Registration

14:30 **Welcome, Opening**  
L. Lorenz, Infineon Technologies / ECPE  
T. Harder, ECPE

#### Introduction

14:45 **4<sup>th</sup> Wide Bandgap User Forum: Motivation and Overview**  
A. Lindemann, Magdeburg University (D)

#### SiC and GaN Power Electronic Systems

15:00 **Opportunities and Challenges for Wide Bandgap Power Devices in Megawatt Applications**  
J. Nistor, M. Rahimo, ABB Switzerland (CH)

15:30 **Medium-Voltage High-Frequency DC-DC Converter**  
F. Krüsmier, J.W. Kolar, ETH Zurich (CH)

16:00 **SiC JFETs for PV Inverters - Advantages and Challenges**  
R. Mallwitz, SMA Solar Technology (D)

16:30 Coffee break

17:00 **SiC Devices for High-Frequency Power Converters - an Experimental Evaluation**  
P. Ranstad, Alstom Power (S)

17:30 **Demonstration of High Power Density Converters Using SiC devices**  
K. Takao, Toshiba Corporation / FUPET (JP)

18:00 **DC-DC Converters Using GaN for Collider Physics Detectors**  
S. K. Dhawan, Yale University (US)

18:30 **Forum**  
**System Review, Statements, Discussion**  
Moderator: A. Lindemann  
Forum Experts: Previous Speakers

19:15 **End of 1<sup>st</sup> day**

20:15 Dinner

## Programme

### Friday, 2 September 2011

9:00 Start of 2<sup>nd</sup> Day

#### Application Aspects of High Bandgap Power Semiconductor Device Technology

9:00 **R&D Activity of SiC Power Devices in Japan**  
T. Kimoto, Kyoto University (JP)

9:45 **Advances in SiC MOSFET Performance**  
A. Agarwal, Cree (US)

10:15 **Normally-On SiC JFETs Acting as Normally-Off Switches in a Module**  
D. Domes, Infineon Technologies (D)

10:45 Coffee break

11:15 **SiC BJT Devices**  
A. Lindgren, Fairchild (S)

11:45 **Reliability of Wide Bandgap Devices in Power Electronic Applications**  
P. Mawby, University of Warwick (GB)

12:15 **GaN Device Physics for Electrical Engineers**  
N. Kaminski, University of Bremen (D)

12:45 Lunch

13:45 **Recent Progress of GaN Power Devices on Si Substrates**  
T. Nomura, Advanced Power Device Research Association (JP)

14:15 **An Update on the Challenges and Opportunities of Commercializing GaN Based Power Devices**  
A. Charles, International Rectifier (GB)

14:45 **Forum**  
**Device Review, Statements, Discussion**  
Moderator: A. Lindemann, P. Mawby  
Forum Experts: Previous Speakers and  
K. Matocha, Semisouth (US)  
E. Soennekus, MicroGaN (D): *Efficient High-Voltage Applications Driven by GaN-on-Silicon Technology*  
E. Hoene, FhG IZM (D): *Packaging the Ideal Switch*  
A. Schletz, FhG IISB (D): *Die Attach Technologies for SiC Devices*  
and others

**Wrap up**  
A. Lindemann

16:00 End of Workshop