Registration (Fax Reply)

To: ECPE e.V.
Att.: Sabrina Haberl, 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 **5 March 2013**

Participation fee:
❍ **€ 530,–** * for industry
❍ € **395,–** * for universities/institutes
❍ **€ 120,–** * for students (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 (€ 50–*).

With the confirmation of registration you will receive the invoice. (* plus VAT) In case of cancellation after 5 March 2013 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

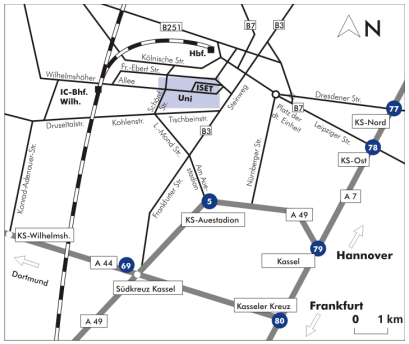
E-mail

Date, signature

F13 – 07.03.2013

Organisational information

Organiser	ECPE e.V. 90443 Nuremberg, Germany www.ecpe.org
Chairman	Prof. Dr. Peter Zacharias, University of Kassel Dipl.-Ing.(FH) Jochen Koszescha ECPE e.V.
Organisation	Sabrina Haberl, ECPE e.V. +49 (0)911 / 81 02 88 – 13 sabrina.haberl@ecpe.org
Workshop venue	University of Kassel Building D / Room 0446 Wilhelmshöher Allee 73 34121 Kassel Germany

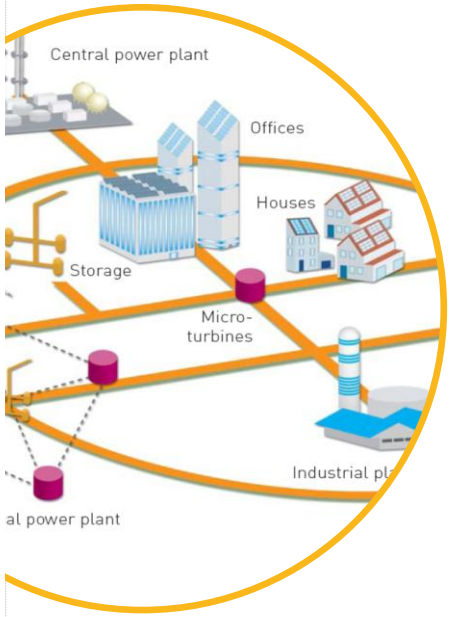


Further information (hotel list and maps) will be provided after registration.

ECPE
European Center for
Power Electronics e.V.

Programme
ECPE Workshop

Power Electronics in the Electrical Network (Renewables, Energy Storage, Grid Stability)



12 – 13 March 2013
University of Kassel
Kassel, Germany

In cooperation with

UNIKASSEL
VERSITÄT

ECPE Workshop

Power Electronics in the Electrical Network (Renewables, Energy Storage, Grid Stability)

12 – 13 March 2013
Kassel, Germany

In face of worldwide growing energy consumption combined with limited fossil fuel resources, a policy for an increasing adoption of renewable energy sources can be observed at almost all countries in the world. The nature of these sources, which is basically decentralized and often volatile, still remains a challenging issue. As examples, high power has to be collected in offshore wind parks and transferred to the industrial centres of Europe, while concentrated photovoltaic generation may compromise weak grid structures.

In order to address such challenges, a considerable increase on the application of electronic power converters will be necessary. Main objectives are to ensure not only compliance with basic power transmission requirements but also stability of these complex interconnected systems having volatile generation and demand. Flexible AC-transmission systems with innovative components figure as an increasingly interesting technique at all voltage levels to ensure grid stability and power quality. Controllable MV/LV transformers, active power transformers and electronic power flow controllers in combination with storages of different sizes may also be approaches for a re-design of the electric distribution and transmission grid. Entirely new perspectives are also opening up with upcoming high-voltage wide band gap semiconductor devices. This is huge emerging market in a multi-GW range for high power semiconductors.

The workshop is dedicated to these technical challenges, giving an overview about current developments and future perspectives of electronic power conditioners for the electric power supply system.

Time is also reserved to discuss specific aspects of this field of application like extended life time requirements and overload capability.

The workshop is chaired by Prof. Dr. P. Zacharias (University of Kassel) and J. Koszescha (ECPE). All presentations and discussions will be in English.

Programme

Tuesday, 12 March 2013

9:30	Start of Registration / Welcome Coffee
10:15	**Welcome, Opening** P. Zacharias, University of Kassel T. Harder, ECPE e.V.
	Introduction
10:30	**Power Electronics in the Electricity Network** P. Zacharias, University of Kassel
10:50	**Status and Limits of Todays Electricity Grids with Regard to Power Electronic Sources** T. Do, Helmut Schmidt University Hamburg
11:20	**Role of Power Electronics in Future Grids** **What PE can do in Smart Grids, Super Grids, Micro Grids?** P. Zacharias, University of Kassel
	Grid Integration of Renewable Energy Sources
11:40	**Integration of Photovoltaic, Impact on Low and Medium Voltage Grids** T. Bülo, SMA Solar Technology AG
12:10	**Discussion**
12:25	Lunch
13:30	**Converters and Semiconductors for Wind Power Plants** H.-G. Eckel, University of Rostock
14:00	**Fault Ride Through Requirements of Grid Connected Electronic Power Sources and Implementation into a Converter System** F. Springmeier, Woodward
14:30	**Control of Grid-Interactive Power Converters: The Synchronous Power Controller** P. Rodriguez, Abengoa Research
15:00	**Discussion**
15:15	Coffee Break
15:45	**Utilizing the Inertia of Wind Energy Converters for Stabilizing the Power System** P. Strauss, Fraunhofer IWES Kassel
16:15	**Distributed Storage for Short Fluctuations - Impact on Distribution System** M. Braun, University of Kassel & Fraunhofer IWES
16:45	**Towards 100%: Integration of Renewable Energy** C. Hoffmann, Fraunhofer IWES Kassel
17:15	**Discussion**
17:30	**End of 1st Day**
19:30	Dinner

Programme

Wednesday, 13 March 2013

8:45	Start of 2nd Day
	Power Electronic Components and Topologies for Future Grids
8:45	**Wide Band-Gap Power Devices in Power Conversion for Renewables** S. Araújo, University of Kassel
	Would DC Grids be a Solution?
9:15	**Low Voltage DC-Grids** E. Waffenschmidt (University of Applied Science Cologne), U. Böke (Philips Research)
9:45	**Power Electronics for Medium-Voltage DC Grids** H. Stagge, RWTH Aachen
10:15	**Discussion**
10:30	Coffee break
	Grid Quality and Stability
10:50	**Power Quality in Distributed Power Supply Systems (U, f, pulsed load and reactive power compensation)** J. Myrzik, TU Dortmund
11:20	**Distributed Control of Power Electronic Interfaces in Smart Micro-Grids** P. Tenti, University of Padova
11:50	**Power Quality Control Issues in Distribution Grids, Experience from Field Test NETZQ** N. Grass, University of Applied Science Nuremberg
12:20	**Discussion**
12:35	Lunch
	Power Converter in Distribution-Grid Control
13:35	**Voltage Control in Distribution Grids** S. Kempen., AEG Power Systems
13:55	**Case Study: Use of Power Electronic Voltage Regulators in Low Voltage Distribution Networks** J.P. da Costa, W. Kruschel, P. Zacharias (University of Kassel), D. Mende, T. Bülo (SMA Solar Technology)
14:15	**Case Study: Intelligent Solid State Transformers (SSTs)- MEGA Cube & MEGA Link** G. Ortiz, J. Kolar, ETH Zurich
14:35	**Discussion**
	Grid Integration of Energy Storages
14:45	**Use of E-Mobiles as Decentralized Storage of the Electricity Grid – Impact on power electronic interfaces and grid infrastructure** C. van Booven, Robert Bosch
15:15	**Large Scale Battery Storage Grid Integration** S. Kempen, AEG Power Solutions
15:45	**Final Discussion**
16.15	End of Workshop