Registration (Fax Reply)

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

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Register before **9 April 2010**

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 19 % VAT)
In case of cancellation after 9 April 2010 or non-attendance 50% of the participation fee is 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

Organizational information

Organizer: ECPE e.V.
90443 Nuremberg, Germany
www.ecpe.org

Chairs of seminar: Prof. Dr. ir. Rik De Doncker
RWTH Aachen University
Dr. Peter Lürkens
Philips Research

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

Place of seminar: Super C RWTH Aachen
Templergraben 57
52062 Aachen, Germany

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

ECPE European Center for Power Electronics e.V.

ECPE Workshop

Power Electronics for Energy Efficient Buildings, Lighting and Home Appliances

15 – 16 April 2010
Super C RWTH Aachen
Aachen, Germany

in cooperation with

RWTH AACHEN UNIVERSITY
E.ON Energy Research Center
PHILIPS
sense and simplicity
EPE EUROPEAN POWER ELECTRONICS AND DRIVES

Introduction

ECPE Workshop

Power Electronics for Energy Efficient Buildings, Lighting and Home Appliances

15 - 16 April 2010
Aachen, Germany

Following the ECPE Workshop ´MegaWatt Power Electronics and Smart Grids´ in March 2009, which was focused on the centralised power generation and transmission side of the smart grid, this workshop will focus on the efficient energy use in buildings, smart homes, lighting and home appliances. Key topics are smart metering for demand side management, as well as the integration of distributed (local) power generation using Building Integrated Photovoltaics (BIPV) and Combined Heat and Power (CHP). Intelligent energy management for buildings and homes will be necessary to control and monitor the heating, ventilating, air conditioning (HVAC) and lighting systems. New concepts (e.g. DC grids) for an efficient infrastructure in cities and buildings/homes will be presented and discussed.

After presenting the system-level view including the part of Information and Communication Technologies (ICT) the role of Power Electronics in the different areas will by highlighted.

Renowned experts from industry and academia are invited to give an overview of latest research results and technologies in the field discussing research initiatives and visions of future efficient and sustainable energy supply using smart grids.

The workshop is organized by Prof. Dr. R. De Doncker (RWTH Aachen, E.ON ERC) and Dr. P. Luerkens (Philips), supported by J. Koszescha (ECPE). All presentations and discussions will be in English.

Programme

Thursday, 15 April 2010

9:00 **Start of Registration**

9:30 **Welcome, Opening**
T. Harder, ECPE e.V.
R. De Doncker, RWTH Aachen

Intelligent Buildings

09:45 **Challenges ahead in the Design of Future Energy Management Systems**
A. Monti, RWTH Aachen

10:15 **DC Networks within Buildings**
S. Zudrell-Koch, TridonicAtco

10:45 **DC Networks for ICT**
M. Szpek, Emerson Network Power

11:15 **Lighting and Energy Management**
R. Tol, Philips Dynalite

11:45 **System Concepts for Rural Electrification and Intelliqent Buildings**
M. Mueller, Steca Elektronik

12:30 Lunch

Intelligent Homes

13:30 **Solution for Smart Plugs**
R. Ricci, STMicroelectronics

14:00 **Case Study: Motor Drives for Home Appliances**
R. Ricci, STMicroelectronics

14:15 **Design issues for line-fed HBLED lamp drivers**
G. Spiazzi, University of Padova

14:45 Coffee Break

15:15 **Vehicle to Grid**
R. Oestreicher, Daimler

15:45 **Home Energy Management and Monitoring**
P. de Bie, Philips Lighting

16:15 **Panel Discussion:**
Who controls the power flow and the load management?

17:15 End of 1st Day

19:30 Dinner

Programme

Friday, 16 April 2010

Distributed Energy Generation and Storage

9:00 **Home Based Decentralised Storage Systems - Technology Options and Operation Scenarios**
D.U. Sauer, RWTH Aachen

9:30 **Case Study: Energy Efficiency Improvement of Micro Hydro-Electric Power Generation by usage of Power Converter**
N. Grass, University of Applied Science Nuremberg

9:45 **Building Integrated Photovoltaics**
M. Stalder, SMA Solar Technologies

10:15 Coffee Break

Distribution Network Level

10:45 **Smart Metering - Enabling Smart Grid and Driving the Internet of Things - From a Marketing Cloud to a Simple and Robust Structure**
R. Gabriel, Easy Meter

11:15 **Smart Metering**
Y. Gourdou, STMicroelectronics

12:00 Lunch

13:00 **The Role of Power Electronics in Future Distribution Networks**
R. De Doncker, RWTH Aachen

13:45 **PV Converter Supporting Power Quality**
N. Grass, University of Applied Science Nuremberg

14:15 **Mega Cube – 1 MW Ultra Compact/Efficient Isolated 20kHz Bidirectional 12kV/1.2kV DC/DC Converter**
G Ortiz et al., ETH Zurich

14:45 Wrap up, Final Discussion

15:30 Optional lab tour (1 hour) at RWTH Aachen, E.ON Energy Research Center