# Organisational information

For registration please use the registration form which is available on the ECPE web page: www.ecpe.org
> ECPE Events > ECPE Workshops: Power Electronics for e-Mobility > Registration Form

www.ecpe.org/ecpe-events

**Deadline for registration**:

- **15 June 2016**

**Participation fee:**

- **€ 595,–** * for industry
- € **445,–** * for universities/institutes
- **€ 150,–** * for students/PhD students
  (copy of student ID requested)
  (limited number only)
  (optional dinner: € 50,-* extra fee)

*plus 19 % VAT

- The participation fee includes dinner, lunch, coffee/soft drinks and a CD with the workshop presentations. Students/PhD students can book the dinner for an extra fee of € 50,-*.
- A printed version of the workshop handout is available on request (€ 50–*).
- With the confirmation of registration by email you are registered for the workshop and the invoice will be sent by post.
- Three participants from each ECPE member company free of charge. Allocation in sequence of registration.
- Further information (hotel list and maps) will be provided after registration and is available on the ECPE web page.
- In case of cancellation later than two weeks before beginning or non-attendance 50 % of the participation fee is payable.

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# Organisational information

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|---|---|
| **Organiser** | ECPE e.V.<br>90443 Nuremberg, Germany<br>www.ecpe.org |
| **Chairmen** | Dr. B. Eckardt, Fraunhofer IISB<br>H.-P. Feustel, Conti Temic<br>Dr. T. Leifert, Volkswagen<br>Dr. L. Schindele, Robert Bosch |
| **Organisation** | Ingrid Bollens, ECPE e.V.<br>+49 (0)911 / 81 02 88 – 10<br>ingrid.bollens@ecpe.org |
| **Venue** | Filderhalle<br>Kongress- und Tagungszentrum<br>Bahnhofstrasse 61<br>70771 Leinfelden-Echterdingen/<br>Stuttgart, Germany |

ECPE
European Center for
Power Electronics e.V.

# ECPE Workshop

# Power Electronics for e-Mobility


Source: Fraunhofer-IISB

22 - 23 June 2016
Filderhalle, Stuttgart
Germany

in cooperation with

Fraunhofer IISB

BOSCH Continental

# ECPE Workshop

## Power Electronics for e-Mobility

**22 – 23 June 2016**
**Stuttgart, Germany**

Today we have an excellent environment for e-mobility, the hype of the recent years has calmed down and changed to a more realistic view. And in the meantime we have a variety of different electric cars on the market, hybrid electric vehicles (HEV) and full battery electric vehicles (BEV) with different levels of electrification e.g. mild HEV, full HEV, Plug-in HEV, BEV, BEV with range extender. Furthermore the battery costs could be reduced significantly.

Power electronics is a key technology for e-mobility, on the vehicle side as well as on the grid side. Against this background, we think that it is the right time to organise another ECPE Workshop on automotive power electronics. This workshop on power electronics for e-mobility will focus on four thematic areas:

- Multi-voltage on-board electrical system incl. 48V net
- Mechatronic system integration of the drivetrain
- Battery charging and grid interaction
- On-board voltage level perspective

The workshop is chaired by Dr. Bernd Eckardt (Fraunhofer IISB) together with the Industrial Co-Chairs Hans-Peter Feustel (Conti Temic), Dr. Torsten Leifert (Volkswagen) and Dr. Lothar Schindele (Robert Bosch).

**All presentations and discussions will be in English language**.

# Programme

## Wednesday, 22 June 2016

09:30 Start of registration/Welcome Coffee

**10:00 Welcome Opening**

### Multi-Voltage On-Board Electrical System incl. 48V Net

**10:15 The Toyota Mirai Fuel Cell Car from the Power Electronics Point of View**
A. Fuchs, P. Wandt, Toyota Europe

**10:45 Opportunities for the Electric Powertrain by Increased Operation Voltage**
W. Wondrak, Daimler (D)

**11:15 48V Development – a Vehicle Approach**
A. Lock, Robert Bosch (D)

**11:45 DC/DC Converters of the On-Board Electrical System (12V - 48V - 400V)**
B. Eckardt, Fraunhofer IISB (D)

**12:15 Discussion**

12:30 Lunch

**13:30 Semiconductor Solutions for 48V Applications**
A. Graf, Infineon Technologies (D)

### Mechatronic System Integration of the Drivetrain

**14:00 Drivetrain integrated Power Electronics**
W. Schoen, ZF Friedrichshafen (D)

**14:30 Mechatronics Inverter Charger**
J.-M. Morelle, Valeo (F)

**15:00 Discussion**

15:15 Coffee Break

**15:45 COSIVU – Compact, Smart and Reliable Drive Unit for Commercial Electrical Vehicles**
K. Brinkfeldt, SWEREA IVF (SE)

**16:15 Solutions for Mechatronic System Integration**
J. Ortner, Schaeffler (D)

**16:45 High Temperature Power Electronics: Technology Solutions from Chip Bonding to System Level**
R. Stoemmer, AB Mikroelektronik (A)

**17:15 Discussion**

**17:30 End of 1st day**

19:30 Dinner at Restaurant of Parkhotel Stuttgart Messe Airport
Filderbahnstrasse 2, 70771 Leinfelden-Echterdingen (D)

# Programme

## Thursday, 23 June 2016

### Battery Charging and Grid Interaction

**08:30 Challenges for Power Electronics in Electrified Drivetrains**
T. Leifert, Volkswagen (D)

**09:00 Modular Charging Solutions**
C. Joffe, Fraunhofer IISB (D)

**09:30 The Future of Charging in e-Mobility**
S. Zudrell-Koch, Brusa (CH)

**10:00 Discussion**

10:15 Coffee Break

**10:45 Wide Bandgap Semiconductors for Conductive and Inductive Charging**
S. Reichert, Fraunhofer ISE (D)

**11:15 Overview on Charging Solutions**
R. Lassartesses, Renault (F)

**11:45 Charging Stations – Infrastructure for Fast Charging**
D. Lautensack, ABB Automation Products (D)

**12:15 Discussion**

12:30 Lunch

### Voltage Level Perspective (=> High Voltages)

**13:45 Future of Fast Charge: 800V**
J. Mittnacht, Porsche (D)

**14:15 Potential of SiC for Converters for High Voltage Level >400V**
S. Matlok, Fraunhofer IISB (D)

**14:45 Component Design and Implementation of a 60kW Full SiC Traction Inverter with Boost Converter**
J. Müller, University of Hannover (D)

**15:15 Drive Faster and Charge Faster with 800 Volts**
M. Deiml, AVL (D)

**15:45 Discussion**

**16:00 End of Workshop**