

Organisational Information

For registration please use the registration form which is available on the ECPE web page: www.ecpe.org
> ECPE Events > ECPE Workshops: Condition & Health Monitoring in Power Electronics > Registration Form

www.ecpe.org/ecpe-events

Deadline for registration:

- **10 April 2018**

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 % German VAT

- The participation fee includes dinner, lunch, coffee/soft drinks and an USB drive 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.

Organisational Information

Organiser	ECPE e.V. 90443 Nuremberg, Germany www.ecpe.org
Chairmen	Prof. Rik W. De Doncker, RWTH Aachen (DE) Dr. Peter Steimer, ABB Switzerland Ltd. Corporate Research (CH) Dr. Andreja Rojko, ECPE e.V. (DE)
Organisation	Ingrid Bollens, ECPE e.V. +49 (911) / 81 02 88 – 10 Ingrid.bollens@ecpe.org
Venue	Hotel Pullman Aachen Quellenhof Monheimsallee 52, 52062 Aachen, Germany



Programme

ECPE Workshop

DC Grids, Technologies and Applications



17 – 18 April 2018
Hotel Pullman
Aachen Quellenhof
Aachen, Germany

in cooperation with



ECPE Workshop

DC Grids, Technologies and Applications 17 – 18 April 2018, Aachen, Germany

DC grids are considered to be a key technology for the connection, collection and integration of renewable energy resources, for the realization of integrated power systems, for mobile applications (electric ships, aircrafts), for new types of urban and industrial distribution power networks and to bridge and support existing AC systems. Advanced power electronic components, power converters and system protection are enabling DC grids on multiple voltages levels. All of them are continuously improving to provide lower costs, losses and size in combination with higher performance, functionality and reliability. Especially medium voltage DC grids are expected to play a key role in managing the higher power flows in our future distribution grids.

This workshop aims to promote the exchange of information concerning innovation, R&D and deployment of power electronic and other necessary components and solutions. The focus is on medium voltage DC distribution and conversion with some carefully selected presentations that are addressing also low and high voltage DC technology.

The latest industrial applications, products as well as research results that show a good potential for an industrial use will be presented and discussed.

The workshop will be concluded with the panel session organized in cooperation with European Commission, Directorate General for Energy. It will be discussed what future R&D in power electronics is necessary to facilitate the transformation of European energy system.

The workshop is chaired by

Prof. Rik W. De Doncker, E.ON Energy Research Center, RWTH Aachen (DE)

Dr. Peter Steimer, ABB Switzerland Ltd. Corporate Research (CH)

Dr. Andreja Rojko, ECPE e.V. (DE)

All presentations and discussions will be in English language.

Programme

Tuesday, 17 April 2018

9:00 Start of Registration

9:30 **Welcome and Opening**
A. Rojko; ECPE (DE)

Introduction

9:45 **Power Electronics for Medium Voltage Distribution Grids**
Rik W. De Doncker; RWTH Aachen (DE)

10:30 **High Power Electronics Innovations**
Peter Steimer, ABB Switzerland Corporate Research (CH)

11:15 Coffee Break

Energy conversion and management

11:45 **Future DC-Grids : Networks of Converters**
Rainer Marquardt, Bundeswehr University (DE)

12:30 **Breaker-Less MVDC Distribution and Protection**
Mischa Steurer, Florida State University (USA)

13:00 Lunch

Energy conversion and management (cont.)

14:00 **Reconfigurable DC links for Restructuring Medium Voltage Distribution Grids**
Pavol Bauer, TU Delft (NL)

14:30 **DCDC converters for MVDC & HVDC grids**
Michel Mermet-Guyennet, SuperGrid Institute (FR)

15:00 **TBA**
Colin Davidson, GE Grid Solutions (UK)

15:30 Coffee Break

Energy conversion and management (cont.)

16:00 **Developments in the Angle-DC project: Project challenges, developments and findings to date**
Andrew Moon, ScottishPower Energy Networks (UK)

16:30 TBD

17:00 Discussion

17:15 End of 1st Workshop Day

19:00 Dinner
Aachen, Germany

Programme

Wednesday, 18 April 2018

DC protection, fault management and coordination

08:30 **HVDC and MVDC breakers**
Frans Dijkhuizen, ABB Corporate Research (SE)

09:00 **LV DC breakers development**
Antonello Antoniazzi, ABB SpA (IT)

09:30 **Cost-effective DC breakers using less power electronics**
Staffan Norrga, SCiBreak (SE)

10:00 Coffee Break

DC protection, fault management and coordination (cont.)

10:30 **A concept for a DC network in industrial production**
Benno Weis, Siemens AG (DE)

Simulation, modelling and control

11:00 **Real time simulation and hardware in the loop in support of DC Grid design**
Antonello Monti, RWTH Aachen (DE)

11:30 **Transient angle stability anal. of VSC-HVDC systems**
Xiongfei Wang, University of Aalborg (DK)

12:00 Lunch

Applications and special topics

13:00 **Sub-transmission HVDC for urban grid modernization**
Jiuping Pan, ABB Corporate Research Center (USA)

13:30 **DC Power grids – BlueDrive PlusC – Enhanced safety in power plant solutions proven by testing**
Stig Olav Settemsdal, Siemens AG (NO)

14:00 **MVDC power distribution networks and technologies for marine applications.**
Drazen Dujic, EPFL, Lausanne (CH)

Panel Discussion R&D needs in power electronics for transformation of European energy sector

14:30 **Moderator: Mario Dionisio**, European Commission, Directorate General for Energy (BE)

16:00 End of Workshop

Additional Programme

16:30 Visit to E.ON Energy Research Center, RWTH Aachen
- 17:30 (Pre-registration necessary)