

18th European Conference on Power Electronics and Applications

Welcome message

It is my pleasure to announce the 18th European Conference on Power Electronics and Applications. The conference will take place in Karlsruhe, Germany, from the 6th to 8th September 2016.

The conference follows previous successful events held in major university cities across Europe since 1985: Brussels, Grenoble, Aachen, Florence, Brighton, Seville, Trondheim, Lausanne, Graz, Toulouse, Dresden, Aalborg, Barcelona, Birmingham, Lille, Lappeenranta and Geneva.

Karlsruhe is a medium sized town on the border between Baden and Alsace regions in the tri-national metropolitan area of the upper Rhine valley. It was founded 300 years ago by the Grand Duke of Baden and is famous for its fan-shaped layout and its architecture. Baden wine and cuisine are renowned well beyond national borders and the Karlsruhe region offers the highest density of gourmet restaurants in Germany.

Karlsruhe is ideally located near the palatinate region, the black forest, Strasbourg, Baden-Baden and Heidelberg with a mild climate of 1800 hours of sunshine per year. Travelling is easy with direct high-speed train connections (ICE and TGV) to all major German and many French cities. The international airports of Frankfurt and Stuttgart are just a little over an hour away.

Karlsruhe is home of 16 research institutions, among them are the Karlsruhe Institute of Technology (KIT), Hochschule Karlsruhe Technik und Wirtschaft (University of Applied Science), three Fraunhofer Institutes, Karlsruhe University of Arts and Design (HfG).

The KIT is the research university of the Helmholtz Association - a unique cooperation between a technical university and a large-scale research institution. It is a place of excellent research and teaching in natural and engineering sciences on an international scale, with scientific excellence and worldwide top level in research, teaching and innovation.

Limiting climate change will probably be the greatest challenge for humankind in the 21st century. Power electronics and electric machines can deliver a substantial contribution to this transition: From the production of renewable, climate-neutral electric energy (wind and solar power) to its transmission (HVDC and FACTS) and the use of energy-efficient drives. Power semiconductors play an important role with rapid technological progress enabling new circuit designs and control strategies. Development of Si based semiconductors is still ongoing and there are new and disruptive technologies like SiC and GaN. Advanced packaging technologies lead to a new level of integration of motors and power electronics.

Electric vehicles will provide a large part of individual mobility in the middle to long term thus reducing CO₂ emissions and the use of limited oil and gas resources. Advanced motor and power electronic technologies in fields like drive train, charging and battery management are needed to further increase usability of electric vehicles and reduce costs.

EPE'16 ECCE EUROPE promotes a wide range of topics in these fields at the cutting edge of research and into applications. It gives researchers, application engineers and experts from academia and industry a platform for exchanging ideas to further unlock the potential of power electronics and electric drives for tomorrow's energy transition.

EPE'16 ECCE EUROPE in Karlsruhe will take place at the heart of current technological developments of power electronics and drives. Germany's industry covers the full range from components to systems and applications, from semiconductors and packaging to manufacturers of converters, motors and complete drive systems. We are looking forward to exchange best practices and new ideas with invited experts from industry in keynotes and industrial sessions on the conference's focal topics (semiconductor components, energy transition and electromobility).

We are very pleased to welcome you to Karlsruhe, to exchange new ideas and shape the future!



Martin Doppelbauer

Local Conference Committee

Local Conference Chair: Martin Doppelbauer

Prof. Dr.-Ing.

Prof. Dr.-Ing. Joachim Böcker, Universität Paderborn

Prof. Dr.-Ing. Michael Braun, Karlsruhe Inst. of Technology (KIT)

Prof. Dr.-Ing. Marc Hiller, Karlsruhe Inst. of Technology (KIT)

Prof. Dr.-Ing. Ralph Kennel, TU München

Prof. Dr. Leo Lorenz, ECPE e.V., President EPE Association

Prof. Dr.-Ing. Axel Mertens, Universität Hannover

Prof. Dr.-Ing. Bernd Ponick, Universität Hannover

Prof. Dr.-Ing. Mark Bakran, Universität Bayreuth

Prof. Dr.-Ing. Sibylle Dieckerhoff, TU Berlin

Prof. Dr.-Ing. habil. Dr. h.c. Kay Hameyer, RWTH Aachen

Prof. Dr.-Ing. Wilfried Hofmann, TU Dresden

Prof. Dr.-Ing. Andreas Lindemann, Universität Magdeburg

Prof. Dr.-Ing. Regine Mallwitz, TU Braunschweig

Prof. Dr.-Ing. Mario Pacas, Universität Siegen

Prof. Dr.-Ing. Uwe Schäfer, TU Berlin