Organisational Information

Sign up at: **www.ecpe.org/events**

Registration Deadline:

7 May 2024

Participation Fee:

€ 670,– *   for industry

€ 520,– *   for universities/institutes

€ 180,– *   for students/PhD student
(limited spaces; copy of students ID required)

* plus VAT

➢ The participation includes dinner, lunches, coffee/soft drinks and digital proceedings. The reduced (PhD) students fee includes all except for dinner (can be booked for an extra fee of € 50,-*)

➢ Digital proceedings will be provided by download link latest one day before start of the event. A printed handout is available on request (€ 50,-*).

➢ Upon receipt of registration confirmation via email you are signed-up for the event. The invoice will be sent via email.

➢ 25 % discount for participants from ECPE member companies.

➢ 10% discount on university/institute fee for participants from ECPE competence centres.

➢ Further information (hotel list and maps) will be provided after registration and can be found on the ECPE web page.

➢ Cancellation policy: Full amount will be refunded in case of cancellation upon to 2 weeks prior to the event. After this date 50 % of the fee is non-refundable (replacement is possible).

➢ The number of participants is limited to 35 attendees.

24/04/24

Organisational Information

Organiser	ECPE e.V. Ostendstrasse 181 90482 Nuremberg, Germany www.ecpe.org
Technical Chair	Prof. Dr. Eckart Hoene, Fraunhofer IZM
Technical Contact	Gudrun Feix +49 911 81 02 88 – 15 gudrun.feix@ecpe.org
Organisation	Ingrid Bollens, ECPE e.V. +49 911 81 02 88 – 10 Ingrid.bollens@ecpe.org
Venue	IRT Saint Exupery Conference room 6th floor B612, 3 rue Tarfaya CS 34436 Toulouse, France

Source photo: IRT Saint Exupery
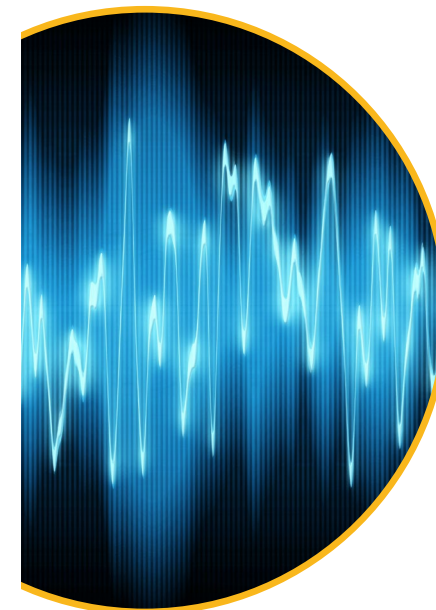Source graph front page: clearviewstock/Istock

European Center for Power Electronics e.V.

ECPE Tutorial

EMC in Power Electronics

14 - 15 May 2024
Toulouse, France

ECPE Tutorial

EMC in Power Electronics

14 - 15 May 2024
Toulouse, France

Advantages in semiconductor technology drive power electronics to higher efficiencies and compact systems designs. This progress comes along with increasing effort to comply with EMC requirements. Integration as a response to the market demands intensifies the challenges. With dense placement electromagnetic coupling between components raises influence on system behavior. The design becomes more complex and leads to significantly higher development costs.

The EMC in Power Electronics tutorial is a response to the increasing importance of EMC. It provides an overview on EMC phenomena and introduces methodologies to handle EMC questions. The tutorial is a supplement to the EMC seminar and intended for the training of young engineers and engineers from neighboring disciplines.

The tutorial is chaired by:

Prof. Dr. Eckart Hoene, Fraunhofer IZM (DE)

Prof. Dr. Jean-Luc Schanen, Grenoble Institute of Technology - G2ELab (FR)

Lex de Rijck, Acradac EMC Training and Consultancy (NL)

All presentations and discussions will be in English.

Programme

Tuesday, 14 May 2024

10:00 Registration & Welcome Coffee

10:30 Welcome, Opening
Ingrid Bollens, ECPE e.V.,
Fabio Coccetti, IRT Saint Exupery

10:45 Introduction
Warming up with Examples
Eckart Hoene

11:15 EMC and Mechanics
Lex de Rijck

11:45 EMC Fundamentals
Jean-Luc Schanen

12:15 Interference Sources and Mechanisms
Jean-Luc Schanen

12:45 Lunch

13:45 Handling Interference: Filtering or Shielding
Eckart Hoene

14:30 Interference Simulation
Jean-Luc Schanen

15:15 Coffee Break

15:45 Filter Components and their Properties
Jean-Luc Schanen

16:30 Return Currents
Lex de Rijck

17:00 Filtering of Common Mode Interference
Eckart Hoene

17:45 End of 1st Day

19:30 Dinner at "La Braisière",
42 Rue Pharaon, 31000 Toulouse, France

Programme

Wednesday, 15 May 2024

09:00 Start of 2nd Day

09:00 EMC-Design for Drive Systems
Eckart Hoene

09:30 Design Rules for PCBs
Eckart Hoene

10:00 Ground Plane Design
Lex de Rijck

10:45 Coffee Break

11:15 Which EMI questions can be solved more efficiently using simulation tools?
Eckart Hoene

11:45 EMI of Power Modules
Eckart Hoene

12:30 Lunch

13:30 Using Stray Elements for Reducing EMC Issues
Jean-Luc Schanen

14:15 Design Methods for Passive Filters
Eckart Hoene

14:45 Wrap up, Final Discussion

15:00 Optional: Lab Tour at IRT

16:00 End of Tutorial