

Organisational Information

Sign up at: www.ecpe.org/events

Registration Deadline:

19 November 2024

Participation Fee:

- € 720,- * for industry
 - € 525,- * for universities/institutes
 - € 180,- * for students/PhD student (limited spaces; copy of students ID required)
- * plus VAT

- The on site participation fee 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,-*)
- The online participation includes remote access via the meeting software Webex and digital proceedings.
- Digital proceedings will be provided by download link latest one day before start of the event. A printed handout is available on request.
- Upon receipt of registration confirmation via email you are signed-up for the event. The invoice will be sent via email.
- Three participants from each ECPE member company free of charge. Allocation in sequence of registration.
- 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).

08/05/24

Organisational Information

Organiser ECPE e.V.
Ostendstrasse 181
90482 Nuremberg, Germany
www.ecpe.org

Technical Chair Dr. Jonas Huber, ETH Zürich (CH)
Prof. Dr. Johann Kolar, ETH Zürich (CH)
Prof. Dr.-Ing. Christine Minke, Clausthal University of Technology (DE)
Prof. Dr. Jean-Luc Schanen, Grenoble Institute of Technology – GE2Lab (FR)

Technical Contact Gudrun Feix, ECPE e.V.
+49 911 81 02 88 – 15
gudrun.feix@ecpe.org

Organisation Marietta Di Dio, ECPE e.V.
+49 911 81 02 88 – 13
marietta.didio@ecpe.org

Venue TBD

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European Center for
Power Electronics e.V.

Hybrid Event

Announcement

ECPE Workshop

Eco-Design Approaches of Power Electronics



26 - 27 November 2024
Grenoble, France /
hybrid

in cooperation with



ECPE Workshop

Eco-Design Approaches of Power Electronics

26 – 27 November 2024
Grenoble, France / hybrid

Power electronics is one of the key technologies for the energy transition. Energy supply from renewable resources, electrolyzers for hydrogen production, e-mobility, efficient variable speed drives, industrial process technologies, and small / lightweight power supplies are unthinkable without power electronics.

However, this perspective considers only one part of a converter's life cycle, i.e. the realised energy or CO₂ emission savings during its useful life, but not the environmental burden (climate impact / CO_{2eq} emissions, water usage, release of toxic substances, etc.) which are accrued during manufacturing nor the disposal at the converter's end-of-life and the loss of raw and valuable raw materials.

Considering the growth in global population and the extension of renewable energy usage and given a typical lifetime of 20 years for power converters, power electronics alone might account for an estimated 5TW worth of electronic waste per year.

In this workshop we would like to discuss approaches, how this environmental burden can be lightened. We will discuss how the environmental impact of power converters can be investigated to learn about the status quo. Design for repair, reuse, and recycling, and necessary material and process developments are also part of the discussion. An insight into existing and upcoming regulations will be provided.

The workshop is chaired by:

Dr. Jonas Huber, ETH Zürich (CH)

Prof. Dr. Johann Kolar, ETH Zürich (CH)

Prof. Dr.-Ing. Christine Minke, Clausthal University of Technology (DE)

Prof. Dr. Jean-Luc Schanen, Grenoble Institute of Technology – GE2Lab (FR)

All presentations and discussions will be in English.

List of Topics

- **Basic terms and definitions for sustainability, circular economy, and life cycle assessment**
- **Materials/material compounds suited for circular economy principles**
- **Durability/repairability/recyclability**
- **Design for circularity**
- **Design methodologies**
- **Application related sustainability aspects**
- **Life Cycle Assessment**
- **Semiconductors**
- **Norms/regulations**

Schedule

Tuesday, 26 November 2024

09:00 Registration

09:30 Welcome, Opening

12:30 Lunch Break

16:30 End of 1st Workshop Day

19:30 Dinner

Wednesday, 27 November 2024

08:30 Start of 2nd Workshop Day

12:30 Lunch Break

15:45 Final Discussion

16:00 End of Workshop