

# Power Electronics Electrical Machines Energy Control Power Systems



## EUROPEAN PHD SCHOOL

26 - 30 May 2025, Gaeta/Italy

ORGANISED BY



# PROGRAMME

## MONDAY 26 May

08:30 – 09:00 **Registration desk** open  
09:00 – 09:30 **Opening Session** @ Conference Room  
09:30 – 10:25 **Keynote 1** @ Conference Room  
**Chair: Davide Montosi, Aston Martin Lagonda**  
**AI for the Optimisation of Power Electronics**  
**Alessandro Cremonesi, STMicroelectronics**  
10:25 – 11:00 **Presentations by participating companies**  
11:00 – 11:30 *Coffee Break*  
11:30 – 12:30 **Presentations by participating companies**  
12:30 – 13:45 *Welcome Lunch*  
13:45 – 14:30 **Keynote 2** @ Conference Room  
**High Power SiC Converters**  
**Fabio Carastro, Semikron Danfoss**  
14:30 – 16:00 **Poster Session A** (last year PhD's)  
16:00 – 16:15 *Coffee Break*  
16:15 – 18:30 **PhD-Company Meetings (Recruitment)**  
@ Exhibition Area  
19:30 **Transfer to dinner**  
20:00 – 22:30 **Social Dinner and Award Ceremony**

## TUESDAY 27 May

09:00 – 10:00 **Keynote 3** @ Conference Room  
**Aircraft Electrification w. Cryog. Power Electronics**  
**Bernd Eckardt, Fraunhofer IISB**  
10:00 – 12:30 **Lecture 1** @ Conference Room  
**HIL Real-Time Simulation of Modern Power Electronics**  
**Caio Osorio, Typhoon HIL | Fei Gao, UTBM**  
12:30 – 13:30 *Lunch Break*  
13:30 – 15:30 **LIVE DEMO SESSION** @ Exhibition Area  
15:30 – 18:00 **Lecture 2** @ Conference Room  
**Fractional KVA rating PWM converter doubly fed variable speed electric generator systems design and control and overview on MAGLEVs**  
**Ion Boldea, TU Timisoara (ret.)**

## WEDNESDAY 28 May

09:00 – 10:00 **Keynote 4** @ Conference Room  
**High Voltage DC Power Transmission (HVDC)**  
**Max Beuermann, Siemens Energy**  
10:00 – 13:00 **Lecture 3** @ Conference Room  
**Modular Multilevel Converters and Applications**  
**Marcelo L. Heldwein, TU Munich**  
**Thomas Brückner, UniBW Munich**  
13:00 – 14:00 *Lunch Break*  
14:00 – 15:00 **Poster Session B** (1st and 2nd year PhD's)  
15:00 – 18:00 **Lecture 4** @ Conference Room  
**Sustainability/Life Cycle Assessment (LCA)**  
**LCA in Power Electronics: Jonas Huber, ETH Zurich**  
20:00 – 22:30 **Pizza Dinner**

## THURSDAY 29 May

09:00 – 10:00 **Keynote 5** @ Conference Room  
**Power Electronics for Particle Accelerators**  
**Fulvio Boattini, CERN (CH)**  
10:00 – 12:30 **Lecture 5** @ Conference Room  
**Solid State Transformer - Theory and Applications**  
**Richard Zhang, Virginia Tech (US)**  
12:30 – 13:30 *Lunch Break*  
13:30 – 15:30 **Lecture 6** @ Conference Room  
**WBG/SiC for Power Electronics**  
**Francesco Gennaro/Natale Aiello, STMicroelectronics**  
15:30 – 16:00 *Coffee Break*  
16:00 – 18:00 **Lecture 7** @ Conference Room  
**Energy Storage Systems and Applications**  
**Fundamentals: Minglong He, ABB**  
**Systems and Applications: Lorenzo Giuntini, ABB**

## FRIDAY 30 May

08:30 – 09:30 **Keynote 6** @ Conference Room  
**Power Electronic Integration onboard Commercial Vehicles**  
**Ilia Basso, IVECO Group (IT)**  
09:30 – 11:45 **Lecture 8** @ Conference Room  
**High-Efficiency and High-Power Density Converters**  
**Ziwei Ouyang, DTU Lyngby**  
11:45 – 12:45 **Final Test for ECTS** @ Conference Room  
12:45 – 13:30 *Lunch Break*  
13:30 – 18:30 **Cultural Excursion**

## ORGANIZED BY



IN COOPERATION WITH

# PHD\_SCHOOL PEOPLE

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**Giuseppe Tomasso**  
University of Cassino  
and South Lazio

GENERAL CHAIR



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ECPE European Center  
for Power Electronics

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HONORARY CHAIR



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EPFL Ecole Polytechnique  
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The European PhD School on 'Power Electronics, Electrical Machines, Energy Control and Power Systems' is organised by the University of Cassino in cooperation with ECPE European Center for Power Electronics since 2011. It's a unique event in Europe for young power electronics engineers from academia to exchange experience and technical information about their PhD projects.

**The PhD School starts with an Industry Day covering keynote presentations from industry experts as well as a dialogue session for detailed face-to-face discussions between PhD students and industry representatives. The 1st day ends with a social dinner including the PhD School Award celebration. The rest of the week is dedicated to high-level lectures from several experts from academia but also from industry, related to the following thematic areas:**

- Power Electronics
- Electrical Machines
- Energy Control
- Power Systems

**More information and registration: [ecpe.org/phdschool](http://ecpe.org/phdschool)**

**More information about the Industry Day for Recruitment see last page!**

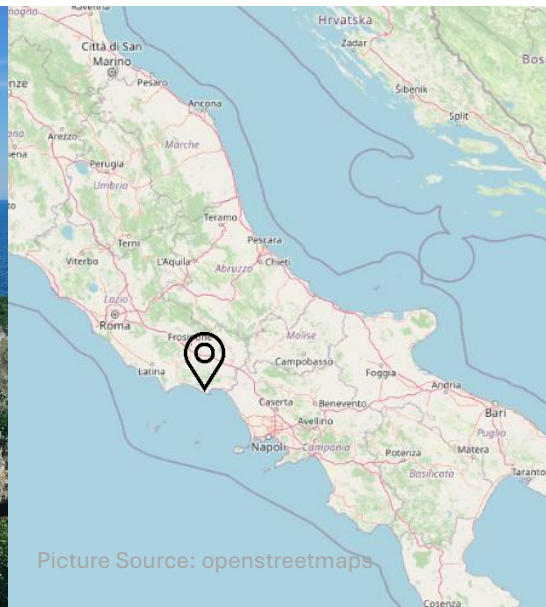


Picture Source: Martina Pellechia, istock

Gaeta is a city in the province of Latina, in Lazio, Southern Italy. Set in the Gulf of Gaeta, it is 120 km from Rome and 80 km from Naples. The European PhD School on ‘Power Electronics, Electrical Machines, Energy Control’ takes place at the beautiful Angevin Castle located in the ancient part of Gaeta.



Picture Source: glass\_bear, istock



Picture Source: openstreetmaps



Picture Source: ECPE

# AWARDS 2025

## European PhD School Award 2025

On a voluntary basis, each last-year stage PhD student can present the research activity to a qualified PhD School Commission at the Poster session A. At the end of the session, the 'European PhD School Award' will be assigned by the Commission, with a grant of 1.000,00 Euro.

### Research activity:

All PhD students have to send the research activity document, their CV and the poster as PDF in advance.

Further details with confirmation of registration.



# EUROPEAN PHD SCHOOL

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Bernd Neuner, ZES Zimmer Electronic System, Germany

Greg Ombach, Airbus, Germany

Dr. Francesco Gennaro, STMicroelectronics



# EUROPEAN PHD SCHOOL

## Contact Organisation



ECPE European Center for Power Electronics e.V.  
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Registration: [www.ecpe.org/phdschool](http://www.ecpe.org/phdschool)

## Industry Day for Recruitment Monday, 26 May 2025



Pictures Source: ECPE

If your company is interested in participation at the Industry Day please contact [lena.somschor@ecpe.org](mailto:lena.somschor@ecpe.org) or visit [www.ecpe.org/phdschool](http://www.ecpe.org/phdschool)

Industry Day for Recruitment – the meeting point for companies and PhD students!  
In the frame of the PhD School event, ECPE organizes the Industry Day for Recruitment, where industry representatives can meet PhD students on-site. Established companies in the field of power electronics, electrical drives and systems participate every year. Moreover, a special session with presentations is dedicated to the participating companies.