

## SIMULATION SEMINARS AND WORKSHOPS

The PE-Region Platform project invites you to participate in two ONLINE events about the use of simulation software in Power Electronics.

The morning seminar contains 3 parallel tracks, covering hardware-in-the-Loop simulation, thermal simulation and simulation of magnetic circuits/filters.

In the afternoon, 3 parallel workshops are offered by 3 companies: Typhoon hardware-in-the-loop simulation, the COMSOL Multiphysics platform and the ANSYS simulation platform.

Participation in all events is free of charge but registration necessary. – This also applies students who are welcome to join both the seminar and the workshops.

When registering, please indicate in which events you would like to participate: Seminar Tracks A/B/C and/or Workshop Tracks A/B/C. Further information and link will be sent after registration.

## PROGRAMME FOR SIMULATION SEMINAR

- 09.00 Welcome and introduction  
[Kasper M Paasch, SDU, Centre for Industrial Electronics (CIE)]
- 09.10 Example from PE-Region Platform project: Designing efficient magnetics using ANSYS  
[Boyan Dinev, SDU, Centre for Industrial Electronics (CIE)]
- 09.45 Individual tracks (A, B, C), breakout rooms  
[Please see the next page for contents]
- 11.45 Follow-up discussions and future trends
- 12.00 End of seminar

\*When attending the online meeting, please keep your microphone muted when you are not talking.

### TIME AND PLACE

Wednesday 23 June 2021  
9:00 – 12:00 (online)  
<https://syddanskuni.zoom.us/j/67765294150?pwd=NnU2V3lwl21yQVlyZUcra2l0blRmQT09;>

### REGISTRATION

Free of charge. Please accept the Outlook invitation or email secretary  
Charlotte Bolding Andersen  
[chba@sdu.dk](mailto:chba@sdu.dk)

Further information or contact:

- Sante Pugliese  
CAU Kiel  
+39 3200 122245  
[sapu@tf.uni-kiel.de](mailto:sapu@tf.uni-kiel.de)
- Kasper M. Paasch  
SDU – CIE  
+44 6550 1695  
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The seminar is organized in cooperation between the PE-Region Platform project partners:



Christian-Albrechts-Universität zu Kiel



## SIMULATION SEMINAR – INDIVIDUAL TRACKS

### ***Track A: Hardware-in-the-loop simulation - Chair: Sante Pugliese***

**Dr. Giovanni de Carne, Karlsruhe Institute of Technology (KIT)**

Designing the future energy system: real time modelling and experimental validation of energy technologies

**Dr. Ing. Sante Pugliese, Christian-Albrechts-Univ. zu Kiel (CAU)**

Stability and Accuracy of P-Hil Simulation in Power Electronic Testing

**Dr.-Ing. Bernhard Wille-Haussmann, Fraunhofer ISE, Institute for Solar Energy Systems.**

Digital Grid Lab: Conformity Power-HIL Test of Electric Vehicle Charging Infrastructure

### ***Track B: Thermal simulation - Chair: Niels Nageler***

**N. Nageler, B. Ritz, T. Köbinger, FH-Kiel**

Thermal simulation of power modules with Flow Simulation

**Dr. Alessandro Checchi, Resolvent A/S**

Simulation cases from Danfoss and Grundfos

**Thure Ralfs, Comsol**

Introduction to COMSOL Multiphysics

### ***Track C: Magnetics/filter simulation - Chair: Kasper M. Paasch***

**Dr. Zhan Shen, Aalborg University**

Multiphysics Modeling and Simulation of Magnetic Components for Power Electronic Applications

**Dr. Wai Keung Mo, University of Southern Denmark (SDU)**

Boost Inducter and EMI filter designs based on ANSYS FEM

**Mostafa Valavi, ANSYS**

Introduction to ANSYS simulation environment

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