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 WORKSHOPS

12.30   Welcome and introduction
         [Kasper M Paasch, SDU, Centre for Industrial Electronics (CIE)]

12.45   Individual tracks (A, B, C), breakout rooms
         [Please see the next page for contents]

TIME AND PLACE
Wednesday 23 June 2021
12:30 – 15:00 (online)
https: Will be provided later

REGISTRATION
Free of charge. Please accept the Outlook invitation or email secretary
Charlotte Bolding Andersen
chba@sdu.dk

Further information or contact:

- Sante Pugliese
  CAU Kiel
  +39 3200 122245
  sapu@tf.uni-kiel.de

- Kasper M. Paasch
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  +44 6550 1695
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The seminar is organized in cooperation between the PE-Region Platform project partners:

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

SIMULATION WORKSHOPS – INDIVIDUAL TRACKS

Track A: Typhoon Hardware-in-the Loop simulation workshop

Online flipped-classroom workshop hosted by Typhoon HIL on hardware-in-the-loop simulation. The HIL-software is tailor-built, for the design and testing of power electronics controllers for Electric Vehicles (EV), e-Mobility, and power converters. HIL solutions exist for EV drivetrains, electric vehicle stationary equipment (EVSE) such as fast DC chargers, onboard vehicle chargers, DC/DC converters, hybrid drivetrains, batteries, and fuel cells. In this workshop, the flipped classroom is intended to work as an open Q&A support group. When you have finised the HIL Specialist and received the workshop materials, we would like to further assist you in understanding how HIL can help your applications and projects. The first 20-30 minutes of the workshop is reserved for a Typhoon introduction on the SW and models created for the workshop.

Preparation: Some preparation and download of software is required. Training models and login info will be sent to all participants for them to look on their own, and to prepare questions for the training. To follow the workshop, all participants are strongly advised to go through the video material at HIL Specialist course and to earn a HIL Specialist badge at the end of the course.

Track B: COMSOL Multiphysics simulation workshop

Online workshop hosted by COMSOL on the general-purpose of COMSOL Multiphysics Finite-Element simulation platform, based on advanced numerical methods. It contains fully coupled multi-physics and single-physics modelling capabilities and can perform a complete modeling workflow, from geometry to postprocessing. The focus of this workshop is on power electronics related issues such as thermal simulation, current induced heating, and electromechanical motor simulation. The content can be adjusted to suit specific wishes.

Preparation: Individual training license keys will be sent to all the participants.

Track C: ANSYS Simulation workshop

In this workshop, we will have a more detailed discussion about ANSYS capabilities and workflows for electromagnetic and multiphysics simulations. In addition, we will go through examples of magnetic simulations with ANSYS Maxwell.

Preparation: Installation of/access to ANSYS Electronics Desktop is needed for those who want to follow the examples and perform the simulations on their own computer.

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