

PLECS WORKSHOP

Real-Time Simulation Using the PLECS RT Box

Plexim GmbH, February 28, 2018

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| 08:30 | Registration and Installation of Necessary Features |
| 09:00 | Overview and Introduction to RT Box Workflow using PLECS <ul style="list-style-type: none">▶ PLECS overview▶ Ideal switch concept▶ From PLECS offline models to RCP and HIL▶ Code Generation |
| 09:30 | RT Box Introductory Exercise <ul style="list-style-type: none">▶ PLECS RT Box features Exercise: Introductory exercise using I/O ports |
| 10:00 | RT Box Specs and Library Blocks |
| 10:15 | Break |
| 10:30 | Real-time Simulation of a Voltage Source Inverter (VSI) <ul style="list-style-type: none">▶ PLECS model creation using the target blocks library▶ Deployment on the RT Box Exercise: Voltage Source Inverter (VSI) |
| 12:00 | Lunch |
| 13:00 | Timing Overview and Step Size Selection <ul style="list-style-type: none">▶ Example of a Buck Converter using continuous, switched implementation▶ Step size and calculation time▶ Motivation for sub-cycle averaging using PWM capture module▶ Example of a Buck Converter with sub-cycle averaged configuration |
| 13:45 | Model Optimization <ul style="list-style-type: none">▶ Sub-cycle averaging and power modules▶ Model separation Exercise: Model splitting using a DTC example |
| 15:00 | Break |
| 15:15 | Virtual Prototyping <ul style="list-style-type: none">▶ Concept of virtual prototyping▶ Extension of VSI with controls Exercise: Virtual prototyping |
| 16:00 | Q&A - End of Workshop |
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| Location | Plexim GmbH, 3rd Floor, Zeppelin Wing, Technoparkstrasse 1, 8005 Zurich, Switzerland |
| Note | This workshop addresses to anyone who already has experience with the simulation software PLECS. |