

PLECS WORKSHOP

Advanced Modeling and Simulation of Power Electronic Systems
University of Pavia, February 26th 2026

08:30	Registration
09:00	Introduction to PLECS <ul style="list-style-type: none">▶ General use of PLECS Blockset and PLECS Standalone▶ Instantaneous switching▶ Variable and fixed-step operation Exercise: Modeling a switched-mode power supply
10:30	Break
11:00	Solver Settings <ul style="list-style-type: none">▶ Definition of stiff and non-stiff systems▶ Explicit and non-explicit solvers▶ Stability domains▶ Accuracy considerations, step size control▶ Proper handling of discontinuities, zero-crossing detection
12:00	Lunch
13:30	Introduction to Thermal Simulation <ul style="list-style-type: none">▶ Switching & conduction loss descriptions▶ Combined electrical-thermal simulation▶ Determining loss values from data sheets Exercise: Thermal modeling of a buck converter
15:00	Break
15:30	Bringing Simulation and Real Hardware Together (Code Generation Workflow in PLECS) <ul style="list-style-type: none">▶ Automatic code generation for microcontrollers▶ Plant code generation for the RT Box▶ Nanostep®, FlexArray and CPU solver engines▶ Real-time simulation with 4ns step size for MHz switching Demonstration: HIL testbench with microcontroller and RT Box
16:30	Q&A
16:45	End of day
Contact	Plexim GmbH, Enrico Sansonetti, +41 44 533 51 00, info@plexim.com
Location	Università di Pavia Via A. Ferrata 5 IT-27100 Pavia Italy/Italia