PLECS WORKSHOP

Advanced Modeling and Simulation of Power Electronic Systems
University of Nottingham, January 27, 2016

09:00	**Registration**
09:15	**Introduction to PLECS** ▶❙ General use of PLECS Blockset and PLECS Standalone ▶❙ Instantaneous switching ▶❙ Variable and fixed-step operation Exercise: Modeling a switched-mode power supply
10:15	**Break**
10:30	**Solver Settings** ▶❙ 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 Exercise: Solver accuracy and settings
12:00	**Lunch**
13:00	**Introduction to Thermal & Magnetic Modeling & Simulation** ▶❙ Switching & conduction loss descriptions ▶❙ Combined electrical-thermal simulation ▶❙ Permeance Capacitance Analogy Model Exercise: Thermal modeling of a buck converter
14:30	**Break**
15:00	**Overview of PLECS Tools** ▶❙ AC Sweep and Impulse Response Analysis Tools ▶❙ Steady State Analysis Tool ▶❙ Implementing custom components Exercise: Creating a custom PV string component
16:00	**End of day**
Contact	Plexim GmbH, +41 44 533 51 00, info@plexim.com
Location	University of Nottingham, Business School South, Juilee Campus, Nottingham NG8 1BB, United Kingdom