PLECS WORKSHOP

Advanced Modeling and Simulation of Power Electronic Systems Day 1
University of Manchester, November 11, 2015

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 & Q&A** ▶ 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	Pulse Power & Measurement Ltd., Linda Davis, +44 1793 784 389, linda.davis@ppm.co.uk
Location	The University of Manchester, Sackville Street Building, Room D45a, Granby Row, M1 3BU, Manchester
Note	This workshop on November 11 addresses to anyone who has not been using PLECS before. There will be another workshop on November 12 in the same location for more advanced users.