PLECS WORKSHOP

Advanced Modeling and Simulation of Power Electronic Systems

ICPE 2015-ECCE Asia – 63 Convention Center, June 1, 2015

08:45	**Registration**
09:00	**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
10:00	**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**
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Location	ICPE 2015-ECCE Asia, Cypress Room (Room F), 3rd Floor, 63 Convention Center, 50, 63-ro, Yeongdeungpo-gu, Seoul, Korea
Scope	This tutorial is designed for engineers to improve and deepen their understanding of modelling and simulation of power electronic systems. Using presentations, demonstrations, discussions and hands-on exercises the subject is learned and applied on specific problems.
Trial License	The tutorial contains hands-on exercises. A computer with PLECS Standalone installed will be needed. Please request your PLECS Standalone trial license via http://www.plexim.com/trial/standalone.

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