MODELING AND SIMULATION OF POWER ELECTRONICS SYSTEMS

Seminar about PLECS Power Electronics Software

North Carolina State University, Thursday, April 7th, 2016

Speaker	Dr. Beat Arnet, Plexim Inc.
8:00am	Registration/Networking, Coffee and Muffins
8:30am	Introduction to PLECS simulation software ▶I General use of PLECS Blockset and PLECS Standalone ▶I Instantaneous switching ▶I Variable and fixed-step operation Exercise: Modeling a switched-mode power supply
10:00am	Coffee break
10:30am	Solver settings ▶I Definition of stiff and non-stiff systems ▶I Explicit and non-explicit solvers ▶I Stability domain ▶I Accuracy considerations, step size control ▶I Proper handling of discontinuities, zero-crossing detection Exercise: Solver accuracy and settings
12:00pm	Lunch (provided)
1:00pm	Introduction to Thermal, Mechanical, & Magnetic modeling and simulation ▶I Switching and conduction loss descriptions ▶I Combined electrical-thermal simulation ▶I Permeance-Capacitance analogy model Exercise: Thermal modeling of a Buck converter
2:15pm	Coffee break
2:30pm	Advanced Topics ▶I Analysis tools for steady-state and small signal analyses ▶I Agile embedded software development using SIL, PIL, HIL tools Demo: PLECS PIL with a TI C2000 MCU
4:00pm	Q&A/Wrap-up
5:00pm	End of day
RSVP	** **REQUIRED** ** Please RSVP to Vitalik Ablaev, ablaev@plexim.com. Space is limited!
Location	McKimmon Conference and Training Center North Carolina State University 1101 Gorman Street Raleigh NC 27606

Plexim, Inc.
5 Upland Road, Suite 4
Cambridge, MA 02140

+1 617 209 2121
info@plexim.com
www.plexim.com

plexim
electrical engineering software