

PLECS REAL-TIME SEMINAR

Code Generation and Hardware-In-the-Loop Testing with PLECS

Friday, March 17, 2017 at North Carolina State University in Raleigh

Speakers	Dr. Beat Arnet, General Manager, Plexim Ms. Manaswini Parimi, Applications Engineer, Plexim
8:30am	Setup, networking, coffee and muffins (provided)
9:00am	Introduction to general use of PLECS Blockset and PLECS Standalone <ul style="list-style-type: none">▶ Fast and efficient semiconductor models with instantaneous switching▶ Variable and fixed-step operation▶ Electrical, thermal, magnetic, mechanical and control components Hands-on exercises: <ul style="list-style-type: none">▶ Buck converter▶ Modeling and measuring thermal loss▶ Designing an inductor in the magnetic domain
10:30am	Coffee break (provided)
10:45am	PLECS Solver and Coder <ul style="list-style-type: none">▶ Definition of stiff and non-stiff systems▶ Explicit and non-explicit solvers▶ Coder options and code generation▶ CodeGen simulation mode Hands-on exercises: <ul style="list-style-type: none">▶ Solver accuracy and settings▶ Code generation with generic target
12noon	Lunch (provided)
1:00pm	Introduction to Hardware-In-the-Loop and PLECS RT Box <ul style="list-style-type: none">▶ Overview of different “in-the-loop” methodologies▶ Using the RT Box for HIL▶ RT Box architecture and specifications▶ IO processing Hands-on exercises: <ul style="list-style-type: none">▶ Discretization of Buck converter▶ Ideal and averaged switch models
3:00pm	Coffee break (provided)
3:15pm	RT Box demos and discussion <ul style="list-style-type: none">▶ Buck/boost converter at 20 kHz switching▶ Field oriented control of PM motor with quadrature encoder▶ 3-level NPC grid-tied solar inverter
5:00pm	End of seminar
Contact	RSVP to Ms. Manu Parimi, parimi@plexim.com , 617-209-2126 (include any special dietary needs)

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