



翹慧事業股份有限公司 INDUSTRADE CO., LTD

Plexim PLECS Workshop Seminar Agenda

Objective: Hardware-in-the-Loop Simulation and Advanced Modeling of Power Electronic Systems

Date and Time: 2017 June 8th, Thursday, From 9:00 to 16:00

Place: L.Y. Room (令洋廳), B1, Department of Electrical Engineering, National Cheng Kung University (Tzu-Chang Campus)

Organizer: Industrade

Sponsor: Plexim & NCKU

Speaker: Orhan Toker, Vice President, Plexim GmbH

Target Audience: Professors, Students and Engineers who associated with power electronic system research and Engineers

Invitation of Participants: 70% participants reserved for NCKU, another 30% reserved for non-NSYSU participants

PLECS Workshop Timetable:

| Time | Subject | Exercises (hand-on sessions) |
|---------------|--|--|
| 08:30 ~ 09:00 | Register | |
| 09:00 ~ 10:00 | Introduction to PLECS <ul style="list-style-type: none"> ✓ General use of PLECS Blockset and PLECS Standalone ✓ Instantaneous switching ✓ Variable and fixed-step operation | Modeling a switched-mode power supply |
| 10:00 ~ 10:30 | <i>Break</i> | |
| 10:30 ~ 12:00 | Solver Settings <ul style="list-style-type: none"> ✓ Definition of stiff and non-stiff systems ✓ Explicit and non-explicit solvers ✓ Stability domain ✓ Accuracy considerations, step size control ✓ Proper handling of discontinuities, zero-crossing detection | Exercise: Solver accuracy and settings |
| 12:00 ~ 13:00 | <i>Lunch</i> | |
| 13:00 ~ 14:30 | Introduction to Thermal, Mechanical & Magnetic Modeling & Simulation <ul style="list-style-type: none"> ✓ Switching & conduction loss descriptions ✓ Combined electrical-thermal simulation ✓ Permeance Capacitance Analogy Model | Thermal modeling of a buck converter |
| 14:30 ~ 15:00 | <i>Break</i> | |
| 15:00 ~ 16:00 | Hardware-in-the-loop simulation RT-Box Demo | |

Event assistance:

1. Workshop materials: Provided by Plexim and Industrade.
2. Licenses: PLECS licenses key provided by Plexim. Industrade will install latest software and license server during event
3. Provide assistance: Provide assist for registration, software installation and seminar room preparation
4. Participants list: Provide NCKU participants contact list to Industrade (for event activity record purpose only)

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