



DRIVING EMBEDDED EXCELLENCE

Two-day workshop: New Methods in Embedded Software Development

Monday, August 13 – Tuesday August 14, 2018

Day 1

- 8:30 a.m. Registration and Breakfast
- 9:30 a.m. Welcome and Introduction
- 10:00 a.m. Software installation and guided example – Modelling in textual language – Modelling a light switch controller for a body control unit
- 10:45 a.m. Coffee break
- 11:00 a.m. Continue guided example
- 11:30 a.m. Advantages of the modelling approach: Fixed point, variants, safety...
- 12:30 p.m. Lunch
- 1:30 p.m. Code generation and hands-on experimenting
- 2:15 p.m. Presented by Pillar Technology: Scaling and architect smart embedded software teams for large scale efforts*
- 3:15 p.m. Coffee break
- 3:30 p.m. Extending the guided example, managing complexity with the ETAS SCODE-ANALYZER software tool
- 4:00 p.m. Running the example in the ETAS ASCET-DEVELOPER experiment environment and on target
- 4:30 p.m. Day 1 wrap up, Q & A

*see next page for details

Day 2

- 8:30 a.m. Breakfast
- 9:00 a.m. Recap of Day 1 and software installation, if necessary
- 9:30 a.m. Presented by Pillar Technology – LOOP-ing in ASCET-DEVELOPER - Demonstrating a proof of concept of ASCET-DEVELOPER and LOOP integrated together
- 10:30 a.m. Coffee break
- 10:45 a.m. Creating an ECU architecture with AUTOSAR (bottom up and top down)
- 12:00 p.m. Lunch
- 1:00 p.m. Virtual AUTOSAR Execution Platform ISOLAR-EVE
- 2:00 p.m. Simulation in ETAS ISOLAR-EVE (Virtual ECU for Software Development)
- 3:00 p.m. Day 2 wrap up, Q & A



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*Integrating hardware and embedded software is always a challenge, but it gets really interesting when it needs to be done at scale. This talk will discuss several factors that affect the ability to do embedded software at scale:

- Criticality and complexity of the software (i.e. smart toaster vs. autonomous vehicle) - the more features, algorithms, and safety implications a project needs to deal with the more important it is to have things like self-validating specifications. As hardware complexity rises, quality software is of utmost importance to ensure functional safety in safety-critical embedded systems.
- Scaling the number of teams, vendors, and locations - increased organizational complexity in the development effort makes it critical to have solid techniques to divide and conquer while continuously integrating.

Understand level of Innovation - as teams scale there is a tendency to sink back into inefficient strategies.

Register here: <https://www.surveymonkey.com/r/86ZLRSC>