Project 8: Testing of Real-Time Embedded Systems (RTES)

Shuai Wang

Postdoctoral Researcher, Simula Research Laboratory

Certus User Partner Workshop

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Objectives

- Devising a set of novel techniques for testing
- Empirically evaluating cost, effectiveness, and scalability of the testing techniques
- Demonstrating the applicability of the testing techniques on the industrial case studies

Existing Tasks

- **Task 8.1:** Automated Test Selection/Generation using Feature Models for Product Lines
  - Finished by the end of 2015
  - All the deliverables are on track
- **Task 8.2:** Non-Functional Testing of Real-Time and Embedded Systems
  - Finished by the end of 2015
  - All the deliverables are on track
- **Task 8.3:** Automated Software Testing of Complex Industrial Robotics Systems
  - Finished by Aug. 2015
  - All the deliverables are on track

AWP 2016

- **New Task 8.4:** Optimal Automated Scheduling of Test Suites Execution

- **New Task 8.5:** Automated Generation of Minimum Test Configurations to Test Robustness of VCSs

Task 8.4: Optimal Automated Scheduling of Test Suites Execution

- Participants: SIMULA, ABB, CISCO (and KM if interested)
- Methods and tools to schedule the execution of test cases in a continuous integration environment
- Underlying technique: Constraint optimization and global constraints
- PhD topic

Task 8.5: Automated Generation of Minimum Test Configurations to Test Robustness of VCSs

- PhD topic: Dipesh Pradhan
- Participants: CISCO and SIMULA
- Context: VCSs should behave in a robustness and scale way when facing to different configurations (e.g., network quality)
- Objective: Generate a minimum set of test configurations for cost-effective testing robustness of VCSs

Thank You!