

## Program of the DECSoS'14 Workshop

The DECSoS'14 Workshop is an ERCIM/EWICS/ARTEMIS workshop, scientifically co-sponsored by the ERCIM Working Group on Dependable Embedded Software-intensive Systems, EWICS TC7 and ARTEMIS projects ([www.artemis-ju.eu](http://www.artemis-ju.eu)), particularly MBAT, nSafeCer, CRYSTAL, ARROWHEAD and EMC<sup>2</sup>.

The Workshop will be held at "Auditorium al Duomo Florence - Donatello room", Via de Cerretani 54/r, Firenze.

The workshop DECSoS'14 comprises the following sessions and papers (in [brackets]: Acronym of the related ARTEMIS project if it is basis of the work reported):

### 09:30 – 10:00 Introduction:

- Erwin Schoitsch, Amund Skavhaug. *ERCIM, EWICS, ARTEMIS: An (European) introduction to different aspects of critical systems engineering.*

### 10:00 – 11:00 Formal Analysis and Verification (I):

- Sayali Salvi, Daniel Kästner, Tom Bienmüller and Christian Ferdinand: *True Error or False Alarm? Refining Astree's Abstract Interpretation Results by EmbeddedTester's Automatic Model-based Testing* [MBAT]
- Markus Oertel, Omar Kacimi and Eckard Boede: *Formal Verification of Implementation Models against Safety Specifications* [MBAT]

### 11:00 – 11:30 Coffee Break

### 11:30 – 13:00 Railway applications: Safety analysis and verification

- Vallée Frédérique, Alexandre Ginisty, Elie Soubiran and Vidal Delmas Tchapet-Nya: *Report on the Railway Use case of the Crystal project: Objectives and Progress* [CRYSTAL]
- Marco Carloni, Orlando Ferrante, Alberto Ferrari, Gianpaolo Massaroli, Antonio Orazio, Luigi Velardi and Ida Petrone: *Contract-based Analysis for verification of Communication-Based Train Control (CBTC) system* [MBAT]
- Gregorio Barberio, Beniamino Di Martino, Nicola Mazzocca, Luigi Velardi, Aniello Amato, Renato De Guglielmo, Ugo Gentile, Stefano Marrone, Roberto Nardone, Adriano Peron and Valeria Vittorini: *An Interoperable Testing Environment for ERTMS/ETCS control systems.* [CRYSTAL]

### 13:00 – 14:30 Lunch Break

### 14:30 – 16:00 Resilience and Trust – Dynamic Issues

- Linas Laibinis, Inna Pereverzeva and Elena Troubitsyna: *Modelling Resilient Systems-of-Systems in Event-B.*
- Nermin Kajtazovic, Christopher Preschern, Andrea Höller and Christian Kreiner: *Towards Assured Dynamic Configuration of Safety-critical Embedded Systems.*
- Daniel Schneider, Eric Armengaud and Erwin Schoitsch: *Towards Trust Assurance and Certification in Cyber-Physical Systems* [EMC<sup>2</sup>].

### 16:00 – 16:30 Coffee Break

### 16:30 – 17:30 Formal Analysis and Verification (II):

- Christian Ellen, Martin Böschen and Thomas Peikenkamp: *MTBF Inconsistency Analysis on Inferred Product Breakdown Structures* [CRYSTAL]
- Francesco Moscato, Rocco Aversa and Beniamino Di Martino: *Critical Systems Verification in MetaMORP(h)OSY* [CRYSTAL]

The workshop will hopefully provide some insight into the topics, and enable fruitful discussions during the meeting and afterwards. The mixture of topics is hopefully well balanced, with a certain focus on Software and System Analysis and Verification, and addressed particularly by the ARTEMIS projects MBAT, CRYSTAL and EMC<sup>2</sup>.