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), particularly MBAT, nSafeCer, CRYSTAL, ARROWHEAD and EMC².

The Workshop will be held at "Auditorium al Duomo Florence - Donatello room", Via de Cerretani 54/lr, 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
- Marco Carloni, Orlando Ferrante, Alberto Ferrari, Gianpaolo Massaroli, Antonio Orazzo, 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.
- Daniel Schneider, Eric Armengaud and Erwin Schoitsch: Towards Trust Assurance and Certification in Cyber-Physical Systems [EMC²].

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 EMC².