

CDC 2016 Full-Day Workshop

Verification and control of cyber-physical systems: theory and applications

Date and Place:

December 11, 2016, Starvine 2, ARIA Resort & Casino, Las Vegas, USA

Organizers:

Axel Busboom - GE Global Research Europe, Munich, Germany

Maria Prandini - Politecnico di Milano, Italy

Agenda:

09.15-09.30:

Introduction and motivation

Session 1: Challenges arising from applications

09.30-10.15:

Maricio Castillo-Effen: Challenges of developing and fielding robots and intelligent machines in the real world

10.15-11.00:

Karl Henrik Johansson: Cyber-physical control of road freight transport

11.00-11.15:

Coffee break

Session 2: Verification and testing

11.15-12.00:

Alessandro Pinto: Verification of autonomous systems

12.00-12.45:

Kerstin Eder: Intelligent test generation for advanced coverage-driven verification of robotic code

12:45-14.15:

Lunch break

14.15-15.00:

Matthias Althoff: Self-verification of automated vehicles

Session 3: Control design, planning, and coordination

15.00-15.45:

Olaf Stursberg: Controller synthesis for probabilistic cyber-physical systems using reachable set computation

15.45-16.00:

Coffee break

16.00-16.45:

John S. Baras: Metric temporal logic and set valued methods for safe control design and planning in CPS

16.45-17.30:

George J. Pappas: Formal synthesis for supervisory control of hierarchical hybrid systems

17.30-17.40:

Concluding remarks
