

NET-CPS 2016

International Symposium on Networked Cyber-Physical Systems
September 19-20, 2016

jointly organized by
Institute for Advanced Study (TU Munich) and
Institute for Systems Research (University of Maryland)



Venue: TUM Institute for Advanced Study (TUM-IAS)
Lichtenbergstraße 2 a
85748 Garching near Munich

Day 1 - September 19, 2016

| Time | Program item |
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| 9:00-9:15 | Welcome, introduction of goals and objectives of the symposium |
| 9:15-10:15 | Plenary lecture by Prof. Manfred Broy (TUM, Zentrum Digitalisierung.Bayern) Towards comprehensive models for connected cyber physical systems |
| 10:15-10:30 | Coffee break |
| 10:30-12:00 | Session 1: Verification of networked CPS 1. Model checking and strategy synthesis for mobile autonomy: from theory to practice (Marta Kwiatkowska/ Univ Oxford) 2. Towards the Symbolic Analysis of Networked Systems (Klaus Wehrle / RWTH Aachen Univ) 3. Online Verification of Cyber-Physical Systems (Matthias Althoff/ TUM) |
| 12:00-13:30 | Lunch and poster session |
| 13:30-14:30 | Plenary lecture by Prof. Werner Damm (Universität Oldenburg) Understanding systems of cyber-physical systems |
| 14:30-15:00 | Coffee break |
| 15:00-16:30 | Session 2: Electric energy system as networked CPS 1. Toward a Unified Approach to Sustainable and Resilient Electric Energy Systems-- Modeling, Control and Testbeds (Marija Ilic / Carnegie Mellon Univ) 2. Real-Time Control of Electrical Distribution-Grids (Jean-Yves Le Boudec/ EPFL) 3. Challenges in simulating future energy systems (Antonello Monti/ RWTH Aachen Univ) |
| 16:30-17:00 | Coffee break |
| 17:00-18:00 | Panel I |

Day 2 - September 20, 2016

| Time | Program item |
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| 9:00-9:15 | Welcome note |
| 9:15-10:15 | Plenary lecture by Prof. Karl Hendrik Johansson (KTH, Sweden) Cyber-physical control of road freight transport |
| 10:15-10:30 | Coffee break |
| 10:30-12:00 | Session 3: Traffic system as networked CPS 1. Formal Methods for Control of Traffic Networks (Calin Belta/ Boston Univ) 2. Future Traffic Management: Towards a Cyber-Physical System Network (Markos Papageorgiou / Tech Univ Crete) 3. Human Roles in CPS Networks: Toward a Classification and a Roadmap (Tariq Samad / Univ Minnesota) |
| 12:00-13:30 | Lunch and poster session |
| 13:30-15:00 | Session 4: Control and security in networked CPS 1. Security problems of networked cyber-physical systems as centrality-based zero-sum games (Ming Cao/ Univ Groningen) 2. Predictive Control Methods for Networked Cyber-Physical Systems (Daniel Quevedo/ Univ Paderborn) 3. CPS with Mixed Time- and Event-Triggered Communication (Samarjit Chakraborty/ TUM) |
| 15:00-15:30 | Coffee break |
| 15:30-16:30 | Panel II |