

DFG Priority Program 1914 – Cyber-Physical Networking

3rd Plenary Meeting – *Tentative Program*

Location: Max Planck Institute for Intelligent Systems, Tübingen Campus; Max-Planck-Ring 4, 72076 Tübingen, <https://is.mpg.de/contact>

Getting in: The main entrance of the MPI (Max-Planck-Ring 4) is usually locked. During main arrival times on Thu and Fri, someone should be at the front door to let you in. If you find the door locked at other times, please call Ms. Julia Braun (+49.7071.601.1757).

Important: Please sign up in the doodle (<https://doodle.com/poll/wygavfus28s5txry>) **until 15 November 2018** if you plan to attend. The program is tentative – please inform Sebastian Trimpe (trimpe@is.mpg.de) in case of any conflicts.

Thursday, 29 November 2018

12:00 - 13:00 **Arrival & Lunch**

13:00 - 13:15 **Welcome address & goals of the meeting**

Klaus Wehrle (RWTH Aachen University), Sandra Hirche (TU Munich), Sebastian Trimpe (MPI for Intelligent Systems, Stuttgart/Tübingen)

13:15 – 15:00 **Presentations by Research Groups I (incl. 5 min Q&A)**

13:15 – 13:40 NICCI: Network-Informed Control – Control-Informed Network
Rolf Findeisen (Otto von Guericke University Magdeburg), Holger Karl (University of Paderborn), Daniel Quevedo (University of Paderborn)

13:40 – 14:00 CoCPN: Cooperative Cyber-Physical Networking
Uwe D. Hanebeck (Karlsruhe Institute of Technology), Martina Zitterbart (Karlsruhe Institute of Technology)

14:00 – 14:20 Model-Predictive Cyber-Physical Networking
Olaf Stursberg (University of Kassel), Gerhard Wunder (FU Berlin)

14:20 – 14:40 Cooperative Consensus-Based Control of Multi-Agent Systems over Wireless Channels
Jörg Raisch (TU Berlin), Slawomir Stanczak (TU Berlin)

14:40 – 15:30 **Break**

15:30 – 16:30 **SPP1914 Overview**

15:30 – 16:30 Overview first phase (activity review and plans) and outlook on second phase
Klaus Wehrle (RWTH Aachen University), Sandra Hirche (TU Munich), Damian Dudek (DFG)

- 16:30 – 18:00 Bar camp reports / discussions**
16:30 – 17:15 Reports from Arosa bar camp groups (t.b.d.)
17:15 – 18:00 Discussion (bar camps, benchmarking, general topics)

19:30 Dinner at Restaurant Wurstküche (self-pay)
Am Lustnauer Tor 8, 72074 Tübingen, <https://www.wurstkueche.com/>

Friday, 30 November 2018

- 9:00 - 10:15 Presentations by Research Groups II (incl. 5 min Q&A)**
- 9:00 – 9:20 EcoCPS: Event-based Wireless Control for Cyber-Physical Systems
Sebastian Trimpe (Max Planck Institute for Intelligent Systems, Stuttgart/Tübingen), Marco Zimmerling (TU Dresden)
- 9:20 – 9:40 Optimal Co-Design of Wireless Resource Management and Multi-Loop Networked Control
Sandra Hirche (TU Munich), Wolfgang Kellerer (TU Munich)
- 9:40 – 10:00 Integrated Controller Design Methods and Communication Services for Networked Control Systems
Frank Allgöwer (University of Stuttgart), Kurt Rothermel (University of Stuttgart)
- 10:00 – 10:15 Measurements for Composable Performance Models of Cyber-Physical Network Components
Georg Carle (TU Munich)
- 10:15 – 11:00 Break**
- 11:00 – 12:00 Presentations by Research Groups III (incl. 5 min Q&A)**
- 11:00 – 11:20 Analysis and Synthesis of Combined Cooperative Control and Topology Control over Wireless Network Models
Hannes Frey (University of Koblenz-Landau), Herbert Werner (TU Hamburg-Harburg)
- 11:20 – 11:40 REFLEXES: A Co-Designed Architecture for In-Network Control
Sandra Hirche (TU Munich), Klaus Wehrle (RWTH Aachen University)
- 11:40 – 12:00 Latency and Resilience-Aware Networking
Thorsten Herfet (Saarland University), Wolfgang Schröder-Preikschat (FAU Erlangen-Nürnberg)
- 12:00 – 12:30 Closing**
- 12:00 – 12:30 Closing remarks and discussion
Klaus Wehrle (RWTH Aachen University), Sandra Hirche (TU Munich)
- 12:30 Lunch & Departure**