

Dagstuhl Seminar “Software Contracts meet System Contracts”

Scientific Organizers: Alessandro Cimatti, Gidon Ernst, Paula Herber, and Kristin Yvonne Rozier

Tentative Schedule

Monday (Opening)

- 09:00 - 09:30 Welcome & Opening
- 09:30 - 10:00 Workshop Goals
- 10:00 - 10:30 Coffee Break and Poster Session
- 10:30 - 12:00 Introduction of the Participants
- 12:00 - 14:00 Lunch and Poster Session
- 14:00 - 15:00 Summary of earlier discussions
- 15:00 - 15:30 Discussion: Workshop aims and Initial Breakout Groups
- 15:30 - 16:00 Coffee Break and Poster Session
- 16:00 - 17:00 Breakout groups
- 17:00 - 17:30 Reconvene

Tuesday (From Software to System Contracts)

- 9:00 - 10:30 Marieke Huisman: Software Contracts
Stefano Tonetta: System-level contract-based design with OCRA
- 10:30 - 11:00 Coffee Break
- 11:00 - 12:00 Thomas Flinkow: Differentiable Logic for Correct-by-Construction Neural Networks
Romain Pascual: Perspectives on Consistency for System and Software Contracts
Marco Scaletta: Taming Big CATs
- 12:00 - 14:00 Lunch
- 14:00 - 15:00 Breakout Groups
- 15:00 - 15:30 Reconvene
- 15:30 - 16:00 Coffee Break
- 16:00 - 17:30 Erika Abraham: Formal methods for probabilistic systems
Mattias Nyberg: Probabilistic Contracts

Wednesday (Probabilistics and Quantitative Aspects)

- 9:00 - 10:00 Pauline Blohm: Quantitative Analysis of Embedded Control Systems using Stochastic Hybrid Automata
Anna Becchi: Verify and Reverse-engineer Relay-based Circuits
Reorganization of Breakout Groups
- 10:00 - 10:30 Coffee Break
- 10:30 - 11:30 Breakout Groups
- 11:30 - 12:00 Reconvene
- 12:00 - 13:50 Lunch
- 13:50 Group Photo at the Chapel
- 14:00 - Walk

Thursday (Contract Inference & Validation)

- 9:00 - 10:30 Philipp Rümmer: Techniques for Contract Inference
Darren Cofer: FIRST CONTRACT – History of Contract Verification at Collins
- 10:30 - 11:00 Coffee Break
- 11:00 - 12:00 Zafer Esen: Sound and Complete Invariant-Based Heap Encodings
Philip Tasche: Local Proofs of Global Properties
Shufang Zhu: Reactive Synthesis of Linear Temporal Logic on Finite Traces
- 12:00 - 14:00 Lunch
- 14:00 - 14:30 Reorganization of Breakout Groups
- 14:30 - 15:30 Breakout Groups
- 15:30 - 16:00 Coffee Break
- 16:00 - 17:30 Breakout Groups

Friday (Closing)

- 9:00 - 10:00 Reports from Breakout Groups
- 10:00 - 10:30 Coffee Break
- 10:30 - 12:00 Key Insights and Future Plans
- 12:00 - 14:00 Lunch (optional)