

# 30th Nordic Workshop on Programming Theory (NWPT'18)

Wednesday, October 24st

**9:00–9:30: Registration of the workshop participants.**

**9:30–9:35: Workshop opening and welcome from the organizers.**

**09:35–10:30** (# 1. Main room, chair: Olaf Owe) (invited talk)

- **Invited talk:** *Design and Validation of Cloud Storage Systems using Rewriting Logic* by Peter Ölveczky.

**10:30–11:00: COFFEE BREAK**

**11:00–12:30** (# 2. Main room, chair: Jaakko Järvi) (semantics)

- *Connecting Choreography Languages With Verified Stacks* by Alejandro Gómez Londoño and Johannes Åman Pohjola.
- *Adding Constraints to CRDTs: From Eventual Consistency to Observable Atomic Consistency* by Xin Zhao and Philipp Haller.
- *Towards Semantical Foundations of Services Computing* by Tobias Rosenberger, Saddek Bensalem and Markus Roggenbach.

**12:30–13:30: LUNCH**

**13:30–15:00** (# 3. Main room, chair: Peter Ölveczky) (software engineering)

- *Adaptations of API test case generation* by Cyrille Valentin Artho, Rudolf Ramler, Martina Seidl and Jun Yoneyama.
- *Graph Algebras and Software Engineering* by Uwe Wolter.
- *An Executable Modeling Language for Context-Dependent Self-Adaptive Systems* by Sigurd Kittilsen, Jacopo Mauro and Ingrid Chieh Yu.

**15:00–15:30: COFFEE BREAK**

**15:30–17:00** (# 4. Main room, chair: Martin Steffen) (semantics theory)

- *Higher-Dimensional Timed Automata* by Uli Fahrenberg.
- *A verified proof checker for higher-order logic* by Oskar Abrahamsson.
- *The Complexity of Identifying Characteristic Formulae* by Luca Aceto, Antonis Achilleos, Adrian Francalanza and Anna Ingólfssdóttir.

**17:30:** Reception/tapas Ole-Johan Dahl's building, 5th floor (<https://www.mn.uio.no/ifi/english/about/>)

## Thursday, October 25th

**09:00–10:30** (# 5. Main room, chair: Einar Broch Johnsen) (invited talk)

- **Invited talk:** *Symbolic Computation Techniques in SMT Solving: Mathematical Beauty meets Efficient Heuristics* by Erika Ábrahám.
- *Railway planning as bounded model checking* by Bjørnar Luteberget.

**10:30–11:00:** COFFEE BREAK

**11:00–12:30** (# 6. Main room, chair: Magne Haveraaen) (analysis)

- *Static analysis for dynamic data race detection with TeSSLa* by Svetlana Jakšič, Malte Schmitz, Volker Stolz and Daniel Thoma.
- *Using Coloured Petri Nets for Resource Analysis of Active Objects* by Anastasia Gkolfi, Einar Broch Johnsen, Lars Michael Kristensen and Ingrid Chieh Yu.
- *Contract-based Verification of Asynchronous Calls with Cooperative Scheduling* by Eduard Kamburjan, Crystal Chang Din, Reiner Hähnle and Einar Broch Johnsen.

**12:30–13:30:** LUNCH

**13:30–15:00** (# 7. Main Room, chair: Marina Waldén) (modeling)

- *On choreographies and communication failures* by Fabrizio Montesi and Marco Peressotti.
- *Towards Compositional User Interfaces: Semantics of Multi-Way Dataflow Constraints* by Magne Haveraaen and Jaakko Järvi.
- *An Event-B Model for a Basic Prototype of a Healthcare System* by Usman Sanwal, Luigia Petre, Gohar Shah, Charmi Panchal, Dwitiya Tiwari and Ion Petre.

**15:00–15:30:** COFFEE BREAK

**15:30–17:00** (# 8A. Parallel Session A Main room, chair: Uwe Wolter) (formal methods)

- *Towards Efficient Bit-Vector Interpolation* by Peter Backeman, Philipp Ruemmer and Aleksandar Zeljić.
- *A Roadmap for Multi-Model Consistency Management* by Patrick Stünkel, Harald König, Yngve Lamo and Adrian Rutle.
- *Specifying with Syntactic Theory Functors* by Magne Haveraaen and Markus Roggenbach.

**15:30–17:00** (# 8B. Parallel Session B Room Nimbus, chair: Volker Stolz) (privacy and security)

- *Language-Based Support for GDPR-Related Privacy Requirements* by Shukun Tokas and Toktam Ramezanifarkhani.
- *The Future Mechanism and Information Flow Security* by Farzane Karami, Christian Johansen, Olaf Owe and Gerardo Schneider.
- *Security Ceremonies with Heterogeneous Devices in ANP and PDL* by Antonio Gonzalez-Burgueño and Peter Ölveczky.

**18:30:** Workshop dinner at Ekeberg Restaurant (<https://www.ekebergrestauranten.com/english/>)

## Friday October 26th

**09:30–10:30** (# 9. Main room, chair: Olaf Owe) (invited talk)

- **Invited talk:** *Breaking and Fixing IoT Apps: from Attacks to Formal Methods for Security* by Andrei Sabelfeld.

**10:30–11:00:** COFFEE BREAK

**11:00–12:30** (# 10. Main room, chair: Andrei Sabelfeld) (privacy and security)

- *A Runtime Enforcement Mechanism for Collaborative Privacy Policies in Online Social Networks* by Hanaa Alshareef, Raul Pardo and Gerardo Schneider.
- *A Language for Modelling Privacy* by Ian Oliver.
- *A Survey of Semantic Attribute-Based Access Control Schemes* by Hamed Arshad.

**12:30–13:30:** LUNCH and PC meeting

**13:30:** End of the workshop and departure.