

# Reachability Problems 2016

Nordkraft, Aalborg, Denmark

**Monday, September 19th**

**9:20–9:30: workshop opening and welcome from the organizers**

**09:30–10:30 (invited talk)**

- *The Ideal Theory for WSTS* by Alain Finkel.

**10:30–11:00: coffee break**

**11:00–12:30:**

- *On the Complexity of Resource-Bounded Logics* by Natasha Alechina, Nils Bulling, Stéphane Demri and Brian Logan.
- *Insertion-Deletion Systems over Relational Words* by Igor Potapov, Olena Prianychnykova and Sergey Verlan.
- *Reachability Predicates for Graph Assertions* by Giorgio Delzanno.

**12:30–13:30: lunch**

**13:30–15:00:**

- *Decidable Models of Integer-Manipulating Programs with Recursive Parallelism* by Anthony Widjaja Lin and Matthew Hague.
- *Compositional Analysis of Boolean Networks Using Local Fixed-Point Iterations* by Adrien Le Coent, Laurent Fribourg and Romain Soulat.
- *Robot Games with States in Dimension One* by Reino Niskanen.

**15:00–15:30: coffee break**

**15:30–16:30:**

- *Vector Ambiguity Problem in  $SL(2, Z)$*  by Sang-Ki Ko and Igor Potapov. (IP)
- *Optimal Control for Simple Linear Hybrid Systems* by Mahmoud A. A. Mousa, Sven Schewe and Dominik Wojtczak. (IP)

**16:30–17:30: Excursion at the Nordkraft facility.**

**Tuesday, September 20th**

**09:30–10:30 (invited talk)**

- *Rare Events for Statistical Model Checking: An Overview* by Axel Legay.

**10:30–11:00: coffee break**

**11:00–12:30:**

- *Plain, Bounded, Reversible, Persistent, and  $k$ -Marked Petri Nets Have Marked Graph Reachability Graphs* by Eike Best and Harro Winkelmann.
- *Safety Property-Driven Stubborn Sets* by Henri Hansen and Antti Valmari.
- *Occam's Razor Applied to the Petri Net Coverability Problem* by Thomas Geffroy, Jérôme Leroux and Grégoire Sutre.

**12:30–13:30:** lunch

**13:30–15:00:**

- *Characterizing Word Problems of Groups* by Sam Jones and Rick Thomas.
- *Decidability of the Membership Problem for  $2 \times 2$  Integer Matrices* by Igor Potapov and Pavel Semukhin. (IP)
- *Importance Sampling for Stochastic Timed Automata* by Kim G Larsen, Axel Legay, Marius Mikucionis, Cyrille Jégourel, Danny B Poulsen and Sean Sedwards. (IP)

**15:00–15:30:** coffee break

**15:30–17:00:**

- *Linear Combinations of Data Vectors* by Piotr Hofman, Jérôme Leroux and Patrick Totzke. (IP)
- *Uppaal Stratego: Safe and Optimal Reachability* by Peter G. Jensen, Kim G. Larsen and Jakob H. Taankvist. (IP)
- *Scheduling for Coordination* by Kasper Dokter. (IP)

**19:00:** Workshop dinner at Prinses Juliana (boat in the harbour), Vestre Havnepromenade 2, Aalborg. <http://www.prinsesjuliana.dk/>

## Wednesday, September 21th

**09:30–10:30 (invited talk)**

- *High Performance Reachability: Algorithms—Extensions—Interface* by Jaco van de Pol.

**10:30–11:00:** coffee break

**11:00–12:30:**

- *Distributed Fixed-Point Computation on Dependency Graphs* by Andreas E. Dalsgaard, Søren Enevoldsen, Kim G. Larsen and Jiří Srba. (IP)
- *Distributed Synthesis of State-Dependent Switching Control* by Adrien Le Coent, Laurent Fribourg, Nicolas Markey, Florian De Vuyst and Ludovic Chamoin.
- *Distributed Reachability for Timed Automata* by Kim G. Larsen, Brian Nielsen, Zhang Zhengkui. (IP)

**12:30–13:30:** lunch

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