

Data structures and Algorithms in Multi-Core Model Checking

Alfons Laarman
Technical University of Vienna

Where: Jakob-Haringer-Str. 2, Room T02

When: Wednesday, June 4, 2014 - 11:00 h s.t.

This talk is about the parallelization of the model checking procedure on modern multi-core machines, a problem I have been working on for the past 4 years. I will discuss several concurrent data structures and algorithms that we used to obtain a linear speedup with respect to state-of-the-art model checkers such as SPIN and UPPAAL. The areas that will be covered include: explicit-state reachability, tree-compressed storage, symbolic reachability using BDDs and some DFS-based algorithms for checking liveness properties.

Alfons Laarman is a postdoc now at TU Vienna, working with Georg Weissenbacher (group of Helmut Veith) on SAT solving. He recently finished his PhD at TU Twente, the Netherlands.



embedded Software & Systems
Center
Colloquium Series

Host: Ana Sokolova