Games and Automata for Verification

Christof Löding

University of Aachen, Germany

Abstract

This tutorial is an introduction to the theory of automata on infinite objects and to games of infinite duration played on graphs. The main objective is to introduce the basic models and to illustrate their use in the model checking approach to verification. The planned subjects of the talk are:

- Büchi automata and LTL model checking;
- parity games and the modal μ-calculus;
- parity tree automata and the logic S2S.

The tutorial is targeted at newcomers to the subject.