

Model Checking, SS2011: Outline of tutorial 2

May 11, 2011

1. Syntax of linear arithmetic
 - (a) Grammar (§2.1 and §3.3.3 of [1])
 - (b) Bound and free variables, (§2.1 of [1] and slides 37-38 of [2])
 - (c) Variable substitution, capture, and substitution over formulas (slides 39-42 of [2])
2. Semantics of linear arithmetic (slides 43-48 of [2])
 - (a) Σ -structures
 - (b) Variable assignments
 - (c) Remapping of assignments
 - (d) Formula evaluation
3. Forward-Symbolic-Reachability algorithm (see this week's lecture notes)

Note: If you do not have access to [1], please send an e-mail to

`mc_ss11@lists.model.in.tum.de`

References

- [1] Aaron R. Bradley and Zohar Manna. *The Calculus of Computation: Decision Procedures with Applications to Verification*. Springer-Verlag New York, Inc., 2007.
- [2] Viorica Sofronie-Stokkermans. Selected topics in automated reasoning. <http://www.mpi-sb.mpg.de/~sofronie/lecture-ar-09/slides/lecture-14-may.pdf>.