

Seminar: Satisfiability Checking

WS 2016/17

October 21, 2016

Dates

Relevant dates (All deadlines are strict):

- ▶ **04.11.2016** Contact your supervisor
- ▶ **18.11.2016** Prepare sources, outline of the paper
- ▶ **09.12.2016** Complete your paper
- ▶ **23.12.2016** Paper final version
- ▶ **20.01.2017** Complete your talk
- ▶ **03.02.2017** Talk final version
- ▶ **TBA** Seminar

Deliverables

During the semester you will prepare

- ▶ a paper (10 pages, german/english) and
- ▶ a talk summarizing your results (25 minutes, german/english).

We provide a template for your paper (ask supervisor).

Topics

The available topics are

1. Difference Logic
2. Theory combination with the Nelson-Oppen integration scheme
3. Computing unsatisfiable cores
4. Model construction during SAT solving
5. Solving nonlinear equalities with virtual substitution
6. Using SMT for bounded model checking

Topics

The available topics are

1. Difference Logic (Kremer)
2. Theory combination with the Nelson-Oppen integration scheme (Kremer)
3. Computing unsatisfiable cores (Ábráham)
4. Model construction during SAT solving (Kremer)
5. Solving nonlinear equalities with virtual substitution (Ábráham)
6. Using SMT for bounded model checking (Ábráham)