

Training in SMT

19.05.2021 – 04.06.2021

Online on Zoom

<https://rwth.zoom.us/j/94099473889?pwd=WnNNbFY4ZG45YThkems0MXVzQU8vZz09>

Program (DE local hours)

19 May 2021 (*Common sessions*)

8:30 - 10:00 Erika Abraham: SMT Solving I

Historical notes

Eager and lazy SMT solving

Discussion

10:30 - 11:30 Róbert Vajda and Zoltán Kovács: GeoGebra

Introduction to a powerful math teaching tool that uses SMT solving

Discussion

12:00-13:30 Erika Abraham: SMT solving II

Model-constructing satisfiability calculus (MCSAT)

Solving quantified formulas / quantifier elimination

Proof generation

Optimization

Discussion

20 May 2021 (*Common sessions*)

8:30-10:00 Erika Abraham: SMT-LIB and SMT solvers

- SMT-LIB logics and syntax
- SMT-LIB benchmarks
- SMT competition
- SMT solvers
- Discussion

10:30-12:00 Erika Abraham: Z3

- Installation, functionalities and usage
- Examples
- Discussion

12:30-14:00 Gereon Kremer: NRA techniques in SMT

21 May 2021 (*Common sessions*)

8:30-10:00 Erika Abraham: SMT-RAT I

- Historical notes
- Software structure
- Solver modules

10:30-12:00 Jasper Nalbach: SMT-RAT II

- Installation
- Functionalities
- General usage
- SMT-RAT in teaching

12:15-13:15 Erika Abraham: SMT solver applications

13:30-15:00 Erika Abraham: Teaching SMT solving

26 May 2021 (*individual training*)

08:30 – 10:00 Session 11

10:00 – 10:15 *Break*

10:15 – 11:45 Session 12

11:45 – 12:00 *Break*

12:00 – 13:30 Session 13

28 May 2021 (*individual training*)

08:30 – 10:00 Session 14

10:00 – 10:15 *Break*

10:15 – 11:45 Session 15

11:45 – 12:00 *Break*

12:00 – 13:30 Session 16

31 May 2021 (*individual training*)

08:30 – 10:00 Session 17

10:00 – 10:15 *Break*

10:15 – 11:45 Session 18

11:45 – 12:00 *Break*

12:00 – 13:30 Session 19

02 June 2021 (*individual training*)

08:30 – 10:00 Session 20

10:00 – 10:15 *Break*
10:15 – 11:45 Session 21
11:45 – 12:00 *Break*
12:00 – 13:30 Session 22

03 June 2021 (*individual training*)

08:30 – 10:00 Session 23
10:00 – 10:15 *Break*
10:15 – 11:45 Session 24
11:45 – 12:00 *Break*
12:00 – 13:30 Session 25

04 June 2021 (*individual training*)

08:30 – 10:00 Session 26
10:00 – 10:15 *Break*
10:15 – 11:45 Session 27
11:45 – 12:00 *Break*
12:00 – 13:30 Session 28