SMT-RAT 2.0

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SMT-RAT is an open-source C++ toolbox for strategic and parallel SMT solving consisting of a collection of SMT compliant implementations of methods for solving quantifier-free (non)linear real and integer arithmetic as well as the logics of bitvectors and uninterpreted functions.

The focus of SMT-RAT is nonlinear arithmetic.

Our current implementation for the logic of uninterpreted functions is the result of a practical course within the winter term 2014/2015. The theory solver as well as the preprocessing techniques for this logic have been implemented and optimized solely by four master students that are listed below.

To broaden the scope of SMT-RAT and demonstrate its expandability to other logics, we offered a master thesis to implement a decision procedure for bitvector logic. Our current implementation for this logic was solely written by the master student listed below.

Authors

- Erika Ábrahám

- Florian Corzilius

- Gereon Kremer

- Stefan Schupp

- Phillip Keldenich (uninterpreted functions)

- Oliver Major (uninterpreted functions)

- Sascha Müller (uninterpreted functions)

- Daniel Neuen (uninterpreted functions)

- Andreas Krüger (bitvector)