

# Satisfiability Modulo Theories Competition

## SMT-COMP 2005

July 6-8, 2005, Edinburgh, Scotland

## About SMT-COMP 2005

The Satisfiability Modulo Theories Competition (SMT-COMP) 2005 brings together implementors of SMT solvers for friendly competition on a collection of well over 1000 benchmark formulas, mostly from verification applications. The goals of the competition are to inspire innovation in SMT solvers, encourage adoption of the proposed standard input language from the Satisfiability Modulo Theories Library (SMT-LIB) initiative, and spur collection of benchmarks in SMT-LIB format. We are delighted to report that in these regards, SMT-COMP has already been a great success. Twelve SMT solvers were entered in the competition, with two others pre-registered but not entered by the deadline. This is a substantially larger number of solvers than we knew even existed when we began planning for the competition. All these solvers support the SMT-LIB format, which was unsupported by any tool just six months ago. And a large set of benchmarks from a variety of different problem divisions has been collected in SMT-LIB format. This greatly furthers SMT-LIB's goal of collecting a publicly available library of benchmarks in a common format, which can be used by SMT researchers for evaluation and comparison of new SMT solving algorithms and implementations.

SMT-COMP is the result of the hard work and support of the entire SMT community, for which we would like to express our sincere thanks. The idea for holding an SMT competition arose in discussions of the SMT-LIB initiative at PDPAR 2004 in Cork, Ireland. We are grateful to Kousha Etessami and Sriram Rajamani, the program chairs for CAV 2005, for helping make SMT-COMP at CAV possible. For their contributions to effort to collect benchmarks for SMT-COMP, we wish to thank first especially Albert Oliveras, who helped translate many benchmarks into SMT-LIB format; and also Bruno Dutertre, Pete Monolios, Lee Pike, Jiae Shin, Sudarshan Srinivasan, Ofer Strichman; as well as members of the TSAT++ team, the MathSAT team, the SAL group at SRI, the UCLID project, and the Wisconsin Safety Analyzer project. We would also like to thank Mike Decoster and Michael Schidlowsky for making available an SMT-LIB parser in Ocaml. A special debt of gratitude is owed to Cesare Tinelli and Silvio Ranise for their work on the specification of the SMT-LIB format and the descriptions of the SMT-LIB theories and logics used by the competition. We would also especially like to thank all the people who entered solvers in SMT-COMP. Your hard work hacking solvers and adding support for the SMT-LIB format is greatly appreciated, and has already advanced the field.

The SMT-COMP organizers:  
Clark Barrett  
Leonardo de Moura  
Aaron Stump