

Preface

This volume contains the papers presented at Satisfiability Checking and Symbolic Computation (SC-square) 2018 held on July 11, 2018 in Oxford, UK as part of FLoC'18.

The workshop was one part of the SC-square project, a H2020 FETOPEN Coordination and Support Activity. Its goal was to provide time and space to bring together two communities, Symbolic Computation and SAT/SMT Solving, to share knowledge and experience, build bridges and collaborate.

The Symbolic Computation community is focused on using mathematical approaches, particularly computational algebraic geometry, to create algorithms that can find exact solutions to complex mathematical problems. With a comprehensive foundation of modern algebra, geometry and analysis, they represent the state-of-the-art in mathematical insight into real-valued polynomial problems.

Conversely, the SAT/SMT community takes a practical and engineering approach to solving a variety of logical problems arising from verification and synthesis of computer hardware and software. Increasingly this includes supporting algebraic “theories” such as reasoning over real and floating-point numbers.

These two communities, separated by history, tradition and approach, are unified in their common interest in providing capable, efficient, scalable and flexible tools for solving a variety of mathematical, engineering and computation problems. The SC-square project has brought the two communities together to build understanding between researchers and interfaces and common road-maps for tools.

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