

# Preface

It is our great pleasure to welcome you to CAV 2015, the 27th International Conference on Computer-Aided Verification, held in San Francisco, California, during July 18–24, 2015.

The CAV conference series is dedicated to the advancement of the theory and practice of computer-aided formal analysis methods for hardware and software systems. The conference covers the spectrum from theoretical results to concrete applications, with an emphasis on practical verification tools and the algorithms and techniques that are needed for their implementation. CAV considers it vital to continue spurring advances in hardware and software verification while expanding to new domains such as biological systems and computer security.

The CAV 2015 program included five keynotes, technical papers (58 long and 11 short papers accepted out of 252 submissions), 11 co-located events (VSTTE – Verified Software: Theories, Tools, and Experiments; SMT – Satisfiability Modulo Theories, EC2, IPRA – Interpolation: From Proofs to Applications; SYNT – Synthesis; VeriSure – Verification and Assurance; HCVS – Horn Clauses for Verification and Synthesis; VMW – Verification Mentoring Workshop, REORDER, SNR – Symbolic and Numerical Methods for Reachability Analysis; VEMDP – Verification of Engineered Molecular Devices and Programs), the Artifact Evaluation as well as briefings from the SMT and Synthesis competitions.

The invited keynote speakers were Philippa Gardner (Imperial College London), Leslie Lamport (Microsoft Research), Bob Kurshan (Cadence), William Hung (Synopsys), and Peter O’Hearn (University College London and Facebook).

Many people worked hard to make CAV 2015 a success. We thank the authors and the keynote speakers for providing the excellent technical material, the Program Committee for their thorough reviews and the time spent on evaluating all the submissions and discussing them during the on-line discussion period, and the Steering Committee for their guidance throughout the planning for CAV 2015.

We also thank Temesghen Kahsai, Local Chair, for his dedication and help with CAV 2015 planning and Hana Chockler, Sponsorship Chair, for helping to bring much needed financial support to the conference; Dirk Beyer, Workshop Chair, and all the organizers of the co-located events for bringing their events to the CAV week; Elizabeth Polgreen for the program and proceedings; Arie Gurfinkel, Temesghen Kahsai, Michael Tautschnig, and the Artifact Evaluation Committee for their work on evaluating the artifacts submitted.

We gratefully acknowledge NSF for providing financial support for student participants. We sincerely thank the CAV sponsors for their generous contributions:

- Google (Platinum sponsor)
- NASA, Fujitsu, SGT, Facebook, Microsoft (Gold sponsors)
- IBM, Cadence (Silver sponsors)
- Intel, Samsung (Bronze sponsors)

We also thank Carnegie Mellon University Silicon Valley and the University of Oxford for their support.

Finally, we hope you find the proceedings of CAV 2015 intellectually stimulating and practically valuable.

May 2015

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Computer Aided Verification

27th International Conference, CAV 2015, San

Francisco, CA, USA, July 18-24, 2015, Proceedings, Part

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Kroening, D.; Păsăreanu, C.S. (Eds.)

2015, XXIII, 677 p. 141 illus., Softcover

ISBN: 978-3-319-21689-8