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# Hardware and Software, Verification and Testing

Second International Haifa Verification Conference, HVC 2006  
Haifa, Israel, October 23-26, 2006  
Revised Selected Papers

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## Preface

The Haifa Verification Conference 2006 took place for the second year in a row at the IBM Haifa Research Lab and at the Haifa University in Israel during October 23–26, 2006. The verification conference was a three-day, single-track conference followed by a one-day tutorial on PSL.

This Haifa Verification Conference was established to bring together researchers from two different disciplines, hardware verification and software testing. The use of similar techniques among the two communities enabled the conference to help generate a unique synergy that fortifies both groups. This year, we had two traditional tracks, hardware verification and software testing, in addition to a new track dedicated to tools in these areas.

The conference emphasized applicability to real-world challenges, which was vital to the many attendees coming from industry. The conference hosted two internationally recognized individuals as keynote speakers. Randal E. Bryant, Dean and University Professor from the School of Computer Science at Carnegie Mellon University gave a talk on “System Modeling and Formal Verification with UCLID” and Michael Jackson from the University of Newcastle gave a talk on “Testing the Machine in the World.” The numerous invited speakers presented topics of great interest to the audience. Just some of these outstanding speakers included Cindy Eisner in the hardware verification track, Alon Gluska and Andrew Piziali in the tools track, and Mauro Pezze and Nir Shavit in the software testing track. The prize for Best Paper was awarded to Stefan Staber, Gerschwin Fey, Roderick Bloem and Rolf Drechsler from Graz University of Technology and the University of Bremen, for their paper titled “Automatic Fault Localization for Property Checking.”

Thirty-three papers from ten countries were submitted, including Israel, Finland, India, the Czech Republic, Germany, China, USA, Spain, France, and Switzerland. The papers were reviewed by the Program Committee and additional referees, with an average of 3.6 reviews per paper. Of the papers submitted, 15 were accepted. The acceptance was based on the score received, the reviewer’s confidence and the final decisions of the Organizing Committee. The keynote speakers and the invited speakers were encouraged to submit papers as well. This volume is composed of the papers accepted by the committee and the invited papers. This volume also includes an abstract of the conference panel on the “Unpaved Road between Hardware Verification and Software Testing Techniques” moderated by Shmuel Ur.

This year’s conference included a number of new initiatives. A Web application was adopted to enable the online submission and review of papers. A ten-minute multimedia clip was produced to provide an overview of the activities in the conference. The clip covered recent news highlights in verification from around the world and gave viewers a short virtual tour of Haifa through scenes from around the city. The conference also included a tool exhibition where leading EDA companies presented their products. The conference organizers initiated a ‘speed networking’

session; based on the original idea of speed dating, this activity helped foster introductions and collaboration among individuals attending the event.

Attendance at the conference was very high throughout the four conference days, with more than 250 participants from several different countries. The facilities provided by the IBM Haifa Research Labs and the Caesarea Edmond Benjamin de Rothschild Foundation Institute for Interdisciplinary Applications of Computer Science (C.R.I.) were remarked upon very favorably by the attendees, as was the proficiency of the administrative assistants.

We would like to thank our sponsors, IBM and CRI, the Organizing Committee, and the Program Committee. Our appreciation goes out to the administrative assistants, especially Vered Aharon from IBM and Rona Perkis from CRI. Special thanks to Shai Halevi, Iliya Kalderon, Ido Levy, and Valentin Mashiah for their important help with the submission and review Web application. We also wish to thank the communications team for their important role: Ettie Gilead, Chani Sacharen, Yair Harry, Tamar Dekel, Hanan Singer and Anne Lustig-Picus. Many thanks to Tsvi Kuflik for his vital help with the proceedings. We would also like to extend special thanks all the authors who contributed their work.

It is our hope that the enthusiasm and value generated by this conference will lead to many other interesting events in the growing fields addressed by the hardware verification and software testing communities.

We would like also to thank Dana Fisman for giving the tutorial on PSL.

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