Lecture Notes in Computer Science

Commenced Publication in 1973
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Program Analysis and Compilation, Theory and Practice

Essays Dedicated to Reinhard Wilhelm on the Occasion of His 60th Birthday

Springer
Preface

On June 9–10, 2006, a celebratory symposium in honor of Reinhard Wilhelm’s 60th birthday was held at Schloß Dagstuhl. Many of his graduate students and research collaborators, as well as current and former colleagues, gathered for this celebration, and Schloß Dagstuhl was certainly the most appropriate location to honor its founder. During this day and a half of scientific discussions, there were 15 research presentations, as well as a group discussion on the topic “The Future of Static Analysis.” The event consisted of the following talks:

1. Christian Ferdinand:
   “New Developments in WCET Analysis”
2. Wolfgang J. Paul:
   “Verification of Distributed Systems with Realistic Time Bounds”
3. Dieter Maurer:
   “Lazy Execution of Boolean Queries”
4. Raimund Seidel:
   “Ideally Distributed Dynamic Random Search Trees Without Using Extra Space”
5. Andreas Zeller:
   “Static and Dynamic Inference of Temporal Properties”
6. Helmut Seidl:
   “Verification of Cryptographic Protocols by Means of Tractable Classes of Horn Clauses”
7. Neil Jones:
   “The Flow of Data and the Complexity of Algorithms”
8. Jaan Penjam:
   “Deductive and Inductive Methods for Program Synthesis”
9. Arnd Poetzsch-Heffter:
   “Encapsulation Properties of OO-Programs Require New Heap Analyses”
10. Bernhard Steffen:
    “Service-Oriented Compiler Construction”
11. Chris Hankin:
    “Average Case Execution Times Matter Too”
12. Robert Giegerich:
    “Making Dynamic Programming Fun”
13. Patrick Cousot:
    “Grammar Abstract Interpretation”
14. Yosi Ben-Asher:
    “Source Level Merging of Programs for Embedded Systems”
15. Mila Majster-Cederbaum:
    “Ensuring Properties of Interaction Systems by Construction”

The articles of this volume serve roughly as a proceedings of this Dagstuhl symposium, although some of the contributors could not participate in the celebration, and
not all of the participants managed to contribute an article. However, we are pleased to have been able to assemble this stimulating collection of research articles, which honor both Reinhard’s 60th birthday and more broadly his contributions to computer science (some of which are summarized in the lead-off article, “An Appreciation of the Work of Reinhard Wilhelm”).

The Dagstuhl symposium could not have been the success that it turned out to be without the help of Angelika Müller, Rosi Bardohl, Annette Beyer, and all of the Dagstuhl staff.

Following lunch on the second day, the participants traveled to Saarbrücken to attend a less scientific (and more alcoholic) 60th-birthday celebration, as is traditional for a German academic, given by the Computer Science Department at Saarland University. There, Reinhard endured another series of talks offered by his graduate students, his Dagstuhl colleagues, his colleagues from the department, his brother, and several close friends. Reinhard’s closing speech in response provided insight into some of the events and influences—both personal and intellectual—that have shaped his career.

We would like to thank the local organizers of the afternoon/evening celebration, and in particular, Erich Reindel from the Computer Science Department at Saarland University and Volker Geiß from the Max Planck Institute for Computer Science.

We offer this volume to Reinhard as a token of the honor that he so richly deserves. It is fitting that the ideas in the articles found herein span such a broad range of Reinhard’s research interests, from ones from very nearly the beginning of his career to current and—we hope!—future work to come.

December 2006

Thomas Reps
Mooly Sagiv
Jörg Bauer
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