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Tests and Proofs

Third International Conference, TAP 2009
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Proceedings

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Preface

This volume[1] contains the research papers and invited papers presented at the Third International Conference on Tests and Proofs (TAP 2009) held at ETH Zurich, Switzerland, during July 2–3, 2009.

The TAP conference is devoted to the convergence of proofs and tests. It combines ideas from both sides for the advancement of software quality. To prove the correctness of a program is to demonstrate, through impeccable mathematical techniques, that it has no bugs; to test a program is to run it with the expectation of discovering bugs. The two techniques seem contradictory: if you have proved your program, it is fruitless to comb it for bugs; and if you are testing it, that is surely a sign that you have given up on any hope of proving its correctness. Accordingly, proofs and tests have, since the onset of software engineering research, been pursued by distinct communities using rather different techniques and tools. And yet the development of both approaches leads to the discovery of common issues and to the realization that each may need the other. The emergence of model checking has been one of the first signs that contradiction may yield to complementarity, but in the past few years an increasing number of research efforts have encountered the need for combining proofs and tests, dropping earlier dogmatic views of incompatibility and taking instead the best of what each of these software engineering domains has to offer.

The first TAP conference (held at ETH Zurich in February 2007) was an attempt to provide a forum for the cross-fertilization of ideas and approaches from the testing and proving communities. The 2008 edition took place in the Monash University Prato Centre near Florence. For the third TAP conference we came back to ETH Zurich. This third edition was co-located with other software conferences, in particular TOOLS Europe.

We wish to sincerely thank all the authors who submitted their work for consideration. We would also like to thank the Program Committee members as well as the additional referees for their great effort and work of high quality in the review and selection process. Their names are listed on the following pages.

There were 20 submissions. Each submission was reviewed by at least three persons. The Committee decided to accept ten research papers. The program also included two keynote talks. We are grateful to Sriram Rajamani (Microsoft Research, India) and Boutheina Chetali (Gemalto, France) for accepting the invitation to address the conference.

The conference also included some short presentations that were reviewed by at least one Program Committee member. They are not included in this proceedings volume but are part of a technical ETH report entitled *TAP 2009: short papers*.

[1] This volume was prepared with EasyChair. Many thanks to its developer.

The success of the conference resulted from a team effort. We are grateful to the Conference Chair and the Steering Committee members for their support at every stage in the conference preparation. We also thank all the members of the Organizing Committee, in particular Yi Wei and Stephan van Staden, ETH Zurich. Finally, we gratefully acknowledge the material and financial support provided by the Chair of Software Engineering, ETH Zurich.

May 2009 Catherine Dubois

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