Preface

This volume contains the papers presented at the 7th International Conference on Tests and Proofs (TAP 2013), held during June 16–20, 2013, in Budapest, Hungary, as part of the Software Technologies: Applications and Foundations (STAF) federated event.

TAP 2013 was the seventh event in a series of conferences devoted to the synergy of proofs and tests, to the application of techniques from both sides and their combination for the advancement of software quality. Testing and proving seem to be contradictory techniques: once you have proved your program to be correct then additional testing seems pointless; on the other hand, when such a proof in not feasible, then testing the program seems to be the only option. This view has dominated the research community since the dawn of computer science, and has resulted in distinct communities pursuing the seemingly orthogonal research areas. 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 effort to provide a forum for the cross-fertilization of ideas and approaches from the testing and proving communities. For the 2008 edition, the Monash University Prato Centre near Florence provided a stimulating environment. The third TAP was again held at ETH Zurich in July 2009. Since 2010, TAP has been co-located with TOOLS, and its instance for 2010 therefore took place at the School of Informatics (E.T.S. de Ingenieria Informatica) of the University of Malaga, while TOOLS 2011 took place at ETH Zurich again. In 2012, TAP was part of TOOLS again, this time held at the Czech Technical University in Prague. TAP 2013 was hosted in Budapest, the capital of Hungary, as part of STAF (the follow-up of TOOLS) and was held on the south campus of the Budapest University of Technology and Economics.

We wish to sincerely thank all authors who submitted their work for consideration. Although, we initially received 29 submissions, five were withdrawn. Out of the 24 remaining submissions, we finally accepted 12 papers, after a formal refereeing process requiring at least three reviews from the Program Committee or by a reviewer appointed by the Program Committee. The overall quality of the submissions was very high. The accepted papers are contributions related to the following four research topics that also form the sessions of the final program: test generation, model-based testing and mutants, declarative debugging, and tool testing.

We are very proud that TAP 2013 featured a keynote given by Andrei Voronkov on EasyChair, who, besides being the inventor and main developer of EasyChair, is also a leading expert on theorem proving, which is a field closely
related to the theme of TAP. EasyChair was used to manage the TAP 2013 conference proceedings, and made the whole chairing process as easy as it can possibly get. Moreover, we were very happy to host two tutorials, one on Frama-C for specifying and proving program correctness, and the other one on Pex4Fun that uses symbolic execution to provide a gaming environment for learning and teaching programming. We also invited the keynote speaker and the tutorial authors to contribute a paper; the first tutorial authors did so, which is also indicated in the title of that paper. We would like to thank the Program Committee members as well as the additional reviewers for their energy and their professional work in the review and selection process. Their names are listed on the following pages. The lively discussions during the paper selection were vital and constructive.

We thank the organizers of the STAF event, in particular the Conference Chair Daniel Varro and the local Organizing Chair Akos Horvath, for their hard work and their support in making the conference a success, we thank the Budapest University of Technology and Economics for providing the facilities, and we thank Springer for publishing these proceedings.

June 2013

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