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Testing Software and Systems

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Proceedings

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Preface

Testing has steadily become more and more important within the development of software and systems, motivating an increasing amount of research aimed at trying to solve both new challenges imposed by the advancement in various areas of computer science and long-standing problems. Testing has evolved during the last decades from an ad-hoc and under-exposed area of systems development to an important and active research area.

The 22nd International Conference on Testing Software and Systems (ICTSS) involved the merger of two traditional and important events which have served the testing community as an important venue for discussing advancements in the area. Those events, namely, TestCom (the IFIP TC 6/WG 6.1 International Conference on Testing of Communicating Systems), and FATES (International Workshop on Formal Approaches to Testing of Software), together form a large event on testing, validation, and specification of software and systems. They have a long history. TestCom is an IFIP-sponsored series of international conferences, previously also called International Workshop on Protocol Test Systems (IWPTS) or International Workshop on Testing of Communicating Systems (IWTCS). It is devoted to testing of communicating systems, including testing of communication protocols, services, distributed platforms, and middleware. The previous events were held in Vancouver, Canada (1988); Berlin, Germany (1989); McLean, USA (1990); Leidschendam, The Netherlands (1991); Montreal, Canada (1992); Pau, France (1993); Tokyo, Japan (1994); Evry, France (1995); Darmstadt, Germany (1996); Cheju Island, South Korea (1997); Tomsk, Russia (1998); Budapest, Hungary (1999); Ottawa, Canada (2000); Berlin, Germany (2002); Sophia Antipolis, France (2003); Oxford, UK (2004); Montreal, Canada (2005); and New York, USA (2006). Fates — Formal Approaches to Testing of Software — is a series of workshops devoted to the use of formal methods in software testing. Previous events were held in Aalborg, Denmark (2001); Brno, Czech Republic (2002); Montreal, Canada (2003); Linz, Austria (2004); Edinburgh, UK (2005); and Seattle, USA (2006). From 2007 on, TestCom and Fates have been jointly held in Tallinn, Estonia (2007), Tokyo, Japan (2008) and Eindhoven, The Netherlands (2009).

The objective of ICTSS 2010 was to be a forum for researchers from academia as well as industry, developers, and testers to present, discuss, and learn about new approaches, theories, methods and tools in the field of testing software and systems. This volume contains the proceedings of ICTSS 2010. Out of 60 submitted papers the Program Committee selected 16 papers for publication as full papers and presentation at the conference. Together with the two invited presentations by Ina Schieferdecker of Fraunhofer Institut, Berlin, Germany and by Connie Heitmeyer of Naval Research Laboratory, Washington, DC, USA, they form the contents of these proceedings. The conference itself, in addition,

contained presentations of short papers, which were separately published as a technical report by CRIM.

We would like to thank the numerous people who contributed to the success of ICTSS 2010: the Steering Committee, the Program Committee and the additional reviewers for their support in selecting papers and composing the conference program, and the authors and the invited speakers for their contributions without which, of course, these proceedings would not exist. We thank CRIM, Conformiq and Microsoft Research for their financial support, and Springer for its support in producing these proceedings. We acknowledge the use of Easy-Chair for conference management and wish to thank its developers. Last, but not least, we thank the Department of Informatics and Applied Mathematics of Federal University of Rio Grande do Norte, in particular, Marcel Oliveira, Thais Batista and David Deharbe, for all matters regarding the local organization and for making ICTSS 2010 run smoothly.

August 2010

Alexandre Petrenko
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