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Trustworthy Global Computing

6th International Symposium, TGC 2011
Aachen, Germany, June 9-10, 2011
Revised Selected Papers

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ISSN 0302-9743	e-ISSN 1611-3349
ISBN 978-3-642-30064-6	e-ISBN 978-3-642-30065-3
DOI 10.1007/978-3-642-30065-3	
Springer Heidelberg Dordrecht London New York	

Library of Congress Control Number: 2012936825

CR Subject Classification (1998): K.6.5, D.4.6, C.2, F.4, E.3, D.2

LNCS Sublibrary: SL 1 – Theoretical Computer Science and General Issues

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Typesetting: Camera-ready by author, data conversion by Scientific Publishing Services, Chennai, India

Printed on acid-free paper

Springer is part of Springer Science+Business Media (www.springer.com)

Preface

This volume contains the proceedings of TGC 2011, the 6th International Symposium on Trustworthy Global Computing, which was held during June 9–10, 2011 in Aachen, Germany, co-located with CONCUR & QEST. Informal pre-proceedings were available to the participants at the conference in electronic form and the papers in this volume have been further improved by the authors, by taking into account the feedback received at the conference.

TGC is an international annual venue dedicated to safe and reliable computation in the so-called global computers, i.e., those computational abstractions emerging in large-scale infrastructures such as service-oriented architecture, autonomic systems and cloud computing. The related models of computation incorporate code and data mobility over distributed networks that connect heterogeneous devices and have dynamically changing topologies. The TGC series focuses on providing frameworks, tools, algorithms and protocols for designing open-ended, large-scaled applications and for reasoning about their behaviour and properties in a rigorous way. The first TGC event took place in Edinburgh during April 7–9, 2005, with the co-sponsorship of IFIP TC-2, as part of ETAPS 2005. TGC 2005 was the evolution of the previous Global Computing I Workshops held in Rovereto in 2003 and 2004 (see LNCS vol. 2874) and the workshops on Foundations of Global Computing held as satellite events of ICALP and CONCUR (see ENTCS vol. 85). The last four editions of TGC were co-located with the reviews of the EU-funded projects AEOLUS, MOBIUS and SENSORIA within the FP6 initiative. They were held in Lucca, Italy (TGC 2006); in Sophia-Antipolis, France (TGC 2007); in Barcelona, Spain (TGC 2008); and in Munich, Germany (TGC 2010); see, respectively, LNCS vol. 4661, LNCS vol. 4912, LNCS vol. 5474, LNCS vol. 6084.

The main themes investigated by the TGC community are concerned with theories, languages, models and algorithms for global computing; abstraction mechanisms, models of interaction and dynamic components management; trust, access control and security enforcement mechanisms; privacy, reliability and business integrity; resource usage and information flow policies; contract-oriented software development; game-theoretic approaches to collaborative and competitive behaviour; self-configuration, adaptation, and dynamic components management; software principles and tools to support debugging and verification; model checkers, theorem provers, and static analyzers.

TGC 2011 received 25 submissions out of which the Programme Committee (PC) selected 11 regular papers to be included in this volume and be presented

at the symposium. To guarantee the fairness and quality of the selection, each paper received at least three reviews. Additionally, the programme included five invited speakers:

- Michele Bugliesi (Venice, Italy)
- Mariangiola Dezani (Turin, Italy)
- Matthias Hoelzl (Munich, Germany)
- Kohei Honda (Queen Mary, University of London, UK)
- Bernd Werther (Volkswagen AG, Germany)

Mariangiola Dezani, Kohei Honda and Bernd Werther also contributed full papers to the proceedings based on the achievements presented in their lectures.

We thank the Steering Committee of TGC for inviting us to chair the conference and all PC members and external referees for their detailed reports and the stimulating discussions that emerged in the review phase. We thank all the authors of submitted papers and all the invited speakers for their interest in TGC. We want to thank the providers of the EasyChair system, which was used to manage the submissions, to carry out the review process including the electronic PC meeting, and also to assemble the proceedings. We thank Giorgio Spagnolo for administrating the website, Barbara Koenig, Joost-Pieter Katoen, Sander Bruggink, Mathias Huelsbusch and the local organization of CONCUR & QEST for their help and the project ASCENS for sponsoring the event.

February 2012

Roberto Bruni
Vladimiro Sassone

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