Computing technology has become ubiquitous, from worldwide distributed applications to minuscule embedded devices. Trust in computing is vital to help protect public safety, national security, and economic prosperity.

A new area of research, known as global computing, has recently emerged. It aims at defining new models of computation based on code and data mobility over wide area networks with highly dynamic topologies, and to provide infrastructures to support coordination and control of components originating from different, possibly untrusted, sources.

*Trustworthy global computing* aims at guaranteeing safe and reliable network usage, also by providing tools and framework for reasoning about behavior and properties of applications.

This volume contains the proceedings of the 2nd International Symposium on Trustworthy Global Computing (TGC 2006), held in Lucca, Italy, November 7–9, 2006. The first edition took place in Edinburgh, UK, as part of ETAPS 2005. TGC 2005 was the evolution of the previous Global Computing I Workshops held in Rovereto, Italy, in 2003 and 2004 and of the Foundation of Global Computing Workshops held as satellite events of ICALP and Concur.

The themes of the workshop addressed issues like theories, models, and algorithms for global computing and service-oriented computing, language-based security, theories of trust, authentication and anonymity, secure protocol composition, resource usage and information flow policies, privacy, reliability and business integrity, models of disciplined interaction and dynamic components management, sharing information and computation, self configuration and adaptiveness, efficient communication, language concepts and abstraction mechanisms, model-driven development, test generators, symbolic interpreters, and type checkers.

The above themes were inspired by the activities of the IST/FET proactive Initiative on Global Computing I and II funded by the European Union. In fact the FP6 Programme of the European Union launched several projects dedicated to these themes, whose (first year activity) reviews were co-located with TGC 2006:

- **Aeolus**: Algorithmic Principles for Building Efficient Overlay Computers  
- **MOBIUS**: Mobility, Ubiquity and Security  
  [http://mobius.inria.fr](http://mobius.inria.fr)
- **SENSORIA**: Software Engineering for Service-Oriented Overlay Computers  
  [http://www.sensoria-ist.eu](http://www.sensoria-ist.eu)
- **Catnets**: Catallaxy Paradigm for Decentralized Operation of Dynamic Application Networks  
  [http://www.iw.uni-karlsruhe.de/catnets](http://www.iw.uni-karlsruhe.de/catnets)
Three special sessions of TGC 2006 were devoted to presenting and discussing recent progress within these projects and to the presentation of three FP7 initiatives named “Internet of the future,” “Pervasive adaptation” and “ICT forever yours.” The format of the symposium was not that of a classical conference, but one structured to leave room for discussions stimulated by a conspicuous number of invited talks and by the papers selected after standard refereeing.

The Program Committee selected 14 contributed papers out of 32 submissions after a selective refereeing process (each paper was reviewed by three experts, at least). These were grouped in five sessions on “Types to discipline interactions,” “Calculi for distributed systems,” “Flexible modeling,” “Algorithms and systems for global computing,” and “Security, anonymity and type safety.”

Additionally the program included four keynote speeches by:

- Jayadev Misra (University of Texas at Austin, USA)
  “Structured Concurrent Programming”
- Andrei Sabelfeld (University of Goteborg, Sweden)
  “Dimensions of Declassification in Theory and Practice”
- Paola Inverardi (University of Aquila, Italy)
  “Software of the Future Is the Future of Software?”
- Danny Krizanc (Wesleyan University, USA)
  “An Algorithmic Theory of Autonomous Mobile Agent Computing”

Beside regular papers, this volume contains the overviews of FP6 Projects Aeolus, Mobius, Sensoria and Catnets and invited papers by Paola Inverardi and Danny Krizanc.

It is planned to dedicate a special issue of the Journal of Theoretical Computer Science to the theme of the workshop, with the extended versions of the best papers presented at TGC 2006.

We would like to thank all the members of the Program Committee, and their sub-referees, for their assistance with the selection process. In view of the importance and the strategic role of trustworthy global computing, the plans are to organize TGC regularly in the future, and we thank all the members of the Steering Committee for their past and future efforts.

We also want to thank all the people involved in the local organization of the event for their help and support, and in particular: Massimo Bartoletti and Laura Semini from the University of Pisa and Marzia Buscemi, Pietro Carubbi, Barbara Iacobino, Silvia Lucchesi, Hernán Melgratti and Roberta Zelari from IMT Alti Studi Lucca.

November 2006

Ugo Montanari
Don Sannella
Roberto Bruni
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