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IFIP was founded in 1960 under the auspices of UNESCO, following the first World Computer Congress held in Paris the previous year. A federation for societies working in information processing, IFIP's aim is two-fold: to support information processing in the countries of its members and to encourage technology transfer to developing nations. As its mission statement clearly states:

*IFIP is the global non-profit federation of societies of ICT professionals that aims at achieving a worldwide professional and socially responsible development and application of information and communication technologies.*

IFIP is a non-profit-making organization, run almost solely by 2500 volunteers. It operates through a number of technical committees and working groups, which organize events and publications. IFIP's events range from large international open conferences to working conferences and local seminars.

The flagship event is the IFIP World Computer Congress, at which both invited and contributed papers are presented. Contributed papers are rigorously refereed and the rejection rate is high.

As with the Congress, participation in the open conferences is open to all and papers may be invited or submitted. Again, submitted papers are stringently refereed.

The working conferences are structured differently. They are usually run by a working group and attendance is generally smaller and occasionally by invitation only. Their purpose is to create an atmosphere conducive to innovation and development. Refereeing is also rigorous and papers are subjected to extensive group discussion.

Publications arising from IFIP events vary. The papers presented at the IFIP World Computer Congress and at open conferences are published as conference proceedings, while the results of the working conferences are often published as collections of selected and edited papers.

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Jan-Philipp Steghöfer · Babak Esfandiari (Eds.)

# Trust Management XI

11th IFIP WG 11.11 International Conference, IFIPTM 2017  
Gothenburg, Sweden, June 12–16, 2017  
Proceedings

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## Preface

The 11th edition of IFIPTM — the IFIP WG11.11 International Conference on Trust Management — held in Gothenburg, Sweden, continued the tradition of a venue that focuses on trust, the glue of any society. Underlying the different papers and the many discussions at the conference, was the insight that trust is not automatic and not self-evident, but that it must be nurtured and managed, regardless of whether the society we speak of is natural or artificial. Computational techniques, such as the ones addressed by IFIPTM and its community, enable services for brokering, certification, recommendation, legal enforcement, identity, and reputation management. Such services become all the more useful and important given the increasing scale and virtual nature of societies, in which the human and the artificial agent mix and interact without prejudice.

IFIPTM is a well-established conference in this field and we observe a steady number of submissions that is suitable for a small venue such as this. This year, we received 29 submissions and were able to accept eight full papers and six short papers. Some of these papers were shepherded, i.e., the reviewers offered their feedback and authors were able to address it by revising their papers before the final decision. This process was well received by both reviewers and authors and allowed us to include additional, promising work. Our 32 Program Committee members produced a total of 95 reviews and dozens of comments in a very lively and engaging decision process.

The selected papers represent the broad topical areas of the call for papers. They are structured in five thematical sessions. The papers in the area of “Information Sharing and Personal Data” address different topics of the information economy and how trust management techniques can help ensure the privacy of personal data in domains such as the Internet of Things. In “Novel Sources of Trust and Trust Information,” the authors explore where the data to base trust decisions on can come from and investigate sources as diverse as behavioral experiments, social networks, and service-level agreements. The papers in the section of “Applications of Trust” reveal novel ways to use existing trust values — including to decide when to uninstall software, detect intrusion into computer systems, or how self-trust and self-efficacy are connected in education. Interesting ways to calculate trust values are the subject of the “Trust Metrics” area. Behavioral profiling and flow models are the basis of two of the metrics, while the third focuses on mathematical properties of specific trust metrics that allow for composition of trust. Finally, the two contributions in the area “Reputation Systems” focus on how entities can report their own reputation without tampering and how reputation can improve recommender systems.

Another thematical focus of the conference was provided by the special session “Trust on the Road” that focused on trust management in vehicular networks, including vehicle-to-vehicle and vehicle-to-infrastructure communication. The special session was spearheaded by Mathias Widman of Volvo Group Telematics/WirelessCar, who spoke about the difficulties of extending vehicle trust and security. A panel discussion

including participants from Volvo Cars, Chalmers University of Technology, and the trust management community facilitated the further exploration of this up-and-coming topic.

The dichotomy of trust and security was the topic of Max Mühlhauser's keynote. Instead of following the attempts of his predecessors to separate the fields, Max showed that they are indeed synergetic.

In addition, we are happy to include the paper accompanying the keynote by Siani Pearson, holder of the William Winsborough Commemorative Address and Award 2017, in the proceedings. The objective of the award is to publicly recognize an individual who has significantly contributed to the development of computational trust or trust management, especially achievements with an international perspective. The award is given out in memory of Professor William Winsborough, who taught at the University of Texas at San Antonio, in recognition of his leadership in the field of trust and trust management. Siani was honored for her own leading role in the area and received 2017's award for her outstanding track record and her long-standing engagement in the community. Her paper and keynote illuminated how the fast-changing use of information technology challenges traditional notions of accountability and how the concept of accountability relates to trust.

Last but not least, we were happy to have received three contributions from young researchers who participated in the IFIPTM Graduate Symposium. There, renowned researchers and students at any stage of their graduate career discussed the research, open issues, and state of the art in the field of computational trust and trust management. The symposium featured lectures by experts in the field, exploring the theory, philosophy, and practice of trust and trust management and its application to society and science. There was ample opportunity to network with presenters and other students. Participants worked on small projects together to apply skills and knowledge and learn from each other. Tim Schürmann's paper explored the human decision processes in socio-technical systems and how much they are guided by trust. Tosan Atele-Williams discussed how much we can trust information and what the social and cognitive foundations for information trust are. Finally, Vida Ahmadi Mehri explored requirements for trust and privacy for cloud-based marketplaces and how they compare to current definitions.

To conclude, we would like to express our thanks to everyone who contributed to the organization of IFIPTM this year. We are, of course, indebted to the entire Program Committee for their commitment and enthusiasm in all phases of the reviewing process, and for the quality and insight of their reviews. We also thank the chairs of previous IFIPTM editions for their feedback on past experiences and general advice along the way, which was extremely helpful. We also benefited from working closely with the other chairs on the committee, Simone Fischer-Hübner, Stephen Marsh, Musard Balliu, Sheikh Mahbub-Habib, and Tomas Olovsson, who provided continual and unstinting support during the entire endeavor.

April 2017

Babak Esfandiari  
Jan-Philipp Steghöfer

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