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## Testing Software and Systems

Valentina Casola, Alessandra de Benedictis, Massimiliano Rak

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Valentina Casola · Alessandra De Benedictis ·  
Massimiliano Rak (Eds.)


# Testing Software and Systems

32nd IFIP WG 6.1 International Conference, ICTSS 2020  
Naples, Italy, December 9–11, 2020  
Proceedings

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# Preface

This volume contains the proceedings of the 32nd IFIP International Conference on Testing Software and Systems (ICTSS 2020). IFIP-ICTSS has become a traditional event of the WG 6.1 of the International Federation for Information Processing (IFIP). The conference was supposed to be in Napoli, Italy, during December 9–11, 2020, but, due to the COVID-19 pandemic, it was held online, as a virtual conference.

ICTSS is a series of international conferences addressing conceptual, theoretical, and practical problems of testing software systems, including communication protocols, services, distributed platforms, middleware, embedded, cyber-physical systems, and security infrastructures. It is a forum for researchers, developers, testers, and users from industry to review, discuss, and learn about new approaches, concepts, theories, methodologies, tools, and experiences in the field of testing of software and systems.

IFIP-ICTSS 2020 received 43 submissions. Each paper was reviewed in a single-blind process by three reviewers on average and discussed by the Program Committee. After a careful selection process, the Program Committee accepted 17 regular papers and 4 short papers. The papers cover a large range of subjects such as test-case generation, testing in relation with artificial intelligence, proof and verification techniques, security, performance, as well as empirical studies. In particular, in the 32nd conference edition, a large space was given to security testing models and techniques.

IFIP-ICTSS 2020 also hosted an industrial event with the participation of big and small enterprises, discussing about their vision and practical experiences on software and security testing, with the aim to encourage interactions and exchanges between the scientific and industrial communities interested in testing.

We would like to thank the Steering Committee for their advice and support in the organization of the conference. Many thanks to the Program Committee members, as well as to the additional reviewers, for their careful reviews and participation in the discussions during the paper selection. The process of reviewing and selecting the papers was significantly simplified through the use of EasyChair. We would also like to thank IFIP for their continuous support of the conference series, as well as Springer for having published this volume.

We would like to thank the CERICT Organizing Committee, particularly Marco Guarino, Michele Salza, and Tiziana Cibelli for their support in the preparation of the conference, as well as in financial and organizational aspects. We kindly thank Silvio Stefanucci, the conference webmaster.

Finally, we are very grateful to the scientific sponsors of the conference: the University of Naples Federico II, the University of Campania Luigi Vanvitelli, and the University of Sannio. Their support strongly contributed to the success of this event.

On behalf of the IFIP-ICTSS organizers, we hope that you find the proceedings useful, interesting, and challenging.

December 2020

Valentina Casola  
Alessandra De Benedictis  
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