Welcome to AST 2016—the 11th International Workshop on Automation of Software Test, held in conjunction with the 38th International Conference on Software Engineering (ICSE 2016) in Austin, TX, USA, May 14 – 15, 2016.

The workshop is the 11th edition of the successful AST workshops held at ICSE conferences. It aims to foster a forum for academia, industry, and the research and development community to share their knowledge, exchange experiences and ideas, and discuss challenges and future research directions in the area of automation of software testing. The workshop provides an opportunity for researchers and developers of testing tools to work together to identify the problems and to bridge the gap between the theory and practice of software test automation.

The special topic and charette discussions of AST 2016 focus on scalability of test automation. In recent years, the complexity of software systems is due more and more to their execution in large and complex platforms and environments, such as mobile devices, distributed wireless networks, large scale clusters and mobile clouds. In such settings, like SaaS, and Big Data applications, Web of Systems, and Cyber-physical Systems, computation must be able to scale up as well as scale out, and there are increasing high demands to the automated testing of large scale software systems. The AST 2016 special theme covers all aspects of scalability problems of test automation, including the development and assessment of automated software testing techniques that are capable of dealing with large scale software systems, and supporting the testing of software systems when they are scaled up and out.

AST 2016 received a total of 21 submissions from 58 authors of 12 countries. Each paper was reviewed by at least three Program Committee members and evaluated according to the criteria of relevance, originality, technical soundness, maturity, and presentation quality. Decisions were made based on the review results as well as the outcomes of the online discussions that allowed to resolve conflicting opinions of the reviewers. 13 papers (including research and industry case study papers) out of the 21 submissions were accepted as full papers.

These papers are grouped in the following 4 technical sessions: i) Tests Automation; ii) Coverage and Mutation Analysis; iii) Testing Smartphone Applications; iv) Fault Detection and Repair. In addition, two keynote lectures focus on the special theme of scalability of test automation and two further sessions are devoted to charette discussions. These charette discussions allow the participants to work together to understand requirements from practice, identify key research challenges and envision research approaches on the scalability of test automation from both academic and industrial perspectives.

We would like to thank all the authors for their submissions to AST 2016, the Program Committee members and the external reviewers for their valuable time and effort in reviewing the submitted papers, the AST Steering Committee and in particular Prof. Hong Zhu, for their support and advice throughout the workshop organization. We thank you for attending the workshop and hope that you enjoy a stimulating and interactive workshop!
Up-to-date information on the workshop can be found at: http://tech.brookes.ac.uk/AST2016/index.html

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