Lecture Notes
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Software Quality

Methods and Tools for Better Software and Systems

10th International Conference, SWQD 2018
Vienna, Austria, January 16–19, 2018
Proceedings

Springer

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Printed on acid-free paper

Message from the General Chair

The Software Quality Days (SWQD) conference and tools fair started in 2009 and has grown to be the biggest conference on software quality in Europe with a strong community. The program of the SWQD conference is designed to encompass a stimulating mixture of practical presentations and new research topics in scientific presentations as well as tutorials and an exhibition area for tool vendors and other organizations in the area of software quality.

This professional symposium and conference offer a range of comprehensive and valuable opportunities for advanced professional training, new ideas, and networking with a series of keynote speeches, professional lectures, exhibits, and tutorials.

The SWQD conference is suitable for anyone with an interest in software quality, such as software process and quality managers, test managers, software testers, product managers, agile masters, project managers, software architects, software designers, requirements engineers, user interface designers, software developers, IT managers, release managers, development managers, application managers, and similar roles.

The guiding conference topic of SWQD 2018 was "Software Quality 4.0: Methods and Tools for Better Software and Systems," as changed product, process, and service requirements, e.g., distributed engineering projects, mobile applications, involvement of heterogeneous disciplines and stakeholders, frequent changing requirements, extended application areas, and new technologies include new challenges and might require new and adapted methods and tools to support quality assurance activities early.

January 2018   Johannes Bergsmann

Message from the Scientific Program Chair

The 10th Software Quality Days (SWQD) conference and tools fair brought together researchers and practitioners from business, industry, and academia working on quality assurance and quality management for software engineering and information technology. The SWQD conference is one of the largest software quality conferences in Europe.

Over the past years a growing number of scientific contributions were submitted to the SWQD symposium. Starting in 2012 the SWQD symposium included a dedicated scientific program published in scientific proceedings. For the seventh year we received 16 high-quality submissions from researchers across Europe which were each peer-reviewed by three or more reviewers. Out of these submissions, the editors selected six contributions as full papers, for an acceptance rate of 38%. Furthermore, two short papers, representing promising research directions, were accepted to spark discussions between researchers and practitioners at the conference. This year we invited two scientific keynote speakers for the scientific program, who contributed with two invited papers.

The main topics from academia and industry focused on systems and software quality management methods, improvements of software development methods and processes, latest trends and emerging topics in software quality, and testing and software quality assurance.

This book is structured according to the sessions of the scientific program following the guiding conference topic "Software Quality 4.0: Methods and Tools for better Software and Systems":

- Safety and Security
- Requirements Engineering and Requirements-Based Testing
- Software Requirements and Architecture
- Crowdsourcing in Software Engineering
- Experimentation in Software Engineering
- Smart Environments

January 2018   Stefan Biffl

Organization

SWQD 2018 was organized by Software Quality Lab GmbH and the Vienna University of Technology, Institute of Software Technology and Interactive Systems.

Organizing Committee

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Johannes Bergsmann   Software Quality Lab GmbH

Scientific Program Chair

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Program Committee

SWQD 2018 established an international committee of well-known experts in software quality and process improvement to peer-review the scientific submissions.

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