

First International Workshop on Quality Assurance and Testing of Web-Based Applications

in conjunction with

COMPSAC 2004

September 28-30, 2004, Hong Kong

<http://rachel.utdallas.edu/compsac>

1. Motivation

The Internet is rapidly expanding into all sectors of our society and becoming a heterogeneous, distributed, multi-platform, multilingual, multimedia, autonomous, cooperative wide area network computing environment. Web-based applications are complex, ever evolving and rapidly updated software systems. Testing and maintaining web-based applications are a nightmare. Traditional quality models, testing methods and tools are not adequate for web-based applications because they do not address problems associated with the new features of web-based applications. At present, web-based applications testing and maintenance are still an unexplored area and rely on ad hoc testing processes. Little has been reported on systematic testing methods and techniques, quality metrics, and dependability of web-based applications, to mention just a few.

2. Scope of the Workshop

This workshop seeks position papers that present preliminary ideas, partially complete research results, or discussion of issues or concerns on quality assurance and testing of web-based applications. Papers that describe more mature research results should be submitted to the main conference. Topics of interest of this workshop include, but are not limited to, the following:

2.1 Challenges of Web Testing

Web-based applications exhibit characteristics that are very different from conventional software systems. This theme invites papers that investigate testing problems associated with web-based applications. Topics may include:

- Analysis of testing problems introduced by web-based applications
- Analysis of testing problems as challenges to existing testing methods
- Applicability of existing testing methods to web-based applications
- Characteristics or properties of new types of testing methods

2.2 Models, Methods and Techniques

Effective quality assurance and testing of web-based applications require a systematic approach. This theme seeks proposals of test models, methods and techniques for web-based

applications. Test models, methods and techniques deal with the representation of test artifacts and procedures for the analysis of component under test (CUT), and generation of test cases/test data. Topics include but are not limited to the following:

- Test models and metamodels
- Verification and validation
- Analysis and testing
- Test criteria
- Architecture and framework
- Reverse engineering
- Exception handling
- Testing for security, privacy and trustworthiness
- Tools and environments

2.3 Process and Management Issues

A process is a sequence of macro-level activities performed to accomplish a significant task. This theme deals with processes and management activities for quality assurance and testing of web-based applications. Example topics are:

- Quality management
- Human factors
- Web configuration management
- Metrics and indicators
- Maintenance and evolution
- Content management
- Process improvement
- Quality of service
- Security and privacy (as quality metrics)
- Dependability
- Fault tolerance and automatic recovery models

2.4 Practical Applications and Experience

Report on quality assurance and testing of practical web-based applications or industrial experiences are strongly encouraged. Topics include but are not limited to:

- Quality assurance and testing of E-Commerce applications
- Quality assurance and testing of E-Government applications
- Quality assurance and testing of E-Science applications
- Quality assurance and testing of Wireless applications
- Security and privacy in practice
- Lessons learned

2.5 Technology Impact

This theme is concerned with impact of related technologies to quality assurance and testing of web-based applications as well as impact of quality assurance and testing of web-based applications to other technologies. Example technologies are

- Bio-metric technology
- Data warehouse and data mining
- Agent technology
- Autonomic computing
- Component software engineering
- Wireless communication
- Mobile computing
- Service-oriented computing
- ubiquitous/pervasive computing
- Network centric computing
- Web services technologies
- Grid computing
- Open grid service architectures
- Grid middleware

3. Important Dates

- Paper submissions due: **March 22, 2004 (extended)**
- Notification of acceptance: **May 20, 2004**
- Camera-ready Due: **June 30, 2004**

4. Submission

Authors must submit papers at <http://rachel.utdallas.edu/compsac/submit.html>. Please read and follow the instructions listed on that page. The format of submitted papers must follow the IEEE conference proceedings guidelines which are available at <http://computer.org/author/psguide.htm>. Accepted papers will be included in a separate proceedings. Each paper is expected to be no more than four pages. One of the authors of each accepted paper must present the paper at the workshop and have regular registration uniquely identified with the paper, which will cover the following: the admission to all the technical sessions and a copy of the proceedings of COMPSAC 2004 and its workshops, the welcome reception and conference banquet.

5. Workshop Organizers

Steering Committee Chair

Stephen Yau, Arizona State Univ., USA (yau@asu.edu)

Program Chair

David Kung, University of Texas at Arlington (kung@cse.uta.edu)
Hong Zhu, Oxford Brookes University, UK (hzyu@brookes.ac.uk)

Program Committee

Sami Beydeda, University of Leipzig, Germany (beydeda@ibus.informatik.uni-leipzig.de)
Jonathan Bowen, London South Bank University, UK (jonathan.bowen@lsbu.ac.uk)
S.C. Cheung, Hong Kong University of Science and Technology, HK (scc@cs.ust.hk)
Sebastian Elbaum, University of Nebraska at Lincoln, USA (elbaum@cse.unl.edu)
Sudipto Ghosh, Colorado State University, USA (ghosh@cs.colostate.edu)
Xudong He, Florida International University, USA (hex@cs.fiu.edu)
Rob Hierons, Brunel University, UK (rob.hierons@brunel.ac.uk)
Kecheng Liu, University of Reading, UK (K.Liu@reading.ac.uk)
Jose Maldonado, University of Sao Paulo, Brazil (jcmaldon@icmc.usp.br)
John May, University of Bristol, UK (j.may@bristol.ac.uk)
Jeff Offutt, George Mason University, USA (ofut@ise.gmu.edu)
Gregg Rothermel, Oregon State University, USA (grother@cs.orst.edu)
Huaglory Tianfield, Glasgow Caledonian University, UK (H.Tianfield@gcal.ac.uk)
W.T. Tsai, Arizona State University, USA (Wei-Tek.Tsai@asu.edu)
T.H. Tse, The University of Hong Kong, HK (tse@csis.hku.hk)
Ji Wang, State Key Lab of Network and Distributed Computing, China (ji.wang@263.net)

6. General Inquiries

For updated information, please refer to <http://rachel.utdallas.edu/compsac> or contact kung@cse.uta.edu, hzhu@brookes.ac.uk.