as of 19, Jan. 2016

Call for papers InSTA 2016

3nd International Workshop on Software Test Architecture

in conjunction with

ICST 2016, 9th IEEE International Conference on Software

Testing, Verification and Validation.

April 10, 2016, Chicago – U.S.A

http://aster.or.jp/workshops/insta2016/

Call for Papers

The 3rd International Workshop on Software Test Architecture (InSTA 2016) will be held at Chicago, U.S.A, on April 10, 2016. The InSTA aims at bringing together experts in software testing to discuss topics around software test architecture. The workshop welcomes academic research papers and industrial experience reports as well as emerging idea proposals.

Publications

All papers will be published in the IEEE Digital Library in the form of a post-proceedings.

All papers must conform to IEEE's format:
http://www.ieee.org/conferences_events/conferences/publishing/templates.html

Important dates

Paper submission due:	~~22 January 2016~~. 05 February 2016 23:59 (AIE)
Notification of acceptance:	19 February 2016.
Camera ready for the proceedings:	4 March 2016.
Workshop date:	10 April 2016.

Paper categories and topics

We invite submissions of high-quality papers in three categories below:

- Research papers (up to 10 pages)
- Industrial experience reports (up to 6 pages)
- Emerging idea proposals (up to 6 pages)

Research papers require both original work and quantitative evaluation. Industrial experience reports require practical insight or actual improvement in industry as well as (quantitative if possible) evaluation. Emerging idea proposals require vision, perspective, concept, new idea, new research theme proposal and cross-technical discussion around test architecture design.

Topics of interest for papers include, but are not limited to:

* Concepts of test architectures
  - Abstraction of test cases (e.g. test levels, test types, abstract equivalent classes, high-level test conditions and high-level test cases)
  - Relationships of abstract test cases
  - Separation of concerns for test
  - Architecture of test suite based on abstract test cases (e.g. design of test levels and test types)
  - Types of test architecture (e.g. architecture of test suite and architecture of test system/environment)
  - Similarities, differences and harmonization between test suite architecture and test system architecture
  - Similarities and differences among test architecture, test strategy, test plan and test

sub-process in 29119

* Design of test architecture
  - How to design several test levels
  - How to design complicated test types and test cycles
  - Design concepts for test architecture design
    Modeling technique for test architecture design
  - Design patterns for test architecture design
  - Styles of test architecture
  - Quality characteristics of test architecture (e.g. maintainability of test suite)
  - Original diagrams and notation for test architecture design
  - Application or enhancement of existing notation (e.g. UML/UTP, SysML and future diagram for SPL)
  - Connection of test architecture design and test case design (e.g. structure of test case based on test architectural components)
  - Meta-models or ontology for test architectures

* Test requirement analysis
  - Whether software requirement specification is the goal of software test or not?
  - How to model holistic test requirement
  - How to model nonfunctional requirement for test
  - How to organize test requirement for several source (e.g. from customer, from design and from environment)
  - How to overview large-scale and complex requirements for test
  - Analysis patterns for test requirement analysis

* Application of test architecture
  - Quality evaluation of test architecture
  - Overall test engineering methodology based on test architecture design
  - Reuse of test architecture design
  - Product line engineering of test suite (e.g. how to design and manage variants of test suite)
  - Design example of test architecture for large-scale and complicated system
  - Roles and responsibilities of test architect
  - Automation based on test architecture (e.g. separating automated test and manual test in keyword driven testing based on test architecture)
  - Test process improvement based on test architecture
  - Relationships between software architectures and software test architectures
  - Typical test architecture for a domain and/or comparison among domains (e.g. banking, logistics, cloud, automotive, medical, industrial automation and telecommunications)
  - Industrial experiments and case studies of test architectures

Motivation of InSTA

It is important to design better software test architectures for software testing activities. The software test architecture is a key part of the test strategy.

As software becomes larger and more complicated, we must increase its reliability and users' delights. The need for better testing calls for emphasizing higher-level test designs with specialized software test architectures. This higher level approach allows the design concepts and big picture of the software to be grasped and communicated, and the higher level of abstraction can increase the productivity and reusability. This makes it possible for the software testing to cope with the high reliability requirements of large and complex programs.

In software testing, there are various keywords for test design concepts. However, there are no widely standardized diagrams or notations to communicate the test design concepts, to increase the productivity and reusability of tests by raising their levels of abstraction, to generally grasp the overall perspective of

the software for testing it. By focusing on the higher concepts of test architectures, our discussions can raise the quality of the testing.

Test architectures must be approached indirectly as a part of the test strategies. Some organizations are working to establish new ways to design novel test architectures, but there is no unified understanding of the key concepts of test architectures. This workshop is intended to allow researchers and practitioners to comprehensively discuss the central concepts of test architectures.

Submission
InSTA 2016 submissions should be made at the EasyChair submission site:
https://easychair.org/conferences/?conf=insta2016

Organization
Program Committee:

Paul Baker, Visa Europe, UK
Dato' Dr Aziz Deraman, Universiti Malaysia Terengganu, Malaysia
Sigrid Eldh, Ericsson, Sweden
Jon Hagar, Grand Software Testing, USA
Tetsuro Katayama, University of Miyazaki, Japan
Qin Liu, Tongji University, China
Satoshi Masuda, IBM Research - Tokyo, Japan
John D. McGregor, Clemson University, USA
Yasuharu Nishi, The University of Electro-Communications, Tokyo, Japan
Benjamin Romberg, Hewlett-Packard, Australia
Vipul Shah, Tata Consultancy Service, India
Kazuhiko Tsuda, Tsukuba University, Japan
Hironori Washizaki, Waseda University, Japan
Peter Zimmerer, Siemens, Germany

The program committee members are being invited.

Organizers:

Yasuharu Nishi, The University of Electro-Communications, Tokyo, Japan
Satoshi Masuda, IBM Research - Tokyo, Japan
Satomi Yoshizawa, NEC, Japan