

A-MOST – InSta – MUTATION – TAIC-PART – ASQT – IWCT – SECTEST

ICSTW 2015

8th IEEE International Conference on
Software Testing, Verification and Validation

WORKSHOPS



Workshop DAY 1 - Monday, April 13th

08:15 Registration

09:00 Workshops - Session 1

SECTEST
Room B.1

Keynote - Achim Brucker, SAP
Security Testing: Myths, Challenges, and Opportunities

S. Palka, D. Mccoy
Dynamic Phishing Content Using Generative Grammars

MUTATION
Room B.2

Keynote - Paul Ammann
"Transforming Mutation Testing from the Technology of the Future into the Technology of the Present"

P. Gong, R. Zhao, Z. Li
"Faster Mutation-based Fault Localization With A Novel Mutation Execution Strategy"

10:30 Coffee Break

11:00 Workshops - Session 2

SECTEST
Room B.1

K. Knorr, D. Aspinall
Security Testing for Android mHealth Apps

L. Rivière, J. Bringer, Thanh-Ha Le, H. Chabanne
A Novel Simulation Approach for Fault Injection Resistance Evaluation on Smart cards

MUTATION
Room B.2

J. Nanavati, F. Wu, M. Harman, Y. Jia, J. Krinke
Mutation Testing of Memory-Related Operators

L. Deng, N. Mirzaei, P. Ammann, J. Offutt
Towards Mutation Analysis of Android Apps

M. Patrick, Y. Jia
Kernel Density Adaptive Random Testing

P. Arcaini, A. Gargantini, E. Riccobene, P. Vavassori
Rehabilitating equivalent mutants as static anomaly detectors in software artifacts

N. Li, M. West, A. Escalona, V. Durelli
Mutation Testing in Practice using Ruby

12:30 Lunch

08:15 Registration

09:00 Workshops - Session 1

IWCT
Room C

Language and process

G. Sherwood
Embedded Functions in Combinatorial Test Designs

D. Hillmer
Introducing Combinatorial Testing in the Organization - a Report on a First Attempt

I. Segall, R. Tzaref-Brill, A. Zlotnick
Combining Minimization and Generation for Combinatorial Testing

InSTA
Room A

Introduction - Yasuharu Nishi, The University of Electro-Communications, Tokyo, Japan

Keynote - Sigrid Eldh, Ericsson, Sweden

10:30 Coffee Break

11:00 Workshops - Session 2

IWCT
Room C

Applications

R. E. Lopez-Herrejon, S. Fischer, R. Ramler, A. Egyed
A First Systematic Mapping Study on Combinatorial Interaction Testing for Software Product Lines

J. Bozic, B. Garn, D. E. Simos, F. Wotawa
Evaluation of the IPO-Family Algorithms for Test Case Generation in Web Security Testing

S. Züfle, V. Krishnamoorthy
A Process for Non-functional Combinatorial Testing - Selection of Parameter Values from a Nondiscrete Domain Space

A. Javeed, C. Yilmaz
Combinatorial Interaction Testing of Tangled Configuration Options

InSTA
Room A

Dominic Eschweiler et al.
Test Driven Development for Device Drivers and Rapid Hardware Prototyping

Yasuharu Nishi
Design Principles in Test Suite Architecture

Keiji Uetsuki et al.
Automated Compatibility Testing Method for Software Logic by Using Symbolic Execution

12:30 Lunch

14:00

Workshops - Session 3

SECTEST
Room B.1

Keynote - Michael Felderer, University of Innsbruck

Current State and Challenges for Model-Based Security Testing

Z. Afzal, S. Lindskog

Automated Testing of IDS Rules

MUTATION
Room B.2

Discussion:

What makes a successful tool, how do we measure the tool effectiveness and how do we bridge the gap between research and industry tools?

Best paper Award

15:00 Coffee Break

15:30 Workshops - Session 4

SECTEST
Room B.1

K. Li, C. Hebert, J. Lindemann, M. Sauter, H. Mack, T. Schroerer, A. Tiple
Tool Support for Secure Programming by Security Testing

MUTATION
Room B.2

R. Kurtz, P. Ammann, J. Offutt
Static Analysis of Mutant Subsumption

J. Troya, A. Bergmayr, L. Burgueño, M. Wimmer
Systematic Mutations for and with ATL Model Transformations

B. Lindström, S. F. Andler, J. Offutt, P. Pettersson, D. Sundmark
Mutating Aspect-Oriented Models to Test Cross-Cutting Concerns

16:00

Discussion Panel

R. A. P. Oliveira, E. Alégroth, Z. Gao, A. Memon
Definition and Evaluation of Mutation Operators for GUI-level Mutation Analysis

SECTEST
Room B.1

14:00

Workshops - Session 3

IWCT
Room C

Finding faults and dealing with constraints

S. Vilkomir, D. Anderson
Relationship between Pair-wise and MC/DC Testing: Initial Experimental Results

Z. Wang
Why Combinatorial Testing Works - Analyzing Minimal Failure-Causing Schemas in Logic Expressions

L. Yu, F. Duan, Y. Lei, R. N. Kacker, D. R. Kuhn
Constraint Handling In Combinatorial Test Generation Using Forbidden Tuples

InSTA
Room A

Invited Talk

15:00 Coffee Break

15:30 Workshops - Session 4

IWCT
Room C

Test generation

A. Gargantini, P. Vavassori
Using Decision Trees to aid Algorithm Selection in Combinatorial Interaction Test Generation

C. Henard, M. Papadakis, Y. Le Traon
Flattening or Not of the Combinatorial Interaction Testing Models?

F. Duan, L. Yu, Y. Lei, R. N. Kacker, D. R. Kuhn
Improving IPOG's Vertical Growth Based on a Graph Coloring Scheme

R. Kuhn, R. N. Kacker, Y. Lei, J. Torres-Jimenez
Equivalence Class Verification and Oracle-free Testing Using Two-layer Covering Arrays

L. S. Gholamhosseinghandehari, J. Chandrasekaran, Y. Lei, R. N. Kacker, D. R. Kuhn
BEN: A Combinatorial Testing-Based Fault Localization Tool

InSTA
Room A

Vipul Shah et al
Mining Process Models and Architectural Components from Test Cases

Tsuyoshi Yumoto et al
A Study on an Approach for Analyzing Test Basis Using I/O Test Data Patterns

Satoshi Masuda et al
Semantic Analysis Technique of Logics Retrieval for Software Testing from Specification Documents

Workshop DAY 2 - Friday, April 17th

08:45 Registration

09:00 Workshops - Session 1

Keynote

Rudolf van Megen,
President ASQF e.V.

The Future of QM, QA and Testing - in
the context of industry 4.0

Keynote

Rob Hierons,
Brunel University

Complete Controllable Test Suites for
Distributed Testing

ASQT
Room A

A-MOST
Room B.2

10:30 Coffee Break

08:45 Registration

09:00 Workshops - Session 1

TAIC-PART
Room C

Keynote

Christoph Preschern
(Ranorex, Austria)

People behind the Testing Tools
and Frameworks

Short Paper Position Statements:
Applications and Challenges

C.S. Gebzli, D. Metin, H. Sözer
**Combining Model-Based and
Risk-Based Testing for Effective Test
Case Generation**

X. Zhang, H. Tanno
**Requirements Document Based Test
Scenario Generation for Web
Application Scenario Testing**

T. Arts, J. Hughes, U. Norell,
H. Svensson
**Testing AUTOSAR software with
QuickCheck**

O. Grinchtein, M. Carlsson,
J. Pearson
**Testing of a telecommunication
protocol using constraint programming**

T. Wetzlmaier, M. Winterer
**Test automation for Multi-Touch User
Interfaces of Industrial Applications**

C. Klammer, A. Kern
**Writing Unit Tests:
It's Now or Never!**

E. Engström, K. Petersen
**Mapping software testing practice
with software testing research – SERP-
test taxonomy**

10:30 Coffee Break

NOTES:

ASQT - Chair: D. Wuksch
Room A

The business value of QA

A. van Ewijk
The shifting business case for testing

A. Nitze, A. Schmietendorf
A Survey on Mobile users's Software Quality Perceptions

V. A. Shekhovtsov, H. C. Mayr, M. Kucko
Implementing Tool Support for Analyzing Stakeholder Communications in Software Development

A-MOST
Room B.2

N. Li, J. Offutt
A Test Automation Language Framework for Behavioral Models

V. Lelli, A. Bloudin, B. Baudry, F. Coulon
On Model-Based Testing Advanced GUIs

H. M'Hemdi, J. Julliand, P.-A. Masson, R. Robbana
Test Generation from Timed Pushdown Automata with Inputs and Outputs

K. Singi, D. Era, V. Kaulgud
Model-based Approach for Automated Test Case Generation from Visual Requirement Specifications

12:30 Lunch

14:00 Workshops - Session 3

ASQT - Chair: B. Peischl
Room A

Lean Product Development

G. Hansbauer
Automated Testing in the Cloud - Test Infrastructure Management with SaaS

A. Egger
Working in Distributed Teams

H. Waggener
From Agile Software Development to the Sharing Economy and the Collaborative Commons: Social Apps for Enterprises

A-MOST
Room B.2

Panel Discussion:

"Model-based Testing for Next Generation Systems"

R. Hierons, J. Offutt, F. Wotawa, B. Aichernig

15:00 Coffee Break

TAIC-PART
Room C

**Full Paper Presentations:
Model-based Test Automation**

V. Entin, M. Winder, B. Zhang,
A. Claus

**A Process to Increase the Model Quality
in the Context of Model-Based Testing**

M. Micallef, C. Colombo
**Lessons learnt from using DSLs
for Automated Software Testing**

T. Arts, K. Bogdanov, A. Gerdes,
J. Hughes
**Graphical editing support for QuickCheck
models**

T. Gustafsson, M. Skoglund,
A. Kobetski, D. Sundmark
**Automotive System Testing by
Independent Guarded Assertions**

12:30 Lunch

14:00 Workshops - Session 3

TAIC-PART
Room C

Poster Space (13:45 - 14:15)

Keynote 2
Per Runeson,
Lund University, Sweden

The 4+1 View Model of Industry–
Academia Collaboration Experiences

15:00 Coffee Break

ASQT - Chair: A. van Ewijk
Room A

Case Studies

V.J. Wawryk, Ch. Krenn, Th. Dietinger
Scaling a running agile fix-bid project with near shoring: Theory vs. Reality and (best) practice

W. Richter
nCanto: An Agile Software Development Case Study

J. Gmeiner, R. Ramler, J. Haslinger
Automated Testing in the Continuous Delivery Pipeline: A Case Study of an Online Company

H. Sneed, K. Erdoes
Testing Big Data (Assuring the Quality of Large Databases)

A-MOST
Room B.2

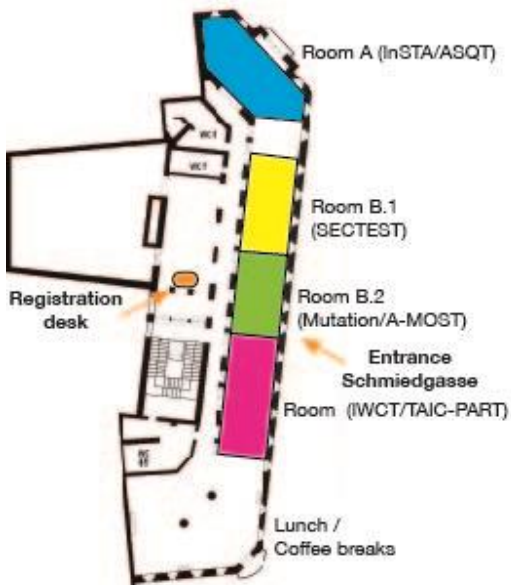
P.-C. Héam, H. M'Hemdi
Covering both Stack and States while Testing Push-down Systems

J. Guan, J. Offutt
A Model-Based Testing Technique for Component-Based Real-Time Embedded Systems

X. Devroey, M. Cordy, P.-Y. Schobbens, A. Legay, P. Heymans
State Machine Flattening, a Mapping Study and Tools Assessment

B. K. Aichernig, F. Lorber
Towards Generation of Adaptive Test Cases from Partial Models of Determinized Timed Automata

17:00 Closing



Floor plan ICSTW 2015 workshop days
(see ICST 2015 floor plan main conference)

**Full Paper Presentations:
Analysis and Improvement**

B. Peischl
**Software Quality Research: from
Processes to Model-based Techniques**

D. Tengeri, A. Beszédés, T. Gergely,
L. Vidács, D. Havas, T. Gyimóthy
**Beyond Code Coverage – an Approach
for Test Suite Assessment and
Improvement**

C. Biray, F. Buzluca
**A Learning-Based Method for
Detecting Defective Classes in Object-
Oriented Systems**

L. Vidács, F. Horváth, J. Mihalicza,
B. Vancsics, A. Beszédés
**Supporting Software Product Line
Testing by Optimizing Code
Configuration Coverage**

17:00 Closing

Thank you for being part of ICST 2015!