

QSIC 2014 Session Schedule

Thursday, October 2, 2014		
08:30~09:00	Opening Session	Cottonwood D, E
09:00~10:00	Session I: Keynote Address Way Kuo, President & University Distinguished Professor City University of Hong Kong	Cottonwood D, E
10:00~10:30	Coffee Break	Watters Foyer
10:30~11:45	Session II: Plenary Panel: Software Quality Assurance in Practice	Cottonwood D, E
11:45~13:00	Lunch	Cottonwood A, B, C
13:00~17:30	Session III: Tutorial [†] on Software Reliability I Professor Kishor Trivedi, Duke University	Rowlett A
13:00~14:30	Session IV – A: Test Generation I Session IV – B: System Development	Rowlett B Rowlett C
14:30~15:00	Coffee Break	Watters Foyer
15:30~17:30	Session V – A: Test Generation II Session V – B: Security and Run-Time	Rowlett B Rowlett C
18:30~20:30	Conference Banquet Speaker: Professor Christian Hansen (President, IEEE Reliability Society)	Cottonwood A, B, C

Friday, October 3, 2014		
08:30~12:30	Session VI: Tutorial [†] on Software Reliability II Dr. Allen Nikora, JPL, NASA	Rowlett A
08:30~10:00	Session VII – A: Test Generation III Session VII – B: QUAMES Workshop	Rowlett B Rowlett C
10:00~10:30	Coffee Break	Watters Foyer
10:30~12:30	Session VIII – A: System Architecture & Correctness Session VIII – B: Software Faults and Bugs	Rowlett B Rowlett C
12:30~14:00	Lunch	Cottonwood A, B, C
14:00~15:30	Session IX – A: Usability Session IX – B: Test Generation IV Session IX – C: Comprehension and Analysis I	Rowlett A Rowlett B Rowlett C
15:30~16:00	Coffee Break	Watters Foyer
16:00~17:45	Session X – A: Metrics Session X – B: Comprehension and Analysis II	Rowlett A Rowlett B

†For the Tutorial Certificate Program sponsored by the IEEE Reliability Society, click [here](#) for more details.

- Click [here](#) for more details of the keynote address by Professor Way Kuo.
- Click [here](#) for more details of the panel: “Software Quality Assurance in Practice”.

QSIC 2014 Final Program

Thursday, October 2, 2014	
08:30~09:00	<p>Opening Session</p> <ul style="list-style-type: none"> • W. Eric Wong (General Chair; University of Texas at Dallas, USA) • Mark Spong (Dean, School of Engineering & Computer Science, University of Texas at Dallas, USA) • Gopal Gupta (Head, Department of Computer Science, University of Texas at Dallas, USA) • Bruce McMillin (Program Chair; Missouri University of Science and Technology)
09:00~10:00	<p>Session I: Keynote Address</p> <p><i>Critical Findings on Nuclear and Renewable Energies: Reflections on Rainbow Energy, Environmental Protection and Safety in the Wake of Fukushima Nuclear Accident</i></p> <p>Way Kuo, President & University Distinguished Professor City University of Hong Kong, Hong Kong</p>
10:00~10:30	Coffee Break
10:30~11:45	<p>Session II: Plenary Panel – Software Quality Assurance in Practice</p> <p>Moderator: Dr. Mark Paulk (University of Texas at Dallas) Panelists in the Alphabetical Order:</p> <ul style="list-style-type: none"> • Paul Grizzaffi, MedAssets • Mas Kono, MedAssets • Tim McClung, NTT Data North America QAT Practice • John Medellin, Medellin Applied Research Concepts • Chad Virnig, IBM • Stuart Yarost, Parker Aerospace
11:45~13:00	Lunch
13:00~17:30	<p>Session III: Tutorial on Software Reliability I</p> <p>Professor Kishor Trivedi Duke University</p>
13:00~14:30	<p>Session IV-A: Test Generation I Chair: Morgan Ericsson (Linnaeus University)</p> <ul style="list-style-type: none"> • <i>Model-Based Testing of Obligations</i> Iram Rubab¹, Shaukat Ali², Lionel Briand¹, and Yves Le Traon¹ ¹University of Luxembourg, Luxembourg ²Simula Research Laboratory, Norway • <i>An Improved Memetic Algorithm with Method Dependence Relations (MAMDR)</i> Ali Aburas and Alex Groce Oregon State University, USA • <i>General Optimization Strategies for Refining the In-Parameter-Order Algorithm</i> Shiwei Gao, Jianghua Lv, Binglei Du, Yaruo Jiang, and Shilong Ma Beihang University, China
13:00~14:30	<p>Session IV-B: System Development Chair: Jeff Tian (Southern Methodist University)</p> <ul style="list-style-type: none"> • <i>Improving the quality of AspectJ application: Translating name-based pointcuts to analysis-based pointcuts</i> Lin Wang¹, Tomoyuki Aotani², and Masato Suzuki¹ ¹Japan Advanced Institute of Science and Technology, Japan ²Tokyo Institute of Technology, Japan

	<ul style="list-style-type: none"> • <i>Exploring Model-Based Repositories for a Broad Range of Industrial Applications and Challenges</i> Tao Yue, Shaukat Ali, Amaud Descour, Qitao Gan, Marius Liaaen, Geir Magne Merkesvik, Boas Krogh Nielsen, Jan Nygard, and Bjom Ove Olafsen Simula Research Laboratory, Norway • <i>Early Identification of Future Committers in Open Source Software Projects</i> Akinori Ihara¹, Yasutaka Kamei², Masao Ohira³, Ahmed E. Hassan⁴, Naoyasu Ubayashi², and Ken-ichi Matsumoto¹ ¹Nara Institute of Science and Technology, Japan ²Queen's University, Canada ³Kyushu University, Japan ⁴Wakayama University, Japan
14:30~15:00	Coffee Break
15:30~17:30	<p>Session V-A: Test Generation II Chair: Hai-Feng Guo (University of Nebraska at Omaha)</p> <ul style="list-style-type: none"> • <i>The Impact of Equivalent, Redundant and Quasi Mutants on Database Schema Mutation Analysis</i> Chris J. Wright¹, Gregory M. Kapfhammer², and Phil McMinn¹ ¹University of Sheffield, United Kingdom ²Allegheny College, USA • <i>Automating Test-Suite Augmentation (S)</i>[†] Roderick Bloem, Robert Koenighofer, Franz Rock, and Michael Tautschnig Graz University of Technology, Austria • <i>Bottom-up Integration Testing with the Technique of Metamorphic Testing (S)</i> Xiaoyuan Xie¹, Jingxuan Tu², Tsong-Yueh Chen¹, and Baowen Xu² ¹Swinburne University of Technology, Australia ²Nanjing University, China • <i>Parameter Tuning for Search-Based Test-Data Generation Revisited: Support for Previous Results (S)</i> Anton Kotelyanskii and Gregory Kapfhammer Allegheny College, USA
15:30~17:30	<p>Session V-B: Security and Run-Time Chair: Matthias Saft (Siemens AG)</p> <ul style="list-style-type: none"> • <i>Optimizing Multi-Objective Evolutionary Algorithms to enable Quality-Aware Software Provisioning</i> Donia Elkateb¹, François Fouquet¹, Johann Bourcier², and Yves Le Traon¹ ¹University of Luxembourg, Luxembourg ²Universite de Rennes 1, France • <i>A Method to Evaluate CFG Comparison Algorithms</i> Patrick P.F. Chan and Christian Collberg University of Arizona, USA • <i>Identifying Data Inconsistencies using After-State Database Testing (ASDT) Framework (S)</i> Robert Setiadi and Man Fai Lau Swinburne University of Technology, Australia • <i>A Hybrid Monitoring of Software Design-Level Security Specifications (S)</i> Muhammad Umair Khan and Mohammad Zulkernine Queen's University, Canada
18:30~20:30	<p>Conference Banquet</p> <ul style="list-style-type: none"> • Speaker: Professor Christian Hansen (President, IEEE Reliability Society)

[†]Those marked with "(S)" are *short* papers, each of which is allocated for 20 minutes; whereas, each *full* paper has 30 minutes.

Friday, October 3, 2014

08:30~12:30	<p>Session VI: Tutorial on Software Reliability II</p> <p>Dr. Allen Nikora Jet Propulsion Laboratory, NASA</p>
08:30~10:00	<p>Session VII-A: Test Generation III Chair: Kristen Walcott-Justice (University of Colorado at Colorado Springs)</p> <ul style="list-style-type: none"> • <i>Integration of Requirements Engineering and Test-Case Generation via OSLC</i> Bernhard K. Aichernig¹, Klaus Hormaier², Florian Lorber¹, Dejan Nickovic³, Rupert Schlick³, Didier Simoneau⁴ and Stefan Tiran¹ ¹Graz University of Technology, Austria ²Infineon Technologies Austria AG, Austria ³Austrian Institute of Technology, Austria ⁴Dassault Systemes, France • <i>An Empirical Study on the Usage of Mocking Frameworks in Software Testing (S)</i> Shaikh Mostafa and Xiaoyin Wang University of Texas at San Antonio, USA • <i>Blackbox Test Data Generation for GUI Testing (S)</i> Mohammad Ali Darvish Darab and Carl K. Chang Iowa State University, USA • <i>Automated Test Oracle Generation via Denotational Semantics (S)</i> Hai-Feng Guo¹, Liang Cao¹, Yushu Song¹, and Zongyan Qiu² ¹University of Nebraska at Omaha, USA ²Peking University, China
08:30~10:00	<p>Session VII-B: QUAMES Workshop Chair: Beatriz Marin Campusano (Universidad Diego Portales)</p> <ul style="list-style-type: none"> • <i>Cost Estimation for Model-Driven Interoperability: A Canonical Data Modeling Approach</i> Peter Mork, Walt Melo, Sylvia Dutcher, Chris Curtis, and Melissa Scroggs Noblis, USA • <i>LTF: A Model-based Load Testing Framework for Web Applications</i> Junzan Zhou, Bo Zhou, and Shanping Li Zhejiang University, China • <i>Using Measures for Verifying and Improving Requirement Models in MDD Processes</i> Giovanni Giachetti¹, Beatriz Marin², and Xavier Franch¹ Universidad Andres Bello, Facultad de Ingenier ía, Chile Universidad Diego Portales, Spain
10:00~10:30	<p>Coffee Break</p>
10:30~12:30	<p>Session VIII-A: System Architecture & Correctness Chair: Mohammad Zulkernine (Queen's University)</p> <ul style="list-style-type: none"> • <i>A Comparative Study of Invariants Generated by Daikon and User-defined Design Contracts</i> Farhana Rahman and Yvan Labiche Carleton University, Canada • <i>Detecting Inter-Component Configuration Errors in Proactive: A Relation-Aware Method (S)</i> Wei Chen¹, Xiaoqiang Qiao¹, Jun Wei¹, Hua Zhong¹, Xiang Huang² ¹Institute of Software Chinese Academy of Sciences, China ²Guangdong Electric Power Design Institute of China Energy Engineering Group, China

	<ul style="list-style-type: none"> • <i>Bounded Model Checking of Hybrid Automata Pushdown System (S)</i> Yu Zhang¹, Yunwei Dong¹, Fei Xie² ¹Northwestern Polytechnical University, China ²Portland State University, USA • <i>Analyzing Behavioral Aspects of UML Design Class Models Against Temporal Properties (S)</i> Mustafa Al-Lail, Wuliang Sun, and Robert B. France Colorado State University, USA
10:30~12:30	<p>Session VIII-B: Software Faults and Bugs Chair: Ruizhi Gao (University of Texas at Dallas)</p> <ul style="list-style-type: none"> • <i>Toward Extended Change Types for Analyzing Software Faults</i> Billy Kidwell¹, Jane Huffman Hayes¹, and Allen P. Nikora² ¹University of Kentucky, USA ²Jet Propulsion Laboratory, USA • <i>The Effect of Method Origin on Method Invocation Fault Frequency</i> Shimul Kumar Nath¹, Robert Merkel², and Man Fai Lau¹ ¹Swinburne University of Technology, Australia ²Monash University, Australia • <i>A General Imperfect Software Debugging Model Considering the Nonlinear Process of Fault Introduction (S)</i> Jinyong Wang, Zhibo Wu, Yanjun Shu, and Zhan Zhang Harbin Institute of Technology, China • <i>W-VST: A Testbed for Evaluating Web Vulnerability Scanner (S)</i> Yuan-Hsin Tung¹, Shian-Shyong Tseng², Jen-Feng Shih¹, and Hwai-Ling Shan¹ ¹Telecommunication Lab., Chunghwa Telecom Co., Ltd., Taiwan ²Asia University, Taiwan
12:30~14:00	Lunch
14:00~15:30	<p>Session IX-A: Usability Chair: Xiaoyuan Xie (Swinburne University of Technology)</p> <ul style="list-style-type: none"> • <i>Assessing the Modeling of Aspect State Machines for Testing from the Perspective of Modelers (S)</i> Shaukat Ali¹, Tao Yue¹, and Iram Rubab² ¹Simula Research Laboratory, Norway ²University of Luxembourg, Luxembourg • <i>In-Process Usability Problem Classification, Analysis and Improvement (S)</i> Ruili Geng, Mingrui Chen, and Jeff Tian Southern Methodist University, USA
14:00~15:30	<p>Session IX-B: Test Generation IV Chair: Xiaoyin Wang (University of Texas at San Antonio)</p> <ul style="list-style-type: none"> • <i>Anti-pattern Mutations and Fault-proneness</i> Fehmi Jaafar¹, Foutse Khomh², Yann-Gael Guéhéneuc², and Mohammad Zulkernine¹ ¹Queen's University, Canada ²École Polytechnique de Montréal, Canada • <i>Empirically Evaluating the Quality of Automatically Generated and Manually Written Test Suites</i> Jeshua S. Kracht, Jacob Z. Petrovic, and Kristen R. Walcott-Justice University of Colorado at Colorado Springs, USA • <i>On a New Detecting Technique of Conjunctive Literal Insertion Fault in Boolean Expressions</i> Tanay Kanti Paul, Man Fai Lau, and Sebastian Ng Swinburne University of Technology, Australia

14:00~15:30	<p>Session IX-C: Comprehension and Analysis I Chair: Srdjan Stevanetic (University of Vienna)</p> <ul style="list-style-type: none"> • <i>Quantifying Program Comprehension with Interaction Data</i> Roberto Minelli¹, Andrea Mocci¹, Michele Lanza¹, and Takashi Kobayashi² ¹University of Lugano, Switzerland ²Tokyo Institute of Technology, Japan • <i>Quantitatively Exploring Non-code Software Artifacts</i> Luca Bigliardi¹, Michele Lanza¹, Alberto Bacchelli², Marco D' Ambros¹, and Andrea Mocci¹ ¹University of Lugano, Switzerland ²Delft University of Technology, Netherlands • <i>A Method to Test the Information Quality of Technical Documentation on Websites</i> Oleksandr Shpak, Welf Lowe, Anna Wingkvist, and Morgan Ericsson Linnaeus University, Sweden
15:30~16:00	Coffee Break
16:00~17:45	<p>Session X-A: Metrics Chair: Yihao Li (University of Texas at Dallas)</p> <ul style="list-style-type: none"> • <i>A Benchmarking-Based Model for Technical Debt Calculation</i> Alois Mayr¹, Reinhold Plosch¹, and Christian Korner² ¹Johannes Kepler University, Austria ²Siemens AG, Germany • <i>Uniformly Evaluating and Comparing Ranking Metrics for Spectral Fault Localization (S)</i> Chunyan Ma, Yifei Zhang, Tao Zhang, Yuwei Lu, and Qingyi Wang Northwestern Polytechnical University, China • <i>Measuring Class Cohesion Based on Iterative Process Using External Class Relationships (S)</i> Jun-Ha Lee¹ and Dae-Kyoo Kim² ¹Sogang University, Korea ²Oakland University, USA • <i>Estimation of uncertainty in application profiles (S)</i> David Flater National Institute of Standards and Technology, USA
16:00~17:45	<p>Session X-B: Comprehension and Analysis II Chair: Man Fai Lau (Swinburne University of Technology)</p> <ul style="list-style-type: none"> • <i>The Value of Software Documentation Quality</i> Reinhold Plosch¹, Andreas Dautovic¹, and Matthias Saft² ¹Johannes Kepler University, Austria ²Siemens Corporate Technology, Germany • <i>Understanding and Classifying the Quality of Technical Forum Questions</i> Luca Ponzanelli¹, Andrea Mocci¹, Alberto Bacchelli², and Michele Lanza¹ ¹University of Lugano, Switzerland ²Delft University of Technology, Netherlands • <i>Exploring the Relationships between the Understandability of Architectural Components and Graph-Based Component Level Metrics (S)</i> Srdjan Stevanetic and Uwe Zdun University of Vienna, Austria

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| | <ul style="list-style-type: none">• <i>Empirical Study on the Effect of a Software Architecture Representation's Abstraction Level on the Architecture-Level Software Understanding (S)</i>
Srdjan Stevanetic and Uwe Zdun
University of Vienna, Austria |
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