



ASE2009

24th IEEE/ACM International Conference on
Automated Software Engineering



16-20 November 2009
Auckland, New Zealand



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THE UNIVERSITY OF AUCKLAND
NEW ZEALAND

Langham Hotel, Auckland, New Zealand

Monday 16th Nov

8.30am	Registration - Waitemata pre-function		
9am	Tutorial 1 Tamaki	Workshop 1 Akarana	Doctoral Symposium Hauraki
10.30am	Morning tea - Waitemata pre-function		
11am	Tutorial 1 Tamaki	Workshop 1 Akarana	Doctoral Symposium Hauraki
12.30pm	Lunch Waitemata pre-function		
2pm	Tutorial 1 Tamaki	Workshop 1 Akarana	Doctoral Symposium Hauraki
3.30pm	Afternoon tea - Waitemata pre-function		
4pm	Tutorial 1 Tamaki	Workshop 1 Akarana	Doctoral Symposium Hauraki
5.30pm			

Tutorial 1 - The Model Oriented Domain Analysis tutorial - Jorn Bettin, Sofismo, Switzerland

Workshop 1 - Workshop on Visual Analytics in Software Engineering (VASE 2009)

Doctoral Symposium – Jamie Andrews and Elisabeta di Nitto

Tuesday 17th Nov

8.30am	Registration - Waitemata pre-function		
9am	Workshop 2 Tamaki	Workshop 3 Akarana	Tutorial 3 Hauraki
10.30am	Morning tea - Waitemata pre-function		
11am	Workshop 2 Tamaki	Workshop 3 Akarana	Tutorial 3 Hauraki
12.30pm	Lunch Waitemata pre-function		
2pm	Workshop 2 Tamaki	Workshop 3 Akarana	Tutorial 4 Greys
3.30pm	Afternoon tea - Waitemata pre-function		
4pm	Workshop 2 Tamaki	Workshop 3 Akarana	Tutorial 4 Greys
5.30pm			
6.30pm	Reception @ SPF Casual Bar & Restaurant		
8.30pm			

Tutorial 3 - Tips, tricks, and traps of Empirical Software Engineering- *Tim Menzies, Emilia Mendes, University of Auckland*

Tutorial 4- Runtime Verification with Monitoring Oriented Programming - *Grigore Rosu, University of Illinois at Urbana-Champaign*

Workshop 2 - Workshop on Knowledge Industry Survival Strategy Initiative (KISS 2009)

Workshop 3 - 5th Asian Workshop on Aspect-Oriented and Modular Software Development (AOAsia 2009)

Wednesday 18th Nov

8.30am	Registration - The Great Room Pre-function	
9am	<p>Welcome (8.50am) – John Grundy, Mats Heimdahl, Gabriele Taentzer & Bob Hall</p> <p>The Great Room IV</p> <p>Keynote 1 – Prof. Gerti Kappel, Vienna University of Technology, Austria</p> <p>“Why Model Management Research is Needed - State of the Art and Future Directions”</p> <p>Chair: Gabriele Taentzer</p>	
10.30am	Morning tea - The Great Room III	
11am	<p>P1: Requirements</p> <p>Chair: Gabriele Taentzer</p> <p>The Great Room IV</p> <p>Semi-automated Test Planning for e-ID Systems by Using Requirements Clustering</p> <p><i>Baris Güldali, Holger Funke, Michael Jahnich, Stefan Sauer, Gregor Engels</i></p>	<p>P2: Defect Detection – 1</p> <p>Chair: Mike Lowry</p> <p>The Great Room II</p> <p>Type Inference for Soft-Error Fault-Tolerance Prediction</p> <p><i>Gustav Munkby, Sibylle Schupp</i></p>
11.30am	<p>A Quantum Algorithm for Software Engineering Search</p> <p><i>Robert J. Hall</i></p>	<p>Evaluating the Accuracy of Fault Localization Techniques</p> <p><i>Shaimaa Ali, James H. Andrews, Tamilselvi Dhandapani, Wantao Wang</i></p>
12 noon	<p>Understanding the Value of Software Engineering Technologies</p> <p><i>Phillip Green, Tim Menzies, Steven Williams, Oussama El-Rawas</i></p>	<p>Spectrum-based Multiple Fault Localization</p> <p>Rui Abreu, Peter Zoeteweij, Arjan J.C. Van Gemund</p>
12.30pm	<p>Lunch</p> <p>The Great Room III</p>	
2pm	<p>P3: Maintenance and Evolution -1</p> <p>Chair: Yves Ledru</p> <p>The Great Room IV</p> <p>Towards a Comprehensive Test Suite for Detectors of Design Patterns</p> <p><i>Krzysztof Stencel, Patrycja Wegrzynowicz</i></p>	<p>P4: Verification - 1</p> <p>Chair: Charles Pecheur</p> <p>The Great Room II</p> <p>SMT-Based Bounded Model Checking for Embedded ANSI-C Software</p> <p><i>Lucas Cordeiro, Bernd Fischer, Joao Marques-Silva</i></p>
2.30pm	<p>Improving API Usage through Automatic Detection of Redundant Code</p> <p><i>David Kawrykow, Martin P. Robillard</i></p>	<p>Static Validation of C Preprocessor</p> <p><i>Macros Andreas Saebjoernsen, Lingxiao Jiang, Daniel Quinlan, Zhendong Su</i></p>
3pm	<p>Clone-aware Configuration Management</p> <p><i>Tung Nguyen, Hoan Nguyen, Nam Pham, Jafar Al-Kofahi, Tien Nguyen</i></p>	<p>Looper: Lightweight Detection of Infinite Loops at Runtime</p> <p><i>Jacob Burnim, Nicholas Jalbert, Christos Stergiou, Koushik Sen</i></p>
3.30pm	Afternoon tea - The Great Room III	
4pm	<p>Posters 1 and informal demos 1</p> <p>The Great Room III</p>	<p>Formal Demos 1</p> <p>Chair: Mats Heimdahl</p> <p>The Great Room II</p>
5.30pm		

Posters 1 and informal demos 1 –

- Precise Data Race detection in Relaxed Memory Model using Heuristic based Model Checking, *KyungHee Kim, Tuba Yavuz-Kahveci, Beverly A Sanders*
- Automatic Generation of Monitors for Probabilistic Timed Property Sequence Charts, *Pengcheng Zhang, Lars Grunske, Antony Tang, Bixin Li*
- Let the ants deploy your software - A hybrid ACO/GA based deployment optimization strategy, *Aldeida Aleti, Lars Grunske, Indika Meedeniya, Irene Moser*
- Using String Distances for Test Case Prioritisation, *Yves Ledru, Alexandre Petrenko, Sergiy Boroday*
- Reggae: Automated Test Generation for Programs using Complex Regular Expressions, *Nuo Li, Tao Xie, Nikolai Tillmann, Jonathan de Halleux, Wolfram Schulte*
- A Methodology and Framework to Simplify Usability Analysis of Mobile Applications, *Florence Balagtas-Fernandez, Heinrich Hussmann*
- An IDE-based Solution for Schema Evolution of Object-Oriented Software, *Marco Piccioni, Manuel Oriol, Bertrand Meyer, Teseo Schneider*
- An Open Source-Based Approach to Software Development Infrastructures, *Yuhoon Ki, Meongchul Song*
- EA-Analyzer: Automating Conflict Detection in Aspect-Oriented Requirements, *Alberto Sardinha, Ruzanna Chitchyan, Nathan Weston, Phil Greenwood, Awais Rashid*
- An Automated Passive Testing Approach for the IMS PoC Service, *Felipe Lalanne, Stephane Maag, Edgardo Montes de Oca, Ana Cavalli, Wissam Mallouli, Arnaud Gonguet*
- Automatic Generation of Example Oriented API Documents, *Jinhan Kim, Sanghoon Lee, Seung-won Hwang, Sunghun Kim*
- Towards Automation for Managing Model and Metamodel Inconsistency, *Louis M. Rose, Dimitrios S. Kolovos, Richard F. Paige, Fiona A.C. Polack*
- Generating Fixes from Object Behavior Anomalies, *Valentin Dallmeier, Andreas Zeller, Bertrand Meyer*
- Service Substitution Revisited, *Dionysis Athanasopoulos, Apostolos Zarras, Valerie Issarny*
- A Verification-Driven Approach to Traceability and Documentation for Auto-Generated Mathematical Software, *Ewen Denney, Bernd Fischer*
- Static Typing for Ruby on Rails, *Jong-hoon (David) An, Avik Chaudhuri, Jeffrey S. Foster*
- AOWP: Web-specific AOP framework for PHP, *Keiji Hokamura, Ryoto Naruse, Masaru Shiozuka, Naoyasu Ubayashi, Shin Nakajima, Akihito Iwai*
- phpModeler - a web model extractor, *Josip Maras, Maja Stula, Ivica Crnkovic*
- Loopfrog: A Static Analyzer for ANSI-C Programs, *Daniel Kroening, Natasha Sharygina, Stefano Tonetta, Aliaksei Tsitovich, Christoph M. Wintersteiger*
- Zoltar: a Toolset for Automatic Fault Localization, *Tom Janssen, Rui Abreu, Arjan J.C. Van Gemund*
- Jtop: Managing JUnit Test Cases in Absence of Coverage Information, *Lingming Zhang, Ji Zhou, Dan Hao, Lu Zhang, Hong Mei*

Formal Demos 1 –

- 1 Involving the User In Code Search, *Steven P. Reiss*
- 2 KaitoroBase: Visual Exploration of Software Architecture Documents, *Moon Ting Su, Christian Hirsch, John Hosking*
- 3 A Tool Suite for the Generation and Validation of Configurations for Software Availability, *Abdelouahed Gherbi, Ali Kanso, Ferhat Khendek, Maria Toeroe, Abdelwahab Hamou-Lhadj*
- 4 An Automated Tool for Generating UML Models from Natural Language Requirements, *Deva Kumar Deeptimahanti, Ali Babar Muhammad*
- 5 A Tool for Attributed Goal-Oriented Requirements Analysis, *Motoshi Saeki, Shinpei Hayashi, Haruhiko Kaiya*
- 6 Supporting Requirements Validation: the EuRailCheck tool, *Roberto Cavada, Alessandro Cimatti, Alessandro Mariotti, Cristian Mattarei, Andrea Micheli, Angelo Susi, Sergio Mover, Marco Pensallorto, Marco Roveri, Stefano Tonetta*

Thursday 19th Nov

8.30am	Registration - The Great Room Pre-function	
9am	<u>Keynote 2 – Prof. Rance Cleaveland</u>	
9.30am	University of Maryland and Fraunhofer USA Center for Experimental Software Engineering “Validating Automotive Control Software using Instrumentation-Based Verification”	
10am	Chair: Mats Heimdahl The Great Room IV	
10.30am	Morning tea - The Great Room III	
11am	P5: Software Architecture and Design Chair: John Grundy The Great Room IV Explicit Concern-Driven Development in ArchEvol <i>Eugen C. Nistor, Andre van der Hoek</i>	P6: Testing Chair: Jamie Andrews The Great Room II Automated Test Order Generation for Software Component Integration Testing <i>Rattikorn Hewett, Phongphun Kijsanayothin</i>
11.30am	Improving the Efficiency of Dependency Analysis in Logical Decision Models <i>Sunny Wong, Yuanfang Cai</i>	A Divergence-Oriented approach to Adaptive Random Testing of Java programs <i>Yu Lin, Xucheng Tang, Yuting Chen, Jianjun Zhao</i>
12 noon	Design Rule Hierarchy and Task Parallelism <i>Sunny Wong, Yuanfang Cai, Giuseppe Valetto, Georgi Simeonov, Kanwarpreet Sethi</i>	Adaptive Random Test Case Prioritization <i>Bo Jiang, Zhenyu Zhang, W.k. Chan, T.h. Tse</i>
12.30pm	Lunch – The Great Room III	
2pm	P7: Variability Chair: Claudia Ermel The Great Room IV Model-based Customization and Deployment of Eclipse- Based Tools: Industrial Experiences <i>Paul Gruenbacher, Rick Rabiser, Deepak Dhungana, Martin Lehofer</i>	P8: Defect Detection – 2 Chair: Tim Menzies The Great Room IV Alattin: Mining Alternative Patterns for Detecting Neglected Conditions <i>Suresh Thummalapenta, Tao Xie</i>
2.30pm	Self-repair Through Reconfiguration: A Requirements Engineering Approach <i>Yiqiao Wang, John Mylopoulos</i>	Inferring Resource Specifications from Natural Language API Documentation <i>Hao Zhong, Lu Zhang, Tao Xie, Hong Mei</i>
3pm	Model Checking of Domain Artifacts in Product Line Engineering <i>Kim Lauenroth, Simon Toehning, Klaus Pohl</i>	Mining temporal specifications from object usage <i>Andrzej Wasylkowski, Andreas Zeller</i>
3.30pm	Afternoon tea - The Great Room III	
4pm	Posters and informal demos 2 The Great Room III	Formal demos 2 Chair: Mats Heimdahl The Great Room II
6pm		
7pm	Conference Dinner @ Harbourside Restaurant, downtown Auckland	
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Posters and informal demos 2 –

- Representing and Reasoning with Preferences in Requirements Engineering: A Goal-Oriented Approach, *Sotirios Liaskos, Sheila McIlraith, John Mylopoulos*
- Automated Comprehension Tasks in Software Exploration, *Sandro Boccuzzo, Harald C. Gall*
- Pointcut Rejuvenation: Recovering Pointcut Expressions in Evolving Aspect-Oriented Software, *Raffi Khatchadourian, Phil Greenwood, Awais Rashid, Guoqing Xu*
- Applications of Simulation and AI Search: Assessing the Relative Merits of Agile vs Traditional Software Development, *Bryan Lemon, Aaron Riesbeck, Tim Menzies, Justin Price, Joe D'Alessandro, Rickard Carlsson, Tomi Prifiti, Fayola Peters, Huihua Lu, Dan Port*
- Automating the Implementation of Analysis Concerns in Workflow Applications, *Oscar González, Rubby Casallas, Dirk Deridder*
- Towards Automating Class-Splitting Using Betweenness Clustering, *Keith Cassell, Peter Andreae, Lindsay Groves, James Noble*
- Reducing Features to Improve Classification-Based Bug Prediction, *Shivkumar Shivaji, E James Whitehead, Ram Akella, Sunghun Kim*
- Generating Vulnerability Signatures for String Manipulating Programs Using Automata-based Forward and Backward Symbolic Analyses, *Fang Yu, Muath Alkhalaf, Tefvik Bultan*
- Weaving Context-Sensitivity into Test Suite Construction, *Huai Wang, W.k Chan*
- Optimizing a Structural Constraint Solver for Efficient Software Checking, *Junaid Haroon Siddiqui, Darko Marinov, Sarfraz Khurshid*
- Automated Debugging Using Data Structure Repair, *Muhammad Zubair Malik, Khalid Ghori, Bassem Elkarablieh, Sarfraz Khurshid*
- Generation of Simulation Views for Domain Specific Modeling Languages based on the Eclipse Modeling Framework, *Enrico Biermann, Karsten Ehrig, Claudia Ermel, Jonas Hurrelmann*
- Using Spectrum-based Fault Localization for Test Case Grouping, *Martin Weiglhofer, Gordon Fraser, Franz Wotawa*
- Cluster-Based I/O-Efficient LTL Model Checking, *Jiri Barnat, Lubos Brim, Pavel Simecek*
- A Linear Programming Approach for Automated Localization of Multiple Faults, *Brian C. Dean, William B. Pressly, Brian A. Malloy, Adam A. Whitley*
- Lost in Translation: Forgetful Semantic Anchoring, *Daniel Balasubramanian, Ethan K. Jackson*
- Involving the User In Code Search, *Steven P. Reiss*
- KaitoroBase: Visual Exploration of Software Architecture Documents, *Moon Ting Su, Christian Hirsch, John Hosking*
- A Tool Suite for the Generation and Validation of Configurations for Software Availability, *Abdelouahed Gherbi, Ali Kanso, Ferhat Khendek, Maria Toeroe, Abdelwahab Hamou-Lhadj*
- An Automated Tool for Generating UML Models from Natural Language Requirements, *Deva Kumar Deeptimahanti, Ali Babar Muhammad*
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- Supporting Requirements Validation: the EuRailCheck tool, *Roberto Cavada, Alessandro Cimatti, Alessandro Mariotti, Cristian Mattarei, Andrea Micheli, Angelo Susi, Sergio Mover, Marco Pensallorto, Marco Roveri, Stefano Tonetta*

Formal demos 2 –

- 7 AOWP: Web-specific AOP framework for PHP, *Keiji Hokamura, Ryoto Naruse, Masaru Shiozuka, Naoyasu Ubayashi, Shin Nakajima, Akihito Iwai*
- 8 phpModeler - a web model extractor, *Josip Maras, Maja Stula, Ivica Crnkovic*
- 9 Loopfrog: A Static Analyzer for ANSI-C Programs, *Daniel Kroening, Natasha Sharygina, Stefano Tonetta, Aliaksei Tsitovich, Christoph M. Wintersteiger*
- 10 Zoltar: a Toolset for Automatic Fault Localization, *Tom Janssen, Rui Abreu, Arjan J.C. Van Gemund*
- 11 Jtop: Managing JUnit Test Cases in Absence of Coverage Information, *Lingming Zhang, Ji Zhou, Dan Hao, Lu Zhang, Hong Mei*

Friday 20th Nov

8.30am	Registration - The Great Room Pre-function	
9am	P9: Human Computer Interaction and Computer Supported Cooperative Work Chair: Christof Lutteroth The Great Room IV Specification and Control of Interface Responses to User Input in Rich Internet Applications <i>Matthias Book, Tobias Brackmann, Volker Gruhn, Malte Halder</i>	P10: Traceability and Monitoring Chair: John Hosking The Great Room II Mining Hierarchical Scenario-Based Specifications <i>David Lo, Shahar Maoz</i>
9.30am	Code Completion From Abbreviated Input <i>Sangmok Han, David Wallace, Robert Miller</i>	Automatic Generation of Object Usage Specifications from Large Method Traces <i>Michael Pradel, Thomas R. Gross</i>
10am	Task-First or Context-First? Tool Integration Revisited <i>Walid Maalej</i>	Efficient Formalism-Independent Monitoring of Parametric Properties <i>Feng Chen, Patrick Meridith, Dongyun Jin, Grigore Rosu</i>
10.30am	Morning tea - The Great Room III	
11am	P11: Maintenance and Evolution -2 Chair: Ivica Crnkovic The Great Room IV Inferring Method Effect Summaries for Nested Heap Regions <i>Mohsen Vakilian, Danny Dig, Robert Bocchino, Jeffrey Overbey, Vikram Adve, Ralph Johnson</i>	P12: Verification – 2 Chair: Tefvik Bultan The Great Room II Cache-based Model Checking of Networked Applications: From Linear to Branching Time <i>Cyrille Artho, Watcharin Leungwattanakit, Masami Hagiya, Yoshinori Tanabe, Mitsuharu Yamamoto</i>
11.30am	Automatically Recommending Triage Decisions for Pragmatic Reuse Tasks <i>Reid Holmes, Tristan Ratchford, Martin P. Robillard, Robert J. Walker</i>	State-space Coverage Estimation <i>Ali Taleghani, Joanne M. Atlee</i>
12 noon	ReAssert: Suggesting Repairs for Broken Unit Tests <i>Brett Daniel, Vilas Jagannath, Danny Dig, Darko Marinov</i>	A Framework for State-Space Exploration of Java-based Actor Programs <i>Steven Lauterburg, Mirco Dotta, Darko Marinov, Gul Agha</i>
12.30pm	Mining Health Models for Performance Monitoring of Services <i>Mithun Acharya, Vamshidhar Kommineni</i>	Symbolic Deadlock Analysis in Concurrent Libraries and their Clients <i>Jyotirmoy Deshmukh, E. Allen Emerson, Sriram Sankaranarayanan</i>
1pm	Lunch - The Great Room III	
2pm	Keynote 3 – Mr Matt Aitken , Weta Digital “Creative Solutions to Technical Problems Recent developments in digital visual effects at Weta Digital Ltd” Chair: John Grundy The Great Room IV	
3.30pm	ASE 2010 & Close - Charles Pecheur & John Grundy The Great Room IV	