



# QSIC 2005

FIFTH INTERNATIONAL CONFERENCE ON QUALITY SOFTWARE  
EDEN ON THE PARK HOTEL, MELBOURNE, AUSTRALIA,  
SEPTEMBER 19 – 20, 2005

## FINAL PROGRAM

Time	Sunday, September 18, 2005		
4:30pm – 6:00pm	Registration <i>Lobby Level 1</i>		
Time	Monday, September 19, 2005		
8:30am – 9:00am	Registration <i>Lobby Level 1</i>		
9:00am – 9:30am	Greetings <i>Convention Room 4</i> Program Co-Chairs and Steering Committee Chair		
9:30am – 10:30am	Keynote Speech <i>Convention Room 4</i> Integrating Environments into Software Testing <i>Mary Lou Soffa</i>		
10:30am – 11:00am	Tea Break <i>Lobby Level 1</i>		
11:00am – 12:30pm	<b>Session 1A Software Testing I</b> <i>Convention Room 4</i> Model-Based Testing of Concurrent Programs with Predicate Sequencing Constraints ( <i>P. Wu and H. Lin</i> ) Test Order for Class-based Integration Testing of Java Applications ( <i>N.L. Hashim, H.W. Schmidt, and S. Ramakrishnan</i> ) On the Test Case Definition for GUI Testing ( <i>K.Y. Cai, L. Zhao, H. Hu, and C.H. Jiang</i> )	<b>Session 1B Software Quality</b> <i>Convention Room 3</i> Peer Reviews in Real Life - Motivators and Demotivators ( <i>L. Harjuma, I. Tervonen, and A. Huttunen</i> ) Towards the UML Evaluation Using Taxonomic Patterns on Meta-Classes ( <i>H. Ma, Z. Ji, W. Shao, and L. Zhang</i> ) Preliminary Evaluation of Software Inspection Tools ( <i>H. Hedberg and J. Lappalainen</i> )	<b>ISEAT 2005 – Session 1</b> <i>Convention Room 2</i> Caste-Centric Agent-Oriented Programming ( <i>J. Wang, R. Shen, and H. Zhu</i> ) Enabling Agent-based Management of Web Services with WS2JADE ( <i>X. Nguyen and R. Kowalczyk</i> ) Guiding Agent-oriented Requirements Elicitation: HOMER ( <i>D. Wilmann and L. Sterling</i> )
	Lunch <i>Convention Room 5</i>		
1:30pm – 3:00pm	<b>Session 2A Software Modeling and Testing</b> <i>Convention Room 4</i> Identification of Categories and Choices in Activity Diagrams ( <i>T.Y. Chen, P.L. Poon, S.F. Tang, and T.H. Tse</i> ) Test Case Generation by OCL Mutation and Constraint Solving ( <i>B.K. Aichernig and P.A.P. Salas</i> ) Action Machines – Towards a Framework for Model Composition, Exploration and Conformance Testing ( <i>W. Grieskamp, N. Tillmann, C. Campbell, W. Schulte, and M. Veanes</i> )	<b>Session 2B Web Based Development</b> <i>Convention Room 3</i> Cost and Response Time Simulation for Web-based Applications on Mobile Channels ( <i>M. Book, V. Gruhn, M. Hilder, and A. Köhler</i> ) Quality Assurance in the Design of Web Information Systems ( <i>A. Binemann-Zdanowicz, K.-D. Schewe, B. Thalheim, and J. Zhao</i> ) Stochastic Voting Algorithms for Web Services Group Testing ( <i>W.T. Tsai, D. Zhang, R. Paul, and Y. Chen</i> )	<b>ISEAT 2005 – Session 2</b> <i>Convention Room 2</i> Towards Making Agent UML Practical: A Textual Notation and a Tool ( <i>M. Winikoff</i> ) Design Patterns for Agent-based Service Composition in the Web ( <i>I. Müller, P. Braun, and R. Kowalczyk</i> ) Tool Support for Agent Development using the Prometheus Methodology ( <i>L. Padgham, J. Thangarajah, and M. Winikoff</i> )
	Tea Break <i>Lobby Level 1</i>		
3:30pm – 5:00pm	<b>Session 3A Formal Methods</b> <i>Convention Room 4</i> Verification of C Programs using Slicing Execution ( <i>X. Yi, J. Wang, and X. Yang</i> ) Automatic Generation of Analyzable Failure Propagation Models from Component-Level Failure Annotations ( <i>L. Grunske and B. Kaiser</i> ) Formal Fault Tree Analysis of State Transition Systems ( <i>J. Xiang, K. Ogata, and K. Futatsugi</i> )	<b>Session 3B Software Components</b> <i>Convention Room 3</i> A Case Study of the Recursive Least Squares Estimation Approach to Adaptive Testing for Software Components ( <i>H. Hu, W.E. Wong, C.-H. Jiang, and K.-Y. Cai</i> ) A Multi-Property Trust Model for Reconfiguring Component Software ( <i>M. Zhou, H. Mei, and L. Zhang</i> ) Measuring the Complexity of a UML Component Specification ( <i>S. Mahmood and R. Lai</i> )	<b>ISEAT 2005 – Session 3</b> <i>Convention Room 2</i> Systematic Incremental Development of Agent Systems, using Prometheus ( <i>M. Pereplechikov and L. Padgham</i> ) The Genesis of a Pattern Language for Agent-based Enterprise Systems ( <i>P. Taylor, P. Evans-Greenwood, and J. Odell</i> ) Towards Goal-Oriented Design of Agent Systems ( <i>J. Khallouf and M. Winikoff</i> )
	Gathering <i>Hotel Lobby</i>		
5:00pm – 5:15pm	Bus Travel to Banquet Location		
5:15pm – 6:00pm	Conference Banquet		
6:00pm – 9:30pm	<i>Boat Cruise on MV Mandalay from Shed 14, Victoria Harbour, Docklands</i>		
9:30 – 10:00pm	Bus Travel back to Conference Hotel		



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Time	Tuesday, September 20, 2005		
8:30am – 9:00am	<b>Registration</b> <i>Lobby Level 1</i>		
9:00am – 10:30am	<b>Session 4A Software Architecture</b> <i>Convention Room 4</i>  Replication for Adaptive Responsiveness in Service-Oriented Systems ( <i>S.S. Yau, G. Goyal, and Y. Yao</i> ) Capturing and Using Software Architecture Knowledge for Architecture-based Software Development ( <i>M.A. Babar, I. Gorton, and R. Jeffery</i> ) Runtime Validation of Behavioural Contracts for Component Software ( <i>Y. Jin and J. Han</i> )	<b>Session 4B Database Modeling and Applications</b> <i>Convention Room 3</i>  Fault-Based Testing of Database Application Programs with Conceptual Data Model ( <i>W.K. Chan, S.C. Cheung, and T.H. Tse</i> ) Proving the Safety of SQL Queries ( <i>S. Brass and C. Goldberg</i> ) Higher Order Entity Relationship Modeling with UML ( <i>A. Tretiakov and S. Hartmann</i> )	<b>ETQSE 2005 – Session 1</b> <i>Convention Room 2</i>  Teaching Automated Test Case Generation ( <i>T.Y. Chen, F.-C. Kuo, and Z.Q. Zhou</i> ) Dynamic Curriculum Delivery: Closing the Loop with Courseware Providers ( <i>A. Fisher and J.F. Lehman</i> ) Designing Activities for Learning Software Quality Practices ( <i>Y.T. Yu and P.-L. Poon</i> )
10:30am – 11:00am	<b>Tea Break</b> <i>Lobby Level 1</i>		
11:00am – 12:30pm	<b>Session 5A Requirements Engineering</b> <i>Convention Room 4</i>  Modeling Software Characteristics and Their Correlations in A Specific Domain by Comparing Existing Similar Systems ( <i>A. Osada, D. Ozawa, H. Kaiya, and K. Kaijiri</i> ) Ontology-based Requirements Analysis: Lightweight Semantic Processing Approach ( <i>H. Kaiya and M. Saeki</i> ) Domain Consistency in Requirements Specification ( <i>S. Acharya, H. Mohanty, C. George, and R.K. Shyamasundar</i> )	<b>Session 5B Software Testing II</b> <i>Convention Room 3</i>  A Metamorphic Approach to Integration Testing of Context-Sensitive Middleware-based Applications ( <i>W.K. Chan, T.Y. Chen, H. Lu, T.H. Tse, and S.S. Yau</i> ) A Method of Generating Massive Virtual Clients and Model-based Performance Test ( <i>G.-B. Kim</i> ) An Ant Colony Optimization Approach to Test Sequence Generation for State-based Software Testing ( <i>H. Li and C.P. Lam</i> )	<b>ETQSE 2005 – Session 2</b> <i>Convention Room 2</i>  A System to Mark Programs Automatically ( <i>K. Ngo-Pham, J. Bigham, J. Rodaway, and L. Tokarchuk</i> ) Teaching Three Quality Assurance Techniques in Tandem: Lessons Learned ( <i>C. Kutay and M.A. Babar</i> ) Software Testing Education and Training in Hong Kong ( <i>F.T. Chan, T.H. Tse, W.H. Tang, and T.Y. Chen</i> )
12:30pm – 1:30pm	<b>Lunch</b> <i>Convention Room 5</i>		
1:30pm – 3:00pm	<b>Session 6A Software Metrics and Tools</b> <i>Convention Room 4</i>  Study on Application of a Quantitative Evaluation Approach for Software Architecture Adaptability ( <i>X. Liu and Q. Wang</i> ) GcpSensor: A CPU Performance Tool for Grid Environments ( <i>D. Guo, L. Hu, M. Zhang, and Z. Zhang</i> ) Case Studies: The Potential Teaching Instruments for Software Engineering ( <i>V. Varma and K. Garg</i> )	<b>GPWW 2005 – Session 1</b> <i>Convention Room 3</i>  A Peer-to-Peer Architecture for Workflow in Virtual Enterprises ( <i>J. Noll</i> ) A Data Mining-based Framework for Grid Workflow Management ( <i>A. Congiusta, G. Greco, A. Guzzo, G. Manco, L. Pontieri, D. Saccà, and D. Talia</i> ) Scalable Enterprise Level Workflow Manager for the Grid ( <i>R.A. Dheepak, S. Ali, I. Gupta, H. Dave, A.K. Upadhyay, L.D. Alves, A. Damodaran, A. Chakrabarti, and A. Ghosh</i> )	<b>SEIW 2005 – Session 1</b> <i>Convention Room 2</i>  Relevant Past Performance for Selecting Web Services ( <i>W. Sherchan, S. Krishnaswamy, and S.W. Loke</i> ) An Operational Semantics for DFM, a Formal Notation for Modelling Asynchronous Web Services ( <i>J. Yang, C. Cirstea, and P. Henderson</i> ) Operating Guidelines – An Automata-theoretic Foundation for the Service-Oriented Architecture ( <i>P. Massuthe and K. Schmidt</i> )
3:00pm – 3:30pm	<b>Tea Break</b> <i>Lobby Level 1</i>		
3:30pm – 4:30pm or 3:30pm – 5:00pm (30 min. per paper)	<b>Session 6B Real-time Applications</b> <i>Convention Room 4</i>  An Efficient Consistency Management Algorithm for Real-Time Mobile Collaboration ( <i>S. Citro, J. McGovern, and C. Ryan</i> ) Principles of Timing Anomalies in Superscalar Processors ( <i>I. Wenzel, R. Kirner, P. Puschner, and B. Rieder</i> )	<b>GPWW 2005 – Session 2</b> <i>Convention Room 3</i>  A Service Workflow Management Framework based on Peer-to-Peer and Agent Technologies ( <i>J. Yan, Y. Yang, R. Kowalczyk and X.T. Nguyen</i> ) Scientific Workflow Management: Between Generality and Applicability ( <i>Z. Zhao, A. Belloum, A. Wibisono, F. Terpstra, P.T. de Boer, P. Sloot, and B. Hertzberger</i> )	<b>SEIW 2005 – Session 2</b> <i>Convention Room 2</i>  Towards a Metamorphic Testing Methodology for Service-Oriented Software Applications ( <i>W.K. Chan, S.C. Cheung, and K.R.P.H. Leung</i> ) Interactive Visualisation and Testing of Jini Services ( <i>B. Quig, J. Rosenberg, M. Kölling, and P. Steele</i> ) OMWSC – An Ontology-based Model for Web Services Composition ( <i>J. Ma and Y. Zhang</i> )