14th IEEE International Symposium on Software Reliability Engineering - ISSRE 2003

Extending the Reach of Software Reliability Engineering

Denver, Colorado, November 17 - 20, 2003

Preliminary Program

	Monday, November 17, 2003 - Tutorials and WOSA	
8:00 AM - 10:00 AM (Parallel Sessions)	Tutorial 1: John Musa	Workshop on Software Assurance (WOSA)
10:00 AM - 10:30 AM	**Break**	
10:30 AM - 12:30 PM (Parallel Sessions)	Tutorial 1: John Musa (Continued)	Workshop on Software Assurance (WOSA - Continued)
12:30 PM - 1:30 PM	**Lunch**	
1:30 PM - 3:30 PM (Parallel Sessions)	Tutorial 2: Bojan Cukic	Workshop on Software Assurance (WOSA - Continued)
3:30 PM - 4:00 PM	**Break**	
4:00 PM - 5:30 PM (Parallel Sessions)	Tutorial 2: Bojan Cukic (Continued)	Workshop on Software Assurance (WOSA Continued)
5:30 PM - 6:30 PM	*Nothing Scheduled*	
6:30 PM - 8:30 PM	**Reception**	

Tuesday, November 18, 2003 - Industry Practice Day

Time			
8:00 AM - 8:30 AM	**Opening Remarks**		
8:30 AM - 9:30 AM	**Keynote Address:** Nicholas Bowen, IBM		
9:30 AM - 10:00 AM	**Break**		
	A-1: Testing Techniques	**B-1: Development Methodology**	**Session C-1: New Session**
10:00 AM - 11:30 AM (Parallel Sessions)	Acceleration and Optimization of Defect Detection over Covered Tests *Jun Xu, Chen Li & Xiangrong Wang, Cisco Systems* Branch Coverage Testing and Visualization for Domain Specific Languages *Hongjun Zheng & Ira Baxter, Semantic Designs* The example of improving quality of imbedded system software applied to automated software test methods *Sang-Seop Han, In-Seung Yang, Eunju Kim, & Sang Deuk Park, Samsung*	Application of IEEE Standard Dictionary of Measures of the Software Aspects of Dependability *Norman Schneidewind, Naval Postgraduate School* Is Software Error Estimation Compatible with Agile Development Teams? *Jon Hagar, Imco* Preparation Effort in Effective Code Inspections *Zoran Matic & Robert Stoddard, Motorola*	
11:30 AM - 1:00 PM	**Lunch**		
1:00 PM - 2:00 PM	**Keynote Address:** Paul England, Microsoft		
2:00 PM - 2:30 PM	**Break**		
	A-2: Testing Distributed Environments	**B-2: Understanding Quality of Service**	**C-2 Fast Abstracts I**
2:30 PM - 4:00 PM (Parallel Sessions)	Analysis of Communication Traces to Improve Reliability of Distributed Systems *Andreas Ulrich, Siemens* Intelligent SAN Test Framework (INSAT) *Komateswar Dhanadevan & M. Satish Kumar, HP* Experience with a Profile-based Automated Testing Environment *Robert Binder, Mobile Systems Verification*	Automatic Detection of Service Degradation in Telecom Systems *Antonio Mendes da Silva Filho, Marcio Ken Iti Doi, Andre Morales & Paula Lima, State University of Maringa* Quality of Service for Web Services - "Demystification, Limitations & Best Practice" *Rajesh Sumra & D. Arulazi, HP* QoS and Reliability in Smart Homes *Niranjan Dhanakoti, Satyam Computer Services*	Security and Reliability, Assurance and Modeling
4:00 PM - 4:15 PM	**Break**		
	A-3: Approaches to Reliability Improvement	**B-3: Measuring Reliability and Availability**	**C-3: Panel**
4:15 PM - 5:45 PM (Parallel Sessions)	Software Failure Models and Effect Analysis - Techniques and Methods *Kannan Sundaram, Robert Stoddard, Moruf Olaosebikan, Todd Peterson & Edward Vraney, Motorola* Resilience for Autonomous Agents *Miranda Mowbray & Matthew M. Williamson, HP* Implementing Process and Quality Improvements During Difficult Economic Times *Richard Cheatham, IBM Printing Systems* Data-Driven with Data Mining for Reliability *Robert Wen, AP Technology*	Measuring and Improving System Availability - Field Performance and In-Process Metrics *Stephen Kan & Diane Manlove, IBM* System Reliability and Availability Measurement Methodology *Alex George & Michael G. Becker, HP* Estimating Reliability and Availability of Enterprise Software: A Practitioners' Experience *Shubhashis Sengupta & Prakash Vishwanathan, Infosys Technologies* A Tool for Calculating Software Reliability Predictions Based on Latent Fault Density *Jon Peterson, Raytheon*	Open Source Software - A Recipe for Vulnerable Software, or the Only Way to Keep Bugs and Bad Guys Out? *Coordinator - Saurabh Bagchi and H.*
6:30 PM - 8:30 PM	**Bus Trip to Denver Downtown and Back**		

Time			
8:15 AM - 8:30 AM	**Opening Remarks**		
8:30 AM - 9:30 AM	**Keynote Address:** Dr. Bhavani Thuraisingham, NSF		
9:30 AM - 10:00 AM	**Break**		
	1A. Test Effectiveness I	**1B. Requirement Analysis**	**1C. Student Papers**
10:00 AM - 12:00 PM (Parallel Sessions)	Detection or Isolation of Defect? An Experimental Comparison of Unit Testing and Code Inspection *Per Runeson and Anneliese Andrews*	Building a Requirement Fault Taxonomy: Experiences from a NASA Verification and Validation Research Project *Jane Huffman Hayes*	Student Paper Details
	Towards a Comprehensive and Systematic Methodology for Class Integration Testing *L.C. Briand, Y. Labiche and Y. Wang*	A New Software Testing Approach Based on Demand Analysis of Specification and Programs *Ruilian Zhao, Michael R. Lyu and Yinghua Min*	
	Optimal resource allocation for the quality control process *Pankaj Jalote, Bijendra Vishal*	Static Specification Analysis for Termination of Specification-Based Data Structure Repair *Brian Demsky and Martin Rinard*	
	Test-driven Development as a Defect-reduction Practice *Laurie Williams, E. Michael Maximilien and Mladen Vouk*	Requirements by Contracts Allow Automated System Testing *Clémentine Nebut, Franck Fleurey, Yves Le Traon and Jean-Marc Jézéquel*	
12:00 PM - 1:30 PM	**Lunch**		
	2A. Test Effectiveness II	**2B. Secure Systems**	**2C. Formal Reliability Analysis**
1:30 PM - 3:00 PM (Parallel Sessions)	Coverage Criteria for Logical Expressions *Paul Ammann, Jeff Offutt and Hong Huang*	Tamper Resistance for Software Protection *Hongxia Jin and Jeffery Lotspich*	Shared Semantic Domains for Computational Reliability Engineering *David Coppit, Robert R. Painter, and Kevin J. Sullivan*
	Anomalies and Precursors of Field Failures *Sebastian Elbaum, Satya Kanduri and Anneliese Andrews*	A Framework for Tamper Detection Marking of Mobile Applications *Mike Jochen, Lisa M. Marvel and Lori L. Pollock*	Enhanced Testing of Domain Specific Applications by Automatic Extractions of Axioms from Functional Specifications *Avik Sinha, Carol Smidts and Andy Moran*
	An Empirical Study on Testing and Fault Tolerance for Software Reliability Engineering *Michael R. Lyu, Zubin Huang and Sam K.S. Sze*	High Assurance Synthesis of Security Services from Basic Microservices *Sung Kim, Farokh B. Bastani, I-Ling Yen, and Ing-Ray Chen*	Thoroughness of Specification-Based Testing of Synchronous Software *Ioannis Parissis and Jérôme Vassy*
3:00 PM - 3:30 PM	**Break**		
	3A. Empirical Studies and Tools	**3B. Software Reliability Modeling**	**3C. Fast Abstracts II**
3:30 PM - 5:00 PM (Paralel Sessions)	Automating the Analysis of Voting Systems *Sherif Yacoub, Xiaofan Lin, Steve Simske and John Burn*	Using a Log-Normal Failure Rate Distribution for Worst Case Bound Reliability Prediction *PG Bishop and RE Bloomfield*	Network/Distributed Systems Reliability Engineering: Validation/Verification
	A Bayesian Belief Network for Predicting Residual Faults in Software Products *Sousuke Amasaki, Yasunari Takagi, Osamu Mizuno, and Tohru Kikuno*	An Iterative Scheme for Maximum Likelihood Estimation in Software Reliability Modeling *Hiroyuki Okamura, Yasuhiro Watanabe and Tadashi Dohi*	
	A Exploratory Study of Component Reliability Using Unit Testing *R. Torkar, S. Mankefors, K. Hansson and A. Jonsson*	Fault Correction Profiles *Dr. Norman F. Schneidewind*	
5:00 PM - 6:30 PM	*Nothing Scheduled*		
6:30 PM - 8:00 PM	**Banquet**		

8:30 AM - 9:30 AM	**Keynote Address:** Professor Barry Boehm		
9:30 AM - 10:00 AM	**Break**		
	4A. Empirical Studies	**4B. Architectural Approaches I**	**4C. Panel**
10:00 AM - 11:30 AM (Parallel Sessions)	Early Warning of Failure Through Alarm Analysis - A Case Study n Telecom Voice Mail Systems *Dorron Levy and Ram Chillarege* Reducing Wasted Development Time via Continuous Testing *David Saff and D. Ernst* User-Oriented Reliability Modeling for a Web System *Wen-Li Wang and Mei-Huei Tang*	Assessing Uncertainty in Reliability of Component-Based Software Systems *Katerina Goseva-Popstojanova and Sunil Kamavaram* When Does it Pay to Make Software More Reliable? *Ed Stoker and Joanne Bechta Dugan* Test Adequacy Assessment for UML Design Model Testing *Sudipto Ghosh, Robert France, Conrad Braganza, Nilesh Kawane, Anneliese Andrews and Orest Pilskalns*	
11:30 AM - 1:00 PM	**Lunch**		
	5A. Software Testing	**5B. Architectural Approaches II**	**5C. Fast Abstracts III**
1:00 PM - 2:30 PM (Parallel Sessions)	A Parametrized Cost Model to Order Classes for Class-Based Testing of C++ Applications *Brian A. Malloy, Peter J. Clarke and Errol L. Lloyd* Exploiting Symmetries to Test Programs *Arnaud Gotlieb* Non-intrusize Debug Technique for Embedded Programming *Linda J. Moore, Angelica R. Moya*	Composition Analysis of QoS Properties for Adaptive Integration of Embedded Software Components *Hui Ma, I-Ling Yen, Farokh Bastani and Kendra Cooper* Augmenting Simulated Annealing to Build Interaction Test Suites *Myra B. Cohen, Charles J. Colbourn and Alan C.H. Ling* Darx - A Framework for the Fault-Tolerant Support of Agent Software *Olivier Marin, Marin Bertier and Pierre Sens*	Software Reliability: Architecture, Practice and Tools
2:30 PM - 3:00 PM	**Break**		
	6A. Metrics	**6B. Probabilistic Analysis**	**6C. Fast Abstracts IV**
3:00 PM - 4:30 PM (Parallel Sessions)	Investigating Java Type Analyses for the Receiver-Classes Testing Criterion *Pierre-Luc Brunelle, Ettore Merlo and Giuliano Antoniol* Incremental Dynamic Impact Analysis for Evolving Software Systems *James Law and Gregg Rothermel* A Comparison of Coverage-Based and Distribution-Based Techniques for Filtering and Prioritizing Test Cases *David Leon and Andy Podgurski*	Integrating Software into PRA *Bin Li, Ming Li, Susmita Ghose, Carol Smidts* New Quality Estimations in Random Testing *S. Mankefors, R. Torkar and A. Boklund* Maximizing Interval Reliability in Operational Software System with Rejuvenation *H. Suzuki, T. Dohi, N. Kaio and K. S. Trivedi*	Software Testing: Methodology, Effectiveness and Empirical Studies
4:40 PM - 5:30 PM	**Closing Remarks: ISSRE 2004 Overview**		