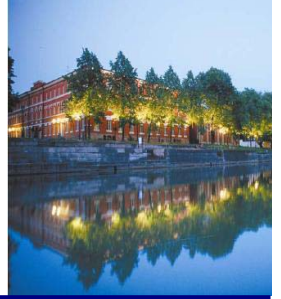




32nd Annual IEEE International
Computer Software and Applications Conference


COMPSAC 2008

Turku, Finland, July 28 – August 1, 2008




PROGRAM

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This year we received 236 submissions internationally from academia, government and industrial sectors. Each paper was evaluated by at least three reviewers to determine its technical content and assess its suitability to the conference theme. After a rigorous peer review process, 46 regular papers and 36 short papers have been selected for presentation and inclusion in the conference proceedings. The regular papers include complete and mature results. Short papers represent quality work that will spur discussion. The program also contains a fast abstract session to discuss promising but preliminary results.

The program includes:

3 Keynotes and 6 Panel Sessions

24 Research and Industry Sessions (12 Tracks)

1 Fast Abstracts Session and 1 Doctoral Symposium

1 Banquet and 2 Receptions

16 Workshops (Total: 53 Workshop Sessions)

- [3rd IEEE International Workshop on Engineering Semantic Agent Systems \(ESAS 2008\)](#)
- [2nd IEEE International Workshop on Requirements Engineering for Services \(REFS 2008\)](#)
- [3rd IEEE International Workshop on Security, Trust, and Privacy for Software Applications \(STPSA 2008\)](#)
- [The 2nd IEEE International Workshop on Quality Oriented Reuse Of Software \(QUORS 2008\)](#)
- [The 1st IEEE International Workshop on Barriers Towards Internet-Driven Information Services \(BINDIS 2008\)](#)
- [5th International Workshop On Software Cybernetics: Control Approaches for Software Engineering \(IWSC08\)](#)
- [First IEEE International Workshop on Engineering Open Complex Systems: Metasynthesis of Computing Paradigms \(EOCS-MCP 2008\)](#)
- [2nd IEEE International Workshop on Security in Software Engineering \(IWSSE 2008\)](#)
- [1st IEEE International Workshop on Semantics for Business Process Management \(SemBPM 2008\)](#)
- [The Second IEEE International Workshop on Software Engineering Challenges in Automotive Domain \(SECAD2008\)](#)
- [The First IEEE International Workshop on Model-Driven Development of Autonomic Systems \(MDDAS 2008\)](#)
- [First IEEE International Workshop On Real-Time Service-Oriented Architecture and Applications \(RTSOAA 2008\)](#)
- [The IEEE International Workshop on Quality and Architectural Concerns in Open Source Software \(QACOS 2008\)](#)
- [1st IEEE International Workshop on Software Engineering for Context Aware Systems and Applications \(SECASA2008\)](#)
- [1st IEEE International Workshop On Component-Based Design Of Resource-Constrained Systems \(CORCS 2008\)](#)
- [The First IEEE International Workshop on Industrial Experience in Embedded Systems Design \(IEESD 2008\)](#)

Monday, July 28, 2008 : Workshops								
Room	B2033	B2034	B2035	B2036	B2037	B2038	B2039	
8:00-9:30	BINDIS 1	EOCS-MCP1	ESAS 1	IWSC 1	IWSSE 1	REFS 1	RTSOAA 1	
9:30-10:00	AM Break							
10:00-11:30	BINDIS 2	EOCS-MCP2	ESAS 2	IWSC 2	IWSSE 2	REFS 2	RTSOAA 2	
11:30-13:30	Lunch							
13:30-17:30	BINDIS3,4	EOCS-MCP3	ESAS 3,4,5	IWSC 3,4	MDDAS 1, 2	REFS 3,4,5	RTSOAA 3,4	
19:00-21:00	COMPSAC 2008 Welcome Reception (Turku City Hall)							
Tuesday, July 29, 2008 : The First Conference Day								
8:30-10:00	<p>Welcome: Carl Chang, Chair, COMPSAC Steering Committee (University Amphitheatre) Opening Remark: Rangachar Kasturi, President, IEEE Computer Society Conference General Chairs: Jan Bosch, Johnny Wong, Program Chairs: Hannu Tenhunen, T. Ming Jiang, Frank Liu</p> <p>Keynote 1: Leveraging Distributed Computing Concepts in Mobile, Lee Williams; Chaired by: Tiberiu Secleanu</p>							
10:00-10:30	AM Break							
Room	BETA		GAMMA		DELTA		OMEGA	
10:30-12:00	T1: Requirements 1		T2: Embedded 1		T3: Quality 1		T4: Testing 1	
12:00-13:30	Lunch							
13:30-15:00	Panel 1		T5: Testing 2		T6: Quality 2		T7: Informatics I	
15:00-15:30	PM Break							
15:30-17:00	T8: Requirements 2		T9: Doctoral		T10: Quality 3		Panel 2	
18:30-21:00	COMPSAC 2008 Conference Reception (cash bar begins at 18:30)							
Wednesday, July 30, 2008 : The Second Conference Day								
8:30-10:00	<p>Best Paper Awards: Frank Liu (University Amphitheatre)</p> <p>Keynote 2: Medical Robotics and Computer-Integrated Surgery, Russell Taylor; Chaired by: Johnny Wong</p>							
10:00-10:30	AM Break							
Room	BETA		GAMMA		DELTA		OMEGA	
10:30-12:00	W1: Formal method 1		Panel 3		W2: Evolution 1		W3: Architecture 1	
12:00-13:30	Lunch							
13:30-15:00	Panel 4		W4: Fast Abstract		W5: Evolution 2		W6: Architecture 2	
15:00-15:30	PM Break							
15:30-17:00	W7: Formal method 2		W8: Evolution 3		W9: Architecture 3			
19:30-23:30	COMPSAC 2008 Banquet (The Castle. Bus Transportation Will Be Provided)							
Thursday, July 31, 2008 : The Third Conference Day								
8:30-9:30	Keynote 3: Generation Y: Understanding the Trend and Planning for the Impact, Jean Holley; Chaired by: Frank Liu (University Amphitheatre)							
9:30-10:00	AM Break							
Room	BETA		GAMMA		DELTA		OMEGA	
10:00-12:00	H1: Embedded 2		H2: Education 1		H3: Security 1		H4: Architecture 4	
12:00-13:30	Lunch							
13:30-15:00	Plenary Panel 1: 40 Years of Software Engineering (part 1)– How far have we come? (Moderator: Fevzi Belli) ROOM: ALFA							
15:00-15:15	PM Break							
15:15-16:45	H5: Testing 3		H6: Best Practice		H7: Architecture 5			
16:45-18:00	COMPSAC 2009 Planning Meeting (ROOM: OMEGA) All Are Invited!							
Friday, August 1, 2008 : Workshops								
8:00-9:30	Plenary Panel 2: 40 Years of Software Engineering (part 2)– How far can we go in the next 40 years? (Conference Hall , Moderator: Cristina Secleanu) ROOM: ALFA							
9:30-10:00	AM Break							
Room	B2032	B2033	B2034	B2035	B2036	B2037	B2038	B2039
10:00-11:30	SemBPM 1,2	SECAD 1, 2	QUORS 1, 2	SECASA 1	CORCS 1	QACOS 1,2	STPSA 1	IEESD-1
12:15-13:30	Lunch							
13:30-15:00	SemBMP 3	SECAD 3	QUORS 3	SECASA 2	CORCS 2	QACOS 3	STPSA 2	IEESD-2
15:00-15:20	PM Break							
15:20-18:00	SemBMP 4	SECAD 4	QUORS 4	SECASA3	CORCS 3	QACOS 4	STPSA 3	

COMPSAC 2008 Program

Tuesday, July 29, 2008

8:30-10:00 Opening Session and Keynote 1 (Room: Auditorium IX,X – University of Turku)
Conference Welcome: Carl Chang, Chair, COMPSAC Steering Committee
Opening Remark: Rangachar Kasturi, President, IEEE Computer Society
Conference Overview: Jan Bosch, Johnny Wong, Conference General Chairs
Program Overview: Hannu Tenhunen, T. Ming Jiang, Frank Liu, Program Committee Chairs

Keynote: *Leveraging Distributed Computing Concepts in Mobile*, Lee Williams, Nokia, Finland
Chaired by Tiberiu Seceleanu, ABB, Sweden

10:00-10:30 AM Break

10:30-12:00 Parallel Sessions

Session T1: Requirements I (Requirements Pattern, Traceability, and Specification)

Chair: Jawed Siddiqi (Room BETA)

- *Modeling Requirements Patterns with a Goal and PF Integrated Analysis Approach*: Jingwei Yang, Lin Liu
- *MV-TMM: A Multi View Traceability Management Method*: Hamid El ghazi
- *So/M: A Requirements Definition Tool using Characteristics of Existing Similar Systems*: Naoyuki Kitazawa, Akira Osada, Kazuyuki Kamijo, Haruhiko Kaiya, Kenji Kaijiri

Session T2: Embedded Systems I (Software Architecture of Cyber-Physical Systems)

Chair: Tiberiu Seceleanu (Room GAMMA)

- *Embedded Architecture Description Language*: Juncao Li, Nicholas T. Pilkington, Fei Xie, Qiang Liu
- *An Open Framework for Highly Concurrent Real-Time Hardware-in-the-Loop Simulation*: Ryan C. Underwood, Bruce M. McMillin, Mariesa Crow
- *Parallel Table Lookup for Next Generation Internet*: Li-Che Hung, Yaw-Chung Chen

Session T3: Software Quality I (Software Quality Measurement, Monitoring, and Analysis)

Chair: Rajesh Subramanian (Room DELTA)

- *Behavioral Dependency Measurement for Change-Proneness Prediction in UML 2.0 Design Models*: Ah-Rim Han, Sang-Uk Jeon, Doo-Hwan Bae, Jang-Eui Hong
- *Collaborative Web Services Monitoring with Active Service Broker*: Xiaoying Bai, Shufang Lee, Wei-Tek Tsai, Yinong Chen
- *Ontology Model-based Static Analysis on Java Programs*: Lian Yu, Jun Zhou, Yue Yi, Ping Li, Qianxiang Wang

Session T4: Testing I (Software Fault Detection and Tracking)

Chair: Ratnesh Kumar (Room OMEGA)

- *Debugging through Evaluation Sequences: A Controlled Experimental Study*: Zhenyu Zhang, Bo Jiang, W.K. Chan, T.H. Tse
- *Implicit Social Network Model for Predicting and Tracking the Location of Faults*: Ing-Xiang Chen, Cheng-Zen Yang, Ting-Kun Lu, Hojun Jaygarl
- *Superfit Combinatorial Elusive Bug Detection*: R. Barzin, S. Fukushima, W. Howden, S. Sharifi

12:00-13:30 Lunch

13:30-15:00 Parallel Sessions

Panel 1: How Well Technology Supports Software Evolution

Moderator: Carl K. Chang (Room BETA)

Panelists: Rajesh Subramanian, Mikio Aoyama, Tiberiu Seceleanu, Jan Bosch

Session T5: Testing II (Testing Technique)

Chair: Fevzi Belli (Room GAMMA)

- *Avoiding Program Failures through Safe Execution Perturbations*: Sriraman Tallam, Chen Tian, Rajiv Gupta, Xiangyu Zhang
- *A Transformation-Based Approach to Generating Scenario-Oriented Test Cases from UML Activity Diagrams for Concurrent Applications*:
Chang-ai Sun
- *Constraint Reasoning in Path-Oriented Random Testing*: Arnaud Gotlieb, Matthieu Petit

Session T6: Software Quality II (Software Non-functional Property Specification and Monitoring)

Chair: Lin Liu (Room DELTA)

- *Modeling and Checking for Non-functional Attributes in Extended UML Class Diagram*: Yan Zhang, Yi Liu, Le Zhang, Zhiya Ma, Hong Mei
- *Pattern and Policy Driven Log Analysis for Software Monitoring*: Ali Razavi, Kostas Kontogiannis
- *A PSC-Based Approach to Monitor Timed Properties in Web Service Compositions*: Pengcheng Zhang, Bixin Li, Mingjie Sun, Ying Zhou

Session T7: Informatics I (Intelligent Applications)

Chair: Bruce McMillin (Room OMEGA)

- *On the Use of Fuzzy Logic in a Seller Bargaining Game*: Kostas Kolomvatsos, Christos Anagnostopoulos, Stathes Hadjiefthymiades
- *Rule Discovery and Matching in Stock Databases*: You-min Ha, Sanghyun Park, Sang-Wook Kim, Jung-Im Won, Jee-hee Yoon
- *Hybrid Strategies for Attribute Relation Learning from Candidates*: Fu Kui, Guiha Nie, Huimin Wang

15:00-15:30 PM Break

15:30-17:00 Parallel Sessions

Session T8: Requirements II (Process Analysis and Service Management)

Chair: Alan M. Davis (Room BETA)

- *Two-level Variability Analysis for Business Process with Reusability and Extensibility*: Mikyeong Moon, Minwoo Hong, Keunhyuk Yeom
- *Software Engineering Interpretation of Information Processing Regulations*: Sabah Al-Fedaghi
- *A Concurrency Control Mechanism for Composite Service Supporting User-Defined Relaxed Atomicity*: Zongtao Zhao, Jun Wei, Li Lin, Xiaoning Ding

Session T9: Doctoral Symposium

Chair: Hsinyi Jiang (Room GAMMA)

- *Small Steps Approach to Tackling Software Quality in a Commercial Setting*: Jakub Rudzki, Tarja Systä
- *An Optimised Runtime Reconfiguration of Component-based Software Systems*: Jasminka Matevska
- *Application of Fuzzy Logic in the Improvement of Text Summarization*: Farshad Kyoomarsi

Session T10: Software Quality III (Software Quality Improvement Technique)

Chair: Weider D. Yu (Room DELTA)

- *Quantifying Trust Based on Service Level Agreement for Software as a Service*: Lin Tan, Chi-Hung Chi, Jianming Deng
- *A Systematic Approach for Integrating Fault Trees into System Statecharts*: Omar El-Ariss, Dianxiang Xu, W. Eric Wong, Yuting Chen, Yann-Hang Lee
- *An Input Adjustable Tree Algorithm for Evolutionary Testing*: Hsin-yi Jiang, Katsunori Oyama, Carl K. Chang

Panel 2: Software Testing for Large Globally Distributed Projects

Moderator: Rajesh Subramanyan (Room OMEGA)

Panelists: Juergen Kazmeier, Peter Zimmerer, Di Cao, Sumit Kumar Popli, Munil Shah

18:30-21:00 COMPSAC 2008 Conference Reception

[Wednesday, July 30, 2008](#)

8:30-10:00 Best Paper Awards and Keynote 2 (Room: Auditorium IX,X – University of Turku)

Best Paper Awards: Frank Liu

Keynote: *Medical Robotics and Computer-Integrated Surgery*, Russell Taylor, Johns Hopkins University, USA

Chaired by Johnny Wong

10:00-10:30 AM Break

10:30-12:00 Parallel Sessions

Session W1: Formal Method I (Formal Specification and Model Checking)

Chair: Cristina Seceleanu (Room BETA)

- *Specifying Behavioural Features of Design Patterns in First Order Logic*: Ian Bayley, Hong Zhu
- *Live and Fair Constraint Automata and Their Linear Temporal Logic of Steps*: Sara NavidPour, Mohammad Izadi, Ali Movaghar
- *Model Checking C Programs with Dynamic Memory Allocation*: María del Mar Gallardo, Pedro Merino, David Sánan

Panel 3: Location Based Services— Back to the Future

Moderator: Sumi Helal (Room GAMMA)

Panelists: Axel Küpper, Elisa Bertino

Session W2: Software& System Evolution I (Context-aware Software Analysis)

Chair: Jawed Siddiqi (Room DELTA)

- *Towards Context Modeling for Algorithm Animation*: Xiao-cong Zhou, Wen-jun Li, Han-jun Xian, Tai-zong Lai, Hui Liang
- *A Human-Machine Dimensional Inference Ontology that Weaves Human Intentions and Requirements of Context Awareness Systems*: Katsunori Oyama, Hojun Jaygarl, Jinchun Xia, Carl K. Chang, Atsushi Takeuchi, Hiroshi Fujimoto
- *Facilitating Software Traceability Understanding with ENVISION*: Xin Zhou, Zhenzhong Huo, Yaowen Huang, Jian Xu

Session W3: Software Architecture I (Software Architecture Development and Evaluation)

Chair: Juha Savolainen (Room OMEGA)

- *Ensuring Architecture Conventions in Multi-site Development*: Jakub Rudzki, Imed Hammouda, Tommi Mikkonen
- *XQPE: A Partial Evaluation System for XQuery*: Hang Su, Husheng Liao
- *Logical Partitioning without Architectural Supports*: Taku Shimosawa, Hiroya Matsuba, Yutaka Ishikawa

12:00-13:30 Lunch

13:30-15:00 Parallel Sessions

Panel 4: Computing Education in the Coming Decade

Moderator: Pradip Srimani (Room BETA)

Panelists: Nancy Mead, Stephen S. Yau, Liang-Jie Zhang

Session W4: Fast Abstracts

Chair: Ville Leppänen (Room GAMMA)

- *Utilising Located Functions to Model and Optimise Distributed Computations*: Stephen Crouch, Peter Henderson, Robert Walters
- *Automating Software FMEA via Formal Analysis of Dependence Relations*: Wei Dong, Ji Wang, Changzhi Zhao, Xian Zhang, Jie Tian
- *Scenario-Based Automatic Prototype Generation*: Shinpei Ogata, Saeko Matsuura
- *AIDDES – Distributed Intelligent Pair-Software Development Environment*: Eustáquio São José de Faria, Keiji Yamanaka, Josimeire do Amaral Tavares, Geraldo Henrique Lacerda Pinto, Lowghan Henrique Sudário de Melo

Session W5: Software& System Evolution II (Modularization, Composition and Reuse)

Chair: Vladimir Getov (Room DELTA)

- *Transformation of Legacy Software into Client/Server Applications through Pattern-based Rearchitecturing*: Sascha Hunold, Matthias Korch, Björn Krellner, Thomas Rauber, Thomas Reichel, Gudula Rünger
- *Evolution Shelf: Reusing Evolution Expertise within the Component-Based Software Architectures*: Olivier Le Goer, Dalila Tamzalit, Mourad Oussalah, Djamel-Abdelhak Seriai
- *Searching for Opportunities of Refactoring Sequences: Reducing the Search Space*: Eduardo Piveta, João Araújo, Marcelo Pimenta, Ana Moreira, Pedro Guerreiro, Roberto Price

Session W6: Software Architecture II (Software Architecture Specification and Analysis)

Chair: Mei Hong (Room OMEGA)

- *An Architecture Description Language for Verification in Component-based Software*: Ahcene Bouzoualegh, Dominique Marcadet, Frédéric Boulanger, Christophe Jacquet
- *An Adaptive Software Architecture Model Based on Component-Mismatches Detection and Elimination*: Shan Tang, Xin Peng, Yiming Lau, Wenyun Zhao, Zhixiong Jiang
- *Analyzing BPEL Compositionality Based on Petri Nets*: Guisheng Fan, Huiqun Yu, Liqiong Chen, Dongmei Liu

15:00-15:30 PM Break

15:30-17:00 Parallel Sessions

Session W7: Formal Method II (Formal Specification and Software Verification)

Chair: Hong Zhu (Room BETA)

- *A Formal Approach to Developing Reliable Event-Driven Service-Oriented Systems*: Ramesh Bharadwaj, Supratik Mukhopadhyay
- *A Maximum Weight Heuristic Method for Abstract State Computation*: Li Li, Xiaoyu Song, Ming Gu, Jianmin Wang
- *A New Temporal Logic CTL[k-QDDC] and its Verification*: Jiaqi Zhu, Hanpin Wang, Zhongyuan Xu

Session W8: Software& System Evolution III (Analysis of Software Updates)

Chair: Atilla Elçi (Room GAMMA)

- *Analyzing Software Evolvability*: Hongyu Pei Breivold, Ivica Crnkovic, Peter Eriksson
- *Modeling by Form Transformation for End-user Initiative Development*: Takeshi Chusho, Noriyuki Yagi
- *WiFi Radar: Design and Implementation of an Infrastructure-less Location Tracking System for Pervasive Environment*: Sheikh Ahamed, Nilothpal Talukder, Mehrab Monjur

Session W9: Software Architecture III (Software Architecture Design)

Chair: Hongji Yang (Room DELTA)

- *On the Performance of Transactional Remote Invocations over Commonly Used Transports*: Ivan Silva Neto, Francisco Reverbel
- *Dealing with the Crosscutting Structure of Software Architectural Styles*: Sam Malek
- *Extending Team Automata to Evaluate Software Architectural Design*: Mehran Sharafi

18:30-22:00 COMPSAC Banquet

[Thursday, July 31, 2008](#)

8:30-9:30 Keynote 3 (Room: Auditorium IX, X – University of Turku)

Keynote: *Generation Y: Understanding the Trend and Planning for the Impact*, Jean Holley, CIO, Tellabs, USA

Chaired by Frank Liu

9:30-10:00 AM Break

10:00-12:00 Parallel Sessions

Session H1: Embedded Systems II (Embedded Systems in Mobile Environment)

Chair: Johan Lilius (Room BETA)

- *A Proxy Design for Nearest-Neighbor Query Processing in Mobile Environments*: Hsin-Han Huang, Ching-Huey Wang, Jiun-Long Huang, Feng-Jian Wang
- *Executable Semantics for Hybrid Systems - The Hybrid Low-Level Framework*: Stefan Bisanz, Ulrich Hannemann, Jan Peleska
- *A Zone-based Distributed Key Management Scheme for Wireless Mesh Networks*: Yingfangn Fu, Jingsha He, Liangyu Luan, Rong Wang, Guorui Li
- *Virtual Reality for 2.5G Wireless Communication Modem Software Development*: Alain Pegatoquet, Filip Thoen, Denis Paterson

Session H2: Education

Chair: Pradip Srimani (Room GAMMA)

Opening Lecture: *An Immersion Program to Help Students Understand the Impact of Cross Cultural Differences in Software Engineering Work*: Nancy Mead, with Dan Shoemaker, Antonio Drommi, Jeff Ingalsbe

- *Teaching Team Software Process in Graduate Courses to Increase Productivity and Improve Software Quality*: Luz Sussy Bayona Ore, Tomas San Feliu
- *Advancing Industry-Related Elements: The Meat on the Curricula Bones*: J. Barrie Thompson, Helen M. Edwards
- *I2P Model - Content recommendation in Web-based Educational Systems using User's Interests and Preferences and Resources' Popularity*: Reginaldo Gotardo, Cesar Teixeira, Sérgio Zorzo

Session H3: Security I (Security Analysis and Monitoring)

Chair: Sheikh Ahamed (Room DELTA)

- *A Probabilistic Attacker Model for Quantitative Verification of DoS Security Threats*: Stylianos Basagiannis, Panagiotis Katsaros, Andrew Pombortsis, Nikolaos Alexiou

- *Embedding Rule-Based Security Monitors into Java Programs*: Tomi Karlstedt, Ville Leppänen, Sanna Tuohimaa
- *A UML-based Framework for Design and Analysis of Dependable Software*: Jun Kong, Dianxiang Xu
- *An Algorithmic Approach to Authorization Rules Conflict Resolution in Software Security*: Weider D. Yu, Ellora Nayak

Session H4: Software Architecture IV (Domain Specific Software Architecture Design)

Chair: Weichang Du (Room OMEGA)

- *Advanced Grid Programming with Components: A Biometric Identification Case Study*: Thomas Weigold, Peter Buhler, Jeyarajan Thiyyagalingam, Artie Basukoski, Vladimir Getov
- *A Cost-Effective Guarantee of Security and Scalability on HVEM DataGrid with Active Disk*: Im Jung, In S. Cho, Heon Yeom
- *Defining a Strategy to Select Either of Closed/Open World Assumptions on Semantic Robots*: Atilla Elçi, Behnam Rahnama, Saman Kamran

12:00-13:30 Lunch

13:30-15:00 Plenary Panel Part I: 40 Years of Software Engineering, How Far Have We Come?

Moderator: Fevzi Belli (Room: Auditorium IX,X – University of Turku)

Panelists: Brian Randell, University of Newcastle upon Tyne, UK; Stephen S. Yau, Arizona State University, USA; Jean-Claude Laprie, French National Organization for Scientific Research, France; Michael Fagan, Michael Fagan Associates, USA

15:00-15:15 PM Break

15:15-16:45 Parallel Sessions

Session H5: Testing III (Software Testing and Re-engineering)

Chair: Mohammad Zulkernine (Room BETA)

- *QA/Testing Bi-directional Languages Software: Issues and Challenges*: Sameer Abufardeh, Kenneth Magel
- *Refactoring Steps, Java Refactorings and Empirical Evidence*: Steve Counsell, Stephen Swift
- *Fault Propagation in Tabular Expression-Based Specifications*: Xin Feng, David Lorge Parnas, T.H. Tse

Session H6: Best Practice

Chair: Juha-Markus Aalto (Room GAMMA)

- *Automated Code Generation for Industrial-Strength Systems*: Thomas Weigert, Frank Weil, Aswin van den Berg, Paul Dietz, Kevin Marth
- *Editable Replay of IDE-based Repetitive Tasks*: Ying Zhang, Gang Huang, Nuyun Zhang, Hong Mei
- *Contraindications, Precautions, Overdoses, and Adverse Reactions: What Software Engineering Can Learn from Pharmaceuticals*: Alan Davis

Session H7: Software Architecture V (Distributed and Service-oriented Architecture)

Chair: Xiaodong Liu (Room DELTA)

- *Reflective Design for Component-Based Distributed Systems with Timing Constraints*: Jing Huang, Wei Zhang, Yansheng Lu, Qin Yang
- *The Application of Distributed Virtual Machines for Enterprise Computer Network Management: A Two-tier Network File System for Image Provisioning and Management*: César Aguiar, Daniel I. Cruz, Roberta Ulson, Antônio Cavenaghi
- *FPCS: A Formal Approach for Privacy-aware Context-based Services*: Nilothpal Talukder, Sheikh Ahamed

16:45-18:00 COMPSAC 2009 Planning Meeting

All invited (Room OMEGA)

[Friday, August 1, 2008](#)

8:00-9:30 Plenary Panel 2: 40 Years of Software Engineering, How Far Can We Go in the Next 40 Years?

Moderator: Cristina Seceleanu (Room: ALFA)

Panelists: Virgil Gligor, Carnegie Mellon University, USA; Pankaj Jalote, Indian Institute of Technology, Delhi; Rustan M. Leino, Microsoft Research, USA

COMPSAC 2008 Workshops

Monday, July 28, 2008

Workshop 1: 3rd IEEE International Workshop on Engineering Semantic Agent Systems (ESAS 2008)
(Room B 2033)

Organizers and Chairs: Atilla Elçi, Eastern Mediterranean University, North Cyprus
Mamadou Tadiou Kone, Laval University, Canada
Mehmet A. Orgun, Macquarie University, Australia

Session 1. Software Agents and Mobile Agents, 8:00-9:30

Chair: Fernando Ubis, TUT Tampere, Finland

- *Facilitator Agent Design Pattern of Procurement Business Systems*
Faiz Al-Shrouf
- *A Contract Net Model Based On Agent Active Perception*
Meisheng Wang, Qingshan Li, Chenguang Zhao, Yingqiang Wang
- *Intelligent Software Agents Mediating the Pair Participation in a Distributed Intelligent Pair-Software Development Environment*
Eustáquio São José de Faria, Keiji Yamanaka, Josimeire do Amaral Tavares, Geraldo Henrique Lacerda Pinto, Lowgan Henrique Sudário de Melo
- *VERSAG: Context-Aware Adaptive Mobile Agents for the Semantic Web*
Kutilla Gunasekera, Arkady Zaslavsky, Shonali Krishnaswamy, Seng Loke

Session 2. Ontology for Agents & MAS, 10:00-11:30

Chair: Atilla Elçi, Eastern Mediterranean University, North Cyprus

Keynote address: *Towards an Ontological Foundation for Evolving Agent Communities*
Pieter De Leenheer, Vrije Universiteit Brussel, Belgium

- *OTAGen: A Tunable Ontology Generator for Benchmarking Ontology-based Agent Collaboration*
Femke Ongenaë, Stijn Verstichel, Filip De Turck, Tom Dhaene, Bart Dhoedt, Piet Demeester
- *An Ontology to Support Adaptive Agents for Complex Manufacturing Systems*
Lars Mönch, Jens Zimmermann
- *Fabrication of Ontology for Security in Health Care Systems*
- J. Indumathi and G. V. Uma

Session 3. Semantic Agent Systems, 13:30-15:00

Chair: Tad Gonsalves, Sophia University, Japan

- *An Ontology of Environments, Events, and Happenings*
Vadim Ermolayev, Wolf-Ekkehard Matzke
- *Towards Engineering Ontologies for Cognitive Profiling of Agents on the Semantic Web*
Amna Basharat, Gabriella Spinelli
- *SDISSASA: A Multiagent-Based Web Mining via Semantic Access to Web Resources in Enterprise Architecture*
Kiavash Bahreini, Atilla Elçi
- *The Challenges Along the Road to the Realisation of a Factory Automation Lifecycle*
F. Ubis, T. Kirkham, B. Matthews, J.L. Martinez Lastra, R. Harrison, V. Villaseñor Herrera, A. Chowdrey

Session 4. Multi-agent Systems, 15:30-17:00

Chair: Vadim Ermolayev, Zaporozhye State University, Ukraine

- *A Multi-agent Architecture for NATO Network Enabled Capabilities: Enabling Semantic Interoperability in Dynamic Environments*
Brenda Powers
- *Design of Multiagent System Architecture*
Luis Vázquez López, Juan Carlos González Moreno
- *Shared Storage in J2ME: A Multi-agent System Approach*
Muhammad Ainan Sadiq, Syed Muhammad Ali Shah
- *Multi-agent Approach to Electrical Distribution Networks Control*
Sébastien Rumley, Elvira Kaegi, Hugh Rudnick, Alain Germond
- *An Approach for the Specification and the Verification of Multi-agent Systems using AUML and Event B*
Leila Jemni Ben Ayed, Fatma Siala

Session 5. Ambient Intelligence, 15:30-17:00

Chair: Amna Basharat, National University of Computer and Emerging Sciences, Pakistan

- *The Similarity Computing of Documents Based on VSM*,
Qinglin Guo, Yanmei LI, Qi Tang, Ming Zhang
- *Swarm Intelligence in the Optimization of Software Development Project Schedule*,
Tad Gonsalves, Atsushi Ito, Ryo Kawabata, Kiyoshi Itoh
- *A Knowledge Management Framework for Software Configuration Management*,
Nikiforos Ploskas, Michael Berger, Jiang Zhang, Gert-Joachim Wintterle

Workshop 2: 5th IEEE International Workshop On Software Cybernetics: Control Approaches for Software Engineering (IWSC08) (Room B 2034)

Organizers and Chair: Stephen S. Yau, Arizona State University, USA
João W. Cangussu, University of Texas at Dallas, USA
Aditya P. Mathur, Purdue University, USA
Fevzi Belli, University of Paderborn, Germany
Kai-Yuan Cai, Beijing University of Aeronautics and Astronautics, China

Welcome by Stephen S. Yau, General Chair, Arizona State University, USA

Keynote address: 8:30-9:30

Hierarchical Fault Detection in Embedded Control Software

Ratnesh Kumar, Iowa State University, USA

Session 1: Process, 10:00-11:30

Chair: Ron Kenett, KPA Ltd., Israel and Univ. of Torino, Italy

- *An Intelligent Control Architecture for Adaptive Service-based Software Systems with Workflow Patterns*
Chang-Hai Jiang, Hai Hu, and Kai-Yuan Cai, Beijing University of Aeronautics and Astronautics, China; Dazhi Huang and Stephen Yau, Arizona State University, USA
- *Quantitative Modeling for Incremental Software Process Control*
Scott Miller, Raymond DeCarlo and A. Mathur, Purdue University, USA.
- *Decision Support for User Interface Design: Usability Diagnosis by Time Analysis of the User Activity*
Avi Harel, Ergolight, Israel; Ron Kenett KPA Ltd., Israel and University of Torino, Italy; and Fabrizio Ruggeri, CNR Milano, Italy

Session 2: Testing, 13:30-15:00

Chair: Fevzi Belli, University of Paderborn, Germany

- *Performance Analysis of Concurrent Programs Using Ordinary Differential Equations*
Zuohua Ding and Kao Zhang, Zhejiang Sci-Tech University, China
- *Testing optimization for mission-critical, complex, distributed systems*
Marek G. Stochel and Radek Sztando, Motorola GSG, Networks & Enterprise - Poland
- *Adaptive Software Testing in the Context of an Improved Controlled Markov Chain Model*
Hai Hu, Chang-Hai Jiang and Kai-Yuan Cai, Beijing University of Aeronautics and Astronautics, China

Session 3: Panel, Control Approaches for Software Engineering, 15:30- 17:00

Chair: Kai-Yuan Cai, Beijing University of Aeronautics and Astronautics, China

Panelists: Fevzi Belli, University of Paderborn, Germany; William Chu, TungHai University, Taiwan; Ratnesh Kumar, Iowa State University, USA; Qianxiang Wang, Peking University, China

Workshop 3: 2nd IEEE International Workshop on Requirements Engineering for Services (REFS 2008) (Room B 2035)

Organizers and Chair: Colette Rolland, University of PARIS-1 Panthéon Sorbonne, France
Eric Yu, University of Toronto, Canada
Jian Yang, Macquaire University, Australia
Lin Liu, Tsinghua University, China

Session 1: Services Requirements Modelling and Specification, 08:00-09:30

Chair: Colette Rolland

- *Using the Friction between Business Processes and Use Cases in SOA Requirements*
Eric Knauss, Daniel Lübke

- *Service-Oriented Modeling: An Extensive Reuse Method*
Budan Wu, Zhi Jin
- *Intentional Services Specification Enhancement with Scenario-Based Techniques to Analyze Security Threats*
MénéL Lassoued

Session 2: Keynote address, 10:00-11:30

Chair: Eric Yu

- *Service Oriented Software: From Requirements to Design-Time Compositions and to Run-Time Monitoring*
Paolo Traverso, FBK-IRST, Italy

Session 3: Methods for Requirements engineering for Services, 13:00-14:30

Chair: Alan Davis

- *A New Methodology Based on Kano Model for the Evaluation of a New Product Acceptability during the Front-end Phases*
Helmi Ben Rejeb, Vincent Boly, Laure Morel-Guimarães
- *Requirements Analysis Using Feedback from Context Awareness Systems*
Katsunori Oyama, Hojun Jaygarl, Jinchun Xia, Carl Chang, Atsushi Takeuchi, Hiroshi Fujimoto
- *The Role of Service Abstraction and Service Variability and its Impact on Requirements Engineering for Service-oriented Systems*
Sebastian Adam, Joerg Doerr

Session 4: Incorporating RE with Services, 15:00-16:30

Chair: Zhi Jin

- *Requirements Change: What's the Alternative?*
Alan Davis, Nur Nurmulliani, Sooyong Park, Didar Zowghi
- *SCCM: Service-oriented Community Coordinated Multimedia Architecture*
Jiehan Zhou, Mika Rautiainen, Mika Ylianttila
- *From UML Activity Diagrams to Event B for the Specification and the Verification of Workflows Applications*
Ahlem Ben Younes, Leila Jemni Ben Ayed
- *Synthesis of Actor Dependency and Business Motivation for Service Requirements Engineering*
Soo Ling Lim, Eric Platon, Karl Cox

Session 5: Workshop Panel, 16:30-18:30

Mediator: Lin Liu

Requirements Engineering For Services: Where are the Synergetic Points?

Panelists: Paolo Traverso, Colette Rolland, Eric Yu, Chi-hung Chi, Alan Davis, Zhi Jin, Jian Yang

Workshop 4: 2nd IEEE International Workshop on Security in Software Engineering (IWSSE 2008) (Room B 2036)

Organizers and Chair: Michael Jiang, Motorola Labs, Motorola Inc., USA
James Joshi, University of Pittsburgh, USA

Session 1: Security in Software Engineering – Requirements and Modeling, 8:00-9:30

Chair: Dr. Mohammad Zulkernine, Queens University, Canada

- *On the Adequacy of Statecharts as a Source of Tests for Cryptographic Protocols*
K. R. Jayaram, Aditya Mathur,
- *A QoS and Security Adaptation Model for Autonomic Pervasive Systems*
Mourad Alia, Marc Lacoste,
- *Incorporating Security Requirements Engineering into the Dynamic Systems Development Method*
Nancy R. Mead, Venkatesh Viswanathan, Deepa Padmanabhan
- *Quantifying Security and Vulnerabilities in Secure Software Development*
Muhammad Khan, Mohammad Zulkernine

Session 2: Security in Software Engineering – Detection and Protection, 10:00-11:30

Chair: Dr. Judy Fu, Motorola Labs, Motorola Inc., USA

- *A System to Prevent Multi-users and Multi-sessions Attack to Breach Privacy Policies in a Trust-end Filter*
Corrado Aaron Visaggio, Gerardo Canfora
- *Botnet Defenses Survey*
Zhaosheng Zhu, Guohan Lu, Yan Chen, Zhi Fu, Phil Roberts
- *Information Security of Remote File Transfers with Mobile Devices*
Sami Noponen, Kaarina Karppinen

- *Mutation-based Testing of Buffer Overflow Vulnerabilities*
Hossain Shahriar, Mohammad Zulkernine

Workshop 5: The First IEEE International Workshop on Model-Driven Development of Autonomic Systems (MDDAS 2008)
(Room B 2036)

Organizers and Chair: John Strassner, Motorola Labs, Motorola Inc., Schaumburg, IL 60196, USA
Sven van der Meer, TSSG, Waterford Institute of Technology, Ireland;
Jing Zhang, Motorola Labs, Motorola Inc., Schaumburg, IL 60196, USA.

Session 1: Models and Methods 13:30-15:00

Chair: Sven van der Meer

- *Meta-modeling Autonomic System Management Policies—Ongoing Works*
Benoit Combemale, Laurent Broto, Alain Tchana, Daniel Hagimont
- *A Context-Aware Policy Model to Support Autonomic Networking*
John Strassner, Yan Liu, Jing Zhang
- *Semantic Integration of User Data - Models and Processes enabling Seamless Mobility*
Ray Carroll, Sven van der Meer

Session 2: Architectures and Applications 15:30-17:00

Chair: John Strassner

- *Model Driven Engineering for Autonomic Provisioned Systems*
Bogdan Solomon, Dan Ionescu, Marin Litoiu, Mircea Mihaescu
- *Enabling Dynamic Co-Evolution of Models and Runtime Applications*
Prawee Sriplakich, Guillaume Wagnier, Anne-Françoise Le Meur
- *Design Methodology for a Modular Component based Software Architecture*
Michael Caragiozidis, Nikos Mouratidis, Christoforos Kavadias, Michael Loupis, Michael Berger
- *An Enhanced Autonomic Multiclass Multithreaded Web Server: A Performance Model Approach*
Ali Doostmohammadi, Morteza Analoui

Workshop 6: 1st IEEE International Workshop on Engineering Open Complex Systems: Metasynthesis of Computing Paradigms
(EOCS-MCP 2008)
(Room B 2037)

Organizers and Chair: Dr. Longbing Cao, Center for Intelligent Information Systems (CIIS), University of Technology, Sydney, Australia
Prof. Ruwei Dai, Institute of Automation, Chinese Academy of Sciences, China
Prof. Vladimir I. Gorodetski, St. Petersburg Institute for Informatics and Automation, Russian Academy of Sciences, Russia
Dr. Huaifeng Zhang, CIIS, UTS, Australia; A/P Yaodong Li, Institute of Automation, Chinese Academy of Sciences, China

Welcome by Chairs Longbing Cao and Ruwei Dai, 8:10 – 8:30

Keynote, 8:30-9:30

Chair: Ferenc Szidarovszky

- *The Development of Meta-synthetic Engineering*
Ruwei Dai

Morning Tea break, 9:30-10:00

Session 1: Methodologies of Meta-synthetic Computing 10:00 -10:40

Chair: Ferenc Szidarovszky

- *Paradigms of Meta-synthetic Computing and Its Implementations*
Yaodong Li, Xia Cui, Ruwei Dai.
- *Meta-synthetic Computing Formula of Situation Assessment in Social Interactions*
Xia Cui, Ruwei Dai.

Session 2: Integration of computing paradigms, 10:40-11:40

Chair: Yaodong Li

- *Towards Four-Layer Framework of Combinatorial Problems*
Mark Levin.

- *Design More Usable and Reliable Large-Scale Software Systems: a New Approach based on P2P, SOA and Web 2.0*
Jinlei Jiang, Johann Schlichter, Guangwen Yang.
- *An Effective Communication Platform based on XMPP for HWME*
Gang Cheng, Ruwei Dai, Mingchang Zhao, Yaodong Li.

Lunch Time 11:40 – 13:30

Extended Speech, 13:30-14:20

Chair: Ruwei Dai

- *A Dynamic Model and Simulation of Industrial Clusters*
Jijun Zhao, Ferenc Szidarovszky

Session 3: Software Engineering of Open Complex Systems, 14:20-15:00

Chair: Ruwei Dai

- *Metasynthetic Computing for Solving Open Complex Problems*
Longbing Cao
- *A New Software Architecture for J2EE Enterprise Environments via Semantic Access to Web sources for Web Mining by Distributed Intelligent Software Agents* Kiavash Bahreini, Atilla Elçi
- *Modern Distance Education: A Special Open Complex Giant System*
Hui Li, Zhen Li

Afternoon Tea Break, 15:00-15:30

Session 4: Implementation & Applications of Metasynthetic Computing, 15:30-17:10

Chair: Atilla Elçi

- *An Opinions Expression and Induction System of Experts in Hall for Workshop of Meta-synthetic Engineering*
Yan-Yan Chai, Lei Fan, Yao-Dong Li, Ming-Chang Zhao
- *A Novel Scheme Producing and Evaluation System in HWME*
Minhua li, Ruwei dai, Yaodong li
- *News Analysis Based on Meta-Synthesis Approach*
Wei Wang, Chunheng Wang, Xia Cui, Ai Wang
- *Extracting Social Network among Various Entities from Chinese News Stories by Content Analysis*
Weijie Yang, Ruwei Dai, Xia Cui

Closing: 17:10-17:30

Chair: Ruwei Dai

Workshop 7: 1st IEEE International Workshop on Barriers Towards Internet-Driven Information Services (BINDIS 2008) (Room B 2038)

Organizers and Chair: *Yang Li*, Group Chief Technology Office, British Telecom, London, UK
Xiaodong Liu, School of Computing, Napier University, Edinburgh, UK

Session 1: Service Engineering, 8:00-9:30

Chair: Sandeep Karamongikar

- *Object Oriented Design Based on Role and Rule*
Qing Wang, Yong Zhang and Chunxiao Xing, Tsinghua University, China
- *Reengineering Legacy Systems with RESTful Web Services*
Yan Liu, Qingling Wang and Mingguang Zhuang, Tongji University, China
- *Challenges of Building High Performing On-demand Software*
Ashutosh Shinde, Infosys Technologies, India

Session 2: Service Marketing and Interoperability, 10:00-11:30

Chair: Chunxiao Xing

- *Entropy based Age Estimation of BLOG Authors*
Masataka Izumi, Takao Miura and Isamu Shioya, Hosei University, Japan
- *Semantic-oriented Ubiquitous Learning Object Management System SULOMS*
Lili Su, ShengGang Yang, Yushun Li, Ronghuai Huan, Beijing Normal University, China; Xiaochun Cheng, Middlesex University, UK

Session 3: Service Innovation, 13:30-15:00

Chair: Yong Zhang

- *Service Productivity Improvement and Software Technology Support*
Yang Li, British Telecom, UK
- *Digital Library – Information and Knowledge Services in China* (invited talk)
Chunxiao Xing, Tsinghua University, China
- *Innovation in IT Services for The Flat World* (invited talk)
Sandeep Karamongikar, Infosys Technologies, India

Session 4: Panel Discussions, 15:30-17:00

Chair: Yang Li

Workshop 8: First IEEE International Workshop On Real-Time Service-Oriented Architecture and Applications (RTSOAA 2008) (Room B 2039)

**Organizers and Chair: Jen-Yao Chung, T.J. Watson Research Center, New York, USA
Jun-Jang (JJ) Jeng, IBM T.J. Watson Research Center, New York, USA
Josef Schiefer, Vienna University of Technology, Vienna, Austria**

Opening Remark: 8:00-8:15

Session 1: Infrastructure, 8:15-9:45

Chair: Fevzi Belli

- *Predicting Performance on a Loosely Controlled Event System*
Luis Garces-Erice, Sean Rooney
- *Towards Real-Time Data Transformation Services over Grids*
Alfredo Cuzzocrea
- *A Functional Data Service Framework for Integrating Heterogeneous Data Sources*
Cui Zhan, C-F Tsdai, Kuo-Ming Chao, Jen-Yao Chung

Session 2: Methodology, 10:00-11:30

Chair: I-Ling Yen

- *Matching Service Requirements to Empirical Capability Models in Service-Oriented Architecture*
Juha Savolainen, Anssi Karhinen
- *Application Generation Framework for Real-Time Complex Event Processing*
Yonit Magid, David Botzer, Asaf Adi, Ella Rabinovich, Maya Barnea
- *Event-Driven Modeling and Testing of Web-Services*
Fevzi Belli, Michael Linschulte

Session 3: Model, 13:30-15:00

Chair: Alfredo Cuzzocrea

- *Service Composition for Real-Time Assurance*
Tong Gao, Hachem Moussa, I-Ling Yen, Farokh Bastani, Jun-Jang Jeng
- *WS-TemporalPolicy: A WS-Policy Extension for Describing Service Properties with Time Constraints*
Markus Mathes
- *A Verification Method for Temporal Consistency of Service Flow*
Rujuan Liu, Guilian Dai, Changjun Hu, ChongChong Zhao

Session 4: Application, 15:15-16:45

Chair: Kuo-Ming Chao

- *A Model-Based Approach to Implementing Real-time Mobile Services*
Michael Jiang, Yang Zhihui, Athale Anant
- *Real-time Service-Oriented Architecture to Support Remote Critical Care: Trends and Challenges*
Carolyn McGregor, Mike Eklund
- *PACTS: A Service Oriented Architecture for Real-Time Peer-Assisted Content Delivery Service*
Zhenghua Fu, Chai Wah Wu, Jun-Jang Jeng, Hui Lei

Panel Discussion: 16:45-17:15

18:30-21:00 Welcome Reception (Turku City Hall)

Friday, August 1, 2008

Workshop 9: The First IEEE International Workshop on Industrial Experience in Embedded Systems Design (IEESD 2008)
(Room B 2039)

Organizers and Chair: Tiberiu Secleanu, ABB Corporate Research, Sweden
Detlef Streitferdt, ABB Corporate Research, Germany

Session 1: Embedded Systems Design Procedures, 10:00-11:30

Chair: Tiberiu Secleanu, AAB, Sweden

- *Simulation of Process Control with Wireless HART Networks Subject to Clock Drift*
Mauro De Biasi, Carlo Snickars, Krister Landernas, Alf Isaksson.
- *Dynamically Optimized Production Planning using Cross-layer SOA*
Domnic Savio, Stamatis Karnouskos, Daniel Wuwer, Thomas Bangemann.
- *The On-Board Control Procedures Subsystem the Herschel and Planck Satellites*
Massimo Ferraguto, Tim Wittrock, Mark Barrenscheen, Matti Paakko, Ville Sipinen.
- *Socrades: An Experience in Embedded Systems Design and Exploitation*
Armando Walter Colombo, S

Session 2: Embedded Systems Design Models, 13:30-15:00

Chair: Victor Bos, SSF, Finland

- *Model Driven Development Challenges in the Automation Domain*
Detlef Streitferdt, Georg Wendt, Philipp Nenninger, Alexander Nyßen, Horst Lichter.
- *MeDUSA - A Model-based Construction Method for Embedded & Real-Time*
Alexander Nyßen, Horst Lichter, Detlef Streitferdt, Philipp Nenninger.
- *Implementing Program Model with Agile Principles*
Maarit Laanti.

Workshop 10: 3rd IEEE International Workshop on Security, Trust, and Privacy for Software Applications (STPSA 2008)
(Room B 2032)

Organizers and Chair: Sheikh Iqbal Ahamed, Marquette University, USA
Mohammad Zulkernine, Queen's University, Canada

Session 1: Identity management and access control, 10:00-11:30

Chair: Mohammad Zulkernine

- *Access Control Framework for Secure Network Computing Environment*
Manpreet Singh, Manjeet Patterh
- *Trade-off Analysis of Identity Management Systems with an Untrusted Identity Provider*
Golnaz Elahi, Zeev Lieber, Eric Yu
- *Using Responsibilities for Early Identification of Hot Spots Reused in Frameworks Modeling*
Simone Matos, Clovis Fernandes

Session 2: RFID and secure services, 13:30-15:00

Chair: Lingyu Wang

- *A Lightweight Protocol for Dynamic RFID Identification*
Stelvio Cimoto
- *RED-Transaction and Goal-Model Based Analysis of Layered Security of Physical Spaces*
Rajiv Ramnath, Jay Ramanathan, Vasudha Gupta
- *An Improved Calculus For Secure Dynamic Services Composition*
Dong-hong Xu, Yong Qi, Di Hou, Ying Chen, Liang Liu

Session 3: Attack detection, 15:30-17:00

Chair: Sheikh Iqbal Ahamed

- *Preserving Privacy in e-Health Systems Using Hippocratic Databases*
Yuan Hong, Shuo Lu, Qian Liu, Lingyu Wang, Rachida Dssouli
- *Measuring Network Security Using Bayesian Network-Based Attack Graphs*
Marcel Frigault, Lingyu Wang

- *A Naive Bayes Approach for Detecting Coordinated Attacks*
Salem Benferhat, Tayeb Kenaza

Workshop 11: The 2nd IEEE International Workshop on Quality Oriented Reuse Of Software (QUORS 2008)
(Room B 2033)

Organisers and chair: Xiaodong Liu, Napier University, UK
Hongji Yang, De Montfort University, UK

Keynote Session 10:00-10:45

Dr. Rajesh Subramanian, Siemens Corporate Research, USA.

Session 1: MDE and Aspect 10:45-12:15

Chair: Xiaodong Liu, Napier University, UK

- *A Requirement Editor for Model-based Requirement Engineering*
Chih-Wei Lu, Chih-Hung Chang, William C. Chu, Ya-Wen Cheng, Hsin-Chien Chang
- *Combining MDE and UML to Reverse Engineer Web-Based Legacy Systems*
Jianjun Pu, Hongji Yang, Baowen Xu, Lei Xu
- *A Taxonomy of Interactions Introduced by Aspects*
Mario Luca Bernardi, Giuseppe Antonio Di Lucca

Session 2: Software Performance (13:30-14:30)

Chair: Barbara Gallina, Luxembourg University

- *Queuing Theory on Software Performance Testing*
Praveen Ranjan
- *RUP Extension for the Software Performance*
Carlos Eduardo Barros Paes, Celso Massaki Hirata

Session 3: Software Reuse (14:30-16:00)

Chair: Hongji Yang, De Montfort University, UK

- *A Product Line Perspective for Quality Reuse of Development Frameworks for Distributed Transactional Applications*
Barbara Gallina, Nicolas Guelfi
- *Software Reuse in Design and Development of Aspects*
Deepak Dahiya, Sudha Dahiya
- *Semantics-Based Component Repository: Current State of Arts and a Calculation Rating Factor-based Framework*
Chengpu Li, Xiaodong Liu, Jessie Kennedy

Session 4: Software Evolution 16:20-17:50

Chair: William C. Chu, Tunghai University, Taiwan

- *Framework Computer-Aided Evolution of Object-Oriented Designs*
Selim Ciraci, Pim van den Broek, Mehmet Aksit
- *Business Intelligence Recovery in Software Reverse Engineering*
Jian Kang, Jianjun Pu, Jianchu Huang, Hongji Yang
- *Delay Front and Skip Interval for Assessing Open Source Software Maintenance of System Vendors and Centres for Computing Service*
Hiroyuki Sato

Workshop 12: The IEEE International Workshop on Quality and Architectural Concerns in Open Source Software (QACOS 2008)
(Room B 2034)

Organisers and chair: Muhammad Ali Babar, Lero, University of Limerick, Ireland
Mari Matinlassi, VTT Technical Research Centre of Finland, Finland
Björn Lundell, University of Skövde, Sweden

Session 1: Product and Process Models for Using Open Source Software, 10:00-11:30

Chair: Bjorn Lundell (University of Skovde, Sweden)

- *Towards a Process Maturity Model for OSS*
Marcus Ciolkowski, Martín Soto
- *A Model of Open Source Software-Based Product Line Development*
Faheem Ahmed, Luiz Capretz, Muhammad Ali Babar
- *Managing Libre Software Distribution under a Product Line Approach*

Israel Herraiz, Gregorio Robles, Rafael Capilla, Jesus M. Gonzalez-Barahona

Breakout group discussion

Session 2: Software Architecture and Open Source Software, 13:30- 15:00

Chair: Faheem Ahmed (United Arab Emirates University, Abu Dhabi, UAE)

- *Architectural Issues in Opening up the Advantages of Open Source in Product Development Companies*
Christian Lennerholt, Brian Lings, Bjorn Lundell
- *OntoArch Approach for Reliability-aware Software Architecture Development*
jiehan zhou, Eila Niemela, Antti Evesti, Anne Immonen, Pekka Savolainen
- *Software Architecture Relevance in Open Source Software Evolution: A Case Study*
Elisa Yumi Nakagawa, Kiyoshi de Brito Murata, Gabriel de Faria Andery, Leonardo Bitencourt Morelli, José Carlos Maldonado

Breakout group discussion

Session 3: Software quality and Open Source Software, 15:30- 17:00

Chair: Marcus Ciolkowski (Fraunhofer IESE, Kaiserslautern, Germany)

- *Improving the Quality of GNU/Linux Distributions: A Sound Approach*
Fabio Mancinelli, Jaap Boender, Roberto Di Cosmo, Berke Durak
- *Applied Quality Assurance Methods under the Open Source Development Model*
Tobias Otte, Robert Moreton, Heinz-Dieter Knoell
- Breakout group discussion

Session 4: Working session, 17:00- 18:30

Workshop 13: The Second IEEE International Workshop on Software Engineering Challenges in Automotive Domain (SECAD2008) (Room B2035)

Organisers and chair: Fabrizio Fabbrini, CNR, Italy
Mario Fusani, CNR, Italy
Giuseppe Lami, CNR, Italy
Alessandro Coco, CNR, Italy
Gianluca Trentanni, CNR, Italy

Keynote speech 10:00-11:00

The Role of Process Standards in Automotive Systems Development
Alec Dorling

Session 1: Overview and Trends, 11:00-12:00

Chair: Risto Nevalainen - FISMA, Finland

- *Software Engineering in the European Automotive Industry: Achievements and Challenges*
Fabrizio Fabbrini, Mario Fusani, Giuseppe Lami, Edoardo Sivera
- *How to Prepare for a SPICE Assessment Having Implemented Processes based on CMMI*
Bhaskar Vanamali, Fabio Bella, Horst Degen-Hientz

13:30-14:30

- *Safety in Automotive Software: an Overview of Current Practices*
Paolo Panaroni, Giovanni Sartori, Fabrizio Fabbrini, Mario Fusani, Giuseppe Lami
- *A Service-Oriented Approach for Modelling Automotive Case Studies*
Laura Bocchi, José Fiadeiro, Antónia Lopes

Session 2: Innovation and Experience, 14:30- 15: 00

Chair: Bhaskar Vanamali - KUGLER MAAG CIE, Germany

- *Configuration and Change Management of the Outcomes of an Automotive Engine Control Model Based Software Design Process*
Stefano Monti, Walter Nesci, Serino Angellotti, Claudio Schellino, Massimo Seminara, Rainer Wuesthenagen

15:20-16:50

- *Visual Configuration in Automotive Software Product Lines*
Goetz Botterweck, Steffen Thiel, Ciaran Cawley, Daren Nestor, Andre Preussner
- *Security Policy Enforcement in the OSGi Framework Using Aspect-Oriented Programming*

Phu Phung, David Sands

- *Control IP's sharing: from scalable and configurable mechatronic closed loop control to Autosar SW-C package. A new model business scenario across automotive OEMs and Component Supplier and the new roles of SW IP's Supplier and SW IP's integrator*
Serino Angellotti, Stefano Monti, Alessandro Peciarolo, Giovanni Prodi, Walter Nesci, Claudio Schellino, Massimo Seminara, Rainer Wuestenhagen

Session 3: Panel: Safety Issues in Automotive Software, 16:50 – 18:00

Workshop 14: 1st IEEE International Workshop on Semantics for Business Process Management (SemBPM 2008) (Room B 2036)

Organisers and chair: Elżbieta Bukowska, Poznań University of Economics, Poland
Witold Abramowicz, Poznan University of Economics, Poland
Leszek Maciaszek, Macquarie University, Sydney, Australia

Session 1: Semantics 10:00-11:30

Chair: Leszek Maciaszek

- *Semantic Enterprise Description for the Needs of Business Process Automation*
Agata Filipowska, Monika Kaczmarek, Monika Starzecka, Piotr Stolarski, Adam Walczak
- *Semantic QoS Model for Extended IOPE Matching and Composition of Web Services*
Duygu CELIK, Atilla ELÇI
- *A Temporal Semantics for Workflow Control Patterns*
Denis Gagné, André Trudel

Session 2: Process Management 13:30-15:00

Chair: Witold Abramowicz

- *Putting Business into Business Process Models*
Ken Decreus, Geert Poels
- *A Meta Modeling Framework for Domain Specific Process Management*
Stefan Jablonski, Bernhard Volz, Sebastian Dornstauder
- *An Approach for Matching Functional Business Requirements to Standard Application Software Packages via Ontology*
Rolf Kluge, Thomas Hering, Roman Belter, Bogdan Franczyk

Session 3: Technology, 16:00-17:00

Chair: Leszek Maciaszek

- *How to Enhance UDDI with Dependability Capabilities*
Anatolij Gorbenko, Alexander Romanovsky, Vyacheslav Kharchenk
- *Towards Distributed Management of Service-oriented Computing Infrastructures*
Roman Belter, Rolf Kluge

Workshop 15: 1st IEEE International Workshop On Component-Based Design Of Resource-Constrained Systems (CORCS 2008) (Room B2037)

Organisers and chair: Cristina Secleanu, Mälardalen University, Sweden
Paul Pettersson, Mälardalen University, Sweden
Hans Hansson, Mälardalen University, Sweden

Session 1: Component Modeling and Dependability, 10:00 – 11:30

Chair: Cristina Secleanu, Mälardalen University, Sweden

- *Valentine: A Dynamic and Adaptive Operating System for Wireless Sensor Networks*
Natasha Hoang, Nicolas Belloir, CongDuc Pham, Severine Sentilles
- *A Component-based Model and Language for Wireless Sensor Network Applications*
Alan Dearle, Dharini Balasubramanian, Jonathan Lewis, Ron Morrison
- *Error Modeling in Dependable Component-based Systems*
Huseyin Aysan, Sasikumar Punnekkat, Radu Dobrin

Session 2: Resource-Oriented Embedded Systems Modeling and Analysis, 13:30 – 15:00

Chair: Paul Pettersson, Mälardalen University, Sweden

- *A (Re)Configuration Mechanism for Resource-Constrained Embedded Systems*
Yu Guo, Krzysztof Sierszecki, Christo Angelov
- *Embedded Systems Resources: Views on Modeling and Analysis*
Aneta Vulgarakis, Cristina Seceleanu
- *A Resource-oriented Static Analysis Approach to Adaptable Java Applications*
Marco Autili, Paolo Di Benedetto, Paola Inverardi, Fabio Mancinelli

Session 3: Design and Validation Techniques for Real-Time Systems, 15:30 – 17:00

Chair: Hans Hansson, Mälardalen University

- *Validation of Temporal Simulation Models of Complex Real-Time Systems*
Farhang Nemati, Johan Kraft, Christer Norström
- *Joint SW/HW Modelling and Design Exploration using P-Ware*
Ismail Assayad
- *An Overrun Method to Support Composition of Semi-Independent Real-Time Components*
Moris Behnam, Insik Shin, Thomas Nolte, Mikael Nolin

Workshop 16: 1st IEEE International Workshop on Software Engineering for Context Aware Systems and Applications (SECASA2008) (Room B 2038)

Organisers and chair: Weichang Du, University of New Brunswick, Fredericton, Canada
John Plaice, University of New South Wales, Australia
Rondogiannis Panagiotis, University of Athens, Greece

Keynote Address: 10:00- 11:00

The Automatic Generation of Context-aware Documents

William W. Wadge, University of Victoria, Canada.

Session 1: Context-aware Applications and Software, 11:00-12:00

- *uNavi: Implementation and Deployment of a Place-based Pedestrian Navigation System*
Masahiro Bessho, Shinsuke Kobayashi, Noboru Koshizuka, Ken Sakamura
- *Designing Simulated Context-aware Telephone in Pervasive Spaces*
Qi Yong, Zhang Qinsheng, He Hui, Niu Yujie

Session 2: Languages for Context-aware Systems, 13:30-15:00

- *Sequential Demand-driven Evaluation of Eager TransLucid*
John Plaice, Blanca Mancilla, Gabriel Ditu, William W. Wadge
- *A Multithreaded Implementation for TransLucid*
Toby Rahilly, John Plaice
- *Design and Implementation of Context Calculus in the GIPSY Environment*
Joey Paquet, Serguei A. Mokhov, Xin Tong

Session 3: Context-aware Communities, 15:30-17:00

- *Synchronous Communities*
Blanca Mancilla, John Plaice
- *Towards Syntax and Semantics of Hierarchical Contexts in Multimedia Processing Applications Using MARFL*
Serguei A. Mokhov

Short Presentations and Group discussion.

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