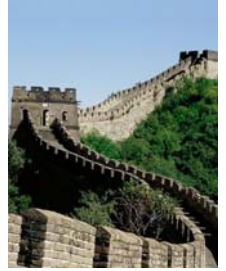


The 31st Annual International Computer Software and Applications Conference

COMPSAC 2007

Beijing, China July 23 - 27, 2007



Beginning 2006, COMPSAC is designated as the IEEE Computer Society Signature Conference on Software Technology and Applications.

COMPSAC is a major international forum for researchers, practitioners, managers, and policy makers interested in computer software and applications. It was first held in Chicago in 1977, and since then it has been one of the major forums for academia, industry, and government to discuss the state of art, new advances, and future trends in software technologies and practices. The technical program includes keynote addresses, research papers, industrial case studies, panel discussions and fast abstracts. It also includes a number of workshops on emerging important topics.

COMPSAC 2007 At-a-Glance

July 23rd, 2007 (Monday): Tutorials & Workshops									
Room	SH-1	SH-2	SH-3	SH-4	SH-5	SH-6	SH-7	SH-8	
9:00-12:30	Tutorial 1	SACT 1, 2	EMOBS 1, 2	IWSC 1,2	STPSA 1,2	AOAsia 1,2	REFS 1, 2	ESAS 1, 2	
12:30-14:00	Lunch (not included)								
14:00-17:30	Tutorial 1	Tutorial 2	EMOBS 3, 4	IWSC 3,4		AOAsia 3,4	REFS 3, 4	ESAS 3	
17:30-20:00	No planned conference activities for the conference participants								
July 24th, 2007 (Tuesday), 1st Conference Day: Tracks, Panels and Doctoral Symp.									
8:00-9:30	Opening Remarks: IEEE Computer Society 2007 President Michael Williams (RB-1/2) Keynote 1: Software Foundation for Critical Pervasive Computing, Dr. Sumi Helal (RB-1/2)								
9:30-10:00	AM Break								
Room	RB-4	RB-5	JB-3	JB-4					
10:00 - 11:30	Security 1	Life Cycle 1	QoS 1	P1: Challenges Experiences, Card/Wong					
11:30-13:30	Lunch (not included)								
13:30-15:00	Security 2	Life Cycle 2	QoS 2	P2: Middle-ware, Bella-vista					
15:00-15:30	PM Break								
15:30-17:00	Security 3	Life Cycle 3	QoS 3	P3: Ethics in Computing, Sedih					
6:30-10:00	Reception								
July 25th, 2007 (Wednesday), 2nd Conference Day: Tracks and Panels									
8:00-9:30	Keynote 2: From Knowledge-based Software Engineering to Knowledge-based Software Engineering, Dr. Lu Ruqian (RB-1/2)								
9:30-10:00	AM Break								
Room	RB-4	RB-5	JB-3	JB-4					
10:00- 11:30	Security 4	Requirements 1	Quality 1	Life Cycle 4					
11:30-13:30	Lunch (not included)								
13:30-15:00	Doctoral Symp. 1	Requirements 2	Quality 2	P4: Test Automation, Subramanyan					
15:00-15:30	PM Break								
15:30-17:00	Doctoral Symp. 2	Requirements 3	Quality 3	P5: Software Process, Bae					
18:30-22:00	COMPSAC Banquet (Time: 7:00-10:00; The People's Great Hall, Beijing; Transportation will be provided from the Friendship Hotel								Bus
July 26th, 2007 (Thursday), 3rd Conference Day: Tracks, Panels and Fast Abstracts									
8:00-9:30	Plenary Panel 6: Future Trends, Dr. McMillin (RB-1/2)								
9:30-10:00	AM Break								
Room	JB-2	JB-4	JB-3						
10:00-11:30	Fast Abstr. 1	Requirements 4	Quality 4						
11:30-13:30	Lunch (not included)								
Room	JB-1	JB-4	JB-3						
13:30-15:00	Fast Abstr. 2	Requirements 5	Quality 5						
15:00-15:30	PM Break								
15:30-17:00	Quality 6								
16:45-18:30	COMPSAC 2007 Planning Meeting. All invited. Refreshments provided. (JB-1)								
July 27th, 2007 (Friday): Tutorials & Industry Day									
8:00-9:30	Keynote 3: Software for the Mobile Internet, Mr. Anson Chen (RB-1/2) Industry Day Plenary Panel 7: Software for the Mobile Internet, Dr. Stephen Chen (RB-1/2)								
9:30-10:00	AM Break								
Room	SH-1	SH-2	SH-3	SH-4	SH-5	SH-6	SH-7	SH-8	SH-9
10:00 - 11:30	Tutorial 3	SPAC 1	Industrial Track 1	KASET 1	SEASS 1	QUORS 1	TEST 1	IWSSE 1	Tutorial 4
12:30-14:00	Lunch (not included)								
14:00-17:30	Tutorial 3	SPAC 2 SECAD	Industrial Track 2,3	KASET 2, 3	SEASS 2,3	QUORS 2,3	TEST 2	IWSSE 2	
18:00 PM	Have A Great Trip Back Home! / Or tour to The Great Wall!								

COMPSAC 2007 Tutorials

Monday July 23 2007

9:00-16:00 Tutorial 1: Service-Oriented Architectures (SOA): The Missing Link Between Business and Technology

Dr. M.E. Fayad (**Room: SH-1**)

Abstract:

A Pattern Topology for SOA is proposed to be developed as a system of patterns including the core knowledge of SOA. It will be prepared in a cognitive process of understanding and generalizing the main concepts associated with SOAs that are independent from any particular application and will serve as a strong backbone design for any related applications.

About the instructor:

M.E. Fayad is a Full Professor of Computer Engineering at San Jose State University. He has given seminars on SE Technologies at many conferences and countries. He is the lead author of several Wiley books

13:00-16:30 Tutorial 2: Setting a Software Test Management Environment

Dr. Rajesh Subramanyan (**Room: SH-2**)

Member Technical Staff, Software Engineering

Siemens Corporate Research

755 College Road East

Princeton, NJ 08540

email: rajesh.subramanyan@siemens.com

Abstract:

Test Management helps testers of large projects to coordinate together their activities, track progress and handle changes. Commercial test management tools are available to assist testers. This tutorial covers basics and necessary activities in test management, executing testing activities with test management tools, providing traceability between requirements-test cases-test results-defects, defect tracking, reporting and analysis. Exercises on formulating test management requirements for a sample project, planning, determining type of reporting required and how to use the information to control testing activities will be conducted in this 3 hour tutorial.

About the instructor:

Rajesh Subramanyan is with Software Engineering department at Siemens Corporate Research, Princeton, NJ, USA. He is associated with the Software Testing program. Prior to joining Siemens, he was a visiting assistant professor with Computer Science department, Purdue University between the years 2003-2005. He developed and ran a software development lifecycle program in collaboration with several large companies. He was also the department coordinator and team advisor for an interdisciplinary program called engineering projects in community service (EPICS).

His technical interests include software engineering and performance management. He received a PhD in ECE from Purdue and MS in EE from the University of Houston.

Friday July 27 2007

10:00-17:00 Tutorial 3 Just Enough Requirements Management

Dr. Alan M. Davis (**Room:SH-1**)

Professor, College of Business

University of Colorado at Colorado Springs

PO Box 7150

Colorado Springs, CO 80933-7150

email: adavis@uccs.edu

Abstract:

Requirements management (RM) needs to be made simpler, not more complex. And in today's world, where you need to accelerate development dramatically, RM must reduce, not extend, the total development effort. This tutorial will expose participants to easy-to-follow simple procedures that enable projects to start development quickly. It will increase the likelihood that systems will satisfy real user needs when delivered. Participants will learn the roles of systems and software requirements in system development, appreciate differences between elicitation, triage, and requirements specification, and be capable of selecting and using requirements techniques. The tutorial will cover a subset of the many principles put forth in the speaker's latest book, Just Enough Requirements Management (Dorset House).

About the instructor:

Al Davis is a professor at U. Colorado at Colorado Springs. He was a member of the board of directors of Requisite, CEO of Omni-Vista, VP at BTG, and Director of the Software Technology Center at GTE Laboratories. He has held academic positions at George Mason U.; U. Tennessee; U. Western Cape, South Africa; U. Jos, Nigeria; U. Technology, Sydney, Australia; and U. Illinois at Urbana. He was EIC of IEEE Software 1994-1998. He is an editor for Journal of Systems and Software. He is the author of Software Requirements, 201 Principles of Software Development, Great Software Debates, and Just Enough Requirements Management. He has published 100+ articles and lectured 500+ times in over 20 countries. He is a fellow of IEEE and earned his Ph.D. (Computer Science) from U. Illinois.

14:00-16:30 Tutorial 4: Emerging Technologies in Industrial Context: Component-Based and Service-Based Software Engineering

Dr. Ivica Crnkovic (**Room:SH-9**)

Abstract:

Component-based software engineering (CBSE) and service-oriented software engineering (SOSE) are two similar but distinguished approaches in software engineering. In this tutorial, we compare CBSE and SOSE and analyze them from different perspectives. We discuss the possibility of combining the strengths of the two paradigms.

About the instructor:

Ivica Crnkovic is professor in Software Engineering at Malardalen University, Sweden. He has been co-organizer of CBSE symposium in last six years and has written a book and many papers in this area.

COMPSAC 2007 Program

Tuesday, July 24 2007

08:00-9:30 Opening Session (Room

Keynote 1 Sumi Helal (Room: RB-1/2)

9:30-10:00 AM Break

10:00-11:30 Parallel Sessions

Session 1: Regular Paper Session Security 1: Security in Communication

Chair: (Room: RB-4)

- *IAPF: A Framework for Enhancing Web Services Security*: Navya Sidharth, Jigang Liu
- *A Scalable Service Scheme for Secure Group Communication in Grid*: Yunfa Li, Hai Jin, Deqing Zou, Jieyun Chen
- *An End-to-end Detection of Wormhole Attack in Wireless Ad-hoc Networks*: Xia Wang, Johnny Wong

Session 2: Regular Paper Session Life Cycle 1: Internet and Web-Based Systems (Life Cycle 1)

Chair: (Room: RB-5)

- *A Satisfaction Driven Model for the Composition of Interactive Web Services*: Shuchao Wan, Wei Jun, Jingyu Song, Hua Zhong
- *Knowledge Hiding in Data Mining by Transaction Adding and Removing*: Xiaoming Zhang

Session 3: Regular Paper Session QoS 1: Quality of Service and Performance

Chair: (Room: JB-3)

- *"Performance Prediction of Service-Oriented Applications based on an Enterprise Service Bus"*: Yan Liu, Ian Gorton, Liming Zhu
- *"An Online Monitoring Approach for Web Services"*: Qianxiang Wang, Yonggang Liu, Min Li, Hong Mei
- *"SQS: A Secure and QoS Guaranteed Solution for Mobile Service"*: Chao Tong, Xiaopeng Gao, Wei Chen, Xiang Long

Panel 1: Challenges and Experiences in Industry-University Research Collaboration and Technology Transition – have panel statement

William Chu (Taiwan) and Soo-Yang Park (Korea). J.Barrie Thompson, Helen M. Edwards

Moderator: Dave Card & Eric Wong (Room:JB-4)

11:30 – 13:30 Lunch

13:30-15:00 Parallel Sessions

Session 4: Regular Paper Session Security 2: Modeling Security

Chair: (Room: RB-4)

- *An Omnipresent Formal Trust Model (FTM) for Pervasive Computing Environment*: Md Munirul Haque, Sheikh Ahamed
- *An Authentication based Lightweight Device Discovery (ALDD) Model for Pervasive Computing Environment*: Sheikh Ahamed, Munirul Haque, Haifeng Li, KM Asif
- *Defining and Detecting Bad Smells of Aspect-Oriented Software*: Komsan Srivisut, Pornsiri Muenchaisri (short)

Session 5: Regular Paper Session Life Cycle 2: Component-Based Software and Architecture

Chair: (Room: RB-5)

- *Iterative Planning in the Context of Automated Code Synthesis*: Jicheng Fu, Farokh Bastani, I-Ling Yen
- *Automating Dynamic Reconfiguration for Non-Stop Dataflow Systems*: Wei LI, Zhikun Zhao
- *An Architectural Framework for the Design and Analysis of Autonomous Adaptive Systems*: Kendra Cooper, Joao Cangussu, Eric Wong

Session 6: Regular Paper Session QoS 2: Quality of Service and Service Composition

Chair: (Room: JB-3)

- *An Interaction Instance Oriented Approach for Web Application Integration in Portals*: Jingyu Song, Jun Wei, Shuchao Wan, Hua Zhong
- *QoS-aware Service Composition based on Tree-Coded Genetic Algorithm*: Chunming Gao, Meiling Cai, Huowang Chen
- *Dynamic Reconfigurable Testing of Service-Oriented Architecture*: Xiaoying Bai, Dezheng Xu, Guilan Dai, Wei-Tek Tsai, Yinong Chen

Panel 2: Middleware for Next-Generation Converged Networks and Services: Myths or Reality?: Weishan Zhang; Dr. Sheikh Iqbal Ahamed; Matthias Book; Kormentzas Georgios

Moderator: Paolo Bellavista (Room:JB-4)

15:00-15:30 PM Break

15:30-17:00 Parallel Sessions

Session 7: Regular Paper Session Security 3: Vulnerabilities – Detecting and Assessment

Chair: (Room: RB-4)

- *Mining User Query Logs to Refine Component Description*: Yan Li, Shaobin Cheng, Lu Zhang, Bing Xie, Jiasu Sun
- *A Machine Learning-Based Reliability Assessment Model for Critical Software Systems*: Venkata Challagulla, Farokh Bastani, Raymond Paul
- *A Static Analysis Framework For Detecting SQL Injection Vulnerabilities*: Xiang Fu, Kai Qian, Xin Lu, Boris Peltsverger, Lixin Tao

Session 8: Regular Paper Session Life Cycle 3 :Embedded systems

Chair: (Room: RB-5)

- *Flexible Application Software Generation for Heterogeneous Multi-Processor System-on-Chip*: Xavier Guerin, Katalin Popovici, Wassim Youssef, Frederic Rousseau, Ahmed Jerraya
- *A Semantic Anchoring Infrastructure for the Design of Embedded Systems*: Graham Hemingway, Hang Su, Kai Chen, T. John Koo
- *Concurrency Control Modularization with Aspect-Oriented Programming*: Sergio Castelo Branco Soares, Paulo Henrique Monteiro Borba, Ricardo Massa Ferreira Lima (short)

Session 9: Short Paper Session QoS 3: Modeling and Validation for Quality of Service

Chair: (Room: JB-3)

- *Validity Checking on Grid Service Composition*: Jing Zhou, Guosun Zeng
- *A Fast Replica Selection Algorithm for Data Grid*: Dafei Yin, Bin Chen, Zhou Huang, Yu Fang
- *Improving the Accuracy of UML Class Model Recovery*: Kun Wang, Wuwei Shen (short)
- *Connectors conveying Software Architecture Evolution*: Dalila tamzalit, nassima sadou, mourad oussalah (short)

Panel 3: Ethics in Computing: Kevin Bowyer (Notre Dame), Bhawani Thurasingham (UT Dallas), Tharam Dillon (Curtin U., Australia), and Ray Paul (OASD).

Moderator: Sahra Sedigh (Room:JB-4)

18:30-22:00 IEEE Computer Society Presidential Welcome Reception

Wednesday, July 25 2007

• **Keynote 2 (Room: RB-1/2)**

9:30-10:00 AM Break

10:00-11:30 Parallel Sessions

Session 1: Short Paper Session Security 4: Infrastructure, Networking and Security

Chair: (Room: RB-4)

- *A model-driven framework for representing and applying design patterns*: Ghizlane El Boussaidi, Hafedh Mili (short)
- *Infrastructure Hardening: A Competitive Coevolutionary Methodology Inspired by Neo-Darwinian Arms Races*: Travis Service, Daniel Tauritz, William Siever
- *Reliable Self-Clustering P2P Overlay Networks*: wang wei, zeng guosun
- *Software Component Re-engineering for their Runtime Structural Adaptation*: Gautier Bastide, Abdelhak Seriai, Mourad Oussalah (short)

Session 2: Regular Paper Session Requirements 1: Design and Modeling

Chair: (Room: RB-5)

- *Structuring 2-way Branches in Binary Executables*: Tao Wei, Jian Mao, Wei Zou, Yu Chen (short)
- *FLEXCM - A Component Model for adaptive embedded systems*: Sindolfo Miranda Filho, Luiz Eduardo Cunha Leite, Guido Lemos, Silvio Meira
- *Structuring software functional requirements for automated design and verification*: Sukhamay Kundu

Session 3: Regular Paper Session Quality 1: Validation and Assessment

Chair: (Room: JB-3)

- *Piping Classification to Metamorphic Testing: An Empirical Study towards Better Effectiveness for the Identification of Failures in Mesh Simplification Programs*: W.K. Chan; Jeffrey Ho; T.H. Tse
- *Risk Assessment in Early Software Design Based on the Software Function-Failure Design Method*: Jayson Vucovich; Robert Stone; Frank Liu; Irem Tumer
- *SRAE: An Integrated Framework for Aiding in the Verification and Validation of Legacy Artifacts in NASA Flight Control Systems*: Andres Orrego; Gregory Mundy

Session 4: Life Cycle 4: Process and Maintenance

Chair: (Room: JB-4)

- *Tracking projects through a three-dimensional software development model*: Juan Li, Nan Jiang, Mingshu Li, Qing Wang, Yanwu Yang
- *Traceability Link Evolution Management with Incremental Latent Semantic Indexing*: Hsin-yi Jiang, Carl K. Chang, Tien Nguyen
- *Identifying Software Decompositions by Applying Transaction Clustering on Source Code*: Renuka Sindhgatta, Krishnakumar Pooloth

11:30 – 13:30 Lunch

13:30-15:00 Parallel Sessions

Session 5: Regular Paper Session Requirements 2: Putting Models to Run

Chair: (Room: RB-5)

- *Understanding and Classifying Requirements for Computer-Aided Healthcare Workflows*: Xiping Song, Beatrice Hwong, Gilberto Matos, Arnold Rudorfer
- *Deriving Formal Specifications from Informal Requirements*: Dubravka Ilic
- *A Model-based Object-oriented Approach to Requirement Engineering (MORE)*: William C. Chu, Chih-Wei Lu, C.H. Chang, Chih-Hung Chang
- *Tool Support to Implementing Business Rules in Database Applications*: Liwen Lin, Suzanne M. Embury, Brian C. Warboys (short)

Session 6: Regular Paper Session Quality 2: Quantification

Chair: (Room: JB-3)

- *Architecture-based software reliability: Why only a few parameters matter?*: Margaret Hamill; Katerina Goseva-Popstojanova
- *On Identifying Bug Patterns in Aspect-Oriented Programs*: Sai Zhang; Jianjun Zhao
- *Measuring and Assessing Software Reliability Growth through Simulation-Based Approaches*: Chu-Ti Lin. Chin-Yu Huang, Chuan-Ching Sue

Panel 4: Test Automation in Practice

Developing and implementing a successful test automation strategy can provide enormous benefit for a software project. However, automating tests is not cheap or easy. It does not replace the need for manual testing or enable to "down-size" the testing group. Automated testing can be made to be cost-effective, if best practices are applied to the process. This panel goal is to discuss techniques that are able to facilitate the adoption of test automation in practice.

Panelists (likely): 1-2 from Siemens US, 1 from Siemens China, 1-2 from Industry (not Siemens) Asia (Korea, Singapore or India), 1 Asia – academia
Moderator: Rajesh Subramanyan (**Room: JB-4**)

Session 7: P4: Test Automation, Subramanyan
Chair: (**Room: JB-4**)

15:00-15:30 PM Break

15:30-17:00 Parallel Sessions

Session 8: Regular Paper Session Requirements 3 : Event-Based and State-Based Modeling

Chair: (**Room: RB-5**)

- *Using UML activity diagrams and Event B for distributed and parallel applications*: Ahlem BEN YOUNES, Leila JEMNI BEN AYED
- *Integration of Agent-Oriented Conceptual Models and UML Activity Diagrams Using Effect Annotations*: Moshir Bhuiyan, Zahidul Islam, George Koliadis, Aneesh Krishna, Aditya Ghose
- *A Data Mining Approach for Software State Definition*: Beibei Yin, Chenggang Bai, Kaiyuan Cai

Session 9: Short Paper Session Quality 3: Coverage and Prioritization for Testing

Chair: (**Room: JB-3**)

- *Effective Fault Localization using Code Coverage* : Eric Wong; Lei Zhao; Yu Qi; Kai-Yuan Cai
- *A Study of Enhanced MC/DC Coverage Criterion for Software Testing* : Jun-Ru Chang; Chin-Yu Huang
- *Test Case Prioritization for Black Box Testing* : Bo Qu; Changhai Nie; Baowen Xu; Xiaofang Zhang

Panel 5: Software Process Improvement for Small Organizations: David Card, Vice President, Q-Lab Robert Lai, Sang-Yoon Min, CEO, Solution Link

Moderator: Doo-Hwan Bae (**Room: JB-4**)

18:30-22:00 COMPSAC Banquet

Thursday July 26 2007

8:00-9:30 Panel 6: Future Trends – Computing as a core discipline: Lionel Ni – Pervasive Computing

E.K. Park – *Computational Discovery*

Sumi Helal – *Pervasive computing in society*

Liang-Jie (LJ) Zhang (

Moderator: McMillin (**Room: B1/2**)

9:30-10:00 AM Break

13:30-15:00 Parallel Sessions

Session 1: Requirements 4: Ontology for Requirements Elicitation

Chair: (**Room: JB-4**)

- *Towards a Multiple Ontology Framework for Requirements Elicitation and Reuse*: Li Zongyong, Wang Zhixue, Yang Yingying, Wu Yue
- *SREM: A Service Requirement Elicitation Mechanism based on ontology*: Jiang Xiang, Lin Liu, Wei Qiao

Session2: Quality 4: Specification and Verification

Chair: (**Room: Room: JB-3**)

- *Formal Verification of Protocol Properties of Sequential Java Programs* : Ying Jin
- *Unified Property Specification for Hardware/Software Co-Verification* : Fei Xie; Huaiyu Liu
- *Model Checking Aspect-Oriented Design Specification* : Dianxiang Xu; Izzat Alsmadi; Weifeng Xu

11:30 – 13:30 Lunch

Session 4: Requirements 5: Analysis & Modeling

Chair: (**Room: JB-4**)

- *A Method of Requirement Inconsistency Analysis*: Zhang Yinkun, Yin Peng, Cui Duwu, Xia Hui
- *Analysis Of Conflicts Among Non-Functional Requirements Using Integrated Analysis Of Functional And Non-Functional Requirements*: VISHAL SADANA, FRANK LIU
- *A metamodel for the notation of graphical modeling languages*: Xiao He, Zhiyi Ma, Weizhong Shao, Ge Li (short)

Session 5: Quality 5: Analysis and Testing

Chair: (**Room: JB-3**)

- *Parameter and Return-value Analysis of Binary Executables* : Jingbo Zhang; Rongcai Zhao; Jianmin Pang
- *Test Case Generation for Collaborative Real-time Editing Tools* : Lian Yu; Wenping Xiao; Changyan Chi; Lin Ma; Hui Su
- *Contract-based testing for web services* : Guilan Dai; Xiaoying Bai; Yongbo Wang; Fenjun Dai

15:00-15:30 PM Break

15:30-17:00 Parallel Sessions

Session 7: Quality 6: Quality, Diversity and Services

Chair: (Room: JB-3)

- *Architectural Adaptation Addressing the Criteria of Multiple Quality Attributes in Mission-Critical Systems*: Xiaofeng Cui; Yanchun Sun; Gang Huang; Hong Mei
- *A Quality Verification Model for Design Pattern*: Nien-Lin Hsueh; Peng-Hua Chu; William Chu; Chian-Chium Lin
- *Bivariate Software Fault-Detection Models*: Tomotaka Ishii; Tadashi Dohi; Hiroyuki Okamura
- *Construction of an Agile Software Product-Enhancement Process by Using an Agile Software Solution Framework (ASSF) and Situational Method Engineering*: Asif Qumer, Brian Henderson-Sellers (short)
- *Model Oriented Evolutionary Redocumentation*: Feng Chen, Hongji Yang (short)

17:00-18:30 COMPSAC 2007 Planning Meeting. All invited. Refreshments provided (Grand Cypress AB)

Friday July 27 2007

8:00-9:30 Plenary Panel 7: Industry Day Plenary Panel Software for the Mobile Internet

Objectives: 1. Describe the challenge for expanding the Internet to the Mobile Handset 2. What are the trends? US, Europe, Asia, etc.? 3. What new applications will we see that are different from what is offered on the wired Internet?

Moderator: Anson Chen, Corporate Vice President, Motorola

Panelists (4): 2 from Industry and 2 from Academia

Format: Anson will open with a 20 minute keynote address, each panelist then delivers opening comments (5-10 minutes), followed by Q&A
Moderator: Stephen Chen (Room RB:1/2)

9:30-10:00 AM Break

10:00-11:30 Industrial Track 1: Process Models

(Room: SH-3)

- *State of Modernisation Practice in Four Swedish Organisations*: Mira Kajko-Mattsson, Mi Ta, Lukas Wilczek
- *ePVM - An Embeddable Process Virtual Machine*: Thomas Weigold, Thorsten Kramp, Peter Buhler
- *State-based Process Description Model in Chinese E-Government Affair System*: Yunxiang Zheng, Lei Li, Hai Wan
- *Analyzing and Re- structuring Product Line Dependencies*: Juha Savolainen, Ian Oliver, Varvana Myllärniemi, Tomi Männistö

11:30 – 13:30 Lunch

15:30-17:00 Industrial Track 2,3: Data, Repositories (2)

(Room: SH-3)

- *Understanding and Classifying Requirements for Computer-Aided Healthcare Workflows*: Xiping Song, Beatrice Hwong, Gilberto Matos, Arnold Rudorfer
- *Towards a Design Methodology for Multiprocessor Platforms*: Dragos Truscan, Tiberiu Seceleanu
- *Specification, Design and Implementation of a Reuse Repository*: Vanilson Burégio, Eduardo Almeida, Daniel Lucrédio, Silvio Meira
- *DataWarp: Empowering applications to make progress in the face of contradictory or inconsistent data*: Stephen Crouch, Peter Henderson, Robert Walters
- *VOEditor: a Visual Environment for Ontology Construction and Collaborative Querying of Semantic Web Resources*: ling li, shengqun tang, lina fang, ruliang xiao, xinguo deng, youwei xu, yang xu

Networking and Distribution (3)

- *Mobile Game Development: Object-Orientation or Not*: Weishan Zhang, Dong Han, Thomas Kunz
- *Performance Evaluation of Notifications in a Web Services and P2P-Based Network Management Overlay*: Clarissa Cassales Marquezan, Carlos Raniery Paula dos Santo, Ewerton Monteiro Salvador, Maria Janilce Bosquioli Almeida, Sérgio Luis Cechin, Lisandro Zambenedetti Granville
- *A Dynamic-Reconfigurable Architecture for Protocol Stacks of Networked Systems*: Mahdi Niamanesh, Rasool Jalili
- *A Study on Distributed Resource Information Service in Grid System*: Huo Jiuyuan, Liu Liqun, Liu Li, Yang Yi, Li Lian

COMPSAC 2007 Workshops

Monday 23 July 2007

Workshop 1: The Second IEEE Asia-Pacific Workshop on Software Architectures and Component Technologies (SACT 07)

9:00–10:30 Session 1: Software Patterns, Frameworks and Architectures

Organizer and Chair: Antony Tang and Jun Han, Swinburne University of Technology, Australia; Muhammad Ali Babar, Lero, Ireland; Hongyu Zhang, Tsing Hua University, China

Chair: Jun Han (Room: SH-2)

- *The Accessibility Analysis Pattern*, M.E. Fayad
- *A Composite Design Pattern for Object Frameworks*, D. Thu Tran and T. B. Tran Huynh
- *Extracting High-level Component-Connector Views from Detailed UML Models: A Case Study*, Arvind Kiwelekar and Rushikesh Joshi

10:30-11:00 AM Break

11:00-12:30 Session 2: Component Software and Technologies

Chair: Hongyu Zhang (Room: SH-2)

- *Dynamic Reconfiguration of Distributed Data Flow Systems*, Zhikun Zhao and Wei Li
- *Visualization of Concurrent Program Traces*, Cyrille Artho, Klaus Havelund, and Shinichi Honiden
- *AOP-based Testability Improvement for Component-based Software*, Chengying Mao
- *Salomé Platform Component Model for Numerical Simulation*, André Ribes and Christian Caremoli

Workshop 2: The First IEEE International Workshop on Engineering Mobile-Based Software and Applications (EMOBS07)

9:00–10:30 Session 1: Applications and Services

Chair: Jingsha He (Room:SH-3)

Open Address: EMOBS07 Organizers (Jerry Gao, Jingsha He, and Axel Küpper)

- *An Instant Messaging Framework for Flexible Interaction with Rich Clients:* Matthias Book, Volker Gruhn
- *Understanding 2D-BarCode Technology and Applications in M-Commerce – Design and Implementation of a 2D Barcode Processing Solution:* Jerry Zeyu Gao, Lekshmi Prakash, Rajini Jagatesan
- *An Optimization Method For Real-Time Natural Phenomena Simulation on WinCE Platform:* Ning Liu, Rong Li, Zhenyu Yang, Hongyang Chao

10:30-11:00 AM Break

11:00-12:30 Session 2: Technologies for M-Commerce

Chair: Axel Küpper (Room:SH-3)

- *A New Approach to Develop Mobile WAP/Web Browser based on Modifying WAP Contents:* Vu Hong Khiem, Park Jeongkyu, Lee Keung Hae
- *A One-Dimensional Probabilistic Model of Wireless Multihop Internet Access:* Chun-Yen Hsu, Jean-Lien C. Wu, Shun-Te Wang
- *A Distributed Intrusion Detection Scheme for Ad Hoc Networks:* Yingfang Fu, Jingsha He, Guorui Li

12:30-14:00 Lunch Break

14:00-15:30 Session 3: Middleware and Service Platforms (Parallel Session)

Chair: Hsing Mei (Room:SH-3)

- *An Aspect Oriented Middleware Architecture for Adaptive Mobile Computing Applications:* Celso Maciel da Costa, Marcelo da Silva Strzykalski, Guy Bernard
- *A Virtual Machine-Based Programming Environment for Rapid Sensor Application Development:* Jui-Nan Lin, Jiun-Long Huang
- *Wireless Multimedia Framework Based on STBC-OFDM:* Zhang Xizheng, Tang Zhihang, Wang Yaonan

16:00-17:30 Session 4: Ambient Intelligence and Pervasive Computing (Parallel Session)

Chair: Lee Keung Hae (Room:SH-3)

- *Dynamic Configuration Based on Mobile Middleware in Aml System:* Shuo Wang, Rui Chen, Yi-bin Hou, Zhang-qin Huang
- *A Framework for Local Ambient Intelligence Space Application System: The Aml-Space Project:* Chen Rui, Zhang Yong, Hou Yin-bin, Huang Zhang-qin, Li Hui
- *A Service Discovery Architecture based on Anycast in Pervasive Computing:* Li Zhang, Zhen-lian Shi, Qi shen

16:00-17:30 Session 5: Mobility Support

Chair: Jerry Gao (Room: SH-8)

- *Vs Golf — Developing Location-based Multi-Player Games:* Georg Treu, Johannes Martens, Matthias Schicker, Mark Breisinger, Axel Küpper
- *Speed-Based Mobility Management for Heterogeneous Wireless Networks Interworking:* Ming-Hsien Yu, Hsing Mei
- *A Mobile Database Design Methodology for Mobile Software Solutions:* Weider Yu, Sunita Sharma

Workshop 3: The Fourth IEEE International Workshop on Software Cybernetics (IWSC 2007)

7:30-8:00 Registration (Room: SH-4)

8:00-8:30 Opening Session (Room: SH-4)

Organizer and chair: Kishor S. Trivedi, Duke University, USA; Qianxiang Wang, Peking University, China; W. Eric Wong, University of Texas at Dallas, USA; Bojan Cukic, West Virginia University, USA

8:30–9:30 Session 1 Papers I

Chair: Aditya Mathur (Room: SH-4)

- *Prioritizing Coverage-Oriented Testing Process --An Adaptive-Learning-Based Approach and Case Study:* Fevzi Belli, Mubariz Eminov, Nida Gokce
- *MASS: Middleware-based Adaptive Software System:* Qianxiang Wang

9:30 to 10:00 Coffee Break

10:00-11:30 Session 2 Invited Talks

Chair: Kai-Yuan Cai (Room: SH-4)

- *An Approach to Adaptive Distributed Execution Monitoring for Workflows in Service-based Systems:* Stephen S. Yau and Dazhi Huang
- *A Family of Software Reliability Growth Models:* Harald Stieber
- *Managing Service-Oriented Computing:* Wei-Tek Tsai

11:30-13:00 Lunch Break

1:30-3:00 Session 3 (Panel Discussion)

Moderator: W. Eric Wong (Room: SH-4)

Future Trends in Software Cybernetics

3:00-3:15 Coffee Break

15:15—14:45 Session 4: Papers II

Chair: Bojan Cukic (Room: SH-4)

- *Towards Controllable Requirements Engineering Processes based on Cybernetics:* Lin Liu, Zhi Jin, Ruqian Lu
- *Adaptive Web Services Testing:* Xiaoying Bai, Zhongkui Shao, Wei-Tek Tsai, Yinong Chen
- *A Control-Theoretic Approach to QoS Adaptation in Data Stream:* Hai Hu, Chang-Hai Jiang, Kai-Yuan Cai, W. Eric Wong

Workshop 4: The Second IEEE International Workshop on Security, Trust, and Privacy for Software Applications (STPSA 2007)

9:00–10:30 Session 1: Security, Privacy and Trust in Software Applications - I

Chair: Mohammad Zulkernine, Queen's University, Canada (**Room: SH-5**)

- *Social Modeling for System Security*: Eric Yu, University of Toronto, Canada
- *A Soft Constraint Privacy Model based on Identifiability*: Weifeng Chen, Zhen Liu, Anton Riabov
- *Security Enhancement of a Novel Proxy Key Generation Protocol*: Chiung-Chou Tsai, Kuan-Chieh Liao, Tzung-Her Chen, Wei-Bin Lee

10:30-11:00 AM Break

11:00-12:30 Session 2: Security, Privacy and Trust in Software Applications -II

Chair: Sheikh Iqbal Ahamed, Marquette University, USA (**Room: SH-5**)

- *An Efficient Software Implementation of AES-CCM for IEEE 802.11i Wireless Standard*: Abdul Samiah, Arshad Aziz, Nassar Ikram
- *Towards the Modeling of Personal Privacy in Ubiquitous Computing Environments*: Ryan Babbitt, Johnny Wong, Carl Chang
- *A Mutual Authentication and Key Exchange Scheme from Bilinear Pairings for Low Power Computing Devices*: Yuh-Min Tseng, Tsu-Yang Wu, Jui-Di Wu

Workshop 5: The Third IEEE Asian Workshop on Aspect-Oriented Software Development (AOAsia)

Organizers: Elisa Baniassad, Chinese University of Hong Kong; Kung Chen, National Chengchi University; Shigeru Chiba, Tokyo Institute of Technology; Jan Hannemann, University of Tokyo; Hidehiko Masuhara, University of Tokyo; Shangping Ren, Illinois Institute of Technology; Jianjun Zhao, Shanghai Jiao Tong University (Primary Organizer) (**Room: SH-6**)

9:30 --10:30 Session 1: Regular Presentation

- *Specifying Pointcut in AspectJ*: Yi Wang, Jianjun Zhao
- *A tool for compiler construction based on aspect-oriented specifications* : Damijan Rebernak, Marjan Mernik
- *AGENT: A Framework for Automatic Generation of Testcases for Aspect Oriented Software*: Gayathri K, Chitra Babu

10:30—11:00 Group Discussion

11:00 – 11:30 Short Presentation

11:30--12:00 Group Discussion

12:00- 13:30 Lunch Break

13:30—14:30 Session 2:

(**Room: SH-6**)

- *Automated unit test classification of large benchmarks* : Cyrille Artho, Zhongwei Chen, Shinichi Honiden
- *Aspect-Based Instrumentation for Locating Memory Leaks in Java Programs* : Kung Chen, Ju-Bing Chen
- *A Combined Concept Location Method for Java Programs* : Dapeng Liu, Shaochun Xu

14:30-15:00 Group Discussion

15:00-15:30 PM break

15:30-16:00 Short Presentation

16:00-17:00 Group Discussion and Summary

Workshop 6: The First IEEE International Workshop on Requirements Engineering For Services (REFS'07)

Organizer and Chair: Lin Liu, Tsinghua University, China; Eric Yu, University of Toronto, Canada; Zhi Jin, Chinese Academy of Sciences, China; Jian Yang, Macquarie University, Australia

Chair: Eric Yu (**Room: SH-7**)

8:45-10:15 Session 1: Workshop Keynote:

- *Requirements Engineering For Services: Does it make sense?*: Alan M. Davis

10:15-10:30 AM Break

10:30-12:30 Session 2: RE For Service

Chair: Zhi Jin (**Room: SH-7**)

- *An Intentional Perspective to Service Modeling and Discovery*: Colette Rolland, Rim-Samia Kaabi
- *Requirements and Evaluation of Protocols and Tools for Transaction Management in Service Centric Systems*: Changai Sun, Marco Aiello
- *Requirements for QoS-based Web Service Description and Discovery*: Kyriakos Kritikos, Dimitris Plexousakis
- *Towards an Agile Infrastructure to Provision Devices, Applications, and Networks: A Service-oriented Approach*: Sandy Liu, Bruce Spencer, Yong Liang, Bo Xu, Libo Zhang, Martin Brooks

12:30-14:00 Lunch Break

14:00-16:00 Session 3: RE and Services

Chair: JianYang (**Room: SH-7**)

Requirements, Plato's Cave, and Perceptions of Reality: Alan Davis, Kesav Nori

- *Requirements, Plato's Cave, and Perceptions of Reality*: Alan Davis, Kesav Nori
- *Non-Functional Computing: Towards a more scientific treatment to Non-functional requirements* : Kai-Yuan Cai
- *Developing Non-Functional Requirements for a Service-Oriented Software Platform*: Xiping Song
- *Experiences in Accurately Estimating Electronic Forms Services with a Spiral Estimate Process*: Zhoulin Dai, Yi Gu, Jun Liu, Yi Jie Xu
- *A Framework of Adaptive Requirements Engineering for USCE, Cheng Bo*: Meng Xiang-Wu, Chen Jun-Liang
- *Frameworks of Composite Services Execution Engine with Feedback Control*: Chunming Gao, Huang Tan, Huowang Chen
- *Managing Business Process Risk Using Rich Organizational Models*: Moshir Bhuiyan, Zahidul Islam, George Koliadis, Aneesh Krishna, Aditya Ghose

16:00-16:15 PM Break

16:15-17:45 Session 4 : REFS Panel: Requirements Engineering For Services: Future Directions

Mediator : Lin Liu (**Room: SH-7**)

Panelists: Al Davis, Colette Rolland, Eric Yu, Jian Yang, Xinsheng Mao

Workshop 7: The Second IEEE International Workshop on Engineering Semantic Agent Systems (ESAS 2007)

9:00–10:30 Session 1: Applications

Chair: Atella Elci (**Room: SH-8**)

- *Trend Analysis using a Temporal Language in News Domains*: Sang-Kyun Kim, and Kyu-Chul Lee
- *Construction of Collaborative Design Environment Based on Multi-Agent*: Xiangzhong FENG
- *Multi-Agent Systems-based Hierarchy Grid Middleware*: Chen Jia, and Yue Wu

10:30-11:30 AM Break

11:00-12:30 Session 2: Platforms

Chair: Aditya Ghose (**Room: SH-8**)

- *OWL-Based Description for Agent Interaction*: Yong-Feng Lin, and Jason Jen-Yen Chen
- *Adaptive Agent Model: an Agent Interaction and Computation Model*: Liang Xiao, Dave Robertson, Madalina Croitoru, Paul Lewis, Srinandan Dashmapatra, David Dupplaw, and Bo Hu
- *Extending the Gaia Methodology for the Design and Development of Agent-based Software Systems*: Wei Huang, Elia El-Darzi, and Li Jin

12:30-14:00 Lunch Break

14:00-15:30 Session 3: Models

Chair: Masoud Mohammadian (**Room: SH-8**)

- *An Ontology-based Semantic Resource Sharing Model in P2P System*: Dan Wang, and Rongjuan Zhao

Keynote Speech:

- *Actor Eco-Systems: From High-Level Agent Models to Executable Processes via Semantic Annotations*: Aditya Ghose and George Koliadis

Position Papers:

- *Intelligent Agents and P2P Semantic Web*: Mehmet A. Orgun
- *A Distress Call: Needed Tools to Large-Scale Semantic-Aware Agent Systems*: Atilla Elçi
- *Web and Intelligent Agents Research and Practice*: Masoud Mohammadian

Friday July 27 2007

Workshop 8: The First IEEE International Workshop on Software Patterns: Addressing Challenges (SPAC 2007)

Organiser and Chair: **DR. M.E. FAYAD**, San Jose State University, USA; Dr. H.S. Hamza, Cairo University, Egypt; Eduardo Segura, vrIsoft, Inc., USA

Session 1: 10:00-11:30 Introduction Word of Welcome

Chair: M. Fayad (**Room SH-2**)

- *Architectural Design of a Collaborative Design Pattern Repository*: Hongjun Su, Hong Zhang, W. Eric Wong
- *Component Oriented Design Style*: Jing-Ying Chen
- *Meta-Specification and Cataloging of Software Patterns: Towards a More Dynamic Patterns Life Cycle*: León Welicki, Juan Manuel Cueva Lovelle

11:30-13:30 Lunch Break

13:30-15:30 Session 2

Chair: M. Fayad (**Room SH-2**)

- *Pattern mining in a project-based environment*: Lotte De Rore, Monique Snoeck, Guido Dedene
- *An XMI-Based Approach for Design Pattern Recovery*: Jing Dong
- *A Framework for Open Distributed System Design*: Alexei Iliasov, Alexander Romanovsky, Budi Arief, Linas Laibinis, Elena Troubitsyna
- *The Lifecycle Stable Analysis Patter*: Fayad

Discussion Session

Closing remarks

Workshop 9: The First IEEE International Workshop on Software Engineering Challenges in the Automotive Domain (SECAD)

15:30-17:00 Workshop Organizers: Fabrizio Fabrini, Mario Fusani, Giuseppe Lami Istituto di Scienza e Tecnologie dell'Informazione "Alessandro Faedo"

Area della Ricerca CNR di Pisa (**Room (Room: SH-2)**)

- *Method Based on OSEK/VDX Platform Using Model-based and Autocode Technology for Diesel ECU Software Development Chunyang MU*: LiningSUN, Zhijiang DU, Yanchun CHEN
- *A Component Model for the AUTOSAR Virtual Function Bus*: Dietmar Schreiner, Karl M. Göschka
- *Repository based Infrastructures for effective Automotive Software Creation - an Experience Report*: Olaf Kath, Marc Born, Michael Soden
- Panel: *Automotive Software: Software Engineering challenges, Business opportunities*

Workshop 10: The First IEEE International Workshop on Development and Application of Knowledge Based Software Engineering Tool (KASET)

Organizer and chair: Li Jiang, University of Adelaide, Australia; Armin Eberlein, American University of Sharjah, UAE; Lawrence Chung, The University of Texas at Dallas, USA.

10:00–11:30 Session 1:

Chair: Rudolf Ramler (**Room: SH-4**)

- *Setting and Evaluation of Flexible Points on Software User Interface*: Limin Shen, Wenwen Jiang, Chunyan Gao
- *Observing Distributions in Size Metrics: Experience from Analyzing Large Software Systems*: Rudolf Ramler, Klaus Wolfmaier, Thomas Natschlaeger

- *Software Reliability Growth Modelling using a Weighted Laplace Test Statistic*: Yan Luo, Torsten Bergander, A. Ben Hamza

11:30-13:30 Lunch Break

13:30-15:30 Session 2

Chair: Li Jiang (Room: SH-4)

- *A Collaborative System for Software Engineering Education*: Hong Zhang, Hongjun Su
- *A REQUIREMENTS PROCESS ENGINEERING TOOL*: Li Jiang, Eberlein Armin
- *Agents, Cases-Based Reasoning and their relation to the Mexican Software Process Model (MoProSoft)*: Elena Cardenas Vargas, Hanna Oktaba, Silvia Guardatti Buemo, Ana Lilia Laureano Cruces

15:30-17:00 Session 3

Chair: LinPeng Huang (Room: SH-4)

- *Research on Dynamic Update Transaction for Java Classes*: Shi Zhang, LinPeng Huang
- *Ontologies, JavaBeans and Relational Databases for enabling semantic*: Ioannis Athanasiadis, Ferdinando Villa, Andrea-Emilio Rizzoli
- *CGR: a Tool for Programming Using Schemes*: Jonatan Garcia, Antonio Gavilanes Ana Gil, Pedro Jesus Martin

15:30-17:00 Session 4

Chair: Hsin-Yi Jiang (Room: SH-8)

- *System Modification Case Studies*: Yulin Ding, Yan Zhang
- *A History-Based Automatic Scheduling Model for Personnel Risk Management*: Hsin-Yi Jiang, Carl K. Chang, Jinchun Xia, Shuxing Cheng
- *Managing Policy Interactions in KNX-Based Smart Homes*: Mohamed Shehata, Armin Eberlein, Abraham Fapojuwo, AbdAllah Mohamed

Workshop 11: The First IEEE International Workshop on Software Engineering for Adaptive Software Systems (SEASS 2007)

Organizer and Chair: Yan Liu, National ICT Australia, Australia; Liming Zhu, National ICT Australia, Australia; Ian Gorton, Pacific Northwest National Laboratory, Australia; Shiping Chen, CSIRO ICT Centre, Australia; Qing Wang, Chinese Academy of Science, China

10:00–11:00 Invited Talk

The Four Major Challenges of Engineering Adaptive Software Architecture: Jun Han and Alan Colman, Swinburne University of Technology, Australia

11:00-11:50 Session 1: Software Architecture

Chair: (Room: SH-5)

- *A Service-oriented Approach for Flexible Information Resource Integration*: Zhuohao Wang, Zhuofeng Zhao, Jun Fang
- *Adaptability Evaluation of Software Architectures: A Case Study*, by Pentti Tarvainen

11:50 - 12:05: AM Break

12:05 - 12:30: Session 2: Requirement Engineering and Decision Making

(Room SH-5)

- *Decision Support for Dynamic Adaptation of Business Systems Based on Feature Binding Analysis*: Liwei Shen, Xin Peng, Wenyun Zhao

12:30 - 14:00: Lunch Break

14:00 - 14:25: Session 2 continues

(Room: SH-5)

- *Towards Requirements Engineering for Context Adaptive Systems*: Wassiou Sitou, Bernd Spanfelner

14:25 - 15:15: Session 3: Domain Specific Adaptation

- *Toward Runtime Self-adaptation Method in Software-Intensive Systems Based on Hidden Markov Model*: Hua Wang, Jing Ying
- *An Adaptive Approach for Web Cache Pre-fetching*: Wenying Feng, Hua Chen

15:15 - 15:30: PM Break

15:30 - 16:20: Session 3 continues

(Room: SH-5)

- *SLA-based Data Integration on Database Grid*: Tiezheng Nie, Guangqi Wang, Derong Shen, Meifang Li, Ge Yu
- *A Framework for Separation of Concerns in Concurrent Programming*: Rafael Ramirez, Andrew Santosa

16:20 - 17:00: Panel discussion and Conclusion

(Room SH-5)

Workshop 12: The First IEEE International Workshop on Quality Oriented Reuse of Software (QUORS)

Organiser and chair: Xiaodong Liu, Napier University, UK; Hongji Yang, De Montfort University, UK; Kyo Kang, Pohang University of Science & Technology, Korea.

10:00 – 10:45 Keynote Session:

Chair: Hongji Yang, De Montfort University, UK (Room: SH-6)

10:45 – 12:30 Session 1: Aspects and SE

Chair: Xiaodong Liu, Napier University, UK (Room: SH-6)

- *Improvement of Object-Oriented System Analysis and Design with Aspects*: Guo Yanhong, Teng Guifa, Li Yueli, Wang Fang, Zhao Yang, Ma Jianbin
- *Using Aspect Orientation in Understanding Legacy COBOL Code*: Jianjun Pu, Zhuopeng Zhang, Jian Kang, Yang Xu, Hongji Yang
- *A Connector-Centric Approach to Aspect-Oriented Software Evolution*: Yiming Liu, Wenyun Zhao, Xin Peng, Shan Tang

12:30 – 14:00 Lunch Break

14:00 – 15:40 Session 2: Components and QoS

Chair: Hongji Yang, De Montfort University, UK (**Room: SH-6**)

- *The Empirical Studies on Quality Benefits of Reusing Software Components*: Jingyue LI, Anita GUPTA, Jon Arvid Børretzen, Reidar Conradi
- *A Product Line Based Aspect-Oriented Generative Unit Testing Approach to Building Quality Components*: Yankui Feng, Xiaodong Liu, Jon Kerridge
- *An Automatic Connector Generation Method for Dynamic Architecture*: Yiming Yang, Xin Peng, Wenyun Zhao
- *Four Automated Approaches to Analyze the Quality of UML Sequence Diagrams*: Marcel van Amstel, Christian Lange, Michel Chaudron

15:40 – 16:15 Break / Panel Discussion

16:15 – 17:30 Session 3: Internet Applications

Chair: Marcel van Amstel, Technology University Eindhoven, Netherlands (**Room: SH-6**)

- *QoS-driven Service Selection Optimization Model and Algorithms for Composite Web Services*: Wentao Zhang, Yan Yang, Shengqun Tang, Lina Fang
- *Verification of Web Service Conversations Specified in WSCL*: Zhifeng Gu, Juanzi Li, Jie Tang, Bin Xu, Ruobo Huang
- *Quality Metrics for Internet Applications: Developing "New" from "Old"*: Shikun Zhou, Xiaodong Liu

Workshop 13: The First IEEE International Workshop on Testing Emerging Software Technology (TEST'07)

Organiser and Chair: Sami Beydeda, ZIVIT, Germany; David Kung, University of Texas at Arlington, USA

10:00–11:30 Session 1: Test models, methods and tools for new technologies

(**Room: SH-7**)

- *A Unified Framework of the Modeling of Fault-Detection and Fault-Correction Processes in Software Reliability Analysis*: Jung-Hua Lo
- *Automated Testing EJB Components Based on Algebraic Specifications*: Liang Kong, Hong Zhu, Bin Zhou
- *Built-in Regression Testing for Component-based Software Systems*: Chengying Mao
- *Towards Automatic Regression Test Selection for Web Services*: Michael Ruth, Shengru Tu

11:30 – 13:30 Lunch Break

13:30–17:00 Session 2

Chair: *Chair: Hong Zhu* (**Room: RB-6**)

- *Generating User Acceptance Test Plans from Test Cases*: Karl R.P.H. Leung, W.L. Yeung
- *Client based Object-Oriented Cohesion Metrics*: Sami Mäkelä, Ville Leppänen
- *A new approach to detecting dynamic memory errors in C programs*: Dae Wan Cho, Hyeon Soo Kim
- *Learning Parameterized State Machine Model for Integration Testing*: Muzammil Shahbaz, Keqin Li, Roland Groz

Workshop 14: The First IEEE International Workshop on Security in Software Engineering (IWSSE)

Organizer and chair: Michael Jiang, Motorola Labs, USA; Patrick McDaniel, Pennsylvania State University, USA; Jan Jurjens, the Open University, UK; Yan Liu, Motorola Labs, USA.

10:00-11:30 Session 1

Chair: Michael Jiang (**Room: SH-8**)

- *ACIR: An Aspect-Connector Based Intrusion Response Approach for Component-Based Software*: Mohammad Uddin, Hossain Shahriar, Mohammad Zulkernine
- *Test Generation from Security Policies Specified in Or-BAC*: Keqin Li, Laurent Mounier, Roland Groz
- *An Adaptive Security Model for Multi-agent Systems and Application to a Clinical Trials Environment*: Liang Xiao, Andrew Peet, Paul Lewis, Srinandan Dasmahapatra, Carlos Sáez, Madalina Croitoru, Javier Vicente, Horacio González-Vélez, Magí Lluch

14:00-16:00 Session 2

Chair: Michael Jiang (**Room: SH-8**)

- *Avoiding Privacy Violation for Resource Sharing in Ad hoc Networks of Pervasive Computing Environment*: KM Asif, Sheikh Ahamed
- *Conformance Checking of Access Control Policies Specified in XACML*: Vincent Hu, Evan Martin, Tao Xie
- *Process activities supporting security principles*: Koen Buyens, Riccardo Scandariato, Wouter Joosen

COMPSAC 2007 Doctoral Symposium

Organizer

Wednesday July 25 2007

13:30-17:00, PM Break 15:00-15:30 (Room: RB-4)

Session Chairs:

- *Challenges in Selecting COTS Component Guideline*: Walisa Romsaiyud
- *Management and Control of Coding and Testing of Component-based Software*: Tatiane Lopes, Clovis Fernandes
- *Functional Specifications of Object Oriented Systems: A Model Driven Framework*: Sabnam Sengupta, Swapan Bhattacharya
- *Model Checking of Component Connectors*: Mohammad Izadi, Ali Movaghar, Farhad Arbab
- *Towards End User Service Composition*: Xuanzhe Liu, Gang Huang, Hong Mei

COMPSAC 2007 Fast Abstract

Thursday July 26, 2007

13:30-15:10 (Room: JB-4)

Session 1: Software Engineering Methods and Tools

Chair: Eric Yu

- *An Empirical Evaluation of Fault-based Testing for General Boolean Specifications*: Zhenyu Chen, Baowen Xu, Changhai Nie
- *Patterns Topology for Performance Evaluation*: Mohamed. E. Fayad
- *Mining Software Repositories to Understand the Performance of Individual Developers*: Shen Zhang, Yongji Wang, Feng Yuan, Li Ruan
- *Adaptive Performance Tuning for Internet-Based Workflows*: Paolo Vercesi, Alberto Bartoli
- *Towards Capability Maturity in Software Review*: Bin Xu, Hua Hu, Xiaohu Yang
- *Fuxi: An agile development environment for embedded systems*: Zhongbin Wang
- *OCL4X: An Action Semantics Language for UML Model Execution*: Jiang Ke, Zhang Lei, Miyake Shigeru

Thursday July 26, 2007

15:30-17:00 (Room: JB-4)

Session 2: Software Applications

Chair: Chi-Hung Chi

- *WEB-service architecture; a solution for e-governement application*: Aurelie Aurilla Bechina arntzen
- *An Aspect-Oriented Intrusion Detection Framework*: Zhi Jian Zhu, Mohammad Zulkernine
- *An Innovative Workflow Product Structure: All Application Data Are Relevant to Workflow*: Haiping Zha, Jianming Wang
- *Matrix-based Change Impact Analysis for Component-based Software*: Chengying Mao, Jinlong Zhang, Yansheng Lu
- *An Novel Authentication Scheme Based on Trust-value Updated Model in Ad Hoc Network*: Ya-tao YANG, Yong FANG, Ping ZENG, Ya-ping CHI
- *luv: A Programming Language for Describing Human Relationships*: Michael de la Maza
- *The Execution Mechanism of Service Proxy in the Web Services Composition Execution Engine*: Chunming Gao, Xiaojuan Yuan, Huowang Chen