# Program

## Sponsored by

<table>
<thead>
<tr>
<th>Sponsor</th>
<th>Platinum Supporter</th>
<th>Sponsor</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="IEEE" /></td>
<td><img src="image" alt="Nokia" /></td>
<td><img src="image" alt="IEEE Computer Society" /></td>
</tr>
<tr>
<td><img src="image" alt="Intuit" /></td>
<td><img src="image" alt="ABB" /></td>
<td><img src="image" alt="Siemens" /></td>
</tr>
</tbody>
</table>

### Bronze Supporters

- Intuit
- ABB
- Siemens

## Supported by

### Patrons

<table>
<thead>
<tr>
<th>Patron</th>
<th>Patron</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Space Systems Finland" /></td>
<td><img src="image" alt="TUCS" /></td>
</tr>
<tr>
<td><img src="image" alt="Iowa State University" /></td>
<td><img src="image" alt="Missouri S&amp;T" /></td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="National Chung Cheng University" /></td>
</tr>
</tbody>
</table>
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)

- 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)
- 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 IEEE International Workshop on Quality and Architectural Concerns in Open Source Software (QACOS 2008)
### Monday, July 28, 2008 : Workshops

<table>
<thead>
<tr>
<th>Room</th>
<th>B2033</th>
<th>B2034</th>
<th>B2035</th>
<th>B2036</th>
<th>B2037</th>
<th>B2038</th>
<th>B2039</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00-9:30</td>
<td>BINDIS 1</td>
<td>EOCS-MCP1</td>
<td>ESAS 1</td>
<td>IWSC 1</td>
<td>IWSE 1</td>
<td>REFS 1</td>
<td>RTSOAA 1</td>
</tr>
<tr>
<td>9:30-10:00</td>
<td>AM Break</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00-11:30</td>
<td>BINDIS 2</td>
<td>EOCS-MCP2</td>
<td>ESAS 2</td>
<td>IWSC 2</td>
<td>IWSE 2</td>
<td>REFS 2</td>
<td>RTSOAA 2</td>
</tr>
<tr>
<td>11:30-13:30</td>
<td>Lunch</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13:30-17:30</td>
<td>BINDIS3,4</td>
<td>EOCS-MCP3</td>
<td>ESAS 3,4,5</td>
<td>IWSC 3,4</td>
<td>MDDAS 1,2</td>
<td>REFS 3,4,5</td>
<td>RTSOAA 3,4</td>
</tr>
<tr>
<td>19:00-21:00</td>
<td>COMPSAC 2008 Welcome Reception (Turku City Hall)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Tuesday, July 29, 2008 : The First Conference Day

<table>
<thead>
<tr>
<th>Room</th>
<th>BETA</th>
<th>GAMMA</th>
<th>DELTA</th>
<th>OMEGA</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30-10:00</td>
<td>Welcome: Carl Chang, Chair, COMPSAC Steering Committee (University Amphitheatre)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Opening Remark: Rangachar Kasturi, President, IEEE Computer Society</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conference General Chairs: Jan Bosch, Johnny Wong, Program Chairs: Hannu Tenhunen, T. Ming Jiang, Frank Liu</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00-10:30</td>
<td>AM Break</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:30-12:00</td>
<td>T1: Requirements 1</td>
<td>T2: Embedded 1</td>
<td>T3: Quality 1</td>
<td>T4: Testing 1</td>
</tr>
<tr>
<td>12:00-13:30</td>
<td>Lunch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13:30-15:00</td>
<td>Panel 1</td>
<td>T5: Testing 2</td>
<td>T6: Quality 2</td>
<td>T7: Informatics 1</td>
</tr>
<tr>
<td>15:00-15:30</td>
<td>PM Break</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15:30-17:00</td>
<td>T8: Requirements 2</td>
<td>T9: Doctoral</td>
<td>T10: Quality 3</td>
<td>Panel 2</td>
</tr>
<tr>
<td>18:30-21:00</td>
<td>COMPSAC 2008 Conference Reception (cash bar begins at 18:30)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Wednesday, July 30, 2008 : The Second Conference Day

<table>
<thead>
<tr>
<th>Room</th>
<th>BETA</th>
<th>GAMMA</th>
<th>DELTA</th>
<th>OMEGA</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30-10:00</td>
<td>Welcome: Medical Robotics and Computer-Integrated Surgery, Russell Taylor; Chaired by: Johnny Wong</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00-10:30</td>
<td>AM Break</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:30-12:00</td>
<td>W1: Formal method 1</td>
<td>Panel 3</td>
<td>W2: Evolution 1</td>
<td>W3: Architecture 1</td>
</tr>
<tr>
<td>12:00-13:30</td>
<td>Lunch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15:00-15:30</td>
<td>PM Break</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15:30-17:00</td>
<td>W7: Formal method 2</td>
<td>W8: Evolution 3</td>
<td>W9: Architecture 3</td>
<td></td>
</tr>
<tr>
<td>18:30-21:00</td>
<td>COMPSAC 2008 Banquet (The Castle. Bus Transportation Will Be Provided)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Thursday, July 31, 2008 : The Third Conference Day

<table>
<thead>
<tr>
<th>Room</th>
<th>BETA</th>
<th>GAMMA</th>
<th>DELTA</th>
<th>OMEGA</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30-9:30</td>
<td>Welcome: Generation Y: Understanding the Trend and Planning for the Impact, Jean Holley; Chaired by: Frank Liu (University Amphitheatre)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:30-10:00</td>
<td>AM Break</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00-12:00</td>
<td>H1: Embedded 2</td>
<td>H2: Education 1</td>
<td>H3: Security 1</td>
<td>H4: Architecture 4</td>
</tr>
<tr>
<td>12:00-13:30</td>
<td>Lunch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13:30-15:00</td>
<td>Plenary Panel 1: 40 Years of Software Engineering (part 1)–How far have we come? (Moderator: Fevzi Belli) ROOM: ALFA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15:00-15:15</td>
<td>PM Break</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15:15-16:45</td>
<td>H5: Testing 3</td>
<td>H6: Best Practice</td>
<td>H7: Architecture 5</td>
<td></td>
</tr>
<tr>
<td>16:45-18:00</td>
<td>COMPSAC 2009 Planning Meeting (ROOM: OMEGA) All Are Invited!</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Friday, August 1, 2008 : Workshops

<table>
<thead>
<tr>
<th>Room</th>
<th>B2032</th>
<th>B2033</th>
<th>B2034</th>
<th>B2035</th>
<th>B2036</th>
<th>B2037</th>
<th>B2038</th>
<th>B2039</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00-9:30</td>
<td>Plenary Panel 2: 40 Years of Software Engineering (part 2)–How far can we go in the next 40 years? (Conference Hall, Moderator: Cristina Seceleanu) ROOM: ALFA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:30-10:00</td>
<td>AM Break</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00-11:30</td>
<td>SemBPM 1,2</td>
<td>SECAD 1,2</td>
<td>QUORS 1,2</td>
<td>SECASA 1</td>
<td>CORCS 1</td>
<td>QACOS 1,2</td>
<td>STPSA 1</td>
<td>IEESD-1</td>
</tr>
<tr>
<td>12:15-13:30</td>
<td>Lunch</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13:30-15:00</td>
<td>SemBMP 3</td>
<td>SECAD 3</td>
<td>QUORS 3</td>
<td>SECASA 2</td>
<td>CORCS 2</td>
<td>QACOS 3</td>
<td>STPSA 2</td>
<td>IEESD-2</td>
</tr>
<tr>
<td>15:00-15:20</td>
<td>PM Break</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15:20-18:00</td>
<td>SemBMP 4</td>
<td>SECAD 4</td>
<td>QUORS 4</td>
<td>SECASA 3</td>
<td>CORCS 3</td>
<td>QACOS 4</td>
<td>STPSA 3</td>
<td></td>
</tr>
</tbody>
</table>
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 Secceleanu, 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
- So/M: A Requirements Definition Tool using Characteristics of Existing Similar Systems: Naoyuki Kitazawa, Akira Osada, Kazuyuki Kamijo, Haruhiko Kiyai, Kenji Kajiwri

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 Subramanyan (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 Subramanyan, Mikio Aoyama, Tiberiu Secceleanu, 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

10:00-10:30 AM Break
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, Guitha 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: Jasmina 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)
- 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
- 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, ChangzhiZhao, 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, Josimeiro 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 Goaer, Dalila Tamzalit, Mourad Oussalah, Djamel-Abdelhak Seria
- 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
- Analyzing BPEL Compositionality Based on Petri Nets: Guisheng Fan, Huiqun Yu, Liqiong Chen, Dongmei Liu
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)
- 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
- 12P 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)
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
(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
  Kutila 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 Ongenae, 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
Ménel 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 Nurmuliani, 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 Jenni 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

(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
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 Waignier, Anne-Françoise Le Meur
- Design Methodology for a Modular Component based Software Architecture
  Michael Caragiozidis, Nikos Mouratidis, Christofoforos Kavadias, Michael Loupis, Michael Berger
- An Enhanced Autonomic Multiclass Multithreaded Web Server: A Performance Model Approach
  Ali Doostmohammadi, Morteza Analoui

(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


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 Tsai, 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
  Markus Mathes
- A Verification Method for Temporal Consistency of Service Flow
  Ruijuan Liu, Guilan 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)

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, ABB, 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
  Dominic Savio, Stamatis Karnouskos, Daniel Wuwer, Thomas Bangemann.
• The On-Board Control Procedures Subsystem the Herschel and Planck Satellites
  Massimo Ferraguto, Tim Wittrock, Mark Barrensheen, 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 Cimato
• 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 Subramanyan, 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: Björn Lundell (University of Skövde, Sweden)
- Towards a Process Maturity Model for OSS
  Marcus Ciolkowski, Martin 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
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


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
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
  Anatoliy Gorbenko, Alexander Romanovsky, Vyacheslav Kharchenk
• Towards Distributed Management of Service-oriented Computing Infrastructures
  Roman Belter, Rolf Kluge


Organisers and chair: Cristina Seceleanu, 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 Seceleanu, 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
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.
COMPSAC 2008 Conference Organization

General Co-Chairs
Jan Bosch, Intuit Inc., USA
Johnny Wong, Iowa State University, USA

Program Co-Chairs
Hannu Tenhunen, Turku University of Turku, Finland
T. Ming Jiang, National Chung Cheng University, Taiwan
Xiaoqing(Frank) Liu, University of Missouri-Rolla, USA

Best Practice Track Co-Chairs
Juha-Markus Aalto, Nokia, Finland

Education Track Co-Chairs
Pradip Sriramani, Clemson University, USA
Nancy Mead, Carnegie Mellon University, USA

Embedded Systems Track Co-Chairs
Ahmed Jerraya, MINATEC, France
Sahra Sedigh, University of Missouri-Rolla, USA

Formal Methods Track Co-Chairs
Cristina Seceleanu, Mälardalen University, Sweden
Rustan Leino, Microsoft Research, USA

Informatics Track Co-Chairs
Bruce McMillin, University of Missouri-Rolla, USA
Roy Campbell, University of Illinois at Urbana-Champaign, USA

Mission Critical Track Co-Chairs
Ivica Crnkovic, Mälardalen University, Sweden
Stephen Chen, Motorola Software Group, USA

Software Quality Track Co-Chairs
Rajesh Subramanayan, Siemens Corporate Research, USA
Joao Cangussu, University of Texas at Dallas, USA

Software & System Evolution Track Co-Chairs
Samik Basu, Iowa State University, USA

Security Track Co-Chairs
Sheikh Alahmed, Marquette University, USA
Virgil Gligor, Carnegie Mellon University, USA

Software Architecture Track Co-Chairs
Paolo Bellavista, University of Bologna, Italy
Karl Leung, Vocational Training Council, Hong Kong, China.

Software & System Evolution Track Co-Chairs
Samik Basu, Iowa State University, USA

Testing Track Co-Chairs
Fevzi Belli, University of Paderborn, Germany
Eric Wong, University of Texas at Dallas, USA

Organization Chair
Jinchun Xia, Iowa State University, USA

Workshop Co-Chairs
Mehmet A Orgun, Macquarie University, Australia
Lin Liu, Tsinghua University, China

Fast Abstract Chair
Hsinyi Jiang, Iowa State University, USA

Doctoral Symposium Chair
Jin Li, Iowa State University, USA

Proceedings Chair
Wie Leppänen, University of Turku and TUCS, Finland

Finance Co-Chairs
Simanta Mitra, Iowa State University, USA
Christel Donner, Turku Center for Computer Science, Finland

Local Arrangements Co-Chairs
Irmeli Laine, Turku Center for Computer Science, Finland
Tomi Mäntylä, University of Turku, Finland

Industry Liaison
Sassan Avessta, Digital Media Service Innovations (DIMES), Finland

Registration Chair
Kaishin Lu, Iowa State University, USA

On-site Registration Chair
Jaana Lindgren Congress Office, University of Turku, Finland

Web Chair
Hua Ming, Iowa State University, USA

Program Committee
Sheikh Alahmed, USA
Mikio Aoyama, Japan
Doo-Hwan Bae, Korea
Samik Basu, USA
Paolo Bellavista, Italy
Fevzi Belli, Germany
Koen Bertels, The Netherlands
Maarten Boasson, The Netherlands
Victor Bos, Finland
Kai-Yuan Cai, China
Roy Campbell, USA
Joao W. Cangussu, USA
Dave Card, USA
W.K. Chen, Hong Kong

Stephen Chen, USA
T.Y. Chen, Australia
Y. C. Chen, Taiwan
Shing-Chi Cheung, Hong Kong
William Chu, Taiwan
Ivica Crnkovic, Sweden
James Cross, USA
Alfredo Cuzzocrea, Italy
Alan Davis, USA
Rado Doganu, Romania
Atilla Elçi, North Cyprus
Vladimir Getov, UK
Virgil Gligor, USA
Limpeng Huang, China
Mohamed Jemni, Tunisia
Ahmed Jerraya, France
Hsin-yi Jiang, USA
Li Jang, Australia
Lujie Jiang, China
Michael Jiang, USA
Juergen Kazmeier, USA
John Koo, China
Dave Kung, USA
Robert Lai, China
Ville Leppänen, Finland
Karl Leung, Hong Kong
Jenny Li, China
Tingyue Li, Norway
Johan Liljus, Finland
Jigang Liu, USA
Lin Liu, China
Xiaodong Liu, UK
Yan Liu, Australia
Jian Lu, China
Juha-Markus Aalto, Finland
Bruce McMillin, USA
Nancy Mead, USA
Hong Mei, China
Armin Mikler, USA
Simanta Mitra, USA
Tien Nguyen, USA
Mehmet A Orgun, Australia
Daniel Paulish, Inc. USA
Paul Pettersson, Sweden
Klaus Pohl, Germany
Rustan Leino, USA
Juha Savolainen, Finland
Ina Schieferdecker, Germany
Cristina Seceleanu, Sweden
Sahra Sedigh, USA
Cristina Serban, USA
Sakir Sezer, UK
Jawed Siddiqi, UK
Pradip Sriramani, USA
Rajesh Subramanayan, USA
Michiharu Takemoto, Japan
Daniel Tauritz, USA
Marlon Vieira, USA
Feng-Jian Wang, Taiwan
Ji Wang, China
Qianxiang Wang, China
Jun Wei, China
Thomas Weigert, USA
Eric Wong, USA
Jinchun Xia, USA
Dianxiang Xu, China
Ji Wang, China
Feng-Jian Wang, Taiwan
Y. T. Yu, Hong Kong
Hong Zhu, UK
Mohammad Zulkernine, Canada

Steering Committee Members
Stephen S. Yau, Aditya Mathur, Dick Simmons, T.H. Tse, Eric Wong, Johnny Wong, Atilla Elçi, Hong Mei, Fevzi Belli, Bruce McMillin, and Carl K. Chang (Chair)