



Program for the 34th Annual IEEE International Computer Software and Applications Conference



COMPSAC 2010 *Computationally Smart Environments*

Seoul, Korea
July 19-23, 2010



IEEE  computer society

Thanks to our sponsors, co-organizers, and supporters:





Welcome to COMPSAC 2010!

Smart software solutions applied to diverse areas (including but not limited to Healthcare, energy, Social, Environmental, Industrial applications etc...) can improve efficiency, reliability, quality and simultaneously reduce costs. Requirement analysis, co-analysis/co-design, modelling, development, testing, measurement, verification, validation, performance, autonomy, safety, security, and dependability constraints are a few of numerous computing areas that can collectively contribute to these smart solutions and are some of the topics of interest. The program of COMPSAC 2010 features research and industrial practice papers with a wide range of topics, focusing, but not exclusively, on software and middleware development for distributed platforms, services computing, cloud computing, and mobile systems.

To properly engineer smart solutions, the foundations, methodologies, and mechanisms that support the design, modelling, and evaluation of software systems and computer applications must come from diverse sources. Multidisciplinary work, research and development of software prototypes, industry-university collaborations, all based on new emerging and critical technologies are of particular interest to this conference. All accepted papers have been published in the electronic proceedings by the IEEE Computer Society, indexed through INSPEC and EI Index, and automatically included in the IEEE digital library.

Thanks for your participation in COMPSAC 2010, from the key organizing team

Doo-Hwan Bae, General Chair

Sungdeok (Steve) Cha, Program Chair

Rajesh Subramanyan, Program Chair

Eric Wong, Program Chair

Sheikh Iqbal Ahamed, Workshops Chair

Sumi Helal, Panels Chair

Wolfgang Minker, Panels Chair

Carl K. Chang, Standing Committee Chair

COMPSAC 2010 Program at a Glance:

Monday July 19, 2010: COMPSAC WORKSHOPS					
Room	Meeting Room 2A (3 rd floor)	Meeting Room 2B (3 rd floor)	Meeting Room 3 (3 rd floor)	Meeting Room 5 (Lower Level)	Classic 7 (7 th floor)
8:30-10:00	REFS I	STA I	IWSC I	BINDIS I	CFSE
10:00-10:30	AM Break				
10:30-12:00	REFS II	STA II	IWSC II	BINDIS II	STPSA I
12:00-13:30	Lunch				
13:30-15:00	REFS III	CloudApp I	IWSC III	QUORS I	STPSA II
15:00-15:30	PM Break				
15:30-17:00	REFS IV	CloudApp II	IWSC IV	QUORS II	STPSA III
Tuesday July 20, 2010					
8:30-10:15	<p>Grand Ballroom: Joint Session Opening and Welcome Remarks Doo-Hwan Bae, General Chair COMPSAC 2010 Carl K. Chang, Chair COMPSAC Standing Committee Katsuyuki Yamazaki, Chair SAINT Standing Committee Jim Isaak, 2010 IEEE Computer Society President Norio Shiratori, President, Information Processing Society of Japan (IPSI) Jin Pyo Hong, President, Korea Institute of Information Scientists and Engineers (KIISE)</p> <p>Computer Society Outstanding Contribution Awards presented by Stephen Yau, Founder, COMPSAC</p> <p>COMPSAC Best Paper Awards: COMPSAC Program Chairs: Sungdeok Cha, Rajesh Subramanyan, and Eric Wong</p> <p>SAINT Best Paper Awards: Yasuo Okabe, Gul Agha, Choong Seon Hong, SAINT General Co-Chairs</p> <p>COMPSAC/SAINT Joint Keynote John Gustafson, Intel Labs, Santa Clara, USA <i>Defining Computer "Speed": An Unsolved Problem</i> Chaired by: Vladimir Getov, Westminster University, UK</p>				
10:15-10:45	AM Break				
Room	Meeting Room 2 (3 rd flr)	Meeting Room 3 (3 rd flr)	Grand Ballroom A (5 th flr)	Grand Ballroom C (5 th flr)	Classic 7 (7 th flr)
10:45-12:15	Security and Dependability I	Software Architecture and Design I	Mobile & Pervasive Computing I	Verification and Testing I	Panel I: <i>Are We Headed Toward Smart Solutions?</i>
12:15-13:30	Lunch				
13:30-15:00	<p>Grand Ballroom: COMPSAC Plenary Panel <i>Challenges and Future Directions of Software Technology</i> Chaired by: Stephen Yau</p>				

15:00-15:30	PM Break				
15:30-17:00	Security and Dependability II	Software Architecture and Design II	Software Quality I	Verification and Testing II	Fast Abstract I
18:30-21:00	Grand Ballroom: COMPSAC/SAINT Joint Presidential Reception				
Wednesday July 21, 2010					
8:30-10:00	Grand Ballroom:COMPSAC/SAINT Joint Keynote Kyo Chul Kang, POSTECH, Korea <i>Software Engineering vs. Product Line Engineering</i> Chaired by: Doo Hwan Bae, KAIST, Korea				
10:00-10:30	AM Break				
Room	Meeting Room 2 (3 rd flr)	Meeting Room 3 (3 rd flr)	Grand Ballroom A (5 th flr)	Grand Ballroom C (5 th flr)	Classic 7 (7 th flr)
10:30-12:00	Security and Dependability III	Software Evolution and Maintenance I	Mobile and Pervasive Computing II	Requirements Engineering	Doctoral Symposium
12:00-13:30	Lunch				
13:30-15:00	Afternoon: Tours of Secret Garden and National Museum of Korea – bus leaves from JWM at 12:30. Box lunch will be served on the bus. Return buses board at 17:30.				
15:00-15:30					
15:30-17:30					
18:30-20:30	Grand Ballroom: COMPSAC 2010 BANQUET				
20:30-22:00	Joint Planning Meeting: COMPSAC/SAINT 2011 (Munich, Germany) All participants welcome – location will be announced at the registration desk				
Thursday, July 22, 2010					
8:30-9:30	Grand Ballroom: COMPSAC/SAINT Joint Keynote Tim Grance, National Institute of Standards and Technology, USA <i>Defining, Securing, and Standardizing Cloud Computing</i> Chaired by: Jeffrey Voas				
9:30-10:00	AM Break				
Room	Meeting Room 2 (3 rd flr)	Meeting Room 3 (3 rd flr)	Grand Ballroom A (5 th flr)	Grand Ballroom C (5 th flr)	Classic 7 (7 th flr)
10:30-12:00	Grand Ballroom: COMPSAC/SAINT Joint Plenary Panel <i>The Future of the Internet</i> Chaired by: Erji Kawai, Elisa Bertino, Sue Moon				
12:00-13:30	Lunch				
13:30-15:00	Smart Computing	Software Evolution and Maintenance II	Performance Engineering	Verification and Testing III	Formal Methods
15:00-15:30	PM Break				
15:30-17:00	Real Time & Embedded Systems	Web Engineering	Software Quality II	Verification and Testing IV	Panel II: <i>Towards New Roles and System Architecture Supporting the Full Life Cycle of Smart Spaces</i>
18:00-20:00	COMPSAC 2011 Planning Meeting (Invite only)				

Friday, July 23, 2010					
8:30-9:30	Grand Ballroom: COMPSAC/SAINT Joint Keynote Hassan Gomaa, George Mason University <i>Software Variability, Evolution, and Adaptation</i> Chaired by: Sooyong Park, Sogang University, Korea				
9:30-10:00	AM Break				
10:00-12:00	Grand Ballroom: COMPSAC/SAINT Joint Concluding Panel <i>Green IT: From Devices to Applications</i> Chaired by: Tohru Asami, Sahra Sedigh				
12:00-13:30	Lunch				
Room	Meeting Room 2A (3 rd floor)	Meeting Room 2B (3 rd floor)	Meeting Room 5 (Lower Level)	Meeting Room 3 (3 rd floor)	Classic 7 (7 th floor)
13:30-15:00	Fast Abstract II	ESAS I	ME I	STA	QUORS III
15:00-15:30	PM Break				
15:30-17:00	SAPSE	ESAS II	ME II		QUORS IV

MONDAY JULY 19, 2010: COMPSAC Workshops

8:30-10:00 COMPSAC Workshops

IWSC 2010: The 7th International Workshop on Software Cybernetics

Session I

Room: Meeting Room 3 (3rd floor)

Welcome from Workshop Chair: Keunhyuk Yeom, Pusan National University, Korea

Remarks from Chair of Steering Committee: Stephen S. Yau, Arizona State University, USA

Program Overview: Program Co-Chair, Zhi Jin, Peking University, China

Keynote Address: *Providing Robustness in Cyber Physical Systems*
Song Hyuk Son, University of Virginia, USA

BINDIS 2010: The 3rd IEEE International Workshop on Barriers towards Internet-Driven Information Services

Session I: Service Creation

Chair: Kwang-Jae Kim, Pohang University of Science & Technology, Korea

Room: Meeting Room 5 (Lower Level)

The Framework of Medical Simulation Education and Evaluation System for Supporting SaaS
Jia Shang, Jijiang Yang, Qing Wang, Hui Pan

A Study of Improving the Accuracy of Software Effort Estimation Using Linearly Weighted Combinations

Chao-Jung Hsu Nancy Urbina Rodas, Chin-Yu Huang, Kuan-Li Peng

CFSE 2010: The 2nd IEEE International Workshop on Computer Forensics in Software Engineering

Chair: Jigang Liu, Metropolitan State University, USA

Room: Classic 7 (7th floor)

Dynamic Analysis for the Reconstruction of System Behavior Models

Vasileios Koutsoumpas, Kostas Kontogiannis, Peter Matthews

Author Identification of Software Source Code with Program Dependence Graphs

Rong Chen, Lina Hong, Chunyan Lü, Wu Deng

XIDR: A Dynamic Framework Utilizing Cross-Layer Intrusion Detection for Effective Response Deployment

Igors Sveics, Tanmoy Sarkar, Samik Basu, Johnny Wong

REFS 2010: The 4th IEEE International Workshop on Requirements Engineering For Services

Session I

Chair: Lin Liu, Tsinghua University, China

Room: Meeting Room 2A (3rd floor)

9:00 – 10:30: Keynote Speech

Dimitris Karagiannis, University of Vienna

STA 2010: The 2nd IEEE International Workshop on Software Test Automation

Session I

Room: Meeting Room 2B (3rd floor)

Keynote Speech

Following Keynote: paper presentation

An Optimization Strategy for Evolutionary Testing Based on Cataclysm

Meng Wang, Bixin Li, Zhengshan Wang, Xiaoyuan Xie

10:00-10:30 AM Break

10:30-12:00 COMPSAC Workshops

IWSC 2010: The 7th International Workshop on Software Cybernetics

Session II

Chair: Tugkan Tuglular, Izmir Institute of Technology, Turkey

Room: Meeting Room 3 (3rd floor)

Optimizing Requirements Elicitation with an i and Bayesian Network Integrated Modelling Approach*

Haochi Wu, Lin Liu, Wenting Ma, Wenzhong Feng, Junjun Sun

Delegation Patterns in Workflow Systems

Hwai-Jung Hsu, Feng-Jian Wang

Entropy-based Measures of Heterogeneity of Software Structural Profile

Bei-Bei Yin, Ling-Zan Zhu, Kai-Yuan Cai

BINDIS 2010: The 3rd IEEE International Workshop on Barriers towards Internet-Driven Information Services

Session II: Service Management

Chair: Jijiang Yang, Tsinghua University, China

Room: Meeting Room 5 (Lower Level)

ULMS: An Accelerator for the Applications by Shifting Writing Log from Local Disk to Clouds

Li Zhou, Yong Zhang, Chunxiao Xing

WS-Sim: A Web Service Simulation Toolset with Realistic Data Support

Wei She, I-Ling Yen, Bhavani Thuraisingham

STPSA 2010: The 5th IEEE International Workshop on Security, Trust, and Privacy for Software Applications

Session I: Protocol

Session Chair: Bruce McMillin, Missouri University of Science & Technology, USA

Room: Classic 7 (7th floor)

Analysis of Two Watermarking Protocols based on Commutative Encryption

Moesfa S. Mohamad, Geong Sen Poh

Access Control Contracts for Java Program Modules

Carlos E. Rubio-Medrano, Yoonsik Cheon

Service Security Analysis Based on i^ : An Approach from the Attacker Viewpoint*

Tong Li, Lin Liu, Golnaz Elahi, Eric Yu, Barrett R. Bryant

T-Kernel/SS: A Secure Filesystem with Access Control Protection Using Tamper-Resistant Chip

Takeshi Yashiro, Masahiro Bessho, Shinsuke Kobayashi, Noboru Koshizuka, Ken Sakamura

Flexible Prime Number Labeling for Resource Limited Clients

Dongchan An, Seog Park

REFS 2010: The 4th IEEE International Workshop on Requirements Engineering For Services

Session II: Services Requirements Identification, Analysis and Management

Chair: Colette Roland, University of PARIS-1 Panthéon Sorbonne, France

Room: Meeting Room 2A (3rd floor)

- 10:30-10:55 *Analyzing Interoperability Requirements for Adaptive Service-based Applications: A Goal-oriented Approach*
Nauman A. Qureshi, Cu D. Nguyen, Anna Perini
- 10:55-11:20 *Requirements and Tools for Variability Management*
Marco Aiello, Pavel Bulanov, Heerko Groefsema
- 11:20-11:40 *A Scenario Based Approach for Service Identification*
Suntae Kim, Minseong Kim, Vijayan Sugumaran, Sooyong Park
- 11:40-12:00 *A Framework for the Elicitation and Analysis of Information Technology Service Requirements and Their Alignment with Enterprise Business Goals*
Didar Zowghi, Zhi Jin

STA 2010: The 2nd IEEE International Workshop on Software Test Automation
Session II: Integration & Performance Testing
Room: Meeting Room 2B (3rd floor)

Using Coupling Measure Technique and Random Iterative Algorithm for Inter-Class Integration Test Order Problem

Zhengshan Wang, Bixin Li, Lulu Wang, Meng Wang, Xufang Gong

Normalized Adaptive Random Test for Integration Tests

Seung-Hun Shin, Seung-Kyu Park, Kyung-Hee Choi, Ki-Hyun Jung

Performance Testing: Far from Steady State

Rajesh Mansharamani, Amol Khanapurkar, Benny Mathew, Rajesh Subramanyan

12:00-13:30 Lunch

13:30-15:00 COMPSAC Workshops

IWSC 2010: The 7th International Workshop on Software Cybernetics
Session III
Chair: Qianxiang Wang, Peking University, China
Room: Meeting Room 3 (3rd floor)

Feedback Control Based Test Case Instantiation For Firewall Testing

Tugkan Tuglular, Gurcan Gercek

Using Coverage Information to Guide Test Case Selection in Adaptive Random Testing

Zhi Quan Zhou

A Parallel Implementation Strategy of Adaptive Testing

Hai Hu, Chang-Hai Jiang, Feng Ye, Kai-Yuan Cai, Dazhi Huang, Stephen S. Yau

QUORS 2010: The 4th IEEE International Workshop on Quality Oriented Reuse of Software

Session I: Service-Based Reuse

Chair: Marcel van Amstel, Eindhoven University of Technology, Netherlands

Room: Meeting Room 5 (Lower Level)

Towards Reusing ESB Services in Different ESB Architectures

Indika Kumara, Chandana Gamage

Negotiating Service Requirements among Strategic Actors

Tuoye Xu, Tong Li, Lin Liu, Barrett R. Bryant

Aspect-Oriented Development of PHP-based Web Applications

Shin Nakajima, Keiji Hokamura, Naoyasu Ubayashi

STPSA 2010: The 5th IEEE International Workshop on Security, Trust, and Privacy for Software Applications

Session II: Privacy and Access Control

Session Chair: Sheikh Iqbal Ahamed, Marquette University, USA

Room: Classic 7 (7th floor)

Privacy Preserving Distributed Learning Clustering of Healthcare Data Using Cryptography Protocols

Ahmed M. Elmisery, Huaiguo Fu

Privacy Preserving Outlier Detection using Hierarchical Clustering Methods

Ajay Challagalla, S.S. Shivaji Dhiraj, D.V.L.N. Somayajulu, Toms Shaji Mathew, Saurav Tiwari, Syed Sharique Ahmad

Invited talk on Secure Cloud

Bhavani M. Thuraisingham, University of Texas at Dallas, USA

REFS 2010: The 4th IEEE International Workshop on Requirements Engineering For Services

Session III: Position Statements on Requirements Engineering for Services

Chair: Sooyong Park, Sogang University, Korea

Room: Meeting Room 2A (3rd floor)

13:30-13:50 *A Requirement Maturity Measurement Approach Based on SKLSEWiki*
Rong Peng, Qiang Ye, Mao Ye

13:51-14:10 *Stakeholders-driven Requirements Semantics Acquisition for Networked Software Systems*
Bin Wen, Peng Liang, Keqing He

14:11-14:30 *Loosely-coupled SOA Service Access Provisioning*
Sean Gu

14:31-14:50 *Elicitation of Goals in Requirements Engineering using Agile Methods*
A.M. Sen, K. Hemachandran

CloudApp 2010: The 1st IEEE International Workshop on Emerging Applications for Cloud Computing
Session I

Chair: Ki-Woong Park, KAIST, Korea

Room: Meeting Room 2B (3rd floor)

LAYSI: A Layered Approach for SLA-Violation Propagation in Self-manageable Cloud Infrastructures
Ivona Brandic, Vincent C. Emeakaroha, Michael Maurer, Schahram Dustdar Sandor Acs, Attila Kertesz,
Gabor Kecskemeti

Permission Management System: Permission as a Service in Cloud Computing
Victor Echeverria, Lorie M. Liebrock, Dongwan Shin

An Anomaly Detection Framework for Autonomic Management of Compute Cloud Systems
Derek Smith, Qiang Guan, Song Fu

15:00-15:30 PM Break

15:30-17:00 COMPSAC Workshops

IWSC 2010: The 7th International Workshop on Software Cybernetics
Session IV

Room: Meeting Room 3 (3rd floor)

Natural Language Processing based Detection of Duplicate Defect Patterns
Qian Wu, Qianxiang Wang

Panel: *Future Directions of Software Cybernetics*

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

Panelists: Zhi Jin, Peking University, China
Song Hyuy Son, University of Virginia, USA
Tugkan Tuglular, Izmir Institute of Technology, Turkey
Keunhyuk Yeom, Pusan National University, Korea

QUORS 2010: The 4th IEEE International Workshop on Quality Oriented Reuse of Software
Session II: Quality, Reuse, and Evolution

Chair: Hongji Yang, De Montfort University, UK

Room: Meeting Room 5 (Lower Level)

Test Sequence Generation from Combining Property Modeling and Program Slicing

Hua Li, Yong-guang Peng, Xin-ming Ye, Jing-yuan Yue

Software Fault Prediction Models for Web Applications

Le Truong Giang, Dongwon Kang, Doo-Hwan Bae

The Level of Decomposition Impact on Component Fault Tolerance

Atef Mohamed, Mohammad Zulkernine

STPSA 2010: The 5th IEEE International Workshop on Security, Trust, and Privacy for Software Applications

Session III: Systems and Models

Session Chair: Mohammad Zulkernine, Queen's University, Canada

Room: Classic 7 (7th floor)

Enforcing Information Flow Security Properties in Cyber-Physical Systems: A Generalized Framework Based on Compensation

Thoshitha T. Gamage, Bruce M. McMillin, Thomas P. Roth

Natural Language Watermarking Based on Syntactic Displacement and Morphological Division

Mi-Young Kim, Osmar R. Zaiane, Randy Goebel

Semantic Analysis of UML2.0 Sequence Diagram Based on Model Transformation

Meixhia Zhu, Hanpin Wang, Wei Jin, Zizhen Wang, Chunxiang Xu

Environmental Obfuscation of a Cyber Physical System - Vehicle Example

Jason Madden, Bruce McMillin, Anik Sinha

REFS 2010: The 4th IEEE International Workshop on Requirements Engineering For Services

Session IV

Room: Meeting Room 2A (3rd floor)

Panel: *Requirements Engineering for Smart Services?*

Chair: Eric Yu, University of Toronto, Canada

Panelists: Marco Aiello, University of Groningen, Netherlands

Zhi Jin, Peking University, China

Dimitris Karagiannis, University of Vienna, Austria

Colette Roland, University of PARIS-1 Panthéon Sorbonne, France

CloudApp 2010: The 1st IEEE International Workshop on Emerging Applications for Cloud Computing

Session II

Chair: Ivona Brandic, Vienna University of Technology, Austria

Room: Meeting Room 2B (3rd floor)

The Case for Content Search of VM Clouds

Mahadev Satyanarayanan, Wolfgang Richter, Glenn Ammons, Jan Harkes, Adam Goode

FalconEye: Data Center Status Extraction using Vision-Transformation Techniques

Ki-Woong Park, Woomin Hwang, Kyu Ho Park

SecureCloud: Towards a Comprehensive Security Framework for Cloud Computing Environments

Hassan Takabi, James B.D. Joshi, Gail-Joon Ahn

TUESDAY JULY 20, 2010

8:30-10:15 Joint Opening Session Welcome Remarks, and Keynote

Doo-Hwan Bae, General Chair COMPSAC 2010

Carl K. Chang, Chair COMPSAC Standing Committee

Katsuyuki Yamazaki, Chair SAINT Standing Committee

Jim Isaak, 2010 IEEE Computer Society President

Norio Shiratori, President, Information Processing Society of Japan (IPSJ)

Jin Pyo Hong, President, Korea Institute of Information Scientists and Engineers (KIISE)

Computer Society Outstanding Contribution Awards

presented by Stephen Yau, Founder, COMPSAC

COMPSAC Best Paper Awards:

COMPSAC Program Chairs: Sungdeok Cha, Rajesh Subramanyan, and Eric Wong

SAINT Best Paper Awards:

SAINT General Co-Chairs: Yasuo Okabe, Gul Agha, Choong Seon Hong

COMPSAC/SAINT Joint Keynote: John Gustafson, Intel Labs Santa Clara, USA***Defining Computer "Speed": An Unsolved Problem***

Chaired by: Vladimir Getov, Westminster University, UK

10:15-10:45 Break**10:45-12:15 COMPSAC Paper Sessions****Security & Dependability I****Session Chair: Axel Hunger, Universitat Duisburg Essen, Germany****Room: Meeting Room 2 (3rd floor)***Towards Secure Virtual Directories: A Risk Analysis Framework*

William R. Claycomb, Dongwan Shin

Using a Hypervisor to Migrate Running Operating Systems to Secure Virtual Machines

Tsutomu Nomoto, Yoshihiro Oyama, Hideki Eiraku, Takahiro Shinagawa, Kazuhiko Kato

A New Concurrent Checkpoint Mechanism for Real-time and Interactive Processes

Jianwei Liao, Yutaka Ishikawa

Software Architecture & Design I

Session Chair: Hongji Yang, Demontfort University, UK

Room: Meeting Room 3 (3rd floor)

An Analysis of Tool-based Research in Software Engineering

Jonas Helming, Maximilian Koegel, Hoda Naguib, Miriam Schmidberger, Florian Schneider, Bernd Brügge

A Task-Oriented Navigation Approach to Enhance Architectural Description Comprehension

Wenhui Zhu, Tao Yang, Gang Huang, Yanchun Sun, Hong Mei

Improving Software Performance and Reliability with an Architecture-based Self-Adaptive Framework

Xu Zhang, Chung-Horng Lung

Mobile & Pervasive Computing I

Session Chair: Junehwa Song, KAIST, Korea

Room: Grand Ballroom A (5th floor)

An Approach for Ensuring Robust Safeguard against Location Privacy Violation

Chowduhury S. Hasan, Sheikh I. Ahamed

Design and Implementation of a Middleware for Development and Provision of Stream-based Services

Seungwoo Kang, Youngki Lee, Sunghwan Ihm, Souneil Park, Su-Myeon Kim, Junehwa Song

geoXmart - a Marketplace for Geofence-Based Mobile Services

Ulrich Bareth, Axel Küpper, Peter Ruppel

Verification & Testing I

Session Chair: Gregg Rothermel, University of Nebraska at Lincoln, USA

Room: Grand Ballroom C (5th floor)

Applying Particle Swarm Optimization to Pairwise Testing

Xiang Chen, Qing Gu, Jingxian Qi, Daoxu Chen

Using Load Tests to Automatically Compare the Subsystems of a Large Enterprise

Haroon Malik, Bram Adams, Ahmed Hassan, Paraminder Flora, Gilbert Hamann

GenRed: A Tool for Generating and Reducing Object-Oriented Tests

Hojun Jaygarl, Kai-Shin Lu, Carl Chang

COMPSAC Panel I: *Are We Headed Toward Smart Solutions?*

Chair: Rajesh Subramanyan, Siemens, USA

Room: Classic 7 (7th floor)

12:15-13:30 Lunch

**13:30-15:00 COMPSAC Plenary Panel, Grand Ballroom (5th floor)
Challenges and Future Directions of Software Technology
Chaired by Stephen S. Yau, Arizona State University, USA**

Panelists: Vladimir Getov, University of Westminster, UK
 John Gustafson, Intel Labs Santa Clara, USA
 Kane Kim, University of California, Irvine, USA
 Hong Mei, Peking University, China
 Bhavani Thuraisingham, University of Texas at Dallas, USA

15:00-15:30 PM Break

15:30-17:00 Paper Sessions

Security & Dependability II

Session Chair: Sheikh Iqbal Ahamed, Marquette University, USA

Room: Meeting Room 2 (3rd floor)

Representing and Reasoning about Web Access Control Policies

Gail-Joon Ahn, Hongxin Hu, Joohyung Lee, Yunsong Meng

A Novel Rubbing Encryption Algorithm and the Implementation of a Web Based One-time Password Token

Fred Cheng

IPTV Micropayment System based on Hash Chain using RFID-USB Module

Yoon-Su Jeong, Ning Sun, Sang-Ho Lee

Software Architecture & Design II

Session Chair: Lin Liu, Tsinghua University, China

Room: Meeting Room 3 (3rd floor)

Security in Context: Analysis and Refinement of Software Architectures

Thomas Heyman, Riccardo Scandariato, Wouter Joosen

Key Roles of Session State: Not against REST Architectural Style

Takeru Inoue, Hiroshi Asakura, Hiroshi Sato, Noriyuki Takahashi

An Adaptation Approach for Component-based Software Architecture

Makhlouf Derdour, Philippe Roose, Marc Dalmau, Nacéra Ghoualmi Zine, Adel Alti

Software Quality I

Session Chair: Mohammad Zulkernine, Queen's University, Canada

Room: Grand Ballroom A (5th floor)

Team Factors and Failure Processing Efficiency: An Exploratory Study of Closed and Open Source Software Development

Michael Grottke, Lars M. Karg, Arne Beckhaus

Target Setting for Technical Requirements in Time-stamped Software Quality Function Deployment

Xiaoqing (Frank) Liu, Praveen Inuganti, Kunio Noguchi, Yuji Kyoya

Towards a General Framework for Evaluating Software Development Methodologies

Shokoofeh Hesari, Hoda Mashayekhi, Raman Ramsin

Verification & Testing II

Session Chair: Anestis Toptsis, York University, Canada

Room: Grand Ballroom C (5th floor)

Effective Software Bug Localization Using Spectral Frequency Weighting Function

Hua Jie Lee, Lee Naish, Kotagiri Ramamohanarao

Detect Related Bugs from Source Code Using Bug Information

Deqing Wang, Mengxiang Lin, Hui Zhang, Hongping Hu

Model of Software Reliability with Coxian Distribution of Duration of Intervals between Errors Detections

Vladimir Bubnov, Alexey Tyrva, Anatoly Khomonenko

Fast Abstract I

Session 1: Smarter and Greener Computing

Session Chair: Eric Wong, University of Texas at Dallas, USA

Room: Classic 7 (7th floor)

Efficient Color Image Compression using Demosaicing

Evgeny Gershikov, Moshe Porat

Using Semantics-Enabled Information Retrieval in Requirements Tracing: An Ongoing Experimental Investigation

Anas Mahmoud, Nan Niu

An Empirical Comparison of Fault-prone Module Detection Approaches: Complexity Metrics and Text Feature Metrics

Osamu Mizuno, Hideaki Hata

Green Computing Methodology for Next Generation Computing Scientists
Chia-Tien Dan Lo, Kai Qian

18:30-21:00 Presidential Reception
Location: Grand Ballroom

WEDNESDAY JULY 21, 2010

8:30-10:00 COMPSAC/SAINT Joint Keynote: Kyo Chul Chang, POSTECH, Korea
Software Engineering vs. Product Line Engineering
Grand Ballroom

10:00-10:30 AM Break

10:30-12:00 Paper Sessions

Security & Dependability III

Session Chair: Feng-Jian Wang, National Chiao Tung University, Taiwan

Room: Meeting Room 2 (3rd floor)

A Consistency Model for Identity Information in Distributed Systems
Thorsten Hoellrigl, Jochen Dinger, Hannes Hartenstein

AntiBot: Clustering Common Semantic Patterns for Bot Detection
Younghee Park, Qinghua Zhang, Douglas Reeves, Vikram Mulukutla

A Weaker Knowledge Connectivity Condition Sufficient for Fault-Tolerant Consensus with Unknown Participants
Jichiang Tsai, Che-Cheng Chang

Software Evolution and Maintenance I

Session Chair: Mikio Aoyama, Nanzan University, Japan

Room: Meeting Room 3 (3rd floor)

Metamodel Recovery from Multi-Tiered Domains Using Extended MARS
Qichao Liu, Barrett Bryant, Marjan Mernik

Reasoning about Human Intention Change for Individualized Runtime Software Service Evolution
Hua Ming, Carl K. Chang, Katsunori Oyama, Hen-I Yang

An Interactive Change Impact Analysis based on an Architectural Reflexion Model Approach
Tae-hyung Kim, Kimun Kim, Woomok Kim

Mobile and Pervasive Computing II

Session Chair: William Chu, Tunghai University, Taiwan

Room: Grand Ballroom A (5th floor)

ucR Based Interoperable Spatial Information Model for Realizing Ubiquitous Spatial Infrastructure

Yukihiko Shigesada, Shinsuke Kobayashi, Noboru Koshizuka, Ken Sakamura

A Personalized Navigation Guide using a Social-Spatial Ontology

Hyunho Park, Gonzalo Huerta-Canepa, Dongman Lee, Ho Namkoong, Byoungoh Kim, Soon J. Hyun

A Scalable and Efficient Path Management Scheme for Internet-based Sensor Data Delivery Infrastructure

Kyungmin Cho, Younghyun Ju, Sungjae Jo, Yunseok Rhee, Junehwa Song

Requirements Engineering

Session Chair: Soo-Yong Park, Sogang University, Korea

Room: Grand Ballroom C (5th floor)

A Usability-pattern-based Requirements-analysis Method to Bridge the Gap between User Tasks and Application Features

Sang-Hyun Lee, In-Young Ko, Sungwon Kang, Dan-Hyung Lee

Managing Consistency Between Textual Requirements, Abstract, Interactions and Essential Use Cases

Massila Kamalrudin, John Grundy, John Hosking

Variability Modeling for Product Line Viewpoints Integration

Nan Niu, Juha Savolainen, Yijun Yu

Doctoral Symposium

Session Chair: Sahra Sedigh, Missouri University of Science & Technology, USA

Room: Classic 7 (7th floor)

Human Desire Inference pRocess Based on Affetive Computing

Jeyoun Dong, Hen-I Yang, Katsunori Oyama, Carl K. Chang

- | | |
|--------------------|--|
| 12:00-18:30 | Board bus for tours of Secret Garden and National Museum. Lunch will be served on the bus. Returning buses board at 17:30, with estimated arrival time back at JW Marriot at 18:30. |
| 18:30-20:30 | COMPSAC 2010 Banquet
Location: Grand Ballroom, JW Marriott |

20:30-22:00 Joint Planning Meeting: COMPSAC/SAINT 2011 (Munich, Germany) – All invited!

THURSDAY JULY 22, 2010

8:30-10:00 COMPSAC/SAINT Joint Keynote: Tim Grance, National Institute of Standards and Technology, USA
Defining, Securing, and Standardizing Cloud Computing
 Chaired by Jeffrey Voas
 Grand Ballroom

10:00-10:30 Break

10:30-12:00 COMPSAC/SAINT Joint Plenary Panel: *Future of the Internet*
 Chaired by: Eiji Kawai, NICT, Japan
 Elisa Bertino, Purdue University, USA
 Sue Moon, KAIST, Korea
 Room: Grand Ballroom
 Panelists: Hiroaki Harai, NICT, Japan
 Kohei Shiimoto, NTT, Japan
 Younghee Lee, KCC/KAIST, Korea

12:00-13:30 Lunch

13:30-15:00 Paper Sessions

Smart Computing

Session Chair: Jong Kim, Pohang University of Science & Technology, Korea

Room: Meeting Room 2 (3rd floor)

PAAKL: Password Authentication with Behavioral Metrics
 Anestis Topsis, Joshua Majonis

Behavior Monitoring in Self-healing Service Oriented Systems
 Harald Psailer, Florian Skopik, Daniel Schall, Schahram Dustdar

A Petri Net-Based Method for RFID Event Detection
 Chunxiang Xu, Yu Huang, Wanling Qu, Hanpin Wang, Xiaojuan Ban

Software Evolution and Maintenance II

Session Chair: Atilla Elçi, Middle East Technical University NCC, North Cyprus

Room: Meeting Room 3 (3rd floor)

Change Impact Analysis Based on a Taxonomy of Change Types
 Xiaobing Sun, Bixin Li, Chuanqi Tao, Wanzhi Wen, Sai Zhang

An Ontology-Based Approach to Reengineering Enterprise Software for Cloud Computing
 Hong Zhou, Hongji Yang, Andrew Hugill

Synchronized Architecture Evolution in Software Product Line using Bidirectional Transformation

Liwei Shen, Xin Peng, Jiayi Zhu, Wenyun Zhao

Performance Engineering

Session Chair: Xiaoying Bai, Tsinghua University, China

Room: Grand Ballroom A (5th floor)

An Optimized Checkpointing Based Learning Algorithm for Single Event Upsets

S. Sharanyan, Arvind Kumar

Exploring Query Optimization in Programming Codes by Reducing Run-Time Execution

Venkata Krishna Suhas Nerella, Swetha Surapaneni, Sanjay Kumar Madria, Thomas Weigert

Verification & Testing III

Session Chair: Byoungju Choi, Ewha Woman's University, Korea

Room: Grand Ballroom C (5th floor)

A Study of Cost-Cognizant Test Case Prioritization Using Genetic Algorithm with Test History

Yu-Chi Huang, Chin-Yu Huang, Jun-Ru Chang, Tsan-Yuan Chen

Minimising the Preparation Cost of Runtime Testing based on Testability Metrics

Alberto Gonzalez-Sanchez, Éric Piel, Hans-Gerhard Gross, Arjan J.C. van Gemund

A Study on the Applicability of Modified Genetic Algorithms for the Parameter Estimation of Software Reliability Modeling

Chao-Jung Hsu, Chin-Yu Huang

Formal Methods

Session Chair: Tugkan Tuglular, Izmir Institute of Technology, Turkey

Room: Classic 7 (7th floor)

Specifying Time-sensitive Systems with TLA+

Hehua Zhang, Ming Gu, Xiaoyu Song

Transformation Rules for Synthesis of UML Activity Diagram from Scenario-based Specification

Sungwon Kang, Hyunho Kim, Jongmoon Baik, Hojin Choi, Changsup Keum

A Game Perspective of Refinement of Component Models

Zizhen Wang, Hanpin Wang, Yongzhi Cao, Wanling Qu, Wei Jin, Meixia Zhu

15:00-15:30 PM Break

15:30-17:00 Paper Sessions

Real-Time & Embedded Systems

Session Chair: Bruce McMillin, Missouri University of Science & Technology, USA

Room: Meeting Room 2 (3rd floor)

An Automatic Configuration Approach to Improve Real-Time Application Throughput While Attaining Determinism

Xiaowei Zhang, Donggang Cao, Yunpeng Gao, Xiangqun Chen, Hong Mei

SAT: Switchable Address Translation for Flash Memory Storages

Yeonseung Ryu

Supporting Design Enhancement by Pattern-based Transformation

Nien-Lin Hsueh, Peng-Hua Chu, Pao-Ann Hsiung, Min-Ju Chuang, William Chu, Chih-Hung Chang, Chorng-Shiuh Koong, Chih-Hsiung Shih

Web Engineering

Session Chair: Sheikh Iqbal Ahamed, Marquette University, USA

Room: Meeting Room 3 (3rd floor)

A Petri-net Based Method for Data Validation of Web Services Composition

Chunxiang Xu, Wanling Qu, Hanpin Wang, Zizhen Wang, Xiaojuan Ban

Process Patterns for Web Engineering

Reza Babanezhad, Yusef Mehrdad Bibalan, Raman Ramsin

Modeling BPEL and BPEL4People with a Timed Interruptable π calculus

Wei Jin, Hanpin Wang, Yongzhi Cao

Software Quality II

Session Chair: Qianxiang Wang, Peking University, China

Room: Grand Ballroom A (5th floor)

QoS-based Dynamic Web Service Composition with Ant Colony Optimization

Wei Zhang, Carl K. Chang, Taiming Feng, Hsin-yi Jiang

Filtering of Inconsistent Software Project Data for Analogy-based Effort Estimation

Tuan Khanh Le Do, Kyung-A Yoon, Yeong-seok Seo, Doo-Hwan Bae

An Efficient Source Allocation Approach for QoS Support in P2PTV Systems

Yaw-Chung Chen, Shang-Shu Lee, Kuan-Teng Chen

Verification & Testing IV**Session Chair: Rajesh Subramanyan, Siemens, USA****Room: Grand Ballroom C (5th floor)***Timing Analyzing for Systems with Task Execution Dependencies*

Yue Lu, Thomas Nolte, Iain Bate, Christer Norström

Service-Oriented Composition and Verification of Abstract Components

Yunja Choi

COMPSAC Panel II: Towards New Roles and System Architecture Supporting the Full Life Cycle of Smart Spaces**Chaired by: Sumi Helal, University of Florida****Room: Classic 7 (7th floor)**

Panelists: Tatsuya Yamazaki, NICT, Japan
 Max Mühlhäuser, Technische Universität Darmstadt, Germany
 Gary Schneider, IBM Corporation, China

18:00-21:00 COMPSAC 2011 PLANNING MEETING (Invite only)**FRIDAY JULY 23, 2010**

8:30-10:00 COMPSAC/SAINT Joint Keynote: Hassan Gomaa, George Mason University
Software Variability, Evolution, and Adaptation
Chaired by: Sooyong Park, Sogang University, Korea
Grand Ballroom

10:00-10:30 AM Break

10:30-12:00 COMPSAC/SAINT Joint Concluding Panel: Green IT – From Devices to Applications
Chaired by: Tohur Asami, The University of Tokyo, Japan
Sahra Sedigh, Missouri University of Science & Technology
Room: Grand Ballroom

Panelists: Shinji Tsuji, Hitachi Ltd., Japan
 Akira Tajima, IBM Research, Japan
 Ali R. Hurson, Missouri University of Science & Technology, USA
 Eunsook Kim Eunah, ETRI, Korea

12:00-13:30 Lunch

13:30-15:00 COMPSAC Workshops

Fast Abstract II

Session II: Robust and High Quality Computing

Chair: Sungdeok Cha, Korea University, Korea

Room: Meeting Room 2A (3rd floor)

A Model-based Design Tool of Automotive Software Architecture

Jeong-Si Kim, Chaedeok Lim, TaeMan Han

A Method for Detecting Defects in Source Codes Using Model Checking Techniques

Yoshitaka Aoki, Saeko Matsuura

Reconnection of the Pre-assigning Peers in the Seamless Video Streaming

Ilhom Karimov, Nuriddin Rayimov, Liu Jing, Jungwook Song, Sungchol Cho, Sunyoung Han, Chinchol Kim

A Know-How Recommendation System for a Software Engineering Project Course By Using the Content Filtering Technique

Rika Kawai, Atsuo Hazeyama

ESAS 2010: The 5th IEEE Workshop on Engineering Semantic Agent Systems

Session I

Chair: Sahra Sedigh, Missouri University of Science & Technology, USA

Room: Meeting Room 2B (3rd floor)

13:30 Opening Remarks by Atilla Elçi

13:40 Invited Speech: *Semantic Image Retrieval Model for Sharing Experiences in Social Networks*

Aslı Apaydın, Duygu Çelik, Atilla Elçi

14:10 *Ontology-based QoS Queuing Model for Selection of Web Services Servers*

Duygu Çelik, Atilla Elçi

ME 2010: The 2nd IEEE International Workshop on Middleware Engineering

Session I: Middleware Architectures

Chair: Tor-Morten Grønli, Brunel University, UK

Room: Meeting Room 5 (Lower Level)

Middleware Support for Mobile Social Ecosystems

Alessandra Toninelli, Animesh Pathak, Amir Seyedi, Roberto Sepicys Cardoso, Valérie Issarny

A Middleware for Personal Smart Spaces

Manal Al-Bahlal, Jalal Al-Muhtadi

Message Oriented Middleware Support for Mobile Ad Hoc Data Sharing
Hongjun Yu, Rong Chen, Zhenjun Du

STA 2010: The 2nd IEEE International Workshop on Software Test Automation
Session III: Test Prioritization, Regression Testing, and Formal Aspects
Room: Meeting Room 3 (3rd floor)

An Approach to Regression Test Selection Based on Hierarchical Slicing Technique
Chuanqi Tao, Bixin Li, Xiaobing Sun, Chongfeng Zhang

Approximation of CFL by Regular Languages for Concurrent Program Verification
Supratik Mukhopadhyay, Sukhamay Kundu

Supporting Concern-Based Regression Testing and Prioritization in a Model-Driven Environment using TDE/UML
Roberto S. Filho, Christof J. Budnik, William M. Hasling, Monica McKenna, Rajesh Subramanyan

QUORS 2010: The 4th IEEE International Workshop on Quality Oriented Reuse of Software
Session III: Model-Driven Techniques
Chair: Xiaodong Liu, Edinburgh Napier University, UK
Room: Classic 7 (7th floor)

Applied MDA for Embedded Devices: Software design and code generation for a low-cost
Michael Lettner, Michael Tschernuth

The Right Tool for the Right Job: Assessing Model Transformation Quality
M.F. van Amstel

A Model Expansion Method in Schema-based Model Evolution
Tsung Lee, Jhih-Syan Hou

15:00-15:30 PM Break

15:30-17:00 COMPSAC Workshops

ESAS 2010: The 5th IEEE Workshop on Engineering Semantic Agent Systems
Session II
Chair: Atilla Elçi, Middle East Technical University NCC, North Cyprus
Room: Meeting Room 2B (3rd floor)

15:30 *Modeling Cyber-Physical Systems with Semantic Agents*
Jing Lin, Sahra Sedigh, Ann Miller

16:00 *On Slicing Semantic Web Services*
Chengying Mao

16:30 Closing Remarks by Atilla Elçi

ME 2010: The 2nd IEEE International Workshop on Middleware Engineering

Session II: Middleware Applications

Chair: Alessandra Toninelli, INRIA Paris-Rocquencourt, France

Room: Meeting Room 5 (Lower Level)

A Context-Aware Meeting Room—Mobile Interaction and Collaboration using Android, Java ME and Windows Mobile

Tor-Morten Gronli, Jarle Hansen, Gheorgihita Ghinea

MiRE4OWL: Mobile Rule Engine for OWL

Taehun Kim, Insuk Park, Soon J. Hyun, Dongman Lee

SAPSE 2010: The 2nd International Workshop on Security Aspects of Process and Services Engineering

Chair: Stelvio Cimato, Università degli Studi di Milano

Location: Meeting Room 3 (3rd floor)

Modeling and Verification of an Automatic Train Protection System

Xijiao Xiong, Jing Liu, Miaomiao Zhang, Zuohua Ding

Toward Cloud-based Key Management for Outsourced Databases

Nadia Bennani, Ernesto Damiani, Stelvio Cimato

QUORS 2010: The 4th IEEE International Workshop on Quality Oriented Reuse of Software

Session IV: Optimal Components and Practice

Chair: Yang Li, Intelligent Systems Research Centre, British Telecom

Room: Classic 7 (7th floor)

COTS Integrations: Effort Estimation Best Practices

Anoop Kumar P, Sathia Narayanan, Vijayalakshmi Mallenahalli Siddaiah

Optimizing Software Quality Assurance

Omar Alshathry

Thank you to all COMPSAC 2010 Organizers!

COMPSAC 2010 General Chair

Doo-Hwan Bae, KAIST, Korea

COMPSAC 2010 Program Chairs

Sungdeok (Steve) Cha, Korea University, Korea

Rajesh Subramanyan, Siemens, USA

Eric Wong, University of Texas, Dallas, USA

COMPSAC 2010 Workshops Chair

Sheikh Iqbal Ahamed, Marquette University, USA

COMPSAC 2010 Panels Chairs

Sumi Helal, University of Florida, USA

Wolfgang Minker, University of Ulm, Germany

COMPSAC 2010 Track Chairs

Real-time & Embedded Systems Track

Tiberiu Seceleanu, ABB Corporate Research, Sweden

Bruce McMillin, Missouri University of Science & Technology, USA

Verification, Testing, & Formal Methods Track

Shaoying Liu, Hosei University, Japan

Cristina Seceleanu, Mälardalen University, Sweden

Quality Track

Keijiro Araki, Kyushu University, Japan

T.H. Tse, The University of Hong Kong

Requirements Engineering Track

Soo-Yong Park, Sogang University, Korea

Juha Savolainen, Nokia, Finland

Software Architecture and Design Track

Ivica Crnkovic, Mälardalen University, Sweden

Krishna Ratakonda, IBM TJ Watson, USA

Software Evolution, Maintenance & Life Cycle Track

Atilla Elçi, Middle East Technical University NCC,
North Cyprus

Yann-Gaël Guéhéneuc, École Polytechnique de
Montréal, Canada

Security, Dependability, & Performance Track

Axel Hunger, Duisburg-Essen, Germany

Mohammed Zulkernine, Queen's University, Canada

Mobile & Pervasive Computing Track

Junehwa Song, KAIST, Korea

Ankur Teredesai, University of Washington, USA

Smart Computing Track

Bertrand du Castel, Schlumberger

Jong Kim, POSTECH, Korea

Fast Abstracts

Dae-Kyoo Kim, Oakland University, USA

Doctoral Symposium

Gregg Rothmel, University of Nebraska, Lincoln, USA

COMPSAC 2010 Organization Chairs

Finance Chair

Simanta Mitra, Iowa State University, USA

Proceedings Chair

Hen-I Yang, Iowa State University, USA

Registration Chair

Michelle Ruse, Iowa State University, USA

Web Chair

Hsin-yi Jiang, Iowa State University, USA

Publicity Chairs

Anestis Toptsis, York University, Canada

Heung-seok Chae, Pusan National University, Korea

Organizing Chair

Laurel Tweed, Iowa State University, USA

Server/Systems Support Chair

Barry Britt, Iowa State University, USA

COMPSAC 2010 Program Committee

Sheikh Iqbal Ahamed, Marquette University, USA
 Mikio Aoyama, Nanzan University, Japan
 Keijiro Araki, Kyushu University, Japan
 Doo-Hwan Bae, KAIST, Korea
 Xiaoying Bai, Tsinghua University, China
 Jongmoon Baik, KAIST, Korea
 Paolo Bellavista, University of Bologna, Italy
 Fevzi Belli, University of Paderborn, Germany
 Maarten Boasson, University of Amsterdam, The Netherlands
 Jan Bosch, Intuit, Inc, USA
 Jan Camenisch, IBM Research Zurich, Switzerland
 Sungdeok Cha, Korea University, Korea
 Heung-Seok Chae, Pusan University, Korea
 W.K. Chan, Hong Kong City University, Hong Kong
 Y.C. Chen, National Chiao-Tung University, Taiwan
 S.C. Cheung, The Hong Kong University of Science and Technology, Hong Kong
 Byoungju Choi, Ewha Woman's University, Korea
 William Chu, Tunghai University, Taiwan
 Ivica Crnkovic, Mälardalen University, Sweden
 James Cross, Auburn University, USA
 Alan Davis, University of Colorado at Colorado Springs, USA
 Bertrand du Castel, Schlumberger, USA
 Eric Dubois, CRP Henry Tudor, Luxembourg
 Atilla Elçi, Middle East Technical University NCC, North Cyprus
 Vladimir Getov, Westminster University, UK
 Michael Grottke, University of Erlangen-Nuremberg, Germany
 Yann-Gaël Guéhenneuc, École Polytechnique de Montréal, Canada
 Sumi Helal, University of Florida, USA
 Axel Hunger, Universität Duisburg Essen, Germany
 Hsin-yi Jiang, Iowa State University, USA
 Murat Kantarcioglu, University of Texas at Dallas, USA
 Sandeep Karamongikar, Infosys, India
 Ron Kenett, KPA, Israel
 Darren Kerbyson, Los Alamos National Laboratory, USA
 Dae-Kyoo Kim, Oakland University, USA
 Jong Kim, Pohang University of Science & Technology, Korea
 Moonzoo Kim, KAIST, Korea
 In-Young Ko, KAIST, Korea
 Fei-Ching Kuo, Swinburne University of Technology, Australia
 Richard Lai, La Trobe University, Australia
 Woojin Lee, Kyungpook National University
 Ville Leppanen, University of Turku and TUCS, Finland
 Jigang Liu, Metropolitan State University, USA
 Lin Liu, Tsinghua University, China
 Shaoying Liu, Hosei University, Japan
 Xiaodong Liu, Napier University, UK
 Xiaoqing Liu, Missouri University of Science & Technology, USA
 Bruce McMillin, Missouri University of Science & Technology, USA
 Jose Miguel-Alonso, UPV/EHU University, Spain

Hua Ming, Iowa State University, USA
 Simanta Mitra, Iowa State University, USA
 Sooyong Park, Sogang University, Korea
 Krishna Ratakonda, IBM, USA
 Greg Roethermel, University of Nebraska at Lincoln, USA
 Juha Savolainen, Nokia, Finland
 Martin Schulz, Lawrence Livermore National Laboratory, USA
 Cristina Seceleanu, Mälardalen University, Sweden
 Tiberiu Seceleanu, ABB Corporate Research, Sweden
 Sahra Sedigh, Missouri University of Science & Technology, USA
 Jawed Siddiqi, Sheffield Hallam University, UK
 Junehwa Song, KAIST, Korea
 Rajesh Subramanyan, Siemens, USA
 Kenji Takahashi, NTT, Japan
 Michiharu Takemoto, NTT, Japan
 Antony Tang, Swinburne University of Technology, Australia
 Ankur Teredesai, University of Washington, USA
 T.H. Tse, The University of Hong Kong, Hong Kong
 Tugkan Tuglular, Izmir Institute of Technology, Turkey
 Hasan Ural, University of Ottawa, Canada
 Feng-Jian Wang, National Chiao Tung University, Taiwan
 Qianxiang Wang, Peking University, China
 Thomas Weigert, Missouri University of Science & Technology, USA
 Eric Wong, University of Texas at Dallas, USA
 Dianxiang Xu, Dakota State University, USA
 Hen-I Yang, Iowa State University, USA
 Hongji Yang, Demontfort University, UK
 Eric Yu, University of Toronto, Canada
 Uwe Zdun, Vienna University of Technology, Austria
 Hong Zhu, Oxford Brooks University, UK
 Xukai Zou, IUPUI, USA
 Mohammed Zulkernine, Queen's University, Canada

IEEE COMPSAC Steering Committee

Carl K. Chang (Chair), Iowa State University, USA
 Doo-Hwan Bae, KAIST, Korea
 Sungdeok (Steve) Cha, Korea University, Korea
 Sheikh Iqbal Ahamed, Marquette University, USA
 Fevzi Belli, University of Paderborn, Germany
 Elisa Bertino, Purdue University, USA
 Yaw-Chung Chen, National Chiao Tung University, Taiwan
 William Chu, Tunghai University, Taiwan
 Atilla Elçi, Middle East Technical University NCC, North Cyprus
 Vladimir Getov, University of Westminster, UK
 Sumi Helal, University of Florida, USA
 Lin Liu, Tsinghua University, China
 Bruce McMillin, University of Missouri, Rolla, USA
 Hong Mei, Peking University, China
 Rajesh Subramanyan, Siemens, USA
 Feng-Jian Wang, National Chiao Tung University, Taiwan
 Eric Wong, University Of Texas at Dallas, USA
 Johnny Wong, Iowa State University, USA
 Hongji Yang, Demontfort University, UK

COMPSAC 2011

IEEE Signature Conference on Computer Software and Applications

MUNICH,
GERMANY
July 18-22 2011

The Computed World: Software Beyond the Digital Society

Creating the digital society and beyond needs all aspects of computing- software development and software systems engineering. The computed world embraces not only the IT world, but also the cyber-physical world. COMPSAC, the IEEE Signature Conference on Computer Software and Applications, is a unique forum to bring together all facets of computed world and their major stakeholders. Building on computationally smart environments, and trustworthy, secure, and dependable distributed software—themes of highly successful recent COMPSAC conferences—the technical theme for the 35th conference is *The Computed World: Software Beyond the Digital Society*.

To properly engineer such domains, the foundations, methodologies, and mechanisms that support the design, modeling, and evaluation of software systems and computer applications must come from diverse sources. Topics of interest include but are not limited to requirement analysis, co-analysis/co-design, modeling, development, testing, measurement, verification, validation, performance, autonomy, safety, security, privacy and dependability constraints. Effective construction of these systems is not limited solely to the field of computer science and engineering and comes as a synergetic effort, between various domains of research. Multidisciplinary work, research and development of software prototypes, industry-university collaborations, all based on new emerging and critical technologies will be of particular interest to this conference. All accepted papers will be published in the electronic proceedings by the IEEE Computer Society, indexed through INSPEC and EI Index, and automatically included in the IEEE digital library.

Submission Information

Authors are invited to submit original, unpublished research papers as well as industrial practice papers. Simultaneous submissions to other publication venues are not permitted. Detailed instructions for electronic paper submission, panel and workshop proposals, fast abstracts, doctoral symposium and review process can be found at <http://www.compsac.org/>. The length of the camera-ready accepted papers will be limited to 8 (IEEE Proceedings style) pages, and printed with 10-12 point fonts. Please follow the IEEE Computer Society Press Proceedings Author Guidelines to prepare your papers. At least one author of each accepted paper (regular, short, workshop) or fast abstract is required to pay full registration fee to the conference. Each accepted paper must be presented in person by the author or one of the authors.

Important Due Dates:

Main Conference

Abstracts due(Jan 16, 2011)
Full manuscript submissions(Jan 30, 2011)
Author notifications(April 2, 2011)
Final camera-ready submission(May 2, 2011)
Author registration(May 2, 2011)

COMPSAC Affiliated Workshops and Panels

Workshop and panel proposals due(Dec 6, 2010)
Workshop paper submissions(March 1, 2011)
Author notifications(Apr 8, 2011)
Final camera-ready submission(May 2, 2011)
Author registration(May 2, 2011)

Contact Information, General Queries

For more detailed information about the conference, or to submit a query, please visit compsac.org.

COMPSAC 2011 Key Organizers

General Chair - Academia: Bruce Mc Millin, Missouri University of Science & Technology, USA (lf@mst.edu)

General Chair - Industry: Klaus Beetz, Siemens AG, Germany (klaus.beetz@siemens.com)

Program Chair - Americas: Sheikh Iqbal Ahamed, Marquette University, USA, (sheikh.ahamed@marquette.edu)

Program Chair - Europe: Wolfgang Minker, University of Ulm, Germany (wolfgang.minker@uni-ulm.de)

Program Chair - Asia/Pacific: Zhi Jin, Peking University, China (zhijin@amss.ac.cn)

Industrial Program Chair: Rajesh Subramanyan, Siemens Corporate Research, USA (rajesh.subramanyan@siemens.com)

Workshops Chair: Axel Küpper, Technical University Berlin, Germany (Axel.Kuepper@telekom.de)

Workshops Chair: Mohammad Zulkernine, Queens University, Canada (mzulkar@cs.queensu.ca)

Local Organizing Chair: Frances Paulisch, Siemens AG, Germany (frances.paulisch@siemens.com)

Sponsored by:



Hosted by:

