



Topics of interest (Tracks)

Emergent Topics; Software Engineering; Networking; Web Technologies; Security and Privacy; Quality Assurance and Assessment; Embedded and Cyber-Physical Environments

Paper Guidelines

The review and selection process for submissions is designed to identify papers that break new ground and provide substantial support for their results and conclusions as significant contributions to the field. Submissions will be selected that represent a major advancement in the subject of the track to which they are submitted. Authors of submissions with a more limited contribution or scope and nature of work may be asked to revise their submissions into a more succinct camera-ready format; e.g., a short paper, workshop, industry practice report, fast abstract, or poster.

Submission

Detailed instructions for electronic paper submission, panel and workshop proposals, fast abstracts, poster papers, doctoral symposium, and the review process are available at **www.compsac.org**.

Important Dates

Main Conference Papers

January 13, 2014:	Paper abstracts due
January 31, 2014:	Full papers due
March 31, 2014:	Paper notifications
April 28, 2014:	Camera-ready copy, registration due

Workshop Deadlines

November 15, 2013: Workshop & tutorial proposals due				
March 23, 2014:	Workshop papers due			
April 20, 2014:	Workshop paper notifications			
April 28, 2014:	Camera-ready copy, registration due			

Fast Abstracts, Posters, Industry Papers, and Doctoral Symposium Paper Deadlines

April 8, 2014:	Fast abstract, poster, industry, and
	doctoral symposium papers due
April 20, 2014:	Fast abstracts, posters, and doctoral
	symposium paper notifications
April 28, 2014:	Camera-ready copy, registration due



IOWA STATE UNIVERSITY OF SCIENCE AND TECHNOLOGY



About COMPSAC

COMPSAC is the IEEE Signature Conference on Computers, Software, and Applications. It is one of the major international forums for academia, industry, and government to discuss research results, advancements, and future trends in computer, software technology, and applications. The technical program includes keynote addresses, research papers, industrial case studies, panel discussions, fast abstracts, doctoral symposium, poster sessions, and a number of workshops and tutorials on emerging important topics.

COMPSAC 2014 Theme

The theme of the 38th COMPSAC conference is The Integration of Heterogeneous and Mobile Services in Smart Environments. The emergence and increasing importance of digital society, cyberphysical systems, and semantic, pervasive, and mobile computing are expanding the role of software and applications in smart environments. Associated with these paradigms are instruments, sensors, and a multitude of applications that generate and require analysis of massive volumes of diverse, heterogeneous, complex, and distributed data. The potential of the emerging electric smart grid motivates developing systems designed with smart grid capabilities foremost in mind. The design of such intelligent systems is challenged by the complexity of the domains in which they are deployed. Knowledge, tools, practices, and infrastructures related to software and data have begun to evolve to cover this expanding sphere, while addressing grand challenges brought about by the complexities and uncertainties of the physical world and the heterogeneity of interconnected services and devices. Beyond the core emphasis areas of the conference, COMPSAC 2014 will provide additional tracks, special sessions, panels, and keynotes to facilitate discourse on and deepen the understanding of these challenges by furthering the fundamental contributions needed for advances in software and breakthroughs in big data analytics.

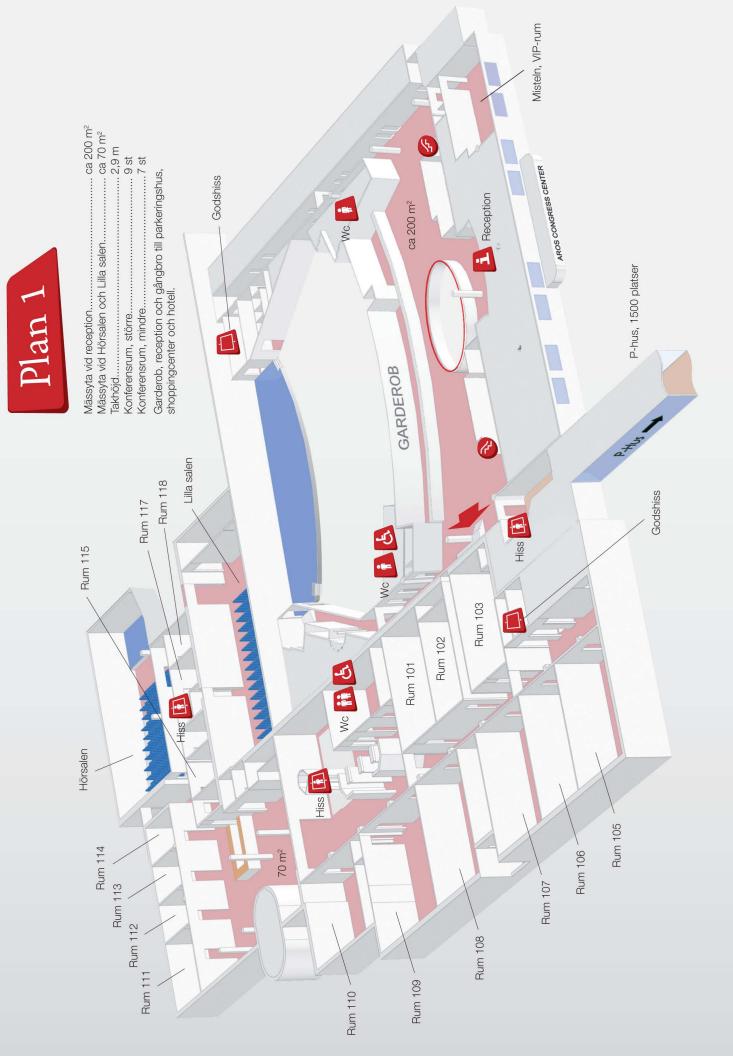
General Inquiries and Contact

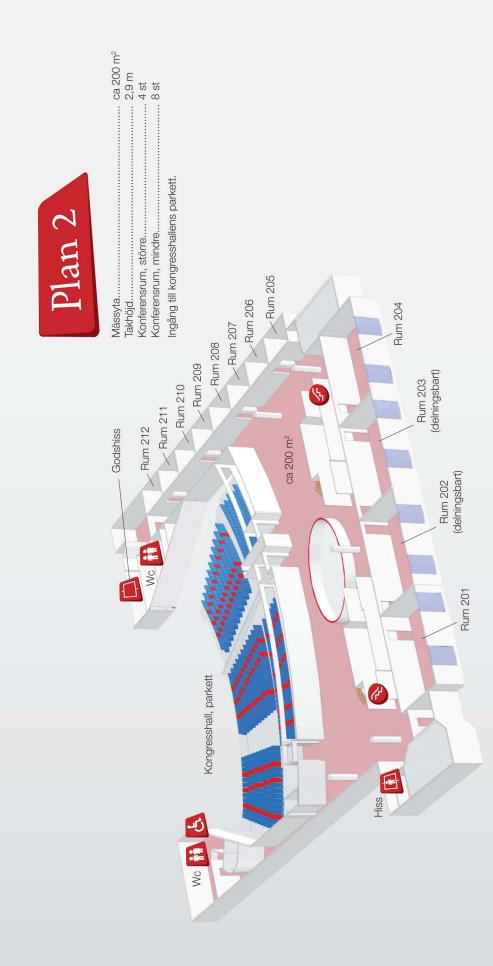
Contact COMPSAC organizers at cs_compsac@iastate.edu.

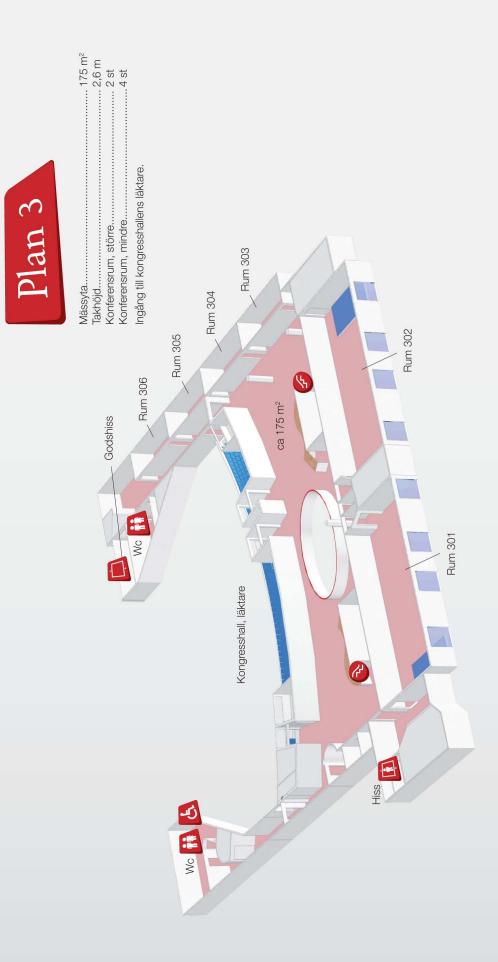
2014 General Chairs

John Walz, 2012 IEEE Computer Society President Tiberiu Seceleanu, ABB Corporate Research, Sweden **2014 Program Chairs** Ali Hurson, Missouri S&T, USA Cristina Seceleanu, Mälardalen University, Sweden Kenichi Yoshida, University of Tsukuba, Japan **2014 Workshop Chairs** Mihhail Matskin, KTH Royal Institute of Technology, Sweden Yasuo Okabe, Kyoto University , Japan **2014 Chair of the COMPSAC Steering Committee** Bruce McMillin, Missouri S&T, USA **Chair of the COMPSAC Standing Committee**

Carl K. Chang, Iowa State University, USA







Message from the Standing Committee Chair

Welcome to the 38th edition of this long-standing IEEE Annual International Computer Software and Applications Conference (COMPSAC), officially designated as the IEEE signature conference on computers, software and applications since 2006. In this round during the development of 2014 program we have been effectively engaging Computer Society staff organization and

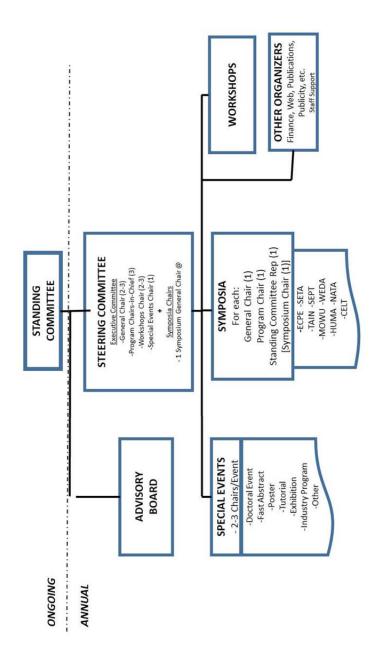
received significant support from their offices. We migrated the COMPSAC website to <u>www.computer.org</u> under the able management of the Society's IT staff. In addition, we also received support from Society's offices representing conference management, marketing, publications, and products and services professionals. These changes are partly due to heritage as COMPSAC started in 1977 as the Society's flagship conference, outside the realm of any technical segments (technical committees or technical councils), and partly by design so that we will continue the transformation of COMPSAC to be ultimately embraced by the Board of Governors and the Executive Committee as an integral component in the current organizational structure.

I would like to first acknowledge the fine efforts of Bruce McMillin, as the 2014 Steering Committee Chair, who gracefully handled a significant portion of top-level oversight function that used to fall largely on my own shoulder. It is great to finally have someone who would step up and share the load. Bruce shepherd the 2014 initiative of building the core for the IEEE Cloud Computing Congress and the Smart Grid Congress as some of you may have noticed. The 2014 General Chairs Tiberiu Seceleanu and John Walz, have worked for almost two years to ensure this year's event a great success. Three Program Chairs, Ali Hurson, Cristina Seceleanu and Kenichi Yoshida, continued our heritage to have developed a superior technical program. Mihhail Matskin and Yasuo Okabe succeeded in cultivating a fine collection of workshops to cover many important, emerging technical subjects. Laurel Tweed continued her outstanding effort to sustain many critical support functions, in particular the conference web. I cannot be exhaustive in expressing my gratitude to many other diligent organizers but each piece of their work is key to the success of this event. Finally, Silvia Ceballos, our primary staff support assigned by the Society, handled many daunting tasking for the volunteers, always with a great smile. It has been a great testimonial, again, of the wonderful partnership between professional staff and volunteers that ties the Computer Society together.

Beginning today, more transformation of COMPSAC will take place. Let me briefly explain what will happen. See attached new organization chart. Basically the super-track structure phased in 2014 will be elevated to the symposia structure, although they will function similarly as far as paper submissions/selections are concerned. That is, COMPSAC will continue to be one conference with one integrated process to develop the annual technical program. The major changes to come in 2015 include the following:

There will be a Symposium Standing Chair to lead and shepherd the development of a particular technical committee represented by a symposium, by contributing a technical vision and long-range planning skills. For a symposium, a Symposium Chair can be appointed to support Standing Chair's function. Each year the Standing Chair for a particular symposium recruit a symposium general chair and a symposium program chair to develop the next edition of symposium program as an integral part of the whole COMPSAC. Symposium program chairs will endeavor under the guidance of the main conference program chairs (i.e. program chairs-in-chief) to ensure overall process consistency, program quality and professional integrity. There will be still only one team of key organizers to help coordinate workshops, posters, panels, student sessions, industry contacts, etc. while taking into account of symposium/community's inputs to optimize collective performance across all communities.

For now, I sincerely hope that you all enjoy this "Västerås Edition" of COMPSAC.



COMPSAC 2014 Message from the General Chairs

On behalf of COMPSAC 2014 organization we would like to welcome you to the 38th Annual IEEE International Computers, Software, and Applications Conference (COMPSAC 2014), held in Västerås, Sweden, July 21-25, 2014.

The theme of the 38th COMPSAC conference is The Integration of Heterogeneous and Mobile Services in Smart Environments. The emergence and increasing importance of digital society, cyber-physical systems, and semantic, pervasive, and mobile computing are expanding the role of software and applications in smart environments.

COMPSAC, first held in Chicago in 1977, continues as the IEEE Computer Society Signature Conference on Computers, Software, and Applications. It is one of the major international forums for academia, industry, and government to discuss research results, advancements and future trends in computer and software technologies and applications. The technical program includes keynote addresses, research papers, industrial case studies, panel discussions, fast abstracts, doctoral symposium, poster sessions, tutorials, industry tracks, and workshops on emerging important topics.

COMPSAC is a premier global forum for crosscutting computing research, practice and education, having a long and established history with the Computer Society, and a strong reputation for exceptional quality as both (a) a generator of technical content and discussion, and (b) a well-planned, well-organized, well-attended, and well-managed event.

Several international societies, IPSJ, KISE, and CCF, and several Computer Society special technical communities support the conference technical program. This has resulted in attracting over 20 workshops, including the Cloud Congress and Smart Grid Congress, along with five keynote speakers and three plenary panelists to provide an international perspective on the conference theme, bringing together funding agency and industry representatives from across the globe to address their vision for software beyond the digital society.

COMPSAC received key support the local team at Mälardalen University and generous support from our sponsoring patrons, ABB and the city of Västerås.

We would like to thank Carl Chang, Chair of the Standing Committee of COMPSAC and Bruce McMillin, Chair of Steering Committee, for their enthusiastic contributions to the organizing team. Special thanks are extended to the Technical Program co-chairs, Ali Hurson, Cristina Seceleanu, and Kenichi Yoshida, as they selected and motivated over 160 Program Committee members to build this outstanding quality program.

COMPSAC 2014 General Chairs

John Walz, 2012 IEEE Computer Society President Tiberiu Seceleanu, ABB Corporate Research, Sweden





COMPSAC 2014 Message from the Program Co-chairs

A warm welcome to COMPSAC 2014, the 38th Annual International Computers, Software and Applications Conference, this year held in Västerås, Sweden, and organized around the theme of "The Integration of Heterogeneous and Mobile Services in Smart Environments". Selecting this theme is inspired by the recognition of the emergence and increasing heterogeneity of different aspects of computing ranging from hardware/architecture platforms to software/application domains. Along with the increase in heterogeneity of hardware, architectural platforms, communication medium, data representation, software techniques, and application domains comes the higher demand for more computational power mainly due to the increase in data availability in newly developed application domains. Nowadays, terms such as "cloud computing", "big data analytics", "pervasive computing", and "smart computing" are becoming part of the usual vocabulary of application users. These changes require a new and holistic approach to computing. Knowledge, tools, practices, and infrastructures have begun to evolve to cover this *heterogeneity*, while addressing grand challenges brought about by the complexities and uncertainties of the physical world and the massive scale of the cyber infrastructure and the data it produces and requires. Addressing these challenges and the discovery of solutions to meet such challenges were the driving force behind organizing COMPSAC 2014.

This year, the main conference (not including workshops) received 209 full submissions to 7 tracks. Following the tradition of past COMPSAC conferences, each submission underwent a rigorous double-blind review process and was discussed by the program and track chairs during the PC meeting, which took place in Los Angeles, in March 2013. As the result of the process, we accepted 21.5% of the submissions as regular papers and 12.5% of the submissions as short papers for inclusion into this year's COMPSAC proceedings, published by IEEE CS.

The success of a complex conference like COMPSAC always depends on the quality of submitted papers, the expertise of the participating program committee members, reviewers, and the engagement of all colleagues involved in the organization of the conference. Therefore, we would like to take this opportunity to thank the authors, who submitted their valuable research results to the conference, the track chairs, who diligently oversaw the paper review process, and the members of the Program Committee and external reviewers whose dedicated and expert review is the foundation of the rich program assembled for COMPSAC 2014. We also thank all keynote speakers and panelists for further enriching the conference program with their insights. This year's COMPSAC is composed of 20 regular sessions, 4 keynote speeches, 3 panels, a PhD forum/poster session, a fast abstract session, and an industrial session.

We deeply appreciate the invaluable help of Carl Chang, Standing Committee Chair of COMPSAC who is truly the backbone of the conference. Special thanks are extended to Bruce McMillin (Steering Committee Chair), and John Walz and Tiberiu Seceleanu (General Co-chairs of COMPSAC 2014) for their ongoing support and contributions. We wish to especially thank Laurel Tweed for her work in hosting and maintaining the COMPSAC 2014 web site and conference management system, as well as Séverine Sentilles and Susanne Fronnå for their tremendous job on local conference organization.

COMPSAC 2014 Program Co-chairs

Ali Hurson, *Missouri S&T, USA* Cristina Seceleanu, *Mälardalen University, Sweden* Kenichi Yoshida, *University of Tsukuba, Japan*

COMPSAC 2014 Message from the Workshops Chairs

It is our pleasure to welcome all you to the workshops sessions of the 38th IEEE International Computer Software and Application Conference, COMPSAC 2014, which is held in Västerås, Sweden.

This year conference includes 23 workshops covering different aspects of developing computer software and applications. The workshops nicely complement the main conference and they together create an exciting scientific program for 5 days. According to the COMPSAC tradition workshops are held during the first (July 21) and during the last (July 25) days of the conference.

Workshops present a nice place for exchange of ideas and results in different aspects of computer software and appications including software testing, security, privacy and trust, software interoperability and reuse, social and user oriented aspects of software systems and social networks, adaptive systems, middleware architecture, risk management, big data and internet of things, semantics, modelling, verification and service oriented computing. Several workshops are focused towards industrial applications and experience, such as, medical computing, embedded systems design and consumer devices. All these topics correlate well with the topics of the main conference and this creates a possibilities for participant to get a deep and up-to-date overview of the field.

This year we received a very large number of papers submitted to the workshops. Only 100? of them were selected for presentation. We thank all authors submitted papers to the workshops for their support of the conference. Selection process was carefully carried by the workshop organizers. We would like thank organizers of all workshops and the members of workshops PCs for their efforts and an excellent job. We also would like thank all people involved into organizing the COMPSAC 2014 and steering committees for their help.

We hope that participants of the COMPSAC 2014 will enjoy nice presentations and discussions as well as an inspiring atmosphere of the event.

COMPSAC Workshops Chairs

Mihhail Matskin, KTH Royal Institute of Technology, Sweden Yasuo Okabe, Kyoto University, Japan

COMPSAC 2014 Sponsors







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COMPSAC 2014:	Progr <u>am at a G</u>	ilance						
Monday July 21:								
	Joint Keynote address: Professor Erol Gelenbe							
0.20 10.00	"Adaptive Management of Energy Packets"							
8:30 - 10:00								
	Session Chairs: Mihhail Matskin, Yasuo Okabe, and Selmin Nurcan							
10:00 - 10:30	Coffee Break							
Room	105	109	110	107	108	106	101	103
10:30 - 12:00	IWSC	ADMNET	CFSE	STPSA	UCDAS	SAPSE	SocNET	WRMOCC
12:00 - 13:30	Lunch		1	-				•
13:30 - 15:00	IWSC	ADMNET	MidArch	STPSA	UCDAS	CORCS + IEEESD	BIoT	WRMOCC
15:00 - 15:30	Coffee Break					· · ·		
15:30 - 17:00	IWSC	ADMNET	MidArch	STPSA	ESAS	CORCS + IEEESD	BIoT	
17:00 - 17:15	Coffee Break		_					
17:15 - 18:45		ADMNET						
Tuesday July 22:	1	-						
	Opening Sess			_				
			pening Remar	ks				
8:30 - 10:00	Keynote Addr							
	-		and Talking B	ehavioral Sce	narios			
	Location: Mai	-	ll (2nd Floor)					
	Session Charia							
Room	302	301	109	108				
10:00-10:30	Morning Brea		ducation in 20	50				
10:30-12:00	Location: Mai			150				
12:00-13:30	Lunch	in congress na	11 (211011001)					
12.00 13.50		Automated						
	Software	Analysis	Validation &					
13:30-15:00	Engineering I	in Software	Verifcation	Bug Reports				
	5 5	Engineering						
15:00-15:30	Afternoon Bre	ak	-					
		Quality						
	Service &	Assurance	Spec &					
15:30-17:00	Application	and	Requirement					
		Assessment I	S					
	Welcome Reco	eption	1					
18:30 - 21:30		•	Hall's Foyer (n	earby Aros Co	ongress Centr	e)		
Wednesday July	23: Conference	Dav 2						
	Keynote Addr		obinson					
			Deploying Re	search Ideas i	nto Industria	l Teams		
9:00 - 10:00	Location: Mai			seuren rueus .		cumb		
	Session Chariz	-						
Room	302	301	109	108				
10:00-10:30	Morning Brea	k						
		Quality	Doctoral					
	Software	Assurance	Sympsoium	Network				
			Mentoring	Traffic				
10:30-12:00	Engineering II	and	mentoring					
10:30-12:00	Engineering II	and Assessment II	-					
10:30-12:00 12:00-13:30	Lunch	Assessment II	-					
12:00-13:30	Lunch Embedded	Assessment II Empirical	Session	Defect				
	Lunch	Assessment II Empirical Study	-					

	Plenary Panel Security with Privacy - Opportunities and Challenges							
15:30-17:00	Location: Main Congress Hall (2nd Floor)							
18:30 - 21:30	Conference Banquet Location: Sätra Brunn, Sala							
Thursday July 24	l: Conference D	ay 3						
9:00 - 10:30	Plenary Panel	: Convergence	Panel					
	Location: Main	Location: Main Congress Hall (2nd Floor)						
10:30-11:00	Morning Brea	k & Poster Ses	sions					
	Keynote Address: Dejan S. Milojicic							
11:00-12:00	Predicting Fut	ture Technolog	gies - IEEE Com	puter Society	y 2022 Report			
11.00 12.00	Location: Main	-						
	Session Chari: Tiberiu Seceleanu							
12:00-13:00	Lunch							
		Keynote Address: Jan Bosch						
13:00-14:00	From Opinions to Facts Building Products Customers Actually Use							
	Location: Main Congress Hall (2nd Floor) Session Chari: Sahra Sedigh Sarvestani							
		-		100				
Room	302	301	109	108				
14:00 - 15:30	Network Appl.	Web	Virtual	Emergent				
14.00 15.50	& Config	Technology	Machine	Topics				
15:30 - 16:00	Afternoon Bre	ak						
16:00 17:30	Network	Social		Industry				
16:00 - 17:30	Performance	Networks	Fast Abstract	Papers				
Friday July 25: W	orkshop Day							
Room	109	108	107	105	110			
8:30-10:00	QUORS	CDS	WASCOM	SSERV	MVDA			
10:00-10:30	Coffee Break							
10:30-12:00	QUORS	CDS	STA	SSERV	MVDA			
12:00-13:30	Lunch							
13:30-15:00	OUORS	CDS	STA	SSERV	SSS +			
13.30-13.00	00013	205		SSERV	MediComp			
15:00-15:30	Coffee Break							
15:30-17:00	OUORS		STA		SSS +			
	200.0		2		MediComp			

IEEE COMPSAC International Workshops

Monday July 21

IWSC 2014

Location: Room 105

8:30-9:45 Workshop Sessions

Joint Workshop Session and Keynote Address Keynote: Adaptive Management of Energy Packets Erol Gelenbe, Imperial College, London, UK

9:45-10:15 Break

10:15-10:30 Workshop Sessions

Session 1: IWSC Opening Session

Welcome from IWSC General Chair: Hongji Yang, Bath Spa University, UK

Welcome from IWSC Steering Committee Chair Hongji Yang, Bath Spa University, UK

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

Report from IWSC Program Co-chair Lin Liu, Tsinghua University, China

10:30-12:00 Workshop Sessions

Session 2: Adaptation and Evolution Techniques for Software Quality Chair: Selmin Nurcan, University of Paris 1, France Design of Intelligent Checkers to Enhance the Security and Safety of Cyber Physical Systems Giedre Sabaliauskaite, Aditya P. Mathur

Countermeasures to Enhance Cyber-Physical System Security and Safety Giedre Sabaliauskaite and Aditya P. Mathur

Controlling and Being Creative: Software Cybernetics and Creative Computing Hongji Yang and Lu Zhang

12:00-13:30 Lunch

13:30-15:00 Workshop Sessions

Session 3: Monitoring and Control for Software Systems and Testing Chair Hongji Yang, Bath Spa University, UK

A Study on Migration Technique Using Program Slicing for Large-scale Information and Control Systems Tomoyuki Mochizuki, Akitoshi Shimura and Takayuki Takezawa

A History-based Dynamic Random Software Testing Lei Zhang, Bei-bei Yin, Junpeng Lv, Kai-Yuan Cai, Stephen S. Yau, Jia Yu

Dynamic Random Testing with Parameter Adjustment Zijiang Yang, Bei-bei Yin, Junpeng Lv and Kai-Yuan Cai,Stephen S. Yau, Jia Yu

15:00-15:30 Break

15:30-17:00 Workshop Sessions

Session 4: Panel: Controlling Software Systems in Big Data and Cloud Era Moderator Chair: Stephen Yau, Arizona State University, USA

Panelists: Kai-yuan Cai, Beijing University of Aeronautics and Astronautics, China, Erol Gelenbe, Imperial College, London, UK, Lin Liu, Tsinghua University, China, Selmin Nurcan, University of Paris 1, France, and Hongji Yang, Bath Spa University, UK

17:00-17:40 Workshop Sessions

Session 5: Planning of IWSC 2015 Chair: Stephen Yau, Arizona State University, USA

ADMNET 2014 Location: Room 109

10:30-12:00 Workshop Sessions

Theory

Fair Optimization - Methodological Foundations of Fairness in Network Resource Allocation (Invited talk) Wlodzimierz Ogryczak

Maxmin Fairness under Priority for Network Resource Allocation Tasks Mario KöeppenKoeppen, Kei Ohnishi and Masato Tsuru

13:30-15:00 Workshop Sessions

Network

Modeling of Dynamic Trend of Latency Variations on Mobile Network using Markov Regime Switching Hiroshi Yamamoto, Chie Hidano, Shigehiro Ano, and Katsuyuki Yamazaki

Toy Block Networking: Easily Deploying Diverse Network Functions in Programmable Networks Masaki Fukushima, Yoshiaki Yoshida, Atsushi Tagami, Shu Yamamoto, and Akihiro Nakao

Bridging the Gap between Low-level Network Traffic Data Acquisition and Higher-level Frameworks Ruediger Gad, Martin Kappes, and Inmaculada Medina-Bulo

A Mobility Management System for the Global Live Migration of Virtual Machine across Multiple Sites Tohru Kondo, Reiji Aibara, Kazufumi Suga, and Kaori Maeda

15:30-17:00 Workshop Sessions

Cloud and Security

Implementation and Evaluation of Secure Outsourcing Scheme for Secret Sharing Scheme on Cloud Storage Services

Toshihiro Ohigashi, and Kouji Nishimura and Reiji Aibara, Kouta YoshidaKouta Yoshida, Kouji Nishimura and Reiji Aibara

Deploying OpenStack: Virtual Infrastructure or Dedicated Hardware Robayet Nasim, and Andreas J. Kassler

A Technique to Assign an Appropriate Server to a Client, for a CDN Consists of Servers at the Global Internet and Hierarchical Private Networks

Takashi Yamanoue, Yuuri Koarata, Kentaro Oda, and Koichi Shimozono

17:15-18:45 Workshop Sessions

Management

What about Tomorrow's Management of Software Development and Maintenance Processes (Invited Talk) Mira Miroslawa Kajko-Mattsson

Computer Etihics Video Clips for University Students in Japan from 2003 until 2013

Takashi Yamanoue, Izumi Fuse, Shigeto Okabe, Atsushi Nakamura, Michio Nakanishi, Shozo Fukada, Takehiro Tagawa, Tatsumi Takeo, Ikuya Murata, Tetsutaro Uehara, Tsuneo Yamada and Hiroshi Ueda

STPSA 2014 Location: Room 107

10:15-10:30 Workshop Sessions

Welcome from STPSA General Chair

10:30-12:00 Workshop Sessions

Security and Analysis

Chair: Sheikh Iqbal Ahamed, Marquette University, USA

Static Code Analysis for Software Security Verification: Problems and Approaches Zeineb Zhioua, Stuart Short, and Yves Roudier

Security by Design for the Smart Grid: Combining the SGAM and NISTIR 7628 Mathias Uslar, Christine Rosinger, and Stefanie Schlegel

Introducing Code Assets of a New White-Box Security Modeling Language He Sun, Lin Liu, Letong Feng, Yuan Xiang Gu and Lin Liu

A Security Oriented Design (SOD) Framework (SOD) for eHealth Systems Weider D. Yu, Lavanya Davuluri, Monica Radhakrishnan, Maryam Runiassy

13:30-15:00 Workshop Sessions

Cyber Security, Detection, and Modeling Chair: Antonino Nocera, University of Reggio Calabria, Italy Bayesian Model Averaging of Bayesian Network Classifiers for Intrusion Detection Liyuan Xiao, Yetian Chen and Carl K. Chang

DCAFE: A Distributed Cyber Security Automation Framework for Experiments George Rush, Daniel R. Tauritz, and Alexander D. Kent

Quantification of Information Flow in a Smart Grid Li Feng, and Bruce McMillin

15:30-17:00 Workshop Sessions

Access Control, Privacy and Process Chair: Daniel Tauritz, Missouri University of Science and Technology, USA A Privacy-Preserving Solution for Tracking People in Critical Environments

Francesco Buccafurri, Gianluca Lax, Serena Nicolazzo, and Antonino Nocera

Access control model for the My Number national identification program in Japan Miyata Sumiko, Suzuki Kazuhiro, Morizumi Tetsuya, Kinoshita HirotsuguSumiko Miyata, Kazuhiro Suzuki, Tetsuya Morizumi and Hirotsugu Kinoshita

Improvement of The Integrity Verification Application using Timestamp Mechanism for Distributed File System

Hidenobu Watanabe, Tsukasa Iwama, Ken. T. Murata, Shigenori Ushiyama, Yasushi MutoShigenori Ushiyama, Yasushi Muto, Tsukasa Iwama and Ken. T. Murata

Secret Key Steganography With Message Obfuscation By Pseudo-Random Number Generators Juan M. Gutiérrez-CárdenasJuan Manuel Gutierrez Cardenas

MidArch 2014 Location: Room 110

13:30-15:00 Workshop Sessions

Welcome Address

Toyokazu Akiyama, Kyoto Sangyo University, Japan Hideaki Goto, Tohoku University, Japan

Certificate-based, Disruption-tolerant Authentication System with Automatic CA Certificate Distribution for eduroam

Hao Liu, and Hideaki Goto

Centralized Online Sign-up and Client Certificate Issuing System for eduroam Tomo Niizuma, and Hideaki Goto

Modeling the Cost Structure of Identity Proofing Masaki Shimaoka, and Noboru Sonehara

15:30-17:00 Workshop Sessions

Dripcast - server-less Java programing framework for billions of IoT devices Ikuo Nakagawa, Masahiro Hiji, and Hiroshi Esaki

The Concept of a Mobility Data Cloud: Design, Implementation and Trials Nikolay Tcholtchev, Benjamin Dittwald, Thomas Scheel, Begüm İlke Zilci, Danilo Schmidt, Philipp Lämmel, Jurma Jacobsen and Ina Schieferdecker

Big Data in Memory: Benchimarking In Memory Database Using the Distributed Key-Value Store for Constructing a Large Scale Information Infrastructure

Michiaki Iwazume, Takahiro Iwase, Koji Tanaka, and Hideaki Fujii

An evaluation of adaptive traffic engineering for delivering high bandwidth movie on overlay routing network

Hiroki Kashiwazaki, Yoshiaki Takai

WRMOCC 2014 Location: Room 103

10:30-12:00 Workshop Sessions

Codeface: Software = Technology + People (Opening and Keynotes) Wolfgang Mauerer

Expert Mining for Evaluating Risk Indicators Scenarios Oscar Franco-Bedoya, Dolors Costal, Soraya Hidalgo, and Ron Ben-Jacob

Building a Community: The Moodbile Perspective Nikolas Galanis, Maria José J. Casany, Marc Alier and Enric Mayol

13:30-15:00 Workshop Sessions

Risk Measure Propagation through Organizational Network Luba Shabnam, Farzana Haque, Moshiur Bhuiyan, Aneesh KrishnaMoshiur Bhuiyan, Luba Shabnam, Farzana Haque and Aneesh Krishna

Conducting a tactical workshop for community analysis Group exercise Wrap Up

SocNet 2014 Location: Room 101

10:30-12:00 Workshop Sessions

Chair: Mihhail Matskin, Royal Institute of Technology, Sweden *The Application of Internet of Things in Social Network*

Yu Zhang and , Jiangtao Wen, and Fan Mo

Cross-domain Scientific Collaborations Prediction with Citation InformationPSAFactory: An End-User Programming Tool for Building Participatory Sensing Applications Ying Guo and Xi Chen An Enterprise Social Recommendation System for Connecting Swedish Professionals Nima Dokoohaki, Mihhail Matskin, Usman Afzal and Md. Mustakimul Islam

How overlapping community structure affects epidemic spreading in complex networks Jiaxing Shang, Lianchen Liu, Feng Xie, and Cheng Wu

UCDAS 2014 Location: Room 108

10:30-12:00 Workshop Sessions

Automated Generation of User-Interface Prototypes based on Controlled Natural Language Description Reyes Juárez-Ramírez, Carlos Huertas, and Sergio Inzunza

- Exploiting Reinforcement Learning to Profile Users and Personalize Web Pages Stefano Ferretti, Silvia Mirri, Catia Prandi, and Paola Salomoni
- Physiological Mouse: Towards an Emotion-Aware Mouse Yujun Fu, Hong Va Leong, Grace Ngai, Michael Xuelin Huang, and Stephen C.F. Chan
- Towards a User Model for the Design of Adaptive Interfaces for Autistic Users Andrés Mejía-Figueroa, Reyes Juárez-RamírezAndrés Mejía Figueroa and José Reyes-Juárez

13:30-15:00 Workshop Sessions

- Text-Based CAPTCHA Using Phonemic Restoration Effect and Similar Sounds Misako Goto, Toru Shirato, and Ryuya Uda
- Improvement of Personal Identification by Flick Input with Acceleration Sensor Nozomi Takeuchi, Shuhei Kobata, Ryuya UdaJasenko Hosic, Daniel R. Tauritz, and Samuel A. Mulder
- Designing Interpersonal Communication Software for the Abilities of Elderly Users Drew Williams and, Sheikh Iqbal Ahamed, William Chu

BloT 2014 Location: Room 101

13:30-15:00 Workshop Sessions

Chair: Hideya Ochiai, The University of Tokyo / NICT, Japan

Designing of a Network-Aware Cloud Robotic Sensor Observation Framework Fredrik Nordlund, Manabu Higashida, Yuuichi Teranishi, Shinji Shimojo, Masanori Yokoyama, and Michio Shimomura

Managing Heterogeneous Sensor Data on a Big Data Platform: IoT Services for Data-intensive Science Sulayman K. Sowe, Takashi Kimata, Mianxiong Dong, and Koji Zettsu

m-cloud - distributed statistical computation using multiple cloud computers Ikuo Nakagawa, Masahiro Hiji, Yutaka Kikuchi, Masahiro Fukumoto, and Shinji Shimojo

15:30-17:00 Workshop Sessions

Chair: Susumu Takeuchi, NTT Corporation, Japan

Facility Information Management on HBase: Large-Scale Storage for Time-Series Data Hideya Ochiai, Hiroyuki Ikegami, Yuuichi Teranishi, and Hiroshi Esaki

Towards a User-Friendly Loading System for the Analysis of Big Data in the Internet of Things Marco Mesiti and Stefano Valtolina

Load-Adaptive Indexing Method for Schema-less Searches

Yutaka Arakawa, Takayuki Nakamura, Motonori Nakamura, Nobuhiko Matsuura, Yuusuke Kawakita and Haruhisa Ichikawa

CFSE 2014 Location: Room 110

10:30-12:00 Workshop Sessions

Chair: Ryoichi Sasaki, Tokyo Denki University, Japan

Digital Fingerprinting on Executable File for Tracking Illegal UploadersDigital Watermarking Method on Executable Files for Tracking Illegal Uploaders Masayuki Tsubouchi, Tomotaka Maeda and Yasuo Okabe

An Evaluation of Side-Information Assisted Forensic Hash Matching

Johan Garcia

Evolving Decision Trees for the Categorization of Software Jasenko Hosic, Daniel R. Tauritz, and Samuel A. Mulder

Proposal and evaluation of safe and efficient log signature scheme for the preservation of evidence Naoki Kobayashi and, Ryoichi Sasaki

ESAS 2014 Location: Room 108

15:30-17:30 Workshop Sessions

Chair: Atilla Elçi, Aksaray University, Turkey

A Safety Food Consumption Mobile System through Semantic Web Technology Duygu Çelik, Atilla Elçi, Rıdvan Akçiçek, Bora Gökçe, and Pelin Hürcan

Mobile Pediatric Consultation and Monitoring System through Semantic Web Technology Duygu Çelik, Atilla Elçi, Rıdvan Akçiçek, Bora Gökçe, and Pelin Hürcan

Using the Semantics Inherent in Sitemaps to Learn Ontologies Abdulelah A. Algosaibi and Austin C. Melton, Jr.Abdulelah Algosaibi and Austin Melton

Round Table and Conclusion

CORCS-IEESD 2014

Location: Room 106

13:30-15:00 Workshop Sessions

Chair: Cristina Seceleanu, Mälardalen University, Sweden

Synthesis of Pareto Efficient Technical Architectures for Multi-Core Systems Sergey Zverlov, and Sebastian Voss

Towards Context-oriented Self-adaptation in Resource-constrained Cyberphysical Systems Mikhail Afanasov, Luca Mottola, and Carlo Ghezzi

Towards a Common Software-to-hardware Allocation Framework for the Heterogeneous High Performance Computing

Zdravko Krpić, Ivica Crnković Crnkovic, and Jan Carlson

15:30-17:00 Workshop Sessions

Chair: Detlef Streitferdt, Technical University of Ilmenau, Germany

Identifying Evolution Problems for Large Long Term Industrial Evolution Systems Daniel Hallmans, Marcus Jäaegemar, Stig Larsson, and Thomas Nolte

Variable factors of influence in product line development Franz Felix Fuessl and, Jirka Ciemala

SAPSE 2014 Location: Room 106

10:30-12:00 Workshop Sessions

The Problem of Handling Multiple Headers in WS-Security Implementations Ernesto Damiani, Valerio Coviello, Fulvio Frati, Claudio SantacesariaFulvio Frati, Ernesto Damiani, Valerio Coviello and Claudio Santacesaria

- A Socio-Technical Methodology for the Security and Privacy Analysis of Services Giampaolo Bella, Paul Curzon, Rosario Giustolisi, and Gabriele Lenzini
- I Was Confused: Robust Accountability for Permission Delegation in Cloud Federations Samane Abdi
- Integration of Heterogeneous Policies for Trust Management Samane Abdi

Friday July 25

SSERV 2014 Location: Room 105

8:30-10:00 Workshop Sessions

Chair: Hiroshi Takahashi, Keio University, Japan

Social Services with Human and Artificial Agents (Opening Remarks) Takao Terano

What is the impact of heterogeneous knowledge about fundamentals on market liquidity and efficiency : an ABM approach

Vivien Lespagnol, Juliette Rouchier

A Study on Filtering of the Effect Range with the Package Insert of the Medicine Takashi Ikoma, Masakazu Takahashi, Kazuhiko Tsuda

10:30-12:00 Workshop Sessions

Chair: Setsuya Kurahashi, University of Tsukuba, Japan

Learning Agents for Human Complex Systems Iris Lorscheid

Heuristics for Designing and Evaluating Socio-Technical Agent-Oriented Behaviour Models with Coloured Petri Nets

Msury Mahunnah, Alex Norta, Lixin Ma, Kuldar Taveter

Analyzing the role of noise trader in financial markets through agent-based modeling Hiroshi Takahashi

13:30-15:00 Workshop Sessions

Chair: Iris Lorscheid, Hamburg University of Technology, Germany

Emergence of Fashion Cycle by Agent-Based Model of WoM Dissemination Takashi Yoshida, Setsuya Kurahashi

Chartists and fundamentalists in an agent based herding model Souhir Masmoudi

Heterogeneity in Lowest Unique Integer Game Takashi Yamada, Nobuyuki Hanaki

QUORS 2014

Location: Room 109

8:30-10:00 Workshop Sessions

Software Evolution

Chair: Hongji Yang, Bath Spa University, UK

A Multi-Dimensional Component Importance Analysis Mechanism For Component Based Systems Xin Zhang A SysML Based Requirement Modeling Automatic Transformation Approach Chih-Hung Chang, Chih-Wei Lu, Wen -Pin Yang, William Cheng-Chung Chu, and Pao-Ann Hsiung

Analyzing Arteifact Anomalies in a Temporal Structural Workflow for SBS.pdf editshow versions Fengjian Wang and Parameswaramma Mandalapu

10:30-12:00 Workshop Sessions

Software Reuse

Chair: Xiaodong Liu, Edinburgh Napier University, UK

A Framework of Patterns Applicability in Software Development Hossam Hakeem, Hui Guan, and Hongji Yang

Reverse Engineering Web Applications for Security Mechanism Enhancement Hui Guan, and Hongji Yang, Hossam Hakeem

Comparing Reuse Strategies: An Empirical Evaluation of Developer Views Julia Varnell-Sarjeant, Anneliese Amschler Andrews, and Andreas Stefik

Modelling a Safety- and Automotive-oriented Process Line to Enable Reuse and Flexible Process Derivation Barbara Gallina and, Shaghayegh Kashiyarandi,Helmut Martin and Robert Bramberger

13:30-15:00 Workshop Sessions

Cloud and Service Computing

Critical evaluation on jClouds and Cloudify abstractopen cloud APIs against EC2, Azure and HP-Cloud Steven Thomas Graham, and Xiaodong Liu

Institution Theory for Services Oriented Applications Amine Achouri, Yousra Bendaly Hlaoui and Leila Jemni Ben ayed and Jemni Ben Ayed Leila

A Reference Architecture for Building Highly Available and Scalable Cloud Application Hassan Jamous

A Semi-Supervised Approach to Software Defect Prediction Kocagunelli Lu and Bojan Cukic

15:30-17:00 Workshop Sessions

Model-Driven Quality and Testing

Chair: Xiaodong Liu, Edinburgh Napier University, UK

Towards Feature-Oriented Fault Tree Analysis Benjamin Behringer, Martina Lehser and Steffen Rothkugel

Integrating the Modelica DSL into a Platform for Model-based Tool Interoperability Nikolay Tcholtchev, Grit Dudeck, Michael Wagner, Christian Hein, Arun Prakash and Tom Ritter

Requirements Model Oriented System Generation Tool and Its Practical Evaluation Shinobu Saito, Jun Hagiwara, Tomoki Yagasaki, and Katsuyuki Natsukawa

Using TTCN-3 to Test SPDY Protocol Interaction Property Sumei Zhang, Li Hua, Yu Xue, and Xiangrong Wang

CDS 2014 Location: Room 108

8:30-10:00 Workshop Sessions

Chair: Toru Kobayashi, Nagasaki University, Japan

A Hazard Detection Method for Bicycles by using Probe Bicycle Shigeo Kaneda, Shohei Asada, Akira Yamamoto, Yuta Kawachi and, Yusuke Tabata

An Ironing Support System with Superimposed Information for Beginners Kimie Suzuki, Kaori Fujinami

A Hybrid Device Profile Detection Method and Its Applications Naofumi Yoshida, Naoki Ishibashi, Norihiro Ishikawa

A Study of on-Vehicle Informatgion Devices Using a Smartphone Takatomo Yamabe, Ryozo Kiyohara

10:30-12:00 Workshop Sessions

Chair: Ryozo Kiyohara, Kanagawa Institute of Technology, Japan

An API Design Process in terms of usability

Sunghoon Lee, Sanghee Lee, Sumi Lim, Jiyoung Jung, Sangho Choi, Neunghoe Kim and, Jung-Been Lee Design and Implementation of Event Information Summarization System Chenyi Liao, Katsuhiko Kaji, Kei Hiroi, Nobuo Kawaguchi

Metadata for Energy Disaggregation Jack Kelly and, William Knottenbelt

13:30-15:00 Workshop Sessions

Chair: Yasuo Okabe, Kyoto University, Japan

Customizable Web-based system to federate smart devices and peripherals Hidenobu Ito, Kazuaki Nimura

- A Power Allocation Management System Using an Algorithm for the Knapsack Problem Naoyuki Morimoto, Yuu Fujita, Masaaki Yoshida, Hiroyuki Yoshimizu, Masafumi Takiyamada, Terukazu Akehi, Masami Tanaka
- A Rapid Prototyping Approach for Smart Energy Systems based on Partial System Models Georg Hackenberg, Maximilian Irlbeck and, Vasileios Koutsoumpas, Denis Bytschkow

WASCOM 2014 Location: Room 107

8:30-10:00 Workshop Sessions

Dynamic adaptive management of buffer for QOS guarantees and energy reduction Wael Zouaoui, Carolina Albea Sanchez, and Yann Labit

Profile-based scalable video adaptation employing MD-FEC interleaving over loss-burst channels Sheau-Ru Tong, Huan-Wen Chen and Cheng-Han Yang

An evaluation of adaptive traffic engineering for delivering high bandwidth movie on overlay routing network

Hiroki Kashiwazaki, and Yoshiaki Takai

An adaptive XACMLv3 policy enforcement point Romain Laborde, Bashar Kabbani, François Barrèere, and Abdelmalek Benzekri

STA 2014 Location: Room 107

10:30-12:00 Workshop Sessions

Instrumentation, Automation and Applications

Testing Java Exceptions: an instrumentation technique Alexandre Locci L. Martins, Simone Hanazumi, and Ana C. V. de Melo

Automated Generation of Integration Test Sequences from Logical Contracts Dianxiang Xu, Weifeng Xu, and Michael Tu

Risk Based Testing of Open Source Software (OSS) Inbal Yahav, Ron S. Kenett and Xiaoying Bai

13:30-15:00 Workshop Sessions

Model-based testing - Improving and Extending

Automated Model-based Performance Testing for PaaS Cloud Services Junzan Zhou, Bo Zhou, and Shanping Li

A Structured Model of Consistency Rules in After-State Database Testing Robert Setiadi, Man Fai Lau

Improving Models for Model-based Testing based on Exploratory Testing Ceren Şahin Gebizli and, Hasan Söozer

SSS-MediComp 2014 Location: Room 110

8:30-10:00 Workshop Sessions

Noninvasive Ambulatory Monitoring of the Electric and Mechanical Function of Heart with a Multifunction Wearable Sensor

Xianxiang Chen, Xinyu Hu, Ren Ren, Bin Zhou, Xiao Tan, Jiabai Xie, Zhen Fang, Yangmin Qian, Huaiyong Li, Lili Tian, and Shanhong Xia

Current Electronic Medical Record in China

Chen Shi, Liu Hui-Ting, Pan Hui, Ji-Jiang Yang, Jianqiang Li, and Qing Wang

A ZigBee based multi-hop health monitoring system: design and performance evaluation F.M.Sun, Z. Fang, Z. Zhao, L.D.Du, Z.H.Xu, D.L.Chen, Y.M.Qian, H.Y.Hui, and L.L.Tian

Using knowledge management and mhealth in high-risk pregnancy care: a case for the floating population in China

Ben-Dda Gu, Ji-Jiang Yang, Jian-qQiang Li, Qing Wang, and Yu Niu

10:30-12:00 Workshop Sessions

- A practical and automated approach for engineering service-oriented applications with design patterns Patrizia Scandurra, and Steven Capelli
- Measuring Prediction Sensitivity of a Cloud Auto-scaling System Ali Yadavar Nikravesh, Samuel Ajila, and Chung-Horng Lung
- Towards an Ontology-based Context-aware Meta-model for the Software Domain Mostafa Erfani, Juergen Rilling, and Iman Keivanloo
- Accountability in a Context-aware Smarthome Healthcare Reasoning System Bingchuan Yuan, and John Herbert

MVDA 2014 Location: Room 110

8:30-10:00 Workshop Sessions

Chair: Leila Jemni Ben Ayed, University of Tunis, Tunisia

- MuScADeL: a Deployment DSL based on a Multiscale Characterization Framework Raja Boujbel, Sam Rottenberg, Sébastien Leriche, Chantal Taconet, Jean-Paul Arcangeli and Claire Lecocq
- A Load Distribution Method Based on Distributed Hashing for P2P Sensor Data Stream Delivery System Tomoya Kawakami, Yoshimasa Ishi, Tomoki Yoshihisa and Yuuichi Teranishi
- A Meta-Model Transformation from UML Activity Diagrams to Event-B Models Ahlem Ben Younes, Leila Jemni Ben Ayed and Yousra Bendaly Hlaoui
- MuScADeL: a Deployment DSL based on a Multiscale Characterization Framework Raja Boujbel, Sam Rottenberg, Sebastien Leriche, Chantal Taconet, Jean-Paul Arcangeli and Claire Lecocq
- A Load Distribution Method Based on Distributed Hashing for P2P Sensor Data Stream Delivery System Tomoya Kawakami, Yoshimasa Ishi, Tomoki Yoshihisa, Yuuichi Teranishi

A Calculus for Transportation Systems Moonkun Lee, and Jungrhan Choi

Towards an Institutional Representation For The B Model Oriented Specification Amine Achouri, Yousra Bendaly Hlaoui and Leila Jemni Ben ayed

10:30-12:00 Workshop Sessions

Chair: Ahlem Ben Younes, University of Tunis, Tunisia

A Formal Modeling on Exceptions for Context-Aware Systems Tae-Seob Yoon, Joong-Hyun Choi, Eun-Sun Cho, and Sumi Helal

- MuScADeL: a Deployment DSL based on a Multiscale Characterization Framework Raja Boujbel, Sam Rottenberg, Sébastien Leriche, Chantal Taconet, Jean-Paul Arcangeli and Claire Lecocq
- Concept Map -Based Short Answer Questions Assessment Approach Safa Ben Salem, Lilia Cheniti-Belcadhi, Rafik Braham
- Towards an Institutional Representation For The B Model Oriented Specification Amine Achouri, Yousra Bendaly Hlaoui and Leila Jemni Ben ayed
- A Meta-Model Transformation from UML Activity Diagrams to Event-B Models Ahlem Ben Younes, Yousra Bendaly Hlaoui, Leila Jemni Ben Ayed

IEEE COMPSAC Main Conference

Tuesday July 22, 2014

8:30-9:00 Opening Session

Location: Main Congress Hall (2nd Floor) Session Chair: John Walz, IEEE Computer Society

9:00-10:00 Keynote Address

Location: Main Congress Hall (2nd Floor)

Programming Liberated: Playing and Talking Behavioral Scenarios David Harel, Weizmann Institute, Israel

10:00-10:30 Morning Break

10:30-12:00 Workshop Sessions

Plenary Panel: Computing Education in 2050 Location: TBDMain Congress Hall (2nd Floor)

Moderator: Stephen B. Seidman, Texas State University, USA and Arnold Pears, Uppsala University, Sweden

Panelists: Claudio Demartini, Politecnico di Torino, Italy

David Harel, Weizmann Institute, Israel, Sorel Reisman, California State University at Fullerton, USA, and Siegfried Rouvrais, Télécom Bretagne, France

12:00-13:30 Lunch

13:30-15:00 Parallel Sessions

Software Engineering I Chair: TBD

Location: Room 302

The Issues of Solving Staffing and Scheduling Problems in Software Development Projects * Daniela C. C. Peixoto, Geraldo R. Mateus, and Rodolfo F. Resende

Randomized Model Generation for Performance Testing of Model Transformations* Xiao He, Tian Zhang, Zhiyi Ma, Changjun Hu and Weizhong Shao

Optimizing Non-orthogonal Space Distance using PSO in Software Cost Estimation Qin Liu, Xiaoyuan Chu, Jiakai Xiao, and Hongming Zhu

A Mutual Information-Based Hybrid Feature Selection Method for Software Cost Estimation Using Feature Clustering

Qin Liu, Shihai Shi, Hongming Zhu, and Jiakai Xiao

Automated Analysis in Software Engineering Chair: TBD

Location: Room 301

*PF-Miner: A new paired functions mining method for Android kernel in error paths** Huqiu Liu, Yuping Wang, Lingbo Jiang, and Shimin Hu

A Feature-Driven Crossover Operator for Product Line Architecture Design Optimization* Thelma ElitaE. Colanzi, and Silvia Regina Vergilio

BuildPredictor: More Accurate Missed Dependency Prediction in Build Configuration Files Bo Zhou, Xin Xia, David Lo and Xinyu Wang A Pattern-Based Approach for Automatic Business Process Specialization Abderrahmane Leshob, Hafedh Mili and Anis Boubaker

Validation & Verification Chair: TBD

Location: Room 109D

GUIDiVa: Automated Discovery and Validation of State-based GUI Invariants * Ali Darvish, and Carl K. Chang

A Runtime Verification Framework for Control System Simulation* Selim Ciraci, Jason C. Fuller, Jeff Daily, Atefe Makhmalbaf, and David Callahan

Towards Model-and-Code Consistency Checking Markus Riedl-Ehrenleitner, Andreas Demuth, and Alexander Egyed

Tackling Incomplete System Specifications Using Natural Deduction in the Paracomplete Setting Alexander Bolotov, and Vasilyi Shangin

Bug Reports

Chair: TBD

Location: Room 108

Towards Semi-automatic Bug Triage and Severity Prediction Based on Topic Model and Multi-Feature of Bug Reports*

Geunseok Yang, Tao Zhang, and Byungjeong Lee

Automated Configuration Bug Report Prediction Using Text Mining* Xin Xia, David Lo, Weiwei Qiu, Xingen Wang and Bo Zhou

An Improved Discriminative Model for Duplication Detection on Bug Reports with Cluster Weighting Meng-Jie Lin and Cheng-Zen Yang

Faceted Bug Report Search with Topic Model Kaiping Liu, and Hee Beng Kuan Tan

15:00-15:30 Afternoon Break

15:30-17:00 Parallel Sessions

Service & Application Chair: Behrooz Shirazi, Washington State University, USA Location: Room 302

Towards Uniform Management of Cloud Services by applying Model-Driven Development* Toni Mastelić, Ivona Brandić, Andrés García GarcíaToni Mastelic, Andres Garcia Garcia and Ivona Brandic

An SLA-Driven Cache Optimization Approach for Multi-tenant Applications on PaaS* Huihong He, Zhiyi Ma, Hongjie Chen, Dan Wu, Huanhuan Liu, and Weizhong Shao

FSaaS: File System as a Service

Dapeng Dong and John Herbert

Modelling Variability in Activity Diagrams for Mobile Business Applications Viktor Kolokolov, Stefan T. Rueh, Paul Baumann, Shaozhen Zhang and Stephan A. W. Verclas

Quality Assurance and Assessment I

Chair: Sahra Sedigh Sarvestani, Missouri University of Science and Technology, USA Location: Room 301

Extending the Theoretical Fault Localization Effectiveness Hierarchy with Empirical Results at Different Code Abstraction Levels*

Chung Man Tang, W. K. Chan, and Y. T. Yu

Adoption of Free Libre Open Source Software (FLOSS): A Risk Management Perspective* Ron S. Kenett, Xavier Franch, Angelo Susi and Nikolas Galanis

Quantifying the Characteristics of Java Programs that May Influence Symbolic Execution from a Test Data Generation Perspective*

Marcelo Medeiros M. Eler, Andre Takeshi T. Endo and Vinicius H. S. Durelli

Spec & Requirements Chair: TBD Location: Room 109 Eliciting Relations From Natural Language Requirements Documents Based on Linguistic and Statistical Analysis* Lin Liu, Tianying Li, and Xiaoxi Kou

Counterexample-guided Abstraction Refinement for Component-based Systems* Lianyi Zhang, Qingdi Meng, and Guiming Luo A Formal Representation of Platform Feature-to- Requirement Traceability for Software Product Line Development*

Sungwon Kang, Jingyu Kim, Sungju Kang and Seokhwan Eom

18:30-20:21:330 Reception

Wednesday July 23, 2014

Session Chair: Bruce McMillin, Missouri University of Science and Technology, USA
Location: Main Congress Hall (2nd Floor)
9:00-10:00 Keynote Address
Challenges in Adopting and Deploying Research Ideas into Industrial Teams

Brian P. Robinson: ABB

10:00-10:30 Morning Break

10:30-12:00 Parallel Sessions

Software Engineering II Chair: Feng-Jian Wang, National Chiao-Tung University, Taiwan Location: Room 302 Dynamic Slicing of Python Programs* Zhifei Chen, Lin Chen, Yuming Zhou, Zhaogui Xu, William C. Chu, and Baowen Xu

Efficient Caching and Incrementalization of Object Queries on Collections in Programming Codes* Venkata Krishna Suhas Nerella, Sanjay Madria, and Thomas Weigert

Trimming Test Suites with Coincidentally Correct Test Cases for Enhancing Fault Localizations Xiaozhen Xue, Yulei Pang, and Akbar Siami Namin

Motivating by examples: An empirical study of teaching an introductory software engineering course in Brazil

Rasha Osman, and Arilo C. Dias-Neto

Quality Assurance and Assessment II Chair: TBD

Location: Room 301

VertexRank: Importance Rank for Software Network Vertices* Huan Luo, Yuan Dong, Yiying Ng and Shengyuan Wang Design and Safety Analysis for System Architecture: A Breeze/ADL-based Approach Luxi Chen, Linpeng Huang, Chen Li, Linzhu Wu and Weichao LuoWeichao Luo and Linzhu Wu

Transformation from Activity Diagrams with Time Properties to Timed Coloured Petri Nets Xuling Chang, Linpeng Huang, Jianpeng Hu, Chen Li and Bei Cao

Understanding and Measuring Nesting Hend Alrasheed and Austin Melton

Network Traffic

Chair: Dianxiang Xu, Boise State University, USA

Location: Room 108

Optimizing the Power Consumption of Mobile Networks based on Traffic Prediction* Safaa Dawoud, Abdulbaki Uzun, Sebastian Göondöor, and Axel Küupper

Power Saving Mechanism for IEEE 802.11 Clients in Multicast Multimedia Streaming Network* Yuta Morisawa, Yoshihiro Kawahara and, Tohru Asami

How to generate realistic network traffic? Antoine Varet and Nicolas Larrieu

Development of a Secure Traffic Analysis System to Trace Malicious Activities on Internal Networks Soshi Hirono, Yukiko Yamaguchi, Hajime Shimada and Hiroki Takakura

Doctoral Symposium Mentoring Session

Chairs: Michiharu Takemoto, NTT, Japan & Detlef Streitferdt, Technical University of Ilmenau, Germany

Location: Room 109

Performance Preservation using Servers for Predictable Execution and Integration Rafia Inam

Exploratory Performance Analysis of Microbot Swarm in Three-Dimensional Field Shota Agemura and Hiroyuki Ohsaki

A Distributed Flow Control with Backward Propagation: Algorithm and Preliminary Performance Evaluation

Kohei Tsutsumi, Hiroyuki Ohsaki and Hideaki Suzuki

A model for distributed agile release planning Ingo Richter, Robert Lindermeier and Michael Weber

Media supported workspaces in agile software development Florian Raith, Robert Lindermeier

12:00-13:30 Lunch

13:30-15:00 Parallel Sessions

Embedded Systems Chair: TBD

Location: Room 302

A Distributed Topic-based Pub/Sub Method for Exhaust Data Streams Towards Scalable Event-driven Systems*

Ryohei Banno, Susumu Takeuchi, Michiharu Takemoto, Tetsuo Kawano, Takashi Kambayashi and Masato Matsuo

Integrated Modular Avionics (IMA) Partition Scheduling with Conflict-Free I/O for Multicore Avionics Systems*

Jung-Eun Kim, Man-Ki Yoon, Richard Bradford and Lui Sha

Time-sensitive adaptation in CPS through run-time configuration generation and verification Marisol Garcíia-Valls, Diego Perez-Palacin, and Raffaela Mirandola

Liquid Software Manifesto: The Era of Multiple Device Ownership and Its Implications for Software Architecture

Antero Taivalsaari, Tommi Mikkonen and Kari Systäa

Empirical Study

Chair: Xiaodong Liu, Edinburgh Napier University, UK

Location: Room 301

Exploring Blueprints on the Prioritization of Architecturally Relevant Code Anomalies: A Controlled Experiment*

Everton Guimaraes, Alessandro Garcia, and Yuanfang Cai

Empirically Based Evolution of a Variability Management Approach at UML Class Level* Anderson Marcolino, Edson Oliveirajr, Itana Gimenes, and Ellen F. Barbosa

Instability and Abstractness Metrics Based on Responsibility*

Austin Melton, Saleh Almugrin, Waleed Albattah, Omar Alaql, and Musaad Alzahrani, Austin Melton

Security Chair: TBD

Location: Room 109

Your Phone Knows You: Almost Transparent Authentication for Smartphones* Mohammad Tanviruzzaman, and Sheikh Iqbal Ahamed

A forensic analysis of Android Malware - How is Malware Written and How it Could be Detected?* Kevin Allix, Quentin Jerome, Tegawendée F. Bissyandée, Jacques Klein, Radu State and Yves Le Traon

Auditing Buffer Overflow Vulnerabilities using Hybrid Static-Dynamic Analysis Bindu Madhavi Padmanabhuni and Hee Beng Kuan Tan

A Countermeasure Recommendation System against Targeted Attacks with Preserving Continuity of Internal Networks

Hirokazu Hasegawa, Yukiko Yamaguchi, Hajime Shimada and Hiroki Takakura

Defect Prediction

Chair: Hiroyuki SATO, The University of Tokyo, Japan

Location: Room 108

A Scenario-Based Approach to Predicting Software Defects Using Compressed C4.5 Model* Biwen Li, Beijun Shen, Jun Wang, Yuting Chen, Tao Zhang, and Jinshuang Wang

A Semi-Supervised Approach to Software Defect Prediction* Huihua Lu, Bojan Cukic, and Mark Culp

FECAR: A Feature Selection Framework for Software Defect Prediction* Shulong Liu, Xiang Chen, Wangshu Liu, Jiaqiang Chen, Qing Gu, and Daoxu Chen

15:00-15:30 Afternoon Break

15:30-17:00 Workshop Sessions

Plenary Panel: Security with Privacy - Opportunities and Challenges Location: Main Congress Hall (2nd Floor) Moderator: Elisa Bertino, Purdue University, USA

Panelists: Johann AkebergÅkerberg, ABB Sweden

Iqbal Ahamed, Marquette University, USA, Bruce McMillin, Missouri University of Science and Technology, USA, Mohammad Zulkernine, Queens University, Canada

18:30-20:30 Conference Banquet

Thursday July 24, 2014

9:00-10:30 Workshop Sessions

Plenary Panel: Convergence Panel

Location: TBD Main Congress Hall (2nd Floor)

Moderator: Steve Diamond (moderator), IEEE Cloud Computing Initiative, EMC Corporation, USA

Panelists: Bruce McMillin, SmartGrid, Missouri University of Science and Technology, USA Atam Dhawan: Life Sciences, New Jersey Institute of Technology, USA Charles Despins, Sustainable IT, Prompt, Canada, Dejan Milojicic: Cybersecurity, and

Rebooting Computing, HP Labs, USA

10:30-11:00 Morning Break

11:00-12:00 Keynote address

Session Chair: Tiberiu Seceleanu, ABB Corporate Research, Sweden Location: Main Congress Hall (2nd Floor)

Predicting Future Technologies - IEEE Computer Society 2022 Report Dejan S. Milojicic: President, IEEE Computer Society, HP Labs, USA

12:00-13:00 Lunch

13:00-14:00 Keynote Address

Session Chair: Sahra Sedigh Sarvestani, Missouri University of Science and Technology, USA Location: Main Congress Hall (2nd Floor)

From Opinions to Facts: Building Products Customers Actually Use Jan Bosch: Chalmers University Technology, Sweden

14:00-15:30 Parallel Sessions

Network Application and configuration

Chair: Motonori NAKAMURA, NII, Japan

Location: Room 302

A Low Cost Hierarchy-Awareness Extension of Skip Graph for World-Wide Range Retrievals* Xun Shao, Masahiro Jibiki, Yuuichi Teranishi and Nozomu Nishinaga

SIROM3 - A Scalable Intelligent ROaming Multi-Modal Multi-Sensor Framework* Jiaxing Zhang, Hanjiao Qiu, Salar Shahini Shamsabadi, Ralf Birken, and Gunar Schirner

Web Technology Chair: Juergen Rilling, Concordia University, Canada Location: Room 301

An Online Education Approach Using Web Operation Record and Replay Techniques* Yanchun Sun, Dejian Chen, Wenpin Jiao, and Gang Huang

JavaScript: The Used Parts*

Sharath Gude, and Munawar Hafiz, and Allen Wirfs-Brock

Towards an Open Architecture Model for Web and Mobile Software: Characteristics and Validity Properties* Bahtijar Vogel, Arianit Kurti, Tommi Mikkonen and Marcelo Milrad

Virtual Machine Chair: TBD Location: Room 109

Transpacific Live Migration of Virtual Machines with Wide Area Distributed Storage* Ikuo Nakagawa, Kohei Ichikawa, Toru Kondo, Yoshiaki Kitaguchi, Hiroki Kashiwazaki and Shinji Shimojo

CrowdAdaptor: a CrowdSourcing Approach Toward Adaptive Energy-Efficient Configurations of Virtual Machines Hosting Mobile Applications*

Edward Y. Y. Kan, W.K. Chan and T.H. Tse

A lightweight virtual machine image deduplication backup approach in cloud environment Jiwei Xu, Wenbo Zhang, Shiyang Ye, Jun Wei, and Tao Huang

Emergent Topics

Chair: Atilla Elci, Aksaray University, Turkey

Location: Room 108

Which Android App Store can be trusted in China?* Yi Ying Ng, Yuan Dong, Hucheng Zhou, Zhiyuan Ji, and Huan Luo, Yuan Dong

Specific Touch Gesture on Mobile Devices to Find Attractive Phrases in News Browsing* Shohe Ito, Takuya Yoshida, Fumiko Harada, and Hiromitsu Shimakawa

Analysis of Reliability and Resilience for Smart Grids Murtadha N. Albasrawi, Nathan Jarus, Kamlesh A. Joshi, and Sahra Sedigh Sarvestani

Generating accessible multimodal user interfaces using MDA-based adaptation approach Lamia Zouhaier, Yousra Bendaly Hlaoui and Leila Jemni Ben Ayed

15:30-16:00 Afternoon Break

16:00-17:30 Parallel Sessions

Network Performance Chair: TBD

Location: Room 302

*Performance Evaluation of Reconfigurable TCP Communication on Wi-Fi Network Using GE Channel Model**

Naoki Oguchi, and Shunji Abe

Performance Improvement of SCTP Communication Using Selective Bicasting on Lossy Multihoming Environment*

Koki Okamoto, Nariyoshi Yamai, Kiyohiko Okayama, Keita Kawano, Motonori Nakamura, Tokumi YokohiraTakuya Sato, Nariyoshi Yamai, Kiyohiko Okayama, Keita Kawano and Motonori Nakamura

Adaptive Online Feedback Controlled Message Compression*

Marcus Jägemar, Sigrid Eldh, Andreas Ermedahl, Björn LisperJagemar, Bjorn Lisper, Andreas Ermedahl and Sigrid Eldh

Social Networks

Chair: TBD

Location: Room 301

Emergence of Fractals in Social Networks: Analysis of Community Structure and Interaction Locality* Sho Tsugawa, and Hiroyuki Ohsaki

Homesick Lévy walk: A mobility model having Ichi-go Ichi-e and scale-free properties of human encounters* Akihiro Fujihara and Hiroyoshi Miwa

Preserving Location-related Privacy Collaboratively in Geo-Social Networks Lin Zhang, Mingxuan Yuan, Yao Guo, Xiangqun Chen and Lei Chen

SPTP: A Trust Management Protocol for Online and Ubiquitous Systems Ivor D. Addo, Ji-Jiang Yang, and Sheikh Iqbal I. Ahamed

Fast Abstract

Chair: Sheikh Iqbal Ahamed, Marquette University, USA Location: Room 109

Towards Test Architecture based Software Product Line Testing Jihyun Lee, Sungwon Kang

Comparing Control Flow Graphs of Binary Programs through Match Propagation Hyun-il Lim

Behavioral Anomaly Detection System on Network Application Traffic from Many Sensors Akira Nagata, Kohei Kotera, Katsuichi Nakamura, and Yoshiaki Hori Improve User's Security Literacy by Experiencing Behavior of Pseudo Android Malware Makoto Kato, Saeko Matsuura

Predicting Release Time Based on Generalized Software Reliability Model (GSRM) Kiyoshi Honda, Hironori Washizaki, Yoshiaki Fukazawa

Industry Papers

Chair: Gaetana Sapienza, Mälardalen University, Sweden Location: Room 108

Experiences Integrating Heterogeneous Government Open Data Sources to Deliver Services and Promote Transparency in Brazil

Kellyton Dos Santos Brito, Marcos Antônio Da Silva Costa, Vinicius Cardoso Garcia, and Silvio Romero De de Lemos Meira

Operation Support System based on Augmented Reality Technology Tatsuya Osawa, Jun Shimamura and, Yukinobu Taniguchi

On Architecture for QoS-Aware Packet Aggregation Tomoaki Umeki, and Yoshinori Kitatsuji

Software-as-a-Service Solution Implementation - Data Migration Perspective Luba Shabnam, Farzana Haque, Moshiur Bhuiyan, Aneesh Krishna

Doctoral Symposium and Posters Location: Room 107

Performance Preservation using Servers for Predictable Execution and Integration Rafia Inam

Exploratory Performance Analysis of Microbot Swarm in Three-Dimensional Field Shota Agemura, Hiroyuki Ohsaki

A Distributed Flow Control with Backward Propagation: Algorithm and Preliminary Performance Evaluation

Kohei Tsutsumi, Hiroyuki Ohsaki and Hideaki Suzuki

A model for distributed agile release planning Ingo Richter, Robert Lindermeier and Michael Weber

Media supported workspaces in agile software development Florian Raith, Robert Lindermeier

- SMoCoR: a Smart Mobile Contact Recommender Based on Smart Phone Data Xiwei Zhuang, Yanchun Sun, Kui Wei
- Thermodynamics-based Entropy Adjustment for Robust Self-organized Network Controls Takuya Iwai, Daichi Kominami, Masayuki Murata, and Tetsuya Yomo

- Expiration Timer Control Method for QoS-aware Packet Chunking Hiroki Yanaga, Daiki Nobayashi, Takeshi Ikenaga
- A Taxonomy for SLA-based Monitoring of Cloud Security Dana Petcu
- A QoS-oriented Inter-Cloud Federation Framework Maria Salama, Ahmed Shawish
- Information Orchestration System for Closing the Information Retrieval Capability Gap Toru Kobayashi
- Cider: An Event-driven Continuous Integration Server Ondřej Kupka Filip Zavoral

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