The 9th IEEE International Conference on Ubiquitous Intelligence and Computing
(IEEE UIC 2012)
The 9th IEEE International Conference on Autonomic and Trusted Computing
(IEEE ATC 2012)
The 12th International Conference on Algorithm and Architectures for Parallel Processing
(ICA3PP 2012)

Advanced Program

Hosted by:
Kyushu Sangyo University, Fukuoka, Japan
September 4~7, 2012

Sponsored by:
IEEE, IEEE Computer Society
IEEE Technical Committee on Scalable Computing
Fukuoka Convention and Visitors Bureau (FCVB)

In cooperation with:
The Information Processing Society of Japan (IPSJ)
The Institute of Electronics, Information and Communication Engineers (IEICE)
The IPSJ Special Interest Group on Distributed Processing Systems (IPSJ SIG-DPS)
The IEICE Special Interest Group on Dependable Computing (IEICE SIG-DC)
The IPSJ Special Interest Group on Computer Security (IPSJ SIG-CSEC)
The IPSJ Special Interest Group on Mobile Computing and Ubiquitous Communication (IPSJ SIG-MBL)

IEEE UIC/ATC/ICA3PP 2012 Program Overview

Day 1 - September 4, 2012 (Tuesday)								
	Room #12105 (120 seats)	Room #12106 (120 seats)	Room #12107 (240 seats)	Room #12108 (120 seats)	Room #12101 (60 seats)	Room #12102 (60 seats)	Room #12103 (60 seats)	Room #12104 (60 seats)
08:00-17:00	Registration							
09:20-09:50	Opening (Bldg 12, Room #12107)							
09:50-10:00	Break							
10:00-11:00	Keynote I (Bldg 12, Room #12107) Kazuo Iwano (Mitsubishi Corporation)							
11:00-11:20	Break							
11:20-13:00 Session 1 (100 minutes)	**UIC 1a**	**UIC 1b**	**ICA3PP 1a**	**ICA3PP 1b**	**ATC 1**	**MENS 1**	**UIPM 1**	**USMAP 1**
13:00-14:30	Lunch							
14:30-15:30	Keynote II Bldg 12, Room #12107) Miroslaw Malek (Humboldt University of Berlin, Germany)							
15:30-15:50	Break (Demo and Poster)							
15:50-17:30 Session 2 (100 minutes)	**UIC 2a**	**UIC 2b**	**ICA3PP 2a**	**ICA3PP 2b**	**ATC 2**	**MENS 2**	**UIPM 2**	**USMAP 2**
17:30-18:00	Free Time							
18:00-20:00	Welcome Reception (Bldg 12, 7th floor)							

Day 2 - September 5, 2012 (Wednesday)								
	Room #12105 (120 seats)	Room #12106 (120 seats)	Room #12107 (240 seats)	Room #12108 (120 seats)	Room #12101 (60 seats)	Room #12102 (60 seats)	Room #12103 (60 seats)	Room #12104 (60 seats)
08:00-17:00	Registration							
09:00-10:20 Session 3 (80 minutes)	**UIC 3a**	**UIC 3b**	**ICA3PP 3a**	**ICA3PP 3b**	**ATC 3**	**CDCN 1**	**UFirst 1**	**WEISS 1**
10:20-10:40	Break							
10:40-12:00 Session 4 (80 minutes)	**UIC 4a**	**UIC 4b**	**ICA3PP 4a**	**ICA3PP 4b**	**ATC 4**	**CDCN 2**	**UFirst 2**	**WEISS 2**
12:00-13:20	Lunch							
13:20-14:20	Keynote III (Bldg 1) Wanlei Zhou (Deakin University, Australia)							
14:20-14:40	Break							
14:40-15:40	IEEE UIC/ATC Panel Discussion I (Bldg 1)							
15:40-16:00	Break							
16:00-17:00	ICA3PP Panel Discussion II (Bldg 1)							
17:00-19:00	Free Time							
19:00-21:00	Banquet (Nikko Hotel Hakata)							

Day 3 - September 6, 2012 (Thursday)

	Room #12105 (120 seats)	Room #12106 (120 seats)	Room #12107 (240 seats)	Room #12108 (120 seats)	Room #12101 (60 seats)	Room #12102 (60 seats)	Room #12103 (60 seats)	Room #12104 (60 seats)
08:00-12:00	Registration							
09:00-10:00	Keynote IV (Bldg 12, Room #12107) Masafumi Yamashita (Kyushu University, Japan)							
10:00-10:20	Break							
10:20-12:00 Session 5 (100 minutes)	**UIC 5a**	**UIC 5b**	**ICA3PP 5a**	**ICA3PP 5b**	**ATC 5**	**WiNA**	**DDCPD**	**GreenPS 1**
12:00-13:00	Lunch							
13:00-20:00	Half-Day Tour							

Day 4 - September 7, 2012 (Friday)

	Room #12105 (120 seats)	Room #12106 (120 seats)	Room #12107 (240 seats)	Room #12108 (120 seats)	Room #12101 (60 seats)	Room #12102 (60 seats)	Room #12103 (60 seats)	Room #12104 (60 seats)
08:00-12:00	Registration							
09:00-10:40 Session 6 (100 minutes)	**UIC 6a**	**UIC 6b**	**ICA3PP 6a**	**ICA3PP 6b**	**ATC 6**	**UISTA 1**	**UFirst 3**	**GreenPS 2**
10:40-11:00	Break							
11:00-12:40 Session 7 (100 minutes)			**ICA3PP 7a**	**ICA3PP 7b**	**ATC 7**	**UISTA 2**		**GreenPS 3**
12:40-13:30	Lunch							
13:30-14:00	Closing Session							

Keynote Talk 1:

Retrospect of Autonomic Computing and its Influences on the Recent Computing Trends

Kazuo Iwano (Mitsubishi Corporation, Japan)

Summary:

This talk covers the original concept and technology of Autonomic Computing which was initiated by IBM in 2001. Although the Autonomic Computing initiative started a decade ago, it has been affecting ways of service delivery, infrastructure, and its architecture in a major way. The talk will elaborate on such influences of Autonomic Computing on the recent computing trends such as Grid Computing, Service Oriented Architecture, Cloud Computing, Cyber Physical Systems, and Smarter Planet. Moreover, it will also cover topics related to dependability.

About the keynote speaker

Dr. Kazuo Iwano helps Mitsubishi Corporation as an advisor to develop new business opportunities based on information technology focusing on services and infrastructure in society. Before joining Mitsubishi Corporation in March 2012, he had been in IBM and engaged in Research and Development and Emerging Businesses. After graduating Tokyo University in Japan with Mathematics major, he joined IBM Japan in 1975. He acquired Ph. D. in Computer Science from Princeton University in 1987. He was Director of Tokyo Research Laboratory, IBM Research from 1995 to 2000. During his stay in T. J. Watson Research Center from 2000 to 2003, he was a key member of the Autonomic Computing initiative as Director of Autonomic Computing, IBM Research. He was also in charge of Emerging Business in IBM Asia Pacific and Japan from 2002 to 2003 focusing on Autonomic Computing and Grid Computing, and he was in charge of Yamato Software Development from 2003 to 2008. He was, then, in charge of Smarter Cities and Cloud Computing as VP of Smarter Cities CTO and VP, Future Value Creation Team from 2009 to March 2012.

His research interest includes combinatorial optimization, cloud computing, and Cyber Physical Systems. He is a member of IEEE, ACM, and SIAM, a fellow of Information Processing Society of Japan since 2003, and an associated member of Science Council of Japan since 2004. He has been a visiting professor of Tokyo Institute of Technology since 2010.

The 2012 International Conference on Algorithms and Architectures for Parallel Processing

(ICA3PP 2012)

Keynote Talk 2:

Securability: The Key Challenge for Autonomic and Trusted Computing

Miroslaw Malek (Humboldt University of Berlin, Germany)

Summary:

Rapid proliferation of computing and communication systems, ranging from clouds to cyber-physical systems, puts ever-growing demands on dependability and security. Securability, the key challenge for autonomic and trusted computing, focuses on both these properties, namely dependability and security. Main techniques to meet this challenge will be outlined and concepts such as proactive fault management, failure prediction, translucency and qq-plane will be introduced.

About the keynote speaker

Miroslaw Malek is professor and holder of Chair in Computer Architecture and Communication at the Department of Computer Science at Humboldt University in Berlin. His research interests focus on dependable architectures and services in parallel, cloud, distributed and embedded computing environments including failure prediction, dependable architectures and service availability. He has participated in two pioneering parallel computer projects, contributed to the theory and practice of parallel network design, developed the comparison-based method for system diagnosis, codeveloped comprehensive WSI and networks testing techniques, proposed the consensus-based framework for responsive (fault-tolerant, real-time) computer systems design and has made numerous other contributions, reflected in over 200 publications and nine books.

He has supervised 26 Ph.D. dissertations and three habilitations (ten of his students are professors) and founded, organized and co-organized numerous workshops and conferences. He served and serves on editorial boards of several journals and is consultant to government and companies on technical and strategic issues in information technology. Malek received his PhD in Computer Science from the Technical University of Wroclaw in Poland, spent 17 years as professor at the University of Texas at Austin and was also, among others, visiting professor at Stanford, Universita di Roma “La Sapienza”, Politecnico di Milano, Keio University, Technical University in Vienna, New York University, Chinese University of Hong Kong, and guest researcher at Bell Laboratories and IBM T.J. Watson Research Center.

Keynote Talk3:

Trust Management and Privacy Preservation in Wireless and Sensor Networks

Wanlei Zhou (Deakin University, Australia)

Summary:

Because of the wireless transmission requirement and the self-organizing nature of its architecture for a Wireless and Sensor Network (WSN), the trust management and privacy protection for WSNs have become an especially challenging problem. In this talk, we analyze current threats and attacks in WSNs and survey state-of-the-art trust management and privacy protection schemes in WSNs. Then we classify and describe trust management schemes into two aspects in secure routing and secure data, respectively and privacy protection schemes into data-oriented and context-oriented privacy, respectively. Finally we try to present a clear direction to design and construction of trust mechanisms and privacy protection techniques in WSNs and discuss some interesting and challenging open issues on this topic.

About the keynote speaker

Professor Wanlei Zhou received the B.Eng (Computer Science and Engineering) and M.Eng (Computer Science and Engineering) degrees from Harbin Institute of Technology, Harbin, China in 1982 and 1984, respectively, and the PhD degree from The Australian National University, Canberra, Australia, in 1991. He also received a DSc degree (a higher Doctorate degree) from Deakin University in 2002 for his substantial contribution to knowledge and authoritative standing in the field of distributed computing. He is currently the Chair Professor in Information Technology and Head of School, School of Information Technology, Deakin University. Before joining Deakin University, Professor Zhou served as a system programmer in HP at Massachusetts, USA; a lecturer in Monash University, Melbourne, Australia; and a lecturer in National University of Singapore, Singapore. His research interests include theory and practical issues of building distributed systems, security and reliability of computer networks, bioinformatics, and e-learning. Professor Zhou has published more than 200 papers in refereed international journals and refereed international conferences proceedings and has edited 5 books and authored 1 book. He has also chaired a number of international conferences. Prof Zhou is a Senior Member of the IEEE.

Keynote Talk 4:

Autonomous Distributed Systems of Mobile Robots

Masafumi Yamashita (Kyushu University, Japan)

Summary:

We regard a set of autonomous mobile robots as a distributed system and investigates it from the view of distributed computing. After introducing the model of mobile robot system, we observe that a system of anonymous and memory-less robots can successfully exhibit some autonomous properties such as the self-organization and the self-stability, which are considered to be an important property required for e.g., robust sensor networks. Through the talk, we explore what problems the robots can solve without identifiers and memory, and discuss why they can. We then come up with the fact that molecules can exhibit autonomy without identifiers and memory -- a similarity between robots and molecules, which may justify an abuse of our using the robot model as a model of more general distributed systems including e.g., molecular computing.

About the keynote speaker

Dr. Yamashita received his Doctor of Engineering degree from Nagoya University, Nagoya, Japan in 1981. From 1980 to 1985, he was an research associate at Toyohashi University of Technology. In 1985, he joined Hiroshima University as an associate professor, and was a professor from 1992 to 1998. Since 1998, he is a professor at Kyushu University. He has held visiting appointments many times with Simon Fraser University, Ottawa University, Carleton University, University of Wisconsin-Milwaukee and Paris 6 University. His research interest includes distributed algorithms. He is a member of IEICE, IPSJ, JSIAM and IEEE.

IEEE UIC/ATC Joint Panel on

Smart Planet Challenges: Impediments and Enablers

Panel Chair: Professor Sumi Helal, *University of Florida, USA*

Panelists:

Professor Dr. Christian Becker, *University of Mannheim, Germany*

Professor Wanlei Zhou, *Deakin University, Australia*

Professor Zhiwen Yu, *Northwestern Polytechnical University, China*

Professor Jadwiga Indulska, *University of Queensland, Australia*

Abstract

Recent advances in Pervasive Computing and Intelligent Environments research give a glimpse into the future of our planet and reveal exciting visions of smart everything - smart cities, smart homes, smart workplaces, smart hotels, smart schools, and much more. Driven by technological evolution offering low power many-things and wireless almost-everything (e.g., IEEE 802.15.4 radio, wireless sensor networks, sensor platforms), we could, in only a decade, envision and prototype impressive cyber-physical systems and ubiquitous applications. In most of these systems, the goal has been clear and convincing, and the technology proved to be promising and exciting. But prototyping is only a beginning, and much remains to be innovated and done before smart cities and smart environments become common places.

This panel will discuss the exciting and promising future of smart planet in terms of the challenging impediments and the potential enablers. Some of the challenges include:

- *The need to integrate research and education across disciplines*. Many research disciplines must collaborate among and within themselves, including domain experts (of the particular environment, e.g., gerontologist for assisted living spaces), behavior scientists, engineers, computer scientists. Collaboration within the computer science and engineering discipline is key enabler to a smart planet.
- *The need for novel cyber-physical software architectures.* Systems support and middleware are essential foundation to building any systems – a smart planet is no exception. Software engineering is urgently needed to understand and support the full lifecycle of intelligent environments and smart spaces. New programming models are also needed for developing safe and adaptive applications and services. New notions of trust must be formulated and supported to ensure symbiotic relationship between the users and their smart environments.
- *Broader support is needed for effective human computer interaction*. Understanding the broader requirements of human computer interaction is crucial for both individuals and the masses. Effective persuasion is also proving to be of paramount importance to the success of the operation of such smart spaces.
- *The need to integrate computational intelligence with systems research*. Without machine learning and computational intelligence techniques, the potential utility and “ceiling of goals” of smart spaces would be severely limited. Without expanding the computer system’s research to encompass proven and established machine learning and computational intelligence techniques, it will be difficult to increase the capacity of appropriately trained smart space engineers.

Panelists will present their position statements and highlight what they identify as challenges and enablers to smart planet progress and advancements.

Professor Sumi Helal
Director of the Mobile & Pervasive Computing Laboratory, University of Florida, USA
Email: helal@cise.ufl.edu

Short Biography

Sumi Helal is a Professor at the Computer and Information Science and Engineering Department (CISE) at University of Florida (UF), and a Finland Distinguished Professor (FiDiPro) at Aalto University, Finland. He is a pioneer and recognized leader in the field of Pervasive and Ubiquitous Computing. He is well known, worldwide, for his interdisciplinary research on smart spaces and Health Telematics in support of Health Care, Aging, Disabilities and Independence. He directs the Mobile and Pervasive Computing Laboratory in the CISE department at UF. He is co-founder and director of the Gator Tech Smart House, an experimental home for applied research in the domains of eldercare and health telematics. He led and directed the NIDRR-funded Rehabilitation Engineering Research Center (RERC) on Successful Aging (2001-2007), and is currently leading a continuation project on smart home based personal health and independence, funded by the National Institutes of Health (NIH).

Dr. Helal organized over 20 IEEE and ACM conferences or workshops and is currently serving as the associate Editor-in-Chief of IEEE Computer, the flagship magazine of the IEEE Computer Society. Dr. Helal earned his B.E. and M.E. degrees summa cum laude in Computer Engineering and Automatic Control from Alexandria University, Egypt, in 1982 and 1985 respectively. He earned his Ph.D. in Computer Sciences from Purdue University in 1991.

Professor Dr. Christian Becker
Chair of Information Systems II, University of Mannheim, Germany
Email: christian.becker@uni-mannheim.de

Short Biography

Christian Becker is a full professor of Information Systems at the University of Mannheim since 2006. Prior to this, he was a visiting professor for distributed systems at the University of Duisburg-Essen in Spring Term 2006. He studied Computer Science at the Universities of Karlsruhe and Kaiserslautern where he received the Diploma in 1996. From 1997 till 2001 he was a researcher at the distributed systems and operating systems group at the University of Frankfurt where he received his PhD in 2001 with a thesis about “Quality of Service Management in Distributed Object Systems”. In 2001 he joined the distributed systems group at the University of Stuttgart as Post Doc. His research focused on system support for Pervasive Computing and Peer to Peer Computing. He is specifically interested in architectures for adaptive systems. In 2004 he received the venia legendi (Habilitation) for Computer Science (Informatik). Christian’s research interests are Distributed Systems, Self-Organizing Systems and Context-Aware Computing.

Professor Wanlei Zhou
Head of School of Information Technology, Deakin University, Melbourne, Australia
Email: wanlei.zhou@deakin.edu.au

Short Biography

Professor Wanlei Zhou received the B.Eng and M.Eng degrees from Harbin Institute of Technology, Harbin, China in 1982 and 1984, respectively, and the PhD degree from The Australian National University, Canberra, Australia, in 1991. He is currently the Chair Professor of Information Technology and the Head of the School of Information Technology at Deakin University, Melbourne, Australia.

Professor Zhiwen Yu
Professor & Vice-Dean, School of Computer Science
Northwestern Polytechnical University, China
Email: zhiwenyu@nwpu.edu.cn

Short Biography

Dr. Zhiwen Yu is currently a professor and vice dean of the School of Computer Science, Northwestern Polytechnical University, P. R. China. He received his B.Eng, M.Eng and Ph.D. degree of Engineering in computer science and technology in 2000, 2003 and 2005 respectively from the Northwestern Polytechnical University. He has worked as a research fellow at the Academic Center for Computing and Media Studies, Kyoto University, Japan from Feb. 2007 to Jan. 2009, and a post-doctoral researcher at the Information Technology Center, Nagoya University, Japan in 2006-2007. He has been a visiting researcher at the Context-Aware Systems Department, Institute for Infocomm Research (I2R), Singapore from Sep. 2004 to May 2005. He has been an Alexander von Humboldt Fellow at the Mannheim University, Germany from Nov. 2009 to Oct. 2010.

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Professor Jadwiga Indulska
Professor, School of Information Technology & Electrical Engineering,
University of Queensland, Australia.
Email: jaga@itee.uq.edu.au

Short Biography

Jadwiga Indulska is a Professor in the School of Information Technology and Electrical Engineering at The University of Queensland, Brisbane, Australia. She received a Master degree in Mathematics from Jagiellonian University and her PhD degree in Computer Science from AGH University of Science and Technology, both in Krakow, Poland. Her research interests are in the areas of computer networks, distributed computing and pervasive/ubiquitous computing. Over the last 10 years, her research has addressed many problems in pervasive and autonomic computing including context

information models for context-aware applications; autonomic management of context information; privacy of context information; software engineering of context-aware applications; balancing user control and software autonomy; and autonomic, rapidly deployable mesh networks. She has led research projects on interoperability of distributed applications, mobile computing, and pervasive computing at the DSTC, an Australian Government funded Collaborative Research Centre on Distributed Systems Technology (1992- 2005). She has been a Research Leader at NICTA (Australian National Centre of Excellence in Information and Communication Technology) since 2006.

ICA3PP 2012 Panel on

Future and Challenges of Parallel and Distributed Computing

Panel Chair: Professor Xu Huang, *University of Canberra, Australia*

Panelists:

Professor Miroslaw Malek, *Humbold-Universität zu Berlin, Germany*

Professor Stephen S. Yau, *Arizona State University, USA*

Professor Koji Nakano, *Hiroshima University, Japan*

Professor Camille Coti, *University of Paris North (Paris XIII), France*

Summary:

Today, both parallel and distributing computing have became ubiquitous in the forms of clouds and cyber physical systems. We have witnessed the fast developing technology fundamentally changing the balances and paradigms between cost of computing, communication and programming: At the hardware level, the essential aspect of quickly changing landscape is the difference in growth of network bandwidth, processor speed and memory access times. High speed networks are changing balance on the networking side, because port throughput is more limited by the processor speed than by the network bandwidth, as it was in the past. At the same time, the latency of the networks is fundamentally limited by the speed of light and the distance that the transferred data need to travel. On the other hand, the speed of a processor is growing faster than the access time to the memory (where the technological advances are used to increase the memory chip capacity rather than its speed). The resulting use of buffering to mask the speed differences has led to the multi-memory hierarchy in which registers, primary cache, secondary cache and main memory are typical layers with progressively lower speed but larger capacity.

This panel will discuss the exciting and promising future of parallel and distributed computing. The challenges and future development will be discussed, such as:

- *Energy* - What makes sustainable and green parallel and distributed computing?
- *Hardware* - What is the future of the hardware of parallel and distributed computing? The price of hardware plays a role as cheaper devices are better received by customers.
- *Software* - What are the challenges of software development? No matter the software development paradigm goes centralized or distributed, parallelism is still a key to performance.
- *Security* - As systems become more complex year by year, their role in everyday life gains importance as well. As a result, security and privacy have become the major concern.

Panelists will present their position statements and highlight what they identify as challenges and potential future development in parallel and distributed computing.

Professor (Dr) Xu Huang, *University of Canberra, Australia*

Short Biography

Dr Xu Huang has received the B.E. and M.E. degrees and Ph.D. in Electrical Engineering and Optical Engineering prior to 1989 and the second Ph.D. in Experimental Physics in the University of New South Wales, Australia in 1992. He has earned the Graduate Certificate in Higher Education in 2004 at the University of Canberra, Australia. He has been working on the areas of the

telecommunications, networking engineering, wireless communications, optical communications, and digital signal processing more than 30 years. Currently he is the Head of the Engineering at the Faculty of Information Sciences and Engineering, University of Canberra, Australia. He is the Course Conveners “Doctor of Philosophy,” “Masters of Information Sciences (by research),” and “Master of Engineering.” He has been a senior member of IEEE in Electronics and in Computer Society since 1989 and a Fellow of Institution of Engineering Australian (FIEAust), Chartered Professional Engineering (CPEng), a Member of Australian Institute of Physics. He is a member of the Executive Committee of the Australian and New Zealand Association for Engineering Education, a member of Committee of the Institution of Engineering Australia at Canberra Branch. Professor Huang has published about two hundred papers in high level of the IEEE and other Journals and international conference; he has been awarded 9 patents in Australia.

Professor Miroslaw Malek, *Humbold-Universität zu Berlin, Germany*

Short Biography

Miroslaw Malek is professor and holder of Chair in Computer Architecture and Communication at the Department of Computer Science at Humboldt University in Berlin. His research interests focus on dependable architectures and services in parallel, cloud, distributed and embedded computing environments including failure prediction, dependable architectures and service availability. He has participated in two pioneering parallel computer projects, contributed to the theory and practice of parallel network design, developed the comparison-based method for system diagnosis, co-developed comprehensive WSI and networks testing techniques, proposed the consensus-based framework for responsive (fault-tolerant, real-time) computer systems design and has made numerous other contributions, reflected in over 200 publications and nine books.

He has supervised 26 Ph.D. dissertations and three habilitations (ten of his students are professors) and founded, organized and co-organized numerous workshops and conferences. He served and serves on editorial boards of several journals and is consultant to government and companies on technical and strategic issues in information technology. Malek received his PhD in Computer Science from the Technical University of Wroclaw in Poland, spent 17 years as professor at the University of Texas at Austin and was also, among others, visiting professor at Stanford, Universita di Roma “La Sapienza”, Politecnico di Milano, Keio University, Technical University in Vienna, New York University, Chinese University of Hong Kong, and guest researcher at Bell Laboratories and IBM T.J. Watson Research Center.

Professor Stephen S. Yau, *Arizona State University, USA*

Short Biography

Stephen S. Yau is currently professor of computer science and engineering at Arizona State University (ASU), Tempe. He served as the chair of the Department of Computer Science and Engineering at ASU in 1994-2001. Previously, he was on the faculty of Northwestern University, Evanston, Illinois and the University of Florida, Gainesville. He received the Ph.D. degree in electrical engineering from University of Illinois at Urbana.

He served as the president of the Computer Society of the Institute of Electrical and Electronics Engineers (IEEE) and American Federation of Information-Processing Societies. He also served as the editor-in-chief of COMPUTER

magazine of the IEEE Computer Society.

His current research interests are in cyber security, ubiquitous computing, distributed computing systems, service-based systems and software engineering. He has received many awards and recognition for his accomplishments, including the Tsutomu Kanai Award and Richard E. Merwin Award of the IEEE Computer Society, the IEEE Centennial and Third Millennium Medals, and the Louis E. Levy Medal of the Franklin Institute. He is a Fellow of the IEEE and the American Association for the Advancement of Science.

Professor Koji Nakano, *Hiroshima University, Japan*

Short Biography

Koji Nakano received the BE, ME and Ph.D degrees from Department of Computer Science, Osaka University, Japan in 1987, 1989, and 1992 respectively. In 1992-1995, he was a Research Scientist at Advanced Research Laboratory. Hitachi Ltd. In 1995, he joined Department of Electrical and Computer Engineering, Nagoya Institute of Technology. In 2001, he moved to School of Information Science, Japan Advanced Institute of Science and Technology, where he was an associate professor. He has been a full professor at School of Engineering, Hiroshima University from 2003. He has published extensively in journals, conference proceedings, and book chapters. He served on the editorial board of journals including IEEE Transactions on Parallel and Distributed Systems, IEICE Transactions on Information and Systems, and International Journal of Foundations on Computer Science. He has also guest-edited several special issues including IEEE TPDS Special issue on Wireless Networks and Mobile Computing, IJFCS special issue on Graph Algorithms and Applications, and IEICE Transactions special issue on Foundations of Computer Science. He has organized conferences and workshops including International Conference on Networking and Computing, International Conference on Parallel and Distributed Computing, Applications and Technologies, IPDPS Workshop on Advances in Parallel and Distributed Computational Models, and ICPP Workshop on Wireless Networks and Mobile Computing. His research interests include image processing, hardware algorithms, GPU-based computing, FPGA-based reconfigurable computing, parallel computing, algorithms and architectures.

Professor Camille Coti, *University of Paris North (Paris XIII), France*

Short Biography

Camille Coti graduated with a MSc in telecommunications (majoring in parallel and distributed computing) from Telecom SudParis and a PhD in computer science from University of Paris South. She made several visits to the Innovative Computing Laboratory at the University of Tennessee, Knoxville, totalizing 22 months in Knoxville. Then she worked as a post-doctoral research associate at Iowa State University. She is now an Assistant Professor at the University of Paris North (Paris XIII). She works on parallel computing on hierarchical memory and highly-distributed systems. Her interests include parallel algorithms, run-time environments and distributed computing on volatile environments.

The IEEE UIC 2012 Technical Program

September 4, 2012 (Tuesday)		
08:00-17:00	Registration	
09:20-09:50	Opening (Bldg 12, Room #12107)	
09:50-10:00	Break	
10:00-11:00	Keynote I (Bldg 12, Room #12107)	
11:00-11:20	Break	
11:20-13:00	UIC 1a	UIC 1b
13:00-14:30	Lunch	
14:30-15:30	Keynote II Bldg 12, Room #12107)	
15:30-15:50	Break (Demo and Poster)	
15:50-17:30	UIC 2a	UIC 2b
17:30-18:00	Free Time	
18:00-20:00	Welcome Reception (Bldg 12, 7th floor)	

UIC 1a: Ubiquitous and Intelligent Systems
Session Chair:

1. Predicting Mobile Phone User Locations by Exploiting Collective Behavioral Patterns
   Haoyi Xiong, Daqing Zhang, Daqiang Zhang, and Vincent Gauthier
2. Treatment of Missing Data in Intelligent Lighting Applications
   Aravind Kota Gopalakrishna, Tanir Özçelebi, Antonio Liotta, and Johan J. Lukkien
3. Development of the Smart Toilet Equipment with Measurements of Physiological Parameters
   Ji-Jer Huang, Sheng-I Yu, and Hao-Yi Syu
4. Development of a Route Finding System for Manual Wheelchair Users Based on Actual Measurement Data
   Yasuaki Sumida, Masaki Hayashi, Kazuaki Goshi, and Katsuya Matsunaga
5. A Lingustic Approach for Robustness in Context Aware Applications
   Young-Mok Min, Joon-Young Paik, and Eun-Sun Cho

UIC 1b: Wireless and Ad-Hoc Network
Session Chair:

1. Downlink Scheduling and Resource Allocation in EPON-WiMAX Integrated Networks
   Chung-Chih Kuo, Hung-Yi Teng, and Ren-Hung Hwang
2. SocioTelematics: Leveraging Interaction-Relationships in Developing Telematics Systems to Support Cooperative Convoys
   Muhammad Ashad Kabir, Jun Han, Alan Colman, and Jian Yu
3. Anycast Routing Based on Connectivity Metric for Sensor and Ad Hoc Networks
   Satoru Ohta and Shingo Toda
4. An Efficient Clustering Authentication Mechanism for Mobile Ad Hoc Networks
   Ching-Hung Yeh, Meng-Yen Hsieh, and Kuan-Ching Li
5. Confidential Enhancement with Multi-code Keying Reconfiguration over Time-Shifted CHPC-based 2D OCDMA Networks
   Yao-Tang Chang and Chuen-Ching Wang

Poster / Demo

1. Safe Driving Education System ASSIST—Education Anywhere, Anytime
   Kazuaki Goshi, Masaki Hayashi, and Katsuya Matsunaga
2. A New Generation Children Tracking System Using Bluetooth MANET Composed of Android Mobile Terminals
   Koki Morii, Koji Taketa, Yuichiro Mori, Hideharu Kojima, Eitaro Kohno, Shinji Inoue, Tomoyuki Ohta, and Yoshiaki Kakuda

UIC 2a: Vehicle Ad-Hoc Network
Session Chair:

1. A Content-Based Publish/Subscribe System for Efficient Event Notification over Vehicular Ad Hoc Networks
   Fusang Zhang, Beihong Jin, Wei Zhuo, Zhaoyang Wang, and Lifeng Zhang
2. Towards a Trusted Vehicular Routing in VANET
   Deng Chuan and Wang Jian
3. Performance Analysis of LTE Smartphones-Based Vehicle-to-Infrastructure Communication
   Hassan Abid, Tae Choong Chung, Sungyoung Lee, and Saad Qaisar
4. Improving the Estimation of Residual Delay based Forwarding Method in Opportunistic Vehicular Networks
   Jia Jianbin, Chen Yingwen, Xu Ming, and Yu Gu
5. The IG-Ferry Protocol to Support Efficient Controlled Replication in Vehicular Delay Tolerant Network
   Ing-Chau Chang, Chien-Hsun Li, and Cheng-Fu Chou

UIC 2b: Smart Environment
Session Chair:

1. Exploiting Ultrasonic Reflections for Improving Accuracy of Indoor Location Tracking
   Kang-Wook Kim, Myung-Gon Park, Takao Hishikawa, Junghee Han, and Chang-Gun Lee
2. Routine Based Analysis for User Classification and Location Prediction
   Yibing Xiong and Huiping Lin
3. MPIGate: A Solution to Use Heterogeneous Networks for Assisted Living Applications
   Hugo Cruz-Sánchez, Lionel Havet, Moutie Chehaider, and Ye-Qiong Song
4. 3D Modeling and Simulation of Human Activities in Smart Spaces
   A. Helal, K. Cho, W. Lee, Y. Sung, J.W. Lee, and E. Kim
5. Global Sensor Modeling and Constrained Application Methods Enabling Cloud-Based Open Space Smart Services
   Anh Lê Tuán, Hoan N. Mau Quoc, Martin Serrano, Manfred Hauswirth, John Soldatos, Thanasis Papaioannou, and Karl Aberer

September 5, 2012 (Wednesday)

08:00-17:00	Registration	
09:00-10:20	UIC 3a	UIC 3b
10:20-10:40	Break	
10:40-12:00	UIC 4a	UIC 4b
12:00-13:20	Lunch	
13:20-14:20	Keynote III (Bldg 1)	
14:20-14:40	Break	
14:40-15:40	Panel Discussion I (Bldg 1)	
15:40-16:00	Break	
16:00-17:00	Panel Discussion II (Bldg 1)	
17:00-19:00	Free Time	
19:00-21:00	Banquet (Nikko Hotel Hakata)	

UIC 3a: Wireless Sensor Network
Session Chair:

1. Java Virtual Machine Based Infrastructure for Decent Wireless Sensor Network Development Environment
   Xing Liu, Xunxing Diao, Kun Mean Hou, Hailun Zhu, Xin Liu, Yazhou Wang, and Wei Jia
2. Wireless Smart Home Sensor Networks: Mobile Agent Based Anomaly Detection
   Muhammad Usman, Vallipuram Muthukkumarasamy, Xin-Wen Wu, and Surraya Khanum
3. Fault Management for Smart Wireless Sensor Networks
   Radosveta Sokullu and Ozlem Karaca
4. Data Gathering in a Hybrid Wireless Sensor Network
   Hua-Wen Tsai, Tzung-Shi Chen, Bing-Hong Tsai, Cheng-Hao Chu, and Jeng-Shian Tsai

UIC 3b: Intelligent and Social Computing
Session Chair:

1. Study of a Conversational Agent System Encouraging “Real” Answers of Individuals in a Group of Acquaintances
   Akihito Yoshii and Tatsuo Nakajima
2. Intelligent Systems that Combine Pervasive Computing and Social Networking
   Sarah Gallacher, Elizabeth Papadopoulou, Nick K. Taylor, Fraser R. Blackmun, and M. Howard Williams
3. A Four-Stage Gate-Keeper Model of Social Service Engineering: Lessons from Golden Rules of Mobile Social Game Design
   Toshihiko Yamakami
4. A Novel Interval Grey Number and Entropy-based Solution for Multiple-Criteria Group Decision Making Problem
   Dae Gun Kim, Hwi Woon Jeong, Geon Yong Park, and Hee Yong Youn

UIC 4a: Ubiquitous Systems and Applications
Session Chair:

1. Contribution-Based User Reputation Modeling in Collaborative Recommender Systems
   Wei Hu, Yaoxue Zhang, Yuezhi Zhou, and Zhi Xue
2. Knowledge Transfer in Activity Recognition Using Sensor Profile
   Yi-ting Chiang and Jane Yung-jen Hsu
3. Hybrid SN: Interlinking Opportunistic and Online Communities to Augment Information Dissemination
   Bin Guo, Zhiwen Yu, Xingshe Zhou, and Daqing Zhang
4. Hydra: An Ubiquitous Application for Service Rerouting
   Lucas A. Almeida, Fabricio N. Buzeto, Ana H.O.R. Castillo, Carla D. Castanho, and Ricardo P. Jacobi

UIC 4b: Energy Efficient and Green Computing
Session Chair:

1. A Battery-Aware Energy-Efficient Android Phone with Bayesian Networks
   Si-Hyuk Yi and Sung-Bae Cho
2. An Energy-Efficient Data Collection Mechanism with a Mobile Sink for Wireless Sensor Networks
   Wen-Hwa Liao and Ssu-Chi Kuai
3. Demand Response Control Strategies for On-campus Small Data Centers
   Cheng-Jen Tang and Miau-Ru Dai
4. Hilbert-Chain Topology for Energy Conservation in Large-Scale Wireless Sensor Networks
   Yih-Chuan Lin and Jia-Hong Zhong

September 6, 2012 (Thursday)		
08:00-12:00	Registration	
09:00-10:00	Keynote IV (Bldg 12, Room #12107)	
10:00-10:20	Break	
10:20-12:00	UIC 5a	UIC 5b
12:00-13:00	Lunch	
13:00-20:00	Half-Day Tour	

UIC 5a: Security and Intelligent Systems
Session Chair:

1. The Challenge of Preparational Behaviors in Preference Learning for Ubiquitous Systems
   Sarah Gallacher, Eliza Papadopoulou, Nick K. Taylor, and M. Howard Williams
2. Risk-Based Intelligent Software Release Planning
   Shunsuke Tokumoto and Tadashi Dohi
3. Efficient Time Series Disaggregation for Non-intrusive Appliance Load Monitoring
   Yao-Chung Fan, Xingjie Liu, Wang-Chien Lee, and Arbee L.P. Chen
4. User Identification Based on Touch Dynamics
   Frode Eika Sandnes and Xiaoli Zhang
5. A Fault Detection and Diagnosis Framework for Ambient Intelligent Systems
   Ahmed Mohamed, Christophe Jacquet, and Yacine Bellik

UIC 5b: P2P & RFID
Session Chair:

1. Neighbor Selection Method Based on Sending Capacity for P2P Live Streaming with Layer Coding
   Rei Endo, Kazuyuki Takayama, Yoshiki Sakata, and Hiroshi Shigeno
2. Using Dynamic Slots Collision Tracking Tree Technique Towards an Efficient Tag Anti-collision Algorithm in RFID Systems
   Chiu-Kuo Liang and Hsin-Mo Lin
3. AB-Chord: An Efficient Approach for Resource Location in Structured P2P Networks
   Yufeng Wang, Xiangming Li, Qun Jin, and Jianhua Ma
4. Development of Industrial Safety Management System for Shipbuilding Industry Using RFID/USN
   Jung-Min Yun and Peom Park
5. An Overlap Aware Technique for Redundant Reader Elimination
   Ching-Hsien Hsu, Chia-Hao Yu, Chun-Yao Chung, Chao-Tung Yang, and Chih-Hsun Chou

September 7, 2012 (Friday)		
08:00-12:00	Registration	
09:00-10:40	UIC 6a	UIC 6b
10:40-11:00	Break	
11:00-12:40	UIC 7a	UIC 4b
12:40-13:30	Lunch	
13:30-14:00	Closing Session	

UIC 6a: Wireless Sensor Network and Mobile Computing
Session Chair:

1. A Transmission Scheduling for Data-Gathering Wireless Sensor Networks
   Chao Gao, Ilkka Kivelä, Xinyu Tan, and Ismo Hakala
2. A Decentralized Quality Aware Adaptive Sampling Strategy in Wireless Sensor Networks
   A. Masoum, N. Meratnia, and P.J.M. Havinga
3. Robust and Dynamic Data Aggregation in Wireless Sensor Networks: A Cross-Layer Approach
   Weigang Wu, Jiannong Cao, Hejun Wu, and Jingjing Li
4. A Mobile Application Framework for Rapid Integration of Ubiquitous Web Services
   Meng-Yen Hsieh, Hua-Yi Lin, Ching-Hung Yeh, Kuan-Ching Li, and Bo-Shiung Wu

UIC 6b: Intelligent Systems, Software and Objects
Session Chair:

1. Situation-Based Design: A Rapid Approach for Pervasive Application Development
   Lei Tang, Xingshe Zhou, Christian Becker, Zhiwen Yu, and Gregor Schiele
2. An Efficient Method for Lane-Mark Extraction in Complex Conditions
   Chin-Yu Chang and Chang-Hong Lin
3. An Intelligent Accessing Control System Based on Human Intention Analysis
   Teng-Hui Tseng, Chin-Lun Lai, Sheng-Ta Hsieh, and Jun-Horng Chen
4. Comparative Study on Advanced TV Interface Types in the Smart Media World
   Youngjae Lim, Jaekyu Park, Eui S. Jung, David Ho Chung, Taeil Kim, Kwangsoo Choi, and Seunghun Lee
5. Backlog Bounds Analysis of Different On-chip Cache Coherence Policies: A Network Calculus-Based Approach
   Xin Lai, Cong Liu, Zhiying Wang, and Quanyou Feng

The ICA3PP 2012 Technical Program

September 4, 2012 (Tuesday)		
08:00-17:00	Registration	
09:20-09:50	Opening (Bldg 12, Room #12107)	
09:50-10:00	Break	
10:00-11:00	Keynote I (Bldg 12, Room #12107)	
11:00-11:20	Break	
11:20-13:00	ICA3PP 1a	ICA3PP 1b
13:00-14:30	Lunch	
14:30-15:30	Keynote II Bldg 12, Room #12107)	
15:30-15:50	Break (Demo and Poster)	
15:50-17:30	ICA3PP 2a	ICA3PP 2b
17:30-18:00	Free Time	
18:00-20:00	Welcome Reception (Bldg 12, 7th floor)	

ICA3PP 1a: Parallel Algorithms
Session Chair:

1. Parallel Algorithm for Nonlinear Network Optimization Problems and Real-Time Applications
   Shin-Yeu Lin and Xian-Chang Guo
2. Fast Parallel Algorithms for Blocked Dense Matrix Multiplication on Shared Memory Architectures
   G. Nimako, E. J. Otoo and D. Ohene-Kwofie
3. Vectorized Algorithms for Quadtree Construction and Descent
   Eraldo P. Marinho and Alexandro Baldassin
4. Exploiting Multi-grain Parallelism for efficient Selective Sweep Detection
   Nikolaos Alachiotis, Pavlos Pavlidis, and Alexandros Stamatakis

ICA3PP 1b: Distributed Scheduling and Load Balancing
Session Chair:

1. Optimal Linear Programming Solutions for Multiprocessor Scheduling with Communication Delays
   Sarad Venugopalan and Oliver Sinnen
2. A Hybrid Heuristic-Genetic Algorithm for Task Scheduling in Heterogeneous Multi-core System
   Chuan Wang, Jianhua Gu, Yunlan Wang, and Tianhai Zhao
3. Multi-Core Fixed Priority DVS Scheduling
   Liu Yang and Man Lin and Laurence T. Yang
4. A Dependency Aware Task Partitioning and Scheduling Algorithm for Hardware-Software Codesign on MPSoCs
   Chunsheng Li, Xi Li, Chao Wang, Xuehai Zhou, and Fangling Zeng

ICA3PP 2a: Parallel Architectures and Networks
Session Chair:

1. Ultrasound Simulation on the Cell Broadband Engine using the Westervelt Equation
   Andrew A. Haigh, Bradley E. Treeby, and Eric C. McCreath
2. Experiments in Parallel Matrix Multiplication on Multi-Core Systems
   Joeffrey Legaux, Sylvain Jubertie, and Frédéric Loulergue
3. A Verified Library of Algorithmic Skeletons on Evenly Distributed Arrays
   Wadoud Bousdira, Frédéric Loulergue, and Julien Tesson
4. Security Computing for the Resiliency of Protecting from Internal Attacks in Distributed Wireless Sensor Networks
   Xu Huang, Dharmendra Sharma, and Muhammad Ahmed

ICA3PP 2b: Performance Management
Session Chair:

1. Efficient Task Assignment on Heterogeneous Multicore Systems Considering Communication Overhead
   Li Wang, Jing Liu, Jingtong Hu, Qingfeng Zhuge, Duo Liu, and Edwin H.-M. Sha
2. Kernel Support for Fine-grained Load Balancing in a Web Cluster Providing Streaming Service
   Mei-Ling Chiang, Chen-Yu Yang, and Shin-Lu Lien

3. Budget Constrained Resource Allocation for Non-Deterministic Workflows on an IaaS Cloud
   Eddy Caron, Frédéric Desprez, Adrian Muresan, and Frédéric Suter
4. On Modelling and Prediction of Total CPU Usage for Applications in MapReduce Enviornments
   Nikzad Babaii Rizvandi, Javid Taheri, Reza Moraveji, and Albert Y. Zomaya x

September 5, 2012 (Wednesday)		
08:00-17:00	Registration	
09:00-10:20	ICA3PP 3a	ICA3PP 3b
10:20-10:40	Break	
10:40-12:00	ICA3PP 4a	ICA3PP 4b
12:00-13:20	Lunch	
13:20-14:20	Keynote III (Bldg 1)	
14:20-14:40	Break	
14:40-15:40	Panel Discussion I (Bldg 1)	
15:40-16:00	Break	
16:00-17:00	Panel Discussion II (Bldg 1)	
17:00-19:00	Free Time	
19:00-21:00	Banquet (Nikko Hotel Hakata)	

ICA3PP 3a: Parallel Algorithms
Session Chair:

1. A Regular Group Quorum System of Degree $\lceil\sqrt{(n/2)}\rceil$
   Fouad B. Chedid
2. A Note on Developing Optimal and Scalable Parallel Two-List Algorithms
   Fouad B. Chedid
3. High-performance Matrix Multiply on a massively Multithreaded Fiteng1000 Processor
   Jie Liu, Lihua Chi, Chunye Gong, Han Xu, Jie Jiang, Yihui Yan, and Qingfeng Hu
4. BIDE-based Parallel Mining of Frequent Closed Sequences with MapReduce
   Dongjin Yu, Wei Wu, Suhang Zheng, and Zhixiang Zhu
5. An Implementation of Parallel 2-D FFT Using Intel AVX Instructions on Multi-Core Processors
   Daisuke Takahashi
6. A New Low Latency Parallel Turbo Decoder Employing Parallel Phase Decoding Method
   Wen-Ta Lee, Min-Sheng Chang, and Wei-Chieh Shen
7. Towards Multi-Level Adaptation for Distributed Operating Systems and Applications
   Djawida Dib, Nikos Parlavantzas, and Christine Morin

ICA3PP 3b: Performance of Parallel & Distributed Computing Systems
Session Chair:

1. Analytical Modeling for Multi-transaction bus on destributed systems
   Jih-Ching Chiu, Kai-Ming Yang, and Chen-Ang Wong
2. Performance Evaluation of OpenMP and CUDA on Multicore Systems
   Chao-Tung Yang, Tzu-Chieh Chang, Kuna-Lung Huang, Jung-Chun Liu, and Chih-Hung Chang
3. Leveraging the Strengths of Transactional Memory While Maintaining System Performance for a Multiplayer Gaming Application
   LihChyun Shu, Ying-Cheng Su, Chang-Ming Tasi, and Huey-Min Sun
4. Maintaining Consistency in Software Transactional Memory through Dynamic Versioning Tuning
   Ehsan Atoofian and Amir Ghanbari Bavarsad
5. Design of n-gram based Dynamic Pre-fetching for DSM
   Sitaramaiah Ramisetti, Rajeev Wankar, and C.R. Rao
6. Exploring Object-Level Parallelism on Chip Multi-Processors
   Weixing Ji, Yizhuo Wang, Zhi Huang, Junqing Zhao, and Xi Li

ICA3PP 4a: Distributed Computing Environments
Session Chair:

1. A Semantic Impact in Decentralized Resource Discovery Mechanism for Grid Computing Environments
   Abdul Khalique Shaikh, Saadat M. Alhashmi, and Rajendran Parthiban
2. Solving a 2-covered Path Problem with Variable Radii for Wireless Sensor Networks
   Da-Ren Chen, Chiun-Chieh Hsu, You-Shyang Chen, and Jun-Fu Guo
3. Small Business-oriented Index Construction of Cloud Data

Kai Peng, Hua Zou, Rongheng Lin, and Fangchun Yang
4. On Construction of Cloud IaaS for VM Live Migration Using KVM and OpenNebula
   Chao-Tung Yang, Shao-Feng Wang, Kuan-Lung Huang, and Jung-Chun Liu
5. Enhancing the Performance of a Distributed Mobile Computing Environment by Topology Construction
   Il-Young Kim and Jong-Kook Kim
6. Determining Quality of S-Boxes Using Pseudo Random Sequences Generated from Stream Ciphers
   Anh P. Nguyen and Thuc D. Nguyen

ICA3PP 4b: Fault-tolerant Computing, Distributed Scheduling, and Application
Session Chair:

1. On Affirmative Adaptive Failure Detection
   Ahmad Shukri Mohd Noor, Mustafa Mat Deris, Tutut Herawan, and Mohamad Nor Hassan
2. Frame Error Rate Testing for High Speed Optical Interconnect
   Yi Dai, Ke-fei Wang, Wei-xia Xu, He-ying Zhang, Shao-gang Wang
3. Efficient Task Scheduling for Hard Real-Time Tasks in Asymmetric Multicore Processors
   Sung Il Kim, Jong-Kook Kim , Hyoung Uk Ha, Tae Ho Kim, and Kyu Hyun Choi
4. Complexity of the Resource Allocation/Matching Problem with Weight Based Ceilings
   Charles Karemera and John Ngubiri
5. FIDs Classifier for Artificial Intelligence and its Application
   Chih-Chiang Wei
6. Design of an Application-dependent Static-based Shared Memory Network
   Yoshimasa Ohnishi and Takaichi Yoshida

September 6, 2012 (Thursday)

08:00-12:00	Registration	
09:00-10:00	Keynote IV (Bldg 12, Room #12107)	
10:00-10:20	Break	
10:20-12:00	ICA3PP 5a	ICA3PP 5b
12:00-13:00	Lunch	
13:00-20:00	Half-Day Tour	

ICA3PP 5a: Parallel Architectures
Session Chair:

1. Performance, Scalability, and Semantics of Concurrent FIFO Queues
   Christoph M. Kirsch, Hannes Payer, Harald R?ck, and Ana Sokolova
2. Scalable Distributed Architecture for Media Transcoding
   Horacio Sanson, Luis Loyola, and Daniel Pereira
3. Overcoming the Scalability Limitations of Parallel Star Schema Data Warehouses
   João Pedro Costa, José Cecílio, Pedro Martins, and Pedro Furtado
4. Enhancing Service-Oriented Computing with Software Mobility
   Hervé Paulino and Gilberto Camacho

ICA3PP 5b: Reliability and Fault-tolerant
Session Chair:

1. Fault Tolerance Logical Network Properties of Irregular Graphs
   Christophe Cérin, Camille Coti, and Michel Koskas
2. Non-Blocking Atomic Commitment in Asynchronous Distributed Systems with Faulty Processes
   Sung-Hoon Park and Seon-Hyong Lee
3. Comparing Checkpoint and Rollback Recovery Schemes in a Cluster System
   Noriaki BESSHO and Tadashi DOHI
4. Causal Order Multicast Protocol Using Minimal Message History Information
   Chayoung Kim and Jinho Ahn

September 7, 2012 (Friday)		
08:00-12:00	Registration	
09:00-10:40	ICA3PP 6a	ICA3PP 6b
10:40-11:00	Break	
11:00-12:40	ICA3PP 7a	ICA3PP 4b
12:40-13:30	Lunch	
13:30-14:00	Closing Session	

ICA3PP 6a: System and Reliability
Session Chair:

1. The Hamiltonicity of WK-recursive Pyramid
   Yi-Chun Wang and Justie Su-Tzu Juan
2. A Bitstream Relocation Technique to Improve Exibility of Partial Reconfiguration
   Yoshihiro Ichinomiya, Motoki Amagasaki, Masahiro Iida, Morihiro Kuga, and Toshinori Sueyoshi
3. Fault Recovery Technique for TMR Softcore Processor System using Partial Reconfiguration
   Makoto Fujino, Hiroki Tanaka, Yoshihiro Ichinomiya, Motoki Amagasaki, Morihiro Kuga, Masahiro Iida, and Toshinori Sueyoshi
4. STM Systems: Enforcing Strong Isolation between Transactions and Non-transactional Code
   Tyler Crain, Eleni Kanellou, and Michel Raynal

ICA3PP 6b: Parallel Programming
Session Chair:

1. Accelerating the Dynamic Programming for the Optimal Polygon Triangulation on the GPU
   Kazufumi Nishida, Koji Nakano, and Yasuaki Ito
2. Optimization of a short-range Proximity Effect Correction Algorithm in E-Beam Lithography using GPGPUs
   Max Schneider, Nikola Belic, Christoph Sambale, Ulrich Hofmann, and Dietmar Fey
3. An Optimal Parallel Prefix-sums Algorithm on the Memory Machine Models for GPUs
   Koji Nakano
4. GPU-Accelerated Restricted Boltzmann Machine for Collaborative Filtering
   Xianggao Cai, Zhanpeng Xu, Guoming Lai, Chengwei Wu, and Xiaola Lin

ICA3PP 7a: Performance of Parallel & Distributed Computing Systems
Session Chair:

1. A Multi-level Monitoring Framework for Stream-based Coordination Programs
   Vu Thien Nga Nguyen, Raimund Kirner, and Frank Penczek
2. Performance Measurement of Parallel Vlasov Code for Space Plasma on Various Scalar-Type Supercomputer Systems
   Takayuki Umeda and Keiichiro Fukazawa
3. The Impact of Global Communication Latency at Extreme Scales on Krylov Methods
   Thomas J. Ashby, Pieter Ghysels, Wim Heirman, and Wim Vanroose
4. Study on the Data Flow Balance in NFS Server with iSCSI
   Nianmin Yao, Yong Han, Shaobin Cai, and Qilong Han

ICA3PP 7b: Parallel Programming for GPUs
Session Chair:

1. On a Wideband Fast Fourier Transform Using Piecewise Linear Approximations: Application to a Radio Telescope Spectrometer
   Hiroki Nakahara, Hiroyuki Nakanishi, and Tsutomu Sasao
2. A multi-GPU Programming Library for Real-Time Applications
   Sebastian Schaetz and Martin Uecker
3. An Insightful Program Performance Tuning Chain for GPU Computing
   Haipeng Jia, Yunquan Zhang, Guoping Long, and Shengen Yan
4. Power Efficiency Evaluation of Block Ciphers on GPU-Integrated Multicore Processor
   Naoki Nishikawa, Keisuke Iwai, and Takakazu Kurokawa

The IEEE ATC 2012 Technical Program

September 4, 2012 (Tuesday)	
08:00-17:00	Registration
09:20-09:50	Opening (Bldg 12, Room #12107)
09:50-10:00	Break
10:00-11:00	Keynote I (Bldg 12, Room #12107)
11:00-11:20	Break
11:20-13:00	ATC 1
13:00-14:30	Lunch
14:30-15:30	Keynote II Bldg 12, Room #12107)
15:30-15:50	Break (Demo and Poster)
15:50-17:30	ATC 2
17:30-18:00	Free Time
18:00-20:00	Welcome Reception (Bldg 12, 7th floor)

ATC 1: AC/OC Architectures and Systems, Components and Modules
Session Chair:

1. Guaranteeing Asymptotic Stability of Clustering by Autonomous Decentralized Structure Formation
   Ryo Hamamoto, Chisa Takano, Kenji Ishida, Masaki Aida
2. Semantic Modeling and Reasoning at Runtime for Autonomous Systems Engineering
   Tarak Chaari, Kaouthar Fakhfakh
3. Autonomic Activities in the Execution of Scientific Workflows: Evaluation of the AWARD Framework
   Luis Assuncao, Carlos Goncalves, Jose Cunha
4. Automatic I/O scheduler selection through online workload analysis
   Ramon Nou, Jacobo Giralt, Toni Cortes

ATC 2: Trust Models and Specifications, Tools and Interfaces
Session Chair:

1. Composite trust model for an information sharing scenario
   Kevin Chan, Jin-Hee Cho, Sibel Adal1
2. Insuring Sensitive Processes through Process Mining
   Jorge Munoz-Gama, Isao Echizen
3. On Enhancing Adaptive Random Testing for AADL Model
   Bo Sun, Yunwei Dong
4. Component Importance Analysis of Virtualized System
   Junjun Zheng, Hiroyuki Okamura, Tadashi Dohi

September 5, 2012 (Wednesday)	
08:00-17:00	Registration
09:00-10:20	ATC 3
10:20-10:40	Break
10:40-12:00	ATC 4
12:00-13:20	Lunch
13:20-14:20	Keynote III (Bldg 1)
14:20-14:40	Break
14:40-15:40	Panel Discussion I (Bldg 1)
15:40-16:00	Break
16:00-17:00	Panel Discussion II (Bldg 1)
17:00-19:00	Free Time
19:00-21:00	Banquet (Nikko Hotel Hakata)

ATC 3: Trusted Reliable and Dependable Systems I
Session Chair:

1. Optimizing Software Rejuvenation Policies under Interval Reliability Criteria
   Tadashi Dohi, Hiroyuki Okamura, Kishor Trivedi
2. Combined Server Rejuvenation in a Virtualized Data Center
   Fumio Machida, Jianwen Xiang, Kumiko Tadano, Yoshiharu Maeno
3. Filesystem Layout Reorganization in Virtualized Environment
   Masaya Yamada, Saneyasu Yamaguchi

ATC 4: Trusted Reliable and Dependable Systems II
Session Chair:

1. Model-Based Performance Optimization of Generalized Snapshot Isolation in Database System
   Chao Luo, Hiroyuki Okamura, Tadashi Dohi
2. Performance Analysis of Virtual Disk System for Transparent Computing
   Yuan Gao, Yaoxue Zhang, Yuezhi Zhou
3. An Availability-aware Virtual Machine Placement Approach for Dynamic Scaling of Cloud Applications
   Wenting Wang, Haopeng Chen, Xi Chen

September 6, 2012 (Thursday)	
08:00-12:00	Registration
09:00-10:00	Keynote IV (Bldg 12, Room #12107)
10:00-10:20	Break
10:20-12:00	ATC 5
12:00-13:00	Lunch
13:00-20:00	Half-Day Tour

ATC 5: AC/OC Communication and Services, Tools and Interfaces
Session Chair:

1. iSac : Intimacy based Access Control for Social Network Sites
   Yonggang Wang, Ennan Zhai, Eng Keong Lua, Jianbin Hu, Zhong Chen
2. PKU-STRAW-L: a simulative platform evaluate the energy save rate of the intelligent street lamp system
   Yang Tao, Wang Yinyang, Hu Jianbin, Chen Zhong

3. Performance Management of Virtual Machines via Passive Measurement and Machine Learning
   Toshiaki Hayashi, Satoru Ohta

September 7, 2012 (Friday)	
08:00-12:00	Registration
09:00-10:40	ATC 6
10:40-11:00	Break
11:00-12:40	ATC 7
12:40-13:30	Lunch
13:30-14:00	Closing Session

ATC 6: Trust-related Security and Privacy
Session Chair:

1. A Self-protection Mechanism against Stepping-stone Attacks for IaaS Clouds
   Kenichi Kourai, Takeshi Azumi, Shigeru Chiba
2. Neighbor Similarity Trust against Sybil Attack in P2P E-Commerce
   Felix Musau, Guojun Wang, Song Guo, Muhammad Abdullahi
3. Accuracy of Privacy-preserving Collaborative Filtering Based on Quasi-homomorphic Similarity
   Hiroaki Kikuchi, Yoshiki Aoki, Masayuki Terada, Kazuhiko Ishii, Kimihiko Sekino

ATC 7: Trustworthy Services and Applications
Session Chair:

1. A Two-level Virtual Machine Self-reconfiguration Mechanism for the Cloud Computing Platforms
   Wei Chen, Xiaoqiang Qiao, Jun Wei, Tao Huang
2. An Frame Rate Up-Conversion Algorithm for 3-D Video
   Shen-Chuan Tai, Chuen-Ching Wang, Chien-Shiang Hong, Chih-Pei Yeh, Yao-Tang Chang
3. A Power Saving Method with Consideration of Performance in Android Terminals
   Nagata Kyosuke, Saneyasu Yamaguchi, Hisato Ogawa

The MENS 2012 Technical Program

September 4, 2012 (Tuesday)	
08:00-17:00	Registration
09:20-09:50	Opening
09:50-10:00	Break
10:00-11:00	Keynote I
11:00-11:20	Break
11:20-13:00	MENS 1
13:00-14:30	Lunch
14:30-15:30	Keynote II
15:30-15:50	Break
15:50-17:30	MENS 2

MENS 1: Modeling of Multidisciplinary Emerging Networks and Systems
Session Chair:

1. Dependability Modeling and Analysis of Random Port Hopping
   Kousaburo HARI and Tadashi DOHI
2. An Assurance Enhanced Route-Split Routing for Non-uniform Node Density in Mobile Ad Hoc Networks
   Mario Takeuchi, Anri Kimura, Eitaro Kohno, Tomoyuki Ohta and Yoshiaki Kakuda
3. An Extension of Routing Tree Algorithm Considering Link Speed Change in IEEE 802.11n Protocol for Wireless Mesh Network
   Nobuo Funabiki, Wataru Maruyama, Toru Nakanishi and Kan Watanabe
4. Quasi-Static Approach for Analyzing Interactions Between Networks and Users Based on Decomposition of Timescales
   Masaki Aida, Chisa Takano, Masayuki Murata and Makoto Imase

MENS 2: Application of Multidisciplinary Emerging Networks and Systems
Session Chair:

1. Toward Remote Service Invocation in Android
   Kazuhiro Nakao and Yukikazu Nakamoto
2. Achieving High Availability of Consistent Data in the Presence of Network Partitions
   Tatsuhiro Tsuchiya
3. Choosing Cost-Effective Configuration in Cloud Storage
   Wei-Tek Tsai, Guanqiu Qi and Yinong Chen
4. A Routing ID-based Node-disjoint Multipath Scheme for Ad Hoc Networks
   Takahide Uemori, Eitaro Kohno and Yoshiaki Kakuda
5. Privacy, Security and Trust in Cloud Computing:The Perspective of the Telecommunication Industry
   Leonardo Martucci, Albin Zuccato, Ben Smeets, Sheikh M. Habib, Thomas Johansson and Nahid Shahmehri

The UIPM 2012 Technical Program

September 4, 2012 (Tuesday)	
08:00-17:00	Registration
09:20-09:50	Opening
09:50-10:00	Break
10:00-11:00	Keynote I
11:00-11:20	Break
11:20-13:00	UIPM 1 (Room #12103, #12216)
13:00-14:30	Lunch
14:30-15:30	Keynote II
15:30-15:50	Break
15:50-17:30	UIPM 2 (Room #12103, #12216)

UIPM 1: Ubiquitous Computing Techniques for Multimedia Systems and Applications
Session Chair: Wei-Jen Wang (**Room #12103) /** Yue-Shan Chang (**Room #12216)**

Room #12103

1. The Modulation Method based on Reed-Solomon code for Watermarking
   Huang-Chi Chen, Yu-Wen Chang, Rey-Chue Hwang
2. Dual-watermarking by QR-code Applications in Image Processing
   Fu-Hau Hsu, Min-Hao Wu, Shiuh-Jeng Wang
3. Employing LSB and VQ for Undetectable Secret Data Hiding
   Cheng-Ta Huang, Wei-Jen Wang, Min-Yi Tsai, Chin-Feng Lee
4. The Design and Realization of Video Phone System in Embedded Platform
   Ching-Lung Chang, Chang-Hsuan Hung

Room #12216

1. A framework for scalable cloud video recorder system in surveillance environment
   Chia-Feng Lin, Shyan-Ming Yuan, Muh-Chyi Leu
2. An Architecture for Video Surveillance Service based on P2P and Cloud Computing
   Yu-Sheng Wu, Yue-Shan Chang, Tong-Ying Juang
3. A Project-based Curriculum for Teaching C++ Object-Oriented Programming
   Yen-Lin Chen, Chuan-Yen Chiang, Yo-Ping Huang, Shyan-Ming Yuan

UIPM 2a: Applications and Tools for Ubiquitous Information Processing and Management
Session Chair: Chun-Chuan Chen (**Room #12103)** / Shyan-Ming Yuan (**Room #12216)**

Room #12103

1. An Expert System Application for Respiratory Infection Diagnostic
   Sheng-Ta Hsieh, Chih-Dao Chen, Jun-Horng Chen, Chin-Lun Lai, Yu-Long Syu
2. Accelerating Computation of DCM for ERP by GPU-Based Parallelism
   Wei-Jen Wang, I-Fan Hsieh, Chun-Chuan Chen
3. An architecture for a homecare pervasive system
   Giovani Librelotto, Leandro Freitas
4. Assessing the Relationships between IS Success with Intellectual Capital for International Medical Services Centers in Taiwan- The Perspective of Physicians
   Hsien-Cheng Lin, Chen-Chia Chen, Echo Huang, Ya-Hui Yang

Room #12216

1. Squareknot: a Flexible Framework for Actuators and Controllers in Smart Environment
   Takeru Ujinawa, Naohiro Hayashibara
2. FOSS4G Based Mobile Web-GIS for Field Survey in Natural Environmental Studies
   Yu Nakayama, Suguru Mori
3. Constructing Private Cloud Storage Using Network Attached Storage
   Guo-Heng Luo, Wen-Feng Hsu, Shyan-Ming Yuan

The USMAP 2012 Technical Program

September 4, 2012 (Tuesday)	
08:00-17:00	Registration
09:20-09:50	Opening
09:50-10:00	Break
10:00-11:00	Keynote I
11:00-11:20	Break
11:20-13:00	USMAP 1
13:00-14:30	Lunch
14:30-15:30	Keynote II
15:30-15:50	Break
15:50-17:30	USMAP 2

USMAP 1:
Session Chair:

1. Ubiquitous Computing and Evaluation of Water Quality by Grey Relational Analysis
   Hung-Jin Chen, Yo-Ping Huang and Yun-Kai Ke
2. Design and Implementation of Assisted Body Movement System for Visually Impaired Children
   Hung-Chi Chu, Wei-Tai Wu, Fang-Lin Chao and Liza Lee
3. Execution Time Prediction Using Rough Set Theory in Hybrid Cloud
   Chih-Tien Fan, Yue-Shan Chang, Wei-Jen Wang, Shyan-Ming Yuan
4. A Finite State Machine-Based Fall Detection Mechanism on Smartphones
   Shang-Lin Hsieh, Ming Hsiung Su, Wey-Wen Jiang, and Lu Feng Liu
5. Human Gesture Recognition by Hidden Markov Model
   Kaung-Pen Chou and Chen-Chiung Hsieh

USMAP 2:
Session Chair:

1. System Design of an Intelligent Nutrition Consultation and Recommendation Model
   En-Yu Lin, Don-Lin Yang, Ming-Chuan Hung
2. An Enhanced IOT Gateway in a Broadcast System
   Xianyang Jiang, Deshi Li, Shaobo Nie, Jing Luo, Zhonghai Lu
3. How Online Social Network Affect Offline Events: A Case Study on Douban
   Junwei Han, Jianwei Niu, Alvin Chin, Wei Wang, Chao Tong, Xia Wang
4. Mixed-Style Print Advertising Combining Fashion Photography and Digital Illustrations: Examining the Print Advertising of Consumer Products in Taiwan
   Yi-Lin Yu

The CDCN 2012 Technical Program

September 5, 2012 (Wednesday)	
08:00-17:00	Registration
09:00-10:20	CDCN 1
10:20-10:40	Break
10:40-12:00	CDCN 2
12:00-13:20	Lunch
13:20-14:20	Keynote III (Bldg 1)
14:20-14:40	Break
14:40-15:40	Panel Discussion I (Bldg 1)
15:40-16:00	Break
16:00-17:00	Panel Discussion II (Bldg 1)
17:00-19:00	Free Time
19:00-21:00	Banquet (Nikko Hotel Hakata)

CDCN 1: Theory of Cognitive Distributed Computing and Networking
Session Chair:

1. Wireless Sensor Network internal attacker Identification with Multiple Evidence by Dempster-Shafer Theory
   Muhammad Ahmed, Xu Huang, Dharmendra Sharma, and Li Shutao
2. A Novel Feature Selection Scheme For Energy Efficient Wireless Sensor Networks
   Moh'd ALWADI and Girija CHETTY
3. A Comprehensive Survey of The Feature Extraction Methods in The EEG Research
   Mohammad A Rahman, Wanli Ma, Dat Tran, and John Campbell
4. Development of a Smart e-Health Portal for Chronic Disease Management
   Maryam Haddad and Girija Chetty

CDCN 2: Practice of Cognitive Distributed Computing and Networking
Session Chair:

1. A Novel Approach to Protein Structure Prediction Using PCA Based Extreme Learning Machines and Multiple Kernels
   Lavneet singh, Girija Chetty, and Dharmendra Sharma
2. A Novel Approach to Guarantee Causal Message Ordering in Pre-Planned Wireless Sensor Networks
   Chayoung Kim and Jinho Ahn
3. People Identification with RMS-based Spatial Pattern of EEG Signal
   Salahiddin Altahat, Xu Huang, Dat Tran, and Dharmendra Sharma
4. Gait Based Human Identity Recognition From Multi-View Surveillance Videos
   Emdad Hossain and Girija Chetty

The UFirst 2012 Technical Program

September 5, 2012 (Wednesday)	
08:00-17:00	Registration
09:00-10:20	UFirst 1
10:20-10:40	Break
10:40-12:00	UFirst 2
12:00-13:20	Lunch
13:20-14:20	Keynote III (Bldg 1)
14:20-14:40	Break
14:40-15:40	Panel Discussion I (Bldg 1)
15:40-16:00	Break
16:00-17:00	Panel Discussion II (Bldg 1)
17:00-19:00	Free Time
19:00-21:00	Banquet (Nikko Hotel Hakata)

UFirst 1: Smart devices and mobile computing
Session Chair:

1. Ubiquitous Smart Devices and Applications for Disaster Preparedness
   W.P. Liao, Y.Z. Ou, E.T.H. Chu, C.S. Shih, and J.W.S. Liu
2. A Surveillance System Designed for the Correction of Sitting Posture in Writing
   Yi-Ping Wu and Jun-Horng Chen
3. Development of an Intelligent App for Obstructive Sleep Apnea Prediction on Android Smartphone Using Data Mining Approach
   Ming-Hseng Tseng, Hsueh-Chen Hsu, Che-Chia Chang, Hua Ting, Hui-Ching Wu, and Ping-Hung Tang

UFirst 2: Ubiquitous Web Services
Session Chair:

1. Design and Implementation of an Auto-Configuration and Cooperation Generation of Web Service User Interface Based on TR-069 Protocol
   Jin-Neng Wu, Chia-Ching Chan, Ping-Yu Chen, and Cheng-Lung Chu
2. Mining Distributed Frequent Itemsets Using a Gossip Based Protocol
   Maryam Bagheri, Seyed-Hassan Mirian-Hosseinabadi, Hoda Mashayekhi, and Jafar Habibi
3. From User Experience to Social Experience: A New Perspective for Mobile Social Game Design
   Toshihiko Yamakami

September 7, 2012 (Friday)	
08:00-12:00	Registration
09:00-10:40	UFirst 3
10:40-11:00	Break
11:00-12:40	UFirst 4
12:40-13:30	Lunch
13:30-14:00	Closing Session

UFirst 3: Smart Environments & E-health Systems
Session Chair:

1. An Intelligent Virtual Fence Security System for the Detection of People Invading
   Jun-Horng Chen, Teng-Hui Tseng, Chin-Lun Lai, and Sheng-Ta Hsieh
2. A Distributed Integrated Fare Collection and Accounting System for Metropolitan Railway Transit
   Pintsang Chang
3. Interval-Valued Cloud Model Based Personal Sub-health Status Diagnosing Prototype System on TCM Syndrome Data
   Feng Guo, Ying Lin, Shaozi Li, and Ying Dai
4. A New RFID Anti-collision Algorithm for the EPCglobal UHF Class-1 Generation-2 Standard
   Wen-Tzu Chen

The WEISS 2012 Technical Program

September 5, 2012 (Wednesday)	
08:00-17:00	Registration
09:00-10:20	WEISS 1
10:20-10:40	Break
10:40-12:00	WEISS 2
12:00-13:20	Lunch
13:20-14:20	Keynote III (Bldg 1)
14:20-14:40	Break
14:40-15:40	Panel Discussion I (Bldg 1)
15:40-16:00	Break
16:00-17:00	Panel Discussion II (Bldg 1)
17:00-19:00	Free Time
19:00-21:00	Banquet (Nikko Hotel Hakata)

WEISS 1:
Session Chair: ***Jing Chen, National Cheng Kung University, Taiwan***

1. Enhancing Traditional Games with Augmented Reality Technologies
   Hiroyuki Sakuma, Tetsuo Yamabe, Tatsuo Nakajima
2. Toward Efficient Detection of Semantic Exceptions in Context-Aware Systems
   Eun-Sun Cho, Sumi Helal
3. A Vision-Based Vehicle Speed Warning System
   Ming-Shi Wang, Shih-Chieh Huang, Liang-Da Lin

WEISS 2:
Session Chair: ***Jing Chen, National Cheng Kung University, Taiwan***

1. Recovery Mechanism for Diff-based Reprogramming in WSNs
   Shin-Lu Lien, Mei-Ling Chiang
2. Compiler Optimization to Reduce Cache Power with Victim Cache
   Cheng-Yu Lee, Jen-Chieh Chang, Rong-Guey Chang
3. F-VT: A Friendly Virtualization Framework
   Yuan-Cheng Lee, Tang-Hsun Tu, Chih-Wen Hsueh
4. HeapDefender: A Mechanism of Defending Embedded Systems against Heap Overflow via Hardware
   Dongfang Li, Zhenglin Liu, Yizhi Zhao

The WiNA 2012 Technical Program

September 6, 2012 (Thursday)	
08:00-12:00	Registration
09:00-10:00	Keynote IV (Bldg 12, Room #12107)
10:00-10:20	Break
10:20-12:00	WiNA
12:00-13:00	Lunch
13:00-20:00	Half-Day Tour

WiNA:
Session Chair:

1. **Smart Trend-Traversal Protocol with Shortcutting for Memory-less RFID Tag Collision Resolution**
   Xin-Qing Yan, Rui-Xia Zhang, Bin Li
2. **Reverse Nearest Neighbors Search in Wireless Broadcast Environments**
   Che-Lun Mak, Chuan-Ming Liu, Wei-Chi Yeh
3. **SARM:An Congestion Control Algorithm for DTN**
   Chengjun Wang, Baokang Zhao, Wanrong Yu, Chunqing Wu, Zhenghu Gong
4. **Station Decision Problem in Bicycle Ad Hoc Networks**
   Wen Ouyang, Chang Wu Yu, Kun-Ming Yu, Ko-Jui Lin, Jo-Heng Yu, Hsin-Wen Chang, Lin-Li Tai, Chung-Han Lin
5. **Entropy-based Distributed Fault-tolerant Event Boundary Detection Algorithm for Wireless Sensor Networks**
   Wen Ouyang, Yu-Ting Liu, Yu-Wei Lin, Yi-Hao Chen

The DDCPD 2012 Technical Program

September 6, 2012 (Thursday)	
08:00-12:00	Registration
09:00-10:00	Keynote IV (Bldg 12, Room #12107)
10:00-10:20	Break
10:20-12:00	DDCPD
12:00-13:00	Lunch
13:00-20:00	Half-Day Tour

DDCPD:
Session Chair: Bernady O. Apduhan, Kyushu Sangyo University, Japan

1. The Design of Multisource Application Layer Multicast with Fast Route Recovery
   Chia-Hui Huang, Kai-Wei Ke, Ho-Ting Wu
2. IRDT-GEDIR: Next-Hop Selection in Intermittent Wireless Multihop Sensor Networks
   Hiroaki Higaki, Takanori Takehira
3. DCSim:Design analysis on Virtualization Data Center
   Chia-Jung Chen, Yi-Sheng Liu, Rong Guey Chang

The GreenPS 2012 Technical Program

September 6, 2012 (Thursday)	
08:00-12:00	Registration
09:00-10:00	Keynote IV (Bldg 12, Room #12107)
10:00-10:20	Break
10:20-12:00	GreenPS 1
12:00-13:00	Lunch
13:00-20:00	Half-Day Tour

GreenPS 1: Energy-efficient algorithms
Session Chair: Beihong Jin

1. GreenTech: A Case Study for Using the Web of Things in Household Energy Conservation
   Yang Liu, Yan Liu, Qiang Li, Weijun Qin, Limin Sun
2. IdleCached: An Idle Resource Cached Dynamic Scheduling Algorithm in Cloud Computing
   Hu Song, Jing Li, Xinchun Liu
3. Multi-Periodic Data Aggregation Scheme Based on Interest for Energy Efficiency in wireless sensor network
   A-Jeong Jeong, Se-Mi Kim, Chae-Seok Lee, Jong-Deok Kim
4. Implementation of Smart Power Management and Service System on Cloud Computing
   Chao-Tung Yang, Wei-Sheng Chen, Kuan-Lung Huang, Wen-Hung Hsu, Ching-Hsien Hsu

September 7, 2012 (Friday)	
08:00-12:00	Registration
09:00-10:40	GreenPS 2
10:40-11:00	Break
11:00-12:40	GreenPS 3
12:40-13:30	Lunch
13:30-14:00	Closing Session

GreenPS 2: Environment-related Pervasive Applications
Session Chair: Zhiwen Yu

1. WaterLady: A Case Study for Connecting Physical Devices into Social Networks
   Longbiao Chen, Yaochun Li, Zeming Zheng, Li Zhang, Dan He, Xiaolong Li, Sha Zhao, Shijian Li, Gang Pan
2. PPCare:A Personal and Pervasive Health Care System for the Elderly
   Yan Tang, Shuangquan Wang, Yiqiang Chen, Zhenyu Chen
3. Towards Scalable Processing for a Large-Scale Ride Sharing Service
   Beihong Jin, Jiafeng Hu

GreenPS 3: Intelligent Human-Computer Interaction
Session Chair: Jing Li

1. Context-Aware Mobile Web Browsing based on HTML5
   Xinxin Zhang, Zhiwen Yu, Jilei Tian, Zhitao Wang, Bin Guo
2. Fall Detection Using Features from A Five-phase Model on Mobile Phones
   Yue Shi, Jin Huang, Yuanchun Shi, Xia Wang
3. UI Portals: Sharing Arbitrary Regions of User Interfaces on Traditional and Multi-User Interactive Devices
   Jie Liu, Haijun Xia, Yuanchun Shi

The UISTA 2012 Technical Program

September 7, 2012 (Friday)	
08:00-12:00	Registration
09:00-10:40	UISTA 1
10:40-11:00	Break
11:00-12:40	UISTA 2
12:40-13:30	Lunch
13:30-14:00	Closing Session

UISTA 1:
Session Chair: Eric Jui-Lin Lu

1. A Universal Lightweight Authentication Scheme Based on Delegation Mechanism in Heterogeneous Networks
   Chou-Chen Yang, Shin-Hao Lo and Eric Jui-Lin Lu
2. A Patient Privacy-aware e-Health System based on Passive RFID
   Kuo-Hui Yeh, N.W. Lo and Chieh Wang
3. Efficiently Preserving Data-Privacy Range Queries in Two-Tiered Wireless Efficiently Sensor Networks
   Thuc D. Nguyen, Thach V. Bui, Van H. Dang, Deokjai Choi
4. Trusted Service Application Framework on Mobile Network
   Xin Gu, Zhengquan XU, Yilin Fang
5. Enhancement of Human-Preference Assisted Activity Recognition Using a Cooperative ADL Infrastructure
   Ching-Hu Lu and Li-Chen Fu

UISTA 2:
Session Chair: Ching-Hu Lu

1. Imperceptible Visible Watermarking Scheme using Color Distribution Modulation
   Wei-Fan Hsieh and Pei-Yu Lin
2. A Self-authentication Mechanism for a (3, 3)-threshold Secret Sharing Scheme
   Yi-Hui Chen and Ci-Wei Lan
3. A Web-based Interaction Design Tool: Pattern Language Toolkit
   Chieh-Jen Chen, Chin-Hung Teng and Tsai-Yen Li
4. An Augmented Reality Environment for Learning OpenGL Programming
   Chin-Hung Teng and Jr-Yi Chen
5. Developing QR Code based Augmented Reality Using SIFT Features
   Chin-Hung Teng and Bing-Shiun Wu