

Welcome Message from the General / Program Chairs

ICA3PP 2010

It is our great pleasure to welcome you to the 10th annual event of the International Conference on Algorithms and Architectures for Parallel Processing (ICA3PP).

ICA3PP is recognized as the main regular event of the world that is covering the many dimensions of parallel algorithms and architectures, encompassing fundamental theoretical approaches, practical experimental projects, and commercial components and systems. As applications of computing systems have permeated in every aspects of daily life, the power of computing system has become increasingly critical. Therefore, ICA3PP 2010 is intended to play an important role for researchers and industry practitioners to exchange information regarding advancements in the state of art and practice of IT-driven services and applications, as well as to identify emerging research topics and define the future directions of parallel processing.

We received a total of 157 submissions this year, showing by both quantity and quality that ICA3PP is a premier conference on parallel processing. In the first stage, all papers submitted were screened for their relevance and general submission requirements. These manuscripts then underwent a rigorous peer-review process with at least three reviewers per paper. At the end, 47 papers were accepted for presentation and included in the main proceedings, comprising a 30% acceptance rate. To encourage and promote the work presented at ICA3PP 2010, we are delighted to inform the authors that some of the papers will be accepted in special issues of Journal of Grid Computing, Journal of Parallel and Distributed Computing, International Journal of High Performance Computing and Networking, Journal of Database Management and Journal of Information Processing Systems. All of these journals have played a prominent role in promoting the development and use of parallel and distributed processing.

An international conference of this scale requires the support of many people. First of all, we would like to thank the Steering Committee Chairs, Professor Andrzej Goscinski, Professor Yi Pan and Professor Wanlei Zhou, for nourishing the conference and guiding its course. We appreciate the participation of the keynote speakers, Professor Wanlei Zhou, and Professor Rajkumar Buyya, whose speeches will greatly benefit the audience. We are also indebted to the members of the program committee, who have put in hard work and long hours to review each paper in a professional way. Thanks to them all for their valuable time and effort in reviewing the papers. Without their help, this program would not be possible. Special thanks go to Dr. Tony Li Xu and Professor Sang-Soo Yeo for their help with the conference web, paper submission and reviewing system and a lot of detailed work, which facilitated the overall process. Thanks also go to the entire local arrangement committee for their help in making the conference a wonderful success. We take this opportunity to thank all the authors, participants and session chairs for their valuable efforts, many of whom traveled long distances to attend this conference and make their valuable contributions. Last but not least; we would like express our gratitude to all of the organizations that supported our efforts to bring the conference to fruition. We are grateful to Springer for publishing the proceedings.

The conference is held in the beautiful city – Busan, to remind our honorary guests that besides the academic nature of the conference, the whole city is ample with beautiful scenic spots and culture source materials. We hope that you enjoy our academic entertainments and at the same time you are able to see the magnificent natural beauty. This conference owes its success to the support of many academic and industrial organizations. Most importantly, we owe a lot to YOU and to all conference participants by contributing to the conference. We are proud to have you to sharing your research with other fellows. We hope you will enjoy ICA3PP'10 as much as we do. Welcome again!

May 2010

Laurence T. Yang, Jong Hyuk Park, J. Daniel Garcia, General Chairs

Ching-Hsien (Robert) Hsu, Alfredo Cuzzocrea, Xiaojun Cao, Program Chairs



Conference Organization

ICA3PP 2010

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 Young-Sik Jeong, Wonkwang University, Korea
 Qun Jin, Waseda University, Japan
 Xiaolong Jin, University of Bradford, UK
 Soo-Kyun Kim, PaiChai University, Korea
 Jongsung Kim, Kyungnam University, Korea
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 Minglu Li, Shanghai Jiaotong University, China
 Xiaofei Liao, Huazhong University of Science and Technology, China
 Kai Lin, Dalian University of Technology, China

Jianxun Liu, Hunan University of Science and Technology, China
 Pangfeng Liu, National Taiwan University, Taiwan
 Alexandros V. Gerbessiotis, New Jersey Institute of Technology, US
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 Peter M. Musial, University of Puerto Rico, US
 Amiya Nayak, University of Ottawa, Canada
 Leandro Navarro, Polytechnic University of Catalonia, Spain
 Andrea Nucita, University of Messina, Italy
 Leonardo B. Oliveira, Universidade Estadual de Campinas, Brazil
 Salvatore Orlando, Ca' Foscari University of Venice, Italy
 Marion Oswald, Hungarian Academy of Sciences, Budapest, Hungary
 Apostolos Papadopoulos, Aristotle University of Thessaloniki, Greece
 George A. Papadopoulos, University of Cyprus, Cyprus
 Deng Pan, Florida International University, US
 Al-Sakib Khan Pathan, BRAC University, Bangladesh
 Dana Petcu, West University of Timisoara, Romania
 Rubem Pereira, Liverpool John Moores University, UK
 María S. Pérez, Universidad Politécnica de Madrid, Madrid, Spain
 Kleantlis Psarris, The University of Texas at San Antonio, US
 Pedro Pereira Rodrigues, University of Porto, Portugal
 Marcel-Catalin Rosu, IBM, US
 Paul M. Ruth, The University of Mississippi, US
 Giovanni Maria Sacco, Università di Torino, Italy
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Erich Schikuta, University of Vienna, Austria
Edwin Sha, University of Texas at Dallas, US
Rahul Shah, Louisiana State University, US
Giandomenico Spezzano, ICAR-CNR, Italy
Peter Strazdins, The Australian National University, Australia
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Uwe Tangen, Ruhr-Universität Bochum, Germany
David Taniar, Monash University, Australia
Christopher M. Taylor, University of New Orleans, US
Parimala Thulasiraman, University of Manitoba, Canada
A Min Tjoa, Vienna University of Technology, Austria
Paolo Trunfio, University of Calabria, Italy
Jichiang Tsai, National Chung Hsing University, Taiwan
Emmanuel Udoh, Indiana University-Purdue University, US
Gennaro Della Vecchia, Gennaro Della Vecchia - ICAR-CNR, Italy
Lizhe Wang, Indiana University, US
Max Walter, Technische Universität München, Germany
Cho-Li Wang, The University of Hong Kong, China
Guojun Wang, Central South University, China
Xiaofang Wang, Villanova University, US
Chen Wang, CSIRO ICT Centre, Australia
Chuan Wu, University of Hong Kong, China
Qishi Wu, University of Memphis, US
Yulei Wu, University of Bradford, UK
Fatos Xhafa, University of London, UK
Yang Xiang, Central Queensland University, Australia
Chunsheng Xin, Norfolk State University, US
Neal Naixue Xiong, Georgia State University, US
Zheng Yan, Nokia Research Center, Finland
Sang-Soo Yeo, Mokwon University, Korea
Eiko Yoneki, University of Cambridge, United Kingdom
Chao-Tung Yang, Tunghai University, Taiwan
Zhiwen Yu, Northwestern Polytechnical University, China
Wuu Yang, National Chiao Tung University, Taiwan
Jiehan Zhou, University of Oulu, Finland
Sotirios G. Ziavras, NJIT, US
Roger Zimmermann, National University of Singapore, Singapore

Welcome Message from Workshop Chairs

ICA3PP 2010

It is our great pleasure to present the symposia and workshops on parallel and distributed computing and applications associated with the ICA3PP 2010 conference. These symposia and workshops provide vibrant opportunities for researchers and industry practitioners to share their research experience, original research results and practical development experiences in the new challenging research areas of parallel and distributed computing technologies and applications.

It is the first time that the ICA3PP conference series added symposia and workshop to its program in order to provide a wide range of topics that extend beyond the main conferences. The goal was to provide a better coverage of emerging research areas and also forums for focused and stimulating discussions. With this objective in mind, we selected three workshops to accompany the ICA3PP'10 conference:

- FPDC'10, the 2010 International Symposium on Frontiers of Parallel and Distributed Computing
- HPCTA'10, the 2010 International Workshop on High Performance Computing, Technologies and Applications
- M2A2'10, the 2010 International Workshop on Multicore and Multithreaded Architectures and Algorithms

Each of the symposia / workshops focuses on a particular theme and complements the spectrum of the main conference. All papers published in the workshops proceedings were selected by the program committee on the basis of referee reports. Each paper was reviewed by independent referees who judged the papers for originality, quality, contribution, presentation and consistency with the theme of the workshops.

We deeply appreciate the tremendous efforts and contributions of the Chairs of individual symposia / workshops. Our thanks also go to all authors for their valuable contributions and to all the program committee members and reviewers for providing timely and in-depth reviews. Particularly, we thank the local arrangement committee for exceptionally nice arrangements. We hope you will enjoy the proceedings and have a great time in Busan, Korea.

May 2010

Laurence T. Yang, Jong Hyuk Park, J. Daniel Garcia, General Chairs

Ching-Hsien (Robert) Hsu, Alfredo Cuzzocrea, Xiaojun Cao, Program Chairs

Kuo-Chan Huang, Yu Liang, Workshop Chairs



Welcome Message from the Symposium, FPDC 2010

We would like to welcome you to the 2010 International Symposium on Frontiers of Parallel and Distributed Computing (FPDC 2010) held in Busan, Korea, May 21-23, 2010.

The FPDC 2010 symposium is intended to bring together researchers from industry and academia, practitioners, scientists and engineers to discuss novel and innovative research activities, on-going research efforts, emerging parallel/distributed computing technologies and applications. Each paper in FPDC 2010 symposium has been reviewed by at least three technical program committee members of the ICA3PP 2010 conference. After the reviewing process, 29 papers of high quality have been invited from 110 submissions for presentation and publication in the FPDC symposium. The acceptance rate of the symposium is 26%. The selected papers cover various topics in parallel and distributed computing systems and technologies with focus on the following areas:

- Parallel Programming and Multi-core Technologies
- Grid / Cluster Computing
- Parallel Algorithms and Architectures
- Bioinformatics and Application
- Mobile Computing and Web Services
- Distributed Operating Systems and P2P Computing
- Fault-Tolerant and Information Security

Many individuals have contributed to the success of this symposium directly or indirectly. First of all, the symposium program co-chairs would like to thank the symposium general chairs, Prof. Laurence T. Yang and Prof. Jong Hyuk Park for their excellent guidance and continuous support. We are very grateful to the ICA3PP 2010 General chair / Program chair, Prof. Laurence T. Yang / Prof. Robert C. Hsu, who helped us in selecting papers for this symposium. Last but not least, we would like to thank all authors for accepting our invitation to publish their papers in this symposium. We hope you will enjoy the symposium and have a great time in Busan, Korea.

May 2010

Laurence T. Yang, Jong Hyuk Park, General Chairs

Ching-Hsien (Robert) Hsu, Sang-Soo Yeo, Program Chairs



Welcome Message from the Workshop, HPCTA 2010

It gives us great pleasure to introduce this collection of papers to be presented at the 2010 International Workshop on High Performance Computing Technologies and Applications (HPCTA 2010), May 21 through 23, 2010, at the Busan Lotte Hotel, Busan, Korea.

The program committee received 23 submissions, from which it selected 12 for presentation and publication. Each paper was evaluated by three referees. Technical quality, originality, Relevance, and clarity were the primary criteria for selection.

We wish to thank all who submitted manuscripts for consideration. We also wish to thank the members of the HPCTA 2010 Program Committee who reviewed all of the submissions.

May 2010

Whey Fone Tsai, Hsi-Ya Chang, General Chairs
Ching-Hsien Hsu, Kuo-Chan Huang, Program Chairs



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Software Simulation Society in Taiwan



Welcome Message from the Workshop, M2A2 2010

It is with great pleasure that we welcome you to the 2010 International Workshop on Multicore and Multithreaded Architectures and Algorithms (M2A2 2010) held in conjunction with the 10th International Conference on Algorithms and Architectures for Parallel Processing (ICA3PP 2010) at Busan, Korea.

In recent years, multicore systems are dominating the processor market, and it is expected that the number of cores will continue increasing in most of the commercial systems, such as high-performance, desktops, or embedded systems. This trend is driven by the need to increase the efficiency of the major system components, that is, the cores, the memory hierarchy, and the interconnection network. For this purpose, the system designer must trade off performance versus power consumption, which is a major concern in current microprocessors. Therefore new architectures or architectural mechanisms addressing this trade off are required. In this context, load balancing and scheduling can help to improve energy savings. In addition, it remains a challenge to identify and productively program applications for these architectures with a resulting substantial performance improvement.

M2A2 2010 workshop provides a forum for engineers and scientists to address the resulting challenge and to present new ideas, applications, and experience on all aspects of multicore and multithreaded systems.

This year and because of the high quality of the submitted papers, only about 40% of those papers were accepted for the conference.

We would like to express our most sincere appreciation to all people contributing to the success of this workshop. First, we thank the authors of the submitted papers for their efforts in their research works. Then, we thank the TPC members and the reviewers for their invaluable and constructive comments. Finally, we thank our sponsors for the support of this workshop.

Welcome again, enjoy the workshop, and have a joyful time at Busan!

May 2010

Houcine Hassan, Julio Sahuquillo, Workshop Chairs



Invited Talk Abstract – 1



Lei Li, Ph.D

Professor and Vice-Dean
Faculty of Science and Engineering
Hosei University, Koganei,
Tokyo 184-8584
Japan

Structure and Model of Algorithms

Design and analysis of algorithms depend on progress and development of computer architecture, and also depend on change of way of thinking. From the fast algorithms to parallel algorithms, from genetic algorithms to machine learning, from evolution computing to soft computing, design method and evaluation standard of algorithms are appearing various directions. What is the algorithm? Does it exist an identical algorithm model to explain all algorithm architectures? Does it exist an identical evaluation standard to evaluate the computational complexity of different algorithm architecture? In this speech, we would discuss architecture and characteristic of every kind of algorithm to provide some materials for finding this identical algorithm model.

About Professor Lei Li

Professor Lei Li was born in Yancheng, Jiangsu, China on May 1, 1961. He received his Doctor Degree of Science from Xian Jiaotong University, China in 1989, and Doctor Degree of Engineering from Tohoku University, Japan in 1994 separately. He studied at Hirosaki University, Japan as a Post Doctoral and Research Assistant from April, 1989 to March 1992.

From April 1992 up to present, he has been on the Faculty of Computer Science and Engineering [1992-1997: Associate Professor, Aomori University, Japan, 1997-2001: Associate Professor, Yamaguchi University, Japan, 1999-2000: Visiting Professor, State University of New York at Stony Brook, 2002-present, Professor, Hosei University, Japan]. His research interest includes the Fast Algorithms, Parallel Algorithms, Genetic Algorithms, Neural Networks, Machine Learning Algorithms etc.

He has published around 220 papers in refereed journals, conference proceedings and book chapters in these areas. He has been involved in more than 30 conferences and workshops as a program/general/organizing chair. He is serving as the president of International Information Institute and the president of Chinese Academy of Science and Engineering in Japan. In addition, he is the Editor-in-Chief of Information, An International Interdisciplinary Journal and as an Associate Editor for some other International Journals. He has been acting as an author/co-author or an editor/co-editor of 12 books. He served as Dean of Graduate School of Engineering, Hosei University, Japan, from 2008 to 2009.



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Invited Talk Abstract – 2



Wanlei Zhou, Ph.D

Chair Professor of Information Technology and Head,
School of Information Technology,
Deakin University, Melbourne, Australia,
Email: wanlei@deakin.edu.au

Efficient Web Browsing with Perfect Anonymity Using Page Prefetching

Anonymous web browsing is a hot topic with many applications since more and more critical events are performed on the Internet that require anonymity and privacy. The dominant strategy of achieving anonymity is packet padding with dummy packets as cover traffic. However, this method introduces two inherent problems: extra bandwidth and extra delay, it is therefore cannot meet both perfect anonymity and strict delay constraints of web browsing. In order to resolve these challenges, we creatively propose to use the predicted web pages that users are going to access as the cover traffic rather than dummy packets. Moreover, users may expect a tradeoff between anonymity degree and the cost, we therefore defined anonymity level as a metric to measure anonymity degrees. We established a mathematical model for anonymity systems, and transformed the anonymous communication problem into an optimization problem, as the result, users can find tradeoffs among the two contradictory constraints. Based on the model, we can describe and compare our proposal and the previous schemas in a theoretical style. We believe that this model offers a solid foundation for further researches in this area. The preliminary experiments on the real data set showed the huge potential of the proposed strategy in terms of resource saving.

About Professor Wanlei Zhou

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 has been 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 is a senior member of the IEEE and has published more than 200 papers in refereed international journals and refereed international conferences proceedings. Professor Zhou has edited 5 books and authored 1 book. He has also chaired a number of international conferences.



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Invited Talk Abstract – 3



Rajkumar Buyya, Ph.D

Professor, Director of CLOUDS Lab, The University of Melbourne, Australia
CEO, Manjrasoft Pvt Ltd, Melbourne, Australia

Cloud Computing: The Next Revolution in Information Technology

Computing is being transformed to a model consisting of services that are commoditised and delivered in a manner similar to utilities such as water, electricity, gas, and telephony. In such a model, users access services based on their requirements without regard to where the services are hosted. Several computing paradigms have promised to deliver this utility computing vision and they include Grid computing, P2P computing, and more recently Cloud computing. The latter term denotes the infrastructure as a Cloud in which businesses and users are able to access applications from anywhere in the world on demand. Cloud computing delivers infrastructure, platform, and software (application) as services, which are made available as subscription-based services in a pay-as-you-go model to consumers. These services in industry are respectively referred to as Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS). To realize Cloud computing potential, vendors such as Amazon, Google, Microsoft, and IBM are starting to create and deploy Clouds in various locations around the world. In addition, companies with global operations require faster response time, and thus save time by distributing workload requests to multiple Clouds in various locations at the same time. This creates the need for establishing a computing atmosphere for dynamically interconnecting and provisioning Clouds from multiple domains within and across enterprises. There are many challenges involved in creating such Clouds and Cloud interconnections.

This keynote (1) presents the 21st century vision of computing and identifies various IT paradigms promising to deliver the vision of computing utilities; (2) defines the architecture for creating market-oriented Clouds and computing atmosphere by leveraging technologies such as VMs; (3) provides thoughts on market-based resource management strategies that encompass both customer-driven service management and computational risk management to sustain SLA-oriented resource allocation; (4) presents the work carried out as part of our new Cloud Computing initiative, called Cloudbus: (i) Aneka, a software system for providing PaaS within private or public Clouds and supporting market-oriented resource management, (ii) internetworking of Clouds for dynamic creation of federated computing environments for scaling of elastic applications, (iii) creation of 3rd party Cloud brokering services for content delivery network and e-Science applications and their deployment on capabilities of IaaS providers such as Amazon and Nirvanix along with Grid mashups, and (iv) CloudSim supporting modelling and simulation of Clouds for performance studies; and (5) concludes with the need for convergence of competing IT paradigms for delivering our 21st century vision along with pathways for future research.

About Professor Rajkumar Buyya

Dr. Rajkumar Buyya is Professor of Computer Science and Software Engineering; and Director of the Cloud Computing and Distributed Systems (CLOUDS) Laboratory at the University of Melbourne, Australia. He is also serving as the founding CEO of Manjrasoft Pty Ltd., a spin-off company of the University, commercialising its innovations in Grid and Cloud Computing. He has authored and published over 300 research papers and four text books. The books on emerging topics that Dr. Buyya edited include, High Performance Cluster Computing (Prentice Hall, USA, 1999), Content Delivery Networks (Springer, Germany, 2008), Market-Oriented Grid and Utility Computing (Wiley, USA, 2009), and Cloud Computing: Principles and Paradigms (Wiley, 2010). He is one of the



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highly cited authors in computer science and software engineering worldwide (h-index=46, g-index=98, 11000+ citations).

Dr. Buyya has contributed to the creation of high-performance computing and communication system software for Indian PARAM supercomputers. He has pioneered Economic Paradigm for Service-Oriented Distributed Computing and developed key Grid and Cloud Computing technologies such as Gridbus and Aneka that power the emerging e-Science and e-Business applications. Software technologies for Grid and Cloud computing developed under Dr. Buyya's leadership have gained rapid acceptance and are in use at several academic institutions and commercial enterprises in 40 countries around the world.

Dr. Buyya has led the establishment and development of key community activities, including serving as foundation Chair of the IEEE Technical Committee on Scalable Computing and four IEEE conferences (CCGrid, Cluster, Grid, and e-Science). He has presented over 200 invited talks on his vision on IT Futures and advanced computing technologies at international conferences and institutions in Asia, Australia, Europe, North America, and South America. These contributions and international research leadership of Dr. Buyya are recognised through the award of "2009 IEEE Medal for Excellence in Scalable Computing" from the IEEE Computer Society, USA. For further information on Dr. Buyya, please visit his cyberhome: www.buyya.com.



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Invited Talk Abstract – 4



I. Burhan Turksen, Ph.D, P.Eng, Fellow: IFSA, IEEE, WIF

Professor

Head Department of Industrial Engineering

TOBB-Economics and Technology University,

Ankara

Turkey

DEVELOPMENTS IN FUZZY SYSTEM MODELS: Fuzzy Rulebases to Fuzzy Functions

In this speech, we first discuss the development of Fuzzy System Models from "Fuzzy Rule bases" proposed by Zadeh (1965, 1975) and applied by Mamdani, et al. (1981) to "Fuzzy Functions" proposed by Turksen (2007-2008) and further developed by Celikyilmaz and Turksen (2007-2009) in a variety of versions. Next, we also discuss a complementary development of "Fuzzy C-Regression Model", (FCRM) proposed by Hathaway and Bezdek, (1993) as well as a Combined FCM, and FCRM algorithms proposed by Hoppner and Klawonn (2003). An experimental assessment of various models discussed in this writing.

About Professor I. Burhan Turkseenn

I.B. Turksen received the B.S. and M.S. degrees in Industrial Engineering and the Ph.D. degree in Systems Management and Operations Research all from the University of Pittsburgh, PA. He joined the Faculty of Applied Science and Engineering at the University of Toronto and became Full Professor in 1983.

In 1984-1985 academic year, he was a Visiting Professor at the Middle East Technical University and Osaka Prefecture University. Since 1987, he has been Director of the Knowledge / Intelligence Systems Laboratory. During the 1991-1992 academic year, he was a Visiting Research Professor at LIFE, Laboratory for International Fuzzy Engineering, and the Chair of Fuzzy Theory at Tokyo Institute of Technology. During 1996 academic year, he was Visiting Research Professor at the University of South Florida, USA, and Bilkent University, Ankara, Turkey. Since December 2005, he is appointed as the Head of Department of Industrial Engineering at TOBB Economics and Technology University.

Currently, he is the President, CEO and CSO, of IIC, Information Intelligence Corporation. He received the outstanding paper award from NAFIPS in 1986, "L.A. Zadeh Best Paper Award" from Fuzzy Theory and Technology in 1995, "Science Award" from Middle East Technical University, and an "Honorary Doctorate" from Sakarya University, Turkey and Azerbaijan Devlet Economics University. He is a Foreign Member, Academy of Modern Sciences. His current research interests centre on the foundations of fuzzy sets and logics, measurement of membership functions with experts, extraction of membership functions with fuzzy clustering and fuzzy system modeling. His contributions include, in particular, Type 2 fuzzy knowledge representation and reasoning, fuzzy truth tables, fuzzy normal forms, T-formalism which is a modified and restricted Dempster's multi-valued mapping, and system modeling applications for intelligent manufacturing and processes, as well as for management decision support and intelligent control. He has published near 300 papers in scientific journals and conference proceedings.

ICA3PP 2010 PROGRAM SCHEDULE

May 21, 2010 (Friday)			
08:00-09:00	Registration (Lounge – 42 nd fl.)		
09:00-10:20	Session 1 (ICA3PP) (Chair: Christophe Cérin) Wireless communication network (Room: Astor – 42 nd fl.)	Session 2 (FPDC) (Chair: Hsi-Ya Chang) Parallel algorithms, architectures and applications 1 (Room: Charlotte – 42 nd fl.)	
10:20-10:40	Coffee Break (Lounge)		
10:40-12:00	Session 3 (ICA3PP) (Chair: Alfredo Cuzzocrea) Parallel algorithm 1 (Room: Astor – 42 nd fl.)	Session 4 (ICA3PP) (Chair: Wanlei Zhou) GPU computing and applications (Room: Charlotte – 42 nd fl.)	Session 5 (FPDC) (Chair: Liang-Teh Lee) Parallel programming and multi-core technologies 1 (Room: Carlton – 42 nd fl.)
12:00-13:45	Lunch (Lotte Art Hall – 3 rd fl.)		
13:45-14:00	Opening (Lotte Art Hall – 3 rd fl.)		
14:00-14:40	Keynote 1 (FutureTech) (Chair: Laurence T. Yang) Structure and Model of Algorithms by Prof. Lei Li , Hosei University, Japan (Lotte Art Hall – 3 rd fl.)		
14:40-15:00	Break		
15:00-16:20	Keynote 2 (ICA3PP) (Chair: Robert C. Hsu) Efficient Web Browsing with Perfect Anonymity Using Page Prefetching by Prof. Wanlei Zhou , Deakin University, Australia (Lotte Art Hall – 3 rd fl.)		
16:20-16:40	Coffee Break (Lounge – 42 nd fl.)		
16:40-18:40	Session 6 (ICA3PP) (Chair: Hirotaka Inoue) Parallel algorithm 2 (Room: Astor – 42 nd fl.)	Session 7 (HPCTA) (Chair: Wen-Jyi Hwang) HPC Technologies (Room: Charlotte – 42 nd fl.)	
19:00-21:00	Conference Reception (Emerald Room – LL fl.)		



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May 22, 2010 (Saturday)			
08:00-08:40	Registration (Lounge – 42 nd fl.)		
08:40-10:20	Session 8 (FPDC) (Chair: Kuo-Chan Huang) Parallel programming and multi-core technologies 2 (Room: Astor – 42 nd fl.)	Session 9 (FPDC) (Chair: Makoto Yoshida) Grid/Cluster computing (Room: Charlotte – 42 nd fl.)	Session 10 (FPDC) (Chair: Xingang Liu) Distributed computing I (Room: Carlton – 42 nd fl.)
10:20-10:40	Coffee Break (Lounge – 42 nd fl.)		
10:40-12:00	Session 11 (ICA3PP) (Chair: Cho-Chin Lin) Parallel architectures 1 (Room: Astor – 42 nd fl.)	Session 12 (FPDC) (Chair: Seongjai Kim) Distributed computing II (Room: Charlotte – 42 nd fl.)	
12:00-13:20	Lunch (Lotte Art Hall – 3 rd fl.)		
13:20-14:40	Keynote 3 (ICA3PP 2010) (Chair: Michael Hobbs) Cloud Computing: The Next Revolution in Information Technology by Prof. Rajkumar Buyya , University of Melbourne, Australia (Lotte Art Hall – 3 rd fl.)		
14:40-14:50	Break		
14:50-16:10	Keynote 4: (FutureTech 2010) (Chair: J. Daniel Garcia) Developments in Fuzzy System Models: Fuzzy Rulebases to Fuzzy Functions by Prof. I. Burhan Turksen , TOBB-Economics and Technology University, Turkey (Lotte Art Hall – 3 rd fl.)		
16:10-16:30	Coffee Break (Lotte Art Hall – 3 rd fl.)		
16:30-18:30	Session 13 (ICA3PP) (Chair: Michael Hobbs) Parallel architectures 2 (Room: Astor – 42 nd fl.)	Session 14 (ICA3PP) (Chair: Kuan-Chou Lai) Cloud computing/virtualization Techniques (Room: Charlotte – 42 nd fl.)	Session 15 (HPCTA) (Chair: Pierre Kestener) GPU Technologies and applications (Room: Carlton – 42 nd fl.)
19:00-21:00	Banquet (Lotte Art Hall – 3 rd fl.)		



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May 23, 2010 (Sunday)			
08:00-08:40	Registration (Lounge – 42 nd fl.)		
08:40-10:40	Session 16 (ICA3PP) (Chair: Rajkumar Buyya) Grid/Cluster computing (Room: Astor – 42 nd fl.)	Session 17 (M2A2) (Chair: Xingang Liu) Multi-core and Multithreaded Architectures (Room: Charlotte – 42 nd fl.)	
10:40-11:00	Coffee Break (Lounge – 42 nd fl.)		
10:40-12:00	Session 18 (ICA3PP) (Chair: Yusaku Yamamoto) Parallel programming, performance evaluation (Room: Astor – 42 nd fl.)	Session 19 (ICA3PP) (Chair: Sang-Soo Yeo) Fault-tolerant / information security and management (Room: Charlotte – 42 nd fl.)	Session 20 (FPDC) (Chair: Yohei Saika) Mobile computing / web services (Room: Carlton – 42 nd fl.)

Note :

1. A paper presentation should be made by one of authors of the paper, during a 20 minute time slot (15 minutes for the presentation itself and 5 minutes for Q/A).
2. All speakers of each session should meet the session chair at its room 10 minutes before the session.
3. We will prepare Windows XP laptops running the Adobe Reader and Microsoft Office 2003 for paper presentations. Please prepare your presentation files for being read by those applications.
4. LNCS reserves the right to exclude a paper from distribution after the conference (e.g., removal from LNCS proceedings) if the paper is not presented at the conference.
5. If you have any query, please feel free to contact the ICA3PP-10 Program Co-Chair, Ching-Hsien Hsu (robertchh@gmail.com) or the ICA3PP-10 secretary, Jongsung Kim (jongsung.k@gmail.com).



DETAILED SCHEDULE FOR ICA3PP 2010

May 21, 2010 (Friday)

08:00- 09:00 Registration (Lounge)

09:00- 10:20 Parallel Session

Session 1 : Wireless communication network – ICA3PP 2010 (Room: Astor)

(Chair : Christophe Cérin)

- **Design of a slot assignment scheme for link error distribution on wireless grid networks**
Junghoon Lee, Seong Baeg Kim and Mikyung Kang
- **Wireless Bluetooth Communications Combine With Secure Data Transmission using ECDH and Conference Key Agreements**
Hua-Yi Lin and Tzu-Chiang Chiang
- **Robust multicast scheme for wireless process**
Junghoon Lee, Gyung-Leen Park, Seong-Baeg Kim, Min-Jae Kang and Mikyung Kang
- **A Note-based Randomized and Distributed Protocol for Detecting Node Replication Attacks in Wireless Sensor Networks**
Xiangshan Meng, Kai Lin and Keqiu Li

Session 2 : Parallel algorithms, architectures and applications 1 – FPDC 2010(Room: Charlotte)

(Chair : Hsi-Ya Chang)

- **A Cost-Optimal Parallel Majority Algorithm**
Massimo Cafaro, Piergiulio Tempesta, Alessio Agrimi and Alessandro Zocco
- **An Efficient Circuit-Switched Broadcasting in Star Graph**
Cheng-Ta Lee and Yeong-Sung Lin
- **Parallel Domain Decomposition Methods for High-Order Finite Element Solutions of The Helmholtz Problem**
Youngjoon Cha and Seongjai Kim
- **Message Clustering Technique towards Efficient Communication Scheduling in Clusters and Grids**
Shih-Chang Chen, Tai-Lung Chen and Ching-Hsien Hsu

10:20- 10:40 Coffee Break (Lounge)

10:40- 12:00 Parallel Session

Session 3 : Parallel Algorithm 1 – ICA3PP 2010 (Room: Astor)

(Chair : Alfredo Cuzzocrea)

- **Scalable Co-clustering Algorithms**
Hyuk Cho and BongJune Kwon



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- **Parallel Pattern Matching With Swaps on a Linear Array**
Fouad Chedid
- **Parallel Prefix Computation in the Recursive Dual-Net**
Yamin Li, Shietung Peng and Wanming Chu

Session 4 : GPU computing and applications – ICA3PP 2010 (Room: Charlotte)

(Chair : Wanlei Zhou)

- **GPU Acceleration of Dock6 Amber Scoring Computation**
Hailong Yang, Bo Li, Yongjian Wang, Zhongzhi Luan and Depei Qian
- **Optimizing Sweep3D for Graphic Processor Unit**
Chunye Gong, Jie Liu, Zhenghu Gong, Jin Qin and Jing Xie
- **Modular Resultant Algorithm for Graphics Processors**
Pavel Emelianenko
- **A Novel Scheme for High Performance Finite-Difference Time-Domain (FDTD) Computations Based on GPU**
Tianshu Chu, Jian Dai, Depei Qian, Weiwei Fang and Yi Liu

Session 5: Parallel programming and multi-core technologies 1 – FPDC 2010 (Room: Carlton)

(Chair : Liang-Teh Lee)

- **Efficient Grid and Pipeline on the OTIS-ARRANGMENT NETWORK**
Ahmad Awwad, Bassam Haddad and Ahmad Kayed
- **Single Thread Program Parallelism with Dataflow Abstracting Thread**
Tianzhou Chen, Xingsheng Tang, Jianliang Ma, Lihan Ju, GuanJun Jiang, and Qingsong Shi
- **Parallel Programming on a Soft-Core Based Multi-Core System**
Liang-Teh Lee, Shin-Tsung Lee and Ching-Wei Chen

12:00- 13:45 Lunch (Lotte Art Hall)

13:45- 14:00 Opening (Lotte Art Hall)

14:00- 14:40 Keynote 1: FutureTech 2010 (Lotte Art Hall)

(Chair : Laurence T. Yang)

Structure and Model of Algorithms

Prof. Lei Li, Hosei University, Japan

14:40- 15:00 Break

15:00- 16:20 Keynote 2: ICA3PP 2010 (Lotte Art Hall)

(Chair : Robert C. Hsu)

Efficient Web Browsing with Perfect Anonymity Using Page Prefetching

Prof. Wanlei Zhou, Deakin University, Australia

16:20- 16:40 Coffee Break (Lounge)



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16:40- 18:40 Parallel Session

Session 6 : Parallel Algorithm 2 – ICA3PP 2010 (Room: Astor)

(Chair : Hirotaka Inoue)

- **A Two-Phase Differential Synchronization Algorithm for Remote Files**
Yonghong Sheng, Dan Xu and Dongsheng Wang
- **A New Parallel Method of Smith-Waterman Algorithm on a Heterogeneous Platform**
Bo Chen, Yun Xu, Jiaoyun Yang and Haitao Jiang
- **Improved genetic algorithm for minimizing periodic preventive maintenance costs**
Chung-Ho Wang and Te-Wei Lin
- **A New Hybrid Parallel Algorithm for MrBayes**
Jianfu Zhou, Gang Wang and Xiaoguang Liu
- **Research and Design of Deployment Framework for Blade-based Data Center**
Haiping Qu, Xiuwen Wang, Lu Xu, Jiangang Zhang and Xiaoming Han
- **Parallel Relational Data Warehouse Design on Heterogeneous Database Clusters**
Ladjel Bellatreche, Alfredo Cuzzocrea and Soumia Benkrid

Session 7: HPC Technologies - HPCTA 2010 (Room: Charlotte)

(Chair : Wen-Jyi Hwang)

- **A Self-Adaptive Load Balancing Strategy for P2P Grids**
Po-Jung Huang, You-Fu Yu, Quan-Jie Chen, Tian-Liang Huang, Kuan-Chou Lai and Kuan-Ching Li
- **Embedding Algorithms for Star, Bubble-Sort, Rotator-Faber-Moore, and Pancake Graphs**
Mihye Kim, Dongwan Kim and Hyeongok Lee
- **Performance Estimation of Generalized Statistical Smoothing to Inverse Halftoning based on the MTF Function of Human Eyes**
Yohei Saika, Kouki Sugimoto and Ken Okamoto
- **Power Improvement Using Block-Based Loop Buffer with Innermost Loop Control**
Ming-Yuan Zhong and Jong-Jiann Shieh
- **An Efficient Pipelined Architecture for Fast Competitive Learning**
Hui-Ya Li, Chia-Lung Hung and Wen-Jyi Hwang
- **Merging Data Records on EREW PRAM**
Hazem Bahig

19:00- 21:00 Conference Reception (Emerald Room)

May 22, 2010 (Saturday)

08:00- 08:40 Registration (Lounge)

08:40- 10:20 Parallel Session

Session 8 : Parallel programming and multi-core technologies 2 – FPDC 2010 (Room: Astor)

(Chair : Kuo-Chan Huang)

- **Self-Organizing Neural Grove and Its Distributed Performance**
Hirota Inoue
- **Dynamic Resource Tuning for Flexible Core Chip Multiprocessors**
Yongqing Ren, Hong An, Ming Cong, Tao Sun and Yaobin Wang
- **Ensuring Confidentiality and Integrity of Multimedia Data on a Multi-Core Platforms**
Eunji Lee, Sungju Lee, Yongwha Chung, Hyeonjoong Cho and Sungbum Pan
- **A Paradigm for Processing Network Protocols in Parallel**
Ralph Duncan, Peder Jungck and Kenneth Ross
- **Real-Time Task Scheduling on Heterogeneous Two-Processor Systems**
Chin-Fu Kuo and Ying-Chi Hai

Session 9 : Grid/Cluster computing – FPDC 2010 (Room: Charlotte)

(Chair : Makoto Yoshida)

- **A Grid Based System for Closure Computation and Online Service**
Wing Ning Li, Donald Hayes, Jonathan Baran, Cameron Porter and Tom Schweiger
- **A Multiple Grid Resource Broker with Monitoring and Information Services**
Chao-Tung Yang, Wen-Jen Hu and Bo-Han Chen
- **Design Methodologies of Workload Management through Code Migration in Distributed Desktop Computing Grids**
Makoto Yoshida and Kazumine Kojima
- **A QoS Network Information Model on Grid Environments**
Chao-Tung Yang, Chih-Hao Lin and Wen-Jen Hu

Session 10 : Distributed operation system / P2P computing / Fault-tolerant and information security – FPDC 2010 (Room: Carlton)

(Chair : Xingang Liu)

- **Quick Forwarding of Queries to Relevant Peers in a Hierarchical P2P File Search System**
TingTing Qin, Qi Cao, Qiyang Wei and Satoshi Fujita
- **iCTPH: An Approach to publish and lookup CTPH digests in Chord**
Jianzhong Zhang, Kai Pan, Yuntao Yu and Jingdong Xu



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- **Toward a Framework for Cloud Security**
Michael Brock and Andrzej Goscinski
- **Cluster-fault-tolerant Routing in Burnt Pancake Graphs**
Nagateru Iwasawa, Tatsuro Watanabe, Tatsuya Iwasaki and Keiichi Kaneko
- **Generalize edge-bipancyclicity of conditionally faulty hypercubes**
Chao-Ming Sun and Yue-Dar Jou

10:20- 10:40 Coffee Break (Lounge)

10:40- 12:00 Parallel Session

Session 11: Parallel architectures 1 – ICA3PP 2010 (Room: Astor)

(Chair : Cho-Chin Lin)

- **Function Units Sharing Between Neighbor Cores in CMP**
Tianzhou Chen, Jianliang Ma, Hui Yuan, Jingwei Liu and Jiang Guanjun
- **A High Efficient On-Chip Interconnection Network in SIMD CMPs**
Dan Wu, Kui Dai, Xuecheng Zou, Pan Chen and Jinli Rao
- **Network-on-Chip Routing Algorithms by Breaking Cycles**
Minghua Tang and Xiaola Lin
- **A Fair Thread-Aware Memory Scheduling Algorithm for Chip Multiprocessor**
Danfeng Zhu, Rui Wang, Hui Wang, Depei Qian and Zhongzhi Luan

Session 12 : Distributed operation system/P2P computing/Parallel algorithms, architectures and applications 2 – FPDC 2010 (Room: Charlotte)

(Chair : Seongjai Kim)

- **Experiences Gained from Building a Services-based Distributed Operating System**
Andrzej Goscinski and Michael Hobbs
- **Emulation of Object-based Storage Devices by a Virtual Machine**
Yi-Chiun Fang, Chien-Kai Tseng and Yarsun Hsu
- **Balanced Multi-Process Parallel Algorithm for Chemical Compound Inference Problem with Given Path Frequency**
Jiayi Zhou, Kun-Ming Yu, Chun Yuan Lin, Kuei-Chung Shih and Chuan Yi Tang
- **Harnessing Clusters for High Performance Computation of Gene Expression Microarray Comparative Analysis**
Philip Church, Adam Wong, Andrzej Goscinski and Christophe Lefevre

12:00- 13:20 Lunch (Lotte Art Hall)

13:20- 14:40 Keynote 3: ICA3PP 2010 (Lotte Art Hall)

(Chair : Michael Hobbs)

Cloud Computing: The Next Revolution in Information Technology*Prof. Rajkumar Buyya, University of Melbourne, Australia***14:40- 14:50 Break****14:50- 16:10 Keynote 4: FutureTech 2010 (Lotte Art Hall)**

(Chair: J. Daniel Garcia)

Developments in Fuzzy System Models: Fuzzy Rulebases to Fuzzy Functions*Prof. I. Burhan Turksen, TOBB-Economics and Technology University, Turkey***16:10- 16:30 Coffee Break (Lounge)****16:30- 18:30 Parallel Session****Session 13: Parallel architectures 2 – ICA3PP 2010 (Room: Astor)**

(Chair : Michael Hobbs)

- **Efficient Partitioning of Static Buses for Processor Arrays of Small Size**
Susumu Matsumae
- **Formal Proof for A General Architecture of Hybrid Prefix/Carry-Select Adders**
Feng Liu, Gang Chen, Xiaoyu Song and Qingping Tan
- **A Remote Mirroring Architecture with Adaptively Cooperative Pipelining**
Yongzhi Song, Zhenhai Zhao, Bing Liu, Tingting Qin, Gang Wang and Xiaoguang Liu
- **SV: Enhancing SIMD Architectures via Combined SIMD-Vector approach**
Libo Huang and Zhiying Wang
- **A Correlation-Aware Prefetching Strategy for Object-Based File System**
Julei Sui, Jiancong Tong, Gang Wang and Xiaoguang Liu
- **An Auxiliary Storage Subsystem to Distributed Computing Systems for External Storage Service**
MinHwan Ok

Session 14 : Cloud computing/virtualization Techniques – ICA3PP 2010 (Room: Charlotte)

(Chair : Kuan-Chou Lai)

- **idsocket: API for Inter-Domain Communications Base on Xen**
Liang Zhang, Yuebin Bai and Cheng Luo
- **Strategy-Proof Dynamic Resource Pricing of Multiple Resource Types on Federated Clouds**
Marian Mihalescu, Yong-Meng Teo

- **Market-Oriented Scheduling Policies for Cloud Computing**
Mohsen Amini Salehi and Rajkumar Buyya
- **A High Performance Inter-VM Network Communication Mechanism**
Xuebin Bai, Cheng Luo, Cong Xu, Liang Zhang and Huiyong Zhang
- **On the Effect of Using Third-party Clouds for Maximizing Profit**
Young Choon Lee, Chen Wang, Javid Taheri, Albert Y. Zomaya and Bing-Bing Zhou
- **A Tracing Approach to Process Migration For Virtual Machine Based on Multicore Platform**
Liang Zhang, Yuebin Bai and Xin Wei

Session 15 : GPU Technologies and Application - HPCTA 2010 (Room: Carlton)

(Chair : Pierre Kestener)

- **Accelerating Euler equations solver on graphics processing units**
Pierre Kestener, Frédéric Château and Romain Teyssier
- **An Improved Parallel MEMS Processing-level Simulation Implementation Using Graphic Processing Unit**
Yupeng Guo, Xiaoguang Liu, Gang Wang, Fan Zhang and, Xin Zhao..
- **Solving Burgers' Equation Using Multithreading and GPU**
Sheng-Hsiu Kuo, Chih-Wei Hsieh, Reui-Kuo Lin and Wen-Hann Sheu
- **Support for OpenMP Tasks on Cell Architecture**
Qian Cao, Changjun Hu, Haohu He, Xiang Huang, and Shigang Li
- **A Novel Algorithm for Faults Acquiring and Locating on Fiber Optic Cable Line**
Yan Chen, Naixue Xiong, Laurence T. Yang, Dong Liu, Yuyuan Zhang and Ning Zhang
- **A Parallel Distributed Algorithm for the Permutation Flow Shop Scheduling Problem**
Talel Ladhari, Samia Kouk iand Mohamed Jemni

19:00 - 21:00 Conference Banquet (Lotte Art Hall)



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May 23, 2010 (Sunday)**08:00- 08:40 Registration (Lounge)****08:40- 10:40 Parallel Session****Session 16 : Grid/Cluster Computing – ICA3PP 2010 (Room: Astor)****(Chair : Rajkumar Buyya)**

- **Checkpointing and Migrating of Communication Channels in heterogeneous Grid Environments**
John Mehnert-Spahn and Michael Schoettner
- **On-line Task Granularity Adaptation for Dynamic Grid Applications**
Nithiapidary Muthuvelu, Ian Chai, Eswaran Chikkannan and Rajkumar Buyya
- **Multithreading of Kostka Numbers Computation for the BonjourGrid Meta-Desktop Grid Middleware**
Christophe Cérin, Franck Butelle and Heithem Abbas
- **Adaptable Scheduling Algorithm for Grids with Resource Redeployment Capability**
Cho-Chin Lin and Chih-Hsuan Hsu
- **Using MPI on PC Cluster to Compute Eigenvalues of Hermitian Toeplitz Matrices**
Fazal Noor and Syed Misbahuddin

Session 17: M2A2 2010 (Room: Charlotte)**(Chair : Xingang Liu)**

- **Performance Modeling of Multishift QR Algorithms for the Parallel Solution of Symmetric Tridiagonal Eigenvalue Problems**
Takafumi Miyata, Yusaku Yamamoto and Shao-Liang Zhang
- **A Parallel Solution of Large-scale Heat Equation based on Distributed Memory Hierarchy System**
Tangpei Cheng, Qun Wang, Xiaohui Ji and Dandan Li
- **A New Metric for On-line Scheduling and Placement in Reconfigurable Computing Systems**
Maisam Mansub Bassiri and Hadi Shahriar Shahhoseini
- **Test data compression using four-Coded and sparse storage for testing embedded core**
Ling Zhang, Ji-shun Kuang and zhi-qiang You
- **Extending a Multicore Multithread Simulator to Model Power-Aware Hard Real-Time Systems**
José Luis March, Julio Sahuquillo, Houcine Hassan, Salvador Peti and, José Duato
- **Real-time Linux Framework for Designing Parallel Mobile Robotic Applications**
Joan Aracil, Carlos Domínguez, Houcine Hassan and Alfons Crespo

10:40- 11:00 Coffee Break (Lounge)

11:00- 12:20 Parallel Session

Session 18: Parallel programming, performance evaluation – ICA3PP 2010 (Room: Astor)

(Chair : Yusaku Yamamoto)

- **A Proposed Asynchronous Object Load Balancing Method for Parallel 3D Image Reconstruction Applications**
Jose Antonio Alvarez-Bermejo and Javier Roca-Piera
- **A small-step extending parallelism approach for Enumeration of Combinatorial Objects**
Hien Phan, Ben Soh and Man Nguyen
- **A Study of Performance Scalability by Parallelizing Loop Iterations on Multi-core SMPs**
Prakash Raghavendra, Akshay Kumar Behki, Praveen Jain, Srivatsa Bhat, Thejus V M, Vishnumurthy Prabhu, Hariprasad K and Madhav Mohan
- **Impact of Multimedia Extensions for Different Processing Element Granularities on an Embedded Imaging System**
Jong-Myon Kim

Session 19: Fault-tolerant / information security and management – ICA3PP 2010 (Room: Charlotte)

(Chair : Sang-Soo Yeo)

- **Reducing False Aborts in STM Systems**
Daniel Nicacio and Guido Araujo
- **Fault-tolerant Node-to-set Disjoint-path Routing in Hypercubes**
Antoine Bossard, Keiichi Kaneko and Shietung Peng
- **A Micro-Scale Urban Air Quality Management System**
Jung-Hun Woo, HyungSeok Kim, Sang-Boem Lim, Jae-Jin Kim, Jonghyun Lee, Rina Ryoo and Hansoo Kim

Session 20: Mobile computing / web services – FPDC 2010 (Room: Carlton)

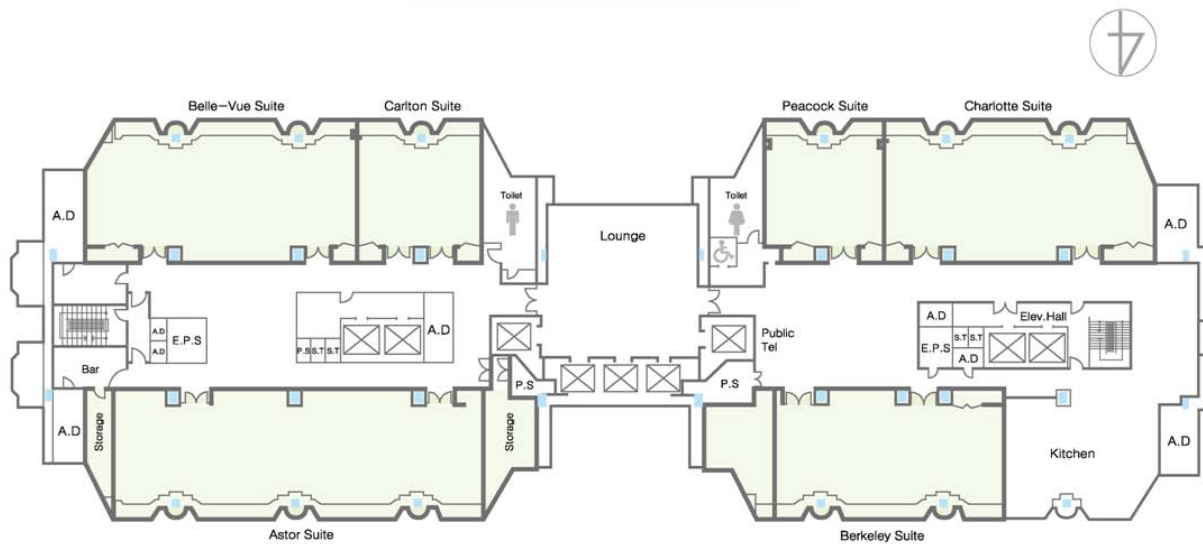
(Chair : Yohei Saika)

- **Semantic access control for corporate mobile devices**
Tuncay Ercan, Mehmet Yildiz
- **A New Visual Simulation Tool for Performance Evaluation of MANET Routing Protocols**
Md. Sabbir Rahman Sakib, Nazmus Saquib and Al-Sakib Khan Pathan
- **A Web Service Composition Algorithm based on Global QoS Optimizing with MOCACO**
Li Wang and Yan-xiang He

Conference Venue



42F FLOOR PLAN



Hotel Information

- Conference Venue and the Official Hotel of FutureTech 2010 and ICA3PP 2010
 - Busan Lotte Hotel: <http://www.lottehotelbusan.com/>
 - Busan Lotte Hotel is now offering special discounts for the conference delegates.
 - On-line Reservation System:
 - <http://www.lottehotel.com/Convention/ConventionReserv.asp?strSeqNO=48>
- To find other hotels, please visit: <http://tour2korea.com/>
 - There are various grades hotels along Haeundae Beach, Busan.
 - The conference venue is about twenty minutes away from any hotels in Haeundae Beach by public transportations.