The 10th IEEE International Conference on Dependable, Autonomic and Secure Computing (DASC 2012)

The 10th IEEE International Conference on Pervasive, Intelligence and Computing (PICom 2012)

The 10th IEEE International Conference on Embedded Computing (EmbeddedCom 2012)

The 12th IEEE International Conference on Scalable Computing and Communications (ScalCom 2012)

December 17 - 19, 2012
Changzhou, China

Organized by
Changzhou University, China

Sponsored by
IEEE, IEEE Computer Society
IEEE Technical Committee on Scalable Computing

TABLE OF CONTENTS

IEEE DASC/PICom/EmbeddedCom/ScalCom 2012 Program Overview

Wednesday December 19, 2012				
Time	**Room 1**	**Room 2**	**Room 3**	**Room 4**
08:00-16:00	Registration			
09:00-09.40	Opening Ceremony			
09:00-09:40	Keynote Speech I: Prof. Yanzhen Qu (Chair: Dr. Jinjun Chen)			
09:40-10:20	Keynote Speech II: Prof. Geyong Min (Chair: Dr. Yang Xiang)			
10:20-10.30	Coffee Break			
10:30-11:10	Keynote Speech III: Dr. Yang Xiang (Chair: Dr. Man Lin)			
11:10-11:50	Keynote Speech IV: Dr. Jinjun Chen (Chair: Dr. Shoukun Xu)			
11:50-13:00	Lunch Time			
13:00-13:40	Keynote Speech V: Dr. Xingang Liu (Chair: Dr. Laurence T. Yang)			
13:40-15:40	DASC-01	PICom-01	EmbeddedCom-01	ScalCom-01
15:40-15:50	Coffee Break			
15:50-17:50	DASC-02	PICom-02	EmbeddedCom-02	ScalCom-02

Message from the DASC/PICom/ScalCom/EmbeddedCom Local Organizers

Welcome to the IEEE DASC/PICom/ScalCom/EmbeddedCom 2012 sponsored by IEEE Computer Society, held on December 17-19, 2012, in Changzhou, Jiangsu, China. As the local organizers, we would like to express to all of the distinguished guests and participants our sincere welcome in Changzhou!

Changzhou University, China

Changzhou University (CZU) is situated in the historical and cultural city of Changzhou, Jiangsu Province, the south of Yangtze River, famous for its rich resources and outstanding talents.

Founded early in 1978, CZU, originally named Wuxi Branch Institute, and then Changzhou Branch Institute of Nanjing Institute of Chemical Technology, was established as a provincial full-time university at the beginning of China's reform and opening-up. In 1981, authorized and granted by State Council, it was officially entitled as Jiangsu Institute of Chemical Technology. Following the cooperative school-running mechanism implemented by Jiangsu Provincial Government and China Petrochemical Corporation in 1984, the institute became a university under the administration of both Ministry of Education and China Petrochemical Corporation (Sinopec Group) in 1992, and it was thus renamed as Jiangsu Institute of Petrochemical Technology. Incorporated into the Jiangsu Provincial Government and co-sponsored by the central and the local government since 2000, the institute was renamed as Jiangsu Polytechnic University in November 2002. In 2010, the University was once again officially approved and elevated by Ministry of Education to be Changzhou University. Through 32 years of construction and development, the university has developed into an institution of higher learning with emphasis on engineering, combined with science and integrated with arts, with the distinguishing feature of cooperation in terms of "production sectors, schools and research sectors", as well as the harmonious development of multidiscipline.

CZU was empowered to grant master degree in 2003, which proves its alteration from undergraduate education to postgraduate training. There are altogether 18,000 undergraduates and postgraduates, including those in Huaide College, of which more than 1000 are postgraduates. The university has ten subordinate colleges, together with the Sports Department, the College of Continuing Education and Huaide College. Two scholastic domains are authorized to confer master's degree programs for the superior disciplines, 17 for the subordinate disciplines and 4 for the Engineering Master's degree. In addition, CZU also provides 45 undergraduate programs which cover six categories ranging from arts, science, economics, engineering, and management to law. The university has 6 provincial or ministerial key subjects, 3 provincial superior scholastic teams, 2 provincial key laboratories, 4 provincial engineering research centers, 2 national featured majors, 2 provincial branded majors, 14 provincial competitive (superior) disciplines, 8 provincial model centers for teaching demonstration, and 2 national or provincial innovative bases of experiments for the personnel training patterns of higher education. During the last five years, the university has been subsequently awarded 1 second prize of Advanced Education Achievement of the State and 2 first prizes of Advanced Education & Teaching Achievement in Jiangsu Province. In 2006, the university smoothly passed with merit in the teaching evaluation for the undergraduate.

CZU embraces a team of innovative, explorative and dedicative faculty members amounting to some 1,300, of which 900 are professional teachers, 410 are advanced professionals (in which professors amount to 120), 660 masters or above (of which more than 200 are doctors). There are 2 faculty members selected as the state's candidates of "Millions of Talents' Projects in the New Century", 3 the members of the ministerial Advisory Committee for Undergraduate Education, and 2 the members of State Advisory Committee for the Subject Teaching of Security Engineering. Apart from that, 23 faculty members are rewarded by State Council the special bonus of the government, 2 honored the title of "The Model Worker in the Educational System of the State" and "The Advanced Worker in the Educational System of the State". And there are also 2 honored to be the first leading technologic talent of the juniors and the seniors, 29 the scholastic leader of "The 333 Training Project of Advanced Talent" and the candidates for the junior and senior scholastic leader of "Qing Lan Project" in Jiangsu province. There are 2 provincial innovative teams of technology and 2 superior teaching teams of higher education in Jiangsu Province. With such a preeminent team of faculty, CZU has been twice evaluated as "The Advanced University in terms of Teachers' Quality Construction in Jiangsu Province".

CZU's high-quality faculty team assures good developing trends in its discipline construction and research capability. During the last five years, the university undertook or accomplished 25 national and 196 provincial

projects with the funds for scientific research amounting to 230 million Yuan (46 million per year). More than 90 projects have been identified as provincial and ministerial researches and 37 of them won scientific and technological awards, including 1 second prize of the National Scientific and Technological Progress Award, 1 second prize of State Technological Invention, and 35 provincial and ministerial scientific research awards, including 6 first prizes. Statistics show that the number of patent applications by CZU has ranked the Top 100 among universities in Mainland China. According to Jiangsu Office of Education, in the past three years, the university is in the Top 10% of 122 universities in Jiangsu Province. For its outstanding academic contributions, CZU was twice awarded "Jiangsu Advanced Universities in Science and Technology Work" consecutively, and was selected as the only winner of "2008-2009 Excellent Co-operation Unit of National Intellectual Property Rights Assistance" in Jiangsu province.

The university actively promotes the strategy of international talents training by adhering to an open school policy, as well as attaching great importance to international exchanges and cooperation with the emphasis on Sino-foreign cooperation, academic exchanges and research cooperation. Currently, the university has already carried out international cooperative educations with St. Francis Xavier University, Canada and National University of Ireland Maynooth, Ireland etc. Meanwhile, CZU positively serves the country's mainstay industries, local economic construction and social development with its achievements in scientific research. The university has successfully established comprehensive cooperative relationships with Sinopec Group, China National Petroleum Corporation, local governments at all levels and various types of enterprises.

CZU is well equipped with basic facilities and superior school conditions. The university now owns two campuses: Baiyun and Wujin with a combined area of more than 1500 mu（100 hectares） and a building area of nearly 500,000 square meters. The library collects more than 1.2 million books, and the university teaching and research equipment worth 200 million Yuan in total. Wujin campus, locating in Changzhou Science and Education City, is surrounded by more than 200 famous universities, colleges and institutions, which greatly enhance the educational quality and scientific research level of the university.

Over 30 years, taking "Responsibility" as the School Mottoes, CZU has formed a school spirit of "Full responsibility in pursuit of excellence". Since the founding, the university has been benefiting greatly from Jiangsu Provincial Government, Changzhou City Government, Sinopec Group and other units for their support and the deep local culture which lays a solid foundation for the education and teaching. By implementing the "New Model of Engineering Education with High Quality Engineering-oriented", CZU has cultivated more than 30,000 professional and technical personnel and management personnel for the country. The university has made sound contributions to China's petrochemical industry, local economic construction and social development.

The university was selected as "Jiangsu Outstanding University School Spirit Unit", and was subsequently titled of "Civilized Unit of Jiangsu Province", "Civilization Schools in Jiangsu Province", "Civilized Unit of Changzhou" and "Advanced Unit of Summer Students Social Practice" on several occasions. The beautiful campus is also well-known to be one of the "National Green Units Top 400" and "Jiangsu Garden-style Campus". Over the years, therefore, CZU's popularity and reputation has been improving.

Zhenghua Ma, Changzhou University, China
Yuqiang Sun, Changzhou University, China
Shoukun Xu, Changzhou University, China
Local Organizers of IEEE DASC/PICom/ScalCom/EmbeddedCom 2012

Message from the DASC2012 General Chairs

Welcome to the 10th IEEE International Conference on Dependable, Autonomic and Secure Computing (DASC2012) sponsored by IEEE Computer Society, held on Dec. 17-19, 2012, in Changzhou, Jiangsu, China. On behalf of the Organizing Committee of DASC2012, we would like to express to all of participants our sincere and warm welcome in Changzhou!

IEEE DASC2012 is the conference event following DSAC2011 (December 2011, Sydney, Australia) and DASC2009 (December 2009, Chengdu, China) after the merger of the successful DASC symposium series previously held as RAMPDS-05 (July 2005, Fukuoka, Japan), DASC-06 (September 2006, Indianapolis, USA), DASC-07 (September, 2007, Columbia, MD, USA), and the successful SecUbiq symposium series, previously held as SecUbiq-05 (December 2005, Nagasaki, Japan), SecUbiq-06 (August 2006, Seoul, Korea), SecUbiq-07 (December 2007, Taipei, Chinese Taipei) and SecUbiq-08 (December 2008, Shanghai, Shanghai). It provides a forum for engineers and scientists in academia, industry, and government to address the resulting profound challenges and to present and discuss their new ideas, research results, applications and experience on all aspects of dependability, security, trust and/or autonomic computing systems. IEEE DASC2012 is sponsored by IEEE, IEEE Computer Society, and IEEE Technical Committee on Scalable Computing (TCSC).

DASC2012 is one of the successful conferences in the series since its birth in terms of both the participants' number and technical sessions. For the successful organization of an international conference of this size and diversity, we counted on the great support of many people and organizations. First of all, we would like to sincerely thank Prof. Laurence T. Yang (St. Francis Xavier University, Canada), the Steering Chair of DASC, for giving us the opportunity to organize the conference and for their support and guidance. We would like to express our appreciation to all 4 distinguished professors for accepting our invitation to be the keynote speakers.

We would like to give our special thanks to the Program Chairs Dr. Felix Gomez Marmol (NEC Europe, Germany), Prof. Zheng Yan (Aalto University, Finland/Xidian University, China), and Prof. Shui Yu (Deakin University, Australia) for their excellent work and great efforts in organizing an outstanding program committee, conducting a rigorous reviewing process and selecting high quality papers from a large number of submissions, and for preparing an excellent conference program. We are grateful to the Workshop/Symposium Chairs Prof. Weishan Zhang (China University of Petroleum, China), Phan Cong Vinh (NTT University, Vietnam) as well as other chairs, advisory members, steering members, and PC members for their great supports. We would like to thank all reviewers for their hard task, for providing constructive feedback to authors and enabling an excellent selection of the papers. Most importantly, our great appreciation to all authors for submitting their high-quality papers to DASC2012. Last but not least, we would like to greatly thank the DASC2012 local organizing team for the excellent local arrangements of the conference.

We thank all of you for participating in DASC2012, and hope you find the conference stimulating and interesting for your research and professional activities.

Jeffrey Voas, National Institute of Standards and Technology, USA
Vijay Varadharajan, Macquarie University, Australia
Gregorio Martinez, University of Murcia, Spain
General Chairs of DASC2012

Message from the DASC2012 Program Chairs

It is our great pleasure to welcome you for the 10th IEEE International Conference on Dependable, Autonomic and Secure Computing (DASC2012) sponsored by IEEE Computer Society, held on Dec. 17-19, 2012, in Changzhou, Jiangsu, China. The DASC conference, sponsored by the IEEE Technical Committee on Scalable Computing (TCSC), is well established in its 10th edition as a highly reputed conference in the field.

This edition consists of 21% highly selected papers from a large number of submissions. We wish to thank the authors of all the submitted papers for choosing DASC2012 as the venue to present their high quality research.

A high quality review process was done by the highly qualified program committee members, and each paper was reviewed by at least three independent reviewers (and about four review reports in average). We would like to appreciate the efforts of the program committee members and to additional reviewers that contributed their valuable time and expertise to provide professional reviews and very interesting feedback to authors in a narrow time schedule.

We are fortunate and delighted to work in coordination with the Steering Chair, Prof. Laurence T. Yang (St. Francis Xavier University, Canada), and the General Chairs Dr. Jeffrey Voas (National Institute of Standards and Technology, USA), Prof. Vijay Varadharajan (Macquarie University, Australia), and Prof. Gregorio Martinez (University of Murcia, Spain), for a successful DASC2012 and for the success of the final program. We sincerely appreciate their constant support and guidance. It was a great pleasure to work with such an excellent team. Also, we would like to express our gratitude to local team for managing the program information in the conference website, and to Shizheng Jiang (St Francis Xavier University, Canada), for his efficient assistances in managing the web-based submission and reviewing systems.

The conference is a highly stimulating event to foster interesting discussions as well as useful interaction between researchers, and provides an excellent forum for exchanging and developing new ideas in the field of dependability, security, trust and/or autonomic computing systems.

Felix Gomez Marmol, NEC Europe, Germany
Zheng Yan, Aalto University, Finland/Xidian University, China
Shui Yu, Deakin University, Australia
Program Chairs of DASC2012

DASC 2012 Organizing and Program Committees

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General Chairs
Jeffrey Voas, National Institute of Standards and Technology, USA
Vijay Varadharajan, Macquarie University, Australia
Gregorio Martinez, University of Murcia, Spain

Program Chairs
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Zheng Yan, Aalto University, Finland/Xidian University, China
Shui Yu, Deakin University, Australia

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Shizheng Jiang, St Francis Xavier University, Canada

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Zheng Yan, Aalto University, Finland
Baoliu Ye, Nanjing University, China
Lu Zhang, Peking University, China
Huanyu Zhao, Oklahoma State University, USA
Deqing Zou, Huazhong University of Science & Technology, China

Message from the PICom2012 General Chairs

Welcome to the 10th IEEE International Conference on Pervasive, Intelligence and Computing (PICom2012) sponsored by IEEE Computer Society, held on Dec. 17-19, 2012, in Changzhou, Jiangsu, China. On behalf of the Organizing Committee of PICom2012, we would like to express to all of participants our sincere and warm welcome in Changzhou!

Over the last fifty years, computational intelligence has evolved from logic-based artificial intelligence, nature-inspired soft computing, social-oriented agent technology to cyber-physical integrated ubiquitous intelligence towards Pervasive Intelligence (PI). The International Conference on Pervasive Intelligence and Computing is intended to cover all kinds of these intelligent paradigms as well as their applications in various pervasive computing. PICom2011 is the next event, in a series of highly successful International Conferences on Pervasive Intelligence and Computing (PICom), previously held as PCC-03 (Las Vegas, USA, June 2003), PCC-04 (Las Vegas, USA, June 2004), PSC-05 (Las Vegas, USA, June 2005), PCAC-06 (Vienna, Austria, April 2006), PCAC-07 (Niagara Falls, Canada, May 2007), IPC-07 (Jeju, Korea, December 2007), IPC-08 (Sydney, Australia, December 2008), PICom-09 (Chengdu, China, December 2009), PICom-11(Sydney, Australia, December 2011). IEEE PICom2012 is sponsored by IEEE, IEEE Computer Society, and IEEE Technical Committee on Scalable Computing (TCSC).

PICom2012 is one of the successful conferences in the series since its birth in terms of both the participants' number and technical sessions. For the successful organization of an international conference of this size and diversity, we counted on the great support of many people and organizations. First of all, we would like to sincerely thank Prof. Laurence T. Yang (St. Francis Xavier University, Canada), the Steering Chair of PICom, for giving us the opportunity to organize the conference and for their support and guidance. We would like to express our appreciation to 4 distinguished professors for accepting our invitation to be the keynote speakers.

We would like to give our special thanks to the Program Chairs Prof. Geyong Min (University of Bradford, UK), Prof. Gang Pan (Zhejiang University, China), and Prof. George Roussos, Birkbeck College (University of London, UK) for their excellent work and great efforts in organizing an outstanding program committee, conducting a rigorous reviewing process and selecting high quality papers from a large number of submissions, and for preparing an excellent conference program. We are grateful to the Workshop/Symposium Chairs Prof. Zhen Liu (Nagasaki Institute of Applied Science, Japan), Prof. Tianrui Li (Southwest Jiaotong University, China) as well as other chairs, advisory members, steering members, and PC members for their great supports. We would like to thank all reviewers for their hard task, for providing constructive feedback to authors and enabling an excellent selection of the papers. Most importantly, our great appreciation to all authors for submitting their high-quality papers to PICom2012. Last but not least, we would like to greatly thank the PICom2012 local organizing team for the excellent local arrangements of the conference.

We thank all of you for participating in PICom2012, and hope you find the conference stimulating and interesting for your research and professional activities.

Stephen S. Yau, Arizona State University, USA
Witold Pedrycz, University of Alberta, Canada
Vincenzo Piuri, University of Milan, Italy
General Chairs of PICom2012

Message from the PICom2012 Program Chairs

It is our great pleasure to welcome you for the 10th IEEE International Conference on Pervasive, Intelligence and Computing (PICom2012) sponsored by IEEE Computer Society, held on Dec. 17-19, 2012, in Changzhou, Jiangsu, China. The PICom conference, sponsored by the IEEE Technical Committee on Scalable Computing (TCSC), is well established in its 10th edition as a highly reputed conference in the field.

This edition consists of a set of outstanding papers, giving an acceptance rate of 17%. We wish to thank the authors of all the submitted papers for choosing PICom2012 as the venue to present their high quality research.

A high quality review process was done by the highly qualified program committee members, and each paper was reviewed by at least three independent reviewers (and about four review reports in average). We would like to appreciate the efforts of the program committee members and to additional reviewers that contributed their valuable time and expertise to provide professional reviews and very interesting feedback to authors in a narrow time schedule.

We are fortunate and delighted to work in coordination with the Steering Chair Prof. Laurence T. Yang (St. Francis Xavier University, Canada), and the General Chairs Stephen Prof. S. Yau, Arizona (State University, USA), Witold Pedrycz, (University of Alberta, Canada), and Prof. Vincenzo Piuri (University of Milan, Italy), for a successful PICom2012 and for the success of the final program. We sincerely appreciate their constant support and guidance. It was a great pleasure to work with such an excellent team. Also, we would like to express our gratitude to local team for managing the program information in the conference website, and to Shizheng Jiang (St Francis Xavier University, Canada), for his efficient assistances in managing the web-based submission and reviewing systems.

The conference is a highly stimulating event to foster interesting discussions as well as useful interaction between researchers, and provides an excellent forum for exchanging and developing new ideas in the areas of Pervasive Intelligence and Computing.

Geyong Min, University of Bradford, UK
Gang Pan, Zhejiang University, China
George Roussos, Birkbeck College, University of London, UK
Program Chairs of PICom2012

PICom2012 Organizing and Program Committees

Honorary Chairs
Guodong Shi, Changzhou University, China

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Stephen S. Yau, Arizona State University, USA
Witold Pedrycz, University of Alberta, Canada
Vincenzo Piuri, University of Milan, Italy

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Weiwei Fang, Beijing Jiaotong University, China
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Jia Hu, Liverpool Hope University, UK
Yulei Wu, Chinese Academy of Science, China
Amrita Ghosal, Dr. B C Roy Engineering College, India
Noushin Najjari, Bradford University, UK
Mukhtar Ibrahim, Bradford University, UK

Local Chairs
Feiyu Lin, Changzhou University, China and Jonkoping University, Sweden
Ling Zou, Changzhou University, China
Daqiang Zhang, Nanjing Normal University, China

Web and System Chair
Shizheng Jiang, St Francis Xavier University, Canada

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Youngho Lee, Mokpo National University, Korea
Vili Lehdonvirta, University of Tokyo, Japan & Helsinki Institute for Information Technology, Finland
Shijian Li, Zhejiang University, China
Chiu Kuo Liang, Chung Hua University, Taiwan
Chun-Yuan Lin, Chang Gung University, Taiwan
Rene Meier, Trinity College Dublin, Ireland
Kazuhiro Minami, National Institute of Informatics, Japan
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Chao-Tung Yang, Tunghai University, Taiwan
Li-Hsing Yen, National University of Kaohsiung, Taiwan
Tomoko Yonezawa, ATR, Japan
Yu Zheng, Microsoft Research Asia, China
Jiehan Zhou, University of Oulu, Finland

Message from the EmbeddedCom2012 General Chairs

Welcome to the 10th IEEE International Conference on Embedded Computing (EmbeddedCom2012) sponsored by IEEE Computer Society, held on Dec. 17-19, 2012, in Changzhou, Jiangsu, China. On behalf of the Organizing Committee of EmbeddedCom2012, we would like to express to all of participants our sincere and warm welcome in Changzhou!

The EmbeddedCom (Symposium on Embedded Computing) is aiming to be a premier international conference in embedded computing. This symposium is to bring together computer scientists, industrial engineers and researchers to discuss and exchange experimental or theoretical results, novel designs, work-in-progress, experience, case studies, and trend-setting ideas in the area of embedded computing include all aspects of embedded computing systems with emphasis on algorithms, systems, models, compilers, architectures, tools, design methodologies, test and applications.

EmbeddedCom2012 is the event, in a series of highly successful International Conferences on Embedded Computing, (EmbeddedCom), previously held as ICPP--NEC04(Montreal, Canada, August 2004), ICPP-EC05 (Oslo, Norway, June 2005), ICPADS-PDES05 (Fukuoka, Japan, July 2005), ICPP-EC06 (Columbus, USA, August 2006), SEC-07 (Niagara Falls, Canada, May 2007), ICPP-EPDC07(Xian, China, September, 2007), SEC-08 (Beijing, China, October 2008), and EmbeddedCom-09 (Dalian, China, September 2009)， EmbeddedCom-11 (Sydney, Australia, December 2011). IEEE EmbeddCom2012 is sponsored by IEEE, IEEE Computer Society, and IEEE Technical Committee on Scalable Computing (TCSC).

EmbeddedCom2012 is one of the successful conferences in the series since its birth in terms of both the participants' number and technical sessions. For the successful organization of an international conference of this size and diversity, we counted on the great support of many people and organizations. First of all, we would like to sincerely thank Prof. Laurence T. Yang (St. Francis Xavier University, Canada), the Steering Chair of EmbeddedCom, for giving us the opportunity to organize the conference and for their support and guidance. We would like to express our appreciation to 4 distinguished professors for accepting our invitation to be the keynote speakers.

We would like to give our special thanks to the Program Chairs Prof. Houcine Hassan (Universidad Politecnica de Valencia, Spain), Prof Julio Sahuquillo (Universidad Politecnica de Valencia, Spain), and Prof. Wei Zhang (Virginia Commonwealth University, USA), for their excellent work and great efforts in organizing an outstanding program committee, conducting a rigorous reviewing process and selecting high quality papers from a large number of submissions, and for preparing an excellent conference program. We are grateful to the Workshop/Symposium Chairs Prof. Xingang Liu (University of Electronic Science and Technology of China, China), Prof. Gang Zeng (Nagoya University, Japan) as well as other chairs, advisory members, steering members, and PC members for their great supports. We would like to thank all reviewers for their hard task, for providing constructive feedback to authors and enabling an excellent selection of the papers. Most importantly, our great appreciation to all authors for submitting their high-quality papers to EmbeddedCom2012. Last but not least, we would like to greatly thank the EmbeddedCom2012 local organizing team for the excellent local arrangements of the conference.

We thank all of you for participating in EmbeddedCom2012, and hope you find the conference stimulating and interesting for your research and professional activities.

Yanzhen Qu, Colorado Technical University, USA
Marisol Garcia Valls, Universidad Carlos III de Madrid, Spain
Pao-Ann Hsiung, National Chung Cheng University, Taiwan
General Chairs of EmbeddedCom2012

Message from the EmbeddedCom2012 Program Chairs

It is our great pleasure to welcome you for the 10th IEEE International Conference on Embedded Computing (EmbeddedCom2012) sponsored by IEEE Computer Society, held on Dec. 17-19, 2012, in Changzhou, Jiangsu, China. The EmbeddedCom 2012 conference, sponsored by the IEEE Technical Committee on Scalable Computing (TCSC), is well established in its 10th edition as a highly reputed conference in the field.

This edition consists of 18% highly selected papers from a large number of submissions. We wish to thank the authors of all the submitted papers for choosing EmbeddedCom2012 as the venue to present their high quality research.

A high quality review process was done by the highly qualified program committee members, and each paper was reviewed by at least three independent reviewers (and about four review reports in average). We would like to appreciate the efforts of the program committee members and to additional reviewers that contributed their valuable time and expertise to provide professional reviews and very interesting feedback to authors in a narrow time schedule.

We are fortunate and delighted to work in coordination with the Steering Chair, Prof. Laurence T. Yang (St. Francis Xavier University, Canada), and the General Chairs Stephen Prof. Yanzhen Qu (Colorado Technical University, USA), Prof. Marisol Garcia Valls (Universidad Carlos III de Madrid, Spain), and Prof. Pao-Ann Hsiung (National Chung Cheng University, Taiwan), for a successful EmbeddedCom2012, and for the success of the final program. We sincerely appreciate their constant support and guidance. It was a great pleasure to work with such an excellent team. Also, we would like to express our gratitude to local team for managing the program information in the conference website, and to Shizheng Jiang (St Francis Xavier University, Canada), for his efficient assistances in managing the web-based submission and reviewing systems.

The conference is a highly stimulating event to foster interesting discussions as well as useful interaction between researchers, and provides an excellent forum for exchanging and developing new ideas in the areas of Embedded Computing.

Houcine Hassan, Universidad Politecnica de Valencia, Spain
Julio Sahuquillo, Universidad Politecnica de Valencia, Spain
Wei Zhang, Virginia Commonwealth University, USA
Program Chairs of EmbeddedCom2012

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Jia Hu, Liverpool Hope University, UK
Yulei Wu, Chinese Academy of Science, China
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Mukhtar Ibrahim, Bradford University, UK

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Daqiang Zhang, Nanjing Normal University, China

Web and System Chair
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Chen Wang, James Hutton Institute, UK

Message from the ScalCom2012 General Chairs

Welcome to the 12th IEEE International Conference on Scalable Computing and Communications (ScalCom2012) sponsored by IEEE Computer Society, held on Dec. 17-19, 2012, in Changzhou, Jiangsu, China. On behalf of the Organizing Committee of ScalCom2012, we would like to express to all of participants our sincere and warm welcome in Changzhou!

Scalability is a primary consideration in the design and implementation of computing and communication systems. The rapid increase in the volume of information that needs to be processed by computers necessitates new architectures, software, algorithms, and tools to improve scalability. ScalCom2012 aims at providing an international forum for researchers and practitioners to discuss original ideas on all aspects of scalability in computing. ScalCom-12 is soliciting original, previously unpublished work addressing research challenges and presenting advances in the design and implementation of scalable computing and communication systems.

ScalCom2012 is one of the successful conferences in the series since its birth in terms of both the participants' number and technical sessions. For the successful organization of an international conference of this size and diversity, we counted on the great support of many people and organizations. First of all, we would like to sincerely thank, Prof. Laurence T. Yang (St. Francis Xavier University, Canada), the Steering Chair of ScalCom, for giving us the opportunity to organize the conference and for their support and guidance. We would like to express our appreciation 4 distinguished professors, for accepting our invitation to be the keynote speakers.

We would like to give our special thanks to the Program Chairs Prof. Beniamino Di Martino (Second University of Naples, Italy), Prof. Samee U. Khan (North Dakota State University, USA), and Prof. Lizhe Wang (Chinese Academy of Science, China), for their excellent work and great efforts in organizing an outstanding program committee, conducting a rigorous reviewing process and selecting high quality papers from a large number of submissions, and for preparing an excellent conference program. We are grateful to the Workshop/Symposium Chairs Prof. Yingwen Song (SARI, Chinese Academy of Sciences, China), Prof. Yong Zhao (University of Electronic Science and Technology of China, China), as well as other chairs, advisory members, steering members, and PC members for their great supports. We would like to thank all reviewers for their hard task, for providing constructive feedback to authors and enabling an excellent selection of the papers. Most importantly, our great appreciation to all authors for submitting their high-quality papers to ScalCom2012. Last but not least, we would like to greatly thank the ScalCom2012 local organizing team for the excellent local arrangements of the conference.

We thank all of you for participating in ScalCom2012, and hope you find the conference stimulating and interesting for your research and professional activities.

Mohammad S. Obaidat, Monmouth University, USA
Junzhou Luo, Southeast University, China
Albert Y. Zoyama, University of Sydney, Australia
General Chairs of ScalCom2012

Message from the ScalCom2012 Program Chairs

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The conference is a highly stimulating event to foster interesting discussions as well as useful interaction between researchers, and provides an excellent forum for exchanging and developing new ideas in the areas of scalable computing and communications.

Beniamino Di Martino, Second University of Naples, Italy
Samee U. Khan, North Dakota State University, USA
Lizhe Wang, Chinese Academy of Science, China
Program Chairs of ScalCom2012

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Thomas Ludwig, DKRZ, Germany

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Yong Zhao, University of Electronic Science and Technology of China, China

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Chao Chen, University of Florida, USA
Weiwei Fang, Beijing Jiaotong University, China
Lai Tu, Huazhong University of Science and Technology, China
Chunsheng Zhu, University of British Columbia, Canada

Jia Hu, Liverpool Hope University, UK
Yulei Wu, Chinese Academy of Science, China
Amrita Ghosal, Dr. B C Roy Engineering College, India
Noushin Najjari, Bradford University, UK
Mukhtar Ibrahim, Bradford University, UK

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Ling Zou, Changzhou University, China
Daqiang Zhang, Nanjing Normal University, China

Web and System Chair
Shizheng Jiang, St Francis Xavier University, Canada

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Alain Crolotte, Teradata, USA
Alfredo Cuzzocrea, ICAR-CNR and University of Calabria, Italy
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Zhiyi Huang, University of Otago, New Zealand
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Aleksander Byrski, AGH University of Science and Technology, Poland
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Wei Chen, National University of Defense Technology, China
Siang-Yew Chong, University of Nottingham, Malaysia
Ciprian Dobre, University Politehnica of Bucharest, Romania
Roland Ewald, University of Rostock, Germany
Cain Evans, Birmingham City University, UK
Horacio Gonzalez-Velez, Robert Gordon University, UK
Shan He, University of Birmingham, UK
Christian Jacob, University of Calgary, Canada
Kin Fun Li, University of Victoria, Canada
Xiaoli Li, Beijing Normal University, China
El Hassan El Mimouni, Université Sidi Mohamed Ben Abdellah, Morocco
Navonil Mustafee, Swansea University, UK
Yew-Soon Ong, Nanyang Technological University, Singapore
Florin Pop, Technical University of Bucharest, Romania
Hamid Sarbazi-Azad, Sharif University of Technology and IPM, IRAN
Chen Wang, CSIRO, Australia
Janusz Wojtusiak, George Mason University, USA
Yiping Yao, National University of Defense Technology, China
Suiping Zhou, Teesside University, UK
Lingjia Liu, University of Kansas, USA
Tuan Tran, University of Louisville, USA
Yanhui Lu, Zhengzhou University, China
Zixia Hu, University of Washington, USA
Zhiyong Chen, Shanghai Jiaotong University, China
Siqian Liu, North Dakota State University, USA

Guanying Ru, University of Louisville, USA
Kewei Sha, Oklahoma City University, USA
Ze Li, Clemson University, USA
Lei Yu, Clemson University, USA
Tinting Chen, Oklahoma State University, USA
Binbin Chen, Advanced Digital Sciences Center, Singapore
Jiajia Liu, Tohoku University, Japan
Longjiang Guo, Heilongjiang University, China
Shouling Ji, Georgia State University, USA
Jing He, Georgia State University, USA
Yong Chen, Texas Tech University, USA
Xuanwen Luo, Sandvik Mining and Construction, USA
Cosimo Anglano, Universitá del Piemonte Orientale, Italy
Laurent LEFEVRE, INRIA, France
Dzmitry Kliazovich, Université du Luxembourg, Luxembourg
Matthias S. Mueller, Dresden University of Technology, Germany
Natalie Bates, LBNL, USA
Costas Bekas, IBM Research, Switzerland
Maja Etinski, NEC Laboratories, Germany

Keynote Speech I

Professor Yanzhen Qu
Colorado Technical University - Southern Colorado, USA

Making Right Business Decision on Cloud Computing Resource Planning and Management

Abstract: Cloud computing has gained a lot of popularity in recent years with the promise of providing all kinds of solutions through reliable networked services associated with enormous benefits that such as lower cost, scalability, and responsiveness. Cloud computing has been creating many attractive opportunities for business of all sizes. “These opportunities, however, did not come without challenges.” In fact, both consumers and vendors of cloud computing service are facing challenges on when and how to plan and manage the computing resources that are needed for their business. For consumers, depends on the nature of application, using cloud computing may not always be a lower cost. For vendors, it is very difficult to accurately predict customers’ elastic demands on the computing resources. In this talk we will discuss the models that we have developed to help both consumers and vendors of cloud computing to deal with their challenges in this aspect.

Short Bio: Dr. Yanzhen Qu currently is the dean and a professor in Computer Science and Information Technology at Colorado Technical University – Southern Colorado, USA. Dr. Qu holds a B.Eng. in Electronic Engineering, a M. Eng. in Electrical Engineering, and a Ph.D. in Computer Science. Over his industrial career characterized by many “the world first innovations”, he has served at various senior or executive level Product R&D and IT management positions at several multinational corporations. He was also the chief system architect and the development director of several world first very large real-time commercial software systems.

At Colorado Technical University, Dr. Qu is the dissertation supervisor of over ten computer science doctoral students, and his recent research interests include cloud computing security and architecture, cyber security risk detection and mitigation, data engineering, software engineering process and methods, soft computing, data mining over non-structured data, human-oriented computer interface, scalable enterprise information management system, as well as embedded and mobile computing. He has been served as general/program/session chair or keynote speaker in several professional conferences or workshops. He has published many research papers in the peer reviewed conferences and professional journals, and is currently serving as a member of editorial board of several professional journals.

Keynote Speech II

Professor Geyong Min
Bradford University, UK

Multimedia Traffic Modelling and Quality-of-Service Assurance

Abstract: Differentiated Quality-of-Service (QoS) is an important requirement of multi-service communication networks. Multimedia applications are usually categorized into various classes according to their traffic patterns and QoS requirements. The hybrid scheduling system that combines the fundamental traffic scheduling schemes in a hierarchical manner is a promising strategy for QoS assurance of multimedia applications. This talk will present an analytical model for the integrated scheduling system under heterogeneous multimedia traffic and investigate the QoS metrics including the queue length distribution and loss probability of individual traffic flows in the system. The accuracy of the analytical model is validated through extensive comparison between the analytical results and those obtained from simulation experiments subject to the real-world multimedia applications. The analytical model is then used as a cost-effective performance optimization tool for resource management and QoS assurance in multimedia networks. Finally, the related emerging issues and future directions will be presented and discussed.

Short Bio: Professor Geyong Min is a Chair in Computer Science in the Department of Computing at the University of Bradford, UK. He received the PhD degree in Computing Science from the University of Glasgow, UK, and the BSc degree in Computer Science from Huazhong University of Science and Technology, China. His research interests include Next Generation Internet, Wireless Communications, Multimedia Systems, Information Security, Ubiquitous Computing, Modelling and Performance Engineering.

His recent research has been supported by European FP, UK EPSRC and industrial partners. He has published over 200 research papers in prestigious international journals, including IEEE Transactions on Communications, IEEE Transactions on Wireless Communications, IEEE Transactions on Computers, IEEE Transactions on Multimedia, IEEE Transactions on Parallel and Distributed Systems, and IEEE Networks, and in reputable international conferences, such as ICDCS and IPDPS.

Prof. Min is an Editorial Board member of 9 international journals and serves as the Guest Editor for 18 international journals. He has chaired/co-chaired 30 international conferences/workshops. He received the Outstanding Leadership Awards from IEEE International conferences HPCC 2012, TrustCom 2012, CIT 2010, ScalCom 2009, and HPCC 2008.

Keynote Speech III

Dr. Yang Xiang
Deakin University, Australia

Network Traffic Classification for Security Applications

Abstract: Traffic classification has wide applications in network management, from security monitoring to quality of service measurements. Recent research tends to apply machine learning techniques to flow statistical feature based classification methods. The nearest-neighbor (NN) based method has exhibited superior classification performance. It also has several important advantages, such as no requirements of training procedure, no risk of overfitting of parameters, and naturally being able to handle a huge number of classes. However, the performance of NN classifier can be severely affected if the size of training data is small. In this paper, we propose a novel non-parametric approach for traffic classification, which can improve the classification performance effectively by incorporating correlated information into the classification process. We analyze the new classification approach and its performance benefit from both theoretical and empirical perspectives. A large number of experiments are carried out on two real-world traffic datasets to validate the proposed approach. The results show the traffic classification performance can be improved significantly even under the extreme difficult circumstance of very few training samples. This work has significant impact on security applications.

Short Bio: Dr. Yang Xiang received his PhD in Computer Science from Deakin University, Australia. He is currently with School of Information Technology, Deakin University. He is the Director of the Network Security and Computing Lab (NSCLab). His research interests include network and system security, distributed systems, and networking. In particular, he is currently leading his team developing active defense systems against large-scale distributed network attacks. He is the Chief Investigator of several projects in network and system security, funded by the Australian Research Council (ARC).

He has published more than 120 research papers in many international journals and conferences, such as IEEE Transactions on Computers, IEEE Transactions on Parallel and Distributed Systems, IEEE Transactions on Information Security and Forensics, and IEEE Journal on Selected Areas in Communications. One of his papers was selected as the featured article in the April 2009 issue of IEEE Transactions on Parallel and Distributed Systems. He has published two books, Software Similarity and Classification (Springer) and Dynamic and Advanced Data Mining for Progressing Technological Development (IGI-Global).

He has served as the Program/General Chair for many international conferences such as ICA3PP 12/11, IEEE/IFIP EUC 11, IEEE TrustCom 11, IEEE HPCC 10/09, IEEE ICPADS 08, NSS 11/10/09/08/07. He has been the PC member for more than 60 international conferences in distributed systems, networking, and security. He serves as the Associate Editor of IEEE Transactions on Parallel and Distributed Systems and the Editor of Journal of Network and Computer Applications. He is a Senior Member of the IEEE.

Keynote Speech IV

Dr. Jinjun Chen
University of Technology Sydney, Australia

Privacy Preserving in Cloud Computing

Abstract: Cloud computing promises an open environment where customers can deploy IT services in pay-as-you-go fashion while saving huge capital investment in their own IT infrastructure. Due to the openness, privacy preserving becomes critical because otherwise customers may eventually lose the confidence of deploying cloud computing in practice. In this talk, we will discuss privacy preserving in general and then propose our solution to address a particular type of privacy preserving in cloud.

Short Bio: Dr Jinjun Chen is an Associate Professor from Faculty of Engineering and IT, University of Technology Sydney (UTS), Australia. He is the Director of Lab of Cloud Computing and Distributed Systems at UTS. He holds a PhD in Computer Science and Software Engineering (2007) from Swinburne University of Technology, a Master of Engineering (1999) and a Bachelor of Applied Mathematics (1996) from Xidian University, China. Dr Chen's research interests include cloud computing, big data, workflow management, privacy and security, and related various research topics. His research results have been published in more than 100 papers in high quality journals and at conferences, including IEEE Transactions on Service Computing, ACM Transactions on Autonomous and Adaptive Systems, ACM Transactions on Software Engineering and Methodology (TOSEM), IEEE Transactions on Software Engineering (TSE), and IEEE Transactions on Parallel and Distributed Systems.

He received Swinburne Vice-Chancellor's Research Award for early career researchers (2008), IEEE Computer Society Outstanding Leadership Award (2008-2009) and (2010-2011), IEEE Computer Society Service Award (2007), Swinburne Faculty of ICT Research Thesis Excellence Award (2007). He is the Vice Chair of IEEE Computer Society's Technical Committee on Scalable Computing (TCSC), Vice Chair of Steering Committee of Australasian Symposium on Parallel and Distributed Computing, Founder and Coordinator of IEEE TCSC Technical Area on Workflow Management in Scalable Computing Environments, Founder and steering committee co-chair of International Conference on Cloud and Green Computing.

Keynote Speech V

Dr. Xingang Liu
University of Electronic Science and Technology of China, China

Multimedia Signal Modelling for Future Big Data Social Systems

Abstract: Advances in multimedia data acquisition and storage technology have led to the growth of very large multimedia databases. Analyzing this huge amount of multimedia data to discover useful knowledge is a challenging problem. This challenge has opened the opportunity for research in Multimedia Signal Modelling (MSM). Multimedia Signal Modelling for Future Big Data Social Systems can be defined as the process of finding interesting patterns from media data such as audio, video, image and text that are not ordinarily accessible by basic queries and associated results. The motivation for doing MSM is to use the discovered patterns to improve decision making. MSM will attract significant research efforts in developing methods and tools to organize, manage, search and perform domain specific tasks for data from domains such as surveillance, meetings, broadcast news, sports, archives, movies, medical data, as well as personal and online media collections. As an active and inter-disciplinary research field, multimedia signal modelling also presents a great opportunity for multimedia computing in the big data field.

Short Bio: Dr Xingang Liu is current an associate professor and PhD supervisor in the school of Electronic Engineering, University of Electronic Science and Technology of China (UESTC), China. He was a BK21 research fellow and adjunct professor in the school of Electrical and Electronic Engineering in Yonsei University, and the department of Multimedia Engineering in Dongguk University, Korea, respectively. His research interests are multimedia signal communication related topics, such as heterogeneous and homogenous video transcoding, video quality measurement (QoE-related), video signal error concealment in the destination, mode decision algorithm, 3-D video codec and so on. He has published around more than 60 academic papers in refereed journals, conference proceedings as the first or corresponding author.
Dr. Liu a member of IEEE and KICS, and he has been invited to serve as an organization committee, technical program committee and session chair of around 20 IEEE International conferences/workshops/symposiums, such as IEEE IPC2007, IEEE ICESS2008, IEEE PICOM2009 and so on. He received the “Outstanding Service Award” and “Outstanding Leadership Award” for IEEE IUCC2012 and IEEE CIT2012 in Jun. 2012 and Oct. 2012, respectively. Dr. Liu severed as the leading guest editors for several international journals, such as JWCN, MTAP, and so on.

The DASC/PICom/EmbeddedCom/ScaCom 2012 Technical Program

Wednesday December 19, 2012				
08:00-16:00	Registration			
09:00-09:40	Opening Ceremony			
09:00-09:40	Keynote Speech I: Prof. Yanzhen Qu (Chair: Dr. Jinjun Chen)			
09:40-10:20	Keynote Speech II: Prof. Geyong Min (Chair: Dr. Yang Xiang)			
10:25-10:30	Coffee Break			
10:30-11:10	Keynote Speech III: Dr. Yang Xiang (Chair: Dr. Man Lin)			
11:10-11:50	Keynote Speech IV: Dr. Jinjun Chen (Chair: Dr. Shoukun Xu)			
11:55-13:00	Lunch Time			
13:00-13:40	Keynote Speech V: Dr. Xingang Liu (Chair: Dr. Laurence T. Yang)			
13:40-15:40	DACS-01	PICom-01	EmbeddedCom-01	ScalCom-01
15:40-15:50	Coffee Break			
15:50-17:50	DACS-02	PICom-02	EmbeddedCom-02	ScalCom-02

DASC-01 Chair: Dr. Ferhat Khendek

1. A Theoretical Model: Using Logistic Regression for Malware Signature based Detection
   Kelly Hughes, Yanzhen Qu
2. Robust Architecture for Distributed Intelligence in an IP-based Mobile Wide-Area Surveillance System
   Mikko Nieminen, Nikolay Tcholtchev
3. Ensemble Model for CPU Load Prediction
   Jiwen Fu, Jian Cao
4. Nonlinear SVMs for Identifying Faults Using the Symmetric Comparison-Based Diagnosis Model
   Mourad Elhadef
5. Comparing Redundancy Models for High Availability Middleware
   Ali Kanso, Maria Toeroe, Ferhat Khendek
6. A Hybrid Authentication Protocol based on Signcryption for VANET
   Yiliang Han

DASC -02 Chair: Dr. Hui Guo

1. Online Performance Anomaly Prediction in Cloud Environment
   Yi Qiu, Jian Cao
2. Unknown Intrusion Detection with Fuzzy Genetic Algorithm
   Pawita Jongsuebsook, Naruemon Wattanapongsakorn
3. Generalized Integer Transform Based Audio Reversible Watermarking Algorithm
   Ka-Cheng Choi, Chi-Man Pun
4. Dynamic Encryption Key Design and Management for Memory Data Encryption in Embedded Systems
   Mei Hong, Hui Guo
5. Proxy Credential Forgery Attack to Two Proxy Signcryption Schemes
   Jyh-haw Yeh

PICom-01 Chair: Dr. Feiyu Lin

1. Towards Ontology-driven Development of Ubiquitous interactive TV Applications
   Muhammad Mohsin Saleemi, Natalia Diaz, Johan Lilius
2. Lattice discretization model for intensive RFID reader deployment
   Shijie Zhou, Jiaqing Luo
3. Trajectory Based Activity Monitoring and HealthCare Provisioning
   Muhammad Aamir Saleem, Iram Fatima, Kifayat Ullah Khan, Young-Koo Lee
4. A Study on Consistency of Cross-site Online Reviews
   Ningning Wu, Fan Liu, Jing Zhang
5. Ontology-driven content search in SDI's using SPARQL and CSW
   Jari Reini
6. An Effective Network Traffic Intelligence Extracting Method to Accurately Detect Malicious and Stealthy Scan before the Attacks
   Yanzhen Qu, Qikai Lu
7. Pervasive Computing for 3D Image Rendering
   Muhammad Mobeen Movania, Wei Ming Chiew, Feng Lin
8. A Novel Approach for Semantic Image Storage and Retrieval
   Guo Kehua, MA Jianhua, Duan Guihua
9. A Framework for Context Automatic Integration in Ubiquitous Computing
   Feiyu Lin, Lidetu Sahile Neshnega, Bikash Subba, and Vladimir Tarasov
10. Design and Implementation of the HDFS-based Cloud Storage Encryption Access Network
    Xiaoyang Tang, Qiaoyan Wen, Hua Zhang

PICom-02 Chair: Dr. Feiyu Lin

1. An Implementation of Interactive Evidence-based Medical e-learning System
   Meng-Chin Hsu, Yu-Fang Huang, Shang-Liang Chen, Tin-Wei Hou, Su-Chen Wang
2. Aggregated-proof Based Hierarchical Authentication Scheme for the Internet of Things
   Huansheng Ning, Hong Liu, Laurence T. Yang
3. Effective Connectivity Analysis of fMRI Data Based on Network Motifs
   Zhuqing Jiao, Ling Zou, Nong Qian, Zhenghua Ma
4. FMC: A fast convergent live migration of virtual machine with CPU scheduling
   Liang Hu, Jia Zhao, Gaochao Xu, Kuo Zhao
5. System Development and Automatic Analysis of Bio-Signals for u-Healthcare Services
   Dongmin Shin, Hyunjun Lee, Dongil Shin, Dongkyoo Shin
6. Context-based Ontology-driven Recommendation Strategies for Tourism in Ubiquitous Computing
   Lin Shi, Feiyu Lin, Tianchu Yang, Jun Qi, Zhenghua Ma, Wei Ma and Shoukun Xu
7. Design of a Fuzzy Controller Based on Genetic Algorithm for a Robot-Assisted Recovery System
   Lei Shi, Qiang Wang, Zhen Liu
8. The Analysis and Visualization on HPLC Fingerprints of Szechwan Lovage Rhizome
   Huang Chun-yi, Shi Sheng-feng, Liu Zhen, and Huang Wei-ping
9. Grid-Based Mobile Data Query Processing with Parallel Computing
   Yi Guo, Changqing Ji, Chuanwei Xu, and Peng Xiao
10. Ontology Based Heterogeneous Data Integration Framework Facing Mobile Environment
    Chuanwei Xu, Shumin Yang, Changqing Ji, Riyun Liu, and Zhongyi Zheng

EmbeddedCom-01 Chair: Dr. Fei Hao

1. A Novel Mobile Architecture for Heterogeneous Bio-sensors Utilizing Machine Learning and General Purpose Graphical Processing Units
   Bjorn Johnson, Yanzhen Qu
2. Low Power Implementation of Deflection Routing Algorithm for Networks-on-Chip
   Jing-Fu Jheng, Chung-Kai Hsu, Shanq-Jang Ruan
3. Towards Distributed Garbage Collection in Distributed Real-Time Java
   Pablo Basanta-Val, Marisol Garcia-Valls
4. Green Recursive Flow Classification : towards an Energy-efficient Packet Classification
   Ilyas Snaiki, Hamza Dahmouni, Omar Cherkaoui
5. Adaptive Custom Instruction Identification Algorithm based on Two-Step Partitioning of Basic Blocks
   Guoqiang Liang, Yuchun Ma, Kang Zhao, Jinian Bian
6. Implementation and Performance of Blake Algorithm in FPGA Victor Pereira
   Edward Moreno, Wanderson Dias, Dellano Santos
7. Energy Efficient Distributed Kalman Filter for Wireless Sensor Networks
   Chenyu Wang, Xuemin Chen, Wei Li
8. Selective Context-switch for Non-Interfered Execution of Real-time Task in Smartphones
   Eunji Lee, Youngsun Kim, Hyokyung Bahn

EmbeddedCom-02 Chair: Dr. Fei Hao

1. Efficient Application Mapping in Resource Limited Homogeneous NoC-based Manycore Systems
   Georgios Georgakarakos, Masoud Daneshtalab, Juha Plosila
2. Fully Adaptive Routing for 3D Networks-on-Chip
   Masoumeh Ebrahimi, Masoud Daneshtalab, Juha Plosila
3. Robust Stabilization Design for Large-scale Parameterized Nonlinear Switched Systems
   Lanping Chen, Zhengzhi Han, Zhenghua Ma
4. A Domain-Specific Language for Run-time Adaptation for Embedded Systems
   André Santos, João Cardoso, Pedro Diniz, Diogo Ferreira, Zlatko Petrov
5. Embedded Endomicroscopic Computing
   Wei Ming Chiew, Feng Lin, Kemao Qian, Hock Soon Seah
6. SQLITE Journaling with Non-volatile Memory to Improve the Performance of Smart Device Storage
   Dohee Kim, Eunji Lee, Hyokyung Bahn
7. Fast EIS Measurements Based on Invariance Properties of Demodulation BER Function
   Yang Li, Jianhua Lu
8. Robust Control and Exponential Stabilization for Large Scale Impulsive Hybrid Systems with Time-delay
   Lanping Chen, Zhengzhi Han, Zhenghua Ma

ScalCom -01 Chair: Dr. Changqing Luo

1. A Simulation Study on the Effect of Individuals' Uncertain Behaviors in Indoor Evacuation
   Minggang Dou, Dan Chen, Hui Li, Hanning Wang, Wencong Zeng, Lizhe Wang, Samee Khan
2. Three-Dimensional Agent-based Model of Fish Collective Behaviour Using Topological Interaction
   Mingwei Tian, Shan He, Dan Chen, Samee Khan
3. Massive Non-stationary Data Analysis Using a GPGPU-aided Continuous Wavelet Transform Approach
   Ze Deng,Yangyang Hu, Weizhou Peng, Dan Chen, and Xiaoli Li
4. Choosing Effective tools for Data Visualization in Bioinformatics
   Jiansi Ren, Yang Liu
5. Scalable, Low Complexity, and Fast Greedy Scheduling Heuristics for Highly Heterogeneous Distributed Computing Systems
   Cesar O. Diaz, Johnatan E. Pecero, Samee U. Khan, Pascal Bouvry
6. A Lightweight Simulator for Resource Scheduling in a Cloud Data Center Considering Real-time Multi-dimensional Information
   Wenhong Tian, Yong Zhao, Yuanliang Zhong, XiaShuang Sun, Chen Jing
7. A novel range query approach for resource discovery in DHT-based peer-to-peer networks
   Ze Deng, Haidong Zhu, Dan Chen
8. Digital Hepatic Vein Typing and its Application in Liver Surgery
   Fang Chi-hua, Liu Xing-xing, Fan Ying-fang, Zhong Shi-zhen, You Jin-hua, Xiang Nan, Bao Su-su, Wu Tian-chong, Yang Jian, Zhu Wen
9. A New Clustering Algorithm Based on Data Field in Complex Networks
   Yuhua Liu, Yi Zhang, Cui Xu, Jianzhi Jin
10. MR-Tree: a Efficient Index for Map-Reduce
    Chunsheng Li, Jie Chen, Cheqing Jin
11. Causality Analysis of Multivariable Time-series using VAR Model and Complex Network Measure
    Zhuqing Jiao, Ling Zou, Nong Qian, Zhenghua Ma
12. The Personalized Priority Routing Algorithm in Publish/Subscribe Network
    Yingying Ye, Jian Cao, Shiyou Qian, Minglu Li

ScalCom -02 Chair: Dr. Changqing Luo

1. A Review of Data Intensive Computing
   Yanhui Wu, Guoqing Li, Lizhe Wang, Yan Ma, Joanna Kołodziej, Samee U. Khan
2. Multi-way Data Analysis with GPGPU-aided PARAFAC
   Ke Zeng, Chang Cai, Dan Chen, Weizhou Peng, Ze Deng, Juan Wang, Xiaoli Li
3. Massively Parallel 3D Staggered-grid Finite-difference Seismic Wave Modeling
   Chang Cai, Dan Chen, Xiaomin Wu, Jingwang Cheng, Lizhe Wang
4. Data Mining Using Clouds: An Experimental Implementation of Apriori over MapReduce
   Juan Li, Pallavi Roy, Samee Khan, Lizhe Wang, Yan Bai
5. A Methodology for OSPF Routing Protocol Verification
   Saif Malik, Sudarshan Srinivasan, Samee Khan, Lizhe Wang
6. The Research of Business Process Based on Cloud Bank Model
   Hao Li, Yaofang Zhang, Shenglin Yang, Joan Lu
7. A Thread Partitioning Approach based on Cost Estimation for Speculative Parallelization of Non-loops
   Liu Bin, Zhao Yinliang, Zhong Xiang, Ma Ying, Sun Yanjun, Feng Boqin
8. An Optimal Traffic Detector Distribution Method Based on Travel Time Estimation Model
   Han Li, Mei Yang, Qi-sheng Wu, Lan Bai
9. Study on Mass Data Filter of Dynamic Parameter Report Based on Hive
   Hongjie Wu, Xiuquan Qiao and Xiaofeng Li
10. Reliable Subscription Model in Push-style Publish/Subscribe System
    Wenqi Guo, Yang Zhang, Junliang Chen
11. Transmission reliability of Distributed Event-based System
    Yulin Tan, Yang Zhang, Junliang Chen
12. LogStore: An Efficient Big Data Management Architecture for Log Data Processing in Cloud Computing Environments
    Julie Kim, Hyokyung Bahn
13. A Secure Host-based Mobility Protocol for Wireless Heterogeneous Networks
    Imen El Bouabidi, Faouai Zarai, Mohammad S. Obaidat, and Lotfi Kamoun

Registration Desk

The Registration Desk will be open to assist you at the following times:

- Wednesday, December, 17, 2012, 8:00 am – 4:00 pm

Venue: Changzhou Science and Education Town

Name Badges and Meal Tickets

All delegates, sponsors and speakers of the IEEE DASC/PICom/EmbeddedCom/ScaCom 2012 will be provided with a name badge, to be collected upon registration. This badge must be worn at all times as it is your official pass to all technical sessions of the conferences and morning and afternoon teas.

There are 5 different meal tickets for 3 lunches on December 17-19, 2012, and banquet on December 17-18, 2012, respectively.

Presentation Information

Language

The presentation language of the IEEE DASC/PICom/EmbeddedCom/ScaCom 2012 is English.

Checking In

Session Chairs are requested to register at least 2 hours before their session.

Setting Up

You are required to arrive at the room (in which you will deliver your talk) **15 minutes before the commencement of the session.** Upon arrival please confirm your attendance with the Session Chair and familiarize yourself with the venue.

Please bring with you a single paragraph summary, including your name (as you would like to be introduced), affiliation and research interests (maximum 100 words). Please present this to the Session Chair upon arrival, for use for introductory purposes, prior to your talk.

Upon arrival, please copy your slides file to the presentation computer. If you plan to use your own equipment, please ensure it is ready to go prior to the session commencing, since there is very little time between presentations. If you have requested optional equipment, ensure that is in the room. In the larger conference rooms please, make sure you familiarise yourself with the audio system. For all assistance, please speak to the Session Chair.

Timing

Please ensure your check the program for the exact time of your session and where your paper falls within the session.

It is recommended that all IEEE DASC/PICom/EmbeddedCom/ScaCom 2012 paper presentations use 20 minutes presentation time including 5 minutes question time. However, the Session Chairs will determine the exact presentation time for each paper, based on the number of presentations in each session. The Session Chairs will ensure that you do not over-run the time allocated.

Useful Telephone Numbers

Changzhou International Dialing Code: 86-519
Directory Enquiries: 114
Emergency Service (Police): 110
Emergency Service (Fire): 119
Emergency Service (Ambulance): 120
Consulting Telephone Number for Conference: 0086-18015279096

The IEEE DASC/PICom/EmbeddedCom/ScaCom 2012 Conference Venue

Address: No. 801 Middle Changwu Road， Changzhou, Jiangsu

Map

Travel Guide to the Conference Accommodation

Transportation Guide

Address: 2 Xihu Road, Wujin Hi-Tech Industrial Park, Changzhou

Located in Wujin District, Shangri-La Hotel, Changzhou is less than 30 minutes away from the Railway Station and Main Coach Station. You can find detailed information below.

Start location	Location	Distance	Time
High-speed Railway Station	Changzhou High-speed Railway Station	17.5km	33-min-drive
Railway Station	Changzhou Railway Station	15.9km	31-min-drive
Coach Station	Changzhou Coach Station	16.2km	30-min-drive
Airport	Changzhou Benniu Airport	45km	40-min-drive

常州香格里拉大酒店
Shangri-La hotel
CHANGZHOU

CHANGZHOU AIRPORT
常 州 机 场

Turn right along Xihu road out of hotel
离开酒店沿西湖路向右转
Turn right onto Changwu Road
右转进入常武路行驶
Turn right onto Yanjiang Expressway for 5.4km
右转上沿江高速行驶5.4公里
Turn onto Jiangyi Expressway (S39) for 26.5km
转入江宜高速（S39）行驶26.5公里
Turn onto Shanghai-Chengdu Expressway for 6.1km.
转入沪蓉高速行驶6.1公里
Eixt at Changzhou Airport(S239), then drive along Jichang Road to the destination.
从常州机场(S239)出口出,然后沿机场路行驶到达机场

Travelling time: 30 mins / 约30分钟车程
Taxi fare (05:00-23:00) : RMB 60 / 白天乘出租车约 (05:00-23:00) : 60元
Taxi fare (23:00-05:00) : RMB 65 / 夜间乘出租车约 (23:00-05:00) : 65元

2 Xihu Road, Wujin Hi-Tech Industrial Park, Changzhou 213164, China
中国常州市武进高新技术产业开发区西湖路2号 邮编:213164
Tel电话:（86 519）6889 8888 Fax传真:（86 519）6889 8899
Email电邮:slcz@shangri-la.com Website网址:www.shangri-la.com

Map


Xiyancun
Zhujiata
Shangdian
Mingbei
Community
鸣北社区
Mingxin Rd 鸣新路
Mingxin Middle Rd
Qianxinwu
凤栖路
232省道
S232
Donghua Rd
Nanhu
unan Rd
310县道
Yongning
Village
Houtianshe
310
武南路
Wunan Rd 310县道
Alley
Shangcun
常武南路
Nanzhoucun
Qiantianshe
S38
S38 Changhe Expy (Toll road)
Dongdafang
S38
沿江高速
S232
Houhuajia
Tang
S38