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Message from the Workshops Chair

Welcome to the ICDCS 2005 Workshops! In recent years the ICDCS workshops have become an integral part of the conference, providing an opportunity for researchers to present results and participate in focused discussion of timely topics related to distributed computing systems. This year, ICDCS will host nine workshops:

Fourth International Workshop on Assurance in Distributed Systems and Networks (ADSN 2005), chaired by Prof. Kinji Mori, Prof. Yoshiaki Kakuda and Prof. Sandeep Kulkarni.

Fourth International Workshop on Distributed Event-Based Systems (DEBS 2005), chaired by Prof. Juergen Dingel and Dr. Rob Strom.

Fifth International Workshop on Smart Appliances and Wearable Computing (IWSAWC 2005), chaired by Prof. Christian Decker and Prof. Tsutomu Terada.

Third International Workshop on Mobile Distributed Computing (MDC 2005), chaired by Prof. Sajal K. Das, Prof. Jiannong Cao and Prof. Cheng-Zhong Xu.

Seventh International Workshop on Multimedia Network Systems and Applications (MNSA 2005), chaired by Prof. Timothy K. Shih, Prof. Akio Koyama, Prof. Chih-Yung Chang and Prof. Leonard Barolli.

First International Workshop on Mobility in Peer-to-peer Systems (MPPS 2005), chaired by Prof. Lionel M. Ni, Prof. Chung-Ta King and Prof. Jie Wu.

Second International Workshop on Security in Distributed Computing Systems (SDCS 2005), chaired by Dr. Wei Zhao and Prof. Yong Guan.

First International Workshop on Services and Infrastructure for the Ubiquitous and Mobile Internet (SIUMI 2005), chaired by Prof. Antonio Corradi and Dr. Philip S. Yu.

Second International Workshop on Wireless Ad Hoc Networking (WWAN 2005), chaired by Prof. David Simplot-Ryl and Prof. Ivan Stojmenovic.

I would like to thank all the workshop chairs and other organizers for their dedication and hard work in putting together these excellent workshops. Organizing a workshop is no small feat and is a tremendous contribution to the research community. I would also like to thank the members of the individual workshop program committees and other reviewers for the many hours they dedicated to reviewing submitted papers and selecting those top papers for inclusion in the respective programs. Many thanks are due as well to the Conference General Chair, Prof. Ten H. (Steve) Lai and the Conference Program Chair, Prof. Anish Arora, for their extensive help on numerous aspects of this year's ICDCS workshops. Finally, and most importantly, I would like to thank the Steering Committee Chair, Prof. Ming T. (Mike) Liu, not only for his continued advice and guidance on the ICDCS workshops, but for his selfless dedication to maintaining ICDCS as a premiere IEEE conference for 25 years!

ICDCS 2005 Workshops Chair

Prof. Philip McKinley

Michigan State University

Message from the ADSN Chairs

It is my great pleasure to welcome you to the Fourth International Workshop on Assurance in Distributed Systems and Networks. The workshop was initiated in Vienna in 2002, and continued in Providence in 2003 and in Tokyo in 2004. After great success of three continent events, we have moved to Columbus in June, 2005.

Along with recent rapid growth of the Internet and ubiquitous networks, autonomous decentralized systems are connected with each other. In these distributed systems and networks, heterogeneous requirements are independently generated and the requirements themselves are frequently changing. Assurance in these distributed systems and networks is defined as capability of adaptability to heterogeneous and changing requirements. The workshop theme is important because requirements for assurance systems and networks are increasing in the future Internet and ubiquitous networks. Technologies supporting assurance including integration of various technologies such as real time, fault tolerance, autonomy, mobility and intelligence will have to be incorporated in complex distributed systems and networks.

In response to the Call for Papers, sixteen papers have been submitted to the workshop. As a result of comprehensive reviews by the Program Committee, we have selected twelve high quality technical papers.

It is our hope that the workshop will stimulate fruitful discussions and generate numerous ideas and that all participants will attain an aura of excitement and accomplishment from the process of paving the way for the foundations to the design of assurance systems and networks.

We would like to take this opportunity to express our deep thanks to the members of the Program Committee for their hard work, especially Program Chair Sandeep Kulkarni, Vice Program Chairs Yinong Chen, Miroslaw Malek, Hidenori Nakazato, who completed rigorous selection of the technical papers. We are also grateful to the ICDCS2005 organizers, especially Steering Committee Chair Ming T. (Mike) Liu and Workshops Chair Philip McKinley for their constant advice and support. We would also like to acknowledge the support of several organizations including the IEEE Computer Society Technical Committee on Distributed Processing, the IEICE Technical Committee on Information Networks and the IEICE Technical Committee on Dependable Computing.

General Chair

Kinji Mori, Tokyo Institute of Technology

Vice Chair

Yoshiaki Kakuda, Hiroshima City University

Message from the MDC Chairs

Welcome to MDC'05! Following the success of the first two workshops MDC'03, held in conjunction with ICDCS'03 in Providence, Rhode Island USA and MDC'04 with ICDCS'04 in Tokyo, Japan, MDC'05 provides a forum for scientists and engineers in academia and industry to exchange and discuss their experiences, new ideas, research results, and products about all aspects of mobile distributed computing. The mobility of users together with their personal/wearable computing devices and the special characteristics of mobile environments, such as highly variable connectivity, disconnection, location-dependency, and energy and resource sensitivity, and the diversity and flexibility introduced by mobile systems bring new challenges for research in distributed computing. Mobile distributed computing has emerged as a discipline of distributed systems research and practice toward support for mobility.

It is concerned with creating solutions using mobile communication networks and mobile computing devices to enable the sharing of distributed resources/services and to facilitate remote collaborations while people work away from the fixed, wired facilities. The principal theme of this workshop is the development of distributed algorithms, system level mechanisms, and applications for mobile computing environments. It also covers the underlying network environments and databases support.

This year, MDC'05 received 41 papers. Each paper was reviewed by two to three members of the Program Committee or external reviewers. The final program includes 11 regular papers and 8 short papers, which cover a range of different topics related to mobile distributed computing, including mobile data management, wireless and sensor networks, resource sharing and cooperation, mobile agents, mobile peer-to-peer computing, and security. In addition, one invited contribution in ad hoc wireless networks further enriches the content of this high quality program. We congratulate the authors of accepted papers, and regret many quality submissions could not be included, due to the space limit of this program.

The organizing committee wants to thank all the submission authors for their contributions to the program. We are grateful that Professor Jie Wu accepted our invitation for the keynote presentation. We would also like to thank the PC members and external reviewers for their in-depth and timely reviews of the papers. Without their help and advice this program would not be possible. Thanks to Mr. Hui Chen for his excellent job as a Web master and for coordinating the review process. We also want to thank Prof. Philip Mckinley, ICDCS'05 Workshop Chair, for his help and guidance in the organization of this workshop.

Hope you all enjoy the workshop.

Program Committee Chairs

Cheng-Zhong Xu, Guohong Cao, and Weijia Jia

General Chairs

Jiannong Cao and Sajal Das

Message from the IWSAWC Chairs

Through the latest technological developments, researchers have the possibility to deploy applications on a larger scale beyond scenarios within the lab environment. For the exploration of such scenarios, enabling hardware and software technologies are required, including new kinds of embedded and smart devices, personal and wearable computers, infrastructure components, software architectures and collaboration models. The International Workshop on Smart Appliances and Wearable Computing (IWSAWC) has now been held for the 5th time in conjunction with the ICDCS. It provides a forum for researchers from academia and industry to exchange new findings in collaborative technologies and smart appliances deployed in real world environments. This year, 12 high-quality peer-reviewed papers, out of 29 submissions, have been selected for presentation.

Wearable computing is one of the main topics in the selected papers, representing that it provides a base technology for research into real world smart appliances. In addition, wearable computing may be further enhanced by collecting inputs from sensors, enabling the retrieval and usage of contextual information. In this domain communication networks, software architectures and appliances incorporate this information to foster their functionality and broaden the appliance design option. Other focal points of this year's workshop are enabling technologies, such as location systems, visual identification technologies and self-organizing networks. These approaches present the closest interfaces to the real world and empower appliances to work collaboratively. In such environments full of computer functionality, appropriate abstractions for the user's interaction with the system are required. As a consequence, user interfaces for controlling complex home networks or other possibilities, utilizing handheld or mobile phone devices, take on an important role in the workshop.

The workshop provides a poster and demonstration session, as an occasion for researchers, both academic and industrial, to immediately coalesce and discuss their work with other workshop participants. This is an excellent opportunity to demonstrate latest results and get involved in highly active discussion in this rapidly evolving research field.

The quality of the workshop would not have been possible without the commitment, help and expertise of the members of the program committee. We would like to express our thanks to the members of the program and organizing committee for the time and effort spent in reviewing and discussing the papers, and in the overall organization of this workshop. We would also like to thank all authors for their submissions.

IWSAWC 2005 Program Chairs

Christian Decker, TecO, University of Karlsruhe

Tsutomu Terada, Cybermedia Center, Osaka University

Message from the MNSA Chairs

The 7th International Workshop on Multimedia Network Systems and Applications (MNSA 2005) will be held in conjunction with the 25-th International Conference on Distributed Computing Systems (ICDCS 2005) in Columbus, Ohio, USA on June 6-10, 2005. MNSA started in 1999 and the workshop has been held in USA, Germany, Austria and Japan.

This international workshop is a forum for sharing ideas and research work in the emerging areas of multimedia networking and their applications. Networks of today are going through a rapid evolution. With growing popularity of wired and wireless networks, multimedia network systems and applications are changing our daily life.

In the last few years, we have observed an explosive growth of multimedia computing, communication and applications. This revolution is transforming the way people live, work, and interact with each other, and is impacting the way businesses, education, entertainment, and health care are operating. Presently, a lot of research on high-speed networks and multimedia communication is going on. The papers included in this workshop cover aspects of multimedia systems and applications, distributed computing systems, P2P systems, Web applications, collaborative systems, network applications and protocols.

For the MNSA 2005, we received 46 submissions. Each of them was reviewed by three PC members. The PC selected 15 papers to be presented in this workshop. We have three sessions: Web and Network Applications, Multimedia Applications and Systems, and Network Protocols.

Many people contributed to the success of MNSA 2005. We would like to express our appreciation to Dr. Tomoya Enokido and Mr. Satoshi Itaya for their great efforts and efficient work to handle the CFP, online paper submission, and paper review process.

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Makoto Takizawa, Tokyo Denki University, Japan

Message from the MPPS Chairs

Welcome to MPPS 2005, the First International Workshop on Mobility in Peer-to-peer Systems, held in conjunction with the 25th International Conference on Distributed Computing Systems. Peer-to-peer (P2P) has emerged as a promising paradigm for developing large-scale distributed systems. P2P systems are characterized as being fully decentralized, self-organizing, and self-repairing. Early P2P systems were designed with an Internet-like network infrastructure in mind. As the emergence and prevalence of new wireless networking techniques, such as wireless mesh networks, wireless LANs, and 3G cellular networks, the need to move P2P paradigm into wireless networking and to support mobile computing is increasing. How does a P2P system exploit and aggregate the resources in such an environment? How should a P2P system manage node mobility? How should a mobile P2P system ensure security and privacy? These issues become very challenging. The goal of the workshop is to examine the mobility issues in P2P systems over heterogeneous wired/wireless networks.

Research on mobility in peer-to-peer systems is still in its infancy, but there is growing interest in the field. This year's workshop features one keynote speech and eleven papers, covering a broad range of interesting issues from architecture to applications. We hope that this workshop will foster increasing collaboration between researchers and stimulate further research.

We would like to thank the workshop chair, Philip McKinley of Michigan State University, for the opportunity to organize this workshop. Next, we wish to thank Prof. Xiaodong Zhang of College of William and Mary for delivering the keynote speech. We are especially indebt to the program committee members for refereeing the papers and helping us organize the program. Finally, we would like to express our gratitude to all the authors and contributors, who, through their contribution, demonstrated an interest in this burgeoning field.

MPPS 2005 General Chair

Lionel M. Ni, Hong Kong University of Science and Technology, Hong Kong

MPPS 2005 Program Co-Chairs

Chung-Ta King, National Tsing Hua University, Taiwan

Jie Wu, Florida Atlantic University, USA

Message from the DEBS Chairs

This volume contains research papers and position papers presented at the 4th International Workshop on Distributed Event-Based Systems, on June 10, 2005, in Columbus Ohio, as part of the 25th International Conference on Distributed Systems.

Event-based systems are receiving increased interest both in the academic and the commercial communities, as a paradigm for timely dissemination of information between loosely coupled producers and consumers.

The Workshop on Distributed Event-Based Systems began in 2002. Because of its inter-disciplinary nature, it has been hosted in diverse conferences, including ICDCS, SIGMOD/PODS, and ICSE.

The workshop encourages submissions covering a broad range of issues, ranging from service specifications, to algorithms for implementing these services efficiently, reliably, and scalably, to applications of event-based systems to real-world problems. There is overlap between research in distributed event-based systems and other disciplines, such as mobile computing, networking, autonomic computing, and continuous queries over data streams. It is our goal to bring people together from many of these disciplines and to combine the perspectives of theoreticians and practitioners, system developers and system users.

As a workshop, we welcome submissions of work in progress and position papers, as well as new research papers. This year, we received 26 submissions. Each paper was reviewed by at least three program committee members, and many by four. Despite the high quality of the submissions, for which we thank our authors, due to the constraints of a one-day workshop, we were only able to accept 9 full papers and 4 short papers. We wish to thank our program committee and outside reviewers for their thorough and insightful reviews and feedback, which contributed to a high quality workshop.

We further acknowledge the help of Philip McKinley, workshop coordinator for ICDCS, for making it possible for DEBS 2005 to be hosted in Columbus.

Sincerely,

Juergen Dingel, Queens University, Canada

Rob Strom, IBM TJ Watson Research, USA

Co-Chairs

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Message from the SIUMI Chairs

We would like to welcome you all to SIUMI 2005, the Workshop on Services and Infrastructure for the Ubiquitous and Mobile Internet, held in conjunction with the 25th International Conference on Distributed Computing Systems. Advances in mobile and wireless communication are enlarging and enhancing the services provided by the Internet infrastructure towards any time, any place and any device features. Ubiquitous services impose new requirements to the entire infrastructure, from the system to the middleware and the applications that should be able to adapt traditional services to different mobile user terminals and profiles, and embed new functions and tools to support the new services and new requirements of the future scenario. The main motivation behind the establishing of the workshop is the idea that the new Internet service infrastructure can only succeed on the basis of a strict synergism between the heterogeneous variety of mobile wireless devices and the fixed network organization that should suite and follow the requirements and constraints imposed by the wireless and mobile counterpart. The specific limitations of mobile wireless devices, such as connectivity discontinuity and energy/resource shortages, connected with the new location- and context-sensitivity properties, are challenging issues that call for a re-examination on the design of the middleware of both the fixed and the mobile counterpart.

In response to the Call for Papers, 30 papers from 11 different countries had been submitted. Based on three review reports per paper, they were classified as accepted, rejected, or discussed. For the last category papers, the final decision has been reached by considering additional reviews. As a result, a total of 18 papers were selected for presentation at SIUMI 2005. Accepted papers reflect the interest in the vision of a mobile and ubiquitous Internet and most of the different active directions of investigation in that area that is rapidly enhancing its focuses, growing with new solutions, and acquiring a significant maturity. The main interests emerged are currently directed to identification and location management, context awareness and content adaptation, middleware supports, and service composition.

The workshop could not be successful without the help of many organizations and individuals. First, we would like to thank the ICDCS Workshops Chair Philip McKinley, Michigan State University, for his support, advice, and organizational suggestions. Next, we wish to thank all the Program Committee members and the external reviewers for evaluating the submitted papers in a timely and professional manner. Last, but not least, we thank all the authors for their submissions. Finally, we would also like to thank the MIUR FIRB WEB-MINDS Project "Wide-scale Broad-band Middleware for Network Distributed Services" that supported the fruitful discussions and interactions that inspired the idea of organizing the SIUMI Workshop.

We are really convinced that you will enjoy and benefit from the presentations and discussions of SIUMI 2005!

SIUMI 2005 Program Co-Chairs

Antonio Corradi, University of Bologna, Italy

Philip S. Yu, IBM T.J. Watson Research Center, USA

Message from the WWAN Chairs

Welcome to WWAN 2005, the 2nd International Workshop on Wireless Ad hoc Networking to be held in conjunction with the 24th International Conference on Distributed Computing Systems. This year, in response to the Call for Papers, thirty papers from twelve different countries had been submitted. From this submitted papers, twelve papers has been selected for inclusion in the workshop. Although that the acceptance rate is lower than in 2004 (31% compared to 50%), we would like to notice that the quality and focus of submissions are both increasing. This fact proves the appropriateness of the workshop scope to the researcher preoccupations.

The workshop could not be successful without the help of many organizations and individuals. First, we would like to thank the workshop general chair, Philip K. McKinley of Michigan State University (USA) for his support and guidance. Next, we wish to thanks the program committee (PC) members, and the PC members and external reviewers for evaluating the assigned papers in a timely and professional manner. Last, but not the least, we thank all the authors for their submissions.

Papers that have been submitted and accepted to WWAN 2005 show the interest of the community for accurate and relevant problems like packet scheduling, advanced MAC layer protocols, positioning, self-organization and energy efficient protocols.

We hope you will enjoy and take benefits of presentations and discussions along WWAN 2005 in Columbus!

On behalf of program committee,

David SIMPLOT-RYL, Université de Lille, INRIA Futurs, France

Ivan STOJMENOVIC, University of Ottawa, Canada

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Jie Wu

Message from the SDCS Chairs

Welcome to SDCS 2005, the 2nd International Workshop on Security in Distributed Computing Systems. Cyber security is a research area of both theoretical and practical significance. In recent years, securing a large-scale networked system has become a great challenge. Interest has increased in the field of security of parallel and distributed systems, which include specification, analysis, and design of protocols, access control mechanisms, denial-of-service attacks, digital forensics, wireless and sensor network security, mobile code security, trust management, digital rights management, privacy and anonymity, modeling of information flow and its application to confidentiality policies, system composition, and covert channel analysis. The aim of this workshop is to provide a forum for continued activity in this area, to allow interaction of security researchers and developers with the Distribute Systems communities, and to give attendees of ICDCS 2005 an opportunity to network with experts in cyber security.

In response to the Call for papers of this workshop, 42 papers from 11 different countries were submitted. Each paper was reviewed by at least three reviewers including the Program Committee members and many external experts. The program committee made selection based on review reports and space and time limitation. As a result, 12 regular papers and 5 WIP papers will be presented at SDCS 2005.

The technical program for SDCS 2005 is the result of the hard work of many authors, reviewers, Program Committee members. We are grateful to them for their help and investing time and energy in the development of the very high quality technical program. We must acknowledge the ICDCS 2005 Workshops Chair, Professor Philip McKinley of the Michigan State University, ICDCS General and Program Chairs, Professors Ten H. Lai and Anish Arora of the Ohio State University, ICDCS Steering Committee Chair, Professor Ming T. (Mike) Liu of the Ohio State University, and IEEE TCDP Chair, Professor Chita Das of the Penn State University, for their guidance, advices, and supports to the SDCS 2005 Workshop. We would like to thank Professor Dong Xuan of the Ohio State University and Ms. Larisa Otto of Texas A&M University for their help. We also wish to acknowledge Danielle Martin, IEEE Computer Society Press, for her outstanding job in the management and production of the SDCS 2005 proceedings.

We hope you will enjoy and benefit from the presentations and discussions of SDCS 2005!

General Chair

Wei Zhao

Program Chair

Yong Guan

SDCS Organizing Committee

SDCS 2005 Paper Reviewer List

Thanks to the following reviewers for SDCS 2005 Security Workshop:

Jalal Almutadh, Kun Bai, Terry Benzel, Ji-Won Byun, Min Cai, Roy Campbell, Dan Cheng, Gyu Sang Choi, Chita Das, Jennifer Davidson, Xinwen Fu, Qijun Gu, Yong Guan, Kai Hwang, Douglas Jacobson, Jin-ha Kim, Jongman Kim, Carl Landwehr, Wenke Lee, Brian Levine, Lunquan Li, Ninghui Li, Sunho Lim, Peng Liu, Zhibin Mai, Daniel Massey, Clifford Neuman, Peng Ning, Michael Oehler, Daji Qiao, Cristina Nita-Rotaru, Chi-chun Pan, Dongkook Park, Daniel Ragsdale, Douglas Reeves, Pierangela Samarati, Geetanjali Sampemane, Shanshan Song, Jacques Thomas, Mahesh V. Tripunitara, Sabrina De Capitani di Vimercati, Hai Wang, Haining Wang, Qihua Wang, Yawen Wei, Johnny Wong, Bing Wu, Jianjia Wu, Jie Wu, Mengjun Xie, Dingbang Xu, Sungwon Yi, Heng Yin, Zhen Yu, Linfeng Zhang, Lixia Zhang, Xiaodong Zhang, Wei Zhao, and Runfang Zhou.

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