The 1st Annual Emerging Information Technology Conference (EITC)
Workshop on Content, Computer, Communications, Consumer electronics, and Integration (C4I)
(EITC-C4I 2008)

PROCEEDINGS

Friday, August 8, 2008
Taipei Economic and Cultural Office (TECO) in New York
1 East 42nd Street,
New York, NY 10017
U.S.A.

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Conference Theme

Business-Aligned Innovation of Information Technology

Businesses and organizations strive to maximize the strategic value and operational efficiency of their information technology (IT) infrastructure. Money invested in developing, deploying, managing. and/or transforming IT-based business processes needs to be clearly justified by the expected business advantage it will create. In a world of globally distributed and remotely managed IT systems, frequent mergers and acquisitions, and rapidly evolving business priorities, it is imperative for competitive businesses and organizations to deploy business-aligned innovative IT services in a timely manner. This Workshop will invite several academia and industry leaders across the Pacific Ocean to share with the attendees their insights on the evolution and impact of several key **Content, Computer, Communications, Consumer electronics, and Integration (C4I)** technologies. The Workshop will discuss:

- How "**Mobile Web**" technologies are revolutionizing how we live and work?
- How "**Cloud Computing & Internet-Scale Data Centers**" are being built as the engine for the 21st Century's industrial revolution?
- How "**Services Computing & Service Oriented Architecture (SOA)**" technologies are evolving to facilitate business and IT integration?

Planning Committee

Conference Organizing Associations

Chinese Institute of Engineers - U.S.A.
Monte Jade Science and Technology Association
Chinese American Academic and Professional Society
Chinese Association for Science and Technology, U.S.A.

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Conference Program

August 8, 2008 (Friday)	
08:00 AM -- 09:00 AM	**Registration**
09:00 AM -- 09:10 AM	**Welcome Remarks**
09:10 AM -- 09:30 AM	**Opening Speech**
09:30 AM -- 10:30 AM	**Keynote Speech**
10:30 AM -- 11:00 AM	**Break**
11:00 AM -- 12:30 PM	**Session I: Mobile Web**
12:30 PM -- 02:00 PM	**Lunch**
02:00 PM -- 03:30 PM	**Session II: Cloud Computing & Internet-Scale Data Centers**
03:30 PM -- 04:00 PM	**Break**
04:00 PM -- 05:30 PM	**Session III: Services Computing & Service Oriented Architecture**

Welcome Remarks (09:00am - 09:10am)

Amb. Kenneth Liao (廖大使港民)
Director General of Taipei Economic and Cultural Office in New York

Opening Speech (09:10am - 09:30am)

Dr. Rong N. Chang (Conference Chair) (張榮)
Manager of Service Management Environments and Chair of Services Computing PIC
IBM T.J. Watson Research Center

Keynote Speech (09:30am - 10:30am)

"Enterprise of the Future"
Dr. Grace Lin (林蔚君)
IBM Distinguished Engineer and Member of IBM Academy of Technology
CTO & Director, IBM Global Business Services

Session I: Mobile Web (11:00am - 12:30pm)

"Challenges in Future Processor Design"
Dr. Yarsun Hsu (許雅三)
Professor, National Tsing Hua University

"An Open and Extensible Platform and Solution for intelligent Surveillance - IBM Perspective"
Dr. Chiao-Fe Shu (徐秋風)
Chief Architect of IBM S3 (Smart Surveillance Solution), IBM Global Technology Services

"Embracing the Coming Enterprise Mobile Platform"
Dr. Yun-Wu Huang (黃允武)
Research Staff Member, IBM T.J. Watson Research Center

Session II: Cloud Computing & Internet-Scale Data Centers (02:00pm - 03:30pm)

"Cloud Computing: HPC in the Cloud, Cloud on a Chip"
Dr. Lurng-Kuo Liu (劉龍國)
Solution Architect & Research Staff Member, IBM T.J. Watson Research Center

"System Virtualization Technologies"
Dr. C. Eric Wu (吳振藩)
Research Staff Member, IBM T.J. Watson Research Center

"Cloud Computing Use Case on Contact Center"
Dr. Zon-Yin Shae (薛榮銀)
Research Staff Member, IBM T.J. Watson Research Center

Session III: Services Computing & Service Oriented Architecture (SOA)" (04:00pm - 05:30pm)

"Services Computing: New Thinking Style of Changing the Engineering and Education Agenda for the Modern Services Industry"
Dr. Liang-Jie Zhang (張良杰)
Research Staff Member, IBM T.J. Watson Research Center

"High-Performance Cryptographic Computing"
Dr. Chen-Mou Cheng (鄭振牟)
Assistant Professor, National Taiwan University

"Services Research at IBM"
Dr. Jih-Shyr Yih (易繼實)
Research Staff Member, IBM T.J. Watson Research Center

Abstracts and Biographies

Conference Chairs

Dr. Rong N. Chang (張榮)

Manager of Service Management Environments and Chair of Services Computing PIC
IBM T.J. Watson Research Center
19 Skyline Drive
Hawthorne, NY 10532
Phone: +1-914-784-7850
Email: rong@us.ibm.com

BIOGRAPHY

Dr. Rong Chang is Manager of Service Management Environments and Chair of Services Computing PIC (Professional Interest Community) at the IBM T.J. Watson Research Center. He received his Ph.D. degree in computer science and engineering from the University of Michigan at Ann Arbor in 1990 and his B.S. degree in computer engineering with honors from the National Chiao Tung University in Taiwan in 1982.

Before joining IBM in 1993, he was with Bell Communications Research (Bellcore) creating advanced personal ubiquitous application services for ATM (Asynchronous Transfer Mode) and Internet based broadband networks. He received his ITIL (IT Infrastructure Library) Foundation Certificate in IT Services Management (ITSM) in 2005. He completed a nomination-based Micro MBA Program in 2006. He has received one IEEE Best Paper Award and many IBM awards, including two corporate-level Outstanding Technical Achievement Awards. He is a leading contributor to IBM's (1) first "Infrastructure Healthcheck Workshop for SOA" service product offering. (2) first "event management and monitoring" service product offering, (3) first "business-of-IT dashboard" service product offering, (4) first globally deployed SLA management solution in IBM Global Service Delivery Centers, (5) first XSLT editor, (6) first real-time credit card processing and software download service at ibm.com, (7) first common registration infrastructure for IBM's Internet Web sites, (8) first hyperlink-aware Web indexing & search engine, and (9) first Internet-based broadband collaborative application services platform. He is a strong contributor to IBM's Digital Library Launch in China in 1996.

Dr. Chang is on the Managing Committee of Emerging Information and Technology Conference (EITC). He is a member of Chinese Institute of Engineers in USA (CIE-USA), ACM and IEEE. He is a member of Eta Kappa Nu and Tau Beta Pi honor societies.

Conference Chairs

Wanjiun Liao (廖婉君)

Professor
Department of Electrical Engineering
National Taiwan University
Phone: +886-2-33663548
Email: wjliao@cc.ee.ntu.edu.tw
Homepage: http://www.ee.ntu.edu.tw/~wjliao

BIOGRAPHY

Wanjiun Liao received her Ph.D. degree in Electrical Engineering from the University of Southern California, Los Angeles, California, USA, in 1997. She joined the Department of Electrical Engineering, National Taiwan University (NTU), Taipei, Taiwan, as an Assistant Professor in 1997. Since August 2005, she has been a full professor. Her research interests include wireless networks, multimedia networks, and broadband access networks.

Dr. Liao is currently an Associate Editor of IEEE Transactions on Wireless Communications, and was on the editorial board of IEEE Transactions on Multimedia (2004-2007). She served as the Technical Program Committee (TPC) chairs/co-chairs of many international conferences, including the Tutorial Co-Chair of IEEE INFOCOM 2004, the Technical Program Vice Chair of IEEE Globecom 2005 Symposium on Autonomous Networks, and the Technical Program Co-Chair of IEEE Globecom 2007 General Symposium. Dr. Liao has received many research awards. Papers she co-authored with her students received the Best Student Paper Award at the First IEEE International Conferences on Multimedia and Expo (ICME) in 2000, and the Best Paper Award at the First IEEE International Conferences on Communications, Circuits and Systems (ICCCAS) in 2002. Dr. Liao was the recipient of K. T. Li Young Researcher Award honored by ACM in 2003, and the recipient of Distinguished Research Award from National Science Council in Taiwan in 2006. She is a Senior Member of IEEE.

Keynote Speech

Enterprise of the Future

Dr. Grace Y Lin (林蔚君)
IBM Distinguished Engineer and Member of IBM Academy of Technology
CTO & Director, Innovation and Emerging Solutions, PS SCM, IBM Global Business Services
Phone: +1-914-648-8899, Email: gracelin@us.ibm.com

ABSTRACT

What does the Enterprise of the Future look like? How will new business models and new technology impact the Enterprise of the Future? Based on a recent study and more than 1000 interviews of CEOs and Public Sector leaders that IBM conducted, the Enterprise of the Future is:

- hungry for change, optimistic and prepared for bold action,
- successful in collaborating with customers and partners to innovate – for business and for society,
- choosing global business designs to re-mix capabilities and disrupt entire industries.

In this talk, Dr. Grace Lin will share the insights IBM gained from the above-mentioned CEO study. She will discuss emerging trends and advances in business models and technologies and how they can be leveraged to accelerate the transformation of the enterprise of the future to gain competitive advantages and to address growing corporate social responsibility expectations. She will also discuss some advances in value-net optimization and real-time business performance management and their impact on the enterprises of today and future.

BIOGRAPHY

Dr. Grace Lin is the Chief Technology Officer and the Director of Innovation and Emerging Solutions for Public Sector Supply Chain Management, IBM Global Business Services (GBS), an IBM Distinguished Engineer, a member of the IBM Academy of Technology, and an INFORMS Fellow. Prior to her work with IBM GBS, she served as a Senior Manager and led the Supply Chain Management and e-Business Optimization research at the IBM T. J. Watson Research Center.

Dr. Lin initiated IBM's Sense-and-Respond Value Net efforts and founded the IBM Value Chain Innovation Center. She led her team to win the 1999 INFORMS Franz Edelman Award – the top honor in OR/MS in Practice—for saving IBM $750M with their Extended Enterprise Management transformation. She was listed as one of the six "Supply Chain Gurus" in Forrester's 2002 SCM Report and served on the "Thinking with the Gurus" Panel in the 2004 eAsia Forum.

Dr. Lin has co-authored more than 50 technical articles and six patents, with another five pending. She is a frequent speaker at various international conferences, universities and company sessions. She has twice been elected VP Practice, INFORMS. She served as Conference Chair for both INFORMS' 2003 and 2004 ORMS in Practice, and IEEE's 2006 SOLI Conference. Dr. Lin has served on the editorial boards of Operations Research, M&SOM, IJBPIM, and IJSOI, on National Science Foundation panels in the U.S., Canada, and Ireland, as well as on a number of university boards/panels. Dr. Lin and her team's advanced work have been recognized in such publications as Forbes Magazine, China News, Information Week, INFORMS News, ComputerGram, Electronic Buyer, Computer Reseller, Stanford Supply Chain Forum Newsletter, Forrester, and CNET.

Dr. Lin received a M.S. in Applied Math and a Ph.D. in Industrial Engineering from Purdue University. She also received an M.S. and a B.S. in Mathematics from Tsing-Hua University, Taiwan.

Session I: Mobile Web

Challenges in Future Processor Design

Yarsun Hsu (許雅三)

Professor
Department of Electrical Engineering
National Tsing Hua University
Phone: +886-3-5162202
Email: yshsu@ee.nthu.edu.tw

ABSTRACT

As silicon technology continues to scale down, it becomes feasible to put billions of transistors onto one chip. As a result, designers are able to place multiple functional components on a single silicon chip. If a system can be successfully designed on a chip, it is expected to increase product functionality, performance, and quality. While the potential return is huge, the complexities are also significant. Certainly the task is not easy and many issues need to be solved. This talk will touch upon several challenges we face in today's SoC era.

BIOGRAPHY

Yarsun Hsu received his B.S. and M.S. degrees in electronics engineering from National Chiao Tung University, Taiwan, and Ph.D. degree from Rensselaer Polytechnic Institute, Troy, New York. He worked in General Electric Company for 3 years before joining IBM T.J. Watson Research Center at Yorktown Heights as a research staff member. Since then, he has been involved in the research of parallel system, shared memory multi-processor, parallel file system, interconnection network, computer architecture, and VLSI design. In 1988 he became the manager of a group working on the research and design of IBM SP2, parallel I/O technology, workload characterization, and performance evaluation. In 2002, he joined Department of Electrical Engineering, National Tsing Hua University, Taiwan as a professor. Prof. Hsu received one IBM Outstanding Technical Achievement Award, three IBM invention plateau awards, two IBM supplemental invention awards, and three IBM Research Division technical achievement awards. He is also the recipient of several awards including the best system paper award from ACM SIGMETRICS Conference in 2000, the best paper award from International Computer Symposium in 2004, and the outstanding teaching award from National Tsing Hua University in 2006.

Session I: Mobile Web

An Open and Extensible Platform and Solution for Intelligent Surveillance - IBM Perspective

Dr. Chiao-Fe Shu (徐秋風)

Chief Architect of IBM Smart Surveillance Solution
IBM Global Technology Services (GTS)
19 Skyline Drive, Hawthorne, NY 10532
Phone: +1-914-784-7163
Email: cfshu@us.ibm.com

ABSTRACT

This presentation gives an introduction of what video surveillance is today and then explains the need to convert such a system to support the capability of comprehensive Situation Awareness for security professionals. It will then describe how to make a traditional video surveillance into an intelligent system and describe its main characteristic for applications for City surveillance, Homeland Security, and Retail Asset Protection and Business Intelligence. An IBM Smart Surveillance Platform and its Open and Extensible Architecture for the intelligent surveillance will be discussed. At the end, it will present sample solutions built upon the platforms.

BIOGRAPHY

Dr. Shu has received his Ph.D. from Computer Science and Engineering Department of University of Michigan in 1993. He is an expert programmer and researcher with over 10 years of industrial experience. He has co-founded Virage Inc. in 1994. His research covers the areas of oriented texture pattern analysis, classification, and segmentation, in-situ wafer inspection system based on Fourier Imaging, and Multimedia Indexing and Retrieval. Since joined Virage, he focused on developing viable commercial applications based on Content-Based Retrieval technology. They include Stock Photo Image System, Trademark Search System, Image Informatics System, Audio/Video Indexing/Retrieval System. The image informatics application developed by him has led to another well-funded private company called Scimagix. Dr. Shu has published extensively in his research areas and owns 9 US patents. Dr. Shu also has solid software product development and management experience through all phases of development cycle. He joined IBM Research in 2004 and has been working on key technology for Smart Surveillance and has been leading the commercialization effort of these technologies. He is currently Senior Technical Staff Member and is the Chief Architect for IBM Smart Surveillance System for IBM GTS.

Session I: Mobile Web

Embracing the Coming Enterprise Mobile Platform

Yun-Wu Huang (黃允武)

Research Staff Member
IBM T.J. Watson Research Center
19 Skyline Drive
Hawthorne, NY 10532
Phone: +1-914-784-7523
Email: ywh@us.ibm.com

ABSTRACT

Enterprise mobile platform is traditionally viewed as a highly fragmented space with different platform technologies each focusing custom enterprise solutions. With the advent of high-speed connection (e.g., 3G/4G, WiMax, Wi-Fi), rich UI (e.g., iPhone), and Web-enabled mobile services (e.g., map, search), mobile technologies are converging to providing a compelling mobile platform in the enterprise space. Smartphones are increasingly becoming the personal computing device of choice. Furthermore, recent development in the adoption of open source mobile technologies by the device manufacturers and the entrance of Google into the mobile space has profoundly changed the dynamics of the mobile ecosystem. These recent developments present an open opportunity for innovative services, applications, middleware and solutions in the mobile space. In this report, we present our findings in the latest trends in mobile computing and identify key areas of innovation we believe will bring values and opportunities based on the coming enterprise mobile platform.

BIOGRAPHY

Yun-Wu Huang received his B.S. in Management Science from National Chiao-Tung University, Hsin-Chu, Taiwan in 1982. He received his M.S. in Computer Science from Indiana University, Bloomington, Indiana in 1989, and his Ph.D. in Computer Science from University of Michigan, Ann Arbor in 1997. He is currently a research scientist at the T. J. Watson Research Center in IBM.

Yun-Wu Huang's research interests at IBM include Java component framework for complex servers and mobile computing in the enterprise space. Recently he has involved in conducting research and studies in designing technical strategies for IBM in the area of server-side application component model and enterprise mobile service and platform.

Session II: Cloud Computing & Internet-Scale Data Centers

Cloud Computing: HPC in the Cloud, Cloud on a Chip

Lurng-Kuo Liu (劉龍國)

Solutions Architect, Research Staff Member
IBM T.J. Watson Research Center
1101 Kitchawan Road, Route 134
Yorktown Heights, NY 10549
Phone: +1-914-945-3899
Email: lkliu@us.ibm.com

ABSTRACT

Fueled by the dramatic growth in Web 2.0 applications (for example, social networking) and business collaboration, cloud computing is emerging as a new computing paradigm where data and services reside in massively scalable data centers and can be accessed from any connected devices over the Internet. It promises to provide virtual, scalable, efficient, and yet flexible solutions to both businesses and consumers in the areas of applications, platforms, and infrastructure. For example, without having to investment in the hardware upfront, an investment bank could access the computational power of a supercomputer to analyze data along with their financial models.

With the potential super-computing power from the cloud, what will be the implications of this computing paradigm shift to the High Performance Computing (HPC) community? Especially, with the trend of microprocessor development moving toward multi-core, substantial parallel computing power will become available from a single machine. As the weighting between FLOPS cost and the deployment cost is changing, HPC in the cloud and cloud on a chip may become a new wave of restructuring in today's HPC infrastructure. How fast we are moving on this track will depend on how successful we are in delivering the performance improvement (cost and processing) in the user experience. In this talk, we will discuss the issues and challenges faced in this computing paradigm shift.

BIOGRAPHY

Lurng-Kuo Liu is a Solutions Architect and RSM at IBM T.J. Watson Research Center. He is also an Adjunct Professor at Columbia University. He is currently leading several emerging solutions development projects as part of IBM's strategy directions for Cell Broadband Engine (Cell/B.E.) processor. Prior to his current position, he was a Program Manager for the Blue Gene (BG/L) System at IBM's Explorer Server Systems department, where he has lead to the success of BG/L and ranked as No. 1 in the top 500 supercomputer list. He has worked on a broad range of projects such as video codec processors, media signal processor, broadband e-commerce, interactive TV, Set-Top Box, MP3 audio, video compression (MPEG-2, MPEG-4, H.263, etc.), immersion computer game systems, vision-enhanced human computer user interface (HCI) system, bioinformatics, and high performance computing (HPC) system. His research interests include digital signal processing, multimedia, computer vision, interactive games, broadband e-business, mobile computing, bioinformatics, financial modeling, and HPC. Dr. Liu received his Ph.D. in Electrical Engineering at University of Maryland at College Park in 1993.

Session II: Cloud Computing & Internet-Scale Data Centers

System Virtualization Technologies

C. Eric Wu (吳振藩)

Research Staff Member
IBM Watson Research Center
PO Box 218
Yorktown Heights, NY 10598
Phone: +1-914-945-2629
Email: cwu@us.ibm.com

ABSTRACT

System virtualization is a key technology for server consolidation in data centers. It improves manageability, data security, and reliability. While its roots trace back decades, system virtualization has drawn renewed attention in recent years. Successful commercial products have extended the reach of virtual machines (VMs) to commodity platforms. The needs for virtualization have prompted extensions to the IA-32 instruction set (Intel's VT/Vanderpool and AMD's Pacifica) and IBM's POWER architecture. As the key driver for virtualization, server consolidation simplifies system management and lowers the total cost of ownership. With dynamic logical partition technologies (DLPAR) a system can grow or shrink based on its workload or to optimize service level achievement, thus providing on-demand services and improving responsiveness. Since a hypervisor provides services to guest operating systems, it is possible to improve availability and reliability through additional hypervisor functions. In this presentation we will discuss various virtualization technologies, the advantages of server virtualization, and emerging opportunities.

BIOGRAPHY

C. Eric Wu received his B.S. from the Department of Electrical Engineering, National Taiwan University in 1981. He received his M.S. and Ph.D. from the Department of Computer Science, Michigan State University in 1985 and 1987, respectively. He has been working with IBM since 1987, in various areas including VLSI design, computer architecture, system management, and system software development. He developed stack simulation algorithms for virtual and real, uni-processor and multiprocessor caches, and has published more than 50 technical papers in conferences and journals. He is currently working in virtual memory management for system virtualization.

Session II: Cloud Computing & Internet-Scale Data Centers

Cloud Computing Use Case on Contact Center

Dr. Zon-Yin Shae (薛榮銀)

Research Staff Member
IBM T.J. Watson Research Center
19 Skyline Drive
Hawthorne, NY 10532
Phone: +1-914-784-7666
Email: zshae@us.ibm.com

ABSTRACT

Cloud computing is viewed as a game-changing paradigm for Enterprise and Internet environments. Traditionally contact center and help desk services is critical to Enterprise operations and has been massively deployed within Enterprises. Today's Enterprise operates collectively on partnership, for examples, outsourcing, contractors, cooperative agreements, etc. This will require the ability for users in one organization to easily work, collaborative, and get help with each other from other organizations. This talk will examine the Enterprise contact center and discuss possible approach to transform the traditional help desk help desk infrastructure into cloud computing scale services.

BIOGRAPHY

Zon-Yin Shae is a Research Staff Member with the IBM T. J. Watson Research Center, Yorktown Heights, New York. He was a pioneer in compress domain multimedia data processing and streaming. Zon-Yin's recent patents and publications deal with SIP/VoIP converged networks and applications, multimedia data analysis, collaborative applications, and services computing especially in extending the contact center services by social and collaborating networking. He has held numerous patents and was an active member and IBM representative of H323 and MPEG international standard group. He received his B.A and M.S in electronic engineering from National Chiao-Tung University, Taiwan, and his PhD in electrical engineering from the University of Pennsylvania at Philadelphia in 1989 and joined IBM Watson Research since then. He also took one year sabbatical leave from IBM to National Chiao-Tung University Taiwan at 1996.

Session III: Services Computing & Service Oriented Architecture (SOA)

Services Computing: New Thinking Style of Changing the Engineering and Education Agenda for the Modern Services Industry

Dr. Liang-Jie Zhang (張良杰)

Research Staff Member
IBM T.J. Watson Research Center
19 Skyline Drive
Hawthorne, NY 10532
Phone: +1-914-784-6132
Email: zhanglj@us.ibm.com

ABSTRACT

As a foundational discipline of the modern services industry, Services Computing covers the science and technology of services innovation research that leverages IT and computing technology to model, create, and manage business solutions, scientific applications, as well as modernized services.

This talk will introduce the fundamentals and landscape of this new discipline based on the definitions of services and services systems. The following engineering aspects of Services Computing will be briefly introduced: Web services and Service-Oriented Architecture (SOA); business consulting methodology and utilities; business process modeling, transformation, integration, and management; security and privacy; and services as software, software as service, and Web 2.0 for effective services delivery.

This talk will also introduce the education agenda by creating Services Computing Curricula for degree programs to cover services innovation research and development. The Services Computing Curriculum Initiative is sponsored by IEEE Computer Society. An Web 2.0 platform based IEEE Body of Knowledge (BoK) on Services Computing will be used to illustrate a set of professional activities in the fast growing Services Computing community and connections with IBM's Services Science, Management, Engineering, and Design (SSMED) Initiative.

BIOGRAPHY

As a Research Staff Member and Program Manager of Application Architectures and Realization at IBM T.J. Watson Research Center, Dr. Zhang has made significant original contributions to Services Computing innovations and interactive media systems. He is the founding chair of IBM Research's Services Computing Professional Interest Community and has been leading an IBM Service-Oriented Architecture (SOA) tooling and architecture research project for years. He has been co-leading IBM's SOA Solution Stack (aka SOA Reference Architecture: Solution View) project since 2004. His new book Services Computing has been published by Springer. He has received 2 IBM Outstanding Technical Achievement Awards, 10 IBM Plateau Invention Achievement Awards, an Outstanding Achievement Award by the World Academy of Sciences, and an Innovation Leadership Award from Chinese Institute of Electronics. Dr. Zhang has 36 granted patents and 20 pending patent applications. As the lead inventor, he holds federated Web services discovery and dynamic services composition patents. He is the chair of IEEE Computer Society Technical Committee on Services Computing. He is the Editor-in-Chief of IEEE Transactions on Services Computing.

Session III: Services Computing & Service Oriented Architecture (SOA)

High-performance Cryptographic Computing

Chen-Mou Cheng (鄭振牟)

Assistant Professor, Dept. Electrical Engineering
National Taiwan University
1 Sec. 4 Roosevelt Rd, Taipei, Taiwan
Phone: +886-233669645
Email: ccheng@cc.ee.ntu.edu.tw

ABSTRACT

In a networked world of ever-increasing wire speeds, fast cryptography is vital to providing security and protecting privacy for the innumerable transactions on today's Internet. On the flip side of the coin, it is also a must for cryptanalysis, which helps us scrutinize new cryptographic algorithms and gain insights into designing new cryptographic systems. Lessons learned over the past few decades show that parallelism at all levels has proven to be one of the most effective weapons for achieving high performance in computing, and as a result, high-performance computing has almost become a synonym of parallel computing. In this talk, we will share our experience of taming the beast of parallelizing big-integer arithmetics, which lies at the very core of a wide collection of cryptographic algorithms and cryptanalysis techniques, on state-of-the-art parallel computers.

BIOGRAPHY

Chen-Mou Cheng received his BS and MS in Electrical Engineering from National Taiwan University in 1996 and 1998, respectively, and PhD in Computer Science from Harvard University in 2007. He joined the Department of Electrical Engineering at National Taiwan University in 2007, where he is currently an Assistant Professor.

His research interest spans cryptology and cryptanalysis, information security and privacy enhancement technologies, computer and wireless communication networks, and high-performance embedded computing. He currently works in the area of high-performance cryptographic computing.

Session III: Services Computing & Service Oriented Architecture (SOA)

Services Research at IBM

Dr. Jih-Shyr Yih (易繼實)
Research Staff Member
IBM T.J. Watson Research Center
19 Skyline Drive
Hawthorne, NY 10532
Phone: +1-914-784-7866
Email: jyih@us.ibm.com

ABSTRACT

This talk will give an overview of the services business at IBM, and explain the role of services for the IT industry. We will go over the approaches to modeling services, and give a tour of services research problems. Finally, we offer a view on how must our disciplines evolve with respect to services.

BIOGRAPHY

Jih-Shyr Yih received degrees from National Taiwan University, Michigan State University, and The University of Michigan, Ann Arbor, all in Computer Science. He has seventeen years of research and over ten years of management experiences at IBM Watson Research Center. From October 2005 to March 2008, Dr. Yih was on technical staff to VP Services Research, in charge of hiring, technical planning, and strategy execution assessment of eight global labs with 550 researchers and budget over $100M. Before the staff role, Dr. Yih was manager of Commerce Architecture department from year 2000. During that time, he was on the architecture board of IBM Value Chain Transformation. Presently, Dr. Yih leads the services transformation initiatives for the Services Research organization. His current interests are in the services software engineering and services delivery research. He has published over 40 technical papers in various premium journals and conferences.