

2011 International Conference on Cloud and Green Computing (CGC2011)
2011 International Conference on Social Computing and its Applications
(SCA2011)
The 9th IEEE International Conference on Dependable, Autonomic and
Secure Computing (DASC2011)
The 9th International Conference on Pervasive Intelligence and Computing
(PICom2011)
The 9th International Symposium on Embedded Computing
(EmbeddedCom2011)

12-14 December 2011
Sydney Australia



Organised by

Lab of Cloud Computing and Distributed Systems
University of Technology Sydney, Australia

Sponsored by

IEEE and IEEE Computer Society
IEEE CS Technical Committee on Scalable Computing (TCSC)

Supported by

School of Systems, Management and Leadership
iNEXT: UTS Research Centre for Innovation in IT Services and Applications

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Notes:

Paper presentation time slot: 20 minutes

Keynote time slot: 1 hour

Panel time slot: 1.5 hours

Industry time slot: 2.5 hours

Poster: through the whole conference period

Presentation facilities: provided by the conference venue

Wireless Internet: provided by the conference venue

UTS Security: dial 6 from any internal phones, or 1800 249 559 from your mobile

Program at a Glance

Sunday 11 December 2011	
16:00-18:00	Pre-Registration (UTS Aerial Function Centre)
18:00-20:00	Welcome Reception (UTS Aerial Function Centre)

Monday 12 December 2011					
08:00-18:00	Registration (Foyer)				
08:30-09:00	Opening and Welcome (Aerial Function Centre) Prof Attila Brungs (Deputy Vice Chancellor, UTS: University of Technology Sydney Australia) Prof Hung Nguyen (Dean, Faculty of Engineering and IT, UTS Australia) A/Prof Jinjun Chen (CGC2011 Program Chair, UTS, Australia)				
09:00-10:00	Keynote Address: Green Computing in Mobile Cloud (Aerial Function Centre) Speaker: Prof. Ivan Stojmenovic (University of Ottawa, Canada) Chair: A/Prof. Jinjun Chen (University of Technology Sydney, Australia)				
10:00-11:00	Keynote Address: Environmentally Sustainable Large Scale Distributed Systems (Aerial Function Centre) Speaker: Prof. Albert Zomaya (University of Sydney, Australia) Chair: Dr. Suraj Pandey (CSIRO Sydney, Australia)				
11:00-11:30	Morning Tea (Aerial Function Centre)				
11:30-12:30	Session 1A: CGC2011 (Harris Room)	Session 1B: SCA2011 (Jones Room)	Session 1C: DASC2011 (Broadway Room)	Session 1D: PICom2011 (Thomas Room)	Session 1E: EmbeddedCom2011 (Wattle Room)
12:30-13:30	Lunch (Aerial Function Centre)				
13:30-14:30	Keynote Address: Mixing Cloud and Grid Resources for High Throughput Science (Aerial Function Centre) Speaker: Prof. David Abramson (Monash University, Australia) Chair: Dr. Young Choon Lee (University of Sydney, Australia)				
14:30-15:00	Afternoon Tea (Aerial Function Centre)				
15:00-18:00	Session 2A: CGC2011 (Harris Room)	Session 2B: SCA2011 (Jones Room)	Session 2C: WMSC2011 (Broadway Room)	Session 2D: CGC2011 (Thomas Room)	Session 2E: CMS2011 and CTUW2011 (Wattle Room)

Tuesday 13 December 2011

08:00-18:00	Registration (Foyer)				
09:00-10:00	Keynote Address: Sensors Nets and their Analysis in the Cloud (Aerial Function Centre) Speaker: Prof. Geoffrey Charles Fox (Indiana University Bloomington, USA) Chair: Prof. Ivan Stojmenovic (University of Ottawa, Canada)				
10:00-11:00	Keynote Address: Secure and Trustworthy Computing (Aerial Function Centre) Speaker: Prof. Vijay Varadharajan, Macquarie University, Australia Chair: A/Prof. Jinjun Chen (University of Technology Sydney, Australia)				
11:00-11:30	Morning Tea (Aerial Function Centre)				
11:30-12:30	Session 3A: CGC2011 (Harris Room)	Session 3B: SCA2011 (Jones Room)	Session 3C: DASC2011 (Broadway Room)	Session 3D: PICom2011 (Thomas Room)	Session 3E: EmbeddedCom2011 (Wattle Room)
12:30-13:30	Lunch (Aerial Function Centre)				
13:30-14:30	Keynote Address: Social Computing, ICT developments and Innovation (Aerial Function Centre) Speaker: Prof. Craig Standing (Edith Cowan University, Australia) Chair: Prof. Igor Hawryszkiewicz (University of Technology Sydney, Australia)				
14:30-15:00	Afternoon Tea (Aerial Function Centre)				
15:00-18:00	Session 4A: CGC2011 (Harris Room)	Session 4B: SCA2011 (Jones Room)	Session 4C: DASC2011 (Broadway Room)	Session 4D: CGC2011 (Thomas Room)	Session 4E: EmbeddedCom2011 (Wattle Room)
19:00-23:30	Banquet (Aerial Function Centre)				

Wednesday 14 December 2011					
08:00-18:00	Registration (Foyer)				
09:00-10:00	Keynote Address: Cloud-Centric Assured Information Sharing (Aerial Function Centre) Speaker: Prof. Bhavani Thuraisingham, The University of Texas at Dallas, USA Chair: Prof. Vijay Varadharajan, Macquarie University, Australia				
10:00-10:30	Morning Tea (Aerial Function Centre)				
10:30-12:30	Session 5A: CGC2011 (Harris Room)	Session 5B: SCA2011 (Jones Room)	Session 5C: CGC2011 (Broadway Room)	Session 5D: ACGS2011 (Thomas Room)	Session 5E: ASS2011 (Wattle Room)
12:30-13:30	Lunch (Aerial Function Centre)				
13:30-15:00	Panel Discussion: Cloud Computing vs Social Media (Aerial Function Centre) Chair: Dr. Steve Versteeg, CA Technologies, Australia Panellists: Prof. Geoffrey Charles Fox, Indiana University Bloomington, USA Prof. Ivan Stojmenovic, University of Ottawa, Canada Prof. Craig Standing, Edith Cowan University, Australia Prof. Vijay Varadharajan, Macquarie University, Australia Prof. Igor Hawryszkiewicz, University of Technology Sydney, Australia Prof. Bhavani Thuraisingham, The University of Texas at Dallas, USA				
15:00-15:30	Afternoon Tea (Aerial Function Centre)				
15:30-18:00	Session 6A: CGC2011 (Harris Room)	Session 6B: SCA2011 and CSN2011 (Jones Room)	Session 6C: DASC2011 (Broadway Room)	Session 6D: PCom2011 (Thomas Room)	Session 6E: Industry Track (Wattle Room)

Keynote Speech

Professor Ivan Stojmenovic

University of Ottawa, Canada

Green Computing in Mobile Cloud

Cloud computing and green computing came to be hot topics in recent years, especially in data center networks. As the development of smart phones and tablets, the combination between mobile devices and cloud computing, named by mobile cloud, has emerged as a new cloud computing platform, bringing new challenges to cloud and green computing. One of the most important issues is how to optimize the scheduling and transport schemes for mobile devices to achieve energy saving.

In this talk, I will first introduce the development of mobile cloud computing. Next, I will present the new challenges of green computing in mobile cloud; especially highlight the uniqueness, compared with the study on the energy saving problem in wireless networking. I will also discuss the possible solutions from various perspectives, including task scheduling, access management, transport mechanisms and application optimization.

Short Bio: Prof. Ivan Stojmenovic received his Ph.D. degree in mathematics in 1985. He held regular or visiting positions in Serbia (Institute of Mathematics, University of Novi Sad, 1980-1987), Japan (Electrotechnical Laboratory, Tsukuba, 1985/6), USA (Washington State University, Pullman, WA, and University of Miami, FL, 1987/88), France (Amiens 1998, Lille 2002-2007, Paris 2008), Mexico (DISCA, IIMAS, Universidad Nacional Autonoma de Mexico, 2000/02), Spain (Murcia, 2005), UK (University of Birmingham, 2007/08), Hong Kong (May 2009), Brazil (Sao Carlos, August 2009), Canada (SITE, University of Ottawa, since 1988). Stojmenovic published >250 different papers in referred journals and conferences; >90 of them are in journals with an ISI impact factor, >20 are in IEEE or ACM journals. His most significant publications can be seen at www.site.uottawa.ca/~ivan. He co-authored over 30 book chapters, mostly very recent. He collaborated with about 100 co-authors with Ph.D. and a number of their graduate students from 24 different countries. He (co)supervised >50 completed Ph.D. and master theses, and published over 120 joint articles with supervised students. He also published articles with 27 graduate students outside of their theses, and 4 undergraduate students. His current research interests are mainly in wireless ad hoc, sensor and cellular networks. His research interests also include parallel computing, multiple-valued logic, evolutionary computing, neural networks, combinatorial algorithms, computational geometry, graph theory, computational chemistry, image processing, programming languages, and computer science education. He is current editor-in-chief of IEEE Transactions on Parallel and Distributed Systems.

Keynote Speech

Professor Albert Zomaya

Director, Centre for Distributed and High Performance Computing
University of Sydney, Australia

Environmentally Sustainable Large Scale Distributed Systems

Global warming and climate change trends call for urgent action to manage information and communication technologies in a sustainable manner by minimizing energy consumption and utilizing resources more efficiently. Distributed computing environments have become the de facto platforms for many applications. These systems bring a range of heterogeneous resources that should be able to function continuously and autonomously. However, distributed systems expend a lot of energy which raises a range of important research issues related to the use and virtualisation of ICT resources in a way offers significant potential to contribute to the goal of what has been described as ‘green computing’. This talk will review some of the important questions related to the development of new algorithms and tools for energy-aware resource management allocation for large-scale distributed systems enabling these systems to become environmentally friendly.

Short Bio: Albert Y. ZOMAYA is currently the *Chair Professor of High Performance Computing & Networking* and *Australian Research Council Professorial Fellow* in the School of Information Technologies, The University of Sydney. He is also the *Director of the Centre for Distributed and High Performance Computing* which was established in late 2009. Professor Zomaya is the author/co-author of seven books, more than 400 papers, and the editor of nine books and 11 conference proceedings. He is the Editor in Chief of the *IEEE Transactions on Computers* and serves as an associate editor for 19 leading journals. Professor Zomaya is the recipient of the *Meritorious Service Award* (in 2000) and the *Golden Core Recognition* (in 2006), both from the *IEEE Computer Society*. Also, he received the *IEEE TCPP Outstanding Service Award* and the *IEEE TCSC Medal for Excellence in Scalable Computing*, both in 2011. Professor Zomaya is an ACM Distinguished Speaker, a Chartered Engineer, a Fellow of AAAS, IEEE, IET (U.K.), and a Distinguished Engineer of the ACM.

Keynote Speech

Professor David Abramson
Monash University, Australia

Mixing Cloud and Grid Resources for High Throughput Science

Over the past 15 years we have developed a sophisticated tool set for solving large parameter sweep and search applications. This tool family, called Nimrod, makes it easy to create computational experiments in which multiple independent scenarios are explored. Nimrod supports complete state-space exploration (so called full parameter sweeps), guided search (using non-linear optimisation techniques) and design-of-experiment schemes (for reducing the search space). All of these work by creating many tasks, and farming them out to computational units distributed (potentially) over a Grid. We have run many real world case studies over local clusters and the Grid.

In the Grid we have consistently experienced two obstacles that complicated experiments. First, the heterogeneity that defines the Grid makes application deployment difficult and error prone. The vast variety of operating systems, hardware platforms and runtime environments means that an application needs to be ported to a large number of different platforms, requiring time consuming setup procedures. Second, the lack of quality of service guarantees means that it is difficult to know how much resource can be delivered, thus computing completion times for experiments is difficult. Both of these problems were addressed in the Nimrod tools. First, we extended the OGSA architecture to incorporate a deployment 'service', and leveraged virtualisation to reduce the heterogeneity. Our experimental system used Microsoft's .NET platform. Second, we designed a computational economy that used a payment model to allow users to trade deadlines against costs.

Interestingly, both of these innovations underpin commercial cloud offerings, and make cloud computing a natural platform for running Nimrod experiments. Accordingly, we have added support for Amazon's EC2, and Microsoft's Azure - both commercial cloud services with very different architectures. Nimrod is able to schedule jobs seamlessly across all three systems, leveraging its computational economy to choose the cheapest allocation that meets a user specified deadline. Moreover, the cloud virtualisation schemes have dramatically simplified application deployment, making it possible to run a variety of applications that use specific software stacks.

In this talk I will discuss our work to date, and show how this has produced outcomes in science and engineering.

Short Bio: Professor David Abramson has been involved in computer architecture and high performance computing research since 1979. Previous to joining Monash University in 1997, he has held appointments at Griffith University, CSIRO, and RMIT. At CSIRO he was the program leader of the Division of Information Technology High Performance Computing Program, and was also an adjunct Associate Professor at RMIT in Melbourne. He served as a program manager and chief investigator in the Co-operative Research Centre for Intelligent Decisions Systems and the Co-operative Research Centre for Enterprise Distributed Systems. Abramson is currently an ARC Professorial Fellow; Professor of Computer Science in the Faculty of Information Technology at Monash University, Australia, and science director of the Monash e-Research Centre. He is a fellow of the Association for Computing Machinery (ACM) and the Academy of Science and Technological Engineering (ATSE), and a member of the IEEE. Abramson has served on committees for many conferences and workshops, and has published over 200 papers and technical documents. He has given seminars and received awards around Australia and internationally and has received over \$8 million in research funding. He also has a keen interest in R&D commercialization and consults for Axceleon Inc, who produce an industry strength version of Nimrod, and Guardsoft, a company focused on commercialising the Guard relative debugger. Abramson's current interests are in high performance computer systems design and software engineering tools for programming parallel, distributed supercomputers and stained glass windows.

Keynote Speech

Professor Geoffrey Charles Fox

School of Informatics and Computing, Community Grids Laboratory
Indiana University Bloomington, USA

Sensors Nets and their Analysis in the Cloud

We discuss the conventional wisdom with light weight clients supported by backend clouds and the implications for power efficient user friendly computing. We apply this to scientific data analysis in remote regions (in particular polar science) robotics and surveillance. We introduce a new sensor-cloud interface based on publish-subscribe technology. We discuss how this can be prototyped on FutureGrid. We define a sensor as any data source producing a time series and point out the generality of this.

Short Bio: Prof. Geoffrey Fox received a Ph.D. in Theoretical Physics from Cambridge University and is now professor of Informatics and Computing, and Physics at Indiana University where he is director of the Digital Science Center and Associate Dean for Research and Graduate Studies at the School of Informatics and Computing. He previously held positions at Caltech, Syracuse University and Florida State University. He has supervised the PhD of 61 students and published over 600 papers in physics and computer science. He currently works in applying computer science to Bioinformatics, Defense, Earthquake and Ice-sheet Science, Particle Physics and Chemical Informatics. He is principal investigator of FutureGrid – a new facility to enable development of new approaches to computing. He is involved in several projects to enhance the capabilities of Minority Serving Institutions. He is current editor-in-chief of Concurrency and Computation: Practice and Experience.

Keynote Speech

Professor Vijay Varadharajan

Macquarie University, Australia

Secure and Trustworthy Computing

Security and dependability have become particularly significant as systems get more and more interconnected and as their complexity increases. Technologies such as distributed online applications, cloud computing, service oriented architectures, pervasive mobile devices, and social networking have increased the dependency of society and economy on information systems and infrastructures. Along with the phenomenal growth in technology has been the growth in technology related crimes.

In this talk, I will start with a brief look at some of the recent developments in the threat scenery. Then I will discuss some key challenges involved in the design of secure and trustworthy systems. In particular, I will discuss the types of security services needed to secure distributed systems and applications and will highlight the issues of trust which underpins security. Then I will consider how traditional security and social aspects of trust can be combined to enhance the quality of security decision making. I will conclude the talk by demonstrating such a trust enhanced security approach using some example systems that we have been working on.

Short Bio: Vijay Varadharajan is the Microsoft Chair Professor in Innovation in Computing in Australia at Macquarie University. He is also the Director of Information and Networked System Security Research (INSS) Group at Macquarie University. Before this he was Chair of Computing and Head of School of Computing and IT at University of Western Sydney. Previously, Vijay headed Security Research worldwide for Hewlett-Packard Labs based at European Headquarters at HP Labs Bristol, UK. He led and managed several research projects in UK, US, Germany, France and Italy and under his leadership several security research technologies were transferred into commercially successful HP products. He also headed the Technical Security Strategy Initiative at HP under the Senior Vice President of HP. Earlier, he was Research Manager of Data Security Lab at British Telecom Research Labs. U.K., Research Fellow and Lecturer in Computer Science at Plymouth and Reading Universities.

Vijay was an inaugural Board Member of International Advisors of TCPA, USA, (originally formed by HP, Microsoft, Intel, Sun and Compaq). He is on the Trustworthy Computing Advisory Board (Microsoft, USA), the SAP (Germany) Security Advisory Board, Australian Government's Peak Security Advisory Group for the Minister of Broadband, Communications and Digital Economy, Australia. He is a member of the ARC College of Experts in Engineering, Mathematics and Informatics. He has been the Technical Board Director of Computer Science at Australian Computer Society, and Chair of the National Taskforce on E-Security. Vijay has been on the Editorial Board of several journals including the IEEE Transactions in Dependable and Secure Computing, the ACM Transactions on Information Systems Security, Springer International Journal of Information Security and IEEE Security and Privacy.

Vijay has published over 320 papers in International Journals and Conferences, has co-authored and edited 9 books and holds 3 patents. His research work over the years has contributed to the development of several successful secure commercial systems and have generated many hundreds of millions of dollars of revenue. His current areas of research interest include Web Services Security, Secure Distributed Applications, Trusted Computing, Wireless and Mobile Security, Cloud Computing and Security, Internet Security, Cyber Security Attacks, Secure Social Computing, Security Policies and Architectures. Vijay is a Fellow of the British Computer Society (FBCS), a Fellow of the IEE (FIEE), a Fellow of the Institute of Mathematics, UK (FIMA), a Fellow of the Australian Institute of Engineers (FIEAust) and a Fellow of the Australian Computer Society (FACS).

Keynote Speech

Professor Craig Standing

Foundation Professor of SIM

School of Management, Edith Cowan University, Australia

Social Computing, ICT developments and Innovation

Implications for Practice and Research Collaborative and social media developments have opened up new opportunities to transform work practices and engage with consumers. Social business models can deliver significant benefits for organisations but strategies are important as there are many pitfalls for the unwary. This talk will explore how social media can be used to improve organisational innovation, the challenges in harnessing social media technologies and also its implications for the research environment.

Short Bio: Craig Standing is Professor of Strategic Information Management at Edith Cowan University in Western Australia. He completed degrees at Lancaster University and the University of Manchester and a PhD at the University of Western Australia. His research has examined the evolving nature of electronic markets, supply chain management and the use of social media in innovation. He is currently the director of the Centre for Innovative Practice at Edith Cowan University and a member of the Australian Research Council's College of Experts. He is an editor of the Journal of Systems and Information Technology, and is at the forefront of knowledge on information systems research and research methods.

Keynote Speech

Professor Bhavani Thuraisingham

Department of Computer Science

Director of the Cyber Security Research Center

Erik Jonsson School of Engineering and Computer Science

The University of Texas at Dallas, USA

Cloud-Centric Assured Information Sharing

Daniel Wolfe (formerly of the National Security Agency) defined assured information sharing (AIS) as one that “provides the ability to dynamically and securely share information at multiple classification levels among U.S., allied and coalition forces.” The DoD’s vision for AIS is to “deliver the power of information to ensure mission success through an agile enterprise with freedom of maneuverability across the information environment”. More recently National Security Agency CIO Lonny Anderson has stated that the agency is focusing on a “cloud-centric” approach to information sharing with other agencies. To address the needs of the DoD, our project is developing technologies and tools for cloud-centric assured information sharing funded by the Air Force Office of Scientific Research (AFOSR).

We initially examined developments in grid and cloud computing and explored security issues. In particular, we explored secure virtualization, secure storage, secure data management and secure cloud monitoring. We also developed a secure cloud data manager that will be utilized as the engine for assured information sharing. We developed two types of cloud data managers, one based on semantic web data and the other based on relational data. Current frameworks do not scale for large RDF graphs and as a result do not address these challenges. Here, we developed a framework using Hadoop to store and retrieve large numbers of RDF triples by exploiting the cloud computing paradigm. We developed a scheme to store RDF data in a Hadoop Distributed File System. More than one Hadoop job may be needed to answer a query because a triple pattern in a query cannot take part in more than one join in a Hadoop job. To determine the jobs, we developed algorithms to generate a near optimal query plan based on a greedy approach to answer a SPARQL Protocol and RDF Query Language (SPARQL) query. We use Hadoop’s MapReduce framework to answer the queries. We implemented XACML-based policy management and integrated it with our query processing strategies. For secure query processing for relational data we utilized the HIVE framework. In addition to secure query processing, we also developed encrypted query processing on the Amazon cloud that interfaced to the Intelligence Community’s BlackBook system.

More recently we have developed strategies for secure storage and query processing in a hybrid cloud. In particular, we have developed algorithms for query processing wherein user’s local computing capability is exploited alongside public cloud services to deliver an efficient and secure data management solution. Hybrid clouds offer numerous advantages including ability to restrict data and processing being out-sourced based on sensitivity/confidentiality of the data as well as control on the monetary expenses of using cloud services by exploiting local resources. Nonetheless, query processing in hybrid cloud introduces new challenges, namely, 1) data design: How to partition relations between the public and private components of the cloud? The solution must account for the sensitivity of attributes in a relation as well as the workload that will be executed; 2) data security: How to represent encrypted (sensitive) data that enables non-trivial query processing on the public cloud? and 3) query processing: How to execute queries over the distributed data with mixed representation (i.e., encrypted and plaintext) while minimizing processing and communication costs? This paper addresses these challenges and incorporates the respective solutions into an add-on tool for a Hadoop and Hive-based cloud computing infrastructure.

We have also developed demonstration systems with our European partners: Kings College, University of London and the University of Insubria Italy who are funded by EOARD (The European Office of Aero-space Research and Development). The first demonstration illustrates how information may be shared in our cloud, based on policies specified in XACML. In the second demonstration we are implementing a semantic web-based policy engine and will show how multiple social networks may share information on our cloud based on semantic web-based policies. For both demonstrations, we will use the secure cloud data managers we have implemented. 2

We have also made progress on a number of research areas related to the cloud. These include (i) SPARQL/JENA-based inference controller for provenance data. This inference controller is being implemented on our Hadoop Cloud; (ii) Cloud-based Malware Detection for Evolving Data Streams where we have developed a scalable feature selection and extraction solution that leverages a cloud computing framework; and (iii) CloudMask: Together with Purdue University we have developed CloudMask, an approach that supports fine-grained attribute-based access control based on encryption while at the same time assuring the privacy of the identity attributes of the users accessing the data. Our future plans include secure virtualization using the XEN hypervisor to host our cloud data managers and demonstrate assured information sharing on this platform. We would also like to explore collaboration with the Asia Pacific region (which includes Australia) for cloud-based information sharing demonstrations with fund-ing from AOARD (The Asian Office of Aerospace Research and Development).

Short Bio: Dr. Bhavani Thuraisingham (aka Dr. Bhavani) is the Louis A. Beecherl, Jr. I Distinguished Professor in the Erik Jonsson School of Engineering and Computer Science at The University of Texas at Dallas (UTD) since September 2010. She joined UTD in October 2004 as a Professor of Computer Science and Director of the Cyber Security Re-search Center. She is an elected Fellow of five organizations: the IEEE (Institute for Electrical and Electronics Engineers, 2002), the AAAS (American Association for the Advancement of Science, 2003), the BCS (British Computer Society, 2005), SPDS (Society for Design and Process Science – a society that promotes transdisciplinary research – 2011) and the Society of Information Reuse and Integration (subcommittee of IEEE Systems, Man and Cybernetics Society). She is the recipient of numerous awards including (i) the IEEE Computer Society’s 1997 Technical Achievement Award for “outstanding and innovative contributions to secure data management”, (ii) the 2010 Research Leadership Award for “Outstanding and Sustained Leadership Contributions to the Field of Intelligence and Security Informatics” presented jointly by the IEEE Intelligent and Transportation Systems Society Technical Committee on Intelligence and Security Informatics in Transportation Systems and the IEEE Systems, Man and Cybernetics Society Technical Committee on Homeland Security, (iii) the 2010 ACM SIGSAC (Association for Computing Machinery, Special Interest Group on Security, Audit and Control) Outstanding Contributions Award for “seminal research contributions and leadership in data and applications security for over 25 years” and (iv) the 2011 AFCEA (Armed Forces Communications and Electronics Association) Medal of Merit for Sustained Professional Excellence in Communications, Electronics, Intelligence and Information Systems and Service to the Association. She is a Distinguished Scientist of ACM, was an IEEE Distinguished Lecturer between 2002 and 2005, and was also featured by *Silicon India* magazine as one of the seven leading technology innovators of South Asian origin in the USA in 2002. She received the prestigious earned higher doctorate degree of Doctor of Engineering from the University of Bristol England for her thesis consisting of her published works on secure dependable data management in July 2011.

Prior to joining UTD, Dr. Bhavani was an IPA (Intergovernmental Personnel Act) at the National Science Foundation (NSF) in Arlington, VA, from the MITRE Corporation for three years. At NSF, she established the Data and Applications Security Program and co-founded the Cyber Trust theme and was involved in interagency activities in data mining for counter-terrorism. She worked at MITRE in Bedford, MA between January 1989 and September 2001, conducting research, development, technology transfer and project management activities in secure data and information management, real-time middleware and data management, and data mining. She also led a department of several staff working in information management. Prior to that she worked in the commercial industry for six years first at Control Data Corporation developing the CDCNET product and later at Honeywell Inc. on research development, and technology transfer. Her work has resulted in over 100 journal articles, over 200 refereed conference papers and workshops, and five US patents (two pending). She is the author of eleven books in data management, data mining and data security including one on data mining for counter-terrorism and another on Database and Applications Security and has edited twelve more. She has given over 90 keynote presentations at various technical conferences and has also given invited talks at the White House Office of Science and Technology Policy and at the United Nations on Data Mining for counter-terrorism. She serves (or has served) on editorial boards of leading re-search and industry journals including several IEEE and ACM Transactions.

Dr. Bhavani is the founding president of “Bhavani Security Consulting, LLC”, a company providing services in consulting and training in Cyber Security and Information Technology. She is also the founder of “Knowledge and Security Analytics, LLC”, a spin-off company from UTD developing tools in assured information sharing and “Evolving Malware Security, LLC” a second spinoff company from UTD developing malware detection tools.

CGC2011/SCA2011/DASC2011/PICom2011/EmbeddedCom2011 Program

Sunday 11 December 2011

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Session 1A: CGC2011 (Harris Room) – Cloud Computing

Session Chair: Udaya Tupakula

An Elastic OLAP Cloud Platform

Peter Brezany, Yan Zhang, Ivan Janciak, Peng Chen and Sicen Ye

An Authenticated Key Exchange Scheme for Efficient Security-Aware Scheduling of Scientific Applications in Cloud Computing

Chang Liu, Chi Yang, Xuyun Zhang and Jinjun Chen

BoostPred: An Automatic Demand Predictor for the Cloud

Waiho Wong

Session 1B: SCA2011 (Jones Room) – Social Computing and Applications

Session Chair: Reda Alhajj

Combining Technical Analysis with Sentiment Analysis for Stock Price Prediction

Shangkun Deng, Takashi Mitsubuchi, Kei Shioda, Tatsuro Shimada and Akito Sakurai

Partial Social Network Disclosure and Crawlers

Suhendry Effendy, Felix Halim and Roland Yap

Applications of Social Network Construction and Analysis in the Medical Referral Process

Wadhah Almansoori, Omar Zarour, Tamer N. Jarada, Panagiotis Karampales, Jon Rokne, Reda Alhajj

Session 1C: DASC2011 (Broadway Room) – Dependable, Autonomic and Secure Computing

Session Chair: Khaled Khan

Service Injection: A Threat to Self-managed Complex Systems

Per Håkon Meland

S2XS2: A Server Side Approach to Automatically Detect XSS Attacks

Hossain Shahriar, Mohammad Zulkernine

Session 1D: PCom2011 (Thomas Room) – Pervasive Intelligence Computing
Session Chair: Roman Danylak

- Personalized Searching for Web Service Using User Interests
Rong Hu, Wanchun Dou, Xiaoping Frank Liu, Jianxun Liu
- Using Particle Swarm Optimization to Improve the Precision and Recall of Taxonomy Extraction
Mohamad Syafrullah, Naomie Salim
- A Formal Model for Advanced Physical Annotations
Ahmad Alzahrani, Seng Loke, Hongen Lu

Session 1E: EmbeddedCom2011 (Wattle Room) – Embedded Computing
Session Chair: Yingjie Cao

- Load-aware dynamic partial reconfiguration implementation of crossbar scheduler
Zhang shaobin, Hu Tongsen, Chen Tianzhou, Qu Zening
- Efficient Pattern Detection for Embedded Optical Bio-sensing System
Yingjie Cao, Yongxin Zhu, Guoguang Rong, Gang Cheng
- Deriving High-Performance Real-Time Multicore Systems based on Simulink Applications
Minji Cha, Kyong Hoon Kim, Chung Jae Lee, Dojun Ha, Byoung Soo Kim
- Analysis and Comparison of Two Different Implementations of MCS-51 Compatible Microcontrollers
Jincheng Fei, Haiyang Quan, Dawei Yuan

Session 2A: CGC2011 (Harris Room) – Cloud Computing
Session Chair: Yang Yu

- A Power-aware Scheduling of MapReduce Applications in the Cloud
Ying Li, Hongli Zhang and Kyong Hoon Kim
- A Consumer-Provider Cloud Cost Model Considering Variable Cost
Werner Mach and Erich Schikuta
- SecDM: Securing Data Migration Between Cloud Storage Systems
Qingni Shen, Lizhe Zhang, Xin Yang and Yahui Yang
- A RESTful Approach to Service Level Agreements for Cloud Environments
Florian Blümel, Thijs Metsch and Alexander Papaspyrou
- A Group-Choose Model for Partner Selection in Virtual Organization
Miaomiao Li, Yang Yu and Zhenguang Huang
- Assessing Measurements of QoS for global Cloud Computing Services
Jens Myrup Pedersen, Tahir Riaz, Bozydar Dubalski, Damian Ledzinski, Joaquim Celestino Júnior and Ahmed Patel
- Cloud-Enabled Adaptive Activity-Aware Energy-Saving System in a Dynamic Environment
Hui-Wen Yeh, Ching-Hu Lu, Yu-Chiao Huang, Tsung-Han Yang and Li-Chen Fu
- From Cloud to Green: E-Collaboration for Environmental Conservation
Chadi Aoun, Savanid Vatanasakdakul and Deborah Bunker
- A Generic QoS Framework for Cloud Workflow Systems
Xiao Liu, Yun Yang, Dong Yuan, Gaofeng Zhang, Wenhao Li and Dahai Cao

Session 2B: SCA2011 (Jones Room) – Social Computing and Applications
Session Chair: Richard Lucas

- Making the Most of Virtual Expertise in Telemedicine and Telehealth Environments
Craig Standing, Raj Gururajan, Izabela Volpe and Susan Standing
- Maximum Reliable Tree for Social Network Search
Wokey Lee, James Jung-Hun Lee, Justin Jong-Su Song and Chris Soo-Hyun Eom
- Evaluating Roving Patrol Effectiveness by GPS Trajectory
Huahuan Li and Jianxun Liu
- TIE: Temporal Interaction Explorer for Co-presence Communities
Daniel Boston and Cristian Borcea
- On the Socialness of Software
Walid Maalej and Dennis Pagano
- Social-aware Document Similarity Computation for Recommender Systems
Tran Vu Pham and Nguyen Thach Le
- Expert-Citizen Engineering: “Crowdsourcing” Skilled Citizens
Zhi Zhai, Peter Semoplinski, Douglas Thain, Greg Madey, Daniel Wei and Ahsan Kareem
- Credibility Assessment using Wikipedia for Messages on Social Network Services

Session 2C: WMSC2011 (Broadway Room) – Workflow Management in Service and Cloud Computing
Session Chair: Jianxun Liu

- A Cloud Computing Environment for Supporting Networked Robotics Applications
Lucio Agostinho, Leonardo Olivi, Guilherme Feliciano, Fernando Paolieri Diego Rodrigues, Eliane Guimarães and Eleri Cardozo
- BSNet: A Three-Layer Business Service Correlation Network Model
Keman Huang, Yushun Fan, Wei Tan
- Multi-business services selection model and calculation method
Yushun Fan, Sufen Li
- A Conceptual Platform of SLA in Cloud Computing
MinChao Wang, Xing Wu, Wu Zhang
- A Dynamical Optimization Approach for Service Process Library
Lei Wang, Jian Cao, Haiyan Zhao
- A New Process Mining Algorithm Based on Event Type
Dongyi Wang, Jidong Ge, Hao Hu, and Bin Luo
- Activity Instance Oriented Handling in Workflows
Yiping Wen, Zhigang Chen, Jianxun Liu
- Requirements Management Using KANO Model and AHP for Service Systems Design
Jaeung Lee, Vijayan Sugumaran, Sooyong Park

Session 2D: CGC2011 (Thomas Room) – Green Computing
Chair: Young Choon Lee

- Analysis of Power-Saving Techniques over a large multi-use Cluster
Andrew Stephen MCGough, Clive Gerrard, Jonathan Noble, Paul Robinson and Stuart Wheeler
- Energy-aware P2P communities using mobile clients
Fabrice Saffre, Sebastien Nicolas and Hanno Hildmann
- Application Behavior Mapping across Heterogeneous Hardware Platforms
Haifeng Chen
- Accurate Mutlicore Processor Power Models for Power-Aware Resource Management
Ibrahim Takouna, Wesam Dawoud and Christoph Meinel
- Energy Prediction For MapReduce Workloads
Wenjun Li, Hailong Yang, Zhongzhi Luan and Depei Qian
- On Reference Node Deployment for Precise Clock Synchronization in Smart Power Grid
Chiu-Ping Chang, Chung-Ta King and Chen-Min Chan
- An Intelligent Real-time Odor Monitoring System Using a Pattern Extraction Algorithm
Eunyeong Kim, Seok Lee, Taikjin Lee, Bumjoo Shin and Jungho Lee
- Cost and Energy Reduction Evaluation for ARM Based Web Servers
Olle Svanfeldt-Winter, Sebastien Lafond and Johan Lilius
- Priority-based Scheduling for Large-Scale Distributed Systems with Energy Awareness
Masnida Hussin, Young Choon Lee and Albert Zomaya

Session 2E: CMS2011 (Cloud Management and Security) and CTUW2011 (Cognitive-based Text Understanding and Web Wisdom) (Wattle Room), Chair: Jian Cao

- Control Strategy of Group Behavior for Internet of Things
Qingkui Chen, He Jia
- Private Cloud System Based on BOINC with Support for Parallel and Distributed Simulation
Yihua Wu, Jian Cao, Minglu Li
- On English Writing Feedback Provided by Writing Roadmap™ 2.0 Automated Evaluation System in EFL Classroom
Shuwen Wang
- Fuzzy Genetic Semantic Based Text Summarization
Ladda Suanmali, Naomie Salim and Mohammed Salem Binwahlan
- A MULTIPLICITY APPROACH TO ORGANIZATION OF KNOWLEDGE AND DEVELOPMENT OF WISE WEB SOFTWARE
K. O. Chow and T. L. Wong
- Towards Data Quality into the Data Warehouse Development
Munawar, Naomie Salim and Roliana Ibrahim
- An automated approach to Web Service Classification based on Semantic
Zhaoteng Song and Xinhuai Tang

Tuesday 13 December 2011

08:00-18:00	Registration (Foyer)				
09:00-10:00	Keynote Address: Sensors Nets and their Analysis in the Cloud (Aerial Function Centre) Speaker: Prof. Geoffrey Charles Fox (Indiana University Bloomington, USA) Chair: Prof. Ivan Stojmenovic (University of Ottawa, Canada)				
10:00-11:00	Keynote Address: Secure and Trustworthy Computing (Aerial Function Centre) Speaker: Prof. Vijay Varadharajan, Macquarie University, Australia Chair: A/Prof. Jinjun Chen (University of Technology Sydney, Australia)				
11:00-11:30	Morning Tea (Aerial Function Centre)				
11:30-12:30	Session 3A: CGC2011 (Harris Room)	Session 3B: SCA2011 (Jones Room)	Session 3C: DASC2011 (Broadway Room)	Session 3D: PCom2011 (Thomas Room)	Session 3E: EmbeddedCom2011 (Wattle Room)
12:30-13:30	Lunch (Aerial Function Centre)				
13:30-14:30	Keynote Address: Social Computing, ICT developments and Innovation (Aerial Function Centre) Speaker: Prof. Craig Standing (Edith Cowan University, Australia) Chair: Prof. Igor Hawryszkiewicz (University of Technology Sydney, Australia)				
14:30-15:00	Afternoon Tea (Aerial Function Centre)				
15:00-18:00	Session 4A: CGC2011 (Harris Room)	Session 4B: SCA2011 (Jones Room)	Session 4C: DASC2011 (Broadway Room)	Session 4D: CGC2011 (Thomas Room)	Session 4E: EmbeddedCom2011 (Wattle Room)
19:00-23:30	Banquet (Aerial Function Centre)				

Session 3A: CGC2011 (Harris Room) – Cloud Computing

Session Chair: Laurent Lefevre

A Taxonomy for Cloud Data Hosting Solutions

Steve Strauch, Oliver Kopp, Frank Leymann and Tobias Unger

An Innovative Self-adaptive Configuration Optimization System in Cloud Computing

Jing Jiang, Jie Lu and Guangquan Zhang

LARM: Autonomic Load-Aware Resource Management for P2P Key-value Stores in Cloud

Can Zhang, Hao-Peng Chen and Shuo-Tao Gao

Session 3B: SCA2011 (Jones Room) – Social Computing and Applications

Session Chair: Roland Yap

An Exploration of Social Media in Public Opinion Convergence: Elaboration Likelihood and Semantic Networks on Political Events

Yi Wu, Jackson Wong, Yimeng Deng and Klarissa Chang

Photo Cube: An Automatic Management and Search for Photos Using Mobile Smartphones

Jinho Kim, Suan Lee, Ji-Seop Won and Yang-Sae Moon

Identifying Consensus Tags in Social Tagging Systems

Kening Gao, Yin Zhang, Bin Zhang, Xin Jin and Pengwei Guo

Session 3C: DASC2011 (Broadway Room) – Dependable, Autonomic and Secure Computing

Session Chair: Zhong Yang

A Bio-inspired Host-based Multi-engine Detection System with Sequential Pattern Recognition

Frank jiang, Michael Frater, Jiankun Hu

New Latch-up Model for Deep Sub-micron Integrated Circuit

Pan Dong, long Fan, Suge Yue

A Connection-Based Signature Approach for Control Flow Error Detection

Atef Mohamed, Mohammad Zulkernine

Session 3D: PCom2011 (Thomas Room) – Pervasive Intelligence and Computing

Session Chair: Supeng Leng

Protecting from Inside Attacks in Wireless Sensor Networks

Xu Huang, Muhammad Ahmed, Dharmendra Sharma

First Prototype of Aquatic Tool Kit: Towards Low-cost Intelligent Larval Fish Counting in Hatcheries

Brian Loh, Valliappan Raman, Patrick Then

A Carrier Aggregation Based Resource Allocation Scheme for Pervasive Wireless Networks

Fan Wu, Yuming Mao, Supeng Leng, Xiaoyan Huang

Session 3E: EmbeddedCom2011 (Wattle Room) – Embedded Computing

Session Chair: Rajeev Kanth

Global Priority Table for Last-Level Caches

Yu Baozhong

Design and Implementation of a Peripheral Bus Based on a New Kind of Reconfigurable System

yimao cai, yuanfu zhao, lidong lan

GALS-JOP – A Java Embedded Processor for GALS Reactive Programs

Muhammad Nadeem, Morteza Biglari-Abhari, Zoran Salcic

Session 4A: CGC2011 (Harris Room) – Cloud Computing

Session Chair: Kaijun Ren

A Measurement Study of Server Utilization in Public Clouds

Huan Liu

Towards a Service Life Cycle-based Methodology for Risk Assessment in Cloud Computing

Mariam Kiran, Ming Jiang and Karim Djemame

An Upper-bound Control Approach for Cost-effective Privacy Protection of Intermediate Dataset Storage in Cloud

Xuyun Zhang, Chang Liu, Wanchun Dou, Jinjun Chen

Migrating Complex Business Process to Cloud based on Mspoa and CBPM

Hai Wan and Yang Yu

A Distributed Application Component Placement Approach for Cloud Computing Environment

Zhicheng Jin, Jian Cao and Minglu Li

A Novel Cost-effective Dynamic Data Replication Strategy for Reliability in Cloud Data Centres

Wenhao Li, Yun Yang and Dong Yuan

CBF: A Packet Filtering Method for DDoS Attack Defense in Cloud Environment

Qi Chen, Wenmin Lin, Shui Yu and Wanchun Dou

Cloud Control and Management Planes for Service Provisioning

Silvana Greco Polito and Adriano Costanzo

A Weighted K-Means Clustering based Coscheduling Strategy towards Efficient Execution of Scientific Workflows in Collaborative Cloud Environments

Kefeng Deng, Kaijun Ren, Junqiang Song and Dong Yuan

Session 4B: SCA2011 (Jones Room) – Social Computing and Applications

Session Chair: Peter Brezany

Organizational Social Media around the GLOBE

Daniel Schlagwein and Pattarawan Prasarnphanich

A Model for Social Network-enhanced Health Communication

Robert Steele

A Mobile Community Service Platform Promoting Ubiquitous Collaboration

Kyungran Kang, Jungtae Lee, Kyoungwon Baek, Sungeun Park and Jaehwan Kim

Simulation on the Dynamics of Interpersonal Communication Network

Ying Liu and Yuxiao Li

An Organization Model in MAS Based on Holon

Jie Liu, Wei-Ming Zhang, Zhong Liu and Bao-Xin Xiu

A Uniform Semantic Web Framework for Co-Authorship Networks

Lule Ahmedi, Lejla Abazi and Arbana Kadriu

Participation and engagement in inter-organizational groups: Synthesizing social network analysis with ethnography to evaluate social capital

Tim Butcher, Paul Scriven, Seamus O'Reilly, Caroline Chan and Steven Pereira

Trust and Trustworthiness in Online Credit Markets

Denise Anthony, Ko Kuwabara and Christine Horne

Some Ethical Considerations for Gov 2.0 using Web 2.0

Lubna Alam and Richard Lucas

Session 4C: DASC2011 (Broadway Room) – Dependable, Autonomic and Secure Computing

Session Chair: Edward Chuah Thuan Yew

Exact and Heuristic algorithm for Multi-Constrained Optimal Path problem

Jun Han, Qingan Fang, Liyong Mao, Zhaoguo Li

A WIDE-RANGE EDGE-COMBINING DLL WITH A CHARGE PUMP FOR LOW SPUR

Bin He

Analysis of the New Latch-up Model for Deep Sub-micron Integrated Circuits

Pan Dong, Long Fan

A Trustful Infrastructure for the Internet of Things based on EPOSMote

Antônio Fröhlich, Rodrigo Steiner, Leonardo Rufino

Long-Term CPU Load Prediction

Jianhuang Liang, Jian Cao, Jungang Wang, Yuxia Xu

Ontology Based Modeling for Information Security Management

Partha Saha, Nandan Parameswaran, Pradeep Ray, Ambuj Mahanti

Towards Self-Awareness in Cloud Markets: A Monitoring Methodology

Ivan Breskovic, Christian Haas, Simon Caton, Ivona Brandic

Intelligent Test Oracle Construction for Reactive Systems without Explicit Specifications

Farn Wang, Li-Wei Yao, Jung-Hsuan Wu

Workload balancing for highly available services: The case of the N+M redundancy model

Ali Kanso, Ferhat Khendek, Maria Toeroe

Session 4D: CGC2011 (Thomas Room) – Green Computing

Session Chair: Lucio Agostinho Rocha

A Multi-objective GRASP Algorithm for Joint Optimization of Energy Consumption and Schedule Length of Precedence-Constrained Applications

Johnatan E. Pecero and Samee U. Khan

Data Allocation Based on XML Query Patterns to Reduce Power Consumption

Xuehua Jiang, Yousuke Watanabe and Haruo Yokota

Improving Energy Efficiency of LTE Networks by applying Genetic Algorithm (GA)

Kongluan Lin

A Workflow Scheduling Algorithm for Optimizing Energy-Efficient Grid Resources usage

Fábio Coutinho, Renato Santana and Luis Alfredo V. De Carvalho

A performance and energy consumption analytical model for GPU

Cheng Luo and Suda Reiji

Energy Efficient Task Allocation over Mobile Networks

Carmela Comito, Domenico Talia and Paolo Trunfio

An Empirical Analysis of Cloud, Mobile, Social and Green Computing: Financial Services IT Strategy and Enterprise Architecture

Asif Gill, Deborah Bunker and Philip Seltsikas

A PID-Controlled Power Manager for Energy Efficient Web Clusters

Simon Holmbacka, Sébastien Lafond and Johan Lilius

Model Interactive Search between User and Associated Link Network

Baiquan Zhu, Xiangfeng Luo, Yang Liu, Xiao Wei and Feiyue Ye

Session 4E: EmbeddedCom2011 (Wattle Room) – Embedded Computing

Session Chair: Jian Cao

A Study on QoS routing Schem for Tactical ad-hoc network

Taehun Kang

Scheduling Instructions for Soft Errors in Register Files

Jianjun Xu, Qingping Tan, Huiping Zhou

System Level Performance Simulation of distributed GENESYS Applications on multi-core platforms

subayal khan

Benchmarking Embedded Devices for Broadband Performance Testing

Snehal Tangadpalliwar, Kumbesan Sandrasegaran, Malcolm Raymond, Ajanta Moitra, Faisal Madani

An Efficient Test Design for Verification of Cache Coherence in CMPs

Mamata Dalui, Biplab K Sikdar

Impact of Inaccurate Design of Branch Predictors on Processors' Power Consumption

Gunjan Bhattacharya, Baisakhi Das, Ilora Maity, Biplab K Sikdar

A Balanced Clustering Algorithm for Non-Uniformly Deployed Sensor Networks

Heewook Shin, Sangman Moh, Illyong Chung

Coprocessing Architecture in System-on-programmable-chip for Walk on the Boundary Method to calculate Capacitance

Stephen J.J. Ong, Z. Abdul Halim

Wednesday 14 December 2011

08:00-18:00	Registration (Foyer)				
09:00-10:00	Keynote Address: Cloud-Centric Assured Information Sharing (Aerial Function Centre) Speaker: Prof. Bhavani Thuraisingham, The University of Texas at Dallas, USA Chair: Prof. Vijay Varadharajan, Macquarie University, Australia				
10:00-10:30	Morning Tea (Aerial Function Centre)				
10:30-12:30	Session 5A: CGC2011 (Harris Room)	Session 5B: SCA2011 (Jones Room)	Session 5C: CGC2011 (Broadway Room)	Session 5D: ACGS2011 (Thomas Room)	Session 5E: ASS2011 (Wattle Room)
12:30-13:30	Lunch (Aerial Function Centre)				
13:30-15:00	Panel Discussion: Cloud Computing vs Social Media (Aerial Function Centre) Chair: Dr. Steve Versteeg, CA Technologies, Australia Panellists: Prof. Geoffrey Charles Fox, Indiana University Bloomington, USA Prof. Ivan Stojmenovic, University of Ottawa, Canada Prof. Craig Standing, Edith Cowan University, Australia Prof. Vijay Varadharajan, Macquarie University, Australia Prof. Igor Hawryszkiewicz, University of Technology Sydney, Australia Prof. Bhavani Thuraisingham, The University of Texas at Dallas, USA				
15:00-15:30	Afternoon Tea (Aerial Function Centre)				
15:30-18:00	Session 6A: CGC2011 (Harris Room)	Session 6B: SCA2011 and CSN2011 (Jones Room)	Session 6C: DASC2011 (Broadway Room)	Session 6D: PCom2011 (Thomas Room)	Session 6E: Industry Track (Wattle Room)

Session 5A: CGC2011 (Harris Room) – Cloud Computing

Session Chair: Alexander Papaspyrou

The Sustainability and Survivability Network Design for Next Generation Cloud Networking

Bing Luo and William Liu

Identifying Contextual Properties of Software Architecture in Cloud Computing

Khaled Khan and Qutaibah Malluhi

The Differences and Commonalities between Green and Conventional Business Process Management

Alexander Nowak, Frank Leymann and David Schumm

WSRank: A Method for Web Service Ranking in Cloud Environment

Rong Hu, Wanchun Dou, Xiaoqing Frank Liu and Jianxun Liu

A Bio-inspired Approach to Provisioning of Virtual Resources in Federated Clouds

Lucio Agostinho, Guilherme Feliciano, Leonardo Olivi, Eliane Guimarães, Eleri Cardozo

Disrupt the Disruptor - A Theoretical Approach of Cloud Computing on IT Outsourcing Industry Disruption

Zhenyu Yang

Session 5B: SCA2011 (Jones Room) – Social Computing and Applications

Session Chair: Tim Butcher

Tweeting Government: A case of Australian government use of Twitter

Sultana Lubna Alam, Richard Lucas

Using Social Media in Government: The Australian Taxation Office E-Tax Facebook Page

Sultana Lubna Alam and John Campbell, Richard Lucas

Finding Strong Groups of Friends Among Friends in Social Networks

Carson Leung and Syed K. Tanbeer

Modeling Learners and Contents in Academic-oriented Recommendation Framework

Jia Zhou, Tiejian Luo and Fuxing Cheng

Extracting Opinions from Topic-based Events in the Blogosphere

Chen-Ming Wu

State of the Art of Community-driven Software Engineering Ontology Evolution

Pornpit Wongthongtham, Elizabeth Chang

Building Hierarchical Keyword Level Association Link Networks for Web Events Analysis

Junyu Xuan, Xiangfeng Luo, Shunxiang Zhang, Zheng Xu, Huimin Liu

Session 5C: CGC2011 (Broadway Room) – Green Computing

Session Chair: Andrew Stephen

An Evaluation of Power-proportional Data Placement for Hadoop Distributed File Systems

Hieu Hanh Le, Satoshi Hikida and Haruo Yokota

Profiling energy consumption of VMs for green cloud computing

Qingwen Chen, Paola Grosso, Karel van der Veldt, Cees De Laat, Rutger Hofman and Henri Bal

Multi-Level Energy Saving and Recycling Policies for an Industry Sector

Hsiao-Fan Wang

Energy consumption side-channel attack at Virtual Machines in a Cloud

Helmut Hlavacs, Thomas Treutner, Jean-Patrick Gelas, Laurent Lefèvre and Anne-Cécile Orgerie

Monitoring Energy Consumption in clouds: the CompatibleOne experience

Laurent Lefevre, Olivier Mornard, Jean-Patrick Gelas

The Green Computing Observatory: a data curation approach for green IT

Cecile Germain-Renaud, Frederic Furst, Michel Jouvin, Gilles Kassel, Julien Nauroy, Guillaume Philippon

Session 5D: ACGS2011 (CB10.04.460) – Advances in Cloud and Green Systems

Session Chair: Mohammed Alhamad

Pre-Study of Multistage Anomaly Detection for Secured Cloud Computing Resources

Byungrae Cha and Jongwon Kim

Service Level Agreement for Distributed Services: A Review

Mohammed Alhamad, Tharam Dillon and Elizabeth Chang

Netml: networking networks

Ron Addie, Moshe Zukerman and Peng Yu

Mobile Cloud Web-Service for U-City

Jong Won Park, Chang Ho Yun, Seong Woo Rho, Hae Sun Jung and Yong Woo Lee

Evaluating Sustainability, Environmental Assessment and Toxic Emissions during Manufacturing Process of RFID Based Systems

Rajeev Kumar Kanth, Hannu Tenhunen, Pasi Liljeberg and Li-Rong Zheng

Session 5E: ASS2011 (CB10.04.470) – Advances in Social Systems

Session Chair: Dmitry Romanov

Command and Control Network Modeling and Efficiency Measure Based on Capability Weighted-Node

Du Wei, Liu Zhong, Xiu Bao-Xin, Zhang Wei-Ming and Cheng Qing

The interrelation between communities, trust and their online social patterns

Sonia Sousa, David Lamas and Paulo Dias

Project or process? How to measure the real type of employees activity?

Dmitry Romanov and Pavel Sidorov

A Model of Close-Relationship among Mobile Users on Mobile Social Network

Paul Kim and Sangwook Kim

Theme-based Mobile Social Network System

Jiamei Tang and Sangwook Kim

Web based Cross Language Semantic Plagiarism Detection

Chow Kok Kent and Naomie Salim

Session 6A: CGC2011 (Harris Room) – Cloud Computing

Session Chair: Xiao Liu

An Elastic Multi-tenant Database Schema for Software as a Service

Haitham Yaish and Madhu Goyal

Intrusion Detection Techniques for Infrastructure as a Service Cloud

Udaya Tupakula, Vijay Varadharajan and Naveen Akku

Conceptualization of a Context Aware Cloud Adaptation (CACA) Framework

Asif Gill and Deborah Bunker

MCDB: Using Multi-Clouds to Ensure Security in Cloud Computing

Mohammed A. Alzain, Ben Soh and Eric Pardede

A Science Cloud Resource Provisioning Model using Statistical Analysis of Job History

Seoyoung Kim, Jung-in Koh, Yoonhee Kim, Chongam Kim

HERO Web Portal: On-demand portal for co-allocating computing and network resources on top of TIGRIS middleware platform

Jae-Hyuck Kwak, Junweon Yoon, Yonghwan Jung, Jaegyoon Hahm, Dongin Park

Performance Evaluation of Image Conversion Module Based on MapReduce for Transcoding and Transmoding in SMCCSE

Myoungjin Kim, Hanku Lee and Yun Cui

Session 6B: SCA2011 and CSN2011 (Jones Room) – Social Computing, Cloud and Social Networking
Chair: Guandong Xu

Complex Human-System Systems Design for C2
Xuhui Luo, Jiang Wang, Meng Qian, Zhong Liu, Weiming Zhang and Cheng Zhu

SkyBoundary: An improved Approach to Member Promotion in Social Networks
Zhuo Peng, Chaokun Wang and Fangbo Tao

Characterizing Twitter with Respondent-Driven Sampling
Mostafa Salehi, Hamid Reza Rabiee, Nasim Nabavi and Shayan Pooya

On Analyzing User Ratings and Directional Trusts in Epinions.com
Shaoyu Li, Won-Seok Hwang and Sang-Wook Kim

Incorporating Sentiment Analysis for Improved Tag-based Recommendation
Qingbiao: Zhou, Jie Fang and Guandong Xu

Multistage Filtering for Collusion Detection in P2P network
Yu Bao, Tianjie Cao and Guosun Zeng

Parallel Range Query Processing on R-Tree with Graphics Processing Unit
Bo-Seon Yu, Hyunduk Kim, Wonik Choi and Dongseop Kwon

Organized Crime Structures in Co-offending Networks
Mohammad A. Tayebi and Uwe Glasser

Semantic Pattern Tree Kernels for Short-text Classification
Kwanho Kim, Beom-Suk Chung, Ye Rim Choi and Jonghun Park

Session 6C: DASC2011 (Broadway Room) – Dependable, Autonomic and Secure Computing
Session Chair: Hossain Shahriar

Reliability implications of register utilization – An empirical study
Paul Roemer, Peter Troeger

A 46MHz Biquad Gm-C High Q Bandpass Filter Design for Wireless Application
Chong Duan, Weimin Li

A Natural Classification Scheme for Software Security Patterns
Aleem Alvi, Mohammad Zulkernine

Automatic Annotation of Software Configuration Models with Service Recovery Information
Ali Kalso, Maria Toeroe, Ferhat Khendek

Self-Adaptive Authorisation Framework for Policy Based RBAC/ABAC Models
Chris Bailey, David Chadwick, Rogerio de Lemos

A Fuzzy Logic-based Buffer Overflow Vulnerability Auditor
Hossain Shahriar, Mohammad Zulkernine

Application of Neural Networks to the Correction of a Stiffness Matrix by a Static Test
Zhong Yang, Haifei Si

Polymorphic Malware Detection Using Hierarchical Hidden Markov Model
Fahad Bin Muhaya, Muhammad Khurram Khan, Yang Xiang

Session 6D: PCom2011 (Thomas Room) – Pervasive Intelligence Computing
Session Chair: Arkady Zaslavsky

Gesture-Based Easy-Computer Interaction using a Linear Array of Low Cost Distance Sensors
Guan Huang, Seng Loke

The User-group based Recommendation for the Diverse Multimedia Contents in the Social Network Environments
Saim Shin, Se-Jin Jang, Seok-Pil Lee

Pervasive Intelligent Routing in Content Centric Delay Tolerant Networks
Anh Dung Nguyen, Patrick Senac, Victor Ramiro, Michel Diaz

From Sensory Data to Situation Awareness – Enhanced Context Spaces Theory Approach
Andrey Boytsov, Arkady Zaslavsky

Mapping for Activity Recognition in the Context-aware Systems using Software Sensors
Kamran Taj Pathan, Stephan Reiff-Marganiec, Yi Hong

Design and Implementation of P2P reasoning system based on Description logic
Hai WAN, Yang YU

Recognizing concurrent and interleaved activities in social interactions
Saguna Saguna, Arkady Zaslavsky, Dipanjan Chakraborty

Intelligent Sensor Network Simulation for Battlefield Resources Management
Hangying Yu, Yilong LU

Crowdsourcing in Mobile- A Three Stage Context Based Process
Ahmad Afridi

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Local and Finance Chairs

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Conference Secretary and Web Chair

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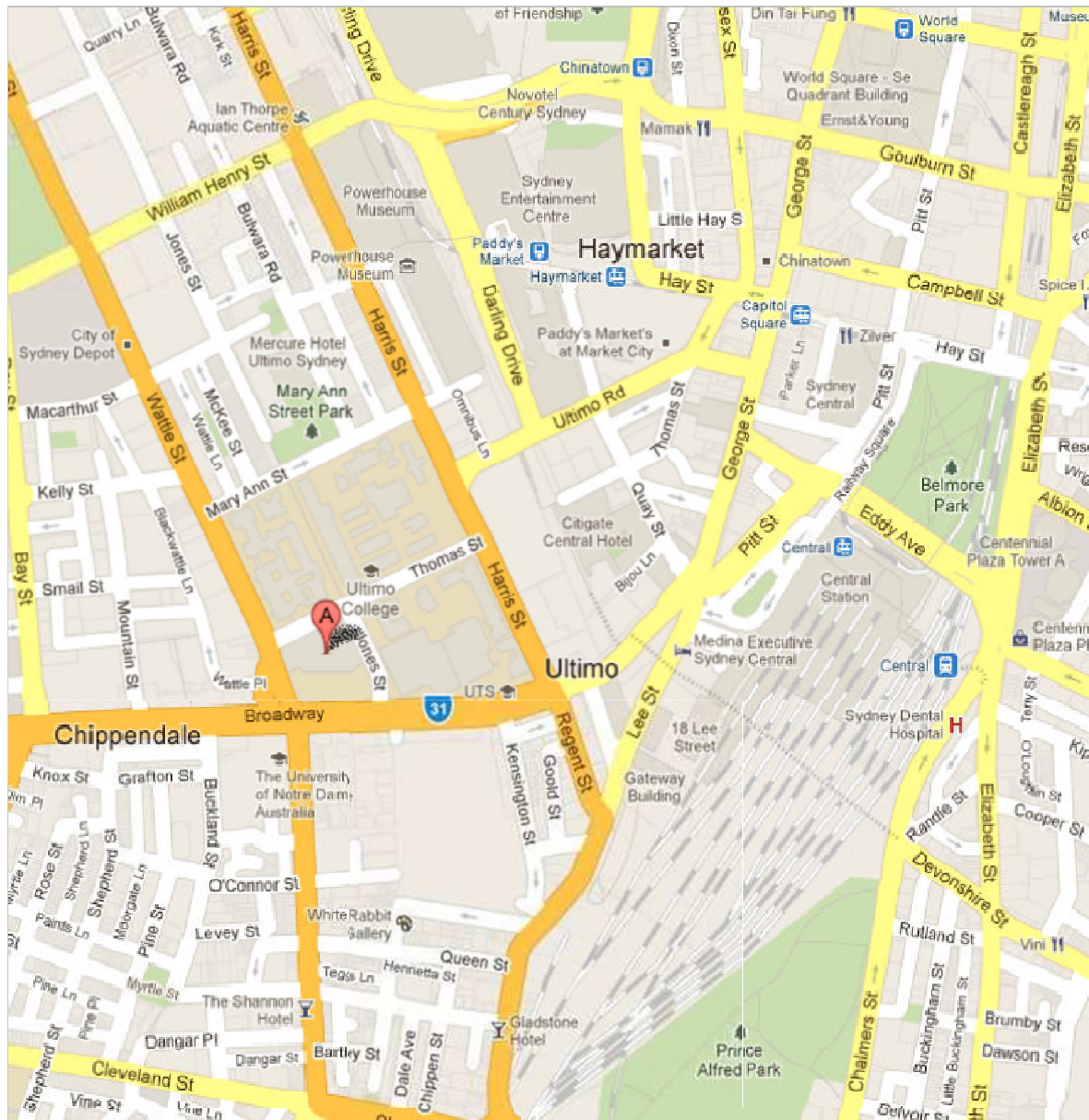
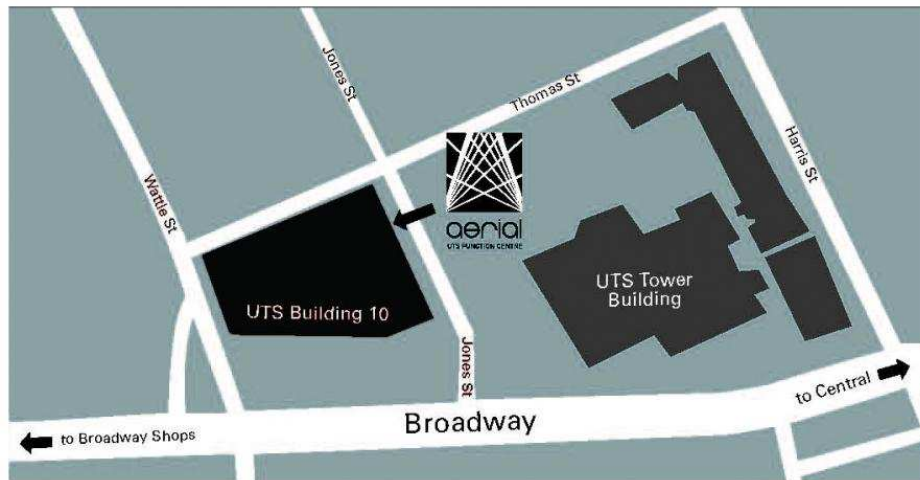
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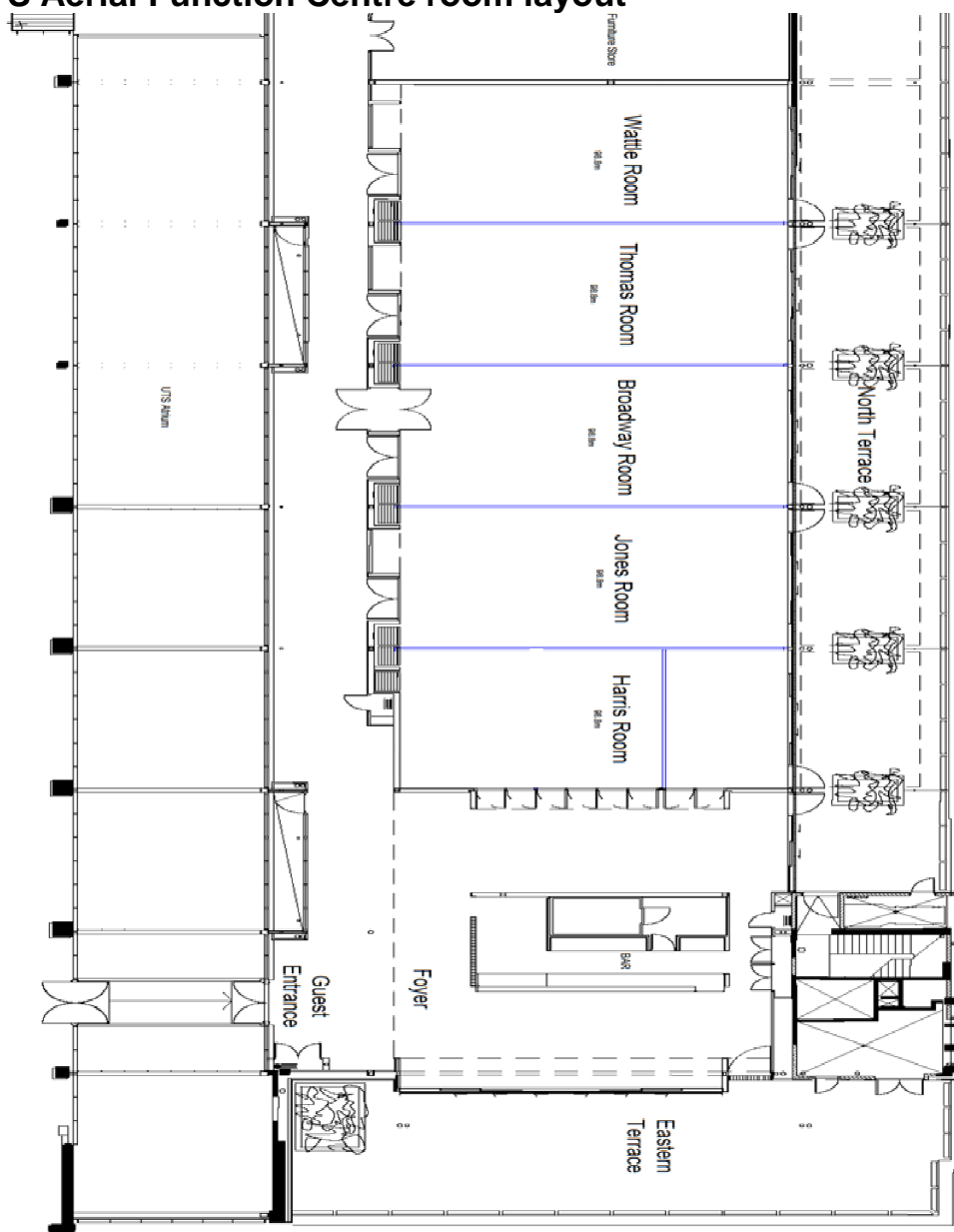
Appendix 1. Location of conference venue: UTS Aerial Function Centre

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Aerial UTS Function Centre



Appendix 2. UTS Aerial Function Centre room layout