

**第二届中澳 IT 院长研究与教育高峰论坛**  
**2<sup>nd</sup> Sino-Australia IT Research and Education Summit 2009**

**Beijing, China**

**26-27 November 2009**

## **2009 Organization Committee**

### **China Side**

Chair:

Professor Sun Jianguang

Vice President, NSFC; and

Dean, School of Information, Tsinghua University

Vice Chair:

Professor Zhang Zhaotian

Deputy Director, Department of Information Sciences, NSFC

Members:

Professor Liu Ke, Director, Division of Computer Science, NSFC

Professor Sun Maosong, Head, Department of Computer Science and Technology, Tsinghua University

Professor Mei Hong, Dean, School of Information, Peking University

Professor Du Xiaoyong, Dean, School of Information, Renmin University of China

Professor Wang Jianmin, Associate Dean, School of Software, Tsinghua University

### **Australia side**

Chair:

Professor Richard Coleman

Executive Director, Physical, Mathematical and Information Sciences, ARC

Vice Chair:

Professor Xiaofang Zhou

Convenor, ARC Research Network EII; and

Professor of Computer Science, University of Queensland

Members:

Professor Paul Bailes, Head, School of Information Technology and Electrical Engineering, University of Queensland

Ms Kath Williamson, Network Manager, ARC Research Network EII

## **Sponsors**

National Natural Science Foundation of China

Tsinghua University

Peking University

Renmin University of China

ARC Research Network in Enterprise Information Infrastructure [EII]

## Pre Summit Program – Australian Delegates only

	<b>Wednesday 25 November</b>
<b>7.00 – 9.00</b>	<i>Breakfast meeting</i>
<b>10.00 – 12.00</b>	<i>Visit Peking University</i>
<b>12.00 – 14.00</b>	<i>Business Lunch hosted by Peking University</i>
<b>14.00 – 16.00</b>	<i>Visit Tsinghua University</i>
<b>18.00 – 21.00</b>	<i>Dinner hosted by Tsinghua University</i>

## Program at-a-glance

	<b>Thursday 26 November</b>	<b>Friday 27 November</b>
<b>9.00 – 10.30</b>	<p><b>Opening Session</b></p> <p>Welcome &amp; Program Overview (by Prof. Maosong Sun, Tsinghua Univeristy)</p> <p>Welcome speech (by Prof. Sun Jiaguang, NSFC)</p> <p>Report of the 1<sup>st</sup> Summit (by Prof. Xiaofang Zhou, UQ and EII)</p> <p>Introduction to NSFC (by Professor Liu Ke, NSFC)</p> <p>Funding Research Excellence in Australia - Introduction to the Australian Research Council (by Professor Richard Coleman, ARC)</p>	<p><b>Education Session</b></p> <p>Chairs: Prof. Alistair Moffat, University of Melbourne &amp; Prof. Jianming Wang, Tsinghua University</p> <p>Invited Talks:</p> <p style="padding-left: 20px;">Keynote 4 by Prof. Paul Bailes, University of Queensland</p> <p style="padding-left: 20px;">Keynote 5 by Prof. Xiaoming Li, Peking University</p>
<b>10.30 – 11.00</b>	<i>Morning Tea</i>	
<b>11.00 – 12.00</b>	<p><b>Brief 3-Minute introductions</b> by delegates and their institutions in round table session</p> <p>Chairs: Prof. Sanjay Chawla, University of Sydney &amp; Prof. Xiaoyong Du, Renmin University</p>	<p><b>Panel Discussion:</b> Cultivation model of Computing Talents in Liberal Education: Challenges and Countermeasures</p> <p>Chair: Prof Paul Bailes (UQ) &amp; Prof. Xiaofei Xu (HIT)</p> <p>Panelists: Prof. Yuxi FU (SJTU), Dr Guido Governatori (NICTA), Prof. Yanxiang HE (WU), Prof. Xuandong LI (NU), Dr Bing Bing Zhou (USYD)</p>
<b>12:00-12:30</b>		<p><b>Discussions</b> on establishing the 985-Go8 IT Research and Education Summit (ITRES) Steering Committee (Chaired by Prof Xuemin Lin (UNSW) &amp; Prof. Hai Jin (HUST)</p>
<b>12.30 – 14.00</b>	<i>Lunch</i>	
<b>14.00 – 15.30</b>	<p><b>Research Session</b></p> <p>(Chairs: Prof. Hong Mei, Peking University &amp; Prof. David Suter, University of Adelaide)</p> <p>Invited Talks:</p> <p style="padding-left: 20px;">Keynote 1 by Prof. Rao Kotagiri, University of Melbourne)</p> <p style="padding-left: 20px;">Keynote 2 by Prof. Jianzhong Li, HIT</p> <p style="padding-left: 20px;">Keynote3 by Prof. Huaiming Wang, NUDT</p>	<p><b>Visit Microsoft Research Asia [MSRA]:</b></p> <p>13.30: Intro &amp; Welcome, Dr Hsiao-Wuen Hon, Managing Director, MSRA</p> <p>14.00: Dr Eric Chang, Director of Technology Strategy, MSRA</p> <p>14.45: Dr Feng Zhao &amp; Dr Weiyong Ma, Assistant Managing Directors, MSRA, and Dr Hang Li, Research Manager, MSRA</p> <p>15.30: Dr Xing Xie, Lead Researcher, MSRA</p>
<b>15.30 - 16.00</b>	<i>Afternoon Tea</i>	
<b>16.00 - 17.00</b>	<p><b>Panel Discussion:</b> Research Opportunities and Sino-Australia Collaboration</p> <p>Chairs: Prof. Mingshu Li (CAS) &amp; Prof. Mark Wallace (Monash)</p> <p>Panelists: Prof Sanjay Chawla (USYD), Prof Tom Gedeon (ANU), Prof. Jianmin Wang (Tsinghua), Prof. Xiaofei Xu (HIT), Prof Jingling Xue (UNSW), Prof Yanchun Zhang (VU), Prof. Aoying Zhou (ECNU)</p>	
<b>18.00 – 21.00</b>	<i>Summit Banquet</i>	<i>Dinner hosted by Renmin University</i>

## Program in Detail

### 25 Nov (Wednesday) Morning – Australian delegates only

- 7.00 – 9.00am Breakfast meeting for Australian delegates
- 10.00am – 12.00pm Visit Peking University
- 12.00 – 2.00pm Business lunch (hosted by Peking University)

#### *About Peking University*

Peking University is a comprehensive and national key university. The campus, known as "Yan Yuan (the garden of Yan)", is situated at Haidian District in the western suburb of Beijing, with a total area of 2,743,532 square metres (or 274 hectares). It stands near to the Yuanmingyuan Garden and the Summer Palace. Peking University is proud of its outstanding faculty, including 53 members of the Chinese Academy of Sciences (CAS), 7 members of the Chinese Academy of Engineering (CAE), and 14 members of the Third World Academy of Sciences (TWAS).

The university has effectively combined research on important scientific subjects with the training of personnel with a high level of specialized knowledge and professional skill as demanded by the country's socialist modernization. It strives not only for improvements in teaching and research work, but also for the promotion of interaction and mutual promotion among various disciplines.

Thus Peking University has become a center for teaching and research and a university of a new type, embracing diverse branches of learning such as basic and applied sciences, social sciences and the humanities, and sciences of medicine, management, and education. Its aim is to rank among the world's best universities in the future.

The School of Electronics Engineering and Computer Science (EECS) is the largest school in Peking University. It now covers four departments: Department of Computer Science and Technology, Department of Electronics, Department of Microelectronics, and Department of Machine Intelligence. Under these four departments are 12 research institutes, which are responsible for research activities and graduate students education. About 390 faculty and staff members work in the school. Among them are 83 full professors, including three members of Chinese Academy of Sciences (one is an adjunct faculty) and one member of Chinese Academy of Engineering. About 2600 students are enrolled in the school. Roughly half of them are enrolled in the undergraduate program, while the others are pursuing graduate degrees.

Since its establishment, the school of EECS has become an internationally recognized, prestigious education and research organization. The school continuously boasts the best student recruitments, and produces more than 600 excellent graduates (half of them with M.S. and Ph.D. degrees) each year. The school has carried out numerous national key research and development projects. With average total funding of 100 million RMB every year, the school has become an important research driving force in the related fields. We have established numerous collaborations with many renowned universities and famous companies and industrial research labs, both domestically and internationally.

## 25 Nov (Wednesday) Afternoon – Australian delegates only

- 2.00 – 4.00pm Visit Tsinghua University
- 6.00 – 9.00pm Dinner (hosted by Tsinghua University)

### *About Tsinghua University*

Tsinghua University was established in 1911, originally under the name “Tsinghua Xuetang”. The school was renamed “Tsinghua School” in 1912. The university section was founded in 1925. The name “National Tsinghua University” was adopted in 1928. Since China opened up to the world in 1978, Tsinghua University has developed at a breathtaking pace into a comprehensive research university. At present, the university has 14 schools and 56 departments with faculties in science, engineering, humanities, law, medicine, history, philosophy, economics, management, education and art. The University has now over 25,900 students, including 13,100 undergraduates and 12,800 graduate students. As one of China’s most renowned universities, Tsinghua has become an important institution for fostering talent and scientific research. The educational philosophy of Tsinghua is to “train students with integrity.” Among over 120,000 students who have graduated from Tsinghua since its founding are many outstanding scholars, eminent entrepreneurs and great statesmen remembered and respected by their fellow Chinese citizens. With the motto of “Self-Discipline and Social Commitment” and the spirit of “Actions Speak Louder than Words”, Tsinghua University is dedicated to the well-being of Chinese society and to world development.

Founded in 1958, the Department of Computer Science and Technology of Tsinghua University has been known for its significant contributions and key achievements in the history of developing the computer industry of China. After 40 years of endeavor, the department has grown to be the strongest and most influential among its counterparts in other universities in the nation, playing an ever-important role in the development of China's information technology as well as its national economy.

The Department of Computer Science and Technology currently has 110 faculty members actively engaged in teaching and research. The department consists of four institutes and state key laboratories:

- *the Institute of Computer Networks*
- *the Institute of Computer Software*
- *the Institute of High Performance Computing*
- *the Institute of Human-computer Interaction and Media Integration*
- *the State Key Laboratory of Intelligent Technology and Systems*

The research areas of the department cover parallel and distributed computing, high performance computer systems, computer networks, software engineering, knowledge engineering, distributed databases, computer graphics and CAD, data security, artificial intelligence, multimedia technology, visualization technology and VLSI design automation etc. Every year the department undertakes nearly 200 projects from the National Natural Science Foundation, the National 863 High-tech Program, international cooperative projects and significant application projects. It has received many national and ministerial awards for scientific advancement. The Department of Computer Science and Technology includes 10 instructional laboratories and 8 joint laboratories in collaboration with renowned international corporations such as Intel, IBM, Microsoft and SUN. Over 60 courses are scheduled in both the undergraduate and graduate curriculums, with emphasis in both fundamental knowledge and applications with the objective to extend knowledge horizons and exploring new technologies. There are currently about 660 undergraduate students, 800 graduate students and 27 post doctoral researchers.

## 26 Nov (Thursday) – All delegates

### Opening Session(9:00-10:30)

- Welcome & Program Overview (by Prof. Maosong Sun, Tsinghua University)
- Welcome speech (by Prof. Jianguang Sun NSFC)
- Report of the 1st Summit (by Prof. Xiaofang Zhou, UQ and EII)
- Introduction to NSFC (by Professor Ke Liu, NSFC)
- Funding Research Excellence in Australia - Introduction to the Australian Research Council (by Professor Richard Coleman, ARC)

### Self-Introduction Session(11:00-12:30)

Chairs: Prof. Sanjay Chawla, University of Sydney & Prof. Xiaoyong Du, Renmin University

- Brief 3-Minute introductions by delegates and their institutions in round table session

### Research Session (14:00-15:30)

**Chairs:** Prof. Hong Mei, Peking University & Prof. David Suter, University of Adelaide

**Keynote 1** Prof. Rao Kotagiri, University of Melbourne

**Title:** Data rich Societies and Challenges

**Keynote 2** Prof. Jianzhong Li, HIT

**Title:** *Massive Data and Data Intensive Super Computing*

**Abstract:** Recent years, data-intensive super computing systems (DISCS) have been created by Google and its competitors in response to the rapidly growing in dataset size and the need of high performance analyzing of massive datasets. DISCSs are different from conventional supercomputers since they acquire and maintain continually changing data sets and perform large-scale computations over the data. DISCSs open up new opportunities to achieve great advances in science, biology and health care, industry and business efficiencies, and so on, and it has become a new research field in the 21 century. This talk will discuss the concepts, motivation, challenges and research issues of DISCS. Some our solutions are also presented.

**Keynote 3** Prof. Huaiming Wang, NUDT

**Title:** *Software in Internet Age in China*

**Abstract:** Internet has becoming a crucial information infrastructure of modern society. In the past decade, middleware has been recognized as a basic solution to meet the challenges for Internet computing, such as Internet-scale application, ubiquitous computing capability and constantly changes in system requirement. The first part of this talk present our understanding of distributed object computing middleware technology, as well as an introduction to our practices through the research and development around StarBus+, PKUAS, WebSASE and ONCE. With the rising of new computing paradigms, such as P2P and Grid computing, we have put forward several novel research programs on the software foundation of Internet-scale resource sharing and collaboration, including: internetware, iVCE and CROWN. The rest of this talk will focus on our understanding and perspective of next generation Internet computing platform. We believe that the new paradigm will come from the convergence of diverse approaches, interplay between IT and other disciplines and the constantly changing and emerging visions.

## Panel Discussion (16:00-17:00)

**Chairs:** Prof. Mingshu Li (CAS) & Prof. Mark Wallace (Monash)

**Panelists:** Prof Sanjay Chawla (USYD), Prof Tom Gedeon (ANU), Prof. Jianmin Wang (Tsinghua), Prof. Xiaofei Xu (HIT), Prof Jingling Xue (UNSW), Prof Yanchun Zhang (VU), Prof. Aoying Zhou (ECNU)

**Topic:** Research *Opportunities and Sino-Australia Collaboration*

**Focus:** Web scale software and data management techniques

## Summit Banquet (18:00-21:00)

## 27 Nov Morning (Friday) – All Delegates

### Education Session (9:00-10:30)

**Chairs:** Prof. Alistair Moffat (Melbourne) & Prof. Jianming Wang (Tsinghua)

**Keynote 4** Prof. Paul Bailes (UQ)

**Title:** *Making Lemons into Lemonade: implications for teaching in a research-intensive university*

**Abstract:** In research-intensive universities such as those in the Chinese 98-5 project and the Australian Go8, it sometimes appears that teaching has to take second place behind the demands of research. For example: academics' time focuses on research; discretionary university funds are allocated to research facilities. We explore how these realities can be managed and turned to advantage in key teaching-related matters such as selection of staff, curriculum design and budget management.

**Keynote 5** Prof. Xiaoming Li (Peking)

**Title:** *Understanding Undergraduate Computing Education in China*

### Panel Discussion (11:00-12:00)

**Chairs:** Prof. Xiaofei Xu (HIT) & Australian co-Chair

**Panelists:** Prof. Yuxi FU (SJTU), Dr Guido Governatori (NICTA), Prof. Yanxiang HE (WU), Prof. Xuandong LI (NU), Dr Bing Bing Zhou (USYD)

**Topic:** *Cultivation model of Computing Talents in Liberal Education: Challenges and Countermeasures*

**Focus:** General Education and Undergraduate Computer Science Students - Issues and Strategies

**Questions:**

- 1) Liberal education or classified education or professional education?
- 2) More CS fundamental knowledge or more IT technical training?
- 3) Approaches to cultivate computing talents: challenge and countermeasure?
- 4) How to enhance the creativity, innovation ability of students in CS and IT?
- 5) Education collaboration models between Chinese universities and Australian universities?

### Discussion (12:00-12:30)

**Discussion** on establishing the 985-Go8 IT Research and Education Summit (ITRES) Steering Committee  
Chaired by Prof Xuemin Lin (UNSW) & Prof Hai Jin (HUST)

## **27 Nov Afternoon (Friday) – Australian delegates only**

- 1:30- 4:00pm Visit Microsoft Research Asia [MSRA]
- 6.00 – 8.00 pm Dinner (hosted by Renmin University)

### *About Renmin University:*

Renmin University of China (RUC, also known as the People's University of China) was established in 1937, during the resistance war against Japanese aggression. The University acquired its present name on October 3, 1950, which made it the first university to be established by the newly founded People's Republic of China. The RUC's strengths emphasize the humanities and social sciences, however, the university also embraces disciplines in the area of natural sciences and Information Technical. The RUC is a comprehensive research-orientated university. In a recent appraisal conducted by the Ministry of Education, five disciplines at the RUC rank first among all the universities in China. These disciplines are: Theoretical Economics; Applied Economics; Legal Studies; Sociology; and Journalism and Communication. The same appraisal saw the RUC programs in Political Science, Management of Agricultural and Forestry Economics, History, and Business Administration also score very well. These results fully demonstrate the great potential of the strength in teaching and research at Renmin University.

At present, the RUC has an enrolment of 18,752 students. This breaks down into 9,262 undergraduate students and 9,490 postgraduate students. The ratio of postgraduates to undergraduates is the highest of all the research-orientated comprehensive universities in China.

School of Information provides three academic programs for undergraduate students. They are computer science and technology, management science and engineering, mathematics and applied mathematics. We focus on the application of mathematics and modern information technology in the field of economic management and social science. The unique feature of our programs is the cross-discipline environment for training out students. It also provides fruitful academic programs for graduated students from science, engineering to management science. It provides eight Master degree programs and two Doctor degree programs. They are Master of Engineering in information management, computer science and computer application, Master of Science in System Theory, Mathematics, Applied Mathematics, Probabilities and Mathematical Statistics, Master of Economic in Mathematical Economic, Doctor of engineering in computer application, Doctor of Economics in Mathematical Economics.

## **28 Nov (Saturday) – optional – Australian delegates only**

- 8am Depart hotel for Great Wall and other places
- 5pm Return hotel (*and the end of Summit program*)

## **Australian Delegation**

Chair: Prof Richard Coleman, Executive Director, Physical, Mathematical and Information Sciences,  
ARC

Vice Chair: Prof Xiaofang Zhou, Convenor and Director, ARC Research Network in Enterprise  
Information Infrastructure

Members: (17 participants, in alphabetic order)

- Paul Bailes, Head, School of Information Technology & Electrical Engineering, The University of Queensland
- Sanjay Chawla, Head, School of Information Technologies, The University of Sydney
- Richard Coleman, Executive Director, Physical, Mathematical & Information Sciences, Australian Research Council
- Henry Gardner, Head, School of Computer Science, The Australian National University
- Tom Gedeon, Professor of Computer Science, The Australian National University
- Guido Governatori, Associate Education Director, National ICT Australia
- Ramamohanarao (Rao) Kotagiri, Professor in Computer Science, The University of Melbourne
- Xuemin Lin, Professor of Computer Science & Engineering, The University of New South Wales
- Alistair Moffat, Head, School of Computer Science & Software Engineering, The University of Melbourne
- Aruna Seneviratne, Australian Technology Park Laboratory Director, National ICT Australia
- David Suter, Head, School of Computer Science, The University of Adelaide
- Mark Wallace, Professor, Faculty of Information Technology, Monash University
- Kathleen Williamson, Network Manager, ARC Research Network in Enterprise Information Infrastructure, The University of Queensland
- Jingling Xue, Professor of Computer Science & Engineering, The University of New South Wales
- Yanchun Zhang, Director, Centre for Applied Informatics Research, Victoria University
- Bing Bing Zhou, Associate Dean, Faculty of Science, The University of Sydney
- Xiaofang Zhou, Professor of Computer Science and Convenor, ARC Research Network in Enterprise Information Infrastructure, The University of Queensland

## China Delegation

Chair: Professor Jiaguang Sun, Vice president of National Natural Science Foundation of China,  
Dean of School of Information, Tsinghua University,

Vice Chair: Professor Zhaotian Zhang, Deputy director, Department of Information Sciences,  
National Natural Science Foundation of China

Members: (28 participants *in alphabetic order*)

- Xiaoyong Du, Dean, School of Information, Renmin University of China
- Yuxi Fu, Head, Department of Computer Science, Shanghai Jiaotong University
- Ji-Feng HE (Academician), Dean, Software Engineering Institute, East China Normal University
- Yanxiang He, Dean, Computer School, Wuhan University
- Jiwu Huang, Dean, School of Information Science and Technology, Sun Yat-Sen University
- Guohui Li, Vice Dean, School of Computer Science and Technology, Huazhong University of Science and Technology
- Mingshu Li, Director, Institute of Software, Chinese Academy of Sciences
- Ke Liu, Director, Division of Computer Science, Directorate of Information Sciences, National Natural Science Foundation of China
- Xiaoming Li, Director, Institute of Network Computing and Information Systems, Peking University
- Xuandong Li, Head, Department of Computer Science and Technology, Nanjing University
- Jianzhong Li, Professor, Department of Computer Science and Engineering, Harbin Institute of Technology
- Dianfu Ma, Dean, School of Computer science and engineering, Beijing University of Aeronautics and Astronautics (Beihang University)
- Hong Mei, Dean, School of Electronics Engineering and Computer Science, Peking University
- Xiangxu Meng, Dean, School of Computer Science and Technology, Shandong University

- Yuwen Qin, Deputy Director, Directorate of Information Sciences, National Natural Science Foundation of China
- JiaGuang Sun, Academician, Vice President, National Natural Science Foundation of China; and Dean, School of Information Science and Technology, Tsinghua University
- Maosong Sun, Head, Department of Computer Science, Tsinghua University
- Yuan-Yan Tang, Dean, College of Computer Science, Chongqing University
- Huaimin Wang, Deputy Dean, School of Computer Science and Technology National University of Defense Technology
- Jianmin Wang, Deputy Dean, School of Software, Tsinghua University
- Xiangyang Xue, Deputy Dean, School of Computer Science and Technology, Fudan University
- Xiaofei Xu, Dean, School of Computer Science and Technology, Harbin Institute of Technology
- Ge Yu, Deputy Dean, School of Information Science and Engineering, Northeastern University
- Yi Zhang, Dean, College of Computer Science, Sichuan University
- Zhaotian Zhang, Deputy Director, Directorate of Information Sciences, National Natural Science Foundation of China
- Aoying Zhou, Deputy Dean, School of Software, East China Normal University
- Xingshe Zhou, Dean, School of Computer Science, Northwestern Polytechnical University
- Yueting Zhuang, Dean, School of Computer Science, Zhejiang University