Newsletter Issue 1, 2003

HKBU
Computer Science Department
計 算 機 科 學 系

Computer Science

Message from Department Head

Welcome to the Newsletter of Computer Science Department (CSD) — a community of vibrant students, dedicated educators, renowned researchers, professional staff, and proud graduates! In this inaugural issue as well as the future issues of the CSD Newsletter, you will get a feel of how our community is developing and where we are heading, in terms of our educational programs, research breakthroughs, innovative technologies, and the academic and professional achievements of our staff and students, past or present.

Here are just a few recent examples of what you will learn. In order to enable our students to be prepared for tomorrow's industry and research challenges, we have been moving proactively in both broadening and deepening our educational program spectrum, incorporating internationally well-recognized Computer Science and Information System curricula. In order to cultivate an enriched learning environment, we have launched summer courses, in part sponsored by IBM, and a unique faculty-supervised Elite Research Program for our students. On the research side, we have consolidated our resources, both tangible and intangible, and established some key research and development laboratories namely, Agents, Machine-learning, and Data-mining Lab, Pattern Recognition Lab, Networking and Multimedia Lab, Information Systems Lab, and Innovation and Technology Lab. Through strengthening major computational resources and attracting talented individuals, the collective research and service activities in these labs will readily demonstrate our true scholarship and leaderships in those respective research fields. Furthermore, in order to better serve the society at large, we have successfully organized a department-sponsored. Student Volunteer Program for several local non-profit organizations and a Computer Science Summer Camp for high school students. All these and many more can only be accomplished when the members of our CSD community cherish a clear sense of mission, responsibility, and ownership.

As we have embarked on a very exciting journey to become one of the prime-choice high-education communities for creating, transferring, and sharing Computer Science and Information Technology (IT) knowledge and practice, I would like to take this opportunity to invite you to become a part of it. Your active participation in our on-going and future activities, as well as your strong support, will help make our vision and dreams become true. I am looking forward to working closely with you and meeting you either in person or in the Newsletter.

Now, let us enjoy reading this very first issue.

Prof. Jiming Liu
Head of Computer Science Department, HKBU
Fall 2003

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香港浸會大學
HONG KONG BAPTIST UNIVERSITY (HKBU)

Latest News

Prof. Jiming Liu: has founded and taken the role of Editor-in-Chief in Web Intelligence and Agent Systems: An International Journal.

Web Intelligence and Agent Systems: An International Journal (Publisher: IOS Press, The Netherlands)

Prof. Yuan Yan Tang: has founded and taken the role of Editor-in-Chief in International Journal of Wavelet, Multiresolution and Information Processing.

International Journal of Wavelets, Multiresolution and Information Processing (Publisher: World Scientific)

Since the first semester of 2003-2004, there have been two new faculty members joining the Department. They are:

Dr. Xiaowen Chu
He received B.Eng. degree in Computer Science from Tsinghua University in 1999, and Ph.D. degree in Computer Science from Hong Kong University of Science and Technology in 2003. He is currently an Assistant professor in the Department.

His main research areas are Optical WDM Networks, High-performance Routing and Switching, and Internet Security.

Dr. Zheng Sun
He received his Bachelor degree in Computer Science from Fudan University, Shanghai, China. In 1996, he entered the graduate program in the Computer Science Department at Duke University, North Carolina, USA, and earned his Ph.D. degree in 2003. During this period, he also worked at Microsoft Corporation (for about one year and a half) and a small Internet startup company called Perfect Commerce (for about two years). He is currently an Assistant professor in the Department.

His main research interest lies in the areas of Algorithmic Robotics and Computational Geometry. He is also interested in Data Mining, and in particular, Applications in E-Commerce.

Research Areas of Strength

The Department has established research excellence in the following three strategic areas:

AREA	FOCUS
Intelligent Informatics	Autonomous agents and multi-agent systems; Statistical and graph-based learning; Rule-based reasoning
Networking and Multimedia	Multimedia communications and systems; All-optical networks; Wireless communications; IP networks
Pattern Recognition	Wavelet analysis and its applications; Vision-based human understanding technology

Our colleagues working in some of the focusing areas have been recognized internationally. They are holding editorships in various international journals, and have been Invited Speakers at prestigious international conferences, such as 2003 International Joint Conference on Artificial Intelligence (IJCAI).
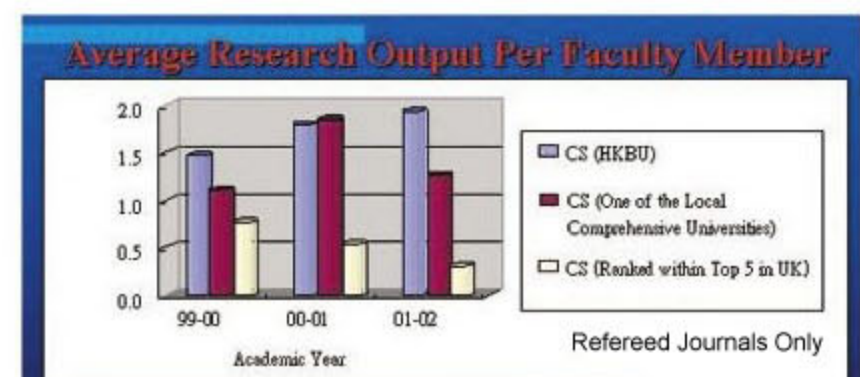
Research Output

Within the past three years, the research output of our faculty members has been steadily increasing. The following is a snapshot of some publications in the top peer-reviewed international journals:

(Among the peer-reviewed journal publications, 17 appeared in IEEE Transactions.)

Furthermore, regardless of our very limited resources, the following is a comparison among the Computer Science Departments in Hong Kong and in United Kingdom.

Average Research Output Per Faculty Member

- CS (HKBU)
- CS (One of the Local Comprehensive Universities)
- CS (Ranked within Top 5 in UK)

Refereed Journals Only

Technical Reports

In February 2003, the Department launched the technical report series to publish the latest research results from our academic staff. Just within the past eight months, we have published 20 technical reports in total, which cover a variety of research areas such as Machine Learning, Intelligent Agents, Pattern Recognition, Wireless Communication, and so forth. More details can be found in the departmental web site:http://www.comp.hkbu.edu.hk/tech-report.

Technical Report Series

Partner Institutions with the Department

The Department is in collaboration with five top universities in Mainland China:

- **Sun Yat-Sen University, China**
- **University of Science and Technology of China**
- **Xidian University, China**
- **Zhejiang University, China**
- **Henan University, China**

in wide-ranging activities through mutual sharing of research-oriented information and output, bi-directional staff visit, student exchange, and so forth.

The delegates from Computer Science College of Zhejiang University visited to our Department in August, 2003.

Some Recent Highlights

a. President's Award on Scholarly Work 2002

President's Award on Scholarly Work 2002

Prof. Yuan Yan Tang was awarded the prize of President's Award of Hong Kong Baptist University in 2002 upon his excellent scholarly performance.

b. Excellent Paper Award Received in ANIA 2003 International Conference

ANIA 2003 International Conference Excellent Paper Award

Dr. Joseph Kee-yin Ng and his two M.Phil. students, Kenny Ka-ho Kan and Stephen Ka-chun Chan, received the Excellent Paper Award in the ANIA 2003 International Conference.

c. Best Presentation Award Received in ACM 4th Postgraduate Research Day

Best Presentation Award

Ms. Candy Lai-kuen, Yiu (M.Phil. student) received the prize of Best Presentation Award at the 4th Postgraduate Research Day, which was organized by Association for Computing Machinery (ACM), Hong Kong Chapter, in December 2002.

d. Merit Awards Received in Intervarsity Internet Technologies Exposition and Conference 2003 (IiTEC 2003)

Two outstanding undergraduate honours projects from the Department:

1. "Web-based Road Traffic Monitoring and Routing System" by Kar-kei So and Clement Chan
2. "Web Services Builder" by Yi-leung Lui

were awarded the prize of Merit Award in Intervarsity Internet Technologies Exposition and Conference 2003 (IiTEC 2003).

The participating projects were selected from a pool of over 400 projects from the Co-organising Institutions via a nomination and assessment process.

IiTEC 2003 Merit Awards

Departmental Activities in 2002-2003

- ## International Conference IDEAL'03 at HKCEC (March 21-23, 2003)

The Fourth International Conference on Intelligent Data Engineering and Automated Learning (IDEAL'03), organised by the Department, was successfully held at the Hong Kong Convention and Exhibition Centre on March 21-23, 2003. IDEAL is a premier conference dedicated to emerging and challenging topics in intelligent data analysis and engineering, and their associated learning paradigms. This year's conference was co-located with the IEEE Conference on Computational Intelligence for Financial Engineering (CIFE'03). The two conferences attracted more than 150 participants from all over the world despite the US-Iraqi war and the outbreak of severe acute respiratory syndrome in Hong Kong.

(from left)
Prof. Yuan-Yan Tang ,
Prof. Jiming Liu ,
President Ching-Fai Ng,
and Prof. Tang Tao

- ## Visit to Hong Kong Applied Science and Technology Research Institute (June 3, 2003)

A team of 13 staff members from the Department, led by the Dean of Science, Prof. Rick Wong, visited the Hong Kong Applied Science and Technology Research Institute Co. Ltd. on June 3, 2003. During this visit, both sides not only briefed and demonstrated their existing R&D projects, but also explored the mutual potential collaboration on research and project development.

- ## Summer Course

The Department offered three summer courses: IBM DB2, SVG Programming, and Network Administration, for our students during the period between June 11 and July 3, 2003. These courses were very welcome by the students. In particular, the IBM DB2 course was oversubscribed.

- ## Elite Program (since June, 2003)

The Elite Program is developed for an intensive and advanced training of our students who are more academically oriented and talented. The intention is to provide an environment for extended and expanded learning via participation in faculty research and/or application development. We have admitted five students so far, who are currently being supervised by our academic staff on an individual basis.

- ## Lunch Bite

This activity aims at encouraging students to discuss with each other in a casual environment, where strong links among the students can be built.

The Lunch Bite is a student-oriented activity held once a month. Each time, one student will be invited to give a talk to share his/her knowledge and experience in an interesting topic. Lunch refreshments are provided to the participants.

- ## Computer Science Summer Camp Stretches Mind and Vision

This three-day summer camp, which was organised by our Department and Summer Youth Programme Committee on July 23 - 25, 2003 enabled secondary students to experience campus life and strengthened the connections between the University and secondary schools.

Besides obtaining first-hand information about the latest technology development, participants had their innovative thinking and problem-solving abilities enhanced through Linux seminar, hands-on exercises, interactive games, sports activities, mentoring and sharing sessions as well as a series of workshops on robot games, network security, vector graphics and communication.

The summer camp was sponsored by The Hong Kong Jockey Club Charities Trust, IBM China/HK Limited, ThizLinux Education Alliance, and HKBU.

The masterminds share their creative works

- ## Volunteer Program (June - July 2003)

From June to July, Department of Computer Science, together with Department of Social Work, organized a volunteer program called "腦有所為義工計劃". The program has three objectives:

1. To help those voluntary organizations that need help in developing computer systems or programs.
2. To educate those who want to acquire computer knowledge.
3. To provide students a chance to serve the community by sharing their knowledge with others.

In this program, volunteers conducted computer courses, such as Basic Computer Knowledge, MS Office, Photoshop and Chinese Word Processing, to the members of some organizations, such as The Boy's and Girl's Clubs Association of Hong Kong, and Hong Kong Women Development Association. Besides, they also helped some organizations develop computer systems. These activities were carried out under the supervision of our faculty members from both Departments. All services were provided free-of-charge.

Nearly 40 students participated in this program. Each of them took at least one responsibility such as liaising with organizations, teaching, editing course materials, and supporting the courses.

• Competition of Logo Design

With our Computer Science Department moving into the new millennium, we need a logo to symbolize the wisdom of information technology and innovation, and to convey the messages of Enroute to Excellence. Hence, in the past summer holidays, the Department has organized a competition for the departmental logo design. From 49 designs, a departmental selection panel finally selected the following design as the departmental logo:

HKBU Computer Science Department 計 算 機 科 學 系

(Designed by: Lam Yeung Sing, our undergraduate student)

Career of Our Former Students

Where are our recent PhD graduates?

- Dr. Yu Tao: Post-Doctoral Fellow – USA
- Dr. Feng Li: Post-Doctoral Fellow - Canada
- Dr. Guo-can Feng: Research Fellow - University of Glamorgan, UK

Career of Our Undergraduate Students

院校	編號	課程	畢業人數	就業率(%)	升學率(%)	待業率(%)	平均薪酬(元)	主要從事工作	15年內畢業的傑出校友(現職)
					2001年				
浸大	2448	計算機科學(資訊系統)	32	90.63	6.25	3.12	12,891	工程、系統分析/程式編寫、教育	/
理大	3856	資訊科技	55	88.00	8.00	4.00	13,684		/
浸大	2436	計算機科學(計算機系統)	32	87.50	9.38	3.12	13,164	工程、系統分析/程式編寫、教育	/
城大	1561	電腦科學	102	84.50	8.30	7.20	14,298	系統分析/程式編寫、軟件工程	/
中大	4410	計算機工程學	50	79.00	18.40	2.60	14,830	行政人員、系統/程式設計及管理、教師	/
理大	3105	資訊系統(HD)	52	77.60	14.30	8.10	10,396	/	/
中大	4446	訊息工程學	102	77.30	22.70	0.0	16,393	系統管理、編寫程序、通訊及網絡工程	林永君(慧科訊業行政總裁)、吳國聲(慧聯科技有限公司行政總裁)、黃廣林(渣打銀行零售銀行業務行款及投資服務總監)
理大	3868	電子計算	96	76.90	14.30	8.80	14,569		/
中大	4422	計算機科學	75	75.90	16.70	5.50	15,754	行政人員、系統/程式設計及管理、教師	/
理大	3076	電子及資訊工程學(HD)	93	72.70	19.00	8.30	9,500	工程、市場推廣/銷售、電腦	/
理大	3193	多媒體設計與科技(HD)	37	57.50	21.20	12.10	10,028	多媒體設計、網頁/動畫設計	/
城大	1573	電子計算機工程學	65	/	/	/	12,831	系統分析、程式編寫	何家豪(千里眼控股有限公司工程董事)、林煒耀、黎智偉(聰明卡設計中心高級工程人員)
					2002年				
浸大	2448	計算機科學(資訊系統)	42	90.48	7.14	2.38	8,700	工程、行政管理、程式編寫	/
城大	1456	創意媒體	60	85.00	11.70	3.30	/	多媒體/平面設計、電視電影及廣告製作、研究	謝月嫦(第48屆歐柏豪森國際短片展國際評判團特別獎得主)
浸大	2436	計算機科學(計算機系統)	32	68.75	28.13	3.12	8,700	工程、行政管理、程式編寫	/
城大	1975	媒體科技(AD)	34	14.70	82.40	/	/	電影/攝視/廣告製作、教育	/

(Data extracted from 明報 大學選科全攻略 2003)

The employment rate of our undergraduate students is always in the top places in comparison to other local IT related programmes. Even though in the worst economic climate in 2001 and 2002, the rates were still in the top three places.

Call for Alumni Participation

To foster a closer link with the alumni, the Department invites all former students to supply their contact information via the departmental web site. Through the campaign, we hope to set up a database so that we can send out newsletters or other announcements to our alumni from time to time. So far, the response is mixed. We would certainly like to see more names. For those who have not signed up, please do so at your earliest convenience. The web site is **http://www.comp.hkbu.edu.hk/~alumni.** If you have already done so, please help us encourage more former classmates to do the same. As we have mentioned in the invitation, we pledge to keep your personal information confidential, and won't release it to anybody, including even your former classmates, without your prior consent.

We are planning an alumni homecoming dinner on November 22, 2003, Saturday. Please refer to the web site **http://www.comp. hkbu.edu.hk/~alumni/dinner** for further information.

To keep in touch, we would like to invite you to send us some news about you (e.g., job change, recent promotion, getting married, a new member in the family, etc.). If you want to share your joy or fun with our alumni, please contact Dr. Ernest C.M. Lam by email: ecmlam@comp.hkbu.edu.hk, or dial 3411 7081 at any time. We shall announce it in our future newsletters. If your news is about other alumni, for personal data protection reasons, we shall need the consent of the persons concerned before publishing it.

We look forward to hearing from you, and meeting you in the homecoming dinner.

Words of Wisdom

A Look at Today's Job Market

Dr. Ernest C.M. Lam:

Since the beginning of this year, Hong Kong has been facing all kinds of problems, for example, SARS, ever increasing unemployment rate, governance, and in general, confidence problems. For our graduates, an important concern is that jobs are scarce, particularly in the information technology (IT) field. It's ironic that while Hong Kong is in transition to an information-based economy, the job market in the IT area is the worst in history right now. The main reasons for this phenomenon are the downturn of the economy, the over-expansion of the IT industry in the past several years, and the trend of employers moving many of the back office tasks, including IT jobs, to low cost locations like the Mainland.

In this information age, companies are constantly looking for ways to outsource their work to reduce their cost, or move to their low cost overseas branches. If a job is removed, the staff concerned may be laid off, or assigned new job duties. No jobs are secured.

With increasing supply of qualified applicants in recent years, employers are more demanding nowadays. They will wait for an ideal candidate to come forward, rather than making rush offers. From informal discussion with industrial leaders and reading of various employment-related reports, besides the basic requirement of a relevant degree, we note that employers look for candidates with good communication skills, common knowledge and work attitude. Many major employers do not care if the candidate has experience in the tools they will use in the job. In most of the work, there is a need to communicate with colleagues and clients, and there are no well-defined specifications in the tasks. Usually bosses or clients will indicate what they want to do. It is up to you to make judgment and suggestions for filling in the details. They expect you to deliver the product/service and meet their sketchy specifications on time. Thus, good communication skill is important for you to understand your boss/client, and vice versa. Furthermore, in this service-oriented society with demanding clients, as a server, you have to try your best to please your client; otherwise you may receive complaints. Good communication skills also help avoid misunderstanding with the other party.

Good work attitude includes reporting to work on time, trying your best whenever you are assigned any duty, making suggestions and offering your view at suitable time, volunteering yourself when there is a need, etc. Due to the free spirit and lassie-faire practice in the university, some fresh graduates have problems adjusting to the working environment. In the university, students may not have to aim at perfect quality and can still survive. For example, you could submit your assignments or projects to your professors even though you know that there are bugs here and there. Your professor may accept them for a passing grade. In the real world, most bosses and clients cannot tolerate any mistake, including very minor ones. You can sit passively in the class, or sometimes even skip some of them. There is little consequence in most cases. In the work, your boss expects you to be a dedicated staff. You should voice your opinion at suitable time so that your boss will not feel you are not interested in the work. You have to report to work and complete your assignment on time. No matter how busy they had been during their years of study, most people found that the university life is most enjoyable.

The economy in Hong Kong has been going down hill for about 5 years. The news in the recent months appears more encouraging. We hope that it will get better from now on. In any case, one fact will not change - global competition in the information age means survival the fittest. Lifetime employment is history. Management will always expect more output with less resource. Employees are expected to be flexible, readily adaptive to sudden and drastic changes in job requirements, and be able to learn fast. The need of constant update of knowledge and skills is a fact of life.

It is never too early or too late to plan for your future. Since communication skills, work attitude and common knowledge are very important nowadays, and they cannot be acquired in a short time, it is better to prepare early. On communication skills, express your view whenever there is opportunity. There is no need to worry about making mistakes. Have confidence in yourself. Be sincere to people around you, and serious and responsible in the study and work. Listen and read more news and articles related to your career interests. Familiarization with popular terms and names in the field is useful for job interviews.

It is a good idea to be serious, and at the same time, optimistic in all matters. If you are serious in your study and work, your work will most likely be of good quality, and the chance of success is high. If you have no confidence in yourself and worry much, it affects the work efficiency, and you may feel depressed because of the pressure. A cheerful person usually has many friends and a happy life.

Good luck and make good use of your education in our University.