You are invited to reach us!

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Mission

The Department’s mission is communicated in three dimensions.

The Department will endeavour
- to nurture graduates who will become leaders and professionals with a global outlook, ready to serve in the society of tomorrow with advanced knowledge and skills in computing and related areas;
- to conduct world-class research and promote inter-disciplinary collaboration, expanding the horizon of knowledge discovery and technology advancement;
- to contribute and deliver professional services to the community at large with strong partnership and collaboration.

Vision

The Department is determined to assert its position as the leader in inter-disciplinary research and education in computing, generating worldwide impact and benefit to mankind.
Appointed Department Head in 2011, I have the honour to experience the 40th anniversary of the Department, and have great pleasure to join with our staff and students for the joyous celebration. Looking back over the years since I joined the Department of Computing in 1997, I am struck by how the Department has been transformed from a modestly influential group of scholars into one that has made its impact of advances in computing and society.

It is our mission to nurture graduates to become leaders and professionals with a global outlook, ready to serve in the society of tomorrow. We launched the first Broad Discipline programme in 2012 which covers comprehensive range of computing discipline. To enrich our student’s learning experience at a global level, we offer “Challengers Program”, exchange programmes and study tours, as well as our unique International Final Year Projects. The “Challengers Program”, launched in 2013, provides opportunities for students to further develop beyond normal curriculum, increasing their competitiveness and developing skills in undergraduate research, leadership and entrepreneurship. We also provide four taught master programmes for people who have gained fundamental knowledge with different backgrounds to further specialize themselves to scale new heights in their career. Our research postgraduate programmes foster curiosity in students, inspiring and engaging them to pursue research. We have nurtured many outstanding students who are now top leaders and high achievers in the society. I would like to take the opportunity to congratulate them, especially to the awardees of our Distinguished Alumni Awards, and show our appreciation to their contribution to the society.

We have made earnest efforts to achieve research excellence. Our research has made high impact in both academic values and practical applications. To steer the department’s research direction to fit the current and future trends and needs, we have recently developed a three-tiered research framework. We have set up two department-driven themes namely “Big Data Analytics” and “Human-Centred Computing” as our first-tier focuses. The backbone of the two themes is the second-tier consisting of our staff’s expertise areas. The third-tier are our cross-area research centres and laboratories established by staff from our Department with collaborators around the world, facilitating research with cutting-edge projects and technologies. The centres and laboratories have made outstanding accomplishments. For example, the Biometrics Research Centre developed the world’s first fingerprint identification system and published the first paper on computerized tongue and pulse diagnosis. The Internet and Mobile Computing Lab is among the few research groups in the world capable of developing fully featured heterogeneous wireless network test-beds solving real-world problems. There are so many achievements that I cannot name them all here.

Noticeing the power of partnership and the synergy that could be brought about, we work closely with other research institutes, industries and organizations. We have established joint labs for collaborative research with EIM, Yonyou and Sun Yat-sen University. We have also participated in interdisciplinary PolyU star projects with other faculties and departments. Through the collaborations we have produced world-renowned output applicable to commercial and industrial uses and creating high values. The cutting-edge efforts of our department members, research staff and students went on display in 2014 at our inaugural Research Open Day, which attracted over 90 local and international visitors. Some of the projects had won well-deserved recognition from government and industry bodies, and opened up entirely new areas of enquiry.

With 40 years of success, we have laid the foundations for impressive changes through ground-breaking multidisciplinary research, high quality education designed to produce future leaders and professionals and a keen sense of social responsibility. Our department’s status within the global academic community is recognized by its high position in world university rankings. We are ranked for two years in a row, among the top 50 in Computer Science and Information Systems in the “QS World University Rankings” in 2013 and 2014. We are also ranked 40th in Computer Science in the “Best Global Universities Rankings” released by the U.S. News and World Report; 51st to 75th in Computer Science in the “Academic Ranking of World Universities (ARWU)” 2014 released by the Shanghai Jiao Tong University; and 15th in Computer Science in the “National Taiwan University Ranking (NTU Ranking) 2014”, alongside other globally renowned institutions.

With the solid foundation built over the 40-year development of our Department, we now have asserted our vision to become the leader in interdisciplinary education and research in computing, offering global benefit through local and international collaboration and partnerships. Envisioning the future, our Department is powering into the stage of tomorrow with the aim of becoming an icon of ‘Smart Computing’. Smart computing is emerging as an important multidisciplinary area, which has potential breakthrough in the near future. As part of our 40th anniversary celebration, we are holding SMARTCOMP 2014 - the first conference of Smart Computing. The conference has two focal points in response to two pertinent challenges in the future of computing: how computing devices can become smarter and how our living environment can be more intelligent to improve the quality of people’s lives.

Looking beyond our 40th anniversary, we could envisage our Department to be the locus of excellence in cross-area and interdisciplinary computing education and research, as to fulfill what is stated in our slogan “Envision Future Computing, Computing for the Future”. I am extremely proud to offer this brochure as an overview of what we have already achieved. Like me, I am sure you will see within it the origins of ever more success to come.

Professor Cao Jiannong
Chair Professor and Head
Milestones (1974 - 2014)

1974
• Establishment of Department of Computing Science
• Mr. G.P. Mead was appointed as Head of Department of Computing Science

1975
• Launch of:
  - 3-year full-time Higher Diploma course in Systems Analysis
  - 1-year full-time Certificate course in Computer Programming

1978
• Launch of:
  - Full-time Diploma in Computing Studies
  - Full-time Higher Diploma in Computing Studies
  - Full-time Diploma in Computing Studies

1979
• The Department renamed Department of Computing Studies

1981
• Launch of:
  - Mixed-mode Higher Diploma in Computing Studies
  - Mixed-mode Diploma in Computing Studies
  - Full-time Diploma in Computing Studies
1983
- Mr. D.V. Gulati was appointed as Acting Head of Department of Computing Studies
- Launch of 4-year full-time Bachelor of Arts (Honours) in Computing Studies (sandwich course)

1984
- Mr. D.V. Gulati was appointed as Head of Department of Computing Studies

1986
- Launch of part-time Higher Certificate in Software Engineering
- Transfer of full-time Diploma in Computing Studies to the Technical Institutes
- Phase-out of part-time Diploma in Computing Studies

1987
- Transfer from Division of Commerce and Design to Division of Mathematical and Computing Studies
- Launch of mixed-mode Professional Diploma in Information Technology

1988
- Launch of Master of Science in Information Systems

1989
- Launch of full-time Higher Diploma in Software Engineering
- Conversion of Professional Diploma in Information Technology to Postgraduate Diploma in Information Technology

1991
- The Department renamed Department of Computing
- Transfer to Division of Business and Information Systems
- Launch of full-time Higher Diploma in Information Systems
- Admittance of the first full-time MPhil students

1992
- Prof. Daniel Yeung was appointed as Head of Department of Computing
- Launch of full-time Bachelor of Science (Honours) in Information Technology (jointly offered with Department of Electronic and Information Engineering)

1994
- Establishment of Software Technology Facilities Centre
- Relocation of the Department from Main Building to Mong Man Wai Building

1995
- Launch of Master of Science / Postgraduate Diploma in Software Technology

1996
- Launch of full-time and part-time Bachelor of Arts (Honours) in Computing
- First PhD student graduated
1999
- Transfer to Faculty of Engineering
- Prof. Tharam Singh Dillon was appointed as Acting Head of Department of Computing
- Establishment of Internet Computing & Electronic Commerce Laboratory

2000
- Launch of:
  - Master of Science in E-Commerce
  - Master of Science in E-Commerce for Executives
  - Master of Science in E-Commerce (offered through Hong Kong CyberU)
- Establishment of Intelligent Technology Laboratory and Software Development and Management Laboratory

2001
- Prof. Keith Chan was appointed as Acting Head of Department of Computing
- Launch of:
  - Full-time Double Degree [Bachelor of Science (Honours) in Computing and Bachelor of Arts (Honours) in Management] (jointly offered with Department of Management)
  - Full-time Higher Diploma in Internet Technology and E-Commerce (jointly offered with Department of Electronic and Information Engineering)
- Establishment of Information Access Technologies Company Limited, the Department’s first spin-off company

2002
- Prof. Keith Chan was appointed as Head of Department of Computing
- Launch of:
  - Master of Science in Information Systems (offered through Hong Kong CyberU)
  - Master of Science / Postgraduate Diploma in Information Systems (offered in collaboration with Xi’an Jiaotong University)
  - Full-time Bachelor of Science (Honours) in Internet & Multi-media Technologies (jointly offered with Department of Electronic and Information Engineering)
  - Full-time Higher Diploma in Multi-media and Multi-lingual Computing (jointly offered with Department of Electronic and Information Engineering)

2003
- Launch of the first Department logo
- Establishment of Joint Laboratory with the Institute of Software of the Chinese Academy of Science

2004
- Launch of Master of Science / Postgraduate Diploma in Software Engineering (Double Degree jointly offered with The Graduate University of the Chinese Academy of Science)
- Host of the First International Conference on Biometric Authentication
2005
- Launch of Bachelor of Science (Honours) Scheme in Computing with simultaneous phase-out of full-time Bachelor of Arts (Honours) in Computing

2008
- Prof. David Zhang was appointed as Head of Department of Computing

2009
- The Department was ranked first in Hong Kong, second in Asia, and 36th in the world for its contributions to Software Engineering in the Association for Computing Machinery’s survey
- Launch of standalone full-time Double Degree in Computing and Management (jointly offered with Department of Management and Marketing)
- Host of the Forum of Department Heads of Computing Discipline

2010
- Prof. Jiannong Cao was appointed as Acting Head of Department of Computing

2011
- Prof. Jiannong Cao was appointed as Head of Department of Computing
- Establishment of Shenzhen Innovative Intelligent Computing Centre

2012
- Launch of full-time Broad Discipline of Computing

2013
- The Department was ranked Top 50 in 2013 QS World University Subject Rankings in Computer Science and Information Systems
- Establishment of PolyU-SYSU Networked Lab on Creative Applications
- Establishment of Joint Laboratory on Smart Cloud Computing
- Establishment of a common research infrastructure for impactful research and education

2014
- The Department was ranked Top 50 in 2014 QS World University Subject Rankings in Computer Science and Information Systems
- The Department logo was revamped to celebrate its 40th anniversary
- Establishment of The Hong Kong Polytechnic University Branch of Ministry of Education Key Laboratory of Machine Intelligence and Advanced Computing
- Inauguration of First Distinguished Alumni Award
- Host of the First International Conference on Smart Computing
- Launch of Challengers Program (CHAMP) for COMP undergraduate students
- Over 10,000 students graduated since establishment

We are ready for the next 40 years!
Groundbreaking Research and Discovery

Strategic Approach to Research

The Department of Computing concentrates on high-quality, interdisciplinary research within a defined strategic framework. Our faculty members have made significant contributions to a full and extensive spectrum of research areas, aiming to make major advances in computing knowledge and extend their collaboration with other academics and research institutes around the world.

Our overarching goal is to be a global leader in innovative, high-impact research, creating new computing-related knowledge and benefits for the entire world. We have established a three-tier strategic framework with a common research infrastructure for achieving the goal.

Three-Tier Strategic Framework

Tier 1 of this framework comprises department-driven strategic research within focused areas of applications. The two strategic themes that drive our work in this tier are big data analytics and human-centred computing, which attract our greatest amount of competitive research grants.

Tier 2 provides the backbone for Tier 1, dividing our efforts into 6 carefully selected areas of departmental research expertise: big data analytics and information retrieval; graphics, visualisation and multimedia; human-centred computing; networking and mobile computing; pattern recognition and machine intelligence; and systems and software engineering.

Tier 3 comprises our cross-area research centres and laboratories. From them, we identify and establish strong connections with well-known researchers and world-leading teams.

Record of Outputs and Funding

The extent of our research success is evidenced in the numbers of research students we have graduated in the past 10 years, and an impressive record of research outputs in various forms.

- MPhil students: over 50
- PhD students: over 100
- Books: over 40
- Book chapters: over 80
- Journal papers: over 900
- Conference papers: over 1,100
- Patents: over 30
- Projects: over 280

In particular, our faculty members have successfully secured many highly competitive research grants with funding amount over HK$4 million. For example, the “Development of New Devices for Information Security” project has been granted HK$5,200,000; the “Seamless Communication and Mobility in Advanced Heterogenous Wireless Network” project has been granted HK$6,848,831; and the “Design and Implementation of a Unified Box for Offering Network Path Measurement as a Service” has been granted HK$4,963,700. All the above three projects are funded by the Innovation and Technology Fund (ITF).

Furthermore, our Department has been granted by the National Natural Science Foundation of China (NSFC) in January 2014 for two key projects, namely “Unconsciously Collaborative Crowd Intelligence Based Social Events Geo-Information Inference and Spatial Correlation Study” and “Study of Information Sensing & Computing Approach of External Examination for Healthcare”. There are only three projects in the information engineering area granted in Hong Kong under this funding scheme in which our department has obtained two.

Tier 1: Strategic Themes

Tier 1 of our strategic research framework serves to focus our overall research efforts on the dual themes of big data analytics and human-centred computing. These two areas, more specific versions of which feature among our departmental areas of expertise, help to shape our drive to provide groundbreaking innovations in truly smart computing.

Big Data Analytics

Big data is one of the key challenges and perhaps the greatest opportunity of our time. Taming the rapid and exponential growth of data in various, constantly changing forms is a daunting task for corporations, other organisations and governments around the world. Traditional data processing techniques and database management tools are no longer viable, with limitations in acquisition, analysis and visualisation, information retrieval and knowledge discovery.

Yet effective big data analytics promises the capacity for enhanced decision making, greater operational efficiency and reduced costs. The Department is focusing on both theoretical and application issues in this field, building a big data framework. Our researchers, for instance, are applying distributed computing technology to tackle the sheer volume of data and investigating the efficient retrieval of semantic and other language-specific information.

Human-Centred Computing

An emerging interdisciplinary field, human-centred computing focuses on computing and computational technologies as they relate to human behaviour, with technologies and applications developed to account for behavioural, physical, social and cultural contexts. Expertise is gathered from a broad range of areas, including cognitive science, communication studies, computer science, graphic design, human-computer interaction, information technology, psychology, sociology and system development.

The Department’s focus on human-centred computing can be divided into two categories: efforts to understand humans through their actions using existing computational technologies, and the development of new technologies to enhance those actions.
Applications

In line with PolyU’s drive to produce applied knowledge, the Department ensures that its strategic themes are translated into applications in a broad range of areas. Our award-winning work provides tangible benefits in different areas, e.g., health care, secured computing, networking, etc.

Healthcare is one of the key beneficiaries of advances in computing. Our strategic efforts in the area have led to a system that screens very large amounts of candidate compounds and predicts drug-target interaction. We have also paid close attention to human-centred advances, leading to the development of emotion-aware hardware, a novel pulse diagnosis system, a non-intrusive system for diabetic retinopathy testing and a method of classifying brain signal data.

Our works also cover green computing and balance on the critical distinction between situations in which human involvement is beneficial and when automation is more appropriate. For instance, we have developed a participatory approach to building energy management that creates a profile for each occupant and a wireless sensor network that monitors the health conditions of a variety of structure types in real time.

Secured computing is of high concern nowadays. We have spent efforts in secured computing to develop secured systems and applications that feature high accuracy, low cost and user friendliness. We refer to two aspects of secured computing as our research focuses: biometric security and network security. For biometric security, we have devised touch-based and touchless systems for fingerprint identification, an online palmprint identification system and an automated biometric system for law enforcement at border crossings. For network security, we have developed mobile accident prevention software for security check.

Big data analytics is a hot area that the Department is committed to. One of our focuses is to provide highly efficient big data analytics systems with relatively low operational cost. This helps to extend the usage of big data analysis to many industries with low running cost while meeting resource requirements.

Furthermore, networking is another area that we have made significant contributions to. One example is sensor network designed for environment monitoring. We focus on developing different wireless network systems with advanced technologies, e.g., RFID, Wi-Fi, mobile cloud computing. The systems could be applied to location tracking, building structure monitoring, and pervasive computing to accommodate users’ various requirements etc.

The Department’s interdisciplinary research generated by our brilliant staff exerts high impacts to the society. It is believed that we could make great contributions by improving the world and life of mankind, with innovative ideas and development of ‘smart computing’. This is our belief - ‘Smart Computing Drives Innovation’.

Tier 2: Areas of Expertise

Tier 2 of our strategic research framework provides the backbone for Tier 1, grouping the existing strengths of our faculty members and research personnel into six clearly defined areas of departmental expertise. In these areas they produce globally recognised interdisciplinary research, innovating for a better world.

Big Data Analytics and Information Retrieval

Our researchers understand the urgent need to develop reliable new technologies, methods and tools for processing ever-changing big data, and are working in various related areas. Among others, their investigations cover parallel databases as services, data accountability and service outsourcing, data and communicative behaviour in online social networks, search engine indexing, transfer-learning methods for multilayer data sets, and social media big data analysis.

Graphics, Visualisation and Multimedia

Multimedia combines content such as sound, images and graphics to make applications dynamic in areas such as education, entertainment, social networking and telemedicine. With the explosion of multimedia information available in daily lives around the world, the key research challenges lie in managing complex multimedia objects and extending them into three dimensions with the capacity for real-time interaction. Our researchers focus on three-dimensional computer graphic modelling and rendering, distributed three-dimensional graphics, image and video quality enhancement, content-based image retrieval, and multi-sensor data and motion analysis, all of which have excellent application potential.

Human-Centred Computing

Drawing on methods developed in a range of scientific, social science and design fields, our researchers explicitly focused on human-centred computing are using computational technologies to analyse human actions and stimulate performance enhancement in numerous areas. Their major work covers brain informatics, ubiquitous computing, human-computer interfaces – including multimodal interaction and affective computing – and social computing.
Network and Mobile Computing

Wireless networks and smart mobile devices have undergone startling advancements in recent years, now offering users the flexibility and freedom of mobile computing almost anywhere at any time. Especially in the last decade, computer networks have become fast, more reliable and wider in their coverage. Our researchers keep well abreast of such advancements, devoting efforts to distributed and parallel computing, mobile application security, mobile cloud computing, network performance monitoring and measurement, wireless sensor networks and vehicular networks. Their solutions now feature in intelligent transportation systems, structural health care and localisation and security applications.

Pattern Recognition and Machine Intelligence

Pattern recognition, or the classification of measurements and observations, is significantly enhanced through the application of computational intelligence techniques. With surging demand for efficient and high-performance automated pattern recognition, breakthroughs are being made in emerging areas such as bioinformatics and computational biology, evolutionary computing, social media mining, soft computing and Web intelligence, among others. Departmental researchers are currently undertaking important work in biometric security, medical imaging, video and image processing, data mining, ontology representation and decision making.

Systems and Software Engineering

Systems and software engineering involves the development of methodologies, processes and tools for building robust, high performance computer-based systems. In this area, our researchers have applied their expertise on key challenges in agile development, context-aware middleware, cost estimation, cyber-physical systems, real-time embedded systems, software metrics, software processes and quality, storage in embedded systems and risk management. They are also working on solutions to the problems arising from the use of business-critical applications.

Tier 3: Research Centres and Laboratories

Tier 3 of the Department's strategic approach to research includes cross-area centres and laboratories in which interdisciplinary work is conducted on strategic applications that are in high demand. Strong partnerships established with local and international academic institutions and dominant industry players are noteworthy here, allowing us to establish joint laboratories and successfully complete projects with high impact and significance.

Over the past decade, the Department has established and developed its research reputation through the following centres and laboratories.

- Advanced Enterprise Infrastructure Lab*/PolyU-SYSU Networked Lab on Creative Applications
- Biometrics Research Centre
- Game Lab
- Human Language Technology Laboratory
- Intelligent Home
- Internet and Mobile Computing Laboratory
- Laboratory for Software Development and Management
- Joint IBM/PolyU Enterprise Data Analytics Laboratory
- PolyU-Yonyou Joint Laboratory on Smart Cloud Computing

* Sponsored by Cisco and Macronix Telecom
With an explicit focus on developing further facilities to promote interdisciplinary research and associated applications, we have recently established the following laboratories.

- Advanced Network Monitoring and Measurement Lab
- Big Data Analytics Lab
- CHILab
- Cognitive Computing Lab
- Embedded Systems and CPS Lab
- Mobile Cloud Computing Laboratory
- Pervasive Visual Computing Lab
- PolyU Branch of Ministry of Education Key Laboratory of Machine Intelligence and Advanced Computing
- Smart Healthcare Management Lab
- Smart Sensing Lab
- Visual Analytics Lab

1. Research Topic:

   **High-Performance Wireless Sensor Network for Structural Health Monitoring**

   **Principal Investigator: Prof. CAO Jiannong**

The conditions of civil structures like skyscrapers and long bridges are critical for public safety. Existing systems for monitoring the health condition of civil structures are wired and need to lay cables and use centralized control, incurring inflexibility, high cost and long deployment time. In the last decade, research on using wireless technologies as an alternative for structural health monitoring has been carried out but there is no systematic approach to investigate the challenging problems of wireless networks and building real-world systems.

Collaborating with researchers in civil engineering, Prof. Cao and his research team have developed a practical structural health monitoring system using cutting-edge intelligent wireless sensor networks. The system can be easily and flexibly deployed on various types of structures, and automatically form a self-organizing wireless network to fulfill the required monitoring functions. It has low cost while meets the practical civil engineering requirements and, therefore, can complement the wired systems to provide more coverage and real-time processing. Comparing with existing works on wireless structural health monitoring, Prof. Cao’s team has proposed computing-engineering co-design and developed various innovative yet practical techniques for energy saving, highly accurate damage detection, and fault-tolerance. The techniques include vibration-triggered wakeup, high accuracy wireless synchronization, distributed in-network processing, and automatic detection and recovery of faulty nodes. The prototype system has been tested in many real infrastructures, including the CCTV tower in Beijing and Hedong Bridge in Guangzhou, and demonstrated its high performance. The technology developed can also be used to monitor the safety condition of old tenement buildings and structures that might be damaged in a disaster.
The research was supported by GRF, Innovation and Technology Fund (ITF) and HK PolyU’s Niche Area Fund. The output of the research has made high impact not only on academic value in technology development of wireless sensor networks but also on its practical use and application to public safety. The research has won “Hong Kong ICT Awards 2013 - Special Mention Award and the Certificate of Merit”, the ‘Best Paper Award’ at IEEE WCNC 2011 and ISSNIP-2009, and produced over 15 research publications in top journals and conferences. It also attracts attention and requests for collaboration from industries.

2. Research Topic:

Palmprint Recognition
Principal Investigator: Prof. ZHANG Dapeng David

Personal identification plays an important and crucial role in security. Unfortunately, the traditional approaches for identity identification cannot meet the requirements for various applications due to their limits. Biometrics technology is concerned with automated authentication by using personal features for high performance, which overcomes the limitations of the conventional methods. So far, there have been extensive studies on different biometrics features with exciting applications such as fingerprint, face and iris. However, it remains a challenging task to develop new and more accurate biometric technologies to meet various needs in practice.

Prof. Zhang has been focusing on the research on biometrics computing since 1980’s with impressive research outputs. The research conducted by the team under his leadership found that human palmprint has many unique features (e.g., principal lines, wrinkles, ridges, etc.) which can be used for accurate personal identification. Based on the comprehensive investigation, they developed the world’s first civil palmprint recognition system in 2003, which resulted in the establishment of a new research area of palmprint recognition. As the pioneering researcher in this area, Prof. Zhang has been dedicated to the development of many novel palmprint recognition systems such as multispectral palmprint system, 3D palmprint system, touchless palmprint system etc. Their work was supported by both GRF and ITF grants, as well as PolyU niche area grant.

Prof. Zhang’s palmprint research outputs have received numerous awards including the ‘Special Gold Award and Gold Medal’, High Speed and Low Cost Security System using Palmprint Technology, 14th National Invention Exhibition of China in 2003; the ‘Silver Medal’ for palmprint security system, the 34th International Exhibition of Inventions, New Techniques and Products of Geneva in 2006; the ‘Hong Kong Award for Industry’, High-Performance Palmprint-Based Security System, Machinery and Machine Tool Design Certificate of Merit, HK SAR in 2009. Besides the awards, Prof Zhang has 10 palmprint related patents registered in China, 2 in Hong Kong and 2 in USA. Prof Zhang served as consultant for the development of ‘E-Channel’ by the HK SAR Immigration Department. In 2014, Prof. Zhang is named to be one of the 19 ‘Highly Cited Researchers 2014’ from Hong Kong universities published by Thomson Reuters. There are only 187 honoured scholars in the Engineering category around the world.

3. Research Topic:

An Innovative Secured Retinal Imaging System for Computer Aided Non-intrusive Diabetic Care
Principal Investigator: Prof. YOU Jia Jane

Human eyes are not only the organ to observe the world, but also the window into health. The rich information about retinal vessels offers the vital details that would enable doctors to inspect the health conditions and examine retinal disorders caused by some systemic diseases such as diabetes, hypertension and arteriosclerosis. According to the World Health Organization, the number of diabetic patients is increasing rapidly and diabetes has remained a major cause of disability and death because of its various complications. It is crucial to detect diabetes and its complications at early stage for proper and timely treatment. Diabetic retinopathy (DR) is one of the common complications of diabetes, which causes damage to the retina of the eye and could eventually lead to blindness. However, DR often has no early warning signs. Conventional ophthalmology-based approach to DR detection imposes heavy workload on doctors and does not provide information about the progress of diabetic complications and the effect of therapy.

It has become international efforts to detect various diabetic complications timely, efficiently, safely and conveniently at low cost. To achieve the objectives of effective diabetic care with high detection accuracy rate and short processing time, the research team led by Prof. You has developed a new retinal imaging system for computer-aided non-intrusive detection of diabetic retinopathy with a systematic mechanism. The new system allowed specialists to study lesions by providing a multi-level detection platform to handle large collection of image data easily without human error, speed up the process for mass screening, facilitate information sharing among medical experts and automate data analysis with high accuracy rate. In addition, the system is also coupled with information security and privacy protection for high-performance. The prototype system which can identify a retinal image with DR above 90% accuracy received positive feedback for practical use from doctors during its clinical trials at different hospitals. Currently the team is collaborating with doctors to develop an e-EyeGuard system in mobile cloud computing environment as an application to telemedicine and e-healthcare.

The research results of this project at different stages led to three consecutive general research funds (GRF) from the Hong Kong government during 2007-2009 and one innovation technology fund (ITF) in 2009. The deliverables out of these funded projects include research publications in top journals such as IEEE Trans. Medical Imaging and Pattern Recognition, a prototype system which was licensed to Wealth Billion International (HK) Ltd in 2011, two Ph.D graduates in 2011 and 2013 respectively. The research work also gained international recognition which is evidenced by the 2nd place in international competition (SPIE Medical Imaging’2009 Retinopathy Online Challenge ROC’2009), the special prize and gold medal with jury's commendation at the 39th International Exhibition of Inventions of Geneva in 2011 and ICMC’2011 Lofti Zadeh best paper award (The 2011 International Conference on Machine Learning and Cybernetics). The research findings are currently pending on a US patent.
4. Research Topic:

**Image/video Quality Enhancement**

**Principal Investigator: Dr ZHANG Lei**

With the ubiquitous use of various types of digital imaging devices in the current e-world, there is a vast and increasing proliferation of visual data, for example, in websites of YouTube, Facebook, Google, Flickr, and via networked TV, etc. Due to the limitation of low-end consumer electronics’ imaging sensors (e.g., smartphone cameras) and limited network bandwidth, the resulting image and video streams are often noisy corrupted, blurred, have low resolution and artifacts, etc. It is thus of high importance to develop new technologies to enhance the visual quality of image/video streams to meet the increasingly higher requirements from users.

The research team led by Dr Zhang has been working on image/video quality enhancement for a long time. Different from traditional methods which often work on the pixel level and enhance a pixel by using its neighboring pixels, Dr Zhang’s team proposed to work on the patch level for image enhancement. The lift from pixel level to patch level greatly improves the local image structure preservation. The approach can go further by clustering patches into groups and performing group based enhancement to exploit the correlation between similar patches. The algorithms they developed achieve cleaner images, higher resolution, and sharper edges and textures. With these techniques, Dr Zhang’s team has developed a real-time video quality enhancement software system, which can help users experience much better quality of IPTV programmes without increasing their network bandwidth.

This research was supported by RGC GRF grants and ITC IITF grant. The research output has won the Best Paper Award in SPIE VOP 2010 conference, and produced a highly cited paper published in IEEE Trans. on Image Processing in 2011 (cited for 230 times so far and ranked as the “hot papers” -- the top 0.1% cited papers in 2 years since its publication by Web of Sciences). Their “Digital Image/Video Quality Enhancement System” was awarded the Silver Medal in the iENA exhibition held at Nuremberg Germany in 2010 with core technology patented in USA. The achievements of Dr Zhang on image/video quality enhancement have also been covered by many local media such as Sing Tao Daily, Oriental Daily News, Ta Kung Pao, and Hong Kong Entrepreneur.

5. Research Topic:

**Monitoring the Internet for Performance, Reliability, and Security**

**Principal Investigator: Dr CHANG Kow Chuen Rocky**

The Internet has already become an indispensable infrastructure for social interactions, business and government operations, world economy, and many good causes. Almost all popular apps rely on Internet connection for computation offloading, storage, information access, communication, and collection of user behaviour. However, the Internet is intrinsically unreliable, susceptible to various types of performance degradation and attacks. However, due to the highly distributed architecture of the Internet, identifying the root cause promptly and effectively for an observed performance problem - an open research problem - is already a daunting task.

Dr Chang’s research team has been active for the last six years in developing active measurement methods and measurement platforms for measuring and monitoring the Internet performance. The active measurement methods enable an ISP operator to measure the network performance perceived by their customers and a home user to gauge the actual network performance provided by her ISP. By coordinating the measurement from multiple users, we can also improve the network performance by changing to a better network path, revealing the cause of performance degradation, and detecting possible network attacks.

Dr Chang’s research outputs were published in the top conferences in the field, such as ACM CoNEXT, ACM/USENIX IMC, and USENIX ATC, and in top journal such as the IEEE JSAC. They have a US patent on one of their new measurement methods to be issued soon. They are providing network monitoring services to the local universities by performing around-the-clock network monitoring for the Hong Kong Academic and Research Network (HARNET) and to a Hong Kong government department for monitoring local network infrastructure (due to the NDA, the project details cannot be revealed.)

This research has attracted close to $7 million of funding from three consecutive IITF grants (two tier-3s and one tier-2) and more than $2 million of consultancy fee (from two projects: HARNET and a government department) for the last six years. The HARNET project has been ongoing since 2009, and it has helped the local universities discover and diagnose various kinds of performance problems. Recently Dr Chang also helped monitor the network performance during the recent RAE exercise. Two submitted GRF proposals in this research area were rated fundable. Four PhD students and three MPhil students have been working in this research area. Two PhD students already graduated and two MPhil students continued their PhD studies at U. Penn and Georgia Tech.

6. Research Topic:

**Big Data Analytics and Cloud Computing**

**Principal Investigator: Dr LO Chi Lik Eric**

Currently, parallel database is the most high-end data analytical system in the big data analytical system market. Examples include HP’s Vertica (used by Obama’s election team during 2012 US President Election) and SAP’s HANA (used by Germany soccer team during 2014 World Cup). Rather than installing and using parallel database locally in a company, Parallel-Database-as-a-Service (PDaaS) can be provided to move much of the operational burden from the company to their cloud servers. One of the key challenging issues, however, is how to operate a PDaaS using less resource (e.g., number of computers, electricity) so as to minimize the operation cost. Solving the problem would greatly promote the acceptance of big data analytic tools in the market. Consequently, the industries have a stronger incentive to investigate the benefits of using big data in their business.

The research team led by Dr Lo has been dedicated to developing advanced techniques to reducing the operation cost of a PDaaS. Before their invention, the traditional approach is to let each PDaaS client obtain an exclusive amount of resources from the cloud servers, which is not cost effective because the resources are wasted when some clients are idle. Dr Lo’s team has successfully developed techniques to let all PDaaS clients share the common pool of computing resources in a PDaaS, while avoiding resource contentions when many clients are active. With this innovative technology, PDaaS providers can significantly reduce the resource requirements of operating a PDaaS by up to 80%. This enables PDaaS providers to significantly reduce the service price, which could be a strong catalyst to push the various industries to use big data in their business.

Dr Lo’s research has attracted technology and funding supports from major cloud service providers like Amazon and Microsoft Azure, major parallel database vendors like HP and EMC. This project has also obtained local support from Hong Kong Science and Technology Park. Furthermore, the research findings are all published at the world leading database journals and conferences including ACM SIGMOD.
Quality Education

We are committed to providing high-quality, all-rounded education, and nurturing computing leaders and professionals who will serve the society through the application of advanced knowledge and skills in computing-related disciplines.

The CARE Philosophy

Our educational pillars are summarised by the acronym CARE, standing for a four-part focus on Career, Application, Research and Entrepreneurship in nurturing tomorrow’s computing professionals. We are committed to caring for our students, understanding their specific needs, and providing them with a stimulating and challenging teaching and learning environment, in addition to quality support.

The career pillar ensures that our students develop a breadth of knowledge and wide range of skills through various training opportunities such as internship, overseas study, exchange programme, and a Work-Integrated Education programme. The application pillar symbolises our commitment to building programmes on a solid technical foundation with application-oriented computing courses, covering a broad range of fields such as business, finance, healthcare, logistics and education, which gives students an unparalleled competitive edge.

Our strong commitment to the research pillar keeps students abreast of the latest technology and advancements in knowledge, and the entrepreneurship pillar ensures that they are encouraged to develop innovative ideas to grasp elusive opportunities in this rapidly changing technological world.

Distinctive Programmes

We offer quality PhD and MPhil programmes, taught Master programmes, and undergraduate programmes within a department-based Broad Discipline of Computing, encompassing awards in the multidisciplinary areas of Computing, Information Technology, and Enterprise Information Systems. All programmes integrate principles, systems and applications, empowering students to build a solid foundation for life-long career development.

Enriching programmes such as the “Challengers Program” also sharpen students’ leadership, entrepreneurship and research skills, providing them with opportunities beyond the scope of their regular studies. We always seek to nurture practical dreamers, who are able to master specific skills and knowledge while being well versed in other disciplines and capable of continuous self-learning.

Distinctive Academic Programmes

Broad Discipline of Computing

Unique in Hong Kong, the Department offers its own Broad Discipline of Computing that includes three programmes with diversified scopes of curriculum design suiting different students’ interests. Specific niches have been introduced in each programme, which empowers students with the competitive edge they will need on their career paths.

After their common first year of study, students can choose one of the three awards: the Bachelor of Science (Honours) in Computing, the Bachelor of Science (Honours) in Enterprise Information Systems or the Bachelor of Science (Honours) in Information Technology. All three are tailor-made to incorporate state-of-the-art applications and up-to-date technologies, meet new challenges and respond to ever-changing corporate and social needs.

Full-time students study for four years through which they gain both personal and professional knowledge. They can also choose a minor in any discipline to broaden their horizons.

Bachelor of Science (Honours) in Computing

The BSc(Hons) in Computing emphasizes on applying computing theories and programming methodologies to design and develop fast and smart computing systems and software. The programme equips students with solid foundations of computer science for solving practical problems and developing software for high performance and intelligent computing systems.

The representative subjects include:

- Human-Computer Interaction
- Software Design Principles
- Artificial Intelligence
- Computer Graphics
- Data Mining and Data Warehousing
- Information Retrieval
- Big Data Analytics

Graduates are equipped to become analyst programmers, system analysts, software engineers, database administrators or software architects in both public and private sectors.
Bachelor of Science (Honours) in Enterprise Information Systems

The BSc(Hons) in Enterprise Information Systems programme focuses on applying computing technologies and enterprise information to develop and manage business solutions.

The programme emphasises on e-business and information systems strategies, their applications, as well as design and development skills.

The representative subjects include:

- E-Business
- Business and Information Systems Strategies
- Software Project Management
- IT Entrepreneurship
- Information Systems Audit and Control
- Business Intelligence and Customer Relationship Management
- Computational Finance

Graduates are equipped to become management executives, business analysts, system developers, project managers and information system managers.

Bachelor of Science (Honours) in Information Technology

The BSc(Hons) in Information Technology programme is oriented towards integrating computing devices, systems and software to design and implement IT architectures for advanced applications.

The programme trains students to think creatively and systematically. They gain knowledge in hardware and software engineering principles as well as system modelling, which allows them to develop integrated technologies for IT applications.

The representative subjects include:

- Internet Security
- Embedded Software
- Mobile Computing
- Social and Collaborative Computing
- Game Design and Development
- Service and Cloud Computing
- E-Commerce Technology

Graduates are equipped to become game and mobile apps designer, information technology security specialists and information technology architects.

Taught Postgraduate Programmes

Our taught postgraduate programmes provide education in computing and information technology that is tailored to suit the professional needs of students from diverse backgrounds. Students benefit not only from detailed knowledge of fundamental theories, core and applied technologies, and industry best practices, but also from interaction with their peers in exchanging ideas and discussing experiences. They acquire not only advanced expertise but also professional networks that help them to scale new heights in their careers.

Four Master of Science programmes are offered in both full-time and part-time modes, structured under the Postgraduate Scheme in Computing.

Postgraduate Scheme in Computing

The Scheme aims to establish within students the impetus to engage in life-long learning and development. It deepens their conceptual understanding of computing and knowledge of its practical applications, ensuring that they are attractive to a wide range of employers.

Designed to meet the career needs of full-time students, business executives and IT professionals engaging in part-time study, the Scheme’s four programmes provide computing knowledge needed in areas such as commerce, industry and the public sector. They also enhance students’ teamwork skills for project design and development, and their awareness of ethical and social issues, allowing them to develop continuously as computing advances.

Master of Science in Information Systems

The MSc in Information Systems provides management and other business professionals with knowledge, skills and confidence in the application of information systems within their organisations. It is designed for professionals with arts, business and social science backgrounds who need to design, apply and evaluate information systems in today’s business environment.
Research Postgraduate Programme

The Department attracts research postgraduate students from Hong Kong and around the world, setting the scene for a rich mix of intellectual stimulation and cross-cultural engagement in various areas of computing and information technology. Over 90 research students are currently studying towards either MPhil or PhD degrees, dedicating themselves to exploring the frontiers of:

- Human language technology and knowledge discovery, with a focus on information processing related to the Chinese language
- Graphics, multimedia and virtual reality, focusing on 3D computer graphic modelling, rendering, animation and multimedia applications
- Mobile and network computing, with emphases on the design and analysis of architectures, protocols and distributed algorithms for network communications and computing, and wireless networking for a ubiquitous computing environment
- Pattern recognition and machine intelligence, encompassing biometrics, computer vision, pattern analysis, machine learning, image processing and medical diagnoses
- Software engineering and information systems, including Chinese natural language processing, information retrieval and extraction, and Cantonese speech processing

Our students’ cutting-edge research is supported by enthusiastic faculty members and support staff who ensure that the Department provides them with a positive and nurturing academic environment.

The Department also ensures that all research students have opportunities to enrich their research experiences through research exchange visits, attendance at leading international conferences and participation in global competitions and departmental projects. Their work, often conducted in conjunction with Faculty members, is shown at our Annual Research Open Day, which attracts interest from various external parties and potential partners.

A further benefit is the Department’s global network across disciplines and bridges industries, offering our students ample career opportunities, resources and access to research funding.

Full-time students are eligible for Research Studentships. Those with exceptional portfolios can apply for scholarships offered under the Hong Kong PhD Fellowship scheme. International students have the opportunity to apply for The Hong Kong Polytechnic University International Postgraduate Scholarships as well.
Excellent Experiences

Instilling a Challenging Spirit

Besides the regular curriculum, the students are also challenged to develop their leadership, entrepreneurship and research skills. The Department offers a range of enriching programmes to achieve this goal. Chief among these is the “Challengers Program”, which is designed to elevate our students’ level of competency in the areas of creativity, innovation, leadership and soft skills through a set of problem-solving and project-based activities that require teamwork and cross-discipline collaboration.

Last year, the Department has organised a spectacular competition requiring students to innovate and develop the “After the iPad” technology. Through students’ devoted effort and creativity, a lot of innovative ideas were produced. These ideas are not only imaginative but also pragmatic so students have been encouraged to apply Departmental funding to refine their ideas and realize their designs.

Global Outlooks

Central to our efforts to promote all-rounded development among our students are the opportunities we provide for them to develop global outlooks. Not only do they have opportunities to broaden their personal outlooks through exchange programmes, study tours and overseas internships, but they also connect with the global computing and information technology sectors. The knowledge and skills they acquire and the experiences they gain, prepare them for new roles as tomorrow’s leaders, both in their communities and their careers.

Exchange Experiences

In recent times students have spent between two and six months at universities such as: Albert Einstein’s check, the prestigious ETH (Swiss Federal Institute of Technology Zurich) in Switzerland, KAIST (Korea Advanced Institute of Science and Technology) in Korea, Georgia Institute of Technology in USA, National University of Singapore, National Taiwan University of Science and Technology and other universities in Sweden, United Kingdom and north America.

The snapshots here show our exchange students immersed in their exchange experiences, taking in the best that the world has to offer!
Study Tours

Our students participate in many study tours in a broad range of destinations. Recently, students have travelled to Cambridge, Singapore, Beijing, Tianjin and Xinjiang in Mainland China. At each destination they have had the opportunity to learn, develop their skills and even showcase their maturing talents.

International Work Experiences

Our students have the valuable opportunity to undergo internships in various countries such as Denmark, Switzerland, Germany, USA and France, learning on the job and broadening their understanding about how the computing and information technology sectors operate. The cross-cultural understanding they develop in real-world employment is critical to their future careers and personal appreciation of this globalised era.

Contributing Service

The Department places a heavy emphasis on social commitment and responsibility, ensuring that all students apply their knowledge learned in the classroom to help people in need. We are the pioneering department to practice this form of service-learning, whereby students take part in projects that benefit disadvantaged groups, aid the work of non-governmental organisations (NGOs), and contribute to government initiatives designed to address various social problems.

Projects are organised in Hong Kong, Mainland China and other parts of the world, such as Cambodia, Rwanda and Myanmar. The service work is heavily information technology-related, allowing our students to excel at transforming classroom learning into real-world solutions.
Student Achievement Highlights

Our students have distinguished themselves with numerous awards and prizes, highlighting their innovative spirit and thirst for new forms of practical knowledge. Their projects have received attention both within and outside of PolyU, highlighting the very best on offer from the sharpest young minds in computing and information technology today.

Most Outstanding Award

Ten Outstanding Young Persons 2010
Junior Chamber International Hong Kong
Mr LAU Hiu Fung

Gold Award
KINECT Application Development Contest (2014)
Mr YIP Hiu Fai
Mr MA Cheuk Fung
Mr O King Chun (Supervisor: Dr NG Hiu Fung Peter)

First Class Award
Asia Student Supercomputer Challenge (2014)
Mr YEUNG Ka Chun
Mr YU Oi Keung
Mr CHAN Ka Wai
Mr WONG Tsz Wun
Mr LAU Tsz Wai (Supervisor: Dr NG To Yee Vincent)

Champion
Crossover 2014 Pan-Pearl River Delta Region Universities IT Project Competition (2014)
Mr LIU Xi
Miss SUN Ruqing
Mr ZHU Jiachen (Supervisor: Dr CHAN Chun Bun Henry)

First Runner Up
ACM Collegiate Programming Contest (2013)
Mr CHAN Tsz-san Stefan
Mr WONG Tin-chi Timothy
Mr YIP Hiu-fai Louiszen (Coaches: Dr YIU Man Lung
Dr LUI Wing Cheung Richard
Dr WANG Guini)

Gold Award, Most Innovative EPC/RFID Application
Hong Kong RFID Awards U-21 RFID Awards Competition (2013)
Mr LIU Xi
Miss SUN Ruqing
Mr ZHU Jiachen
(Supervisor: Dr CHAN Chun Bun Henry)

Gold Award, Most Innovative EPC/RFID Application
Hong Kong RFID Awards U-21 RFID Awards Competition (2012)
Mr LAU Shiu Fung
Mr LO Ka Yee
(Supervisor: Dr CHAN Chun Bun Henry)

Research Awards

First Prize
The IEEE Hong Kong Section Student Paper Contest (2013)
Mr CHENG Kam Yuen (Supervisor: Dr KUMAR Ajay)

Excellent Student Paper
International Conference on Enterprise Information Systems (2011)
Miss WANG Shu (Supervisor: Dr NG To Yee Vincent)

Best Student Paper
ACM International Conference on Internet Multimedia Computing and Service (2010)
Miss ZHONG Shenghua (Supervisors: Dr LIU Yan and Mr CHUNG Fu Lai Korris)

Best Student Paper
ACM International Conference on Internet Multimedia Computing and Service (2009)
Mr LIU Yang (Supervisors: Dr LIU Yan and Prof. CHAN Chun Chung Keith)

Entrepreneurship Awards

Award in Innovative Stream (HK$30,000)
PloyU Micro Fund for Innovation and Entrepreneurship Competition (2011)
Mr CHU Hau Shing
Miss YUNG Shing Mei

Award in Entrepreneurship Stream (HK$100,000)
PloyU Micro Fund for Innovation and Entrepreneurship Competition (2011)
Mr LIANG Chen
Connecting the Community

The Department has been keen on collaborating with industry and other institutes to provide a unique and advanced environment for achieving excellence in research and education. We work closely with industry on project development of advance technologies and their commercial and industrial applications, as well as establishment of joint laboratories to serve research and educational purposes. Below listed four joint laboratories of the Department as examples of our collaborations with industry and institutes.

1. PolyU Branch of Ministry of Education Key Laboratory of Machine Intelligence and Advanced Computing (Director: Prof. CAO Jiannong)

The PolyU Branch of Ministry of Education Key Laboratory of Machine Intelligence and Advanced Computing is jointly established by The Hong Kong Polytechnic University (PolyU) and Sun Yat-sen University (SYSU) in March 2014. The establishment of the branch laboratory serves as a recognition of our distinctive success in undertaking world-class research and delivering high-quality education over the past 40 years. Through fostering strategic research collaborations between the Department and SYSU on recent development in big data analytics and cognitive computing and facilitating the development of talents, the Key Laboratory will further enhance its impact in the international arena. Also, capitalizing the research strengths of PolyU and SYSU, the laboratory will be instrumental to advancing the technology frontier for the benefits of the nation’s development.

2. Advanced Enterprise Infrastructure Laboratory / PolyU-SYSU Networked Lab on Creative Applications (Director: Dr CHAN Chun Bun Henry)

The networked lab is built on the partnership of two existing labs, namely the Advanced Enterprise Infrastructure Laboratory (sponsored by Cisco and Macview Telecom) at the Department and the Digital Media Technology Laboratory at the School of Software, Sun Yat-sen University (SYSU). It aims to foster collaborations among students and researchers between the Department and SYSU. For example, PolyU and SYSU students can conduct group projects through the networked lab. Furthermore, PolyU and SYSU researchers can also conduct research projects based on their complementary expertise.

3. Joint IBM/PolyU Enterprise Data Analytics Laboratory (Director: Dr NG To Yee Vincent)

The Joint IBM/PolyU Enterprise Data Analytics Laboratory (EDAL) is one of the major laboratories in the Department. EDAL focuses on the big data research on design of software tools, and analytical algorithms for enterprise and social media data. Based on the advance big data analytic tools and platform, EDAL is empowered to provide a 360-degree support for student learning on data analysis and generating data products.

There are 3 objectives of EDAL covering teaching and learning, research and professional knowledge transfer. The Lab plays a key role in assisting the curriculum development of Data Science and Big Data Analytics in the Department. For the research aspect, EDAL aims to provide a platform to advance Big Data technologies. Our initial focuses are on the applications and fundamentals of analysis of big data in enterprises, social media, and education. The laboratory also supports knowledge transfer to the communities and enterprises. We aim to actively seek collaboration with different partners for training, consultancy and Big Data analysis support.

4. PolyU-Yonyou Joint Laboratory on Smart Cloud Computing (Director: Dr CHAN Toong Shoon Alvin)

The establishment of the joint lab combines the strengths of the Department and Yonyou Software Co. Ltd (Yonyou) to develop new management methodologies and bring about more innovative services which benefit industries and businesses. This is the first time ever in Hong Kong that Yonyou joins hands with local tertiary institute to establish a new infrastructure supporting research and education. The lab provides a platform for conducting research in enterprise smart computing and business applications, as well as for developing young talents with advance knowledge and skillsets in enterprise management software.
Shining Talents

With its focus on interdisciplinary research and education, the Department nurtures talents who develop highly successful careers in a broad range of fields. From senior industry executives to young entrepreneurs and successful professionals, the Department's alumni shine in any number of roles.

Senior Alumni

Mr CHOW Chok Kee Horace

Mr Chow completed Diploma in Computing Studies from the Department of Computing at PolyU in 1985. He is a seasoned industry veteran with 20 years of IT and leadership experience running multinational IT companies in Hong Kong. With his senior management roles within several large IT corporations, he has contributed to the IT profession through shaping the development of related policies, transforming enterprises with the latest technology, growing the local partner ecosystem and developing IT professionals as well as management talent in the IT industry. Currently, he is the General Manager of Microsoft Hong Kong and Macau, overseeing strategy, business operations and outreach for the company in Hong Kong. Mr Chow leads an executive team responsible for Microsoft business in Hong Kong, including key customer organizations, business and marketing groups, and technical support and consultancy services.

On the community services front, it has always been Mr Chow’s passion to nurture the next-generation of IT talent. He has served on the Advisory Committees of IT Management and Systems Engineering & Engineering Management departments for years. He also regularly visits different universities in Hong Kong to share experience and insights to inspire young university students about technology innovations and their social impact on Hong Kong. Additionally, he has served on the ICT Services Advisory Committee of the Hong Kong Trade Development Council and OGCIO’s Steering Committee on Enriched IT Programme in Secondary Schools.

Mr LAM Bing Kuen Paul

Mr Lam graduated from MSc in E-Commerce from the Department of Computing at PolyU in 1985. He is a seasoned industry veteran with 20 years of IT and leadership experience running multinational IT companies in Hong Kong. With his senior management roles within several large IT corporations, he has contributed to the IT profession through shaping the development of related policies, transforming enterprises with the latest technology, growing the local partner ecosystem and developing IT professionals as well as management talent in the IT industry. Currently, he is the General Manager of Microsoft Hong Kong and Macau, overseeing strategy, business operations and outreach for the company in Hong Kong. Mr Chow leads an executive team responsible for Microsoft business in Hong Kong, including key customer organizations, business and marketing groups, and technical support and consultancy services.

Mr Lam has immersed in the IT industry for years with solid and fruitful knowledge. He has taken up the different IT management role who was responsible for application development, infrastructure and operations in various multi-national companies. Mr Lam is also a passionate educator and researcher. In order to promote the exchange of learning experience among Mainland China, Taiwan and Hong Kong universities’ students as well as teaching staffs, he has initiated and served as the Chair Judge of the ‘Amway Pan-Pearl River Delta Region Universities IT Project Competition’ since 2006. He was also involved in research works in the University of Strathclyde in England, specializing in research area like the relationship between IT operating cost and commercial application of technology, and business intelligent applications.

In contributing to the IT industry development, he is a fellow member of the Hong Kong Computer Society helping to promote the IT profession in the industry. He served at the International/China Affairs Committee of the Society and aligned many exchange activities between Hong Kong and Mainland China IT parties.

Ir Dr LEUNG Ping Hung Karl Richard

Ir Dr Leung received his Diploma and Higher Diploma in Computing Studies from the Department of Computing in 1985 and 1987 respectively and had been a faculty member at his Alma Mater, the Department of Computing, The Hong Kong Polytechnic University, between 1989 and 1998. He joined the Vocational Training Council in 1998 and has been the head of several IT departments and technology transfer unit of the Hong Kong Institute of Vocational Education and Vocational Training Council since then.

Ir Dr Leung is a good example of contributing his IT professional knowledge and services all rounded locally and internationally significantly. He was one of the three project managers at The University of Hong Kong responsible for the development of all the software for the subject ‘Computer Literacy’ when this subject was first introduced in HK secondary schools in 1989. In 1998, he led the IEEE HK Section Computer Society Chapter, the largest computer society in HK by that time, and won the World Most Outstanding Computer Society Chapter Award of the IEEE Computer Society. This was the first IEEE Most Outstanding Chapter Award won by HK. He also contributed to lobby the HKSAR Government and Chinese Government to include IT as one of the functional constituency in the Legislative Council and the set up of the Innovation Technology Fund.

Ir Dr Leung is also an outstanding achiever in applied research and technology transfer. His research results have been adopted by industries such as the Yantian International Container Terminals. Ir Dr Leung’s research has been frequently reported by media, invited to show case in international exhibitions, reported in invited seminars, as well as implemented in corporate locally and overseas. He is also frequently interviewed by media providing professional comments on different IT matters.
Mr Lee graduated from BSc in Computing from the Department of Computing at PolyU in 1998, while Dr Chuang graduated from BSc in Information Technology in 1999, MPhil in 2002 and PhD in Computer Science in 2009 from the Department of Computing at PolyU.

Mr Lee and Dr Chuang are the co-founders of K-Matrix Group. They are an excellent example of successful partnership in which Mr Lee is the CEO who takes care of the business side; while Dr Chuang is the CRD (Chief Research Director) who is in charge of the research and development of the company’s technology backbone. K-Matrix was founded from the incubation programme of Hong Kong Science Park back in 2005 when they started to develop a series of cutting-edge analytics tools and systems for sophisticated digital intelligence analysis. With headquarter in Hong Kong, the company has expanded their business to the Greater China with branches set up in Shanghai and Guangzhou. The company has been partnering with over 400 companies including charity, government and non-government organization in advertising, corporate communication, marketing and communication, media planning and public relation sectors in China and Hong Kong. Currently, they are planning to expand their business to Asia-Pacific region.

Dr Li graduated from BSc in Computing in 2002 and MPhil in Computing in 2004 from the Department of Computing at PolyU.

With the strong interest in computing nurtured at the Department, Dr Li continued his study of PhD at the University of Waterloo in Canada after graduation from the Department. He set up a company of “Algorithmic Trading” in Canada. He is specialized in research and business on applications of A.I. and data mining and has served as a machine learning consultant for many companies. He has also served as consultant for numerous high-tech projects including energy management, chemical sensors, web search, social media and microarray data. Dr Li is the co-founder and the Chief Scientist of KFL Investment Management Inc. The company employs pattern analysis and machine intelligence technologies to find important patterns in financial data. Dr Li currently leads the R&D of predictive modelling and algorithmic trading of the company.

State-of-the-Art Facilities for Students

The Department extends its support to students in every possible way, recognising the importance of their practical work. All academic programmes and research activities enjoy a broad range of computing facilities in the Department, and also from the Information Technology Services Office of PolyU.

We also provide a variety of software, tools and systems necessary to ensure that students are thoroughly familiar with what they will use in their careers, ranging from data mining, warehousing software to database management systems, project management software, game development tools, system software and development kits.

The Department has newly established a Private Cloud infrastructure to provide a fully-integrated, self-service, scalable virtualized platform, supporting the delivery of on-demand requests and services. It will serve as a platform for research, teaching and learning such as Big Data and High Performance Computing (HPC).

The Cloud consists of 20 nodes, each with 256GB memory and 12 cores. It has 168TB shared storage and the whole system is running on 10Gbit network. With this infrastructure, it can easily have more than 300 typical virtual machines with 16G memory.

We provide general laboratories for students and wireless access for computing equipments.

Student Laboratory

The Student Laboratory have two rooms, providing a general computing environment for all students, offering 24 PCs and 5 high speed laser printers.

PC Laboratory

The four-room PC Laboratory provides 157 PCs for basic and advanced computing in Windows for all students, serving as an instruction laboratory during some class hours.
Organizations and Advisors

Departmental Advisory Committee (DAC)

Chairman
Mr LAI Sik-cheung Daniel
Chairman
Government Chief Information Officer
Office of the Government Chief Information Officer

Vice-Chairman
Prof. SURI Neeraj
TUD Chair Professor
Department of Computer Science
TU Darmstadt
Darmstadt, Germany

Members
Mr CHENG Chung Ngam Rocky
Deputy General Manager
Information Technology Department
Bank of China (Hong Kong) Limited

Mr LAU Ka Men Stephen
Vice President (Executive)
Hong Kong Computer Society

Prof. LV Jian
Vice President
Deputy Director of Computer Science and Technology Department
Nanjing University

Prof. XU Chengzhong
Professor
Department of Electrical and Computer Engineering
Wayne State University

Ex-officio Members
Prof. MAN Hau-chung
Dean
Faculty of Engineering
The Hong Kong Polytechnic University

Prof. CAO Jiannong
Chair Professor and Head
Department of Computing
The Hong Kong Polytechnic University

Internal Members
Prof. BACIU George
Professor
Department of Computing
The Hong Kong Polytechnic University

Dr ZHANG Lei
Associate Professor
Department of Computing
The Hong Kong Polytechnic University

Dr CHUNG Fu Lai Korris
Associate Professor
Department of Computing
The Hong Kong Polytechnic University

Creative Computing Laboratory
The Creative Computing Laboratory provides a Mac OS/X (supporting also Windows system) computing environment for all students in the Department. It houses 40 Apple iMac computers and serves as an introductory laboratory for mobile application development.

Project Laboratory
The Project Laboratory is available for use by final year undergraduate and postgraduate students carrying out their final year projects. The Project Laboratory features 15 high end PCs.

Departmental Academic Advisor (DAA)

Prof. BHAGAVATULA Vijayakumar is the Associate Dean for the College of Engineering and a Professor of the Department of Electrical and Computer Engineering, Carnegie Mellon University.

Prof. Bhagavatula received B. Tech and M. Tech (Electrical Engineering) from Indian Institute of Technology, Kanpur in 1975 and 1977 respectively and his PhD (Electrical Engineering) from Carnegie Mellon University in 1980. His research interests include Error Correction Codes, Signal/Image Processing and Pattern Recognition. Prof. Kumar is a Fellow of the Optical Society of America (OSA), the International Association for Pattern Recognition (IAPR), SPIE and IEEE.

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TUD Chair Professor
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Department of Computing
The Hong Kong Polytechnic University
Strong Team

Chair Professor and Head

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Parallel and Distributed Computing, Computer Networking, Mobile and Pervasive Computing, Fault Tolerance Middleware

Chair Professor

Prof. ZHANG Dapeng David  
BSc(Peking); MSc; PhD(Harbin IT); PhD(Waterloo); FIEEE; FIAPR
Biometrics, Pattern Recognition & Image Processing, Information Security, Neural Networks

Professor & Associate Head

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BSc(Beijing Normal); MSc; PhD(UIUC)
Natural Language Process and Computational Linguistics, Lexical Semantics, Information Extraction and Knowledge Discovery, Open Systems and Standardization

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BEng(X’an Jiaotong); PhD(Leeds); Dip(China Foreign Language); MIEEE
Image Processing, Pattern Recognition, Computer-aided Diagnosis and Monitoring

Associate Professor & Associate Head

Dr NG To Yee Vincent  
BSc(Simon Fraser); MMath(Waterloo); PhD(Simon Fraser)
Databases, Data Mining and XML, Medical Informatics

Professor

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BMath, MASc, PhD(Waterloo); MACM; MIEEE; HKDEA
Interactive Computer Graphics, Virtual Reality, Motion Synthesis, Image and Video Analysis

Prof. CHAN Chun Chung Keith  
BMath, MASc, PhD(Waterloo)
Software Engineering, Data Mining, Computational Intelligence

Associate Professor

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BSc, MSc(Rochester); MSci(Wisconsin-Madison); PhD(Rochester); MIEEE; MACM
Data Mining, Recommender System, Human Computer Interaction, Service Learning

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BA, MA(Cambridge); PhD(British Columbia); MIEEE
Networking and Communications, Internet Technologies, Electronic Commerce

Dr CHAN Toong Snoon Alvin  
Dip(EEE)(Singapore Poly); BEng(Leeds); PhD(New South Wales); MIEEE; MACM
Internet and Mobile Computing, Context-aware Computing, Smart Card Applications

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BSc(Virginia Poly); MEng, PhD(Rensselaer); MIEEE; MACM
Network Measurement Systems, Internet Infrastructure Security and Privacy; QoE Evaluation of Network Services

Dr CHUNG Fu Lai Korris  
BSc(Montana); MPhil; PhD(CUHK); MIEEE
Data Mining, Multimedia, Computational Intelligence, Pattern Recognition

Dr LEONG Hong-va  
BSc, MPhil(CUHK); PhD(California); MIEEE; MACM
Parallel and Distributed Computing, Distributed Databases, Mobile Computing, Internet Computing

Dr LEUNG Kam Nang Hareton  
BSc(British Columbia); MSc(Simon Fraser); PhD(Alberta); MIEEE; MHKCS
Software Testing, Process Engineering and Quality Improvement, ISO 9000, CMM/CMMI, Software Metrics, Software Maintenance, IT Outsourcing

Dr LI Wenjie Maggie  
BSc, MSc(Tianjin); PhD(CUHK); MACM; MIEEE
Information Retrieval and Extraction, Natural Language Processing, Temporal Information Processing and Reasoning

Dr LIU Yan  
BEng(Southeast); MSc(Nanjing); PhD(Columbia)
Machine Learning, Multimedia Understanding
Dr LO Chi Lik Eric
BSc(PolyU(H.K.)); MSc(HKU); PhD(ETH Zurich)
Information Retrieval, Algorithmics, Pattern Recognition, Speech Processing, Natural Language Processing, Chinese Computing, Computational Linguistics

Dr LUK Wing Pong Robert
BSc, DipEng(Southampton); MSc(Warwick); PhD(Southampton); CEng.; CITP; SMAIC; FBCS; SMEEE
Information Retrieval, Algorithmics, Pattern Recognition, Speech Processing, Natural Language Processing, Chinese Computing, Computational Linguistics

Dr NGAI Grace
ScB(Brown); MSE, PhD(Johns Hopkins)
Human Computer Interaction, Human Centred Computing, Pervasive Computing, Natural Language Processing

Dr SHAO Zili
BEng, MEng(Electronic Science & Technology of China); MSc, PhD(Texas at Dallas)
Embedded Systems and Real-time Systems

Dr WANG Dan
BSc(Peking); MSc(Case Western Reserve); PhD(Simon Fraser)
Wireless Sensor Networks, Peer-to-Peer Networks, and QoS Routing

Dr XIAO Bin
BSc, MSc(Fudan); PhD(UT Dallas)

Dr ZHANG Lei
MSc, PhD(Northwestern Polytechnical)
Image and Video Processing, Biometrics, Multisensor Data Fusion, Pattern Recognition

Assistant Professor
Dr AU Man Ho Allen
BEng, MPhil(CUHK); PhD(Wallongong); MIEEE
Information Security and Privacy, Applied Cryptography, Accountable Anonymity, Cloud Computing

Dr LOU Wei
BEng(Taishan); MEng(RUPT); PhD(Florida Atlantic); SMEEE
Mobile Ad Hoc and Sensor Networks, Computer Networks, Mobile Computing, Multimedia Systems

Dr KUMAR Ajay
BEng(UT); MEng, PhD(HKU); SMEEE
Biometrics, Computer Vision-Based Industrial Inspection

Dr SHIU Chi Keung Simon
MSc(City U.K.); MSc(Newcastle U.K.); PhD(PolyU(H.K.)); MBIS; MAMS; MIHKS; SMEEE
Soft Computing, Case-based Reasoning, Web 3D Systems and Applications

Dr WANG Gixin
BE, MEng(Taishan); PhD(UT)
Real-time/Embedded Systems, Cyber-physical Systems

Dr WANG Zhi Jun
BE, MS(HUST); PhD(UT Arlington)

Dr YIU Man Lung
BEng, PhD(HKU)
Data Engineering, Query Processing, Spatial Database Systems

Research Assistant Professor
Dr CAO Yixin
BEng(Harbin Engineering U); MS(BUA); PhD(TAMU)
Algorithmic Graph Theory, Combinatorial Optimization, Social Networks, Bioinformatics

Dr LI Shuai
BEng(HUST); MEng(USTC); PhD(Steven)
Robotics, Dynamic Systems and Control, Recurrent Neural Networks, Distributed Control and Optimization

Dr LUO Xiapu Daniel
BSc, MS(Wuhan); PhD(PolyU(H.K.)); SMEEE
Network and System Security, Information Privacy, Internet Measurement, Cloud Computing
Motivational Quotes

Teachners

Dr CHUNG Fu Lai Korris
Associate Professor, Department of Computing, PolyU
“Tailor-made programmes (Broad Discipline of Computing) incorporate the latest in sector developments, meeting new challenges head on and giving students the knowledge and advantage they need to pursue exciting and fulfilling computing careers.”

Dr ZHANG Lei
Associate Professor, Department of Computing, PolyU
“The Department of Computing maintains an effective approach to research. Our mission is to conduct world-class research and commit to inter-disciplinary research, expanding the horizons of knowledge discovery and technology advancement.”

Alumni

Mr LAU Shiu Fung
2013 Graduate of BSc in Computing, Department of Computing, PolyU
Current Student of MPhil in Computing, Department of Computing, PolyU
“Programmes of the Department of Computing are interesting and interactive, and practically train up my programming and problem-solving skills. Furthermore, the teaching staff are patience and nurture my interest in programming.”

Dr CHOW Ted
2002 Graduate of BSc in Computing, Department of Computing, PolyU
2005 Graduate of MPhil in Computing, Department of Computing, PolyU
“Besides knowledge in computing, the Department of Computing has offered me practical curriculum, interactive learning environment, scholarship etc. I was encouraged to make efforts in extra-curricular activities, which helped me in personal as well as career development.”

Students

Miss CHAN Iris
Current Student of BSc in Enterprise Information Systems, Department of Computing, PolyU
“The most important thing in our life is never give up easily. We all face difficulties in our life. Even though we are in big trouble, just keep on concentrating and achievement will be the fruition of our hard work. This is what I have learnt through my studies in the department.”

Miss WONG Rachel
Current Student of BSc in Computing, Department of Computing, PolyU
“The programmes of the Department of Computing are practical and profound. They cover difficult aspects including software, hardware and network which equip me well for my future work.”

Mr KWAN Anson
Current Student of BSc in Information Technology, Department of Computing, PolyU
“The programmes of the Department of Computing do not focus on computer studies only, but also includes some aspects of business which could help me develop my career. During my studies, I was well trained for problem-solving. It helps me gain in understanding and executing duties in my future work.”
Awards and Merits

Outstanding Performance Highlights

Named as one of the Highly Cited Researchers (Engineering Category), Thomson Reuters, 2014
Prof. ZHANG Dapeng David

Faculty External Grants Achievement Award, Faculty of Engineering, The Hong Kong Polytechnic University, 2014
Dr CHANG Kow Chuen Rocky

Faculty External Grants Achievement Award, Faculty of Engineering, The Hong Kong Polytechnic University, 2014
Prof. CAO Jannang

The President’s Award for Excellent Performance/Achievement in Services, The Hong Kong Polytechnic University, 2012/2013
Prof. LU Qin, MH

Faculty Award for Outstanding Performance in Research and Scholarly Activities, Faculty of Engineering, The Hong Kong Polytechnic University, 2012/13
Dr ZHANG Lei

Research Grant Achievement Award, Faculty of Engineering, The Hong Kong Polytechnic University, 2009/2010
Dr ZHANG Lei

Faculty Award for Outstanding Performance in Teaching, Faculty of Engineering, The Hong Kong Polytechnic University, 2012/13
Dr LIU Nga Kwok James

The President’s Awards for Excellent Performance/Achievement in Research and Scholarly Activities (Team Award) 2011/2012
Prof. ZHANG Dapeng David Dr ZHANG Lei
Prof. YOU Jia Jane Dr KUMAR Ajay

Medal of Honour, HKSAR, 2012
Prof. LU Qin, MH

Faculty Award for Outstanding Performance in Research and Scholarly Activities, Faculty of Engineering, The Hong Kong Polytechnic University, 2011/12
Dr ZHANG Lei

The President’s Award for Excellent Performance/Achievement in Teaching, The Hong Kong Polytechnic University, 2010/2011
Dr CHAN Chun Bun Henry

The President’s Award for Excellent Performance/Achievement in Services, The Hong Kong Polytechnic University, 2010/2011
Dr NG To Yee Vincent

Faculty Award for Outstanding Performance in Teaching, Faculty of Engineering, The Hong Kong Polytechnic University, 2010/2011
Dr CHAN Chun Bun Henry

Faculty Award for Outstanding Performance in Research and Scholarly Activities (Team Award), Faculty of Engineering, The Hong Kong Polytechnic University, 2010/11
Prof. ZHANG Dapeng David Dr ZHANG Lei
Prof. YOU Jia Jane Dr KUMAR Ajay

The President’s Award for Excellent Performance/Achievement in Teaching, The Hong Kong Polytechnic University, 2009/2010
Dr NGAI Grace

Research Grant Achievement Award, Faculty of Engineering, The Hong Kong Polytechnic University, 2009/2010
Dr ZHANG Lei

Research Grant Achievement Award, Faculty of Engineering, The Hong Kong Polytechnic University, 2009/2010
Prof. YOU Jia Jane
Industrial and Engineering Services Grant Achievement Award, Faculty of Engineering, The Hong Kong Polytechnic University, 2009/2010
Prof. CAO Jiannong

Industrial and Engineering Services Grant Achievement Award, Faculty of Engineering, The Hong Kong Polytechnic University, 2009/2010
Dr CHANG Kow Chuen Rocky

Faculty Award for Outstanding Performance in Services, Faculty of Engineering, The Hong Kong Polytechnic University, 2009/2010
Dr NG To Yee Vincent

Faculty Award for Outstanding Performance in Teaching, Faculty of Engineering, The Hong Kong Polytechnic University, 2009/2010
Dr NGAI Grace

Faculty Merit Award in Teaching, Faculty of Engineering, The Hong Kong Polytechnic University, 2009/2010
Dr CHAN Chun Bun Henry

Faculty Merit Award in Research and Scholarly Activities, Faculty of Engineering, The Hong Kong Polytechnic University, 2009/2010
Dr NGAI Grace

The President’s Award for Excellent Performance/Achievement in Research and Scholarly Activities,
The Hong Kong Polytechnic University, 2008/2009
Prof. CAO Jiannong

The President’s Award for Excellent Performance/Achievement in Services, The Hong Kong Polytechnic University, 2008/2009
Dr CHAN Chun Bun Henry

Faculty Award for Outstanding Performance in Research and Scholarly Activities, Faculty of Engineering,
The Hong Kong Polytechnic University, 2008/2009
Prof. CAO Jiannong

Faculty Award for Outstanding Performance in Services, Faculty of Engineering, The Hong Kong Polytechnic University, 2008/2009
Dr CHAN Chun Bun Henry
**Award-Winning Research Highlights**

**Silver Award: Best Digital Inclusion (Service Stream), Hong Kong ICT Awards**
A Mobile Computing Centre: A Lab in a Suitcase on a Tuktuk, 2014
Dr NGAI Grace Mr HUANG Erwin (WebOrganic)
Dr CHAN Chi Fai Stephen

**Best Paper Award, 11th IEEE International Symposium on Parallel and Distributed Processing with Applications**
Local Monitoring and Maintenance for Operational Wireless Sensor Networks, 2013
Dr M.Z.A Bhuiyan (Central Shout University) Prof. CAO Jiannong
Dr WANG Guojun Prof. WU Jie (Temple University)

**Special Mention Award and Certificate of Merit, Hong Kong ICT Awards**
Prof. CAO Jiannong Mr LIU Yang Dr GUO Peng
Dr LIX Xuefeng Mr HE Zongjian

**IET Computer Vision Premium Award**
Robust Mean-Shift Tracking with Corrected Background-Weighted Histogram, IET Computer Vision, Vol. 6, Issue 1, 2012, P. 62-69, 2013
Mr NING Feng Professor ZHANG Dapeng David
Dr ZHANG Lei Dr ZHU Hailong (Research Institute of Innovative Product & Technology, PolyU)

**Best Paper Award (Honourable Mention), Pattern Recognition Journal**
Dr ZHANG Lin Prof. ZHANG Dapeng David
Dr ZHANG Lei Dr ZHU Hailong (Research Institute of Innovative Product & Technology, PolyU)

**Best Paper Award, 28th IEEE International Conference on Data Engineering**
Answering Why-Not Questions on Top-K Queries, 2012
Mr HE Zhan
Dr LO Chi Lik Eric

**Qualcomm Award, 19th ACM International Conference on Multimedia**
Bilinear Deep Learning for Image Classification, 2011
Miss ZHONG Shenghua Dr LIU Yang
Dr LIU Yan

**Best Paper Award, 2011 IEEE Wireless Communications and Networking Conference**
Dr WU Hejun (Sun Yat-sen University) Dr LIU Xuefeng
Prof. CAO Jiannong Mr LIU Yang
Most Valued Paper published in Pattern Recognition Journal
Dr KONG Adams (Nanyang Technological University) Prof. KAMEL Mohamed (University of Waterloo)
Prof. ZHANG Dapeng David

Silver Award: Best Professional Development (Product), Hong Kong ICT Awards
Multimedia Resources Package for the New Senior Secondary Information and Communication Technology (ICT) Curriculum, 2009
Dr NG To Yee Vincent and research team

Best Paper Award, 4th IFIP International Conference on Embedded and Ubiquitous Computing
A Self-configuring Personal Agent Platform for Pervasive Computing, 2008
Dr Feng Yuhong Mr LAU Ivan
Prof. CAO Jiannong Mr LIU Xuan

Best Paper Award, IEEE Transactions on Industrial Informatics
Dr LIU Xue (McGill University) Dr HE Wenbo (McGill University)
Dr WANG Qixin Dr DING Hui (University of Illinois at Urbana-Champaign)
Dr GOPALAKRISHNAN Sathish (The University of British Columbia) Dr LEE Khwal (University of Illinois at Urbana-Champaign)
Prof. SHA Lui (University of Illinois at Urbana-Champaign)

Gold Medal, 6th China International Invention Exhibition
Prof. BACIU George Baciu
Prof. HU Jinlian (Institute of Textiles and Clothing, PolyU)

Best Paper Award, 2nd IFIP International Conference on Embedded and Ubiquitous Computing
A Fuzzy-based Service Adaptation Middleware for Context-aware Computing, 2006
Dr CHEUNG Ronnie Mr YAO Gang
Prof. CAO Jiannong Dr CHAN Toong Shoon Alvin