Faculty of April 2010 April 2010 Newsletter



The University of Hong Kong in Shenzhen

On March 16, 1910, the Foundation Stone of the Main Building was laid by Sir Frederick J D Lugard, the then Governor of Hong Kong to mark the founding of The University of Hong Kong (HKU). Exactly one hundred years later, the Foundation Stone of the Centennial Campus was laid by The Honorable Donald Y K Tsang, the Chancellor of HKU and the Chief Executive of the Government of the Hong Kong Special Administrative Region on March 16, 2010. As one of the Founding Faculties of HKU, the Faculty of Engineering is planning a programme of centennial activities, in conjunction with HKU, to celebrate the achievements and developments of the Faculty in the past one hundred years.

It is prudent for any major development in Hong Kong to include the China factor and there is no exception for HKU. At the December 2009 Senate meeting, plans for extending HKU's activities into Shenzhen were revealed. The future presence of HKU in Shenzhen will focus on the following four projects:

- ✤ Research facilities at the Shenzhen Virtual University Park
- The University of Hong Kong Campus in Shenzhen
- * Shenzhen Binhai Hospital
- ✤ Dental teaching annex and dental hospital

Development of the first two projects will be closer to the heart of the Faculty, in particular when the Faculty is experiencing serious shortage of space within the existing Pokfulam Campus for teaching as well as new R&D initiatives.

Shenzhen Virtual University Park (SVUP) is located at the Shenzhen High and New Technology Industry Development Zone (Gao Xin Qu) near Shenzhen Bay. About 35 universities and institutions from Mainland and Hong Kong have set up facilities in SVUP. A piece of land has been reserved for HKU which could serve as a seed to develop active participation of our R&D activities in this "high-tech" neighborhood. The Dean of Engineering is now leading a pioneering plan to establish a R&D stronghold for the Faculty in SVUP. A possible site for HKU campus in Shenzhen is located at the new University Town in Nanshan District served by the Xili railway station. Detailed planning has started and discussions have been progressing with the Shenzhen Government and the Mainland authorities on development and operation of this Campus. This "extension" of Pokfulam Campus would greatly enhance the teaching and learning environment of our undergraduate students. It would also help to ease the space constraints faced by many of our present research activities. The door-to-door travel time between Pokfulam Campus and the proposed Shenzhen Campus has been estimated to be less than one hour.

The construction of Binhai Hospital started in November 2007. It is expected to be in operation by the second half of 2011. It will provide 2000 beds, including 300 VIP beds serving patients from all parts of China. In collaboration with Shenzhen Health Bureau and Hong Kong Hospital Authority, the Medical Faculty of HKU would steer and manage this Hospital which could become the base to develop teaching and research for the Medical Faculty in China.

The fourth project is to set up facilities for teaching and training dental students at the postgraduate level in Shenzhen. With support of Shenzhen Health Bureau, a building of the Donghu Hospital in Lu Wu might be converted into a dental hospital for this purpose.

Stepping into the second century, HKU will continue to move ahead in giant strides, both internationally as well as into the motherland. It would not be impossible, therefore, for many of us to attend another Foundation Stone Laying Ceremony well before March 16, 2110.

Peter K K Lee Associate Dean Faculty of Engineering, The University of Hong Kong



With the increasing interaction between Hong Kong and the Mainland, the Faculty of Engineering has attracted talented teachers and students who are originally from the Mainland. There are also local graduates who choose to work in the Mainland after graduation. Here are a few of those who share thoughts and views about life at HKU Engineering.

DR JUN YANG

Associate Professor Department of Civil Engineering

D^r Jun Yang joined HKU Engineering in 2003. Prior to that, he spent several years doing research at Kyoto University and Technical University of Berlin. He is currently teaching both undergraduate and postgraduate courses in the area of geotechnical engineering. His primary research interests are in geotechnical earthquake engineering, a multidisciplinary field dealing with the effects of earthquakes on the built and natural environment from the geotechnical engineering perspective.

Hong Kong is appealing to many overseas Chinese scholars, including Dr Yang. It is a place where "East meets West" and its proximity to the Mainland is a great advantage. Moreover, HKU and its Engineering Faculty have a long history and enjoy a fine tradition and reputation. For all these reasons, Dr Yang is proud of being a member of HKU Engineering and is happy to contribute to sustain its tradition and reputation.

As a mainland professor teaching in Hong Kong, Dr Yang feels that HKU facilitates his collaboration with researchers in the Mainland. Since joining HKU Engineering, he has established a collaborative network with academic partners from various institutions including Dalian University of Technology, Peking University, Shanghai Jiao Tong University, Tongji University and Zhejiang University.

Dr Yang's achievements are many. He received the Outstanding Young Researcher Award of HKU in 2007; the Humboldt Research Fellowship Award in 2001; the Best Presentation Award at the 55th National Conference of the Japan Society of Civil Engineers in 2000; the Center of Excellence Research Fellowship of Kyoto University in 1997; and the Outstanding Graduate Award of Zhejiang University in 1992. Dr Yang is currently serving as the President-Elect of the American Society of Civil Engineers, Hong Kong Section. The students who are supervised by Dr Yang have also won external awards.

During his leisure time, Dr Yang enjoys hiking with his family. If there is one tip that Dr Yang would give to new teachers from the Mainland, it would be 'live close to campus'. For one thing, life will definitely be easier when you have to work overtime in the office. Besides, hiking to Lung Fu Shan during the weekends is a very attractive idea.





SU MEI NI

Year 3 student Department of Civil Engineering

I have been living in Hong Kong for more than two years and am now a final year undergraduate student. Three years ago, I was enrolled by Peking University and HKU at the same time. I chose HKU without any hesitation because it has been my dream since I was a little girl. I believe that HKU can allow me



to have more international exposure and a global outlook, a better English environment, and a more colorful university life. All of these are big challenges for me and at the same

time HKU offers me numerous opportunities to practice my communication, management, and organization skills.



I still remember the first day I was at HKU. I was a little bit scared and excited then, because everything was new for me. As a freshman, I got a lot of help and support from professors, mentors, supervisors and other faculty staff. I really want to extend my sincere thanks to all of them. Without their help and support I wouldn't be able to adapt to HKU life so quickly, not to mention receiving my first Dean's List Prize in the first year. HKU has given me a lot of opportunities to broaden my horizon, such as the exchange experience in Australia, the internship in Singapore, and attending an undergraduate conference in UK.

With so many advantages, I believe that HKU will attract more and more mainland students. I hope they will actively participate in the extra-curriculum activities to develop their overall competence in this world-class university.

MEI LIJUN

PhD Student Department of Computer Science

Was admitted to The University of Hong Kong (HKU) in 2006, and this is my fourth year as a PhD student here.

There are many reasons why I have chosen HKU for my PhD study. First of all, it is a world-class university with a good reputation. There are many excellent researchers in HKU. For example, my supervisor Prof T H Tse is one of the most well-known researchers in software testing and debugging. With their excellent supervision, it is much easier to publish research papers in top-tier

venues such as the International Conference on Software Engineering (ICSE) and the International Symposium on Foundation of Software Engineering (FSE). Secondly, Hong Kong is one of the biggest cities in the Greater China area. The western culture (English as the main language) and eastern culture (traditional Chinese as the main language) are integrated very well. Meanwhile, Hong Kong is adjacent to the Mainland. From Hong Kong, we can easily go back to the Mainland for gatherings with parents and friends.

A big challenge in my first year at HKU is on how to be a good teaching assistant. I guess many mainland students may not have such experiences before coming to Hong Kong. Giving tutorials in English to a large class is not an easy task, especially when we sometimes have to face part-time students with many years of real-life experience. On the other hand, such teaching experience is also interesting. I have actually made friends with many students in my class. My department has honoured me with the best tutor award twice based on the very positive feedback from my students in 2008 and 2009.



The financial research support enables me to attend international conferences held in various countries including

HONG KONG UNIVERSITY STUDENTS'

Germany, Spain, Canada, Holland, and Singapore. These conferences provided me with great opportunities to meet world-renowned researchers in my research field. The travel experience also enriched my world view. In addition, there are many kinds of scholarships available if you work hard. For instance, I have been awarded an IBM PhD fellowship, an HKSAR government scholarship, Hung Hing Ying scholarships, and The Hong Kong and China Gas Company Limited scholarships because of my research achievements. I was also selected as an intern in IBM China Research Lab in 2009.

Based on my personal experience, I feel that mainland students should spend more time to learn about Hong Kong people and society by attending social activities either on campus or outside of the university, and trying to make friends from various countries with different backgrounds. It will be also very helpful if you can speak Cantonese. Try your best to integrate by becoming a real Hong Kong student, rather than remaining as a mainland student who happens to be in Hong Kong.

EATURE

ZHENG ZHANG

MPhil student Department of Electrical and Electronic Engineering

Joined HKU EEE Department in 2008 as an MPhil student supervised by Dr Ngai Wong. My research focuses on very-largescale integration (VLSI) circuit modeling and simulation. Prior to that, I studied in Huazhong University of Science and Technology, and obtained a BEng degree in microelectronics.

Unlike other top-ranked students continuing their postgraduate studies in the Mainland, I decided to come to HKU after my undergraduate study. I was extremely amazed by the research projects of the EEE Department, its internationalized research style, as well as the outstanding research records of the Faculty of Engineering. My experience in HKU has proven my choice to be a smart one. At HKU, I have received excellent guidance from my



LI JIANYU

Year 3 student Department of Mechanical Engineering

The moment I received the offer of admission from Harvard University, I certainly realized that all my devotion to learning and research was well paid off. If you ask what I did in the past years that led to the success in my studies, I have to claim that, as agreed by my advisor, the experience of exchange studies at HKU must be highlighted and emphasized with top priority. HKU is a paradise full of diverse opportunities - it is an open and generous environment for a beginner to learn new knowledge, develop his/ her interest and engage in original research as long as you are ready to grasp the opportunity. I was fortunate enough to make the best use of an opportunity – to start my research in the Nanomechanics



supervisor and finished seven top-tier conferences and journal papers in less than 18 months. With the support from Dr Wong, I also had the chance to visit Prof C K Cheng (an IEEE Fellow and a leading expert in VLSI) at the University of California, San Diego for four months, which had largely enhanced my research exposure and calibre. These experiences, I believe, are immensely helpful for me to gain admittance to the EECS PhD program at the Massachusetts Institute of Technology (MIT) in the coming Fall.

I must thank my supervisor who has helped reshape my research style. Dr Wong is a very hardworking young researcher, and he always has a strong interest in solving challenging problems. Because of Dr Wong's influence, I have learned to become selfmotivated in conducting research and be patient and persistent in solving problems. Before coming to HKU, I would never finish a project before the deadline without my supervisor's warnings, and I would never actively seek interesting topics. I am deeply thankful to HKU and Dr Wong for the inspirations.

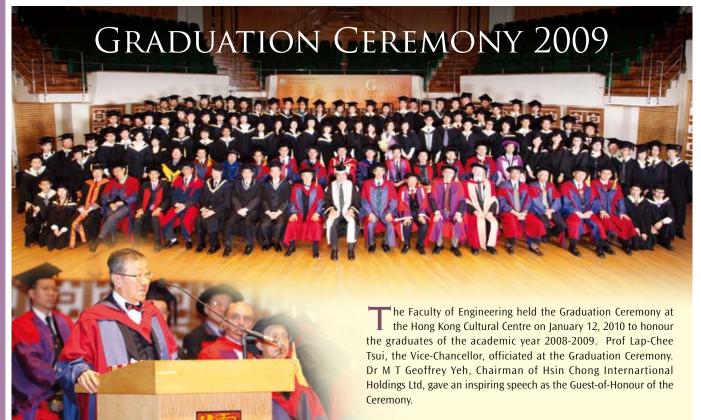
Many mainland students have asked me for suggestions about postgraduate studies. Each time I repeated the same thing: "HKU is a better place for research than any mainland schools. If you are really interested in research and want to be well prepared for future pursuits, you will find excellent opportunities here to make your dreams come true."



Laboratory of the Department of Mechanical Engineering. My project was focused on mechanical behavior of polymeric materials during nanoindentation. I enjoyed full freedom in my research to use plenty of advanced scientific equipment. Most importantly, I received guidance and collaboration from talented researchers. Owing to this unforgettable experience, my first paper was published in a famous scientific journal.

In addition to the outstanding research opportunity, I also found that the comprehensive education provided by HKU satisfies students' thirst for knowledge and inspire their original thinking. My favorite courses such as Nanotechnology and Computational Chemistry illustrate this point. Last but not least, I would like to express my thanks to Prof A H W Ngan and Dr Bin Tang for their excellence in teaching, research and knowledge exchange. They have guided me into the fantastic world of materials.

EWS & EVENTS



Mentorship Day 2009-2010

The Faculty of Engineering organised the Mentorship Day again this year on February 8, 2010 to provide an opportunity for Year 1 engineering students to meet their non-academic tutors and peer mentors. About 180 Year 1 students and 70 peer mentors and non-academic tutors attended the event. The great turnout indicated that the Year 1 students appreciated the support and attention given to them.





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"Selected topics in Nanomechanics of Engineering and Biology Systems"

By Prof Huajian Gao January 6, 2010



Prof Huajian Gao, Walter H Annenberg Professor, Division of Engineering, Brown University, USA, discussed some recent studies on the mechanics of plastic deformation in nanocrystalline materials as well as mechanics of focal adhesions in cell-substrate interactions.

"Systems Theory: A Retrospective and Prospective View"

By Prof Sanjoy K Mitter

January 18, 2010

Prof Sanjoy K Mitter, Laboratory for Information and Decision Systems, Massachusetts Institute of Technology, USA, took a retrospective look at Systems Theory, especially Linear Systems Theory as it developed from the early sixties to the late eighties. The second part of the lecture was a prospective look at the future. Finally, Prof Mitter raised the issue of how questions of spacetime control systems, that is systems evolving over graphs, should be framed in light of our theoretical understanding of the structure of linear systems.



ENGINEERING DISTINGUISHED LECTURE

"Modeling, simulation, inversion and Chang E data validation for microwave observation in China's lunar project"

By Prof Prof Ya-Qiu Jin January 13, 2010

FACULTY SEMINARS

RFID-Enabled Wireless Manufacturing Supply Chain

By Prof George Huang Department of Industrial and Manufacturing Systems Engineering January 5, 2010





Prof Ya-Qiu Jin, IEEE Fellow and Professor and Director, Key Laboratory of Wave Scattering and Remote Sensing Information (MoE), Fudan University, China, presented the multi-layered model of lunar surface media and how numerical simulations of multi-channel brightness temperature (Tb) from global lunar surface are obtained. It is applied to the study of retrieving the regolith layer thickness and evaluation of global distribution of 3He content in regolith media.



Mesoscopic studies of ferroelectric/ferromagnetic materials with defects

By Prof A K Soh Department of Mechanical Engineering February 12, 2010

Overview of Electric Vehicle Research

Prof K T Chau Department of Electrical and Electronic Engineering March 5, 2010

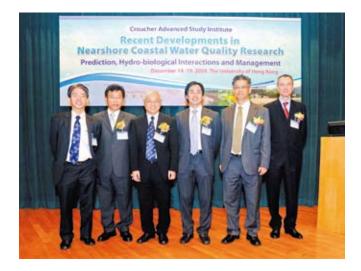


Croucher Advanced Study Institute

Whith the financial support from The Croucher Foundation, the Advanced Study Institute (ASI) on "Recent Developments in Nearshore Coastal Water Quality Research: Prediction, Hydro-biological Interactions and Management" was successfully organised by the Department of Civil Engineering from December 14 to 19, 2009.

The Opening Ceremony of ASI held on December 14, 2009 at the Wang Gungwu Theatre of Graduate House started with a welcoming address by Prof Paul K H Tam, Pro-Vice-Chancellor (Research) of HKU. The opening addresses were delivered by Mr Peter K K Lau, Director of Drainage Services Department of HKSAR and Mr Elvis W K Au, Assistant Director of Environmental Protection Department of HKSAR. The ASI Course Director and Pro-Vice-Chancellor of HKU, Prof J H W Lee, then explained the background leading to the ASI, mentioning also related developments in a Jockey Club funded project to develop a water quality forecasting and management system for Hong Kong.

The ASI was an intensive high level teaching activity which lasted over five and a half days. A number of world leading experts and researchers were invited to give lectures. Most of the lectures were delivered in the morning session, while the afternoon sessions consisted of short



presentations and discussions. On the afternoon of December 16, 2009, a field trip was organised to visit Stonecutters Island Sewage Treatment Works, followed by a boat cruise to see selected beaches, a fish culture zone and the Chinese white dolphin habitat.

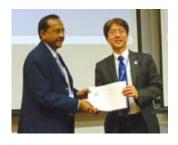
A Site Visit to Rubber Foundations for Earthquake

group of 12 civil engineering students and 6 architectural students spent their last Christmas holidays in Sichuan for reconstruction of a kindergarten. They worked with the local engineers on detailed designs of the project. They had also visited a site of a new hospital building on rubber foundations. The students got first observation on how a building, floating on rubbers, is isolated from strong vibration during earthquake.

This interesting site was introduced by Ir Victor Lo of Development Bureau of HKSAR responsible for Sichuan Reconstruction and our students' participation into the reconstruction was supported by Lee Hysan Foundation.



Prof Joseph Hun-wei Lee has been appointed by the HKSAR Government as a member of the Construction Industry Council from February 2010 to January 2012.



Dr S T Smith delivered a keynote lecture entitled "FRP Anchors: Recent Advances in Research and Understanding" at the Second Asia-Pacific Conference on FRP in Structures (APFIS 2009) held in Seoul, Korea from December 9 to 11, 2009. He was also a member of the International Scientific Committee of APFIS 2009.

Dr S T Smith delivered an invited lecture entitled "Recent Advances in the Use of FRP Composites in Civil Infrastructure" at the headquarters of The Hong Kong Institution of Engineers on January 18, 2010.

Dr W Y Szeto, BEng, MPhil, PhD, MIEI, MIEEE, MHKSTS, MCIHT, CMILT joined the Department as Assistant Professor in December 2009. He obtained his BEng, MPhil, and PhD degrees at the Hong Kong University of Science and Technology in 1998, 2000, and 2003, respectively. He was a Lecturer in Transportation Engineering at Trinity College Dublin, and an Assistant Professor at the National University of Singapore. He has been awarded the World Conference on Transport Research Prize (2001), the Eastern Asia Society for Transportation Studies Outstanding Paper Award (2003), the Hong Kong Society for Transportation Studies Outstanding Student Paper Award (2003), the Hong Kong Society for Transportation Studies Outstanding Dissertation Paper Award and the Gordon Newell Memorial Prize (2005), and the Hong Kong Institution of Engineers Outstanding Paper Award for Young Engineers/Researchers (2008). His research interests include intelligent transport systems, dynamic traffic assignment, network design, road pricing, network reliability, game theory, transport logistics, meta-heuristics, and landuse-transport-environment.

Dr J Yang has been appointed as a Guest Professor of the East China Jiao-Tong University in December 2009.



Dr A T Yeung delivered an invited presentation "Ground Investigation, Field Tests and Laboratory Tests – Soil" at the Workshop on Slope Engineering organised by the Geotechnical Division of the Hong Kong Institution of Engineers on December 5, 2009.

Dr A T Yeung hosted the Board of Governors Meeting of the American Society of Civil Engineers Region 10 (International Region) in Hong Kong and Macau from January 16 to 18, 2010. Region 10 is composed of all the International Sections and International Groups of the American Society of Civil Engineers outside the United States. Dr A T Yeung is the Vice Chair of the Board and other members are from the Philippines, South Korea, Costa Rica, Australia, and Nigeria. They are responsible for overseeing all the International Sections and International Groups of the American Society of Civil Engineers. Dr A T Yeung was also approved by the nomination committee during the meeting to be official nominee for the position of the International Director and Chair of the Region 10 Board of Governors of ASCE 2010-2013.

Dr A T Yeung attended the 18th Executive Committee Meeting of the Asian Civil Engineering Coordinating Council (ACECC) in Busan, South Korea from February 21 to 25, 2010 as a member of the ASCE delegation. Member societies of ACECC include the American Society of Civil Engineers, the Chinese Institute of Civil and Hydraulic Engineering, Engineers Australia, the Institution of Civil Engineers (India), the Japan Society of Civil Engineers, the Korean Society of Civil Engineers, the Mongolian Association of Civil Engineers, the Philippine Institute of Civil Engineers, and the Vietnam Construction Association. The upcoming 5th Civil Engineering Conference in the Asian Region (CECAR 5) organised by ACECC will be held in Sydney, Australia from

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August 8 to 12, 2010 (further details of the conference are available at http://www.acecc. net/modules/tinycontent3/index.php?id=9).

Dr A T Yeung was appointed to be a member of the Education and Examinations Committee of the Hong Kong Institution of Engineers 2009-2010.

Dr A T Yeung was appointed by the Director of Buildings of the Hong Kong SAR Government to be a member of the Geotechnical Engineers Registration Committee Panel and an alternate member of the Geotechnical Engineers Registration Committee for a period of two years commencing January 2, 2010.

Dr B Young has been appointed as adjunct Professor by Zhejiang University in December 2009.



The Center for Information Security and Cryptography (CISC) of the Department of Computer Science introduced its ITC project Robust Face Detection and Reconstruction Method that addresses inherent limitations in Face Recognition Technology at InnoCarnival of Innovation Festival (IF '09), which was held at Hong Kong Science Park from November 5-8, 2009. InnoCarnival was one of the major events of IF '09 which was launched by Innovation and Technology Commission (ITC). Over 2,000 people visited the project booth of CISC during the four days of the event.

The Sixth Annual IFIP WG 11.9 International Conference on Digital Forensics was successfully held at Council Chamber, HKU, from January 3 to 6, 2010. The Conference was organized in partnership with IFIP WG 11.9 on Digital Forensics, and the Center for Information Security and Cryptography under Department of Computer Science. The Conference was supported by the digital forensics professional body Information Security and Forensics Society (ISFS) of Hong Kong. Dr K P Chow, Associate Director of the Center for Information Security and Cryptography (CISC), is the General Chair of the Conference. About 80-100 researchers and practitioners from over 10 countries, including North America, Europe, Australia, Africa and Asia, attended the conference.

The Hong Kong Olympiad in Informatics (HKOI) Award Presentation Ceremony was held on January 23, 2010 at the Rayson Huang Theatre in The University of Hong Kong. There were over 150 participants including award winners, their parents and schoolmates, school principals and teachers. HKOI is an annual programming competition for secondary school students in Hong Kong co-organized by the Education Bureau of HKSAR Government and the Hong Kong Association for Computer Education (HKACE), with the Department of Computer Science of The University of Hong Kong as the supporting organization. The award presentation ceremony was commenced by welcome speeches by Mr Danny C H Cheng, Chairman of HKACE and Prof David Cheung, Head of Department of Computer Science, HKU cum Honorary President of HKACE.

The 1st International Workshop on Engineering Biomedical Imaging – Addressing Tomorrow's Medical Challenges

Prof Ed X Wu chaired the 1st International Workshop on Engineering Biomedical Imaging – Addressing Tomorrow's Medical Challenges (IWEBI) on December 12, 2009 in Hong Kong. The workshop aims to promote the scientific exchanges between imaging scientists and clinicians, to brainstorm the emerging in vivo medical imaging technologies, and to boost HKU's visibility in the international biomedical imaging research community.

The workshop faculty consisted of eleven distinguished magnetic resonance imaging (MRI) scientists and clinicians from US, Korea

and China/HK region with lectures on both cutting-edge MRI technologies and their applications in clinical and basic medical sciences. The workshop was attended by approximately 120 participants, mostly MRI physicists, research engineers and physicians from the Greater China region.



The workshop was co-organized by HKU Faculty of Engineering, LKS Faculty of Medicine, Department of Electrical and Electronic Engineering, Department of Diagnostic Radiology, and Medical Engineering Programme with sponsorships from Siemens, GE, Philips and Bruker. Dean of Medicine, Prof Sum-Ping Lee, and Acting Dean of Engineering, Prof Victor Li, made the opening and closing remarks respectively. The workshop was endorsed by the International Society of Magnetic Resonance in Medicine, the Chinese Society of Radiology, the Hong Kong College of Radiologists and the IEEE EMBS HK Chapter.

DEPARTMENT OF COMPUTER SCIEN

Engineering MSc students visited Dr Samson Tam, Dr Ringo Lam, Mr Allan Yeung in the HK Science and Technology Park for the development of industrial entrepreneurship

ver 30 MSc students from different countries including Canada, India, Turkey, Mainland China and Hong Kong, enrolled in ELEC6603 "Success in Industrial Entrepreneurship" visited the Hong Kong Science and Technology Park on November 14, 2009. Dr Samson Tam, the founder of Group Sense Ltd and the Legislative Councilor of the IT Constituency, shared his success story in starting up his business.

The group also visited the Enterprise Center of the Science Park. Mr Allan Yeung, Vice President, Business Development, introduced different types of supports and incubation programs offered by the Science Park for entrepreneurship development.

The visit was followed by a luncheon hosted by alumnus Dr Ringo Lam who had successfully found the company Wiser and Anyplex. Dr Lam gave valuable tips and guidance to students about the way to be a successful entrepreneur.

Five students including Ma Chun Pong (EComE3), Leung Chung Him (EComE3), Ko Ka Ming (EE3), Ng Cheuk Lam (EComE3) and Tang Ming Hon (EComE3) took part in the Kunshan Internship Programme organized by the Government of Kunshan, JiangXu Province in July and August 2009. The student team worked under the department of engineering, production and information technology. They also participated in many cultural and social activities organized by the Kunshan government and universities.

The internship program was implemented and sponsored by the Government in Kunshan, JianXu Province and was jointly coordinated by the HKU China Affairs Office and the Department of Electrical and Electronic Engineering. This internship is part of the curriculum on the Industrial Training (ELEC1804).

Dr G Chesi has been appointed as the Guest Editor of Special Issue on Systems Biology, International Journal of Robust and Nonlinear Control (2010-2011). Dr Chesi has also been appointed as the Associate Editor of the Special Issue on Systems Biology, Automatica (2010-2011).

Dr Sam C M Hui presented a research paper entitled "Zero energy and zero carbon buildings: myths and facts" at the International Conference on Intelligent Systems, Structures and Facilities (ISSF2010): Intelligent Infrastructure and Buildings on January 12, 2010 in Kowloon Shangri-la Hotel, Hong Kong.

Dr Sam C M Hui presented a research paper entitled "Development of energy labels for residential buildings in Hong Kong" at the 10th Asia Pacific Conference on the Built Environment: Green Energy for Environment held in Kaohsiung, Taiwan from November 5 to 6, 2009. He also attended the official celebration of the 20th Anniversary of the ASHRAE Taiwan Chapter on November 5, 2009.

Dr Sam C M Hui was the Chairman of the Organizing Committee for the Joint Symposium 2009 held on November 25, 2009 at the Kowloon Shangri-la Hotel. This symposium was organized jointly by ASHRAE Hong Kong Chapter, CIBSE Hong Kong Branch and HKIE Building Services Division. Dr Hui presented a research paper entitled "Green roofs for storm water mitigation in Hong Kong" at this symposium.

Dr Sam C M Hui was the advisor and organizer for a student technical study tour to Thailand from August 20 to 26, 2009. Eight HKU BEng students from the Department of Mechanical Engineering joined this study tour, together with four students from other universities. The study tour is supported by the Hsin Chong – K N Godfrey Yeh Education Fund for Joint Student Projects and the ASHRAE Hong Kong Chapter.

Dr Michael K H Leung led a study tour of the Energy Institute to Taiwan from December 11 to 12, 2009.

Dr C H Liu presented a paper at the 2009 American Geophysical Union Fall Meeting in San Francisco, USA from December 14 to 18, 2009.

Dr C O Ng gave a seminar at the Tainan Hydraulics Laboratory, Research Center for Ocean Environment and Technology, National Cheng Kung University, Taiwan from December 2 to 4. 2009.

Prof K Y Sze presented a paper at the Second International Symposium on Computational Mechanics (ISCM II) in conjunction with the Twelfth International Conference on the Enhancement and Promotion of Computational Methods in Engineering and Science (EPMESC XII) in Hong Kong and Macao from November 30 to December 3, 2009. He also gave seminars at Hohai University, Nanjing, China from November 19 to 21, 2009.

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he Second International Symposium on Surface and Interface of Biomaterials" (ISSIB-II) was held from January 4 to 6, 2010 at HKU, with nearly 150 delegates from Asia, Europe, North America and Australia. About 200 abstract submissions have been received and over 160 of them were accepted. The final ISSIB-II program contained 2 plenary lectures, 15 keynote lectures and 133 presentations from submitted papers.



DEPARTMENT OF MECHANICAL ENGINEERING

HKUEAA Sustainable Development (SD) Project 2010 – Part 1: Sustainable City Competition

KUEAA has organised a Sustainable City Competition from November 2009 to February 2010 to arouse interest of engineering students on the latest sustainable development topics sponsored by Ove Arup & Partners HK Ltd and Wong & OuYang (HK) Ltd. The theme of the SD project this year is "Sustainable City – From Challenges to Way Out".

The competition consisted of two rounds. In the first round, participants (eight teams of engineering students) were required to design three postcards to present the three core aspects of sustainability. The four teams with highest scores then entered the final round in which students were required to prepare a planning proposal for a virtual urban development project.

Graduate Mentor Scheme (GMS) 2010

The Inauguration Ceremony of Graduate Mentor Scheme (GMS) 2010 was held on March 20, 2010 at HKU. Specifically designed for engineering students, the GMS has entered the 10th session and already benefited more than 300 engineering students since 2001. This year the GMS attracted more than 100 applications and received support from more than 30 distinguished and enthusiastic alumni as mentors, who are graduates of Engineering, Medicine, Arts, and Social Sciences.

"The GMS has received very good responses and support from engineering students and alumni. HKUEAA is glad to organize the GMS for the tenth year and continuously provides development opportunities for engineering students," said Dr Henry H C Wong, the GMS Secretary of HKUEAA Session 2009-10.

Founded in 1975, the HKU Engineering Alumni Association (HKUEAA) was established to strengthen the bond between engineering alumni and HKU Faculty of Engineering as well as promote the development of engineering students.



The jury panel of this competition was comprised of Ir Adi Lau (MTRC & President of HKUEAA), Ir Alan Kwok (Arup), Ir C F Lam (EPD) and Ir P K Lee (AECOM). The winning team CLAW (with students from Civil and Law Programme) won the competition and was awarded a \$3,000 bookstore coupon.

The enrolment for Part 2 of the SD Project 2010, the Sustainable City Study Tour to Singapore from May 26 to 29, 2010, has started. All engineering students and alumni are welcome to join. Please visit http://www3.hku.hk/hkueaa/event_details_0910.php#sdtrip2010 for more details.





O THER NEWS

The HKU Scholars Hub: Knowledge Exchange with the PRC

HKU's mission and strategic plan for development call for knowledge exchange (KE) between HKU and its community, which is defined as Hong Kong, China, and the world, in that order. HKU's KE initiative explains that a database of visible research will be made to enable, display, and measure KE between HKU and its community.

The HKU Scholars Hub, "The Hub" (http://hub.hku.hk) is this database.

The Hub is a key player in HKU's endeavour to engage with the mainland. A new feature in The Hub is the creation of "ResearcherPages" for every current HKU researcher, including 157 for the Faculty of Engineering. An example is that of Prof Victor Li, http:// hub.hku.hk/rp/rp00150. Because these pages are highly visible, researchers in government, industry and academia can quickly use The Hub or Google to discover Faculty of Engineering experts for media comment, contract research, research collaboration, or supervision of post-graduate students. The Hub provides HKU authored articles in fulltext, in open access. This is important to the developing world, in particular China, where neither individuals nor their libraries can afford expensive subscriptions to the research literature. Staff managing The Hub check publisher policies and author consent in order to place articles in The Hub.

Bibliometrics are given for each current researcher, with hyperlinked counts of papers, and citations. Clicking on them will show complete lists of these papers in Scopus and ResearcherID. While access to Scopus requires a paid subscription, the data in ResearcherID is open to the public. If the data in ResearcherID matches upon data in the Web of Science (for which again, a paid subscription necessary), citation counts, and charts and maps of citers and collaborators will display, for free.

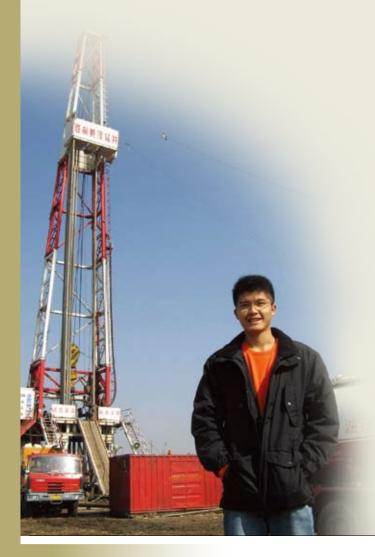
Because of these free open access tools, researchers in engineering and other disciplines can use them as online CVs or portfolios showcasing their research. Researchers in China, without paid-for subscriptions and library support, search out these free tools, and thus open access articles may enjoy more readership in China than would paid-for articles.

JOHN CHOW

Department of Mechanical Engineering (BEng 2003; MSc(Eng) 2007)

My academic qualifications from HKU Engineering definitely helps me build a very strong and concrete foundation of technical know-how, which has been an essential preparation for a career in an engineering-based company – Hong Kong and China Gas Co Ltd (Towngas) – one of the largest energy suppliers in Hong Kong. My career journey kicked off in 2004 with a graduate trainee program in Towngas. It included an 18-month all-rounded training of the Company's core business in Hong Kong, as well as a half-year attachment in the Company's joint ventures in Mainland China. While Towngas sees the booming development in China, it has actually started expanding its businesses to China since the last decade. The expansion offers excellent opportunities to youngsters like me to join the rapid-growing market.

Leaving a comfort zone is always difficult. Adapting to a new working environment with a totally different cultural background is a big challenge. After the completion of the trainee program, I continued my role as an Assistant to General Manager and Project Manager in the joint venture situated in Jilin City, Jilin Province (northeastern part of China) for a further period of three years. I saw this as a precious chance to expand my horizon and cultural appreciation during this period, I have developed all-rounded skills through taking the vital responsibilities of project management and making strategic decisions for the joint venture.





Having "Guan Xi" (relationship) is a key factor in doing business in China. I felt that building trust and relations with different working groups - colleagues, business partners, government officials and central authorities - is the most challenging part of the move. By spending tremendous effort in sharing my views and thoughts with them, I cultivated a very good network and this is very encouraging to my continuous development in China.



Keeping abreast of the latest development of the Chinese economy and political environment is beneficial when doing business negotiations in China. However, Hong Kong graduates pay only little attention to this although they tend to have more general knowledge compared to Mainland students. Frequent reading of news and reports is always the fundamental step to start one's career in the Mainland.

Regarding the booming economic growth and increasing demand of environmental-friendly energy resources worldwide, many companies including Towngas have been looking for potential new energy resources in China. In my current position as a business analyst, I have to do extensive research and analysis regarding this brand new market. Undoubtedly, Hong Kong talents can unfold abundant and unlimited opportunities in China.

A LUMNI FEATURE



The Mainland China has experienced rapid growth and development in various areas as a result of the reform and opening-up policies being adopted since 1978. In the past three decades, the pace of urbanization was particularly quick. Whilst the urbanisation process has raised the standard of living of the people as well as the economy of the Mainland, it has also resulted in problems such as traffic congestion, environmental pollution and shortage of electrical energy etc.

In order to achieve a more sustainable development, many Mainland cities have started to plan, construct and operate extensive rail transit network. Using Shenzhen as an example, the metro network size was 22km in 2004, but it would be expanded to 177km in 2011 and around 468km in 2020 (compared to network size of 218km in Hong Kong in 2010).

The quick pace in infrastructure development including railway development in the Mainland has provided an excellent opportunity for engineers and professionals in Hong Kong to work and develop their career in the Mainland, and at the same time to make their contribution to the Mainland development.

I am currently working as the General Manager-Shenzhen of MTR Corporation and mainly responsible for the overall management of the Build-Operate-Transfer (BOT) Project of Shenzhen Metro Line 4.

If I were in the position of giving tips to our HKU graduates who have an aspiration of working and developing in the Mainland, I would suggest our graduates to train and equip themselves with the following:-

- (i) relevant professional knowledge and experience,
- (ii) business and commercial acumen of working in the Mainland, and
- (iii) international vision

When our graduates are ready, they are welcome to join me in the adventure of exploring the exciting cities in the Mainland China!



THOMAS, YU SZE PIU

Department of Industrial and Manufacturing Systems Engineering (IMMSE 2001)

M r Thomas Yu is a graduate of the Department of Industrial and Manufacturing Systems Engineering, The University of Hong Kong, and is currently the Sales Manager of the Hong Kong Air Cargo Industry Services Limited (HACIS), a wholly-owned subsidiary company of HACTL. Thomas is responsible for establishing and implementing the medium to long term business strategy to uphold the Company's market leadership. Thomas also acts as the Chief Representative at the Guangzhou Representative Office of HACTL, representing the Company to interact with customers, stakeholders and government authorities on all business matters in Guangzhou. As the General Manager of SuperLink Logistics (Shenzhen) Co Ltd, a subsidiary company of HACIS, Thomas oversees the overall business development, service delivery, financial management, and administration.

Thomas joined HACTL as Service Improvement Officer in 2001 after his graduation from HKU. With eight years of solid experience in the logistics and air cargo industry, Thomas gained extensive exposure in various key line functions at HACTL and HACIS while he moved up the career ladder. He has been involved in various key projects including terminal capacity enhancement, services development, customer base expansion, corporate branding as well as intercompany collaboration. As an integral part of the management

team, Thomas is committed to bringing innovation as well as leadership to the Company and thus helping to develop the Company into the preferred air cargo terminal operator and logistics support service provider in the local and international markets.

Thomas is currently a member of various industry institutions in Hong Kong. He is the Chartered Member of the Chartered Institute of Logistics and Transport in Hong Kong (CILTHK), the subcommittee members of Logistics Policy Committee and Professional Activity Committee of CILTHK, the Professional Member of the Hong Kong Logistics Management Staff Association (LMSA) and the Advisory Committee Member of the Hong Kong Airport Authority.

Thomas enjoys a balanced life through participation in community services in his spare time to help young students and the needy.







STAFF AWARDS

A paper co-authored by 3 academic staff members of the Department of Civil Engineering (i.e. J S Du, Dr F T K Au, Prof Y K Cheung and Prof A K H Kwan, Ductility Analysis of Prestressed Concrete Beams with Unbonded Tendons, Engineering Structures, Volume 30, Issue 1, 13-21, 2008) has won the OVM Paper Award for Prestressing 2009 (Class 1) of China Civil Engineering Society.

Prof Joseph Hun-wei Lee received the first "Distinguished IAHR-APD Membership Award" during the IAHR-APD Congress in Auckland, New Zealand from February 22 to 24, 2010. The award was made in recognition of his outstanding contributions to the scientific activities of the Asian and Pacific Division of the International Association of Hydraulic Engineering and Research (IAHR).

Prof S C Wong received the Outstanding Researcher Award 2008-2009 from the University at the Award Presentation Ceremony held on January 28, 2010.

STUDENT AWARDS

Mr Chan Chun Wing (2009 graduate) was awarded the Best Student Award 2009-10 HKIE Geotechnical Division. **Mr Cheung Hang Shan** (2005 graduate) won The Cass Hayward Prize for the highest standard in the bridge question at the IStructE examinations 2009. After graduating from The University of Hong Kong, he joined Dragages Hong Kong Ltd as a Graduate Engineer working on construction of the East Tsing Yi Viaduct. Currently he is seconded to a consultancy firm for 1 year to gain design experience, working as a design engineer for tendering various civil and building projects.

Mr Leung Kin Kei (2009 graduate) was awarded the Best Final-Year Geotechnical Project Award 2009-2010 by the HKIE Geotechnical Division.

STAFF AWARDS

Dr Ho-Leung Chan and Dr Vincent Lau received grants from the UGC Knowledge Exchange Funds for running knowledge transfer activities. Dr Ho-Leung Chan is an Assistant Professor who is currently teaching algorithms and programming. The grant awarded to him will be used for organizing public seminars for secondary schools, training university students for entering international programming contests (ACM-ICPC), and coorganizing programming contests in Hong Kong for both secondary schools (HKOI and CCC) and university students (ACM-ICPC Regional). Dr Vincent Lau, who is the Instructor of the Computer Game Design and Programming course, will use the award to organize lectures and workshops on "Easy Programming for Robot" for secondary school students

Dr K P Chow, Associate Director of the Center for Information Security and Cryptography in the Department of Computer Science, has been appointed by the Privacy Commissioner for Personal Data as a member of the Standing Committee on Technological Development for 2 years from January 1, 2010.

Prof Tak-Wah Lam has been selected for the HKU Outstanding Research Student Supervisor Award in 2008-09. This award is to accord recognition to supervisors of research postgraduate students who, through their highly effective supervisory guidance, have particularly benefitted their students in the pursuit of research excellence. Prof Lam was one of the founding teaching staff when the Department of Computer Science was formally established in 1988. He is currently supervising 3 MPhil and 2 PhD research students.

Dr Nikos Mamoulis received the HKU Outstanding Young Researcher Award in 2008-09 in recognition of his exceptional research accomplishments. Dr Mamoulis joined the Department of Computer Science in September 2001, and his research interest is in the areas of spatial database and data engineering.

Dr Siu-Ming Yiu has been selected for the HKU Outstanding Teaching Award 2009 in recognition of his outstanding achievements in and commitment to teaching and supporting student learning. Dr Yiu's name will be posted with the names of other awardees of the University Distinguished Teaching Award and Outstanding Teaching Award for a period of five years on a dedicated plaque to be installed on the Ground Floor of the Main Library. Since joining the Department of Computer Science in 1992, Dr Yiu has received the award as the Best Tutor in 1994-95 and 1995-96 and obtained the Departmental Teaching Excellence Award for six times. He has also been awarded twice as the Best Teacher in the Faculty of Engineering.

STUDENT AWARDS

Mr Wang Hao, **Mr Yu Dongxiao**, and **Mr Yuan Zhan**, three of our PhD students, are selected for the University Postgraduate Fellowships for the academic year 2009-2010. Mr Wang, co-supervised by Dr Nikos Mamoulis and Prof David Cheung, is doing research in the field of database. Mr Yu, supervised by Prof Francis Lau, is focusing his research in the area of computer network. Mr Yuan, supervised by Prof Wenping, is working on a thesis on computer graphics. The University Postgraduate Fellowships are awarded to select new full-time PhD students who have excellent academic records.

Mr Zhenyu Zhang, a PhD graduand, has been offered an appointment of Assistant Professor by the Institute of Software, Chinese Academy of Sciences in Beijing, China. Mr Zhang was selected for two Best Paper Awards in the 32nd and the 33rd Annual International Computer Software and Applications conferences (COMPSAC 2008 and COMPSAC 2009) and an Excellent Paper (First Class) Award at the Tsinghua University Doctoral Academic Forum in 2008. Mr Zhang is supervised by Prof T H Tse of the University of Hong Kong and Dr W K Chan of the City University of Hong Kong.



31, 2009. The team members who received

STAFF AWARDS

Dr Wilton Fok and Dr Sam Lam received the Best Paper Award 2nd Prize and 3rd Prize in the "Shenzhen-Hongkong Metropolitan Information Network Development 2009" Academic Conference. Their papers titled "Technical and Economical Impacts of RFID Technology to Shenzhen and Hong Kong" and "Solar Energy for Buildings in Hong Kong and Shenzhen" won the 2nd Prize and 3rd Prize respectively. The Conference was jointly organized by the Hong Kong Information Technology Joint Council and the Shenzhen Computer Users Association.

Prof Victor O K Li, Associate Dean (Research), Faculty of Engineering and Chair Professor of Information Engineering, Department of Electrical and Electronic Engineering, received the Outstanding Research Student Supervisor Award 2008-2009 for his supervisory guidance to his research postgraduate students. The Outstanding Research Student Supervisor Award recognizes highly effective supervisory guidance provided by teachers to their research postgraduate students.

Dr Kenneth K Y Wong received the Outstanding Young Researcher Award 2008-2009 for his research accomplishments and the quality and quantity of his research publications. His research interests include fiber optic communication, novel optical devices, nanophotonics, fiber optical parametric amplifiers (OPA) and photonic crystal fibers.

STUDENT AWARDS

Two teams of EEE students won the Supreme Award and Bronze Award in the 11th National Challenge Cup in Beijing from October 28 to

the Supreme Award in the undergraduate science and technology category include Cheng Tsz Kwai Cindy (EE2), Au Yeung Hoi Hang Eric (EComE3), Ho Man Chun (EComE3) and Law Kam Yuen Ken (EComE3). The project title was "Solar-power Multimedia Satellite Real-time Interactive e-Learning System". Another team received the Bronze Award in the post-graduate social science category and the members include Wu Mao Mao, Ng Hung Wai, Ho Sui Ying Jacqueline Marie (EComE3) and Yeung Hiu Fan Fanny (EComE3). The project title was "IT Education shorten the distance between city and village - A case study of the Yuanjia Primary School in Sichuan". The National Challenge Cup was organized by the Central Committee of the China Communist Youth, the China Association of Sciences, Ministry of Education, Ministry of Industry and Information Technology and National Academic Association, and Beijing Municipal Government. A total of 1106 teams from 432 universities from all provinces in China participated in the competition. There were 53 teams from 15 universities in the Hong Kong, Macau and Taiwan region and only two teams won the Supreme Awards.

EEE students Ho Man Chun (EComE3), Yeung Hiu Fan (EComE3), Law Kam Yuen, Ken (EComE3), Cheng Tsz Kwai (EE2), Au Yeung Hoi Hang Eric (EComE3) and Ho Sui Ying Jacqueline Marie (EComE3) won the Best Paper Award 2nd Prize (University Category) in the "Shenzhen-Hongkong Metropolitan Information Network Development 2009" Academic Conference for their paper titled "Solar-powered Satellite Multimedia E-Learning System". This system had been implemented in a reconstruction project in Sichuan in August 2009. The Conference was jointly organized by the Hong Kong Information Technology Joint Council and the Shenzhen Computer Users Association.

Lai Chengdi (MPhil) and Shi Hang (EComE Year 3) received the Hong Kong ICT Awards 2009: Best Innovation and Research (College and Undergraduates) Silver Award for the project entitled "TCP-NCL: A Unified Solution for TCP Packet Reordering and Random Loss" under the joint supervision of Prof Victor O K Li and Dr K C Leung. The project was also selected to represent Hong Kong in the Asia Pacific ICT Awards held in Melbourne, Australia from December 15 to 17, 2009.

Mr Lei Chi-Un, a PhD student supervised by Dr N Wong, won the Best Posters Award in the IEEE/ ACM 15th Asia and South Pacific Design Automation Conference (IEEE/ACM ASP-DAC 2010) held in Taipei, Taiwan from January 18 to 21, 2010. Mr Lei's research work entitled "Linear Macromodeling Process Advancement via Digital Signal Processing Techniques" is one of the three Best Three Posters among the 26 student entries in the IEEE/ACM ASP-DAC 2010.

Ms Zheng Rui Min received the CLP Fellowship in Electrical Engineering on her research topic "Operation and Planning of Power Grid Containing Distributed Energy Resource for Smart Grid Construction". The CLP Fellowship in Electrical Engineering is awarded to a postgraduate student reading the Electrical Engineering Programme and who is a selected research postgraduate student working on a research topic of particular interest to CLP Holdings Limited.

Mr Zhou Yue, an MPhil student under the supervision of Dr K K Y Wong, has taken the second prize in the FHKOI Best Paper Awards in the 10th IEEE Photonics Society HK Chapter PG Conference held at HKUST on November 28, 2009.

STAFF AWARDS

DEPARTMENT OF MECHANICAL ENGINEERING

Dr B P Chan received the 2009 Research Output Prize (Faculty of Engineering). Her paper entitled "A microplate compression method for elastic modulus measurement of soft and viscoelastic collagen microspheres" was published in Annals of Biomedical Engineering (vol. 36, No.7, July 2008, 1254-1267).

STUDENT AWARDS

Daikin Scholarship 2008-2009:

Chan King Yin (ME-BSE Year 3) – Research award

Cheung Wing Yee Agnes (ME-BSE Year 3) – Level 3 award and Design award Lai Yuen Yee (ME-BSE Year 2) - Level 2 award Law Pan Lau (ME-BSE Year 1) - Level 1 award Ng Ka Chun Nick (ME-BSE Year 3) – Research award Yau Tik Choi (ME-BSE Year 3) – Design award Yu Man Piu Bill (ME-BSE Year 3) – Design award and Research award

BUDA Group Prize in Mechanical Engineering 2009-2010:

Chau Chi Wai (ME Year 3) Wong Chuen Wa (ME Year 3)

NGINEERING FUN E-

Inauguration Ceremony

of the Engineering Society 2010-2011 Session

he Inauguration Ceremony of the Engineering Society, HKUSU, session 2010 to 2011, was held on February 26, 2010 in Rayson Huang Theatre, HKU. The Ceremony is traditionally a formal occasion for the handing over of responsibilities to the new EXCO members. The honorable guests who attended the Ceremony included Prof Victor O K Li, Associate Dean (Research Programs), Faculty of Engineering; Ir MAK Chai-kwong, JP, Permanent Secretary for Development (Works); Mr K W Lee, Chairman of the ICE HK Association Committee; and Mr Conrad T C Wong, JP, President of the Hong Kong Construction Association Council.

Engineering Society 2010-2011 Session

The cabinet

Devotio is the name of the cabinet of the Engineering Society, HKUSU, Session 2010-2011. Devotio is a Latin word, which stands for devotion. It represents the Engineering Society's enthusiasm, determination and devotion to serve its members. The new cabinet of the Engineering Society is hoping to inherit the fine tradition and pass on these beliefs to both current and future members.

The mission

Snauguration Peremony

To deepen members' understanding of the profession of engineering

auguratio

eremon

- To enhance our members' interests in and knowledge about the practice of engineering
- To cultivate the interests of members in intellectual, social and sports activities
- To facilitate the connection between all engineering students, the Society and the Faculty
- To serve all members through diverse activities and comprehensive welfare
- To act as a bridge between members and the Faculty
- To collect different opinions and communicate to the University

Come and join us at the Engineering Summer Camp!!

Date: July 26-29, 2010 Time: All day! Place: HKU

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