



香港科技大學
THE HONG KONG
UNIVERSITY OF SCIENCE
AND TECHNOLOGY

2012-2013 Annual Report



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PERSPECTIVES OF WISDOM

The background of the slide is a grid of small, square images. These images depict various university environments: some show students in lecture halls or classrooms, others show library shelves filled with books, and many show students working at computers or in study groups. A thin, light-colored diagonal line runs across the grid from the bottom left towards the top right. The overall color scheme is dark blue, with the grid images providing a collage of university activities.

Objects

(The Laws of Hong Kong: Chapter 1141)

The objects of the University —

(a) to advance learning and knowledge through teaching and research, particularly —

(i) in science, technology, engineering, management and business studies; and

(ii) at the postgraduate level; and

(b) to assist in the economic and social development of Hong Kong.



Statement of Vision

To be a leading university with significant international impact and strong local commitment.

- Global** – To be a world-class university at the cutting edge internationally in all targeted fields of pursuit.
- National** – To contribute to the economic and social development of the nation as a leading university in China.
- Local** – To play a key role, in partnership with government, business, and industry, in the development of Hong Kong as a knowledge-based society.



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Chairman's Foreword

In 2012-13, local higher education underwent a transformational system change while emphasis on connectivity and international presence grew within the sector globally. As the Annual Report of the Hong Kong University of Science and Technology shows, HKUST has met these challenges with characteristic insight and vigor, enabling the University to advance further toward its vision to be a leading university with significant international impact and strong local commitment.

HKUST's 22nd year coincided with a Hong Kong education milestone – the launch of the four-year undergraduate degree system under the sweeping 334 reform initiative, and the arrival of the accompanying double cohort on higher education campuses across the city. There had been much debate as to how institutions would cope. However, there was a remarkably smooth transition at HKUST.

For this, grateful thanks are due to the University's dedicated faculty members and administrators for their forethought, innovation and commitment. HKUST not only met the challenge of this exciting but demanding change but turned it into an opportunity to deliver a new and pioneering education experience that will keep the



University's graduates competing alongside the world's best. I and other Council members found it an energizing experience to work with the senior administration to facilitate this endeavor.

Congratulations are also in order as HKUST's on-going pursuit of excellence brought further recognition of the University's leading international standing. In the QS Asian University Rankings 2013, HKUST was once again ranked first for the third year in a row. In addition, the University was placed top in the global QS Top 50 Under 50, a survey highlighting universities established in the past five decades.

As indicated by these results, HKUST's drive to succeed remains strong. It makes me proud to be associated with an institution that always seeks the peaks. That others in Hong Kong and beyond feel the same way has been amply shown over the year through our expanding network of academic, business and industry partners, the broad and generous response of donors and supporters, as well as heartening public interest in our activities and achievements.

To sustain and build on such interest, the University welcomed delegations from top universities and institutions from a diverse range of locations, and made visits overseas, bringing greater internationalization through exchanges, collaborations and non-local recruitment. Meanwhile, invitations to prestigious national and international forums with leading political, business and higher education leaders emphasized HKUST's growing profile as a valued contributor on a range of major global issues.

I believe that one of the elements sustaining HKUST's success, and ability to cope well with fundamental change, is that the University knows where it is headed as an institution. Such guidance is provided by HKUST's five-year Strategic Plan (2011-2016), drawn up after extensive consultations with key stakeholders and the active participation of the Council and Court. Under the plan, the University has a clear set of strategies and objectives. When an organization grows in scale and complexity, such direction has a contribution to make.

As the Annual Report shows, over the year HKUST moved steadily ahead in all six key areas of developmental focus identified in the Strategic Plan: education, research, faculty development, community engagement, international and Mainland strategy, and organization and resources. In working toward improvement in these core areas, we can keep in step across different Schools, departments and offices. This enables the University to move forward as a whole.

Among other significant measures for institutional development, good governance and transparency have an essential part to play. With the encouragement of the Council, HKUST has therefore been adding to its capabilities with the adoption of key performance indicators, an annual performance review, and an annual operating plan.

Looking back over the year, I would like to thank new and continuing members of the Court and Council, who have willingly shared their knowledge to enable both governance bodies to fulfill their respective roles in guiding the University. The President and his team have provided inspiration and great support to the HKUST community, and I pay tribute to their hard work and leadership. With the foundations laid and the advances made over the past 12 months, HKUST is ready to move on with confidence and high spirits to keep the University's miraculous story unfolding in ways that enthuse the world.

Chairman, University Council
Dr the Hon Marvin K T Cheung, GBS, JP

President's Report

In 2012-13, Hong Kong entered a fresh educational era with the city-wide launch of the four-year undergraduate degree system. HKUST has viewed this far-reaching initiative as an opportunity to embrace a life-changing university experience. Such an experience is not just about academic learning – though this remains at the core – but also readies students to become contributing, innovative global citizens.

The move marks an exciting step forward in our development. I was therefore delighted to welcome the double cohort of more than 4,000 first-year undergraduates to our campus in September 2012, and to witness the smooth transition for both our final three-year and inaugural four-year degree students. For such a memorable, positive start, my deepest thanks go to faculty members and staff who worked so hard over several years to provide the educational, logistical and emotional support to enable this to happen.



Engaging Education Vision

Under the flexible four-year degree programs developed by our Schools, students have time to discover their true interests while developing the essential skills of critical thinking, analysis and problem solving. Walking around the University, the new approach has been clearly visible.

The Chevalier Learning Commons and new School advising centers have quickly become popular meeting places for informal discussion and project team gatherings. I see this buzz of engaged debate as an invigorating addition to our enlivening campus atmosphere.

Further student-centered education and teaching opportunities were introduced when we joined Coursera and edX online education consortia, two leading Massive Open Online Course (MOOC) providers. The initiative keeps HKUST at the forefront of a major global trend to leverage digital technologies inside and outside the classroom, and offers immense potential to reach out to wider student audiences. Initial courses generated an enthusiastic response, drawing tens of thousands of enrollments.

Driving and Applying New Knowledge

Our pursuit of excellence in education was paralleled by high-impact research achievements and our interdisciplinary drive to deepen knowledge and develop technologies to improve lives. Such excellence saw two HKUST-led projects receive funding totaling more than \$90 million under the Research Grants Council's Theme-based Research Scheme. Two more projects were awarded grants of over RMB30 million each under the National Basic Research Program (973 Program).

Meanwhile, we continued to extend our research scope through our strategically located Pearl River Delta platforms – in Shenzhen, Nansha and Foshan – and the recent partnership with Xi'an Jiaotong University to establish a Joint School of Sustainable Development. These platforms will enable us to contribute to the upgrading of industry and to work on solutions to some of the major challenges of development.

Our achievements were also recognized over the year with many faculty and students receiving significant honors for their leading work, including State Natural Science Awards and Higher Education Outstanding Scientific Research Output Awards (Science and Technology): Natural Sciences, as well as international accolades.

Reaching Out for Diversity

With such opportunities and excellence in teaching and research, we have continued to attract first-rate faculty members from around the world, providing the fresh sparks of creative input to keep our momentum at full strength. In this, we have been supported by our prestigious HKUST Named Professorship Program which, thanks to the generosity of community donors, has enabled us to create a total of 22 Named Professorships to draw and retain the world's best minds.

The University's goal for international diversity among our faculty has been matched by our drive to internationalize our student population in order to create a stimulating multicultural learning environment. Through on-going efforts to raise greater awareness of HKUST and recruit top students from different parts of the world, over the year we moved closer to our target



President's Report

of 20% non-local undergraduate intake, with a balance between Mainland students and those from overseas. In 2012-13, we saw approximately 56% of non-local undergraduates from Mainland China and 44% from other parts of the world, representing the most diverse group among University Grants Committee-supported institutions.

Our spectacular and inspiring campus is among the attractions that draw faculty and students to join HKUST, and we added to its appeal through the opening of the Lee Shau Kee Campus with state-of-the-art teaching and research facilities and a sweeping sea view. I was also pleased to see our new residential halls completed, providing another 700 places in total. Sharing life on campus with fellow students is a rewarding part of attending university and a good way to gain greater independence.

Building Global Presence

As higher education expands around the world and competition strengthens for leading faculty and students, we must proactively work to keep HKUST at the global forefront. We have consistently performed strongly in international rankings. In 2013, we were ranked No.1 globally in the QS Top 50 Under 50 for universities established for less than five decades and No. 1 for the third year



in a row in the QS Asian University Rankings. However, we must continue to build on our unique strengths in order to stand out in the increasingly crowded international higher education sector.

In line with this, I have led two HKUST delegations to Europe, the Near and Middle East over the year, visiting 33 universities, science and technology institutions and organizations to foster ties and establish fruitful connections for our faculty and students. We entered into 89 agreements at various levels with leading universities globally and continued to build relationships through our network of 250 institutions. Our strategic partnership initiative, for example, represents an important step to deepen collaboration with top international universities that have complementary strengths.



All such activities are important to keep the University at the forefront. They open doors to research collaborations and outside funding for our faculty. They foster more exchange opportunities for our undergraduates while our campus community gains by bringing more people from different backgrounds and with different perspectives to study here. Program development benefits through opportunities for innovative joint and dual degrees that can attract leading undergraduates and postgraduates. All these factors in turn help us to attract more top faculty to drive HKUST ahead.

Another way to enhance our global links is by joining significant international forums. My invitation to the World Economic Forum in Davos, Switzerland, provided a substantial opportunity to discuss the latest developments in science and higher education, with leading figures from different sectors. At Davos, I was also delighted to meet with more than 20 presidents from top universities at the Global University Leaders Forum.

Moving Higher

The year has thus been both a challenging and rewarding one. It has strengthened HKUST's presence as an educator of first choice, further defined the University as a research institution with global impact, and added to our capability to assist social and economic development.

I would like to take this opportunity to express my deep appreciation to our community supporters and alumni, who have wholeheartedly contributed to a host of HKUST initiatives to boost education, research and campus development. Such support has provided the bedrock on which to build toward future accomplishments, and will enable us to carry on striding ahead.

I would also like to thank all members of the HKUST community for their tremendous support and ebullience in generating the spirit, energy and campus environment to enable the University to make a difference. One of the keys to our on-going achievements is the ability to see change as an opportunity to advance to the next level of accomplishment. The past year has strengthened the foundation for the University to extend its reach higher and wider, locally and in the wider realm. I look forward to working together in the coming year with colleagues, students, alumni and community supporters to keep HKUST pioneering the way to further excellence.

President
Prof Tony F Chan, JP

(From left):

*Prof Yuk-Shan Wong, Vice-President for
Administration and Business;*

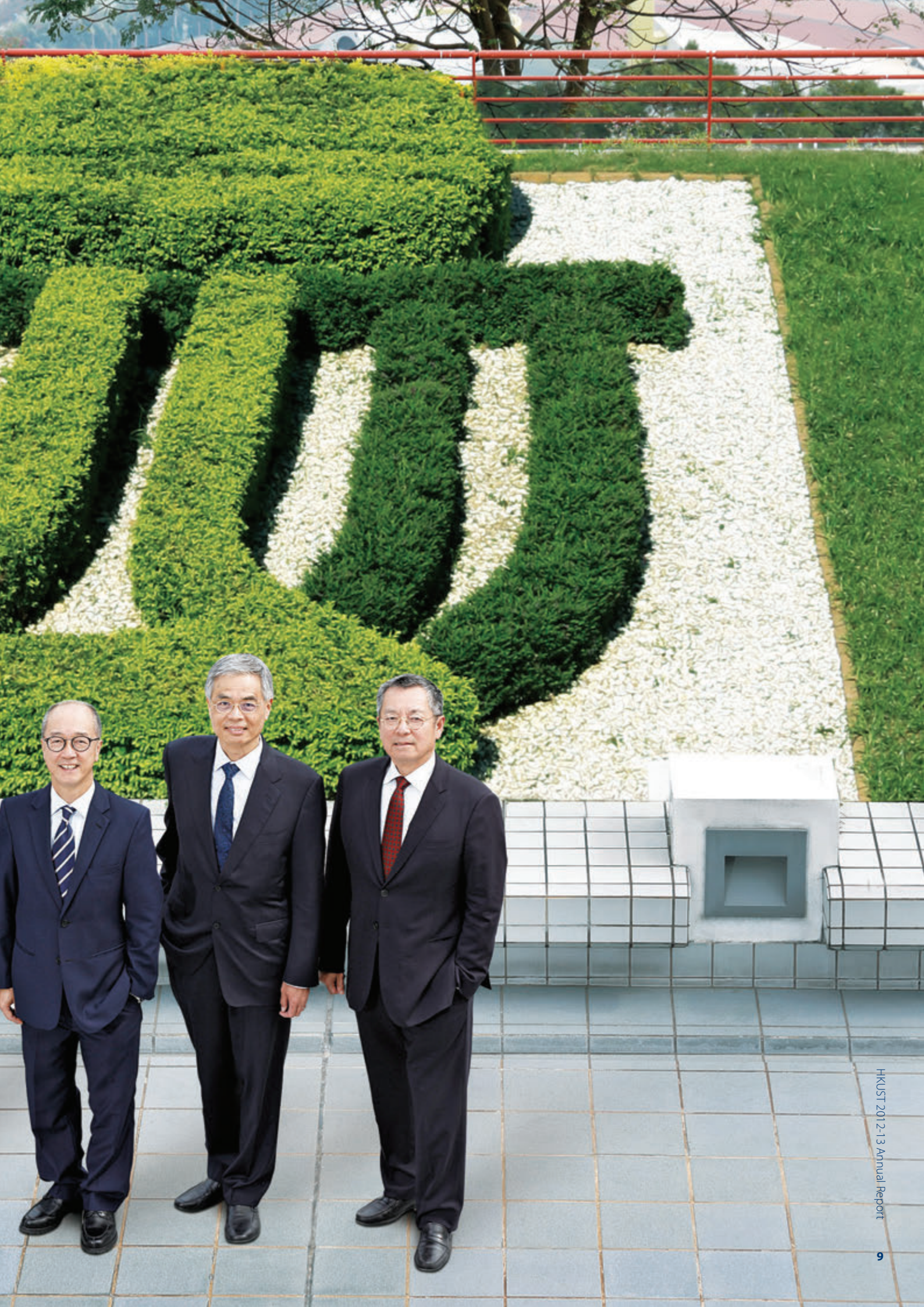
*Prof Joseph Hun-Wei Lee, Vice-President for
Research and Graduate Studies;*

Prof Tony F Chan, President;

Prof Wei Shyy, Provost;

*Dr Eden Y Woon, Vice-President for
Institutional Advancement*











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Education Development



HKUST saw a smooth start to the double cohort and a growing array of opportunities for students to explore wider avenues of learning in 2012-13. These included new minors, more advising support and enrichment for undergraduates, greater internationalization of the postgraduate intake, and preparations for a joint school with Xi'an Jiaotong University

UNDERGRADUATE EDUCATION

Successful Transition

In September 2012, the University welcomed two incoming classes of undergraduates – the final cohort of the three-year degree and the first cohort of the new four-year degree – totaling more than 4,000 students. Careful planning, good preparation and hard work by faculty, staff and senior students acting as mentors made it possible to smoothly handle the step-up in numbers and the delivery of two Year One undergraduate programs.



The University's recruitment and profile-raising efforts were rewarded by the high quality of the intake for the four-year degree. The year also saw a well-received initiative to increase the interest of young women in science and engineering at HKUST, with a special summer camp drawing over 90 female secondary school students.

The greater flexibility of four-year degree programs gives students more choice in their study pathway, requiring greater resources for academic advising, particularly in Year One ahead of selecting a major. All Schools responded effectively to this challenge.

A growing number of exciting new minors have been developed, including Aeronautical Engineering, Actuarial Mathematics, and Entrepreneurship. Further innovation in learning options saw the launch of the inaugural HKUST-University of Virginia Jefferson Global Seminars to encourage students to develop wider perspectives on issues; and further preparations for the pioneering tripartite World Bachelor in Business, where students study on three continents during their four-year program and gain three degrees.

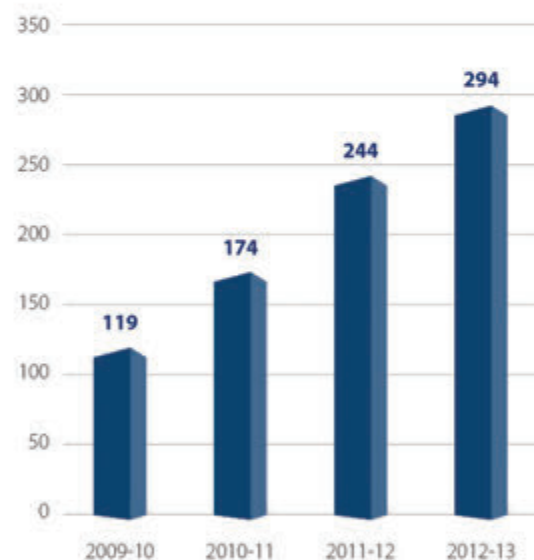
Digital Resources and New Learning Spaces

The University seeks to stay at the forefront of developments in digital resources and new technologies and responded positively to invitations from Coursera and edX, the two most important providers of Massive Open Online Courses (MOOCs), to join their projects.

MOOCs are university-level courses that are offered free and are open to anyone with an internet connection. edX is a consortium of universities, led by Harvard and MIT, and with a student body of over one million. Coursera has over 80 participating universities in four continents, and a student body of over four million. Three HKUST courses have already been developed, with others to follow.

In a positive step forward for collaborative learning, the Chevalier Learning Commons has become one of the most popular places on campus for students to meet and work together. Ninety per cent of users have said that the Commons area is important or very important to their studies. Renewal of classrooms to accommodate the needs of digital formats and more active learning environments are also scheduled.

Number of Undergraduate Research Opportunities Program Projects



ALL-ROUND LEARNING INITIATIVES

At HKUST, student learning and success are not only about in-class instruction and study.

Early Research Experience

The University's highly successful Undergraduate Research Opportunities Program continued to provide valuable experience in working directly with professors on research projects. The number of projects, students, and professors saw on-going

Education Development

growth in 2012-13. Over the past two years, international research experience at MIT, CERN, University of Cambridge, and Tokyo Institute of Technology has also been available.

Theme-based Joint Summer Programs

In 2013, HKUST piloted two theme-based summer programs with Xi'an Jiaotong University and China Academy of Art. Students from both institutions enrolled in a customized, credit-bearing course, with classes held at both

campuses. Students are expected to work closely on group projects during the program. More activities of this kind are planned.

Student Exchange

Student exchange for one semester or more is a signature program at HKUST. In the year under review, the number of exchange-out students reached 761, representing 36% of graduates with exchange-out experience in 2012-13.

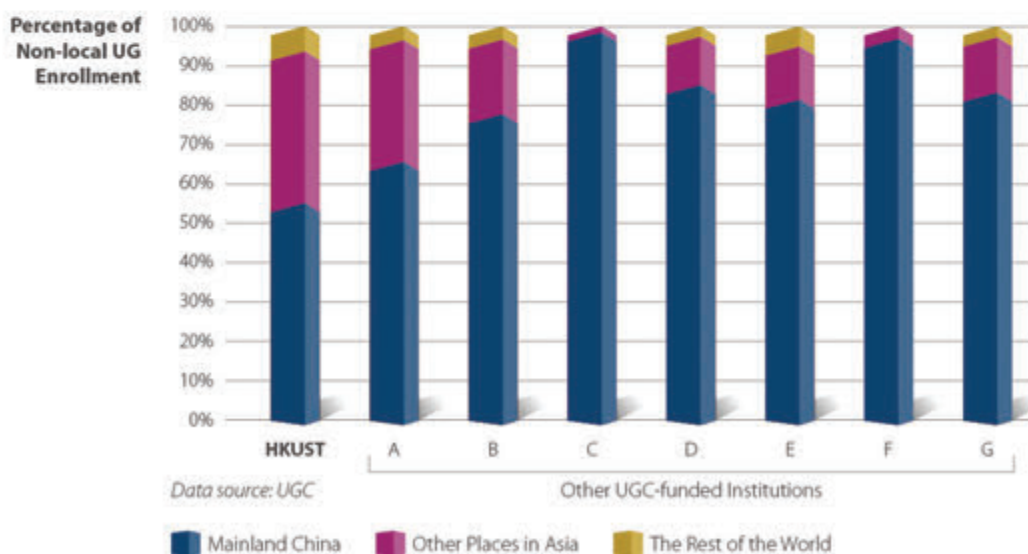
The program enables students to experience life in a different cultural and social environment. International exchange is ranked by alumni as one of HKUST's most valuable experiences. It is the University's goal for 50% of undergraduates to have had an exchange-out experience by the time they graduate.

Leadership and Community Service

The REDbird Award program fosters student leadership and personal development. In 2012-13, its 235 members and 14 student leaders (coaches) participated in 90 service learning projects. Five students received financial sponsorship from SAE Magnetics (HK) Ltd's TDK-SAE CSR Fund to join overseas service learning programs and trips, and a total of five REDbird gold awards, 25 silver awards and 88 bronze awards were granted.



Non-local Undergraduate Enrollment of UGC-funded Programs by Institution - Breakdown of Non-local UG Enrolled Students by Origin, 2012-13-





HKUST Connect is a significant way for students to launch and gain experience of service learning and community projects. It collaborates with over 75 community partners to offer different types of service opportunities. In 2012-13, over 2,600 participants took part in 145 service projects through the program. During its signature HKUST Service Learning Day, held over four days in April 2013, more than 970 students, faculty members, staff and alumni participated in 49 service projects.

THE WORLD ON CAMPUS

Increasing student diversity is an important priority for HKUST. In the 2012-13 academic year, the non-local undergraduates on campus represented a diverse group, with approximately 56% from Mainland China, 37% from other places in Asia and 7% from the rest of the world. This was the most diverse group of non-local undergraduate students among UGC-funded institutions. The group included 382 non-local students newly admitted in 2012. The University is on track toward its target of 20% non-local students, with an equal split between students from Mainland China and other places.

Education Development



With strong support from Schools and the Interdisciplinary Programs Office, HKUST attracted excellent non-local Mainland and international students as reflected by their Joint Entrance Examination, International Baccalaureate and SAT scores. In 2012-13, HKUST also received five out of the 10 HKSAR Government Scholarship Fund targeted scholarships awarded to University Grants Committee institutions. The targeted scholarships aim to recruit students from ASEAN countries, India and Korea.

The President hosted three luncheons to strengthen ties with the secondary school sector, including one for the English Schools Foundation leadership. Recruitment and information activities aimed at European students were also arranged. These included attendance at education fairs in France, Germany, Norway and the UK, and a campus visit by a group of teachers from notable French high schools.

POSTGRADUATE EDUCATION

HKUST gives high priority to postgraduate programs. The student population undertaking these degrees continued to grow in 2012-13, reaching a total of 3,944 (as of 31 December 2012).

Intake Widens

The University worked hard to broaden recruitment globally, resulting in a steady increase in overseas students. The proportion of students from outside Mainland China increased to 15% in 2012-13. The range of countries also expanded, with students joining HKUST from Eastern Europe, the Middle East and other areas.

Non-local postgraduate recruitment has been given a special boost by the success of HKUST in the Hong Kong PhD Fellowship Scheme. For the academic year starting Fall 2013, the University received the largest number of Fellowship awards among institutions in Hong Kong, securing 49 out of a total of 185 (26.5%).

Holistic Outlook

There was further progress toward a more holistic educational experience for research students, with preparations for all new research students to take a Professional Development Course, providing a comprehensive set of skills and knowledge for personal growth and career development. The course is due to launch in Fall 2013.

More funding was allocated to the research travel grant program, providing additional support for students to attend conferences. Meanwhile, the Overseas Research Awards Scheme for PhD students provided opportunities for selected students at leading research universities overseas.

New Program Launches

In 2012-13, two research programs got underway: MPhil/PhD programs in Environmental Science, Policy and Management within the Interdisciplinary Programs Office; and an MPhil program in Innovative Technologies Leadership established by HKUST Fok Ying Tung Graduate School.

The University's taught postgraduate programs saw the addition of an MSc in Chemical and Biomolecular Engineering, introduced by the School of Engineering. Enrollments continued to grow for full-time taught postgraduate programs.



JOINT SCHOOL OF SUSTAINABLE DEVELOPMENT WITH XI'AN JIAOTONG UNIVERSITY

In June 2012, the University Council endorsed a plan to establish the Xi'an Jiaotong University-Hong Kong University of Science and Technology Joint School of Sustainable Development (JSSD). Xi'an Jiaotong is a major research university and, as the regional academic leader in western China, has become an engine for scholarship, education and knowledge transfer. The initiative was welcomed by both universities, recognizing that sustainable development is one of the world's greatest challenges and a strategic national goal for China.

Major steps have been taken during the year to realize the vision for the Joint School. A Cooperation Agreement setting out the parameters for the partnership has been signed and the University Senate has endorsed a provisional curriculum for both undergraduate and postgraduate studies. The proposal for the official establishment of the JSSD is being submitted to the Ministry of Education under Xi'an Jiaotong's lead. In the meantime, HKUST is driving global recruitment of faculty members, who are expected to lead academic and administrative matters for the Joint School. The emphasis will be on interdisciplinary collaboration across three core departments: Sustainable Energy; Sustainable Materials; and Sustainable Systems.



Research Development

The University's research achievements continue to bring significant discoveries, while partnerships with business, industry and government boost the transformation of breakthroughs into novel technologies and solutions

INCREASED REACH

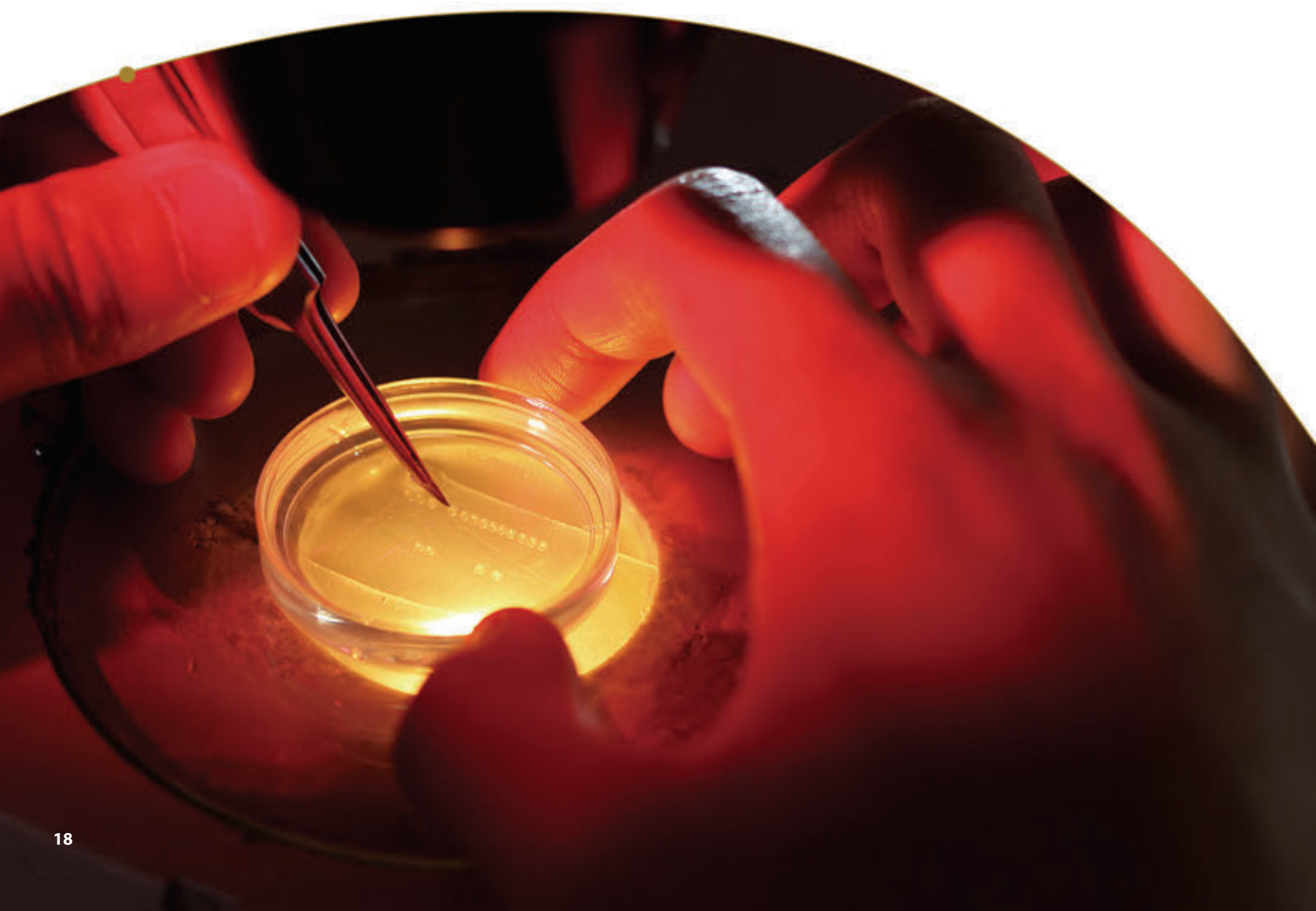
HKUST encourages new and emerging areas of excellence that draw on our discipline strengths and extend the impact of the University's research.

During 2012-13, two institutes were established to explore significant areas of development and address major challenges of the 21st century. The Energy Institute was formally established in December 2012 to provide strong leadership in energy research in Hong Kong, engage in emerging research, and develop technologies, policies and educational programs to contribute to solutions to pressing energy issues. The HKUST

Institute for Emerging Market Studies, launched in May 2013 and supported by Ernst & Young, will promote high-quality research and collaboration on emerging markets. The Institute seeks to establish the University as a thought leader on public policy and the business challenges facing these highly significant markets.

FUNDING SUPPORT

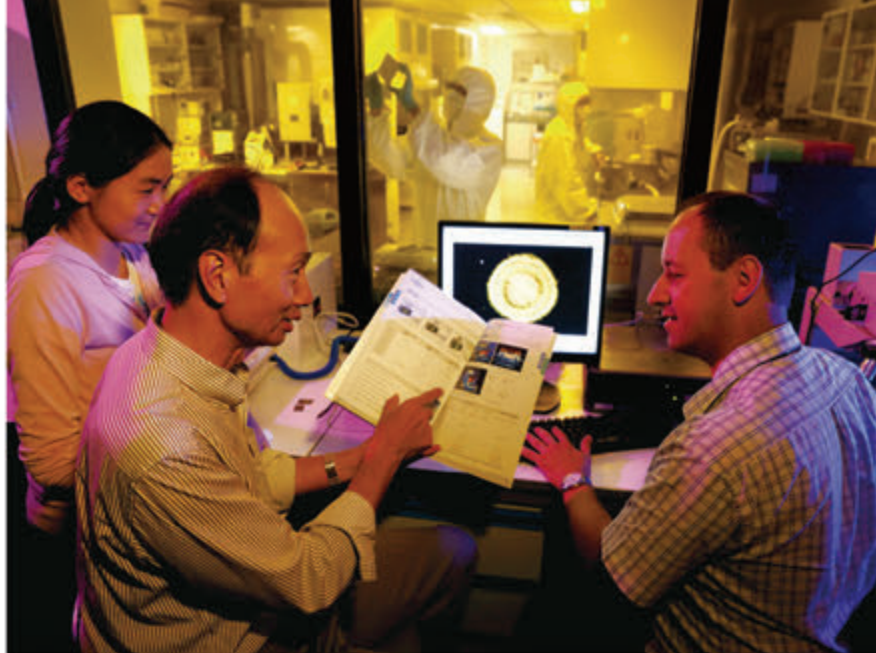
The University provided incentives to support research excellence and to develop large-scale interdisciplinary research via a number of internal funding initiatives, including the Initiation Grant, Development Grant, and matching support for



group research projects. Internal support is also available for exploratory new research projects, and recapitalization and enhancement of research equipment.

Externally, the University secured total research awards of more than \$500 million from various sources, an increase of 13% over the previous year. Major research funding sources included the Research Grants Council (RGC), government and government-related organizations, Hong Kong private funds, and non-Hong Kong funds. Some highlights of our research performance were:

- HKUST was awarded 173 new research projects by RGC, with total project value of \$153 million. HKUST researchers achieved the highest success rate (44%) in the competitive 2012 General Research Fund exercise and Early Career Scheme (46%), which supports outstanding newly recruited junior faculty members. A HKUST application for the Prestigious Fellowship Scheme in Humanities and Social Sciences was also funded.
- HKUST researchers led a number of Areas of Excellence (AoE) proposals. Subsequent to the closing of this report, two projects were eventually awarded around HK\$100 million in total for studies on Novel Wave Functional Materials for Manipulating Light and Sound, and the Mechanistic Basis of Synaptic Development, Signaling and Neuro-disorders. In another major move, HKUST applied to the Ministry of Science and Technology to set up a Partner State Key Laboratory on Advanced Displays and Optoelectronic Technologies. The application went on to be approved.
- During 2012-13, HKUST submitted a record 69 applications to Innovation and Technology Fund schemes, including 12 applications under the University-Industry Collaboration Program (UICP). This reflects the enthusiasm of industry in working with HKUST to bring innovations that meet its specific needs.



- Interdisciplinary research and industrial partnerships received a further boost from the University's Mainland research bases in the Pearl River Delta. In 2012, two HKUST-led projects within the HKUST Shenzhen Research Institute were each awarded grants of over RMB30 million from the prestigious National Basic Research Program (973 Program) for research on Alzheimer's disease and aggregation-induced emission respectively. HKUST Fok Ying Tung Research Institute in Nansha, Guangzhou, also secured 20 new research grants and 32 commercial projects. During the reporting year, HKUST scholars secured and launched 68 Mainland research projects and contracts, worth around RMB64 million.

In line with the University's push for research collaborations, the share of research funding awarded to collaborative research increased significantly to \$163 million in 2012-13. Some particularly noteworthy examples were:

- Two HKUST-led projects, with a total value of more than \$90 million, were awarded under RGC's Theme-based Research Scheme: Stem Cell Strategy for Nervous System Disorders; and Cost-effective and Eco-friendly LED System-on-a-chip.
- Two major grants by the Innovation and Technology Fund: \$25 million for the Large-scale Study on Realization and Application of SANI Process in Sewage Treatment in Hong Kong, a public sector innovation project; and over \$11 million for Indoor Localization, Tracking and Navigation, in logistics and supply chain management research.



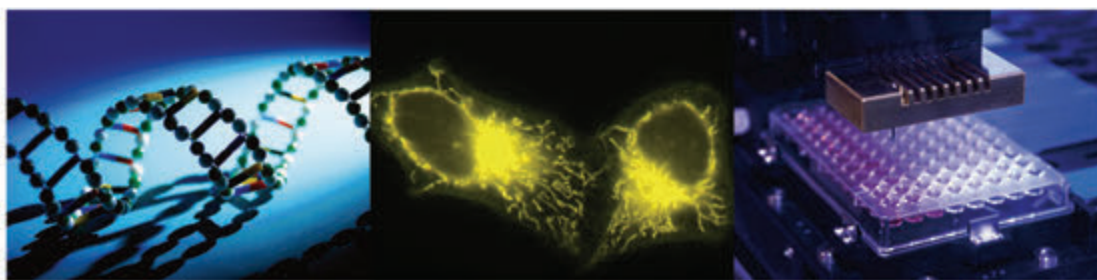
KNOWLEDGE TRANSFER INTO THE COMMUNITY

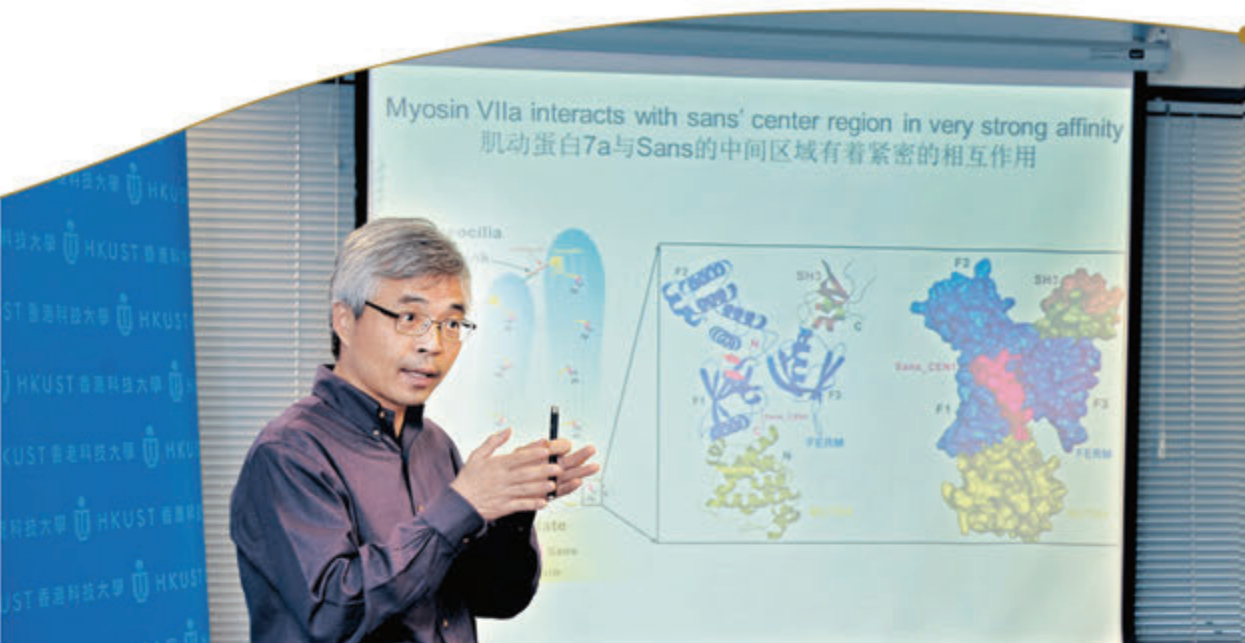
The University fosters knowledge transfer by encouraging faculty members and students to participate in a range of activities, including an Entrepreneurship Day, IP training, patent preparation and technology review. It also proactively explores collaborative opportunities with industry through open innovation activities, such as research and development workshops and networking sessions. In addition, professors share their innovative research insights with the general public through interviews and regular columns in newspapers, and talks to business leaders. The University's Open Research, Innovation and Collaboration Network (ORION) also provides an online platform for HKUST to engage with the public and external stakeholders.

Open innovation enables HKUST and research partners to collaborate at an early stage to develop research that has a direct impact on industry. In addition, the University provides a Proof-of-Concept Fund to encourage researchers to undertake pre-commercialization development of inventions with commercial potential. In 2012-13, HKUST researchers filed 78 invention disclosures. A total of 35 new patents were granted to the University, making a cumulative total of 396 granted patents.

During 2012-13, the HKUST R and D Corporation Ltd (RDC) – a separate not-for-profit legal vehicle wholly owned by the University – signed 140 new projects commissioned from Hong Kong (51%), the Mainland (43%) and overseas (6%), amounting to a total of \$79.3 million. RDC handled a total of 260 R&D projects, serving the needs of industry (52%), government (29%) and other sectors.

Examples of current high-impact innovative technologies include development of sensors and solid state light emitters based on aggregate-induced emission, acoustic metamaterials with soundproofing capability, wireless data access in harsh environments, and drug discovery based on Traditional Chinese Medicine (TCM). In 2012, the Center for Chinese Medicine R&D was set up at HKUST, with a grant of \$5 million from the Hong Kong Jockey Club to provide professional TCM testing, quality control and certification services in Hong Kong.





INCUBATING START-UPS

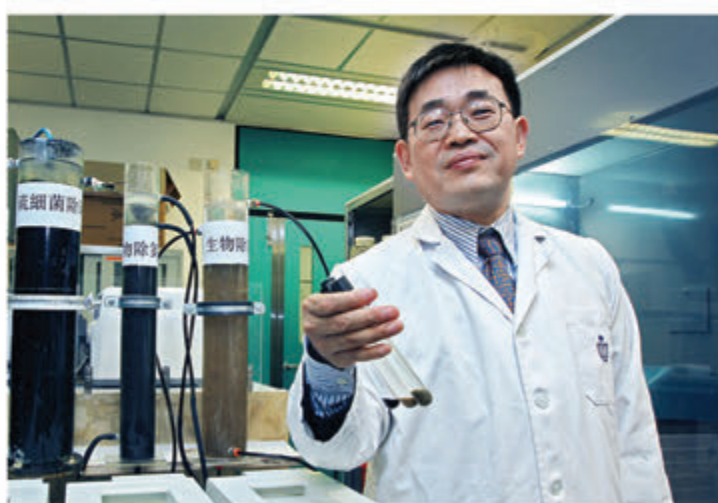
The University's Entrepreneurship Center nurtures the entrepreneurial spirit within the HKUST community through entrepreneurship education and training, business outreach and start-up incubation.

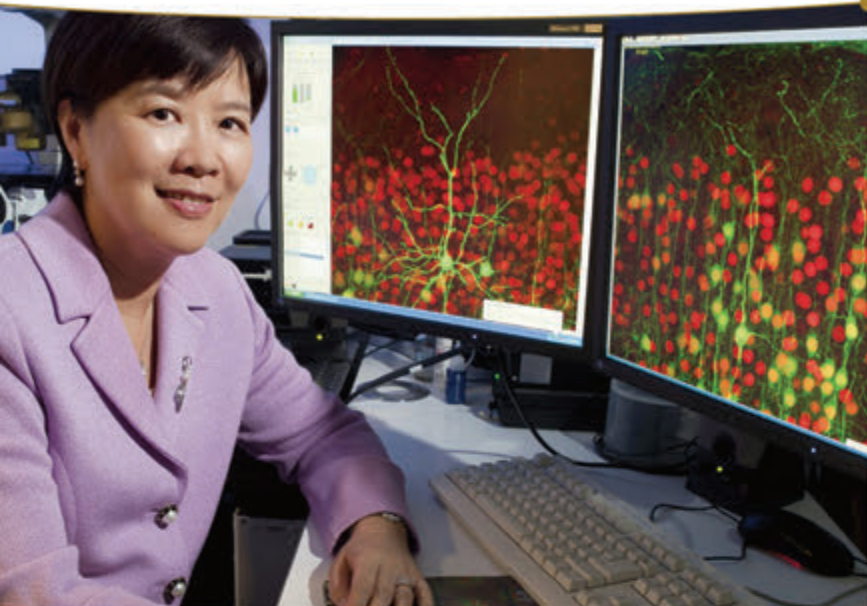
The annual HKUST One Million Dollar Entrepreneurship Competition continued to draw many aspiring entrepreneurs, with the year's contest attracting a total of 85 eligible entries from local, Mainland and international teams. The competition has helped HKUST to become a role model in promoting entrepreneurship in Hong Kong and the surrounding region.

In further activities, the Center introduced the E-Academy program to provide systematic entrepreneurial training to students, and initiated an Entrepreneur-in-Residence scheme, which provides opportunities for faculty and students to explore setting up start-up companies with experienced industry members.

MAINLAND PLATFORMS

Over the past decade, HKUST has established research platforms at different strategic locations in the Mainland, including Shenzhen, Nansha, Foshan and Zhejiang. Significant progress on research and technology transfer has been achieved through these Mainland platforms. The HKUST Shenzhen Industry, Education and Research Building for the HKUST Shenzhen Research Institute and the HKUST LED-FPD Technology R&D Center in Foshan both completed their first full year of operation, while significant progress has been made in developing core technology and partnerships with Pearl River Delta industries.





DRIVING FORWARD, FINDING SOLUTIONS

HKUST's pioneering research seeks to lead the way to a better world for all. Over the year, many significant advances have been made. The following highlights illustrate just some of the cutting-edge work pursued

Tackling Nervous System Disorders

Brain diseases and disorders such as Alzheimer's disease and clinical depression do not have any cures at this time, while treatments only target symptoms of these conditions. Recent breakthroughs in regenerative medicine show much promise in the development of effective neural stem cell-based therapies that replace lost or damaged brain cells or induce self-repair within the brain. In July 2012, under the Theme-based Research Scheme, the Hong Kong Research Grant Council awarded HK\$60.8 million to an interdisciplinary team led by Prof Nancy Ip for a pioneering initiative entitled Stem Cell Strategy for Nervous System Disorders. The focus is to understand the key signaling mechanisms governing the generation of new brain cells and their differentiation, maturation and integration into the neural network, and to identify small molecules derived from traditional Chinese medicine herbs to treat brain diseases and disorders.

Bending Light and Sound

To create more efficient light-emitting devices and thermal radiation control, a new generation of functional materials capable of controlling the density of radiation modes is being explored by Prof Che Ting Chan (Physics). The materials are expected to be able to bend and confine light and sound in unusual ways, equipping microscopes with better resolution and facilitating the design of efficient, lighter antennae and optical chips. In addition, the research team will work on modifying the scattering and absorption properties of natural materials in order to achieve stealth, reduce noise and increase energy harvesting capability.

Understanding Autism

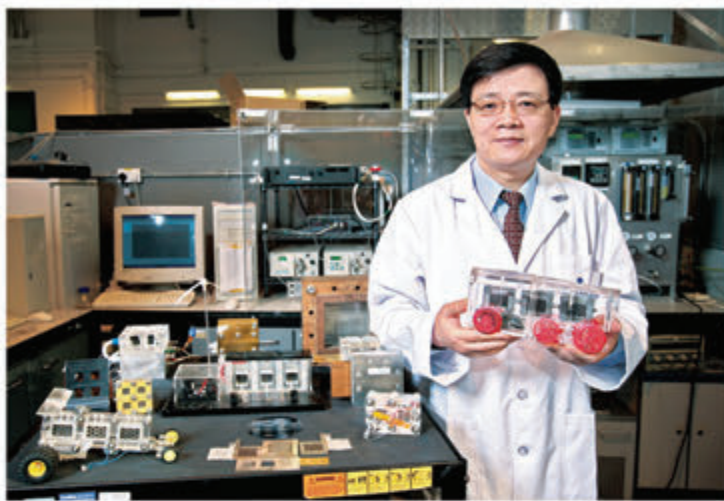
Genetic studies have consistently proved that hundreds of genes are associated with autism spectrum disorders, yet our understanding of underlying mechanisms governing the alterations of these genes and their role in causing the diseases is limited. Research led by Prof Mingjie Zhang (Life Science) aims to provide new theoretical grounding for understanding an array of neuro-disorders including autism, schizophrenia and depression, while at the same time developing medicines and therapies to treat the disease-related effects.

Fresh Light on Luminescent Materials

Conventional luminescent materials often become non-emissive when aggregated, resulting in an aggregation-caused quenching effect. Prof Benzhong Tang (Chemistry) and his researchers are working on the creation of new luminescent molecules with aggregation-induced emission (AIE) characteristics. Hi-tech applications of AIE materials in optoelectronics, chemosensors and bioprobes are also being explored.

Window into World of Cells

An interdisciplinary team of researchers led by Prof Michael Loy (Physics) is developing and applying super-resolution technology ("STORM") to look inside live cells. With this technique, blurred images of mitochondria, which are the power plants inside every living cell, can now be imaged in 3D with much sharper resolution, allowing researchers to see how these organelles change in real time under various drug treatments.



Green Energy Boost

Prof. Tianshou Zhao's research group (Mechanical Engineering) has developed a multi-scale numerical method and studied the transport mechanism of fluid flow, heat and mass in complex systems. The research is not only helpful for understanding the complicated transport processes in energy systems, but also plays an important role in improving energy efficiency and boosting green energy development.

Next Generation Wireless Networks

Work by Prof. Qian Zhang (Computer Science and Engineering) will be particularly useful for the design of future wireless video, mobile multimedia systems, as well as next-generation wireless networks. Her focus on models for joint wireless multimedia communication and performance optimization has resulted in a major breakthrough in efficient video communications under discontinuous transmission conditions, and in effectively increasing bandwidth efficiency.

Manufacturing Upgrade

The transformation and upgrading of manufacturing industries is set to be propelled forward through research by Prof. Furong Gao (Chemical and Biomolecular Engineering) and his studies on high-performance batch process control systems. In addition, the project has creatively developed a capacitive transducer for injection molding and provided a new technology for quality online measurement.

Building Resilience

Prof. Christopher Leung (Civil and Environmental Engineering) and his research team have developed high-toughness fiber-reinforced cementitious composites, with excellent tensile ductility and crack control. The materials' high energy absorption capability has been used for constructing earthquake-resistant structures. The research findings can bring along a new generation of structures with improved safety and reparability under severe loading as well as higher durability.

Boss Rage

When do victims of abusive supervision have enough and start to retaliate against such treatment? This study, by Prof. Huiwen Lian (Management), develops a model to explain whether subordinates will or will not aggress against an abusive supervisor. It also explores how to eliminate supervisor-directed aggression and its significant costs to organizations.

Clawback Effectiveness

Firm-initiated compensation recovery provisions, or clawbacks, are gaining popularity. However, little is known about their effectiveness. Do they improve financial reporting? Are they a deterrent? Profs. Kevin C. W. Chen and Tai Yuan Chen (Accounting), working together with Prof. Lilian H. Chan (University of Hong Kong), and Yangxin Yu (Australian National University), show that the incidence of accounting restatements does decline after firms initiate such provisions. In addition, their research indicates that investors and auditors view such provisions as associated with increased accounting quality and lower audit risk. The paper was published in the *Journal of Accounting & Economics* in 2012.

Research Development

Weighty Issue

Obesity is a major public health problem and weight loss is a pervasive personal goal. This research, published in *Psychological Science*, is the first to study laypeople's weight-related beliefs. Authors Prof Anirban Mukhopadhyay (Marketing) and Prof Brent McFerran (University of Michigan) find these beliefs have real consequences – they predict an individual's actual body mass index. Their results suggest that obesity has an important, pervasive, and hitherto overlooked psychological antecedent. Follow-up research is investigating how food marketing companies actively promote the exercise lay theory. Related articles in this stream have appeared in the *Journal of Consumer Research*, *Journal of Consumer Psychology*, and *Journal of Marketing Research*.

Credit Constraints

In a series of papers, Prof Pengfei Wang (Economics) has shown that credit market imperfections can translate small economic downturns to severe financial crises and that credit market imperfections can lead to asset bubbles and hence generate self-fulfilling fluctuations. The macroeconomic data reveal that asset bubbles driven by excess credit are not theoretically appealing but empirically necessary to explain how housing prices and stock prices influence macroeconomic fluctuations. Related research articles have appeared in *American Economic Review*, *Econometrica*, *Journal of Monetary Economics*, and *American Economic Journal: Macroeconomics*.

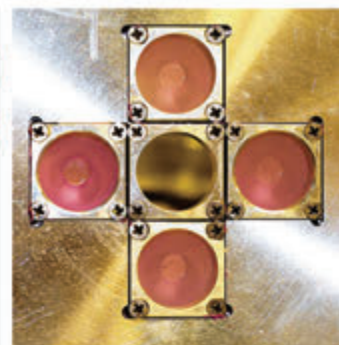
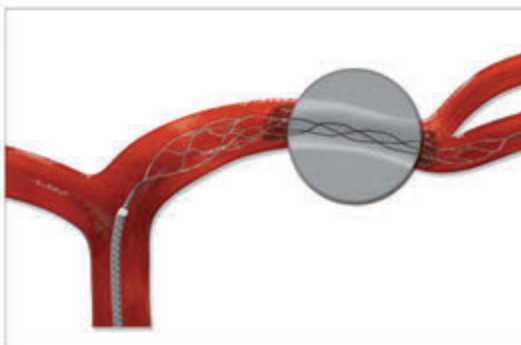
Tracking China's Aging Population

Prof Albert Park (Social Science and Economics) in collaboration with researchers from Peking University, University of Southern California, and other international partners, conducted a mass survey of Chinese adults over the age of 45, finding stark gender differences in how men and women age in the developing world. The research combines socioeconomic data on areas such as employment, education and consumption, with self-reported and actual measures of physical and psychological health offering fresh insights for policymakers and researchers. First results show that older women are much more likely to be in poor health than men. The release of the China Health and Retirement Longitudinal Study (CHARLS) baseline report excited much general interest, including summary articles in *Science*, *The Wall Street Journal*, and *South China Morning Post*.

The Wider View

School of Humanities and Social Science faculty members published 13 books and many articles during the year. One key example was *China's Early Modern Economy: A Study of the GDP of the Huating-Lou Area in the 1820s* by Prof Bozhong Li (Humanities). The book won two national prizes: the quinquennial Guo Moruo Chinese History Prize from the Chinese Academy of Social Sciences, 2012; and the triennial Higher Education Outstanding Scientific Research Output Award (Humanities and Social Sciences): Economics, 2013, from the Ministry of Education. Both are firsts for the Hong Kong academe.





POWERING INNOVATION, GENERATING CHANGE

HKUST's applied research and knowledge transfer culture is propelling development through putting novel ideas to work

Streaming Cloud Success

A next-generation streaming cloud for large-scale high bitrate applications over the global internet has been developed by Prof Gary Chan (Computer Science and Engineering). The "Streamphony" cloud makes use of innovative technologies to provide high-quality content to viewers, and has been acclaimed by both content and service providers. Its high-quality multimedia broadcasting also offers cost savings of 70% on bandwidth and 30% on hardware.

Biodevice Breakthroughs

An interdisciplinary team led by Dr John Kwok (Biomedical Engineering), Prof David Lam and Prof Matthew Yuen (Mechanical Engineering) has developed bio-devices for the treatment of endoluminal diseases. The team has developed devices for advanced clot retrieval and focal dissolution to treat ischemic stroke. The researchers have further developed breakthrough devices made of bioabsorbable materials, which not only treat but help the body to restore the treated blood vessels. The bioabsorbability of the device also enables it to disappear, allowing the shrinkage and natural healing of aneurysms to proceed without interference.

Absorbing Development

Profs Ping Sheng, Zhiyu Yang and Che Ting Chan (Physics) have developed a novel metamaterial that can absorb sound energy. The thin and light metamaterial is made of elastic membranes with specially designed rigid platelets, and is particularly effective against sound frequencies between 100–1,000 Hz. Potential uses include panels or walls to reduce noise in aircraft cabins and buildings.

Understanding Viruses

A multidisciplinary research team is undertaking an experimental and computational immunology project. The team includes Profs Matthew McKay (Electronic and Computer Engineering), I-Ming Hsing (Biomedical Engineering and Chemical and Biomolecular Engineering) and Xuhui Huang (Chemistry and Biomedical Engineering), working together with researchers from MIT and Massachusetts General Hospital. The project seeks to develop new computational methodologies for better understanding and predicting the evolutionary behavior of infectious viruses, with exciting preliminary results for the Hepatitis C virus.

Learning about Risk

An Interdisciplinary Programs Office collaboration with Marvel Digital Limited has designed a scenario-based system to teach investors about financial risk management. The project adopted ontology and intelligent rules to dynamically create different financial risk management scenarios to assist learners. An ontology database stores the relevant concepts and rules.



School of Science

The introduction of the four-year curriculum in 2012-13 provided flexibility for a wider range of academic and personal development opportunities for science undergraduates. Meanwhile, the School's faculty continued to achieve major breakthroughs and gain significant funding for research. The School was ranked 12th in Natural Sciences and 13th in Life Sciences in the QS Asian University Rankings 2013, and 24th in Chemistry in the QS World University Subject Rankings 2013

EXTENDING SCIENCE EDUCATION FRONTIERS

The School welcomed the first cohort of University entrants through school-based admission in 2012. Under the new four-year curriculum, students are offered a range of science foundation education courses in their first year, allowing them to develop a broader knowledge base by exploring their aptitudes and interests before deciding on their major programs and study track or option.

With the mission to nurture the future generation of scientists, the School has pioneered the development of an International Research Enrichment study track, which targets undergraduates eager to gain early research

experience in various fields of science. This track offers a series of courses on research guidance, providing students with all-round research skills training during their undergraduate studies. This includes the opportunity to gain research internship experience at overseas institutes.

The School has set up a well-equipped Office of Academic Advising and Support to advise students on selecting their major. Training modules were organized for faculty advisors to provide them with the required skills and knowledge to ensure a smooth orientation for freshmen.

Development also extends to minor programs that further expand the horizons of undergraduates, and widen their options. New minor programs in Biotechnology and Actuarial Mathematics will commence in the 2013 academic year.

ENRICHMENT IN POSTGRADUATE STUDIES

Pushing ahead with preparation for Professional Development in Science (PDS) courses for postgraduate researchers, the School recently completed the development of a series of mini-workshops covering teaching, research management, and communication skills to be launched in the 2013 academic year. These courses emphasize students' career development and research ethics. During the year, the School invited experts to organize workshops for students on oral presentations and research article writing skills as well as to give seminars on responsible research conduct for PDS faculty instructors.

To encourage postgraduate applications from top non-local students, the School organized a summer research program in 2013. Outstanding undergraduates from outside Hong Kong were invited to experience a five-week research program with our science faculty. The program received an overwhelmingly positive response from high-caliber students in the region.

A new computational science concentration was developed for Chemistry, Mathematics and Physics research postgraduate students interested in pursuing research in computation-related areas. Preparations have also continued for the launch of a new MSc Program in Environmental Health and Safety and admission of the first batch of full-time students for the MSc Program in Biotechnology. The new concentration and programs will all be rolled out in the 2013 academic year.



ACHIEVEMENTS RECOGNIZED

During the academic year, the School successfully secured large-scale grants from the Research Grants Council's Theme-based Research Scheme, and the National Basic Research Program of China (973 Program) under the Ministry of Science and Technology. School faculty led Areas of Excellence proposals that were awarded funding subsequent to the closing of this report. Faculty members and their research teams continued to achieve major breakthroughs in research, with findings published in prestigious journals such as *Science*, *Nature Neuroscience*, *Cell Stem Cell*, *Nature Materials*, and *Physical Review Letters*.

The School has established strategic partnerships with leading overseas universities and organizations, including Columbia University, California Institute of Technology, University of British Columbia, University of South California, and CERN among others. Such collaborations build new strengths, reinforce existing ones, and enhance the University's reputation.

The School has also collaborated with leading organizations and enterprises, including CERN, GlaxoSmithKline R&D China, Roche Hong Kong, and the L'Oreal Group to offer hands-on training to undergraduate and postgraduate students to develop their research skills.

HOLISTIC DEVELOPMENT

The School strives to enhance students' holistic development through enrichment programs. During 2012-13, the School increased its exchange partnerships and now has over 60 overseas exchange institution partners worldwide.

To foster curiosity, creativity, and passion for science among Hong Kong's younger generation, the School and Roche Hong Kong have launched the Roche Young Scientist Award. This initiative enables participants to discover their potential and fosters enthusiasm for scientific discovery. Through collaboration with BASF, the BASF Kids' Lab was again organized during the summer, enabling children to conduct experiments under the guidance of our undergraduates to enhance interest in chemistry.



School of Engineering

The School has been expanding its undergraduate and postgraduate student experience through a series of innovative initiatives that add to its academic and research endeavors through personal and professional development, industry and community engagement. In the QS World University Rankings by Subject 2013, the School was ranked within the global top 30 in all five fields in Engineering and Technology

The four-year curriculum introduced in 2012 provided an unprecedented opportunity for the School to optimize students' education through widening the range of programs and experiences available to undergraduates and postgraduates.

ENGINEERING COMMONS

The School inaugurated its state-of-the-art Engineering Commons, a milestone student-centered space to promote total learning. Located at the entrance to the School, the custom-designed area serves as a hub for student advising, collaborative learning and knowledge exchange, a platform to inspire creative ideas, and a showcase for the School's latest inventions and technologies.

The Engineering Commons has also become home to the School's pioneering Center for Engineering Education Innovation (E²I). Over the year, E²I helped implement new ideas on innovative teaching and assessment strategies aimed at improving student learning in a number of courses, including promotion of collaborative problem solving skills in "Engineering Solutions to Grand Challenges of the 21st Century". The peer mentoring program continued, with around 100 of the School's undergraduates involved during 2012-13. Peer mentors are upper-year engineering students who volunteer their time to help first-year students to facilitate a positive transition to HKUST.

WIDENING LEARNING OPTIONS

To expand options for students in two areas of increasing social demand, minor programs were established in Aeronautical Engineering and Entrepreneurship, the latter offered jointly with the School of Business and Management. A three-credit, one-month summer course on Design Thinking was also launched in collaboration with the China Academy of Art. Open to undergraduates and postgraduates across both universities, this course provided the foundation for designing a successful product, with participants spending time at both campuses.

Student exchanges are another major focus for the School, which fully recognizes the personal development benefits of such opportunities. The percentage of engineering undergraduates participating in exchanges grew to 35% in 2012-13.





INDUSTRY ENGAGEMENT

The Center for Industry Engagement & Internship (IEI) was established in Fall 2012 to serve as a bridge between industry and the School, and to promote internship and recruitment. IEI has its own director and is tailored as a one-stop information and training hub. In addition, faculty members and industry advisors can coach students on career planning and critical skills to be competitive in their job search and beyond.

Early developments include joint workshops with J P Morgan to inspire students to look beyond technology industries, company visits to Apple, Google and LSI Logic in Silicon Valley, and nomination of students to industry internship fellowship programs. An inaugural industrial forum entitled “Empowering Our Engineering Talents for Globalized Technology Industries” was organized where multinational corporations could engage directly with students. A custom-built mobile app provides the School’s students with access to up-to-the-minute recruitment information.

SERVING THE COMMUNITY

In community-oriented moves, a service learning program was launched in 2013, enabling students to apply their engineering skills to assist local and non-local NGOs. The School’s Center for Global & Community Engagement recognized the outstanding contributions of 80 students through the presentation of achievement certificates.

A Chemical and Biomolecular Engineering undergraduate and two teammates from the School of Business and Management developed an innovative Elderly Simulation Program called Eldpathy, which earned them the Champion and Best Presentation Award at the Hong Kong Social Enterprise Challenge 2012.

POSTGRADUATE MOVES

There were numerous enterprising developments in postgraduate education, among them a joint venture in PhD education exchange with the University of Toronto and the launch of a joint MPhil/PhD program with Tsinghua University. The School also received the largest number of Hong Kong PhD Fellowship Scheme awardees among all engineering schools in Hong Kong for the fourth consecutive year – a position held since the scheme began.

Overall, international research and taught postgraduate numbers have grown over the year due to the School’s continuous outreach efforts, with students from a wide number of countries in Asia, Europe, North America, the Middle East, and Africa.

Postgraduates will benefit from a partnership with Ford Motor Company, which is bringing its global Conservation and Environmental Grants program to Hong Kong for the first time, in collaboration with the School. In another supportive move, the School set up the Arthur and Louise May Scholarship for Young Engineers to encourage engineering professionals to pursue taught postgraduate programs. The awards helped to attract a number of good quality students from different locations.



School of Business and Management

The School entered a fresh phase of development in 2012-13, with further diversification of programs, research activities and geographical reach, and a move to its state-of-the-art home on campus

It was a time of change and forward-looking initiatives for the School of Business and Management in 2012-13. The School succeeded in tackling the challenges of the transition to the four-year undergraduate curriculum and also made significant advances on several fronts to enhance its status as a global center for excellence in business education and research.

PREPARING LEADERS OF TOMORROW

The School's degree programs – undergraduate, Master of Business Administration (MBA), Master of Science (MSc) and Doctor of Philosophy (PhD) – and a wide range of executive education programs continued at the forefront of education development, grooming business leaders and researchers in Asia for the world.

The MBA program was ranked No.1 in Asia and No.8 in the world by the *Financial Times* Global MBA Rankings 2013, marking the program's fourth consecutive year in the top 10. The Kellogg-HKUST Executive MBA (EMBA) program, jointly offered by Kellogg School of Management, Northwestern University, was ranked the world's No.1 by the *Financial Times* Global EMBA Rankings, also the fourth year in a row.





Building on its solid foundation and rising international reputation, the School has been actively seeking opportunities to create new learning experiences that meet the needs of the global workplace and extend its education footprint. Over the year under review, the School made final preparations for a series of program initiatives, including the World Bachelor in Business program, a pioneering three-continent undergraduate program, run in collaboration with the University of Southern California in the US and Bocconi University in Italy; an MSc Program in International Management, in collaboration with CEMS, a global alliance of leading business schools, multinationals and NGOs; and a MSc Program in Global Operations. The three programs will commence in Fall 2013.

In May 2013, the School launched a pilot part-time MBA program in the Kingdom of Saudi Arabia, with support from Saudi Aramco, the biggest integrated oil company in the world. This marked the School's first company-sponsored MBA program. The program has not only extended the School's geographical reach, but also brought its world-class program to an important region.

RESEARCH EXCELLENCE

Teaching and research go hand in hand at the School, which is committed to producing high-quality, insightful research that informs economic and business decision-making. The School was ranked No.1 in Asia and No.16 globally by the University of Texas at Dallas Top 100 World Rankings of Business Schools (2008-2012). HKUST also excelled in the QS University Rankings by Subject 2013, with Statistics & Operational Research ranked No.7, Computer Science &

Information Systems at No.12, Accounting & Finance at No.16, and Economics & Econometrics ranked No.32.

The School's research received additional support from the business community, including donations from the Tanoto Foundation and Mr James Thompson to assist the development of the Tanoto Center for Asian Family Business and Entrepreneurship Studies and the Thompson Center for Business Case Studies respectively.

STRENGTHENING LINKS

Alliances and partnerships continued to be a key objective, with the School becoming the first CEMS member school in Hong Kong and joining 20 other business schools around the world to form the Global Network for Advanced Management.

In addition, the School strengthened its position in Mainland China, developing a new collaboration with Peking University's HSBC Business School to enrich and enhance its MBA program offered in Shenzhen. The collaboration was approved by the Ministry of Education in April 2013.

MOVING IN, MOVING ON

In another exciting development, the School moved in phases to the new Lee Shau Kee Business Building on campus in summer 2013. The dedicated, state-of-the-art facility houses the School's 400 staff and 4,200 students, providing an ideal place to continue to advance business knowledge and develop business leaders to contribute to the advancement of the region.

School of Humanities and Social Science

A major expansion in undergraduate teaching, faculty members' successful engagement with Massive Open Online Courses, enterprising collaborations with national and overseas universities, and pioneering artistic endeavors have made 2012-13 an exciting year for the School. In the *Times Higher Education World University Rankings 2013*, the School was ranked No.50 in Social Sciences

EXPANDED PROVISION

2012 was the first year of the new 334 Common Core Program undertaken by all four-year undergraduates at the University. This program totals 36 credits, with as many as 27 credits taught by the School's faculty. The total number of undergraduate students taking the School's classes accordingly increased from 12,000 to 17,000 (excluding students taking Center for Language Education programs), and it is expected to increase further next year.

Two faculty members offered Massive Open Online Courses (MOOCs) through the Coursera platform, which HKUST joined in Fall 2012. Prof Naubahar Sharif's "Science, Technology, Society in China" began in April 2013 and ended with a total enrollment of almost 22,000, while Prof James Lee's "A New History for a New China, 1700-2000" was launched in summer 2013 and ended with a total enrollment of more than 30,300. Plans are underway to use their MOOC video lectures to enhance HKUST classes and "flip their classrooms", requiring students to watch the pre-recorded lectures outside the classroom and replacing in-class lectures with class discussion and student presentations, effectively moving forward active learning.



GLOBAL OUTLOOK

The School, in collaboration with the Graduate School and College of Arts and Sciences of the University of Virginia (UVa) and a large number of Mainland China and Taiwan university exchange partners, successfully inaugurated the first HKUST-UVa Jefferson Global Seminars, a collaborative academic program seeking to offer students a unique, multi-faceted global perspective.

With students from HKUST, UVa, and the School's Greater China partner universities participating, the seminars enabled students to broaden their intellectual horizons. Six courses were organized in Global Humanities and Global Sustainability in the first program, taught by both UVa and HKUST faculty members.

Thirteen of 27 applications to the Research Grants Council for General Research Funds, Early Career Scheme and Humanities and Social Sciences Prestigious Fellowship Scheme projects were successful, the School's largest number of applications and funded projects yet.

The cross-disciplinary South China Research Center continued to establish academic connections among scholars and institutions in South China studies through workshops, lectures and conferences on the social history and cultural anthropology of the area; and to foster awareness of the latest theories and ideas related to Hong Kong history and liberal studies among secondary school teachers.

ARTISTIC ENCOUNTERS

The School organized public lectures, performances, and projects as different forms of community engagement. In 2012-13, this included the third season of The Intimacy of Creativity and the inaugural season of HKUST Music Alive!

The Intimacy of Creativity was led again by Prof Bright Sheng, Artistic Director, YK Pao Distinguished Visiting Professor of Cultural Studies, and IAS Visiting Fellow. The innovative activity brought together emerging composers and such renowned musicians as Lin Cho-Liang and Edgar Meyer to work on compositions and performances in an interactive dialogue. Lunchtime lectures were conducted on campus and sell-out world premiere concerts held at Hong Kong City Hall.

HKUST Music Alive!, a new concert series to boost top arts performance on campus, was launched in 2012-13, featuring renowned international and Hong Kong-based performers. Nearly 2,000 people attended the season of concerts. The online audience also enjoyed the music through live streaming in stereo, a first for a university in Hong Kong.





Interdisciplinary Programs Office

The Interdisciplinary Programs Office (IPO) encompasses focused programs and two divisions that nurture cutting-edge education and research beyond traditional academic boundaries and ignite new perspectives

EDUCATION MOVES

A key objective of the IPO is to answer the demand for graduates with the capability to integrate relevant interdisciplinary know-how and skills. This was reflected when the first cohort of Bachelor of Science in Environmental Management and Technology students graduated in 2012-13, moving on to careers in consultancy firms, government and non-governmental organizations.

To widen perspectives on sustainability, the Division of Environment offered courses to undergraduates on "Urban Air Pollution", "Megacities: Systems Thinking and Complex Challenges", and "Environmental Control and Management for a Modern Society" as part of the inaugural HKUST-University of Virginia Jefferson Global Seminars, co-sponsored by the IPO and School of Humanities and Social Science.



CONFERENCES AND COLLABORATIONS

Eminent scholars from overseas and Mainland China gave more than 30 seminars during the year, organized by the Division of Biomedical Engineering. A short course on Physico-chemical Concepts in Immunology and Virology was also held, with Prof Arup Chakraborty, Robert T Haslam Professor of Chemical Engineering, Chemistry and Biological Engineering at MIT, as the invited speaker. Faculty, researchers, and students from HKUST and other local universities participated.

The University's first International Conference on Biomedical Engineering and the Joint Scientific Symposium of the Hong Kong University of Science and Technology, Shanghai Jiao Tong University and Chiba University took place in January and April 2013 respectively. The conferences gathered together leading scientists from around the world to exchange ideas and promote academic-industrial and international collaborations.

The Division of Environment held a workshop on climate research opportunities with Prof Peter Brimblecombe, University of East Anglia, Dr Yi Ming, NOAA/Geophysical Fluid Dynamics Laboratory, Princeton University, and Prof Shaw Liu, Academia Sinica, Taiwan. It also worked with the Division of Social Science and National Taipei University on urban transport and air pollution and CO₂ emissions. In addition, Profs Chak Chan, Chi Ming Chan and Jian Yu began collaborating with Profs Seinfeld and Flagan of California Institute of Technology on secondary atmospheric aerosols.

MPhil and PhD programs in Environmental Science, Policy and Management were launched in Fall 2012, with high-caliber students from Hong Kong and Mainland China. Students included a Hong Kong PhD Fellowship Scheme awardee.

The Division of Biomedical Engineering worked closely with the Schools of Science and Engineering on major and minor programs in Bioengineering. The programs facilitate the close integration of biological, physical, and computational sciences, and engineering.

EARLY BUSINESS VISION

Students from the Dual Degree Program in Technology and Management formed teams with peers from the University of Illinois to participate in the Technology and Management International Business Plan Competition 2013 in South Africa. Highlights included learning about global business development and entrepreneurship opportunities in developing countries through research and discussion, and cultural visits.

In a separate activity, Dual Degree students took part in company-sponsored projects, providing the students with business experience and deeper insights into economic and technological developments in Hong Kong.





HKUST Fok Ying Tung Graduate School

The School has built on its hi-tech areas of focus, securing further research projects, facilitating cross-border exchange, and fostering innovative technology management

HKUST Fok Ying Tung Graduate School (FYTGS) is one of the University's key platforms in Mainland China, engaging in research, education, and technological advancements. It is located in Nansha, Guangzhou, designated as a National Special Zone for development.

The School continued to focus its research and academic programs in four technology areas: Internet of Things; Energy and Advanced Engineering Materials; Advanced Manufacturing & Automation; and Environment & Sustainable Development. Over the years, the School has built up the capacity and capability to seek government grants, either on its own or in collaboration with other Mainland China institutions, and to assist companies in technological advancement. It has around 200 staff and interns working in its eight research centers. The new school building is expected to be completed by Fall 2013, paving the way for further growth and impact.

CROSSING BORDERS

In 2012-13, FYTGS secured another 52 projects, bringing the total number to 184. Projects secured during the year included grants from prestigious Mainland research schemes, such as the 973 and 863 Programs, National Natural Science Foundation and Guangdong International Cooperation Program, as well as commercial contracts, contributing to cross-border technology transfer between Hong Kong and Mainland China.

The School filed 20 patents during the year. This brought the total number of patents filed to 102, with 24 registered. The School is also taking a leading role in the Guangzhou Supercomputing Center, facilitating the opening up of the Center for use by Hong Kong institutions.



DUAL PERSPECTIVES

During the year, the School admitted its first batch of postgraduate students to the MPhil in Innovative Technologies Leadership program. Students undertaking the two-year interdisciplinary program attend courses at HKUST's Clear Water Bay campus in their first year, and undertake practical research at the Nansha campus in their second year, offering a valuable dual perspective.

Faculty associated with the School continued to excel in the research arena. Prof Qian Zhang, Director of the Digital Life Research Center, gained a State Natural Science Award (Second Class), while a research team led by Prof Furong Gao, the School's Associate Dean, received a Higher Education Outstanding Scientific Research Output Award (Science and Technology): Natural Sciences, First Class, from the Ministry of Education. Prof Jingshen Wu, Mechanical Engineering, was admitted to the Thousand Talents Program, and Dr Kaishun Wu, Digital Life Research Center, won the Hong Kong Young Scientist Award, and the Guangdong Province Outstanding Youth Award.

HKUST Jockey Club Institute for Advanced Study



The HKUST Jockey Club Institute for Advanced Study provides a home for catalytic interaction between the world's foremost scientists and scholars, and a cutting-edge knowledge hub to inspire faculty and students, drive development, and ignite public interest in the latest discoveries

EMINENT MINDS

Prof Sir Christopher Pissarides, IAS Helmut & Anna Pao Sohmen Professor-at-Large, was the first Nobel Laureate appointed to the HKUST faculty, joining the Institute in January 2013. Prof Pissarides was awarded the Nobel Prize in Economic Sciences in 2010 for his "analysis of markets with search frictions", together with Profs Peter Diamond of MIT and Dale Mortensen of Northwestern University.

Prof Ching Tang, hailed as the "Father of OLED" (organic light-emitting diodes), accepted the IAS Bank of East Asia Professor appointment and will join in Fall 2013. OLEDs are applied in an extensive range of display applications, such as mobile phones, digital cameras and large-screen televisions. The Hong Kong-born and raised scholar is the first Chinese recipient of the prestigious Wolf Prize in Chemistry.

To build a strong link with HKUST faculty members and their research, the Institute engaged 15 prominent, active HKUST professors as senior fellows, who contribute to its activities and help to forge new ones, especially interdisciplinary ventures. Two fellows, five junior fellows, as well as a number of postdoctoral fellows were also appointed.

The Institute is committed to drawing leading scholars and has enlisted 33 visiting professors from diverse disciplines. Two are Nobel Laureates and most are members of national academies or of equivalent stature. In the year under review, 21 visiting professors, four senior visiting fellows and one affiliate member visited the Institute. Their association and visits promote academic and research excellence at HKUST and beyond.

KNOWLEDGE SHARING

In 2012-13, the Institute organized some 80 academic events, including four international conferences, 50 distinguished lectures and two UC RUSAL President's Forums. Videos of many of these activities were uploaded to the online IAS Channel. Agreements were also reached for the prestigious Gordon Research Conferences to be held at the Institute.

The IAS Programs initiative, the first of its kind in Hong Kong, attracts top talents around the world for extended visits to IAS to find solutions to the most challenging problems in various disciplines. The Institute hosted four programs over the year, focused on metamaterials, plasmonics & transformation optics, topological materials and strongly correlated electronic systems, particle theory, and human resources and economic development.

NEW HOME, NEW ERA

The Institute moved into its new building on the Lee Shau Kee campus in June 2013. One key feature is the grouping of faculty, researchers and students along non-discipline lines to create a more interactive and cross-disciplinary environment, and encourage fresh ideas and approaches to research.



Faculty Development

The recruitment of faculty and their achievements as educators and researchers are key to HKUST's advancement. In 2012-13, the University took several significant steps to enhance recognition of leading faculty, and received national and international acknowledgement of the work generated by its world-class team



The recent growth in student numbers has enabled HKUST to recruit more than 70 new faculty members in the past few years. Recruitment of faculty is a valuable opportunity to bring in talented teachers and researchers and promote the diversity of the faculty to better reflect HKUST's position as an international institution. The University continued to refine the faculty compensation review system to enhance international competitiveness of faculty salaries and at the same time reward achievements and contributions.

FOSTERING EXCELLENCE

The University Council approved the introduction of new teaching-track faculty positions (Lecturer I/II and Senior Lecturer). These posts provide a clear career path for colleagues other than tenure-track faculty members to enable them to better contribute to the University's teaching and learning missions. Forty staff members held teaching-track faculty positions at 30 June 2013.

New faculty members joining the University are provided with start-up support for their research and access to research funding. Along with this assistance, academics are propelled forward in their role as teachers in order that students gain the most benefit from studying with scholars who are among the best in their field. Such input is provided by programs and seminars delivered through the University's Center for the Enhancement of Learning and Teaching, funding for teaching development projects – with about 20 projects in hand at any given time – and School-led programs. The focus is on early-career faculty with emphasis on the role of senior faculty in mentoring and advising less experienced colleagues.

With the launch of the new four-year degree, there has been an intensive and successful effort to draw faculty into academic advising for students. This engagement with students out of class and with objectives that go beyond the academic issues of a course builds a significant new dimension to the relationship of students and faculty.



During the year, Prof Karl Herrup was appointed Head of the Division of Life Science and Prof I-Ming Hsing took up the post of Head of the Division of Biomedical Engineering. Prof Jianhua Chen and Prof Yiu Ming Fung, both Division of Humanities, were awarded the title of Professor Emeritus on their retirement.

NAMED PROFESSORSHIPS

HKUST conferred Named Professorships on a selected number of distinguished faculty members, a University-wide program to foster areas of academic excellence and honor outstanding academics. The landmark initiative provides greater opportunities for the University to recruit and recognize eminent academics and boost its contributions to different fields and the wider society. HKUST academics were appointed to professorships named in honor of their respective donors, with additional professorships provided for the Institute for Advanced Study. Five other donations are being used to recruit new faculty of the highest caliber in areas that the University intends to strengthen and expand.



The following faculty members have been appointed to professorships that are named in honor of their respective donors:

Prof Chan Kalok, Department of Finance
Synergis - Geoffrey YEH Professor of Business

Prof Albert Ha, Department of Information Systems, Business Statistics and Operations Management
Wei Lun Foundation Professor of Business

Prof Nancy Ip, Division of Life Science
The Morningside Professor of Life Science

Prof James Kung, Division of Social Science
Yan Ai Foundation Professor of Social Science

Prof Kwok Hoi Sing, Department of Electronic and Computer Engineering
Dr William M W Mong Professor of Nanotechnology

Prof Lee Chung-Yee, Department of Industrial Engineering and Logistics Management
Cheong Ying Chan Professor of Engineering

Prof Matthew McKay, Department of Electronic and Computer Engineering
Hari Harilela Associate Professor of Electronic and Computer Engineering

Prof Jaideep Sengupta, Department of Marketing
Joseph Lau Professor of Business

Prof Bright Sheng, School of Humanities and Social Science
Y K Pao Distinguished Visiting Professor of Cultural Studies

Prof Sheng Ping, Department of Physics
Dr William M W Mong Professor of Nanoscience

Prof Tang Benzong, Department of Chemistry
Stephen Kam Chuen Cheong Professor of Science

Prof Zhang Mingjie, Division of Life Science
Kerry Holdings Professor of Science

Prof Zhang Tongyi, Department of Mechanical Engineering
Fang Professor of Engineering





EMINENCE RECOGNIZED

A host of HKUST faculty members were honored with prestigious national awards for science and technology. Prof Tianshou Zhao (Mechanical Engineering), Prof Qian Zhang (Computer Science and Engineering), and their research teams received State Natural Science Awards, while Prof Furong Gao (Chemical and Biomolecular Engineering), Prof Christopher Leung (Civil and Environmental Engineering), and Prof Matthew Yuen (Mechanical Engineering), and their researchers were selected for Higher Education Outstanding Scientific Research Output Awards (Science and Technology): Natural Sciences, established by the Ministry of Education.

Profs Ping Sheng, Che Ting Chan and Zhiyu Yang (Physics) shared the Brillouin Medal awarded by the International Phononics Society for their discovery of locally resonant acoustic metamaterials while Prof Xuhua He (Mathematics) was awarded the 2013 Morningside Gold Medal of Mathematics. Prof Vincent Lau (Electronic and Computer Engineering) received a Croucher Senior Research Fellowship for his contribution to wireless technologies.

Individual Schools also support and highlight their faculty members' research achievements, with awards for academics at different stages of their careers.

During the year, the first Common Core Excellence Award was presented to inspire faculty, instructors and staff to enhance holistic education. HKUST's Common Core Program encompasses more than 260 courses in humanities, social analysis, science and technology, Chinese and English communication, among others. The inaugural award-winner was "Music, Drama and Theater", taught by Dr Oliver Lo (Humanities). The course shows students how to create their own musicals. Honorable mentions were given to "Developing the Leader in You", by Prof Karen Lee and Ms Agnes Lai (Management), and "Physics in Movies", taught by Prof Che Ting Chan (Physics).

The Michael G Gale Medal for Distinguished Teaching, an annual HKUST award highlighting one faculty member across the University for outstanding teaching, was presented to Prof Stephen Nason (Management). Other established teaching awards are presented by individual Schools. The Best Ten Lecturers Award, a student-run annual poll, highlights top teaching from the learners' perspective.

Community Engagement

On campus and off, the University continued to serve the community through the sharing of expertise and enthusiasm, with Schools adding their presence through numerous knowledge-building activities in their respective fields. The University's leading work in education and research also generated generous donations to support initiatives for development while bonds with alumni strengthened

NURTURING NEXT-GENERATION INNOVATORS

In collaboration with the Women Faculty Association, HKUST launched the Women in Science and Engineering (WISE) program for young women who aspire to be scientists or engineers. The first WISE Summer Camp took place in July 2012, bringing 96 senior secondary school students to campus to gain greater insight into science and technology.

The School of Science Education Development Program continued to promote activity-based teaching in science and mathematics through courses, workshops and summer camps for primary school students to arouse early interest in science and mathematics. In 2012-13, the program served over 1,500 primary school students, with 144 science undergraduates as instructors and teaching-content developers. The Center for the Development of the Gifted and Talented under the School offered specialized academic and enrichment programs in mathematics and science to nurture secondary school students with potential in science, including a university credit-bearing "HKUST Dual Program" for outstanding secondary students.



A number of events for school students were organized by the School of Engineering. The Department of Computer Science and Engineering co-organized the Android Application Design Contest with the Hong Kong Federation of Education Workers to raise interest among secondary school students in computer science and improve their independence and peer cooperation. More than 200 students and teachers from 40 secondary schools joined the contest. The Department of Industrial Engineering and Logistics Management held the My Toy Design Competition to foster entrepreneurship and innovation, attracting 140 teams from local secondary schools and tertiary institutions. The competition was well supported by toy companies, professional bodies, design and youth organizations.

The School of Business and Management organized or co-organized a series of conferences and seminars, including a roundtable on the sustainability of Chinese family businesses and a conference on China's securities market. The School also continued to arrange its well-received Business Insights luncheon seminars, a weekly column in a major economic and financial newspaper in Hong Kong, and a biweekly release of research articles.

In addition, the Division of Humanities organized 54 seminars, and co-organized 23 public lectures with the Hong Kong Museum of History, while the Division of Social Science held 27 seminars.

To share what life is like at the University, HKUST Information Day offered talks and campus tours in October 2012, attracting over 35,000 people.



GIVING SUPPORT

The year saw many generous donations that will assist the University to move forward in a range of significant ways.

The landmark HKUST Named Professorship Program, which unites community support and recognition for exceptional faculty, mobilized a wide range of donors and benefactors. The prestigious scheme was inaugurated in February 2013 to honor donors and professors. With the addition of a Professorship in Aerospace Engineering, supported by the Swire Group Charitable Trust, the total number of Named Professorships at the University stands at 18, with another four for the Institute for Advanced Study. The University will continue to engage support for Named Professorships to attract and retain distinguished academics.

The recently established Leadership and Public Policy Executive Education Programs Unit received a \$30 million donation from Shui On Holdings Limited. The Unit runs high-level executive education programs in leadership and public policy for senior public officials and corporate executives from Hong Kong, Mainland and Asia. The first program will be the Oxford-HKUST Leadership and Public Policy Series, an initiative with Oxford University.

To meet the increasing demand for hostel places, HKUST and Hong Kong Baptist University are developing a joint undergraduate hostel in Tseung Kwan O. The Hong Kong Jockey Club Charities Trust is supporting part of the construction costs, with the amount for HKUST standing at \$23.5 million.



Community Engagement

Research Initiatives

Several donations were received and new partnerships established to enhance research. Dr Simon Kwok and Dr Eleanor Kwok gave \$5 million to support the development of innovative bio-devices for treatment of endoluminal diseases. Tongyi Industrial Group China made a donation of US\$500,000 to the Center for Electronic Commerce. The Hong Kong Jockey Club Charities Trust approved a grant in support of a joint project with the University of Hong Kong to establish research and development laboratories for Chinese medicine, with \$2.75 million given to HKUST. Next Media Interactive Limited provided a grant of \$1.54 million for the HKUST-NIE Social Media Laboratory. Ernst & Young sponsored the establishment of the Institute for Emerging Market Studies, while Xilinx Inc supported the founding of the Xilinx-HKUST Joint Lab for the development of reconfigurable computing technologies.



Student Activities

Two scholarships were established by Hong Kong Yu's Charity Fund Committee through donations from philanthropist Mr Yu Pang Lin, who gave \$3.15 million, and The Lion & Globe Educational Trust, which donated \$2.5 million. Mrs Choi Ma Oi Kuen gave \$1 million to support a Public Service Leaders program; and The Yeh Family Philanthropy donated \$1 million to fund a new course in Social Entrepreneurship and Venture Philanthropy.

Further Donations

Following a \$3 million donation by Dr Ko Pui-shuen to the Library's Special Collections Gallery and University Archives project, the Library's Archives and Special Collections Reading Room was renamed the Hong Kong Chiu Chow Chamber of Commerce Ko Pui Shuen Gallery.

The University received its first bequest, with US\$5 million given by an anonymous donor to support academic and research development.

A Naming Ceremony was held for the Chevalier Learning Commons in honor of a \$20 million donation from Dr Chow Yei Ching.

The second Science-for-Lunch series was also successfully held, thanks to the on-going sponsorship of University Council member Mr Maximilian Ma. The series contained eight talks presented by nine HKUST professors on the latest research innovations. The presentations drew business and community leaders.

ALUMNI BONDING

2012-13 was a vibrant year for HKUST alumni. The Alumni Endowment Fund received an overwhelming response from over 800 enthusiastic alumni donors; and with the generous efforts of alumni Dr Jack Lau and Mr Kent Hau, who gave \$2 million each, and the matching funds from the Hong Kong government, a total of almost \$10 million was raised. Investment return of around \$322,000 was allocated to the enrichment of students' lives.

The Standing Committee of the HKUST Convocation was elected in March 2013 and began its new term in April 2013. Under the leadership of Mr Sean Lin, Convocation Chairman, the Committee continued to strengthen bonds between the University and alumni, as well as the University and the community.

Mr Alvin Lam became President of the HKUST Alumni Association in November 2012. Its executive committee, also known as the A1 Team, created an interactive, three-pillar platform

focusing on alumni engagement, community service and entrepreneurship to work toward its vision that "Alumni Inspire Alumni".

Alumni reunions took place in the US, Europe, Asia and Mainland China, with President Prof Tony F Chan and Vice-President for Institutional Advancement Dr Eden Woon attending many of them. Two more alumni groups were established: Endeavour House V Alumni Association and the Dual Degree Program in Technology and Management Alumni Association. Alumni chapters were set up in Beijing and Shenzhen to keep up links with HKUST graduates.

During the year, many alumni received awards in recognition of their contributions and achievements. Among them were: Mr Warren Lee, MBA (Ten Outstanding Young Persons Awardee 2012), Mr Arthur Chow, MBA (Ernst & Young Entrepreneur of the Year 2012 China), Mr Sean Lin, MBA/MSC (ISM), BBA(MGMT)-MO (2012 Asia-Pacific Information Security Leadership Achievements – Senior Information Security Professional (ISC)²), Mr Alvin Lam, BBA (Finance) (Hong Kong Computer Society Outstanding ICT Achiever Award 2012 in the Sales/Marketing/Business Development category), Mr Samuel Lee, MSc (Biotechnology) (ranked No.3 in Chemicals sector of *The Wall Street Journal's* 2012 Asia's Best Analysts Survey), and Mr Kenneth Cheung, BBA(Finance) (Hong Kong Association for Customer Service Excellence 2012 Field & Special Service Bronze Award).



International and Mainland Strategy

The University's Mainland China and global activities continued to move forward, with the deepening of links with leading enterprises nationally, and productive interaction with top institutions across the world

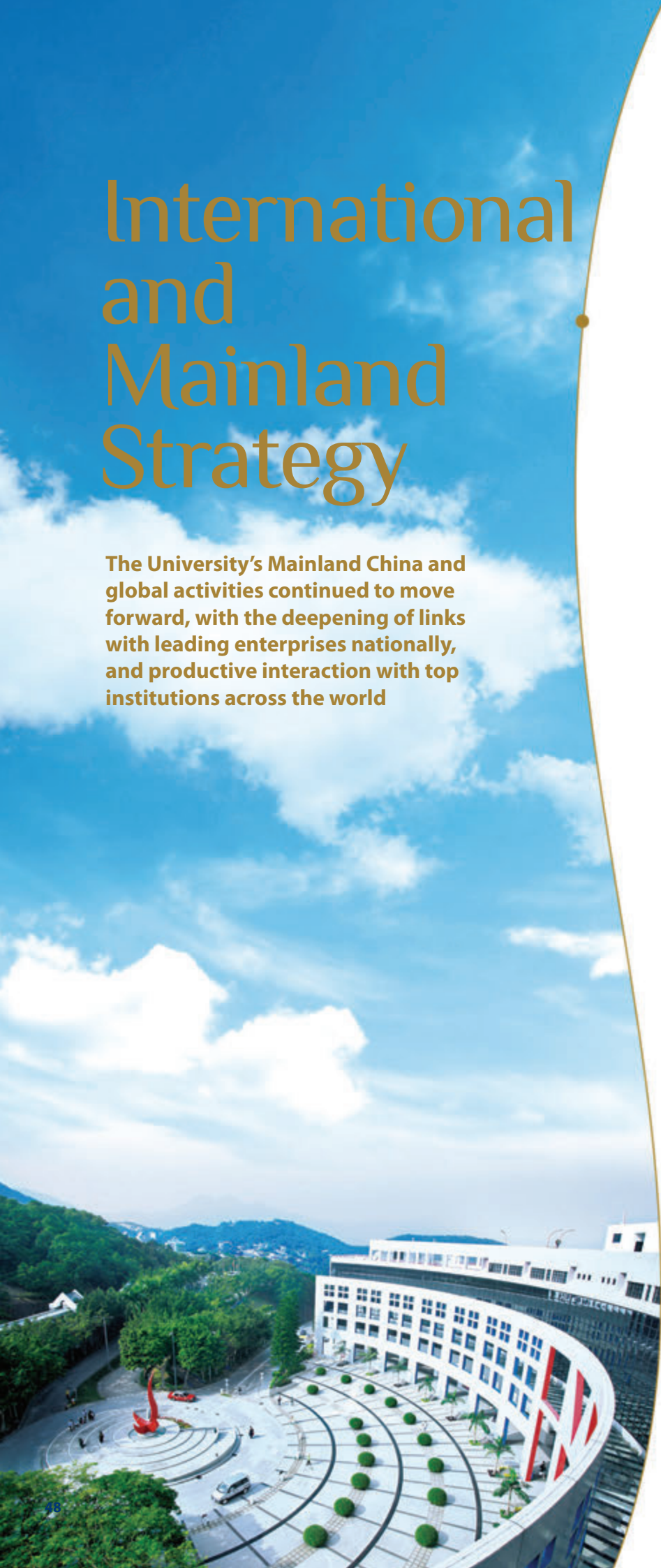
MAINLAND PRESENCE

Key Platforms

Over the year, HKUST continued to strengthen its strategic presence and build momentum in the Pearl River Delta through key regional platforms. The University's Fok Ying Tung Graduate School in Nansha deepened its engagement in research and education. With Nansha designated a National Special Zone for development, the School is also expected to play a significant role in boosting Hong Kong-Mainland collaborations. Meanwhile, HKUST Shenzhen Industry, Education and Research Building and the HKUST LED-FPD Technology R&D Center at Foshan provided research facilities and various training activities for knowledge building.

In Western China, the University and Xi'an Jiaotong University are in the process of establishing the Joint School of Sustainable Development to contribute to the economic and social development of central and western regions of Mainland China and beyond.

In addition, in the Yangtze River Delta, the Zhejiang Advanced Manufacturing Institute of HKUST in Hangzhou is helping to upgrade industrial capabilities through promoting manufacturing research, enhancing collaboration with institutions, and facilitating knowledge transfer. The Hangzhou Internet of Things Intelligent Technology Center at the Institute is also assisting the extension of skills in this important field.





Agreements and Visits

HKUST signed 16 Memorandums of Understanding with Mainland China institutions in 2012-13, including AVIC Technology Foundation, China Academy of Art, Shanghai University of Finance and Economics, and Nankai University. To date, the University has 13 undergraduate exchange partners from Mainland China, opening up more opportunities for students of both partners to gain the valuable experience of living in a different location. The University also collaborated with 25 higher education institutions in Mainland China on 37 projects, covering academic workshops, joint research projects and cultural experiences. Nearly 200 faculty and students participated in the first round of the scheme.

The University received 109 Mainland China delegations and 1,345 delegates in total in 2012-13, including government officials, entrepreneurs and university representatives. Among those visiting the campus were senior officials Prof Lu Yongxiang, Vice-Chairman of the Standing Committee of the National People's Congress, Madam Chen Zhili, Vice-Chairman of the Standing Committee of the National People's Congress and President of the All-China Women's Federation, and Madam Zhang Meiying, Vice-Chairman of the Chinese People's Political Consultative Conference.

Business Links

HKUST has also been widening links with leading Mainland China sectors and enterprises. President Prof Tony F Chan was invited to attend the significant Yabuli China Entrepreneurs Forum in February 2013 and the Boao Forum for Asia in April 2013. In addition, Mr Zhang Ruimin, Founder, Board Chairman and Chief Executive Officer of Haier Group, a world-leading major appliance brand, shared his views on management innovation with an audience of 500 at HKUST in his first public speech in Hong Kong.

University management and faculty visited several enterprises, including AVIC, Digital China, Tencent, Vanke, and others, to learn more about their operations and collaboration opportunities. HKUST also signed a Memorandum of Understanding with China Merchants Group to develop cooperative activities related to student internships, executive training and scholarships.

During 2012-13, the School of Business and Management co-organized a five-city China Business Forum Series with China Business News, a leading business media outlet. Each forum focused on a specific topic, including leadership, logistics, finance and IT, and was led by a School faculty member. The series attracted more than 750 managers in total.

EXTENDING INTERNATIONALIZATION

The University's drive for internationalization strengthens HKUST's global presence through strategic partnerships, academic agreements, research collaborations, international students and faculty, overseas alumni connections, and media relations. HKUST was placed first in 2013 in the QS Top 50 Under 50 and was ranked No.1 in the QS Asian University Rankings for the third consecutive year.

World Presence

During the year, the University continued to step up expansion of its global network. HKUST was the first university in Hong Kong to be invited to participate in IdeasLab at the World Economic Forum in Tianjin in September 2012, presenting on the topic of Sustainability without Borders. Other institutions taking part included MIT, University of Oxford, Tsinghua University and National University of Singapore.

President Chan joined the World Economic Forum Annual Meeting 2013 in Davos, Switzerland. At the event, he engaged in discussions with global political, business and education leaders. He also participated in the Global University Leaders Forum (GULF) with over 20 presidents from other top universities. Topics included the international outlook for science and technology and trends in higher education.

Creating Ties

To cement international partnerships, President Chan led two delegations to Germany, Sweden and Denmark, Israel and Turkey, visiting presidents and senior management of 25 universities in addition to eight science and technology institutions and organizations. The delegations successfully created opportunities for research and academic collaborations, faculty and student exchange on research and entrepreneurial experience, and 10 agreements with universities in Europe and three agreements in Israel and Turkey were signed.

During the trips, President Chan hosted more than 20 seminars and student sessions to share HKUST's experience of building a world-class university and inspire faculty members and postgraduate students to join the University. He gave talks on science and technology to corporate and government leaders, and strengthened connections with the University's graduates through alumni gatherings. International media coverage brought further recognition to HKUST and its achievements.



Forging Partnerships

Overseas delegations paved the way for the development of strategic partnerships between HKUST and selected elite universities to foster faculty research collaborations. The first such collaborations have been established with the University of Southern California and California Institute of Technology in the US, École Normale Supérieure in France, École Polytechnique Fédérale de Lausanne in Switzerland, and Technical University of Munich in Germany.

Another exciting development is a joint initiative with the University of Oxford. The Oxford-HKUST Leadership and Public Policy Series will provide top-quality executive education to senior members of the public sector in Hong Kong, Mainland China, and eventually Asia. President Chan and Oxford's Vice-Chancellor Prof Andrew Hamilton signed a Memorandum of Understanding in January 2013 at Davos to develop the series. The University is also collaborating with Smith College to provide executive education tailor-made for senior women executives in Asia.

Growing Network

HKUST continued to enhance engagement with its global network of 250 universities and institutions during the year. Students benefited from the University's internationalization efforts through internships and research experience at first-class institutions such as MIT and CERN, among others.

The University entered into 89 institutional, university and school-level agreements with leading institutions globally in 2012-13. In addition, 88 international delegations visited HKUST, including senior representatives from Harvard University, University of Southern California and University of Minnesota in the US; Imperial College London in the UK; and TU Berlin in Germany.



Organization and Resources

The opening of the Lee Shau Kee Campus, the addition of campus facilities and student accommodation, together with initiatives to advance staff development and sustainable operations, enhanced the University's inspiring environment



The significant expansion in facilities to accommodate the needs of Hong Kong's higher education reforms and the introduction of the four-year undergraduate curriculum approached completion in 2012-13. Environmentally friendly initiatives continued to flourish. The recognition of organizational loyalty and programs for staff development further encouraged the sense of community on campus.

BUILDING ADVANCES

One early development saw the extension of library and catering facilities, which in turn resulted in the creation of the highly popular Chevalier Learning Commons.

In recent months, the completion of the Lee Shau Kee Business Building allowed the School of Business and Management to occupy a new and prestigious location. This 12,000 sq m facility has technology-equipped classrooms, computer labs and other leading teaching and learning facilities,

and enjoys unparalleled sea and mountain views. The move also provided welcome expansion opportunities for the other Schools that remain in the main academic building.

Next to the Lee Shau Kee Business Building is the newly completed HKUST Jockey Club Institute for Advanced Study Lo Ka Chung Building, which encompasses 4,500 sq m of teaching and working space for members of the Institute. The soon-to-be-built Conference Tower will provide world-class conference and lodging facilities.

The current phase of academic building development will be completed when the Cheng Yu Tung building is brought on stream next year. The 10,000 sq m facility will house multidisciplinary research laboratories, advanced teaching facilities and a 400-seat multi-purpose lecture theater and performance venue.

Along with the academic building program, the University maintained its efforts to maximize student residential accommodation. In January 2013, 700 students moved into the new Halls VIII and IX. A hostel development with Hong Kong Baptist University in Tseung Kwan O is also underway. When completed, the hall will provide 370 residential places for HKUST undergraduates.

STAFF RECOGNITION AND DEVELOPMENT

During the year, Ms Diana Chan took up the post of University Librarian, Mr Michael Cheng became Director of Purchasing and Mrs Pandora Yuen was appointed Director of Student Affairs. Showing the loyalty and cohesiveness of the University community, the Long Service Award was presented to 275 staff members in recognition and appreciation of 20 years at HKUST.

To assist staff development, a Leadership and Management Development Program for senior non-academic administrators was organized, leveraging the extensive experience of the School of Business and Management in offering top executive education. A Management Development Program for non-academic middle managers was also held in 2013. To promote equal opportunities and work-life balance on campus, the University arranged occasional seminars on relevant anti-discrimination Ordinances and wellness programs for all staff members. New staff orientation programs continued to be arranged to facilitate settling in.

SUSTAINABLE LIVING

HKUST fully embraces sustainability in operations. New halls meet HK-BEAM standards and incorporate many green measures. Existing buildings are being retrofitted to minimize energy usage.

On the transport front, staff and student buses were organized to shuttle members from designated locations to campus, and hybrid models were included in the University's official car fleet. A ride-sharing program was also launched to provide a forum for car pools.

To minimize the use of paper, e-publishing, e-procurement, e-pay slips, and e-student services have been introduced. The print shop also utilizes soybean-based inks and other eco-friendly chemicals and promotes the use of recycled paper. Meanwhile, efforts to



promote the recycling of plastics, batteries, CDs, and toner cartridges continued to prove effective.

Various green activities were held to reinforce sustainability concepts during the year. Student hostel move-out recycling campaigns and University community-based garage sales have become regular occurrences. In addition, students joined numerous activities, including Earth Hour and coastline cleaning. The University's annual Environment Week focused on the challenges of energy and waste. The President and other senior management took part in "green" dining and encouraged the campus community to adopt an environmentally friendly lifestyle.

Recognition from community-based sustainability activities included the Wastewise Award, IAQWise Award, Environmental Excellence Award, Food Waste Recycling Award, and the Low Carbon Lifestyle Campaign Award. Members of the public were also able to learn about organic farming and medicinal plants by visiting HKUST's EcoPark.



Governance

The University Ordinance and Statutes provide for a number of bodies to govern or advise the University. Three major bodies in the University's governance structure are the Court, Council and Senate

The Court

Over 35 members from the Court and 10 others from the Council were present at the annual meeting of the Court, and the interest shown by members of the University's highest advisory body was encouraging. The year under review saw 12 new members commissioned, while a number of those retiring became Honorary Court Members.

The Council

2012-13 was essentially a year of transition and adjustment for all local universities as the city-wide higher education reform ushered in a four-year degree curriculum, running in parallel with the last cohort of students undertaking the three-year program. As the highest governing body of the University, the Council was pleased to see that, with all the preparations made under its overview, HKUST proved capable of rising above this formidable challenge. Seven non-executive members joined the Council during the year. All have taken up roles on committees accountable to the Council. Several retiring members have joined the Court to continue serving the University in a different capacity.



The Senate

The Senate is the University's principal academic body, responsible for all related matters, including directing and regulating teaching and research at the University. During the year, a number of academic programs were introduced while modifications were made to specific programs to enhance program administration and to keep abreast of the needs of students. One of the projects of strategic importance endorsed by

the Senate was the formation of a Joint School of Sustainable Development, in partnership with Xi'an Jiaotong University. The Senate has further endorsed initial proposals for undergraduate and postgraduate degree programs which, subject to the approval of the Ministry of Education, will provide the basis for academic programs offered by the Joint School.



Awards and Recognitions

Faculty

Faculty members received prestigious national science and technology awards.



- Prof Qian Zhang, Department of Computer Science and Engineering, received a State Natural Science Award, Second Class, from the State Council of the PRC, for “Models for Joint Wireless Multimedia Communication and Performance Optimization”.

Prof Zhang also won the

Electronics Information Science and Technology Award, First Class, Chinese Institute of Electronics; and the Ho Leung Ho Lee Foundation Science and Technology Innovation Award.

- Prof Tianshou Zhao, Department of Mechanical Engineering, received a State Natural Science Award, Second Class, from the State Council of the PRC, for “Investigations of Multi-scale and Multi-physics Field Coupled Fluid Flow and Heat/Mass Transfer in Complex Systems”.



- Prof Xiangtong Qi, Department of Industrial Engineering and Logistics Management, received a Higher Education Outstanding Scientific Research Output Award (Humanities and Social Sciences): Management, Second Class, for his co-authored paper “Price Competition, Cost and Demand Disruptions and Coordination of a Supply Chain with One Manufacturer and Two Competing Retailers”.



- Prof Furong Gao, Department of Chemical and Biomolecular Engineering, received a Higher Education Outstanding Scientific Research Output Award (Science and Technology): Natural Sciences, First Class, from the Ministry of Education for “Theory of High-Performance Batch Process Control Systems”.
- Prof Christopher Leung, Department of Civil and Environmental Engineering, received a Higher Education Outstanding Scientific Research Output Award (Science and Technology): Natural Sciences, First Class, from the Ministry of Education for “Mechanism for Crack Control in Quasi-brittle Cementitious Materials and the Developing of Ultra High Toughness Cementitious Composites”.
- Prof Matthew Yuen, Department of Mechanical Engineering, received a Higher Education Outstanding Scientific Research Output Award (Science and Technology): Natural Sciences, Second Class, from the Ministry of Education, for “3D Garment Design”.

- Prof Bozhong Li, Division of Humanities, was awarded the Higher Education Outstanding Scientific Research Output Award (Humanities and Social Sciences): Economics, Third Class, from the Ministry of Education for his book *China's Early Modern Economy: A Study of the GDP of the Huating-Lou Area in the 1820s*. He also received the 2012 Guo Moruo Chinese History Prize, Third Class, from the Chinese Academy of Social Sciences.



Faculty



- Prof Nancy Ip, Dean of Science, and her team and Prof Kei May Lau, Department of Electronic and Computer Engineering, and her team were awarded RGC Theme-based Research Scheme grants totaling more than \$90 million for studies on “Stem Cell Strategy for Nervous System Disorders” and “Cost-effective and Eco-friendly LED System-on-a-chip” respectively. Prof Ip and her researchers also received a National Basic Research Program (973 Program) grant for “Elucidating the Molecular Mechanisms Underlying the Pathogenesis of Alzheimer’s Disease”. Prof Benzhong Tang, Department of Chemistry, and his research team were awarded a grant under the 973 Program for “Basic Scientific Problems of Aggregation-induced Emission”. The two projects received over RMB30 million each.



- Prof Vincent Lau, Department of Electronic and Computer Engineering, was awarded a Croucher Senior Research Fellowship.



- Prof Yung Hou Wong, Division of Life Science, received the Medal of Honour from the Hong Kong Special Administrative Region Government.



- Profs Che Ting Chan, Ping Sheng and Zhiyu Yang, Department of Physics, shared the Brillouin Medal awarded by the International Phononics Society.



- Prof Gary Chan, Department of Computer Science and Engineering, won a Merit Award in the research and development category of the Asia Pacific ICT Alliance (APICTA) Awards 2012.



- Prof Melody Chao, Department of Management, received the 2013 Early Career Award from the International Academy of Intercultural Research.

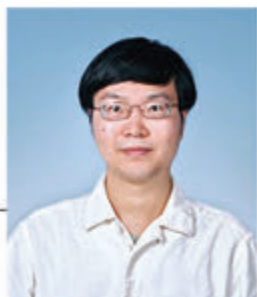


- Prof Guanghao Chen, Department of Civil and Environmental Engineering, received the Global Honor Award in the Project Innovation Awards (PIA), International Water Association (IWA), Honor Award of PIA in the East Asia Region, IWA, and Runner-Up Award in the Sustainability Specialist Group Prize and the Finalist Award in the project category in the second edition of the Smart City Expo World Congress.

Awards and Recognitions

Faculty

- Prof Xuhua He, Department of Mathematics, was awarded the 2013 Morningside Gold Medal of Mathematics.



- Prof Jiewen Hong, Department of Marketing, was named a Marketing Science Young Scholar by the Marketing Science Institute.

- Prof Hoi Sing Kwok, Department of Electronic and Computer Engineering, received the 2013 Society for Information Display (SID) Slottow-Owaki Prize.



- Prof Kei May Lau, Department of Electronic and Computer Engineering, won the Guangdong Province Science and Technology Award (Second Prize).



- Prof Joseph Lee, Department of Civil and Environmental Engineering, won the Karl Emil Hilgard Hydraulic Prize awarded by the American Society of Civil Engineers.

- Prof Huiwen Lian, Department of Management, received an Early Career Award 2012/13 from the Research Grants Council.



- Prof Wouter Stam, Department of Management, won the 2012 Citation of Excellence Award from Emerald Management Reviews.



- Prof Raymond Wan Keung Wong, Division of Life Science, was recognized by a Europe Business Assembly Prestigious International Award.

- Prof Weichuan Yu, Department of Electronic and Computer Engineering, received the Biomedical Wellness Pioneer Award at the 2013 SPIE Defense, Security, and Sensing meeting.



Fellows, board memberships



- Three engineering professors were elected Fellows of the Institute of Electrical and Electronics Engineers, bringing the total at HKUST to 30. They were Prof Amine Bermak, Prof Mansun Chan, and Prof Daniel Palomar, Department of Electronic and Computer Engineering.

- Prof Christopher Chao, Department of Mechanical Engineering, was elected to the Board of Directors of the International Society of Indoor Air Quality and Climate. Prof Chao and students S Yin, G N Sze-To, Department of Mechanical Engineering, also won the Best Paper Award from the *Building and Environment* journal.



Faculty



- Six faculty members from the Department of Electronic and Computer Engineering were made Fellows of the Hong Kong Institution of Engineers. They are Prof Khaled Ben Letaief, Dean of Engineering, Prof Roger Cheng, Prof Ross Murch, Prof Oscar Au, Prof Vincent Lau and Prof Danny Tsang.
- Prof Ross Murch, Department of Electronic and Computer Engineering, was made a Fellow of the Institution of Engineering and Technology.
- Prof Oscar Au, Department of Electronic and Computer Engineering, was elected Chair of the Asia-Pacific Signal and Information Processing Association (APSIPA) Image, Video and Multimedia Technical Committee.



- Prof Shiu Yuen Cheng, Department of Mathematics, was elected a Fellow of the American Mathematical Society.

- Prof Hong K Lo, Department of Civil and Environmental Engineering, was elected Convener of the International Scientific Committee of the triennial Conference on Advanced Systems for Public Transport.



- Prof Jianan Qu, Department of Electronic and Computer Engineering, became a Fellow of the Optical Society of America.



- Prof Gary Shiu, Department of Physics, was elected a Fellow of the Institute for Physics, UK, and awarded the Johannes Diderik van der Waals Chair by the University of Amsterdam.

- Prof Qiang Yang, Department of Computer Science and Engineering, was made a Fellow of the International Association for Pattern Recognition, American Association for the Advancement of Science, and Association for the Advancement of Artificial Intelligence.



Papers

- Prof Jack Cheng and PhD student Ms Moumita Das, Department of Civil and Environmental Engineering, received the Best Applied Paper Award at the 14th International Conference on Computing in Civil and Building Engineering (ICCCBE-XIV).



- Prof Francesco Ciucci, Department of Mechanical Engineering, received the Journal of Laboratory Automation Ten Award (JALA Ten 2013).

- Prof Ricky Lee, Department of Mechanical Engineering, won the Outstanding Paper Award at the 12th International Conference on Electronics Packaging.



Awards and Recognitions

Faculty

- Prof JT Li, Department of Management, received the IM Division Fundação Dom Cabral Best Paper in Strategy/IB Theory from the Academy of Management.



- Prof Irene M C Lo and former student Prof Kelvin Ng, Department of Civil and Environmental Engineering, received the 2012 Best Practice-Oriented Paper Award from the American Society of Civil Engineers.

- Prof Huihe Qiu, Department of Mechanical Engineering, received the Philips Outstanding Paper Award, at the 2012 International Conference on Electronic Packaging Technology and High Density Package (CEPT-HDP 2012).



- Prof C Y Tsui and PhD student Mr Zhiliang Qian, Department of Electronic and Computer Engineering, won the Best Paper Award at the 2012 IEEE/ACM International Conference on Hardware/Software Codesign and System Synthesis (CODES/ISSS).

HKUST Awards



- Prof Darwin Choi, Department of Finance, Prof Jiewen Hong and Prof Jaideep Sengupta, Department of Marketing, Mr Charles Lam, and Prof Tai-Yuan Chen, Department of Accounting, and Prof Christopher Doran, Department of Management, were awarded the Franklin Prize for Excellence in Teaching. The Department of Management won the departmental prize.



- Prof Chung Yee Lee, Department of Industrial Engineering and Logistics Management, received the School of Engineering's Distinguished Research Excellence Award. Prof Irene M C Lo, Department of Civil and Environmental Engineering, and Prof Dimitris Papadias, Department of Computer Science and Engineering, won the School's Research Excellence Awards.

- Prof Wenkai He, Division of Social Science, received the School of Humanities and Social Science Award for Teaching Excellence.



- Dr Oliver Lo, Division of Humanities, won the HKUST Common Core Course Excellence Award 2012 for his course "Music, Drama, and Theater".



Students and Researchers

The HKUST Robotics Team comprising 70 students from different departments won a host of awards.



Remotely Operated Vehicle (ROV) Team

- Technical Report Champion and Poster Display Champion, 12th Annual MATE International ROV Competition
- Champion Award in the Explorer Class, IET/MATE Hong Kong Underwater Robot Challenge 2013
- First Runner-up and HK Technopreneur Award, HSBC YDC Young Entrepreneur Challenge, Hong Kong Region
- Second Runner-up, JEC Outstanding Engineering Project Award
- Lenovo Innovation Award and Finalist, 1st Asia Innovation Forum Young Entrepreneur Award
- Gold Award, 8th Challenge Cup for Entrepreneur Competition

Robocon Teams

- Champion, First Runner-up, Best Engineering Award, Best Artistic Design Award, Robocon 2013 Hong Kong Contest
- Best Idea Award, 2012 ABU Asia-Pacific Robot Contest

Smart Car Team

- Third Class Award, 7th Freescale Smart Car Competition, South China Region

Awards and Recognitions

Students and Researchers

- Graduate Mr Herman Ho Man Chan, Marketing and Management, Year 2 student Mr Nivey Ka Hing Tsang, Finance and Marketing, and Year 2 student Ms Samantha Wing Man Kong, Chemical and Environmental Engineering, created the Eldpathy social enterprise, receiving the Championship and Best Presenter Awards at the Hong Kong Social Enterprise Challenge 2012.



- School of Business and Management first-year undergraduates Mr Timothy Kan Chiu Chau, Mr Jun Kyu Lee, Ms Charmaine Cheuk Wing Ng and Mr Ricardo Tomas Wong won the Joint University Outstanding Marketing Award 2012-2013, beating more than 450 other competitors from Hong Kong tertiary institutions. The team also won the Best Presentation Award.

- Mr Hwon Kim, Year 1, Mr Nelson Lik Ching Leung, Year 3 and Ms Ilona Christy Unarta, Year 2, all Chemistry, won the Champion award at the 24th Hong Kong Chemistry Olympiad for Tertiary Institutions.



- A team of more than 20 science and engineering undergraduates won a gold medal at the International Genetically Engineered Machine Competition (iGEM) with their "B.hercules" project, subtitled "The Terminator of Colon Cancer".



- Mr Philip Ming Fung Tai, Risk Management and Business Intelligence, Mr Junhong Cao and Mr Xiongqi Zhang, Computer Science and Engineering, were placed first in the 2012 ACM-ICPC Asia Hanyang Regional Contest, which tests students' problem solving and computing skills.

- A team of 10 Year 2 mechanical engineering students won the Championship in the 2nd Greater China Region Design Competition, organized by the Institution of Mechanical Engineers.
- Mr Ken Ka Cheuk Yung, Dual Degree Program in Technology and Management, Mr Peter Wai Lun Siu, Risk Management and Business Intelligence, and Mr Andy Chun Kit Wong, Ms Victoria Hiu Lam Tse and Mr Carson Chun Fung Wu, School of Business and Management, won the Championship in The Joint University Eco-Business Innovation Award 2012-2013 with their "GreenLung" recommendation for an eco-vacation plan.

- Mr Brian Kwok, Ms Cherry Wong, Mr Jasper Li and Mr Owen Chan, Global Business Program, won the 6th Association of Chartered Certified Accountants (ACCA) Hong Kong Business Competition (Degree Category) and awards for Best Proposal, Most Creative Team and My Favorite Team.
- Mr Anthony Hon Pan Lo and Ms Shavian Wai Shan Ng, Electronic and Computer Engineering, won the Gold Award at the Hong Kong Electronic Industries Association Innovation & Technology Project Competition 2012.
- First-year students Mr Philip Wai Ching Chan, Mr Marco Chi Ho Chu, Mr Kenny Cheuk Him Ng, and Mr Rex Sheung Tsun Sin, Global Business Program, won the University Student Category of the SCMP/IFPHK Financial Planner Awards 2012.

Students and Researchers

- Undergraduates Mr Marcus Kam Hau Chu, Ms Becky Yiyun Lu and Mr Byron Chao Fan, School of Business and Management, and Ms Daisy Sihui Li, Dual Degree Program in Technology and Management, received the first prize in the Hong Kong section of the CFA Institute Research Challenge 2012-2013.



- Year 3 student Ms Qiaojin Lin, Life Science, was awarded a Gates Cambridge Scholarship 2013 to study neuroscience at the University of Cambridge.



- Mr Kenny Tsun Yat Lam, Dual Degree Program in Technology and Management, and his team won the Championship in the 2012 Hong Kong A Cappella Contest and won a Silver Award in the Contemporary World Cup Competition, Taiwan International Contemporary A Cappella Festival 2012.
- Ms Helen Hoi Ling Tang, Information Systems, Business Statistics and Operations Management, became one of six international winners in the L'Oreal Reveal online business game contest, competing against nearly 20,000 competitors from 122 countries.
- Undergraduate Mr Qifeng Chen, Computer Science and Engineering, ranked 12th in the Google Code Jam World final 2012, the best achievement by a Hong Kong student since the competition started in 2003.



- Mr Godfrey Wai Lun Mok, Environmental Management and Technology, participated in the G20 Youth Forum in Russia, with more than 1,500 young leaders, students and academics, and representatives of the business world. Mr Chandra Jinata, Bioengineering, was one of five youth representatives from Indonesia chosen to attend the summit.

- Mr Roger Jiaxiang Zhang, Dual Degree Program in Technology and Management, won Best Debater in the Hong Kong RTHK Mandarin Debate Competition 2012.



- A HKUST MBA team, comprising Ms Lex J Aryanimitskul, Mr Christian Maentele and Mr Karan Singh won the 4th NUS Asian MBA Stock Pitch Competition held in Singapore.



- A team of HKUST MBA students comprising Mr Clement Dieudonne, Mr Nicky Loh and Mr Simon Zhu gained the Championship at the INNOVATEChina 2013 Entrepreneurship Challenge; took first prize for Best Trade Show and for the Lightning Round competition at the University of Oregon New Venture Competition; and won the grand prize and elevator pitch prize at the HKUST 2013 One Million Dollar Entrepreneurship Competition. The students' business idea sought to commercialize nanostructured solar cells developed by researchers at HKUST's School of Engineering to boost the use of solar energy.

Awards and Recognitions

Students and Researchers

- MPhil student Ms Jia Wang, Division of Social Science, and undergraduate Mr Degang Wu, Physics, received Hong Kong PhD Fellowships.



- Members of Computer Science and Engineering won two best paper awards at IEEE Globecom 2012: PhD students Ms Lu Wang and Ms Jiang Xiao, Dr Kaishun Wu, and Prof Mounir Hamdi for "FCM: Frequency Domain Cooperative Sensing and Multi-channel Contention for CRAHNS"; and Ms Jin Zhang, Mr Dawei Chen, Prof Qian Zhang, and an industry collaborator for "deStress: Mobile and Remote Stress Monitoring, Alleviation, and Management Platform".

- Two teams of PhD students comprising Mr Yin Zhu, Mr Erheng Zhong and Mr Bin Wu, and Mr Ben Tan, Mr Erheng Zhong and Mr Kaixiang Mo, all Computer Science and Engineering, won separate championship awards at the Nokia Mobile Data Challenge 2012. Mr Yin Zhu also received a Google Fellowship as part of the Google PhD Fellowship Program.



- Bioengineering PhD student Ms Danhui Cheng received a Fulbright-RGC Hong Kong Research Scholar Award.



- PhD students Mr Wei Chen and Ms Jianying Zheng, Electronic and Computer Engineering, received the Best Student Paper Award at the 2012 IEEE International Conference on Information and Automation.

- Computer Science and Engineering PhD student Mr Shaoming Huang took first place in the Student Research Competition at the ACM SIGPLAN Programming Language Design and Implementation Conference.



- PhD student Mr Tongde Huang, Electronic and Computer Engineering, received the Best Student Paper Award at the IEEE International Conference on Solid-State and Integrated Circuit Technology.

- PhD student Mr Chun Hang Leung, Civil and Environmental Engineering, received the Best Paper Award in the Papers Competition 2012, organized by the Graduates & Students Division of the Institution of Civil Engineers Hong Kong Association.



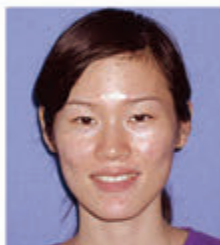
- Physics PhD student Mr Xiaoguang Ma won the Best Student Presentation Award for "Colloidal Diffusion Over a Periodic Energy Landscape" at the 16th Annual Conference of the Physical Society of Hong Kong.

Students and Researchers

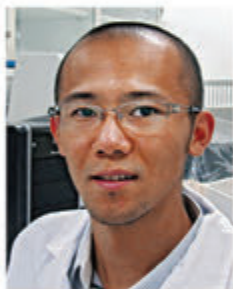


- PhD student Mr Hyunmin Seo, Computer Science and Engineering, won the ACM SIGSOFT Distinguished Paper Award at the 27th IEEE/ACM International Conference on Automated Software Engineering.

- PhD student Mr Yu Yu, Bioengineering, received the Champion Award in the Young Engineers' Paper Competition at the Biomedical Engineering International Conference 2012, organized by the Hong Kong Institution of Engineers.
- Dr Nan Cao, Computer Science and Engineering, Dr Xiaolei Wang, Civil and Environmental Engineering, and Dr Qixing Wu, Mechanical Engineering, received School of Engineering PhD Research Excellence Awards 2012/13.



- Dr Zhangfan Chen, PhD in Life Science, received the Best Paper Award at the 10th International Larval Biology Meeting at UC Berkeley.



- Mr Siyuan Wang, PhD in Chemistry, received the Outstanding Student Paper Award from the American Geophysical Union.



- Computer Science and Engineering PhD candidate Mr Yongxin Tong received a Microsoft Research Asia Fellowship 2012.



- Post-doctoral fellow Dr Dongsun Kim, PhD student Mr Jaechang Nam, MPhil student Mr Jaewoo Song and Prof Sunghun Kim, Computer Science and Engineering, received the SIGSOFT Distinguished Paper Award at the International Conference on Software Engineering 2013.
- Dr Yongjie Li, Division of Environment, received a Young Scientist Poster Award at the 12th International Global Atmospheric Chemistry (IGAC) Open Science Conference – "Atmospheric Chemistry in the Anthropocene".
- Dr Kaishun Wu, PhD in Computer Science and Engineering, and Dr Can Yang, PhD in Electrical and Electronic Engineering, won Hong Kong Young Scientist Awards from the Hong Kong Institution of Science.

- Physics PhD student Ms Lin Wang received a Young Scientist Award from the European Materials Research Society.

Honorary Doctorates and Honorary Fellows



Honorary Doctorates

- Sir Michael Atiyah, Honorary Professor, University of Edinburgh
- Prof Yuk-Shee Chan, SBS, JP, President of Lingnan University
- Prof Justin Yifu Lin, Honorary Dean of the National School of Development, Peking University
- Prof H Vincent Poor, Dean of the School of Engineering and Applied Science, Princeton University
- Dr the Hon Allan Zeman, GBM, GBS, JP, Chairman of Ocean Park and Lan Kwai Fong Holdings Ltd



Honorary Fellows

- Dr Robin Y H Chan, GBS, JP, Chairman of Asia Financial Holdings Ltd and Asia Insurance Co Ltd
- Mr Cheah Cheng-Hye, Chairman and Co-Chief Investment Officer, Value Partners Group
- Prof Takako Nishizaki, BBS, world-renowned concert performer and violin teacher
- Dr Zhang Ya-Qin, Corporate Vice-President of Microsoft Corporation and Chairman of Microsoft's Asia-Pacific R&D Group

HKUST Medals



- Prof Stephen Nason, Department of Management, was awarded the Michael G Gale Medal for Distinguished Teaching.

- Mr Tim Ka Long Tsang, Department of Finance and President of the HKUST Students' Union 2011-12, was awarded the Stephen Cheong Kam-chuen Medal for Distinguished Service to the Student Body.

- Mr Hong Yee Kow, Department of Civil and Environmental Engineering, received the Roy To Community Service Award.



- Ms Samantha Wing Man Kong, School of Engineering, Ms Jacqueline Yee Yan Fong, School of Business and Management, and Ms Dora Dongshunyi Li, School of Science, received HKUST Alumni Endowment Fund Service Awards.



- A team comprising Mr San Hung Choi, Ms Yee Man Choi, Mr Kwong Mun Kwok, and Ms Chui Hung Yau, Department of Chemical and Biomolecular Engineering, won the HKUST President's Cup.

- Mr Jacky Wai Kit Fung, Interdisciplinary Programs Office, received the champion accolade in the Mr Armin and Mrs Lillian Kitchell Undergraduate Research Awards.



- Archer Ms Yonnie Ying Kiu Fu, Department of Physics, and rower Mr Cheuk Yiu Lai, Department of Accounting, won the Paul and May Chu Sportswoman and Sportsman of the Year Awards respectively.

Calendar of Events 2012-13



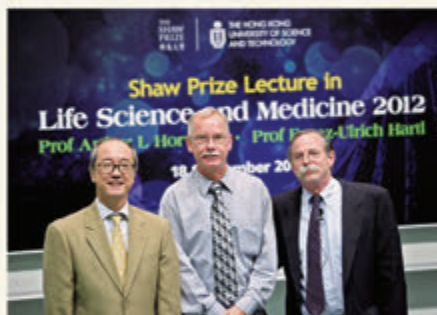
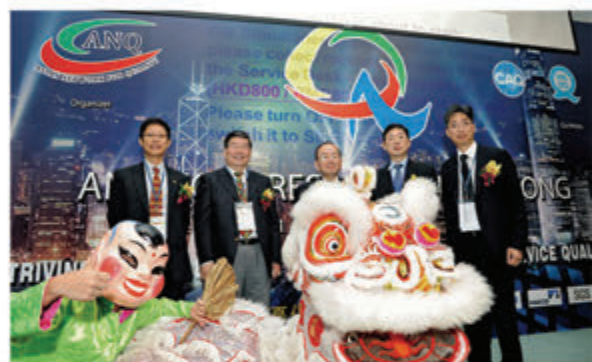
JUL

- HKUST held its first Women in Science and Engineering (WISE) Summer Camp. The residential camp for HKDSE Secondary Six students included workshops and experiments, lab tours, and out-of-class activities. Themes covered neuroscience, environment, multimedia, and skin care.
- The Hong Kong Physics Olympiad team, trained by HKUST Department of Physics professors, won two gold, two silver, and one bronze medal at the 43rd International Physics Olympiad in Estonia. The Hong Kong team also came home with one silver, two bronze medals, and three honorable mentions from the 14th Asian Physics Olympiad, in Indonesia in May 2013.
- Prof George Hadjipanayis, University of Delaware, Prof Steven DenBaars and Prof Shuji Nakamura, both University of California, Santa Barbara and IAS Visiting Professors, gave distinguished lectures at the HKUST Institute for Advanced Study.
- Division of Humanities academics held two public lectures at the Hong Kong Museum of History. The lecture series continued throughout the year under review.

AUG

- The University and Xi'an Jiaotong University signed an agreement to establish the XJTU-HKUST Joint School of Sustainable Development to nurture talent and research in sustainable development.
- Undergraduates from HKUST and top US universities completed the Research in Industrial Projects for Students program, a nine-week summer course on how to apply mathematical theories and computations skills to real-life challenges.
- HKUST co-hosted the Asian Network for Quality Congress 2012, drawing 400 leading experts. Prof Fuguee Tsung, Department of Industrial Engineering and Logistics Management, served as co-chair of the Congress.

- HKUST Business School announced the launch of a multi-campus, multi-country pre-experience Master of Science in International Management, in collaboration with CEMS, a global alliance in management education.
- A cooperation agreement was signed between HKUST spin-off companies Enzymomics (HK) Limited and Intelgen (HK) Limited and Guangzhou General Pharmaceutical Research Institute, part of Guangzhou Pharmaceutical Holdings Limited, for the development of novel targeted anticancer drugs and other new drugs from natural sources.



SEP

- HKUST became the first university in Greater China to join Coursera, a leading provider of Massive Open Online Courses, also known as MOOCs. The University subsequently launched three successful courses via the platform to students around the world.
- The Shaw Prize Lecture in Life Science & Medicine was held at HKUST. Awardees Prof Arthur L Horwich and Prof Franz-Ulrich Hartl spoke on protein folding and the impact of such research on understanding of neurodegenerative diseases.

- HKUST was the sole local higher education institution invited to share sustainability insights with global thought leaders at IdeasLab, a presentation and discussion session of the "Summer Davos" World Economic Forum Annual Meeting, convened in Tianjin. President Tony F Chan and four faculty members represented the University.
- Dr Ivan Sherstov, Director of Research at Skolkovo Institute of Science and Technology in Russia, discussed research opportunities offered by the Skolkovo Tech program with members of HKUST.
- Mr Zhang Ruimin, Founder and Chief Executive Officer of Haier Group, gave a distinguished lecture on "Successful Enterprises Move with the Times" at HKUST, his first public lecture in Hong Kong.





OCT

- The University celebrated the official launch of the World Bachelor in Business, run together with the University of Southern California in the US and Bocconi University in Italy. This is the first undergraduate program that enables students to live and study on three continents and earn degrees from three universities.
- President Tony F Chan led a HKUST delegation to Germany, Sweden and Denmark to establish wider global connections for students and faculty, and further opportunities to enhance the University's international education and research endeavors.
- Kellogg-HKUST Executive MBA program was ranked No.1 in the *Financial Times*' global survey of EMBA programs for the fourth straight year.
- The HKUST Institute for Advanced Study organized an IAS Program on Metamaterials, Plasmonics and Transformation Optics, bringing leading researchers from around the world to HKUST.
- The University co-hosted the launch of the first Roche Young Scientist Award, an initiative to foster curiosity, creativity and passion for science among young people in Hong Kong.
- HKUST Information Day saw 35,000 people visit the campus to learn more about the University's education, research, facilities and student life.
- The School of Engineering organized the "What's Missing in Engineering Leadership?" international seminar at the InnoCentre to keep alumni and members of the professional community up to date on the latest global engineering trends.
- The inaugural season of HKUST Music Alive! concert series was launched.
- The Library organized a solo exhibition by Hong Kong ceramic artist Ms Chiu So-lan.



NOV

- HKUST held its 20th Congregation, conferring 2,011 bachelor's degrees, 1,661 master's degrees and 169 doctoral degrees.
- The University hosted the 2012 Legacies of Women Forum, a signature event organized by the Global Summit of Women. The event was supported by the School of Business and Management.
- Dr Andy Palmer, an executive vice president of Nissan Motor Company Ltd, delivered a talk on "Leadership of Innovation" at HKUST.
- A symposium on "A Story on Schisandra Berry: Past, Present and Future" was co-organized by the Division of Life Science and the Hong Kong Traditional Chinese Medicine Research Center. This symposium was the first of its kind for academic exchange among Wu Wei Zi researchers.
- The School of Engineering and the Graduate School at Shenzhen, Tsinghua University (THU), agreed their first joint MPhil/PhD program, with students spending time at both institutions during their studies.
- The University hosted the biennial Eighth International Workshop on Low Energy Electron Microscopy and Photoemission Electron Microscopy. The workshop is the premier meeting on LEEM/PEEM for leading scientists around the globe.
- The Second Annual HKUST ECE Shenzhen Industry Day was held to promote and explore collaboration between Shenzhen industry and the Department of Electronic and Computer Engineering.
- The Tanoto Center for Asian Family Business and Entrepreneurship Studies at HKUST and the World Economic Forum Beijing Representative Office jointly organized the Sustainability of Chinese Entrepreneurial and Family Businesses Roundtable, drawing entrepreneurs, business leaders and academics.

DEC

- The 1st HKUST Symposium on Neurodegenerative Disease – Alzheimer's Disease 2012: New Advances and New Challenges offered fresh perspectives on this complex human disease and provided a human context for the latest scientific advances.
- Prof Tongyi Zhang, winner of the HKUST School of Engineering Distinguished Research Excellence Award 2012, gave his keynote lecture on "Fracture and Failure of Smart and Intelligent Materials of Piezoelectric Ceramics" at the University.
- The HKUST Institute for Advanced Study organized an IAS Program on Topological Materials and Strongly Correlated Electronic Systems.
- Faculty and students celebrated coming second out of more than 30 teams from different parts of the world in the quest to design a space orbit that provided maximum coverage of the Galilean moons of Jupiter in the Global Trajectory Optimization Competition.



Calendar of Events 2012-13



JAN

- President Tony F Chan participated in the World Economic Forum at Davos, Switzerland, with global community and business leaders, engaging in discussions on the outlook for science and technology, and emerging trends in higher education.
- A Memorandum of Understanding was signed at Davos by President Tony F Chan and University of Oxford Vice-Chancellor Prof Andrew Hamilton to jointly establish the Oxford-HKUST Leadership and Public Policy Series of executive education.
- The third season of "The Intimacy of Creativity" music partnership, creating a dialogue between emerging composers and established performers, was presented by HKUST.
- More than 100 financial scholars, researchers, practitioners and policy-makers attended the China Securities Market and Valuation Conference, organized by HKUST Value Partners Center for Investing.



- The HKUST MBA was ranked No.1 in Asia and No.8 in the world, marking the fourth consecutive year for the program among the world's top 10.
- Long Service Awards were presented to more than 270 faculty and staff members in recognition of two decades' dedicated service and contribution to HKUST's achievements.

FEB

- HKUST held its first inauguration ceremony for its Named Professorship program, conferring named professorships on 13 outstanding faculty members.
- A remarkable number of four papers from the Department of Electronic and Computer Engineering were presented at the prestigious IEEE International Solid-State Circuits Conference ISSCC 2013, in San Francisco, US. The conference is the premier forum for the presentation of advances in solid-state circuits and systems-on-a-chip.
- The HKUST Institute for Advanced Study organized an IAS Program on Particle Theory.



MAR

- Prof Benjamin Wah, Chairman of the Research Grants Council, visited HKUST. More than 20 senior faculty members joined the visit and exchanged views on research policies and directions.
- The month-long HKUST Arts Festival 2013 featured visual arts displays; drama, dance and Chinese orchestra performances; film shows; and talks.
- HKUST School of Engineering and DHL Express jointly unveiled the innovative DHL Power Bike, the first electricity-generating exercise bicycles for logistics operations use in Hong Kong.
- The University's annual Environment Week focused on "Energy and Waste – Challenges for a Sustainable Planet", with activities including green dining, and talks by environment groups.
- The HKUST LED-FPD Technology R&D Center at Foshan celebrated its first anniversary with a forum on "LED Applications: Environmental Lighting and Vision Health".
- *The Gorgeous China, The Colorful West* exhibition by award-winning Chongqing photographer Jin Shouxian opened at the Library.



APR

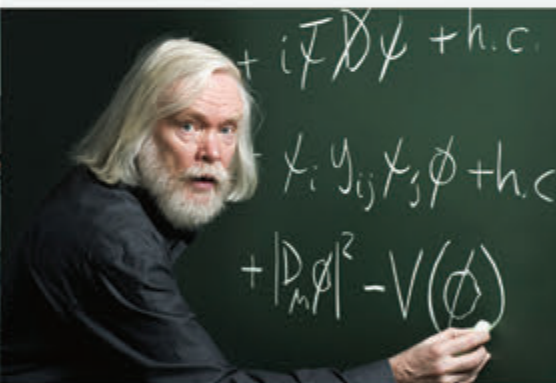
- The School of Engineering inaugurated its state-of-the-art Engineering Commons. An inaugural Industrial Forum on "Empowering Our Engineering Talents for Globalized Technology Industries" was also featured at the opening ceremony of the Engineering Commons.
- President Tony F Chan led a University delegation to Turkey and Israel to establish connections with top universities and institutes, and to pave the way for closer partnerships and collaborations.

MAY

- HKUST joined edX, a major provider of Massive Open Online Courses, founded by Harvard University and MIT.
- A Symposium on Economic Governance in China and the Developing World was held as part of the HKUST Institute for Advanced Study Public Policy Series.
- Business school representatives from countries and regions in Asia Pacific attended the Association of Asia-Pacific Business Schools Academic Conference, held at HKUST. The theme of the event was "Building Sustainable Research Programs in Business Schools".
- The School of Business and Management and Saudi Aramco announced the launch of a new MBA program in the Kingdom of Saudi Arabia to meet the need for local managerial and business leaders to support development of the region.

- Prof Nathan Nunn, Professor of Economics at Harvard University, gave a lecture on "Culture and the Historical Process". The lecture was jointly organized by the School of Humanities and Social Science and HKUST Institute for Advanced Study.
- A delegation from the Shenzhen Science, Industry, Trade and Information Technology Commission visited HKUST for an information session on Shenzhen government policies on science and technology development, Shenzhen-Hong Kong cooperation, and major funding programs.
- The HKUST Institute for Emerging Market Studies hosted a forum on "Prospects for Emerging Markets in the Global Economy" to launch the Institute.

- The 2013 HKUST One Million Dollar Entrepreneurship Competition attracted 85 entries from local, Mainland and international. Judging panels consisted of over 50 internationally recognized entrepreneurs.
- The first National Pingtung University of Science and Technology-HKUST joint workshop took place in Taiwan. At the workshop, HKUST faculty members explored research collaboration and academic exchange on areas such as sustainability and green development.



JUN

- World-renowned theoretical physicist Prof John Ellis, King's College London and European Organization for Nuclear Research (CERN), spoke at the UC RUSAL President's Forum. His focus was basic questions of the cosmos and pursuit of the Higgs boson.
- Students, faculty, staff and alumni took part in a variety of community service activities for HKUST Connect – Service Learning Day 2013.

- HKUST was ranked No.1 in Asia by the QS University Rankings: Asia for the third year running.
- The one-million dollar Ford-HKUST Conservation and Environmental Research Grants program was launched to support School of Engineering taught postgraduate students in undertaking conservation science and engineering research.
- The first biennial Croucher Summer Course on Climate Change and Marine Ecosystems brought together around 60 graduate students and young scientists from Greater China, Asia and North America to generate new research ideas through interaction with the world's leading scientists.
- The HKUST Institute for Advanced Study organized an IAS Program on Human Resources and Economic Development.

- The inaugural HKUST-University of Virginia Jefferson Global Seminars, co-sponsored by the School of Humanities and Social Science and Interdisciplinary Programs Office, took place.
- HKUST's annual summer musical camp continued its successful run of Broadway musical productions with *Grease*, produced and performed by HKUST students, staff and alumni.



Facts and Figures

Students

ENROLLMENT (as of 30 Sept 2013)

School / Area	Undergraduate	Postgraduate		Total
		Research	Taught	
Science	2115	438	151	2704
Engineering	3113	1001	913	5027
Business and Management	3063	104	1188	4355
Humanities and Social Science	192	76	189	457
HKUST Fok Ying Tung Graduate School	0	86	0	86
Interdisciplinary Programs	366	24	60	450
Total	8849	1729	2501	13079

NON-LOCAL ENROLLMENT (2012-13)

Home Country	Undergraduate	Postgraduate		Total
		Research	Taught	
Mainland China	668	1161	921	2750
Other Asian Countries	433	90	106	629
Rest of the World	82	37	127	246
Total	1183	1288	1154	3625

UNDERGRADUATE EXCHANGES (2012-13)

Host/ Destination Region	Exchange-in	%	Exchange-out	%
Mainland China	59	10.6	63	8.3
Asia	101	18.2	191	25.1
North America	261	46.9	238	31.3
Central and South America	0	0	3	0.4
Europe	129	23.2	262	34.4
Australia and New Zealand	6	1.1	4	0.5
Africa	0	0	0	0
Total	556	100	761	100

GRADUATE NUMBERS (2012-13)

School / Area	Undergraduate	Postgraduate		Total
		Research	Taught	
Science	464	111	62	637
Engineering	804	177	597	1578
Business and Management	691	21	644	1356
Humanities and Social Science	-	30	101	131
HKUST Fok Ying Tung Graduate School	-	11	-	11
Joint School/Interdisciplinary Programs	85	9	34	128
Total	2044	359	1438	3841

EMPLOYMENT (2012)

	Undergraduate	Postgraduate			
		PhD	MPhil	Taught Master (Except MBA)	MBA
Employment Situation	%	%	%	%	%
Employed	82.7	77.3	48.4	55.3	90.4
Further Studies	12.2	0.7	34.1	7.5	1.9
Returned to Home Country or Emigrated	1.3	20.6	13.5	30.1	0
Others	3.8	1.4	4.0	7.1	7.7
Employment Situation by Industry	%	%	%	%	%
Commerce and Business	49.4	7.2	28.0	36.9	80.4
Engineering and Industry	36.1	20.5	20.0	44.4	19.6
Education	7.1	71.1	48.0	15.7	0
Government and Related Organizations	2.7	0	4.0	1.0	0
Community and Social Services	4.7	1.2	0.0	2.0	0

Facts and Figures

Faculty

FACULTY MEMBERS (as of 30 Jun 2013)

School/ Area	Regular	Visiting	Total
Science	117	23	140
Engineering	159	22	181
Business and Management	135	20	155
Humanities and Social Science*	83	53	136
Interdisciplinary Programs	9	6	15
Total	503	124	627

* The teaching staff of the Center for Language Education are included following its merger with SHSS on 1 July 2012.

Research

NEW RESEARCH PROJECTS AND FUNDING (2012-13)

	Number	Funding (in HK\$M)
UGC	282	67.7
RGC	185	152.2
Others	311	328.5
Total	753*	548.4**

* No. of projects does not add up due to projects with multiple sponsors.

** Includes R&D projects administered by HKUST R and D Corporation; excludes R-portion i.e. on-costs, PI costs and HSS Premium provided by RGC for ERG projects.

PATENTS (2012-13)

Filed	149
Granted	80

International Rankings

As of 31 Oct 2013

HKUST	No. 1 in Asia – three years in a row (Asia's Top 300 Universities, QS Asian University Rankings 2011-2013)
	No. 1 in the world (World's Top 50 Universities Under 50, QS Top 50 Under 50 2013)
	No. 34 in the world (World's Top 700 Universities, QS World University Rankings 2013)
	No. 57 in the world (World's Top 400 Universities, Times Higher Education World University Rankings 2013/14)
School of Science	No. 12 in Asia (No. 2 in Hong Kong) (Asia's Top 100 Universities in Natural Sciences, QS Asian University Rankings 2013)
	No. 13 in Asia (Asia's Top 100 Universities in Life Sciences and Medicine, QS Asian University Rankings 2013)
	No. 23 in the world (World's Top 200 Universities in Materials Sciences, QS World University Rankings by Subject 2013)
	No. 24 in the world (World's Top 200 Universities in Chemistry, QS World University Rankings by Subject 2013)
School of Engineering	No. 1 in Hong Kong, No. 19 in the world (World's Top 400 Universities in Engineering and Technology, QS World University Rankings 2013)
	No. 1 in Greater China, No. 21 in the world (World's Top 100 Universities in Engineering and Technology, Times Higher Education World University Rankings 2013/14)
	No. 2 in Greater China, No. 12 in the world (World's Top 200 Universities in Computer Science and Information Systems, QS World University Rankings by Subject 2013)
	No. 1 in Greater China, No. 14 in the world (World's Top 200 Universities in Electrical and Electronic Engineering, QS World University Rankings by Subject 2013)
	No. 1 in Greater China, No. 24 in the world (World's Top 200 Universities in Computer Science, Academic Ranking of World Universities by Shanghai Jiao Tong University 2013)
School of Business and Management	Kellogg-HKUST EMBA Program: No. 1 in the world – five years in a row (Global EMBA Rankings, Financial Times 2009-2013)
	Full-Time MBA Program: No. 8 in the world and No. 25 in research ranking in the world (Global MBA Rankings, Financial Times 2013)
	No. 1 in Greater China, No. 7 in the world (World's Top 200 Universities in Statistics and Operational Research, QS World University Rankings by Subject 2013)
	No. 1 in Asia, No. 16 in the world (University of Texas at Dallas (UTD) Top 100 Business School Research Rankings, 2013, based on research contributions in 2008-2012)
School of Humanities and Social Science	No. 1 in Greater China, No. 51-75 in the world (World's Top 200 Universities in Social Science, Academic Ranking of World Universities by Shanghai Jiao Tong University 2013)
	No. 45 in the world (World's Top 100 Universities in Social Sciences, Times Higher Education World University Rankings 2013/14)

Appendices

APPENDIX I: COURT, COUNCIL AND SENATE

As of 30 June 2013

COURT MEMBERSHIP		
Ex-Officio Members	Chairman	Dr John C C Chan, GBS, JP
	Honorary Chairmen	Dr the Hon Sir Sze-Yuen Chung, GBM, JP Dr Vincent H S Lo, GBS, JP
	Chairman of the Council	Dr Marvin KT Cheung, GBS, JP
	Vice-Chairman of the Council	Mr Martin Y Tang
	Treasurer of the University	Mr John B Harrison
	President of the University	Prof Tony F Chan, JP
	Provost	Prof Wei Shyy
	President of the Students' Union	Mr Sam Ngai-Chun Shek
	President of the Alumni Association	Mr Alvin Lam
	Chairman of the Staff Association	Dr Chi-Moon Li
Honorary Members	The Hon Sir David Akers-Jones, GBM, JP	Dr Lau Wah-Sum, GBS, JP
	Dr Robin Y H Chan, GBS, JP	The Hon Lau Wong-Fat, GBM, GBS, JP
	Dr Thomas T T Chen	Dr the Hon Charles Y K Lee, GBM, GBS, JP
	Dr Christopher Cheng, GBS, OBE, JP	Dr the Hon Lee Shau-Kee, GBM
	Dr Henry Cheng, GBS	Dr the Hon Andrew K N Li, GBM
	Dr Cheng Hon-Kwan, GBS, OBE, JP	Ms Kai-Yin Lo, SBS
	Mr Paul M F Cheng, JP	Mr Winston Yau-Lai Lo, SBS
	Mr Linus W L Cheung, JP	Dr the Hon Lui Che-Woo, GBM, GBS, MBE, JP
	Dr Raymond K F Ch'ien, GBS, JP	Mr Tim Lui Tim-Leung, BBS, JP
	Dr Alice Chiu, BBS, JP	Dr Anthony Neoh, SC, JP
	Dr Chow Yei-Ching, GBS	Mr David Teng Pong
	Dr Kenneth H Fang, GBS, JP	The Hon Sin Chung-Kai, SBS, JP
	Dr William K Fung, SBS, JP	Dr Jack C Tang
	Dr the Hon Hari N Harilela, GBM, GBS, OBE, JP	Mr Kenneth Ting Woo-Shou, SBS, JP
	Mr Hu Fa-Kuang, GBS, CBE, JP	Dr Lawrence T Wong
	Mr Herman S M Hu, BBS, JP	Mr Wilfred Y W Wong, SBS, JP
	Mr Lester G Huang, JP	Ms Marjorie Yang, GBS, JP
	Dr Simon S O Ip, JP	Dr Geoffrey M T Yeh, SBS, JP
	Dr Roger King	Dr Larry C K Yung
	Mr Walter P S Kwok, JP	
Appointed Members	Mr Bernard Auyang	Mr Keith Graham Kerr, SBS, JP
	Dr Anissa Chan, MH, JP	Mr Herbert S K Lee
	Dr Charles S C Chan, BBS, JP	Mr Marcus C W Lee
	Dr Ian Chan Yau-Nam, MH	Ms Margaret Lee Pui-Man
	Mr Ronnie C Chan	Ms Rose Lee Wai-Mun
	Ms Ronna W Chao	Mr Winston Leong Kwok-Wai
	Mr Chau How-Chen, GBS, JP	Mr Humphrey Leung Kwong-Wai, JP

COURT MEMBERSHIP *(continued)*

Appointed Senate Representatives

Mr Herbert S Cheng Jr	Dr Raymond Leung Siu-Hong
Mr Donald Chia, JP	Mr Ted Ling
Ms Lai-Yuen Chiang, JP	Mr Sing-Cheong Liu, JP
Dr Paul M Y Chow, GBS, JP	Mr Colin Lo Chor-Cheong
Dr Stephen Chow, SBS, JP	Mr Raymond C Lo
Mrs Susan Chow	Mrs Noelle Lu
Mr Ian C W Fok, SBS, JP	Dr Ronald Lu
Mr David Fong Man-Hung, BBS, JP	Mr Francis Lui Yiu-Tung
Mr Tim Freshwater	Dr Michael H H Mak, SBS, JP
Dr Patrick Y B Fung, JP	The Hon Abraham Shek Lai-Him, GBS, JP
Mrs Rossana Wang Gaw	Mrs Christine Wong, SBS
Dr Aron H Harilela	Dr Rosanna Wong Yick-Ming, DBE, JP
Ms Katherine Hung Siu-Lin	Mr Billy Yung Kwok-Kee
Mr Hans Michael Jebsen, BBS	
Prof Leonard K Cheng, JP	Prof Francis T Lui
Prof Nancy Y Ip, MH	Prof Charles W W Ng

COUNCIL MEMBERSHIP

Academic Members of the Senate Chairman of Convocation Elected Staff Member Elected Student Member Members Not Being Public Officers or Employees of the University

Chairman	Dr Marvin KT Cheung, GBS, JP
Vice-Chairman	Mr Martin Y Tang
Treasurer of the University	Mr John B Harrison
President of the University	Prof Tony F Chan, JP
Provost	Prof Wei Shyy
Vice-President	Prof Yuk-Shan Wong, BBS, JP, <i>Administration and Business</i>
Deans	Prof Khaled Ben Letaief, <i>School of Engineering</i> Prof Leonard K Cheng, JP, <i>School of Business and Management</i>
Prof Kalok Chan	Prof Peiyuan Qian
Mr Sean Lin	
Mr Donny K M Siu	
Mr Green Wing-Sum Lam	
Mr Oscar VT Chow	Ms Catherine K C Leung
Ms Anita Fung Yuen-Mei, BBS	Mr Maximilian Y K Ma
Mrs Yvette Yeh Fung	Mr Kyran Sze
Ms Teresa Ko Yuk-Yin, JP	Mr Wong Tat-Sum Samuel
Mr Quinn Y K Law, JP	Ms Woo Chun-En Jennifer
Mr Michael Lee Tze-Hau, JP	Mr Michael Wu Wei-Kuo
The Hon Starry Lee Wai-King, JP	Mr Patrick Yeung Wai-Tim

Appendices

APPENDIX I: COURT, COUNCIL AND SENATE (continued)

SENATE MEMBERSHIP			
	Chairman	Prof Tony F Chan, President	
	Provost	Prof Wei Shyy	
	Vice-Presidents	Prof Yuk-Shan Wong, <i>Administration and Business</i> Dr Eden Y Woon, <i>Institutional Advancement</i> Prof Joseph Hun-Wei Lee, <i>Research and Graduate Studies</i>	
School of Science	Prof Nancy Y Ip, <i>Dean</i>	Prof Zhenyang Lin	Prof Jiannong Wang
	Prof Michael S Altman	Prof Allen Moy	Prof Michael K Y Wong
	Prof Karl Herrup	Prof Robert Z Qi	Prof Zhenguo Wu
School of Engineering	Prof Khaled Ben Letaief, <i>Dean</i>	Prof Jangkjo Kim	Prof Fugee Tsung
	Prof Guohua Chen	Prof Christopher K Y Leung	Prof Matthew M F Yuen
	Prof Ravindra S Goonetilleke	Prof Ross D Murch	Prof Tianshou Zhao
	Prof Mounir Hamdi	Prof Charles W W Ng	
School of Business and Management	Prof Leonard K Cheng, <i>Dean</i>	Prof Albert Ha	Prof Emily M Nason
	Prof Kalok Chan	Prof J T Li	Prof James Y L Thong
	Prof Kevin C W Chen	Prof Francis T Lui	Prof Shaohui Zheng
	Prof Sudipto Dasgupta	Prof Anaimalai V Muthukrishnan	
School of Humanities and Social Science	Prof James Lee, <i>Dean</i>	Prof Billy K L So	
	Prof Albert Park	Prof Michelle Yik	
HKUST Fok Ying Tung Graduate School	Prof Lionel M Ni, <i>Dean</i>		
Dean of Students	Prof Kar-Yan Tam		
Interdisciplinary Programs Office	Prof Chi-Ming Chan, <i>Director</i>	Prof Chak-Keung Chan	Prof I-Ming Hsing
Elected Members of the Academic Staff	Prof Roger Shu-Kwan Cheng	Prof King-Lau Chow	Prof Benzhong Tang
Co-opted Members of the Academic Staff	Prof David K Banfield	Prof Xiao-Yuan Li	Prof Karl W K Tsim
	Prof Che-Ting Chan	Prof Peiyuan Qian	Prof Henry Tye
	Prof Mohamed S Ghidaoui		
Directors	Mr Robert Brashear, <i>Academic Records and Registration</i>	Ms Diana L H Chan, <i>Library</i>	Mrs Pandora Yuen, <i>Student Affairs</i>
Student Representatives	Mr Sam Ngai-Chun Shek, <i>President of Students' Union</i>	Mr Will Sze-Chung Lee, <i>Undergraduate Student Representative</i>	Mr Zhihua Wu, <i>Postgraduate Student Representative</i>

APPENDIX II: ATTENDANCE OF MEMBERS AT COUNCIL MEETINGS

Date of meeting	Total number of Council members	Number of members present	Percentage of members present
21 September 2012	27	19	70%
14 December 2012	26	19	73%
15 March 2013	26	21	81%
27 June 2013	27	17	63%

APPENDIX III: ACADEMIC ADVISORY COMMITTEES

SCHOOL OF SCIENCE ADVISORY COMMITTEE

Prof Marvin Cohen

University Professor, Department of Physics
University of California, Berkeley
USA

Prof Patrick Lee

William & Emma Rogers Professor of Physics
Division Head, Atomic, Biological, Condensed
Matter and Physics
Massachusetts Institute of Technology
USA

Prof Xiaodong Wang

Director and Investigator
National Institute of Biological Sciences
Beijing
China

Prof Roger E Howe

Professor, Department of Mathematics
Yale University
USA

Prof George Papanicolaou

Robert Grimmett Professor in Mathematics
Department of Mathematics
Stanford University
USA

Prof Weitao Yang

Philip Handler Professor of Chemistry
Department of Chemistry
Duke University
USA

Prof Roberto Kolter

Professor, Department of Microbiology and
Immunology
Harvard Medical School
USA

Prof Randy Schekman

Howard Hughes Investigator and Professor of
Cell and Developmental Biology Department of
Molecular and Cell Biology
University of California, Berkeley
USA

Prof King-Wai Yau

Professor of Neuroscience
The Solomon H Snyder Department of
Neuroscience
Johns Hopkins University
USA

Prof Jean-Marie Lehn

Director of the Supramolecular Chemistry
Laboratory
Institut de Science et d'Ingénierie
Supramoléculaires (ISIS)
Université Louis Pasteur Strasbourg
France

SCHOOL OF ENGINEERING ADVISORY COMMITTEE

Prof Eduardo D Glandt

Dean of School of Engineering and Applied
Science
Robert D Bent Professor of Chemical
and Biomolecular Engineering
University of Pennsylvania
USA

Prof Yingyue Ye

Professor of Management Science and
Engineering
Stanford University
USA

Mr Pindar Wong

Chairman
VeriFi (Hong Kong) Limited

Prof Gregory Fenves

Dean of Engineering
Cockrell School of Engineering
The University of Texas at Austin
USA

Prof King-Ning Tu

Department of Materials Science and
Engineering
Henry Samueli School of Engineering and
Applied Science
University of California, Los Angeles
USA

Mr Victor Ng

Managing Director
Micom Tech Limited

Prof M Tamer Özsu

Professor and Director
David R Cheriton School of Computer Science
University of Waterloo
Canada

Mr Daniel Cheng

Managing Director
Dunwell Environ-Tech (Holdings) Co, Ltd
Hong Kong

Mr Stanley Hui

Chief Executive Officer
Airport Authority Hong Kong

Prof Vincent Poor

Dean of Engineering and Applied Science
Michael Henry Strater University Professor of
Electrical Engineering
Director, Princeton Center for Innovation in
Electrical Engineering
Princeton University
USA

Ir Dr Andrew Ka-Ching Chan

Deputy Chairman
Ove Arup & Partners Hong Kong Ltd

Ir Dr Wai-Kwok Lo

Member of the Legislative Council
HKSAR

Appendices

APPENDIX III: ACADEMIC ADVISORY COMMITTEES (continued)

SCHOOL OF BUSINESS AND MANAGEMENT ADVISORY COUNCIL

Dr Fung Kwok Lun, William
Group Chairman
Li & Fung Limited

Prof Dipak C Jain
The INSEAD Chaired Professor of Marketing
INSEAD

Prof Yingyi Qian
Dean
School of Economics and Management
Tsinghua University

Ms Umran Beba
President, Asia Pacific Region
PepsiCo
(currently SVP & Chief Human Resources Officer
Pepsi-Cola International Ltd)

Mr Hans Michael Jebsen
Chairman
Jebsen & Co Ltd

Mr Sukanto Tanoto
Chairman
RGE Pte Ltd

Prof Sally Blount
Dean
Kellogg School of Management
Northwestern University

Mr Keith Kerr
Chairman
The Development Studio Ltd

Mr James E Thompson
Chairman
Crown Worldwide Holdings Ltd

Mr Louis McDaniel Bowen
Chairman and Chief Executive Officer
Asia Capital Management Limited
and China Advisors Limited

Dr Jack Lau
Chairman, CEO and Director
Perception Digital Holdings Limited

Mr Andy Tung
Chief Executive Officer
Orient Overseas Container Line Ltd

Mr Cheah Cheng Hye
Chairman and Co-Chief Investment Officer
Value Partners Group Ltd

Prof Hau L Lee
Thoma Professor of Operations, Information and
Technology
Stanford Graduate School of Business

Dr Wong Chi-Yun, Allan
Chairman and Group Chief Executive Officer
VTech Holdings Limited

Mr Philip Chen
Managing Director
Hang Lung Properties

Mrs Margaret Leung
Former Vice-Chairman and Chief Executive
Hang Seng Bank

Dr Rosanna Wong Yick-ming
Executive Director
The Hong Kong Federation of Youth Groups

Mr Chow Man Yiu, Paul
Chairman
Hong Kong Cyberport Management Company
Limited

Mr Liu Sing-Cheong
Chairman
My Top Home (China) Holdings Limited

Mr Woo Chun Kuen, Douglas
Managing Director
Wheelock Properties (HK) Ltd

Mr David L Cunningham Jr
President, Asia Pacific Division
FedEx Express

Dr Vincent H S Lo
Chairman
Shui On Holdings Limited

Mr Thomas Jefferson Wu
Managing Director
Hopewell Holdings Limited

Dr Fu Yuning
Chairman
China Merchants Group

Mrs Noelle Lu
Executive Director
Greenhill Investments Ltd

Mr Yuen Kwok Hang, Arthur
Deputy Chief Executive
Hong Kong Monetary Authority

Ms Wendy Gan
Executive Director
Pacific Century Premium Developments
Limited

Mr Anthony Nightingale
Director
Jardine Matheson Holdings Ltd

Mrs Betty Yuen So Siu Mai
Vice Chairman
CLP Power Hong Kong Ltd

Mr Hung Pi Cheng, Benjamin
Executive Director and Chief Executive Officer
Standard Chartered Bank (Hong Kong) Limited

Mr Christopher Dale Pratt
Chairman
Swire Pacific Limited

Mr Shengman Zhang
Chairman, Asia Pacific
Citi

SCHOOL OF HUMANITIES AND SOCIAL SCIENCE ADVISORY COMMITTEE

Prof Angela Ki Che Leung
Director and Chair Professor
Hong Kong Institute for the Humanities and
Social Sciences
The University of Hong Kong

Prof Kenneth Pomeranz
Professor
Department of History
University of Chicago

Prof Yunxiang Yan
Professor
Department of Anthropology
UCLA

Prof Lydia Liu
Wu Tsun Tam Professor in the Humanities
Professor of Chinese and Comparative
Literature
Columbia University

Prof Andrew Walder
Denise O'Leary and Kent Thiry Professor
Department of Sociology
Stanford University

APPENDIX IV: FINANCE

OVERVIEW

Year 2012/13 started a new chapter in Hong Kong tertiary education with the launch of four-year undergraduate programs. The University's operating income and expenditure grew along with the roughly one-third increase in the undergraduate student population. Coupled with donations and matching grants of \$543 million mainly solicited under the 6th Matching Grant Scheme (MGS) (\$28 million for 2011/12), and an increase of investment returns to \$318 million (\$19 million for 2011/12) mainly attributable to a fair value gain of the investment portfolio managed by fund managers, a surplus of \$878 million was recorded for the year (deficit of \$101 million for 2011/12).

CONSOLIDATED INCOME AND EXPENDITURE

Consolidated income for the year rose to \$4,191 million (\$2,916 million for 2011/12) primarily due to the higher UGC Block Grant for operation of the additional year for the four-year undergraduate program, additional donations and matching grants under the 6th MGS and favorable investment return.

Consolidated expenditure for the year increased to \$3,316 million (\$3,020 million for 2011/12) as a result of the general pay adjustment on salaries in line with that for the civil service, and additional staffing and other resources to cope with the new four-year undergraduate programs.

SEGMENT RESULTS

University Grants Committee ("UGC") Block Grant-funded Activities

While extra preparation costs for the four-year undergraduate programs were incurred resulting in a deficit of \$153 million for 2011/12, additional recurrent Block Grant was received from UGC starting 2012/13; together with the favorable investment return for the year, a surplus of \$148 million has been retained and transferred to the General and Development Reserve.

Self-Financing Continuing Professional Education Programs ("CPEP"), Research and Other Activities

Self-financing CPEP activities continued to contribute a steady surplus to the University. Together with the higher investment returns, the overall surplus of these operating segments amounted to \$134 million (\$99 million for 2011/12).

Donations and Related Activities

As a result of the 6th Government MGS and the favorable investment returns in 2012/13, this segment saw a surplus of \$596 million (deficit of \$47 million for 2011/12). This illustrated how segment results fluctuate depending on whether a MGS is in operation or not. Had the operating results of the donation activities segment been removed from the other segments, the variance in the consolidated operating result would be reduced to \$336 million (surplus of \$282 million for 2012/13 vs deficit of \$54 million for 2011/12) instead of \$979 million (surplus of \$878 million for 2012/13 vs deficit of \$101 million for 2011/12).

CAPITAL EXPENDITURE

Construction projects completed during the year, including the Lee Shau Kee Business Building, Institute for Advanced Study Academic Building and the new hostel with 700 student places, have provided the necessary space and facilities for the expanded operation under the four-year undergraduate programs. Other in-progress construction projects include additional teaching, research and student hostel facilities and an off-campus joint student hostel in Tseung Kwan O.

As at 30 June 2013, the total commitments for the approved construction projects and other capital items amounted to \$1,548 million; of which, \$979 million will be supported by approved but yet to be received UGC grants, \$27 million by pledged donations and the rest by the University's reserves and deferred income on hand.

OUTLOOK

The University managed the roll-out of the double cohort successfully in 2012/13. The University continues to prudently manage its financial affairs to support its recurrent and strategic needs under the four-year undergraduate system from 2013/14 and beyond.

Consolidated Balance Sheet

As at 30 June 2013

	2013 \$million	2012 \$million
Non-Current Assets		
Property, Plant and Equipment	4,361	4,030
Intangible Assets	34	49
Held-to-Maturity Financial Assets	113	1,019
Available-for-Sale Financial Assets	18	17
Financial Assets at Fair Value through Profit or Loss	2,853	2,368
Interest in an Associate	61	59
Interest in a Joint Venture	0	0
Bank Deposits with Maturity over One Year	0	60
	7,440	7,602
Current Assets		
Held-to-Maturity Financial Assets	908	407
Inventories	1	1
Accounts Receivable and Prepayments	331	267
Bank Deposits with Original Maturity over Three Months	700	534
Cash and Cash Equivalents	1,323	739
	3,263	1,948
Current Liabilities		
Accounts Payable and Accruals	518	470
Provision for Staff Benefits	141	122
Deferred Income	559	622
Tax Payable	2	2
	1,220	1,216
Net Current Assets	2,043	732
Total Assets Less Current Liabilities	9,483	8,334
Non-Current Liabilities		
Provision for Staff Benefits	19	16
NET ASSETS	9,464	8,318
Capital Reserves	4,395	4,079
UGC Block Grant Reserves	1,125	967
Donations and Matching Grants Reserves	2,625	2,065
Other Reserves	1,315	1,204
Investment Revaluation Reserve	4	3
TOTAL FUNDS	9,464	8,318

Consolidated Statement of Comprehensive Income

For the year ended 30 June 2013

	2013 \$million	2012 \$million
Income		
Government Subventions and Grants	2,155	1,687
Tuition, Programs and Other Fees	882	739
Interest and Investment Income, net	318	19
Donations and Benefactions	344	27
Auxiliary Services and Other Income	299	276
Transfers from Capital Reserves	193	168
	4,191	2,916
Expenditure		
Learning and Research		
Instruction and Research	2,107	1,924
Library	94	87
Central Computing Facilities	103	96
Other Academic Services	80	70
	2,384	2,177
Institutional Support		
Management and General	196	170
Premises and Related Expenses	516	476
Student and General Education Services	189	166
Other Activities	31	31
	932	843
	3,316	3,020
Surplus / (Deficit) from operation for the year	875	(104)
Share of Result of an Associate	3	3
Surplus / (Deficit) for the year before taxation	878	(101)
Taxation	0	0
Surplus / (Deficit) for the year after taxation	878	(101)
Other comprehensive income / (loss) for the year		
Items that may be reclassified subsequently to income and expenditure:		
Unrealized gain / (loss) on Available-for-Sale Financial Assets	1	(2)
Transfer from Capital Reserves to consolidated statement of comprehensive income	(193)	(168)
Exchange differences arising from retranslation	5	2
	(187)	(168)
Total comprehensive income / (loss) for the year	691	(269)
Transfers to / (from):		
Capital Reserves	(188)	(167)
University Grants Committee ("UGC") Block Grant Reserves	148	(153)
Donations and Matching Grants Reserves	594	(48)
Other Reserves	136	101
Investment Revaluation Reserve	1	(2)
	691	(269)







香港科技大學

THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

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