



## New President of HKUST Takes Office

The first of July 2001 witnessed a historic hand-over at HKUST when the University welcomed its second President, Prof Paul Ching-Wu CHU, into office.

President Chu, an internationally renowned expert in superconductivity, takes on the leadership of the University at a crucial time, as HKUST celebrates its first impressive decade and sets out to further extend its teaching, research, and world-class reputation amid a climate of financial cutbacks for Hong Kong's established tertiary institutions.

"I feel very honored to become a member of this young, dynamic, and fast-rising university and, at the same time, I am extremely excited about working with such a group of distinguished faculty, aspiring students, and dedicated staff," says President Chu, who previously worked at the University of Houston for over 20 years and became founding Director of its Texas Center for Superconductivity in 1987.

Advancing HKUST's tradition for excellence and its goals to further local, national, and international development in the challenging times ahead will mean having "all involved on board", President Chu says. This includes those within the University and Hong Kong at large.

"I would like to start the process to define and develop collectively with members of the University a distinctive HKUST culture and spirit. A quality environment is indispensable to the retention and recruitment of top faculty, students, and staff.

"As coach and cheer-leader of HKUST under the guidance of the University Council, I shall also actively work with the Government, the private sector, and the public of Hong Kong to broaden the support base, financial and otherwise, for our University," he says. "Tertiary education is an expensive investment but too important to the future well-being of

Hong Kong to neglect."

The community, especially its secondary-school graduates, needs to realize what a "unique treasure" HKUST is with its world-class faculty and record for global research breakthroughs, according to President Chu.

"In the past 10 years, under the leadership of founding President, Prof Chia-Wei Woo, and the University Council, HKUST has

established itself as a world premier university in many areas of science, technology, business, humanities, and social science. Unfortunately, this extraordinary accomplishment remains one of the best-kept secrets in Hong Kong. I hope to recruit and educate more of the best school graduates at HKUST by revealing this secret."

President Chu, a multi award-winning physicist, was highly sought after by top international universities for many years but resisted a move from Texas until HKUST's offer. He is a Member of the American Academy of Arts and Sciences, Academia Sinica, the National Academy of Sciences (US), the Texas Academy of Sciences, and the Third-World Academy of Sciences, as well as a Foreign Member of the Chinese Academy of Sciences.

President Chu has received numerous awards for his outstanding achievements in superconductivity. In May

2001, he was honored by the American Association of Engineering Societies with the John Fritz Medal. Other technological greats awarded the medal include Alexander Graham Bell, Thomas Edison, Erico Fermi, Guglielmo Marconi, and Orville Wright. □



Meeting of minds: (from left) President Chu, Prof Yuk-Shee Chan, Acting Vice-President for Academic Affairs, and Prof Peter Dobson, Associate Vice-President for Academic Affairs.



President Chu in lively dialogue with one of the 228 Chinese students from around the world participating in the 3rd China Synergy Program for Outstanding Youth.



President Chu officiates the opening ceremony of the 10th Asian Collegiate Fencing Championships organized by the HKUST Students' Union Fencing Club.

East Asian exchange: President Chu and Prof K C Chan, Acting Dean of Business and Management, at the opening ceremony of the Association of East Asian Research Universities Student Camp.





## Whither HKUST?

I arrived in Hong Kong in mid-September 1988, and became immersed in all aspects of preparatory work for the new University. Among the myriad tasks, the most urgent was to attract first-rate senior scholars to Hong Kong from around the world to form the founding team. Also, it was important to mobilize a large number of colleagues in the international science and technology community to form a network of voluntary advisors for the new University. All these called for the building of an effective and timely channel of communication. Thanks to Mrs Catherine LAI, who had joined the University's Planning Committee on government secondment, the first issue of the Hong Kong University of Science and Technology *Newsletter* appeared barely a month later.

From then on, an issue has been published every quarter without fail. In autumn 1994, a Chinese edition of the quarterly *Newsletter* was added. The contents of the two editions have been similar in the main; but since different readers are targeted, variations do exist in coverage, emphasis, and style. Many of our readers are bilingual, and some of them read both editions.

Time flies. By now I have written close to 80 "President's Progress Reports" in the *Newsletters*, counting both Chinese and English. This will be my last such Report, as by the time it is printed I will have stepped down from the presidency. Perhaps this is the right time for me to recount some of the issues HKUST will have to face in the coming years.

### Positioning the University

The Mission of HKUST was determined in its planning days, and was passed into law:

*To advance learning and knowledge through teaching and research, particularly:*

- (a) *in science, technology, engineering, management and business studies; and*
  - (b) *at the postgraduate level;*
- and to assist in the economic and social development of Hong Kong.*

This Mission has been adhered to throughout the University's conception, birth, growth, and maturation. The very focused approach has contributed in no small measure to HKUST's success.

During the past two years, the administration and the Council have worked together to review the University's positioning. Between March and November of 1999, under the leadership of the then Vice-President for Academic Affairs, Prof Leroy CHANG, a review was carried out for each academic unit on its performance, progress, and prospects. The 1998–2001 triennial Academic Development Plans were reconfirmed. The 2001–2004 triennial Academic Development Plans were then drafted and submitted to the University Grants Committee (UGC) in November 1999, in accordance with the latter's normal time cycle.

Between August 1999 and March 2000, under the leadership of the Council Chairman, Dr Vincent H S Lo, the Council, and the administration—in consultation with the University's Senate, Students' Union, staff, and Court—drafted and later promulgated a *Statement on Mission, Vision, and Objectives*. The document spells out how HKUST positions itself. The section on Vision states this concisely:

*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.*



Founding President Chia-Wei Woo addressing the guests at the 10th Anniversary Launching Ceremony on 23 April 2001.

- *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.*

Soon after April 2000, the administration commenced a thorough inventory of the University's resources and conducted a careful assessment of the University's needs. The document that emerged provided useful information to the Task Force on Strategic Development, a committee formed jointly by the Council and the administration. To translate strategy into action plans, the Task Force organized five Sub-groups—on Talent, Areas of Excellence, Resources and Land, Local Connectivity, and Non-local Connectivity (national and global), respectively. In February 2001, the Sub-groups submitted their reports via the Task Force to the Council. Short-term and medium-term plans were outlined, and will be provided as a reference to Prof Paul Ching-Wu CHU, who will take up the University's presidency on 1 July 2001.

Incidentally, by that date all of the founding Members of HKUST's Council and top administration will have retired from active duty. At a time of transition like this, we are happy to see the University's positioning and macroscopic development strategy reconfirmed by all its stakeholders.

### External conditions

The University's early days saw a multitude of almost insurmountable challenges: to recruit first-class senior professors to Hong Kong when neither a campus nor an assured equipment budget was in sight; to complete building the main campus in just three years; to go from an enrollment of zero to 7,000 in just five years... I wrote about these challenges in my last Report (in the Spring 2001 issue of this *Newsletter*). However, I said little about the external conditions that have influenced the fate of the new University in a profound way. These were conditions that severely tested the founding members' collective wisdom, diligence, and dedication. Unfortunately, some of them have persisted to this day.

What external conditions am I referring to?

Firstly, *political*. Hong Kong has succeeded in making a peaceful transition from colonial rule to self-governance, and in implementing the "one country, two systems" principle. This was what the people of Hong Kong hoped for, anticipated, and rejoiced over. However, the peaceful transition has exacted a price: Those conditions which should not change have not changed, but those which *should* change have not changed either. More on this later.





Next, *economic*. Hong Kong failed to appreciate the necessity of an economic transition. As a result, we suffered greatly from the Asian financial crisis. We then relied on a grossly misunderstood concept of "high-tech" to create a new bubble, which took almost no time to collapse. Our economy may now have hit the bottom and begun to recover, but neither the crisis nor the collapse seems to have awakened the public. A trader and speculator's mentality remains.

Thirdly, *social*. The people of Hong Kong have celebrated self-governance and social emancipation by creating a tower of Babel. We now debate and express our views incessantly on every social issue. However, not having experienced in real life a democratic system, we do not appreciate the delicate balance between rights and responsibilities required by that system. Furthermore, along with high-tech comes an increasing polarization of wealth. Both factors breed public discontent and social tension.

These developments form the external conditions that have affected, and will continue to affect, HKUST's future.

It should surprise no one that higher education was not better looked after under colonial rule. Hong Kong's investment in education has never been compatible with her economic prowess. HKUST was fortunate to have been created with strong support from two successive enlightened governors—at the urging of its founding Council Chairman, Dr the Hon Sze-Yuen CHUNG. But, since its birth, we have seen a series of reductions in the higher education budget as well as a continuing tendency towards uniformity in the distribution of resources. These actions, politically and socially more acceptable because they appear anti-*élitist*, pose limitations on the development of HKUST's full potential.

It should surprise no one that science and technology were not more strongly encouraged under colonial rule. Hong Kong was mainly a trading post, and her investment in R&D has never been compatible with her economic prowess. Over the past few years, there has been a lot of talk about innovation and technology but not very much action, and no clear direction has emerged. The Government continues to lack a mechanism to provide executive leadership in science, technology, and industry, causing Hong Kong to miss one opportunity after another. (The recent appointment of Prof Eugene WONG, a no-nonsense former Vice-President for Research and Development at HKUST, to chair the Council of Advisors on Innovation and Technology gives us hope.)

And it should surprise no one that culture was not more enthusiastically supported under colonial rule. Hong Kong's investment in cultural pursuits has never been compatible with her economic prowess. Over the past few years, we have witnessed improvements in our museums and artistic endeavors, but the overall foundation remains fragile. Most unfortunate is the fact that a large segment of the media has abandoned its cultural and social mission, and succumbed to near-total commercialization. The role of universities as citadels of culture does not seem to be generally appreciated.

Four years have passed since Hong Kong returned to her motherland. How much longer do we have to wait for the three pillars of a knowledge-based society (education, science and technology, and culture) to rise to modern specifications?

HKUST has not been able to make an impact on improving these external conditions. Full of heart but lacking in influence, I myself have failed to contribute. This is a source of much personal regret.

External conditions affect the speed of HKUST's ascent. In turn, HKUST's ascent can contribute to changes in the external conditions. Let's hope our successors will be able to help establish a beneficial cycle between these two forces.

## Core and peripheral activities: a strategic model for HKUST

The founders of HKUST believed that size was not a commanding

factor for building a strong university. We went after quality and depth, rather than quantity.

The Planning Committee had envisioned a total enrollment of 10,000 to be reached over three phases—with at least 30% in postgraduate studies. Phases I and II were to be built more or less simultaneously, and the enrollment would soon reach 7,000. Some 3,000 more were to be added in Phase III, starting 1996/97.

In 1990, the fear that too many professionals were emigrating while too few were being trained led the Government to decide on rapid expansion of the existing post-secondary institutions. Since Phase III of HKUST was not to commence until 1996/97, whether there would remain a need for it could be decided later, so it was reasoned. Thus Phase III was postponed, and has not been reconsidered since.

The faculty establishment for an enrollment of 7,000 has been set at 520. (The original plan called for a student/faculty ratio of 11, which has climbed to nearly 13.5 after successive funding cuts.) Distributed over 19 departments (or divisions), the faculty size in each department now ranges from less than 20 to around 40. In order that a critical mass be reached for each specialty, the academic scope in the departments must not be too broad. We must carefully select a limited number of academic specialties and interdisciplinary fields and focus our resources on them—if we wish to insure a place for each at the international forefront. This principle has been at the center of our strategy. In other words, we must define judiciously the University's *core activities* and defend them resolutely. (Of course, as times change, adjustments, and shifts may follow.)

It is not necessary for me to elaborate on these core activities since they have been described in detail in the Academic Development Plans.

The mission of HKUST specifically requires us to contribute to the region's economic and social development. Hence, we endeavor to link our core services in teaching and academic research to the needs of business, industry, and community.



In this respect, we employ a strategic model that contains two components. On the one hand, we use our academic expertise and instructional capabilities to provide voluntary services to secondary schools, community organizations, and the public media; and we use our technological achievements and innovative ability to build cooperative relationships with local, domestic, and international business entities, and to create our own start-up companies. On the other hand, we select the strongest academic institutions worldwide with which to forge mutually supportive partnerships and alliances. Such a strategy allows us to carry out a wide range of *peripheral activities*.

For example, in order to strengthen the scientific capabilities in secondary schools, we are working with hundreds of schools to provide direct training to teachers; we are also working with the Hong Kong Institute of Education in planning joint-degree courses. In order to





strengthen students' knowledge outside their chosen specialty, we share general education lectures with sister institutions. In order to broaden students' national and international vistas, we have set up large-scale student exchange programs—with particular emphasis on the Chinese Mainland, North America, Western Europe, and East Asia. In order to accelerate the region's economic transition, we are working with governments and enterprises far-and-wide to effect technology transfer, and to share with them the University's talent and facilities.

We also carry out peripheral activities utilizing non-local resources. For example, since we are really strong in industry-oriented fields such as advanced materials, microsystems, environmental protection, and business management, it would be most helpful to have a secondary base of operations in the Pearl River Delta. Our strategic model includes the establishment of a "Shenzhen-Hong Kong Institution – Industry, Education, and Research" in alliance with Peking University (PKU) and the Shenzhen Municipal Government. The Institution offers self-financed executive education, applied R&D, and technology incubation, with Shenzhen providing all the infrastructure. Since we are really strong in the life sciences, we should associate our research and enterprise incubation in biotechnology with relevant clinical activities—without actually operating a medical school. Our strategic model includes the establishment of a medical center in alliance with Peking University, the Shenzhen Municipal Government, and leading international partners, again with the Shenzhen Government footing the bill. Since we are strong in modern business and technology management, we need to support our curriculum and research with expertise in international business law, corporate law, intellectual property rights law, and so on—without actually operating a law school. This has become particularly crucial in view of China's upcoming entry to the World Trade Organization. Our strategic model includes the setting up of targeted law programs with partners from the Mainland, Taiwan, and across the Pacific Ocean. Sitting at the center of the Pearl River Delta is a new town called Nansha. We have teamed up with the Fok Ying Tung Foundation to build a Suzhou garden-style information technology park, with the Foundation providing both land and construction costs.

Thus, focusing on clearly defined *core activities* while creating a network of strong allies to carry out closely related *peripheral activities* underlies the University's development strategy. Given the limitations on funding, this has proven to be a good model for realizing our vision and achieving our mission.

## Quantifying enrollment

Seven thousand students or 10,000? Postgraduate enrollment above 30%? The new President and the faculty will need to take these issues through careful consideration and broad-based consultation to reach a set of implementable decisions.

Certain circumstances are beyond the University's direct control. Let me recount them for our colleagues' reference.

Firstly, "three to four"—that is, transforming the duration of Hong Kong's first-degree curriculum from three years to the international norm of four years. A social and political consensus has finally been reached; there is no longer any doubt that a four-year system will be implemented in a few years' time. It is a certainty, then, Hong Kong's undergraduate enrollment will rise by one-third. Some may feel that no rise should take place unless and until the Government's finances improve; but this would mean a 25% reduction in annual intake—a totally futile proposition in today's political climate.

Next, relentless worldwide advances towards a Knowledge Economy require Hong Kong to respond by rapidly expanding her human resources. Even if the Government decides to put its full weight behind setting up community colleges and subsidizing lifelong education, society would still want those tertiary institutions which have shown clear success, unstoppable momentum, and strong potential to expand

their undergraduate enrollment. HKUST fulfills all three conditions and should not be left out of the process.

The engines for a Knowledge Economy are science, engineering, and management. What Hong Kong desperately needs are advanced degree-holders who will become professional leaders in these three areas. The three turn out to be precisely the major areas of pursuit selected for HKUST by the Government and society. And special emphasis on postgraduate training happens to be a critical part of HKUST's mission—as written into law. Furthermore, HKUST's capability in academic and applied research has been clearly recognized by professional communities both locally and overseas. So, if significant increases in postgraduate intake are contemplated, it is only reasonable for the Government to call on HKUST to contribute.

Given circumstances as such, would it not be appropriate to open discussions on restoring Phase III at HKUST? If indeed there will be a Phase III, what can be done to meet all the above requirements?

Please take a look at the numbers that I have worked out below.

The enrollment determined by the UGC for HKUST's Phases I and II was 7,000, including 80% undergraduates and 20% postgraduates—in line with the two other local research universities. This translates to 5,600 undergraduates and 1,400 postgraduates. Recent shifts in enrollment mandated by the Government on the basis of society's needs for teachers, social workers, and so on, have resulted in reductions in undergraduate places at HKUST. The trend indicates that our total undergraduate enrollment may drop to about 5,300, and therefore the steady-state annual intake would drop to 1,767 (assuming Hong Kong's tertiary drop-out rate remains extremely low). At the same time, the UGC's ruling on postgraduate enrollment has been that the 20% quota can be exceeded if the excess is supported by non-UGC, competitive, peer-reviewed funding. Thus HKUST's postgraduate enrollment now stands at about 1,500.



Assuming an annual intake of 1,750 after the implementation of "three to four", the total steady-state undergraduate enrollment at HKUST would become 7,000. If the UGC would agree to adding 1,500 postgraduates to our roster, the total postgraduate enrollment would become 3,000.

You see, if this scheme can be put into effect, *all* of the above-mentioned wishes by *all* of the interested parties would become reality: (1) implementation of "three to four" without noticeably reducing undergraduate intake; (2) expansion of a university with proven achievement, momentum, and potential; (3) increase in postgraduate enrollment in science, engineering, and management; (4) restoration of the originally planned Phase III and a total enrollment of 10,000; (5) restoration of the originally planned postgraduate enrollment of at least 30%; (6) improvement in average weighting and thus total funding. Wouldn't it be great to hit all six targets with just one shot!

It will be up to the new President and the faculty to determine the strategic approach, initiate action, and persuade the Government's decision-makers.

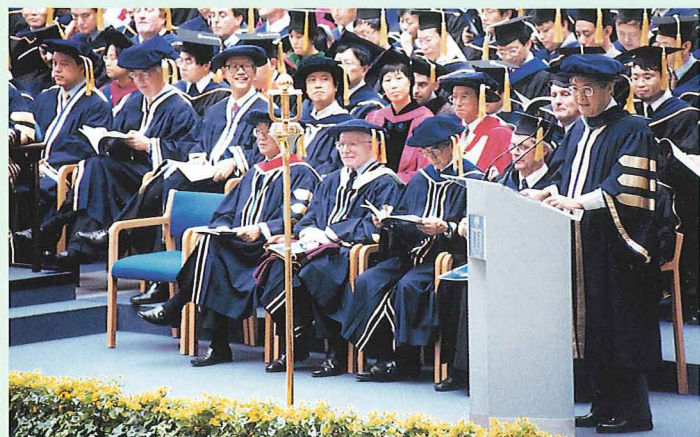




## The faculty

The soul of the University is its faculty. The credit for HKUST's success belongs to its world-class faculty.

The first decade saw HKUST's faculty quality safely in the lead in Asia; we cannot help but be proud of the excellence and dedication of our academics. As pointed out by the former Vice-Presidents for Academic Affairs as well as the current Acting Vice-President for Academic Affairs, the future of this University will depend on whether we are able to recruit and retain truly world-class professors.



Our early recruitment was greatly assisted by Chinese-American scholars on both coasts of the United States. A network of volunteers counseled us and recommended suitable candidates to us. They made logistical preparations for us as we traveled around to visit the candidates. With the help of this network I was once able to visit nine locations in one week. Before gatherings of academics we extolled the great virtues of Hong Kong and HKUST, and extended repeated invitations to desired candidates to come and join us in the pursuit of an impossible dream. Such labor-intensive recruitment efforts required the efficient organization of numerous geographically scattered advisors.

Those days are gone. Most of the chief advisors eventually became pioneers themselves and joined HKUST, thus taking themselves out of the overseas network. As a result the network collapsed. The time has come for a fresh network to be built.

How? Who constitute potential members for this network? I can think of four core groups. Firstly, our old friends who have not joined us at HKUST. Secondly, younger scholars we approached in the early days who were not ready to make the big move at that time. Some of them have by now become well known for their academic achievements, and have remained in touch with us—at least spiritually. Thirdly, recent graduates from China studying or working in overseas institutions. While the overwhelming majority are from the Mainland, some are from Hong Kong and Taiwan. For example, a rising number of HKUST graduates are now studying or working in California, especially in Silicon Valley. They have formed an alumni group, and have continued to show strong feelings for Hong Kong and the University. Fourthly, retired faculty members who have only recently returned to America to live after giving some of their best years to HKUST. I propose that our faculty, under the leadership of the new President and with the help of the University's Convocation, help weave these "friends and relatives" of HKUST into a new network. (It may need to be said that, for an internationally oriented research university with special emphases on science, engineering, and management, founded to a large extent by returning Chinese-American scholars, which uses English as its medium of instruction, the main source of new faculty will continue to be the United States in the near and medium terms. However, the network should, in time, be extended further and wider.)

Since the academic plans in the coming three to five years are largely

known, a department-by-department and school-by-school examination could be carried out to answer the following questions: Are we missing senior academic leaders in any of the selected specialties? Which specialties are short on successors to the present leaders? Which specialties require a replenishment of rich new blood? Just as was done throughout the founding years, a roster could be made; then door-to-door recruiting could re-start with the assistance of the new network.

It will be hard work, but we have every reason to feel optimistic.

Recall that in the early days there was some uncertainty about both the campus to be built and the equipment budget to be approved. "June 4" and "1997" affected Hong Kong's overseas credibility. Salaries were two to three times lower than what is now offered. Today, Hong Kong's political stability is not in question. HKUST has done well and gained international respect. Some of the world's leading universities are now going after our teaching staff, thus making HKUST psychologically a potential stepping stone rather than the end of the line. We will need to recruit quite a large number of good scholars, but nothing like 10 per month as in the early years. Also, there are now many senior colleagues to share the labor-intensive recruiting work. Yes, we can feel optimistic.

Recruitment is followed by retention. The renewal/promotion system at HKUST is now well established. Every review is initiated in the department by a faculty committee and the department head. Their recommendations go to the relevant school, whereupon a further review is carried out by a school-level faculty committee and the dean. For senior candidates, the school's recommendation goes on to a University-level faculty committee and the Vice-President for Academic Affairs, and finally (in cases of full-professorship or substantiation/tenure) to the President. The review processes are dominated by faculty members. Thus, faculty governance on academic assessment has already become the established norm at HKUST. Over the last 10 years, the Vice-President for Academic Affairs and myself have sought to overturn not more than two or three cases—and these all towards "leniency". So, it is obvious that our faculty are most demanding of themselves. But since the same system is used for new appointments and the same vigor is applied at the point of entry, it is ensured that a large majority will later qualify to move up the academic ladder.

Once again, let's look at the numbers. Not long after the University opened, we deliberated on what would constitute an optimum distribution over the ranks. Our consensus was to aim for a steady-state pattern of 30%, 30%, and 40% for full professors, associate professors, and assistant professors, respectively. In other words, as faculty retire or resign at one end of the stream, new appointments should be made at the other end to try to achieve and maintain a 3:3:4 ratio.

The following chart is quite interesting. Assuming no change in student enrollment and thus no change in the total faculty establishment, we have:

	3:3:4 model	Spring 2001
Professors	141	76
Associate Professors	141	143
Assistant Professors	188	185
Visitors, vacancies, and dollar-based positions	50	116
Total	520	520

How can we project these figures on our current faculty age distribution curve, past renewal/promotion statistics, and future changes in student enrollment and/or faculty establishment? How should we analyze and integrate these data, and design a flow model? How are we to match the model to the roster of potential recruits prepared according to the University's academic plans? And what policies need to be made and implemented in order to achieve a 3:3:4 end result?





Here is an attractive research problem which should not be so difficult to solve—at least not by my many colleagues with razor-sharp analytical minds.

Let me, however, offer an apology for a somewhat misleading element in the chart. We, in reality, do not have sufficient money to fully fund the “visitors, vacancies, and dollar-based positions”. After appointing visiting faculty members and certain auxiliary teaching and research staff, not much is left for appointing new regular full-time faculty. So, a major issue faces the new President and the faculty: Should we insist on a student/faculty ratio of 13.5 and appoint many more new faculty to lower ranks and compensation? Or should we relax the student/faculty ratio and make do with fewer faculty in order to achieve the desired rank distribution? In either case there would be a price to pay.

## Resources: staff, land, facilities, and funding

While the University's soul is its faculty, its bones and muscles are the administrative staff. The accomplishments of HKUST's faculty would not have been possible without the many dedicated services provided by our administrative colleagues.

We were given very little time to plan and grow. The tasks of faculty and staff recruitment, infrastructure development, equipment purchases and installment, budgeting and financial control, and so on, were diverse and numerous, and were thrust upon a very small contingent of government secondees. Hence the administrative staff had to grow rapidly—albeit within the confines of government-determined formulas.

In the past several years, the University has entered a consolidation period, and has been able to gradually reduce its administrative staff. The only possible and decent way to do so was through “natural attrition”: As staff who had earned their substantiation in accordance with Hong Kong's civil service practices left, we froze the resulting vacancies. Since 1998, natural attrition has succeeded in reducing administrative staff expenditure by 17%. However, the Government's funding reductions, at 10% point-to-point for the 1998-2001 triennium and an additional 5% for the 2001-2004 triennium (actually higher for HKUST), have nullified the savings. Another scheme, known as “voluntary redundancy”, has had to be implemented by providing incentives for early retirement or voluntary resignation in order to reduce administrative staff expenditure by some further 4% to 5%. We now also encourage job-sharing.

It appears that the practice of natural attrition will have to continue. The resulting loss of manpower implies an increase in average workload. We must further simplify, indeed re-engineer, our administrative procedures to increase productivity and thereby control the workload.

Land, the average reader may find it strange, is a lifeline for research universities. Just imagine how Stanford University would have fared without its 3,000-plus hectares. Where would Silicon Valley be without Stanford, and where would Stanford be without Silicon Valley? Many strong state universities in America began with thousands of acres in land grant. Pity HKUST, which was given 60 hectares (148 acres) of steep slopes (albeit, thankfully, with an incomparable sea view). Over the past decade, I have struggled to acquire more neighboring land from the Government. While no success can be reported, glimmers of hope do exist. This kind of continuing exploration and negotiation is too sensitive for public discussion, so please permit me to stop at this point.

Facilities refer to space and equipment. First, space. Classrooms and lecture theaters are directly related to head count. We should be able to get by until the enrollment expands. However, HKUST's School of Business and Management and School of Engineering offer many executive education programs which are space-intensive. Quality requirements are high for this kind of lecture theater. In addition, break-out rooms, offices, and hotel-quality short-term residence halls need to be provided. Relying on fundraising and mortgage loans, the Annex and some visitor residences were built to cover short-term needs. We

are working now on a sizable new project.

On-campus undergraduate student housing is crucial to a well-rounded education. A new residential cluster has been approved for partial government funding, and now awaits private donations for construction to begin. For postgraduates, a novel scheme to deploy bank loans made it possible to house all our research students. If we are to radically increase our postgraduate enrollment, more housing will be needed. The same scheme can be used.

Applied R&D and enterprise incubation all require space. The sizable project I just referred to will cover those needs. Perhaps it is all right to mention that, after several years of intense negotiation, we are now optimistic that the Government will provide one half of the funds. A drive to raise the other half from donors has recently begun.

On teaching and research equipment, even though we have continuously made new purchases, replacements, and upgrades, the pace has noticeably slowed, and our equipment may soon fall behind the times. Ongoing work includes: planning for the deployment of the University's equipment reserve funds, persuading the Government to pay reasonable overhead costs for contract research, and attracting large-scale technology investments from business and industry.

We are also looking for resources from outside Hong Kong. As I mentioned earlier, the Shenzhen Municipal Government is providing the PKU-HKUST Academic Alliance with a variety of research infrastructure, space, equipment, and operating subsidies. The new President has indicated his wish to expand the scope of our cooperation in Shenzhen. The Fok Ying Tung Foundation is investing both land and capital in Nansha to construct an Information Technology Park with HKUST. This IT park may soon become a hot spot of Hong Kong-Guangzhou collaboration. The governments and industries of France and Germany also provide funding for HKUST and have established research centers on our campus. In all these cases, we use our research capabilities, academic prestige, and both national and international networks to leverage for external resources. I hope to be able to serve the new President in seeking still higher levels of support from Shenzhen and Europe.



Nevertheless, it must be made abundantly clear that the main source of funding must be our own Government. In the face of successive funding cuts, morale on campus has begun to fall. It appears strange that, as one breakthrough after another is made in science, engineering, and management at HKUST, the signal we receive reads “time out!”. Perhaps Hong Kong is still paying for her peaceful transition, and the signals represent the Special Administrative Region's birth pains.

Reporters like to ask: “Is the Government cutting away your fat? Or is the cut into your bones?” My answer is: “Please examine what we intend to do with our 2001-2004 triennium budget.” HKUST has a very straightforward mission to realize. We shall thus fully protect our teaching and academic research, and do our best to support those





applied research projects that are academically strong, at the world's forefront, or particularly relevant to Hong Kong's economic development. As for contract research that directly benefits the Government's industrial support units or the commercial sector, if the potential for true innovation is merely average, we will have to reconsider our participation—doing only what we can, when we can. The same goes for our voluntary service to society and basic education. I then add: "Please define for us which of these activities are fat, and which are bones. Based on that you can answer your own question."

We will get through the coming triennium without allowing our core activities to erode. As for the peripheral activities, we will do what is financially possible while waiting for Hong Kong's executive-led Government to put together and implement a new strategy for economic development.

## Destiny in our own grasp

Finally, let's take a long-term view. How should we control our own destiny?

The Government has been exploring informally a never-before-considered avenue: give universities a large endowment and let them become privatized.

Why should any university wish to be privatized?

There would be more autonomy. Operationally there would be more flexibility. Administratively, by totally delinking from the civil service, there would be fewer unnecessary bureaucratic regulations. The Government believes that, upon privatization, the universities would become financially more cost-effective. There may be some truth to this line of thinking. The Government also believes that, upon privatization, the universities would become more aggressive and work more closely with society—especially business and industry. This may be the case with some of the older universities, but for HKUST—a university that is youthful, dynamic, and already closely linked to business and industry—further impact brought on by privatization may not be all that significant.

Nevertheless, HKUST should be the easiest target for privatization since our mission is crystal clear, our governance structure is straightforward, and we carry no baggage of outdated tradition or entrenched habits.

The question is: How well would the University be financed after privatization? This would depend on the size of the Government-provided endowment and the financial return on that endowment. It should be noted that endowments for public institutions must always be securely and conservatively invested, and therefore the return can never be high. Some say it cannot be more than about 3% per annum in real terms (above inflation). If so, an endowment equal to 33 years of expenditure would be required. Some are willing to assume a return as high as 4% or 5%. If so, the endowment must equal 25 years or 20 years of expenditure, respectively. Most feel that too much risk would be incurred if one tries to achieve a real return of 5%. However, rumor has it that the Government is considering an assumed annual return much higher than 5% above inflation.

Privatized universities must be allowed to receive capital grants from the Government from time to time, as they do now, unless a separate endowment for capital construction is provided. In allocating such grants, public and privatized universities must be treated alike.

Furthermore, public and privatized universities must be given an equal chance through open competition for all R&D grants and contracts. These include grants and contracts for academic research, innovation and technology, and all scholarly, R&D, and service projects, whatever their magnitude or duration. Of course, fair and open competition is in any case always the most cost-effective way for deploying public monies.

The University Council, the new President, and our colleagues may soon need to discuss with the Government the feasibility of privatizing

HKUST. Such a move, perhaps more than anything else, would affect how we macroscopically plan for HKUST's next hundred years.

What, indeed, are our prospects for the next hundred years? There is no point in speculating. As I said in the last issue of this *Newsletter*: "Times have changed. Over the past century, the pace of human progress has accelerated tremendously. Never has one year gone by without a scientific breakthrough that could improve the world's economy. Never has a decade gone by without new discoveries that could bring about fundamental changes in man's lifestyle." We can make macroscopic plans, but cannot predict really long-term prospects.

During HKUST's 10th anniversary year, we are celebrating our past with 29 academic events and 29 social and cultural programs. One can catch a glimpse of HKUST's prospects through these events and programs, which reflect the solid foundation we've built.

Please allow me to reiterate. Little more than a decade ago, the University did not have a campus; all we possessed was a weed-strewn slope. There was no equipment, and we did not know how much equipment funding the Government would grant us. The oncoming 1997 political transition brought uncertainties, and few could profess total confidence in the untested principle of "one country, two systems". Manufacturing industries were moving northward across the border, and the concept of a high-tech based economic transition was still considered heretical. Faculty salaries were two to three times lower than today's, living conditions were far from ideal, and a cultural ambience was practically non-existent. HKUST was still on the drawing board; few believed in the dream of a meteoric rise... Those were the daunting realities then. But, hand in hand, shoulder to shoulder, we came through.

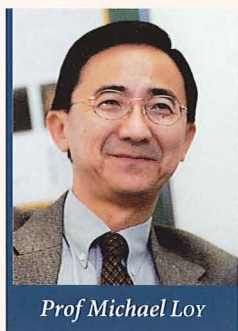
Conditions are now so much better. In addition to improvements in all of the above, HKUST's well-led Council is now filled with dynamic young members, and HKUST's administration celebrates a new generation of distinguished successors. The quality and performance of HKUST's faculty and students continue to excel. The University's national and international reputation is now well established. These are the realities today. As we advance hand in hand, shoulder to shoulder, what can stop us?



Yes, there will always be challenges. Conditions will never be ideal. Every time I see, hear, or talk about the challenges, I always like to repeat what I said in our early days: "If everything were in order, why would Hong Kong need us?"

On the eve of my departure, please allow me to be both somber and light-hearted in sharing with you the following thought: "With hands on the present and eyes for the future, we control our own destiny and create our own prospects. That has been, is, and will be the way for HKUST. May the Force be with you, always." □





Prof Michael Loy

## Report of the Dean of Science

*Our major challenge has been, and will continue to be, to recruit and retain high-quality faculty members. We have been doing quite well: Many of the University's notable achievements have come from the School of Science.*

I have always encouraged our faculty to aim for two things: to excel globally in scholarship and research; and to be relevant locally and nationally through teaching and service to society.

### Research breakthroughs

A major research breakthrough in our School last year was the successful synthesis of the world's smallest single-walled carbon nanotubes (a mere 0.4 nm in diameter) by researchers in the Department of Physics. Academicians in China named this as one of the 10 most important discoveries of the year worldwide. It was the only breakthrough to have originated from China.

Since then, the research team has discovered that these nanotubes exhibit superconductivity below 15K—one of the most important findings in the field. This major breakthrough was published in *Science* (292: 2462–65). To advance research in this cutting-edge area, the University inaugurated the Institute for Nano Science and Technology in May 2001.

We have also done very well in biotechnology. A research group in the Department of Biochemistry has discovered a novel signaling pathway critical in the functioning of the human nervous system. This may prove to be invaluable in the design of therapeutic agents for nerve-muscle disorders. The research was recently published in *Nature Neuroscience* (4: 374–381)—the first time research done in China has ever appeared in this prestigious journal.

These are but a few of the many examples of us excelling globally.

### Training versatile specialists

One way to be relevant locally is through teaching. We have helped in this area with the Personal Response System, devised by Prof Nelson CUE of the Department of Physics, which encourages student participation in lectures. The technology has been fully implemented in the University.

Our School believes that students should be given a broad education, in addition to a specific major, and I am proud of the system we practice. People are trained for a variety of areas so they are able to find good jobs. In education, the important thing is to teach people how to learn and solve new problems. I am very pleased that employers welcome our students.

Undergraduate education is the first step in lifelong learning and we provide our students with a solid general background together with the specializations that come with a science and technology

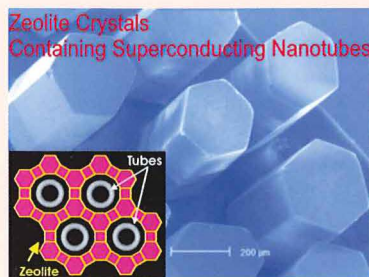
university. Over the last decade, we have trained a large number of graduate students with PhDs and many of them are now doing post-doctoral research at HKUST and other first-rate universities. That our students are competitive with the rest of the world is solid proof of the quality of our teaching and research.

The Government has allowed us to bring in a small number of top students from the Mainland. They have introduced a level of competition that I think will have a positive effect. Hong Kong students now realize they are facing strong competitors. Being pragmatic, they will work harder if they need to, and will improve accordingly.

### New frontiers

We have achieved a lot, but the key is to continue to explore new frontiers. This Fall, the School will start a graduate program in Atmospheric Marine Coastal Environment. HKUST is one of the few universities anywhere that is located on the waterfront and able to equip a laboratory with clean, flowing seawater. We are also launching an MD-PhD program for top Mainland medical students this Fall, as part of our collaboration with Peking University and the Shenzhen Municipal Government.

An extremely important event is the ongoing education reform in Hong Kong. Our faculty are already working closely with secondary-school teachers and teachers in training through our joint degree with the Hong Kong Institute of Education. We are also actively looking at how the curriculum can be changed and how we can move from three to four-year degrees. It is an exciting time and offers another big challenge for the School. □



Prof Ning Wang (left) examines 0.4 nm single-walled carbon nanotubes grown in zeolite crystals (see inset) under an electron microscope while Prof Zikang Tang looks on.

### SCHOOL OF SCIENCE

Dean:	Prof Michael Loy	Faculty:	120 (1 Jan 2001)
Associate Deans:	Prof Shiu Yuen Cheng	Undergraduates:	1,285 (1 Jan 2001)
	Prof Nancy Ip	Postgraduates:	284 (1 Jan 2001)





Prof Kang L. WANG

## Report of the Dean of Engineering

*The mission of the School of Engineering is to train high-caliber engineering professionals and industrial leaders, to engage in innovative research, and to facilitate frontier technological developments in Hong Kong. As the SAR*

*transforms itself into a knowledge-based society, I believe our School will continue to make even greater contributions to the process.*

The School of Engineering's many acclaimed achievements in the University's first decade reflect the commitment of our world-class faculty and excellent staff.

### At the international frontier

In the area of research, we are at the forefront of technology. The accomplishments of our faculty and students have won them international recognition and many prestigious awards. For example, our Department of Electrical and Electronic Engineering recently set a new record. Statistics have shown that the Department ranks among the top in publication output in the journals published by the Institute of Electrical and Electronics Engineers (IEEE), the most respected professional body in the field. In particular, we came first in the number of papers published in the prestigious *IEEE Transactions on Electron Devices*.

In addition, we have established a number of world-class facilities. Our Department of Civil Engineering recently inaugurated the CLP Power Wind/Wave Tunnel and the Geotechnical Centrifuge Facility. These are among the most advanced facilities in the world, with the capacity for cutting-edge research. The US and Japan are planning to build similar facilities using HKUST as a model. This proves that we are really ahead in terms of international standards. It is also worth mentioning that these facilities have enabled us to contribute to a number of major infrastructure projects in Hong Kong.

### Innovative technology

As the engineering school of a research university, we do not simply focus our efforts on basic academic research. We believe that basic research and applied R&D must maintain a balance in order to make the greatest contribution to the economic and social development of society.

Through technology transfer, our researchers are able to bring novel applications with creative solutions to local industry and help enhance competitiveness. Though HKUST is still very young, the School of Engineering has been very successful in establishing strong ties with industry. Our Engineering Industrial Consortium has received support from more than 30 corporate members. In the past few years, we have achieved outstanding results working with

industry in applying for government funding on innovative industrial projects. We will continue to foster links with our current partners and actively assist in the growth of new industries to advance the development of innovative technologies in Hong Kong.

### Nurturing entrepreneurs

We recognize that innovation and entrepreneurship are the keys to furthering Hong Kong's industrial and economic growth. In addition to employment with Hong Kong companies, there are enormous opportunities for our students to start new businesses in advanced technology. To do so, they need to be properly equipped. The University trains about 2,000 graduates each year. If just 10% of them were to start new businesses with the help of our faculty, there

would be 200 new companies in Hong Kong each year. These companies would in turn create ample employment opportunities in the area of high technology.

We are now working on a new High-Tech Entrepreneur Program (HTEP) to help our students develop entrepreneurial skills, including how to prepare business plans and how to raise finance for high-tech businesses. Our academic programs are well established and have been very successful in

training professionals for the local and international markets. This new HTEP program aims to equip our students for a new challenging career path—entrepreneurship.

### Our challenges

In order to further our mission, we must continue to maintain and enhance the quality of our faculty. Without world-class faculty, we will not be able to nurture the creative minds needed for our society to compete internationally. Since its inception, the School has employed stringent criteria in recruiting outstanding teaching staff. We were able to attract high-caliber faculty members from around the world in the past because the economies of Europe and the US were weak at the time and our packages were therefore relatively attractive. However, in recent years, government cutbacks have resulted in a freeze in salary and benefits here while the economic situation in the West has improved. We are indeed losing our competitive edge.

To face this challenge, the School is now working to develop new resources and solicit greater support from industry and private organizations in order to attract faculty in the high-demand areas. We cannot afford to compromise on the standard of our faculty, as it is the key to our success. □



The Geotechnical Centrifuge Facility is equipped with the world's first bi-axial shaking table and a state-of-the-art four-axis robotic manipulator.

#### SCHOOL OF ENGINEERING

Dean:	Prof Kang L. Wang	Faculty:	153 (1 Jan 2001)
Associate Deans:	Prof Yeou-Koung Tung	Undergraduates:	2,184 (1 Jan 2001)
	Dr Ting Chuen Pong	Postgraduates:	733 (1 Jan 2001)





Prof K C CHAN

## Report of the Acting Dean of Business and Management

*What makes us different from other business schools in Hong Kong or Asia is that we really see the School not only as a provider of training but as an innovator, a discoverer of knowledge.*

When we started out in 1991, our goal was to be as good as the top schools in the world. We looked to the big European and American business schools as models and competitors.

### International faculty

From the outset, despite strong competition for people, we were successful in attracting a multinational group of faculty who had gained respect in American business schools. Our initial collaboration with the Anderson Graduate School of Management at the University of California, Los Angeles helped a great deal in this respect.

The first intake of academics produced good research and started inundating the prestigious journals with articles carrying the HKUST name. Just their presence on campus spread the word about the University.

The fact that HKUST's name was put on the world map so quickly allowed us to rapidly create exchange and collaborative programs with other leading business schools. They knew we were a quality player. Our undergraduate exchange program started in the mid-1990s and is now the largest in Asia, with over 60 exchange partners. Our joint Executive Master of Business Administration (EMBA) program with the Kellogg Graduate School of Management, the number-one business education provider in the US, has been a groundbreaker in the region.

### A meteoric rise

International recognition soon followed. The School is the only business school in Hong Kong and Asia to have gained dual accreditation from both the US-based AACSB International—The Association to Advance Collegiate Schools of Business and the European Foundation for Management Development.



This year's *Financial Times* ranking, which put our overall MBA program in the top 50 out of some 1,500 worldwide, is further evidence of the recognition we have received. The School ranked first

for the international experience offered by its MBA program, second for its international faculty, and 33rd for its research.

Recently, our Accounting Department ranked number one in the world for research published in the top five academic journals in the field for 2000; and in June, a study of 17 leading journals placed our Finance Department first for research among Asia-Pacific universities. These are impressive achievements and I feel very proud of the departments.



From left: Acting Dean K C Chan, Acting Vice-President for Academic Affairs, Prof Yuk-Shee Chan, and Associate Dean Steve DeKrey are proud of the world recognition HKUST Business School is receiving.

Our philosophy has always been to recruit those who are the best researchers and teachers. Our faculty members are research oriented and extremely international in outlook. But when they have found teaching materials are not geared to local students, they have written their own textbooks based on Hong Kong standards and cases.

### Challenges

Major challenges lie ahead of us. Many people in Hong Kong want management education. People are paying out of their own pockets for our MBA and EMBA programs because management education is important to them. But Hong Kong does not have a long tradition of supporting executive education. We need to convince corporations to come to us, to support a good business school in their own community. We also want to build up more links with the Mainland.

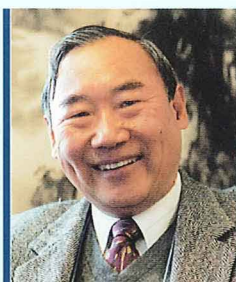
Competition for good faculty will intensify. So we need to create the right environment to keep our academics happy. Business school faculty are basically scholars with scholarly values. If we build a culture and infrastructure where they feel they can be more productive in research and teaching programs than elsewhere, it will induce them to stay here and contribute to our city.

Faced with funding cuts, we will need corporations to step forward. The Government will have a part to play by encouraging companies to do so, and recognizing the value of a top business school to Hong Kong. □

#### SCHOOL OF BUSINESS AND MANAGEMENT

Dean:	Prof K C Chan (Acting)	Faculty:	140 (1 Jan 2001)
Associate Deans:	Prof Gary Biddle	Undergraduates:	2,109 (1 Jan 2001)
	Prof Kar Yan Tam	Postgraduates:	487 (1 Jan 2001)
	Dr Steve DeKrey		





Prof Pang-Hsin TING

## Report of the Dean of Humanities and Social Science

*The School of Humanities and Social Science has taken great strides in faculty recruitment, research, and teaching. Our most prominent achievement has been the recruitment of first-rate professors.*

When I took up the deanship of Humanities and Social Science in 1996, there was only one regular full professor in the whole School. The other professorial faculty members were all on visiting terms. Any crucial development of the School is not possible without a stable team of highly experienced scholars. My strategy since coming on board has, therefore, been to stabilize the operation of both Divisions by recruiting and retaining senior faculty. Over the past five years, we succeeded in recruiting the heads of the two Divisions and five regular full professors in humanities, as well as in appointing two Associate Deans to look after the postgraduate and undergraduate affairs of the School, respectively. All of these professors are renowned scholars in the disciplines of the humanities and social sciences.

At the same time, we introduced a flexible teaching arrangement, in which junior professors with several years of seniority can apply to teach three courses in one semester, leaving the other semester entirely available for their research. This is to help them in preparing for the tough academic reviews for substantiation. Such an arrangement plays a significant role in motivating and retaining excellent faculty.

### Research

As regards research, our School is focusing its efforts on areas of excellence. We have set up three research centers that have rapidly become established in their respective fields of study. The South China Research Center of the Division of Humanities actively conducts and promotes research into the history of Hong Kong and South China. It has started an oral history archive and undertaken a survey of historical buildings for the Hong Kong Antiquities and Monuments Office. The Survey Research Center of the Division of Social Science is accumulating a database of material that will provide future researchers with the means to compare past and present trends. The interdisciplinary Center for Cultural Studies is now working on topics such as the post-colonial era of Hong Kong, the identity issues of Hong Kong people, the experiences of ordinary people, and the relationship between culture, society, and technology.

The School is also responsible for organizing academic programs for the Y K Pao Visiting Chair in Cultural Studies Foundation, inviting world-class scholars in the humanities and social sciences to lecture at HKUST.

The quality of research undertaken by the School is excellent. In the University Grants Committee's triennial Research Assessment Exercise in 1999, our two Divisions attained the highest scores in their respective areas relative to the overall ratings of local institutions. (Each Division scored more than 24% higher than the average of other local institutions.) In addition, the Division of Social Science has consistently scored one of the highest success

rates in applying for the Research Grants Council's Competitive Earmarked Research Grants.

The School has also been actively engaged in forging close ties with prestigious institutions on the Mainland. We have signed collaborative research agreements with the Chinese Academy of Social Science, Peking University, Nanjing University, and East China Normal University. Our biggest cooperative program, in terms of funds and the size of the project involved, has been the research into Chinese linguistics with the Chinese Academy of Social Science and Peking University. Other academic exchange partners include the universities of Zhongshan, Nankai, and Jilin.

### Teaching

We provide credit-bearing general education courses to all HKUST undergraduates. Subjects range from art and music appreciation to history, politics, economics, psychology, literature, religion, philosophy, linguistics, and sociology. In spring 1998, the School launched its minor programs for undergraduates who want to deepen their knowledge of the humanities and social sciences. The initial intake was 64 students, and since then, the enrolment has rapidly grown to 350.

Our quality research and teaching have also benefited the basic education sector. In December 1998, the South China Research Center launched an 18-month program, Understanding the History, Culture, and Society of Hong Kong, for secondary-school teachers. The aim was to provide them with interdisciplinary resources to enrich their teaching.

### Challenges

The most critical challenge to the School still lies in the recruitment and retention of faculty. On the one hand, we need to replace senior professors who are planning to retire or leave the University in the near future. On the other, we are faced with increasing competition in the search for accomplished scholars from institutions in the US, Singapore, and Hong Kong. We must provide a good system and an atmosphere conducive to attracting and retaining these scholars.

The recent funding cuts by the Government will further reduce the resources available to tertiary institutions. This will have a serious adverse impact on the School's development in research and new teaching programs. At present, there is still a lot of room for the two Divisions to develop interdisciplinary programs. Without sufficient resources, our progress in this regard will be severely hampered. □



Humanities students on an archaeological field trip.

#### SCHOOL OF HUMANITIES AND SOCIAL SCIENCE

Dean:	Prof Pang-Hsin Ting	Faculty:	52 (1 Jan 2001)
Associate Deans:	Prof William Tay Dr Yanjie Bian	Postgraduates:	118 (1 Jan 2001)





## Home-grown Entrepreneur Honored

On 29 June, the University awarded an Honorary Fellowship to Mr Sing Cheong LIU, Chairman of Hang Cheong Surveyors Ltd, for his innovations in business management and his contributions to HKUST. Mr Liu is a Hong Kong born and educated chartered surveyor and entrepreneur who has created an award-winning real-estate company in Guangzhou. A staunch supporter of continuous education, Mr Liu has invested heavily in staff development and research activities from day one. His company also sponsors young Chinese academics to conduct research on the Hong Kong and China real-estate markets. He himself became one of HKUST's founding MBA students in 1991, graduating in 1994. His close ties with the University have continued and he is now a Corporate Advisor to the School of Business and Management and a member of the Advisory Committee on Entrepreneurship.



## Tribute to Founding President

The academic concourse on the first floor of the Academic Building has been named the Chia-Wei Woo Academic Concourse in recognition of the founding President's significant contribution to the development of the University. The naming ceremony took place on 29 June, Prof Woo's penultimate day in office as University President. It was a warm occasion attended by his successor, Prof Paul Ching-Wu CHU, his wife, Yvonne Woo, and some 80 members of the Court and Council, faculty, and staff. The Pro-Chancellor, Dr the Hon Sze-Yuen CHUNG, and Council Chairman, Dr Vincent H S LO, officiated.

Prof Woo has also been awarded the honorary titles of President Emeritus and University Professor Emeritus. The latter is HKUST's highest honor for an academic and supersedes the title of University Professor conferred upon him by the University Professors Committee in May.



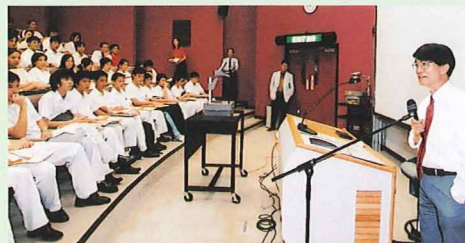
## Green Building Materials

The University has teamed up with environmental technology company 3E Envirotech Products Co Ltd to recycle coal ash into new building materials. Associate Professor Zongjin LI of HKUST's Department of Civil Engineering (third from left) and industry partner 3E will use extrusion technology to develop and manufacture building materials such as high-strength bricks, wall panels and light-weight aggregate from pulverized coal ash, an industrial waste produced by electricity-generating plants. The partnership, which involves an investment of HK\$8 million by 3E, was formalized by 3E's Chief Executive Officer, Ding WANG (fourth from right), and HKUST's Associate Vice-President for Research and Development, Prof Tony EASTHAM (third from right) in a signing ceremony on 2 June.



## General Knowledge for Secondary Schools

The University's 5th General Knowledge Lecture series attracted over 900 secondary-school teachers and students to the HKUST campus from 9 to 12 July. These lectures are given by HKUST faculty twice yearly to stimulate interest among local school students in a wide range of subjects. Topics in this series included wireless communications, air pollution, building structures, globalization, transportation, finance, geotechnical problems, and polymers. The President, Prof Paul Ching-Wu CHU, Vice-President for Research and Development, Prof Otto LIN, and Dean of Science, Prof Michael LOY, gave the opening addresses. Their message was clear and simple: Students need an all-round education to succeed in today's knowledge-based society.



## San Francisco Reunion

Three of the University's Professors Emeritus—Hiroiyuki HIRAOKA, Ming LIU, and Chih-kan SHEN—and other founding faculty and staff members, including the founding Dean of Science, Prof Chih-Yung CHIEN, and their spouses met up for a two-day HKUST family reunion in San Francisco on 13 and 14 July. There was much reminiscing and sharing of fond memories of HKUST particularly during meal times, starting with dinner at the home of Alice and Dr Henry LIU (former Associate Vice-President for Academic Affairs) on Friday evening. Saturday found the party enjoying a seafood lunch by the ocean in Half Moon Bay and dinner in a Chinese restaurant at Millbrae. University souvenirs delivered at the reunion, including those commemorating the farewell of founding President Chia-Wei Woo, were also a big hit.

