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Bulletin

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Cultural Fusion
University Helps to
Protect South China's
Architectural Heritage



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Gold Award (Best Environmental Reporting)
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Race to the Start

One of the 21st century's leading scientists in genomic research said he would be discussing possible future collaboration on influenza during his visit to the University in December 2004.

J. Craig Venter, who pioneered the methods of rapid gene analysis used to decode the human genome, talked to staff and students about the scope of his work and suggested he may be interested in collaborating on the influenza virus.

"Flu is a very critical issue right now," he told a press conference. "We need new ways to make new vaccines based on what we know about the genome."

Venter, founder and President of The J. Venter Institute and The J. Craig Venter Science Foundation said he viewed the mapping of the human genome as 'a race to the starting line, not a race to the finish line.'

His revolutionary new strategy for gene discovery – expressed sequence tags, or EST's – was used to decode the genome of the first free-living organism, the bacterium *Haemophilus influenzae*. His accomplishments in decoding the genetic sequences of the fruit fly, mouse and rat have provided important insights, including a new understanding of the genetic relationship between species.

Using his new whole genome shotgun technique his current research has seen him and his team sequencing microbes in the Sargasso Sea, off Bermuda – a body of water once considered a desert. What he found, however, was 1,800 new species and over 1.2 million new genes.

"The sheer amount of life and diversity was the biggest surprise," he said.

His research has led him on an 18 month global scientific expedition gathering water samples from Florida, Panama, the Galapagos and Polynesia. The information gathered will go into a database accessible for free by researchers all over the world.

The mission of Venter Institute's – not-for-profit organization – is to explore biological energy solutions to environmental issues like global warming and to discover new sources of cleaner and more efficient fuels.

Venter said: "The point of science is not to make money. It's to change the world."



Early Start

The risk of complications for older women during pregnancy does not rise dramatically at any particular age, according to researchers in the Department of Obstetrics and Gynaecology.

New evidence indicates that there is no specific age at which complications dramatically increase, but rather there is a linear correlation between maternal age and pregnancy complications.

Professor Terence Lao Tzu Hsi, Reader in the Department, studied 16,000 births between 1998 and 2001 and documented the risk of ten different complications according to the age of the mothers.

Lao said: "The older a woman carries a pregnancy the higher would be the risk of adverse an outcome, however, there is no age threshold as most people used to think."

In other words the study revealed that the risk rises progressively along with maternal age. But Lao warned: "The findings imply that if a woman wants to have babies she'd better start while she is younger rather than older."



Success for the Press

Hong Kong University Press' growing slate of international authors is paying off with increased sales in the overseas market.

Its rapidly growing list of books on topics of wide academic interest, and authors from as far afield as the United States, Australia, Singapore and Taiwan, has helped build a strong international sales and distribution network. Particularly exciting is the news of a more than 250% growth in sales to North America in the past year.

Winnie Chau, Marketing Manager at the Press, said close collaboration with the University of Washington Press since her visit there in early 2003 had begun to produce results.

"With Washington's help, our books are now selling well and getting noticed in the United States. Of course, having books from American authors has helped enormously".

Pat Soden, Director of the University of Washington Press, added: "With HKUP, sales have grown each year which indicates that your efforts in building a more internationally-focused list are beginning to bear fruit."

And it is not just in the United States that sales have been growing rapidly. Chau went on to report that total export sales are up nearly four times (388%) over the last two years.

"Hong Kong authors can now get wide international notice for their work through the sales network we have built," she said.

Colin Day, Publisher of the Hong Kong University Press put this success in broader context. "Building the sales infra-structure has been important, but for this kind of growth we have to be publishing books with genuine international appeal.

"Our sales growth results from publishing books that have significance for scholars throughout the world. The topics have to interest them and the books have to meet international academic standards.

"We have placed great weight on seeking out books with relevance for scholars across the world and applying stringent peer review to ensure that our books are truly up to international scholarly standards.

"We are linking the name of The University of Hong Kong with outstanding academic work and advancing the global recognition of the University".



State Key Laboratory a First

The University's strong record in researching Severe Acute Respiratory Syndrome (SARS) and bird flu has helped it secure approval from the Ministry of Science and Technology for a State Key Laboratory to be set up on campus.

The laboratory will concentrate on emerging infectious diseases, enabling it to play a leading role in controlling these diseases in China and the world.

State Key Laboratories provide high-level research and development in 92 fields in China and this is the only one located outside the Mainland. It is also the only one to focus on emerging diseases.

Dr Guan Yi, Associate Professor of the Department of Microbiology will be in charge of the laboratory here, together with Professor Yuen Kwok Yung. Their initial focus will be to identify new SARS and bird flu outbreaks, as well as any other new diseases or diseases that are new to China.

"New infectious diseases emerge every year. Our laboratory will be responsible for going to sites, identifying the new virus or pathogen and providing background information to the government so it can devise a strategy for dealing with the matter," Dr Guan said.

Another important duty of the State Key Laboratory is to develop diagnostic reagents for emerging infectious diseases, which will enhance the capabilities of other laboratories in the country in recognising these diseases, he said.

Researchers here will also investigate treatments for patients and train people from around the country in treatment and the identification of pathogens.

The State Key Laboratory is funded with input of \$8 million from Hong Kong's Health, Welfare and Food Bureau. The SAR Government is expected to provide further funds to help maintain the laboratory.



A Safety Net for Vulnerable Fish

Our researchers have played a pivotal role in securing international protection for a popular but increasingly endangered dinner-table fish.

The humphead (Napoleon) wrasse has been listed under Appendix Two of the Convention on Illegal Trade in Endangered Species (CITES), the first commercially important reef fish to achieve protection from this powerful Convention. From January 2005, when the listing came into effect, international trade must be monitored. Importing countries are required to ensure traders have permits that demonstrate catches have been taken sustainably.

The humphead wrasse is a popular luxury item on Hong Kong and Mainland menus, and Hong Kong is the largest importer of the species. The humphead can grow up to two metres long but is slow to mature and reproduce, making populations vulnerable to rapid decline when overfished. Humpheads in the Philippines and Indonesia have been mostly fished-out, and fishermen have been going as far as Fiji and the Seychelles for catches.

Dr Yvonne Sadovy, Associate Professor in the Department of Ecology and Biodiversity, helped to prepare the CITES proposal using trade, fishery and biological data collected since the late 1990s. She also chairs the World Conservation Union (IUCN) Specialist Group that investigated the fishery and conservation status of this species, as well as other wrasses and groupers.

"The CITES listing is symbolic of growing concerns over the international trade in vulnerable reef fish species. It is an important listing because it puts a spotlight on the consequences of uncontrolled trade and unsustainable fishing practices," she said.

"This listing will help to push the agenda for sustainable resource use in coral reef fish fisheries, which receive so little management priority. This is surprising, given the importance of reef fishes for food and livelihoods for millions of people in coastal communities in the tropics."

Until recently, opponents of a CITES listing had argued there was little chance of commercial fish becoming extinct because they produced large numbers of off-spring and, even if numbers did drop dramatically, they would become too expensive to catch. But Dr Sadovy and other researchers in her department have demonstrated such fish could indeed become extinct if they were over-fished. The case of the humphead also shows that,

with luxury fish, the fishing did not stop, instead the price went up along with the incentive to continue fishing the species.

"The CITES proposal was underpinned by strong science and that's what helped it gain acceptance, even by countries typically opposed to commercial fish listings," Dr Sadovy said.

Major fishing nations, including China, Norway and Iceland, supported the listing. The proposal was endorsed by the Food and Agricultural Organisation of the United Nations.

Dr Sadovy is now co-operating with the SAR Government's Agriculture, Fisheries and Conservation Department to address problems in implementing the CITES listing in Hong Kong. Locally-licensed fishing boats are not required to declare their cargo, so voluntary and legislative controls are being explored to encourage fishermen to co-operate with the CITES requirement.

Market and underwater surveys are also being conducted to serve as baselines for determining if the CITES listing helps humphead populations recover. Dr Sadovy is also working with the World Wide Fund for Nature on education campaigns in Hong Kong and Southern China, to make consumers aware of the humphead's plight.

"My experience is that when people know the situation, they are often willing to choose something else to eat. They don't want to contribute to the elimination of a species," she said.



For Love of the Past

Houses built in the 1930s with the proceeds of remittances from villagers working abroad.

Loving it to Death. That was the title of a conference on sustainable cultural tourism that Professor David Lung Ping Yee of the Department of Architecture recently attended. It also sums up his attitude to his passion: preserving the past through buildings and landscapes.

Professor Lung has worked many hours in an honorary capacity to promote the heritage of Hong Kong and headed research teams writing applications for World Heritage status for nearby cities. He is now enjoying the fruits of his efforts.

Rural Kaiping, a watchtower-dotted hamlet off the beaten track in Guangdong, asked Professor Lung to help it apply for World Heritage inscription. The application is now being scrutinised by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and hopefully will win approval within two or three years.

Another project, Macau, is clearing the last of UNESCO's hurdles and, fingers crossed, could be placed on the World Heritage list this summer. World Heritage status brings financial support via tourism income to protect a site.

In each case, Professor Lung was attracted by the story that the architecture had to tell – of Macau's centuries of interaction with the West, and of Kaiping's interactions of a different kind.

"Kaiping is very beautiful, with all these Western-style watchtowers sitting in a rural landscape, but it wasn't the architectural appearance that attracted me. These buildings are physical evidence of the contribution of overseas Chinese," he said.

"The sons of Kaiping of the *Si Yi* region were working in gold mines in Australia and the United States at the turn of the 20th century and they couldn't buy property or marry because of racism laws, so they spent their money in their hometowns. Since they had been in the West, they wanted to build something to show their status. You won't find anywhere else like this."

That desire to preserve a slice of Chinese history, in Hong Kong as well as elsewhere, has been a strong motivator for Professor Lung. He served on Hong Kong's Antiquities Advisory Board for 14 years and worked with other board members to compose a draft policy paper on heritage protection that became the blueprint for the government's public consultation on the issue.

In 1999 he set up and helped to fund the Architectural Conservation Programme in his department, at a time when Hong Kong was suffering a post-handover identity crisis, the government was showing keen interest in saving old buildings and there were few experts in the region in architectural conservation.

The University provided \$500,000 and another \$1.3 million was personally donated by Professor Lung and his colleague, Assistant Professor Dr Lynne DiStefano, with income they earned from carrying out conservation studies for the government.

They have set up a team that also includes Assistant Professors Lee Ho Yin, Ken Nicholson, Honorary Assistant Professors Ivan Ho, Chia Ing-Ping, Senior Research Assistants Euphemia Chow, Datta Poonom, Alexandra Sauvegrin McCellan and Postgraduate Student Sharif Imon.

The academics plough their research work back into the programme, providing students with access to a rich resource of Asian-based knowledge. "We bring our research results to the classroom," Professor Lung said.

The high quality of the programme, which offers Master's, diploma and elective courses, has attracted praise and recognition from international bodies, including UNESCO, the International Council on Monuments and Sites (ICOMOS), the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM) and the Getty Conservation Institute.

The Getty Conservation Institute asked Professor Lung to help with the English translation of *The China Principles*, a major international charter on heritage conservation. UNESCO and ICCROM, meanwhile, asked the team to help launch an Asian Academy

to train professionals and government officials working in heritage conservation. "This was very important world recognition," Professor Lung said.

Delegates from Bangladesh, Hong Kong, India, Mainland China, Macau, Pakistan, the Philippines, Sri Lanka, Thailand and Vietnam attended the academy's first field school in late 2003 for a two-week executive programme (a second session is now being planned). They used Macau as a training ground, with which Professor Lung's team has had close contact.

"China has a big vacuum in terms of the heritage management knowledge needed to package local heritage sites



A house soon after it was built in the 1930s by Ling Lu with money he earned working in Mexico.

COVER STORY

for protection at the national and international levels. I hope more of our graduates will have the opportunity to work there," he said.

Graduates are already starting to share their expertise with others, for example, by training people in building conservation principles in Shanghai and fighting to protect heritage sites under threat in Hong Kong. Significantly, the Hong Kong community is also taking a greater interest in conservation issues, such as the Central Police Station. One of Professor Lung's prime concerns is to heighten public awareness.

The University is exploring the possibility of launching the Architectural Conservation Programme in the Mainland. While Professor Lung is interested, his busy schedule as Head of



Department means it will take another two or three years to get that off the ground. Recently, he and his colleagues launched another programme in Hong Kong, *Cultural Heritage Management*, with the HKU School of Professional and Continuing Education (HKU SPACE), which begins this month.

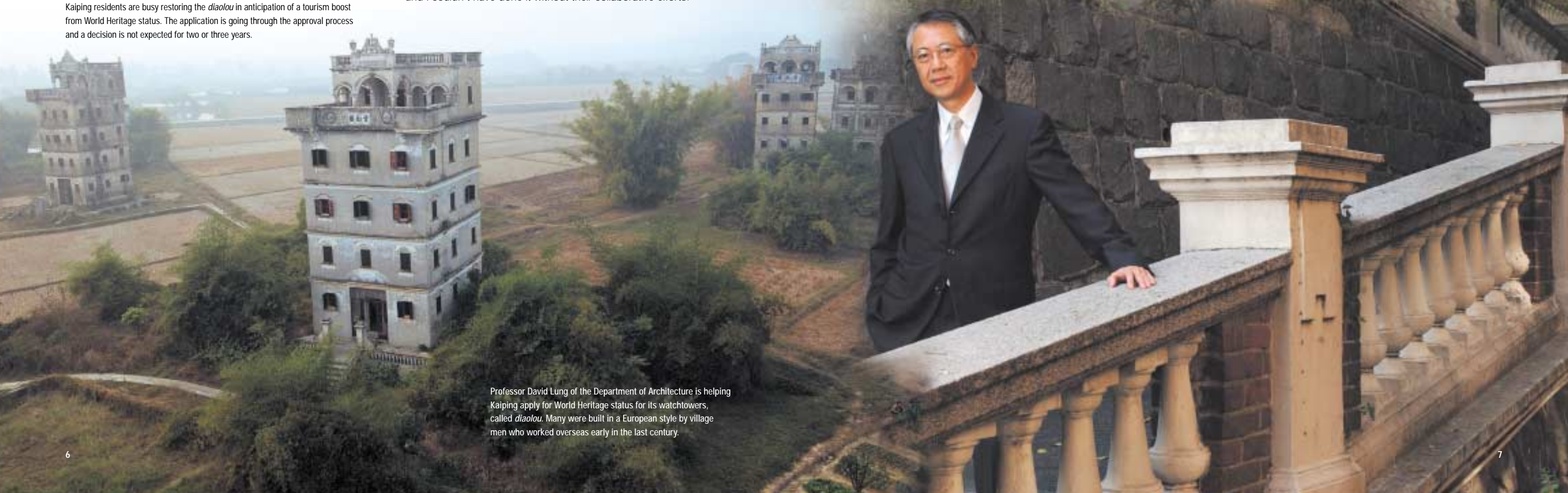
"If I didn't love what I do to death, I wouldn't have done all of this," he said. "My humble purpose is to train students in the region to international standards and have them go into the community and share their knowledge. In turn they all become experts. My team-mates have all contributed selflessly to this end and I couldn't have done it without their collaborative efforts."



Some of the *diaolou* are still occupied and contain original paintwork, furniture and fittings.



Kaiping residents are busy restoring the *diaolou* in anticipation of a tourism boost from World Heritage status. The application is going through the approval process and a decision is not expected for two or three years.



Professor David Lung of the Department of Architecture is helping Kaiping apply for World Heritage status for its watchtowers, called *diaolou*. Many were built in a European style by village men who worked overseas early in the last century.

TV Helps, Tutors Hurt in Literacy

The key to helping children perform better in literacy tests may be the opposite of what parents and schools would like to hear: a bit of time in front of the television, preferably with a domestic helper nearby, and a lot less time doing exercises with private tutors.

These were among the factors that produced higher scores in reading and literacy tests conducted by the University on 10-year-olds for the International Education Association (IEA) last year.

with domestic helpers scored 537 and those without scored 530 – figures Dr Tse said were statistically significant given the large size of the sample.

Domestic helpers spent time watching television with children, chatting in English and teaching English, but their presence also helped students score better in Chinese. “They play an important role in language learning,” he said.

Families that could afford to buy books also gave their children an advantage. In homes with 200 or more books, students scored a mean of 552, compared with 517 for those with fewer than 10 books – although Dr Tse cautioned that ‘real’ books, as opposed to exercise books, were what helped students. Parents also needed to provide pre-schoolers with books and read to them.

“We know Chinese parents are concerned about education, but they put all the resources in the wrong area. They don’t give their time,” he said.

Another poor investment is private tutors. Forty-three per cent of students said they had private tutors, but their mean score was only 525, compared to 539 for those without tutors. Only 12 per cent of students had tutors because of poor academic results, and students mostly attended to finish homework and be given more assignments.

“Most of these activities are not related to reading. It takes up their time, so there’s no

time left to read,” he said.

Unsurprisingly, students who read more and enjoyed reading scored better. But so did those who spent up to five hours a day watching television. Students who watched no television or watched more than five hours a day both scored 516. “Watching good programmes can help in literacy,” Dr Tse said.

This was the first time both Chinese and English were tested – the 2001 tests involved Chinese only. Students scored much lower in English, with a mean of 458 compared to a mean of over 500 in English-speaking countries. This had implications for medium of instruction, he said.

“Only eight per cent of our students reached 500 or more and would be able to study in those countries,” he said. “These are important figures because for the first time the government can know how good our students are compared with the rest of the world.”



The 4,300 students tested performed well when reading for information but were weak in literacy. This involves reading for deeper meaning and requires imagination, experience and creative thinking, according to Dr Tse Shek Kam, Associate Professor of the Faculty of Education who conducted the study with Lecturer Raymond Lam Yu Hong and Teaching Consultant Joseph Lam Wai Ip.

“If you really want to have a knowledge economy, you have to enhance literacy,” he said.

The study, *The Current State of Chinese and English Reading Literacy at Primary Four in Hong Kong (2004)*, was a follow-up to an IEA study conducted in 2001. Although there has been some improvement in the mean score, from 528 to 532, the gap between good and poor readers is getting wider, with poor readers declining.

Economic reasons may have a role to play here. Students

Excellence in Research, 2003-04

Outstanding achievement on the part of the University’s researchers was recognized at the Award Presentation Ceremony for Excellence in Teaching and Research 2004, held on November 23, 2004. At the ceremony five University Teaching Fellowships were awarded and research awards were conferred on 12 outstanding researchers. An exceptional Special Research Achievement Award was made to the team in the Department of Microbiology which identified the novel coronavirus responsible for Severe Acute Respiratory Syndrome (SARS). Three colleagues recently appointed to membership of the Chinese Academy of Sciences and the Chinese Academy of Engineering were also honoured.

Speaking at this fifth annual ceremony, the Vice-Chancellor Professor Lap-Chee Tsui reminded his audience that outstanding achievement in both research and teaching lay at the heart of the University’s reputation.

The Vice-Chancellor pointed out that the *Times Higher Education Supplement* had recently rated the University as one of the top five universities in Asia and one of the top 50 universities in the world.

He pledged that the University would continue to develop its focus on student-centred learning and whole-person development, and noted the success it had already achieved with its problem-based learning approach to teaching. On the research side, the University had identified eight broad multidisciplinary research areas and a number of specific research themes as the focus of its future development, and intended to increase the number of its research postgraduate students by 50% to just over 1,900 by 2008.

Dr Alice Lam, Chairman of the University Grants Committee, who gave a concluding address at the ceremony, praised the University’s determination to excel in both teaching and research. She felt strongly that the vigilant pursuit of excellence must – and would – characterize all that the University did. She said that excellence in teaching constituted a basic fulfillment of the University’s contract with the students who represented the future of Hong Kong, and that excellence in research made a vital contribution to Hong Kong’s future economic development.

Further information about the recipients of the research awards and their areas of research can be obtained from the website or e-mail address provided after each article.



Outstanding Research Student Supervisor Award

The Outstanding Research Student Supervisor Award is granted in recognition of supervisors of research postgraduate students whose guidance has been of particular help to their students in the pursuit of research excellence.

Professor Chau Kwong Wing

Professor: Chair of Real Estate and Construction

Professor Chau's main research interests are interdisciplinary in nature, and have focused on real estate investment, building performance assessment and performance of the real estate and construction sector. In particular, his studies on construction productivity, cost modelling, risk analysis, subcontracting, construction procurement and real estate price indices have successfully challenged existing theories and have won international respect and recognition. He has published and presented over 200 technical and academic papers, and serves on the editorial boards of 13 international peer-reviewed academic journals.

Professor Chau believes that a university's commitment to educating a substantial number of high-calibre postgraduate

students is the hallmark of a distinguished research university. His approach to research postgraduate supervision and education can be summarized in three broad steps. Firstly, he has always tried to attract high-calibre research students. Secondly, he has striven to cultivate a research culture among his students by encouraging them to question received wisdom and to seek out knowledge. Finally, he has done his best to understand his students, in order to tailor a research programme and supervision strategy to enable all students to realize their full potential.

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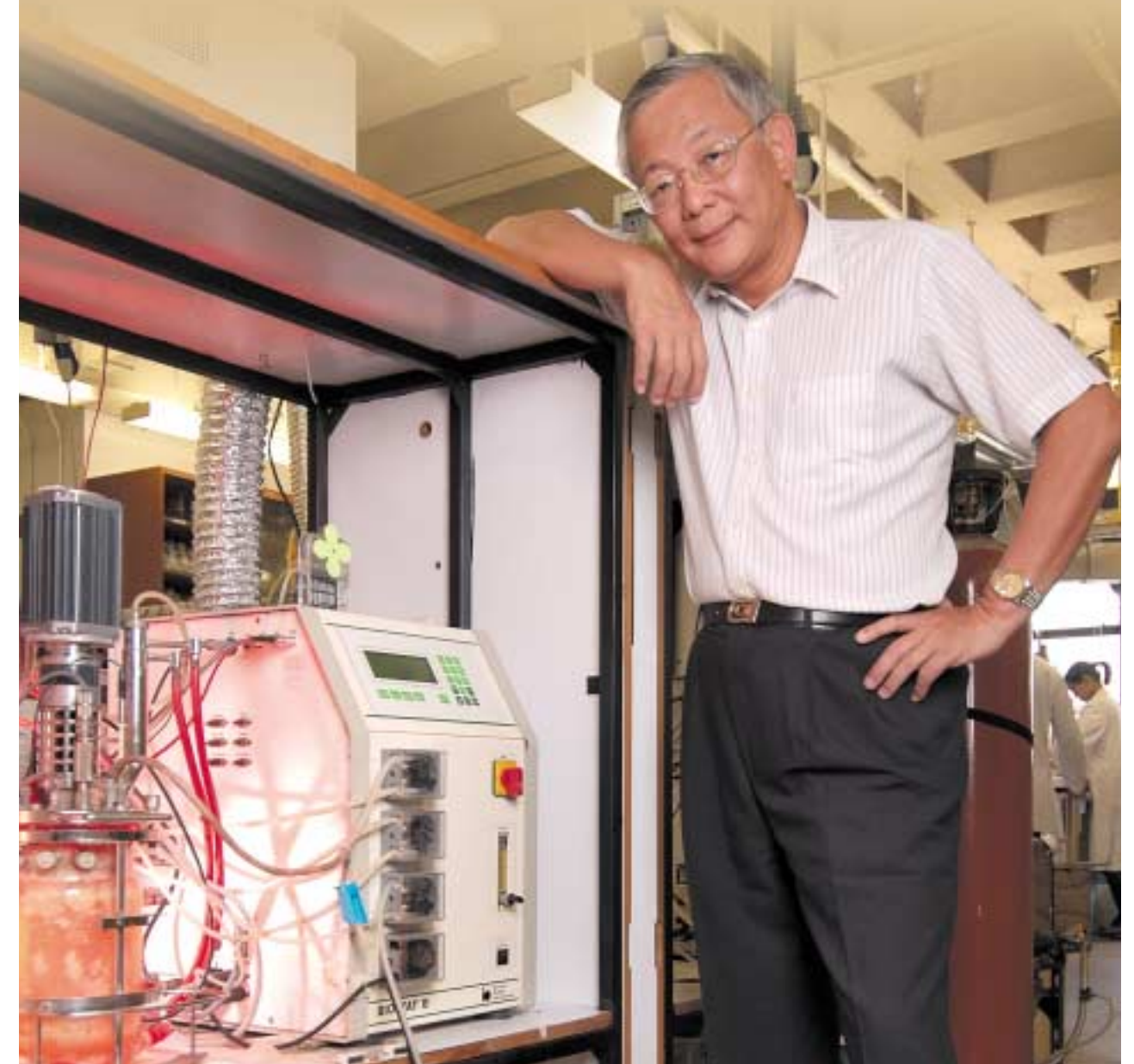
Professor Herbert Fang Han Ping

Professor: Chair of Environmental Engineering

Professor Fang is an expert in environmental biotechnologies, including anaerobic degradation, nutrient removal, bio-corrosion, and bio-hydrogen production. He has already received several research awards. These include a Croucher Foundation Senior Research Fellowship in 1999, and our own Outstanding Researcher Award in 2000. He is presently serving on the editorial boards of three international journals published in the UK and Holland.

Many of Professor Fang's students are now teaching in top universities in Mainland China, or serving in various sectors in Hong Kong. An early student, Dr H. K. Chui, won the first Li Ka Shing Prize in 1994 for the best HKU doctoral thesis. Professor Fang urges his students to be inquisitive, and not to be afraid of challenging experts. He tries to leave them room to grow, develop, become independent, and have fun in life. He would like to share the honour of this Award with all his students.

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Outstanding Young Researcher Award

The Outstanding Young Researcher Award is given to researchers of promise who have attained excellence in their research performance within 10 years of receiving their PhD or equivalent.

Dr Chan Wai Kin

Associate Professor, Department of Chemistry

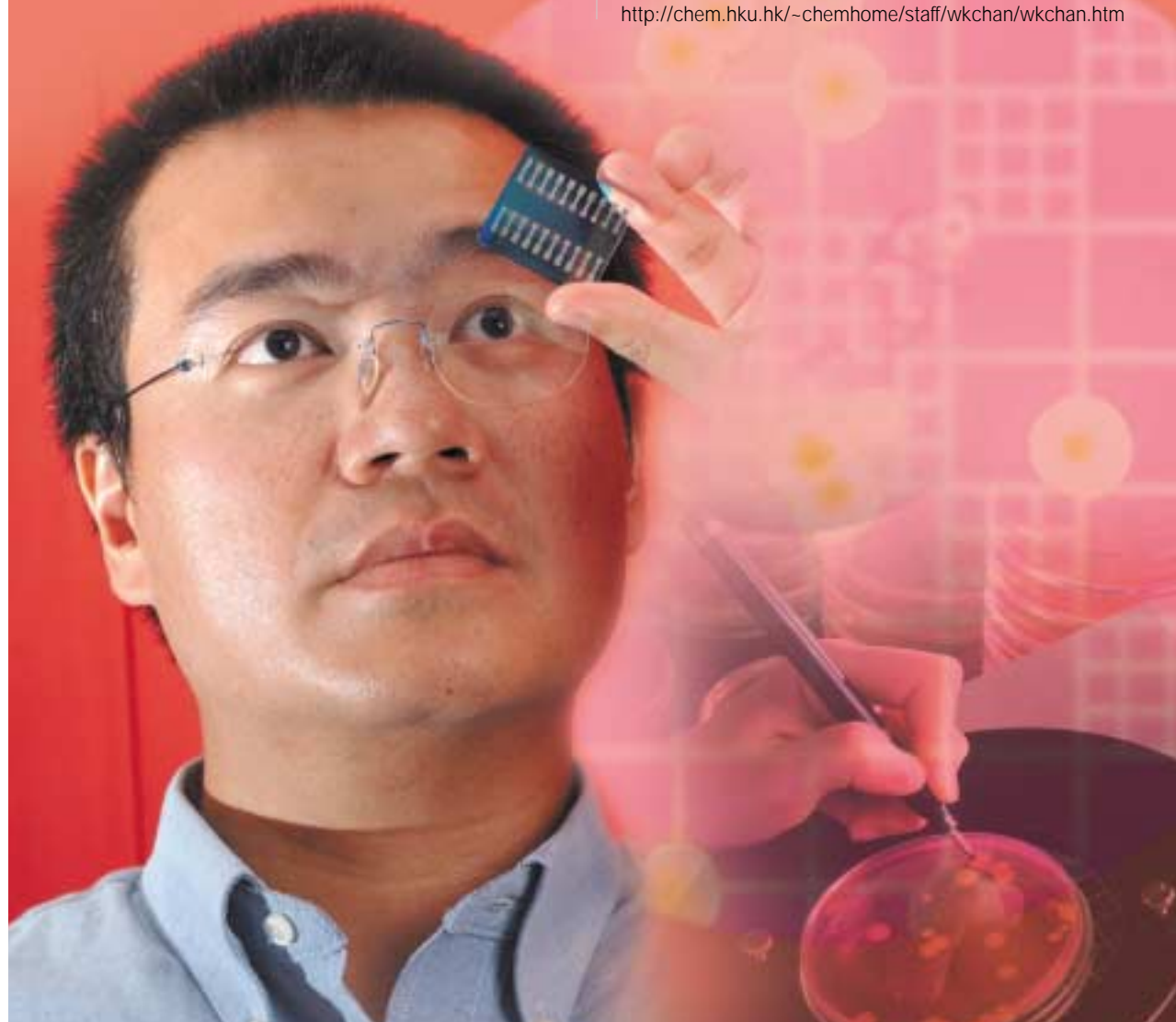
Dr Chan is interested in studying the chemical and physical properties of novel metal-containing polymers. Most of the plastic products commonly used in our daily lives are organic polymers, based on non-metallic elements such as carbon, hydrogen, oxygen and nitrogen. Dr Chan discovered that when some organic polymers were incorporated with metal complexes, the resultant materials exhibited interesting optical and electronic properties, and have important applications in the latest generation of light emitting devices, solar cells, and

chemical sensors. He has published more than 80 articles on his chosen field of research in various international journals.

Dr Chan believes that scientific research is bound to become more interdisciplinary in nature, and that scientists will have to learn to work closely with their peers in several different fields rather than restricting themselves to a single area of interest. He has put this philosophy into practice, and is presently collaborating on a number of research projects with colleagues in other faculties and departments. He also welcomes the opportunity to meet students from other scientific disciplines in the course of their studies, and encourages their work.

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Dr Ricky Kwok Yu Kwong

Associate Professor, Department of Electrical and Electronic Engineering

Dr Kwok has been working on parallel processing research, and on research problems related to mobile computing, wireless networking, grid computing infrastructure technologies, and distributed algorithms. He has published widely on these areas of research in professional journals, and has also co-authored two books on advanced wireless communications and mobile Internet. His recent research endeavours have focused on ad hoc mobile distributed computing, high performance wireless networking, short-range wireless communication technologies, reconfigurable and adaptive computing, and security issues in Grid computing.

Dr Kwok says that doing research is like solving a difficult puzzle. First of all you have to set the problem in context, then you have to generate novel ideas, then you have to proceed by trial and error until you find a solution, and finally you have to communicate your findings so that they can be of use to others. Looking back at his career, he says he has been lucky enough to solve a number of small puzzles; but he still looks forward to the challenge of solving some more fundamental problems.

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Professor Lawrence Lai Wai Chung

Professor, Department of Real Estate and Construction

Professor Lai is an academic who keeps up his professional practice. He coined and promoted the idea of 'planning by contract', which articulates a social contract theory of society and institutional economics. In this context, he has worked closely with Professor Chris Webster of Cardiff University on urban management within a property rights framework and with Professor Frank Lorne of California State University on the institutional mechanisms for sustainable development. He has also critically examined Hong Kong's planning control system in terms of its logical structure and impact on private property

rights, and has applied statistical techniques to evaluate planning decisions in friendly international competition with researchers from the Hong Kong Polytechnic University.

Professor Lai says that he owes an immense intellectual debt to his former teachers at the University, and is also grateful to the Hong Kong Economic Journal for providing him with a vent for his ideas in the 1990s that enabled him to develop his academic reputation. He insists that two qualities are essential for progress in learning: firstly, humility; and secondly, a passionate desire to discover the truth.

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Dr Tatia Lee Mei Chun

Associate Professor, Department of Psychology

Dr Lee is fascinated and inspired by the extraordinary power of the human brain. How does this small organ define our identities and regulate our everyday emotions and behaviour? How do ageing and injury affect the brain's regulation? What can be done to maximize the potential of our brains, or to ensure the fullest possible recovery after brain injuries? Dr Lee is challenged by these important research questions, and has been working with scientists of different disciplines to address them, using functional neuroimaging technology and behavioral methodology. Her research findings in the fields of neuropsychology and neuroscience have been widely disseminated. She has authored one book and four book chapters and published 60 international journal papers, and has presented her work at international conferences on numerous occasions.

Dr Lee believes in teamwork. Her laboratory has very close ties with other research labs and institutes in the university and

beyond. She believes that collaboration across disciplines generates synergies, and is essential for scientific innovation. She also says that it has been a privilege to work with her research staff and students, and that she has enjoyed unfailing support in her work from her mentors, friends and family. They made this award possible, and she would therefore like to dedicate it to them.

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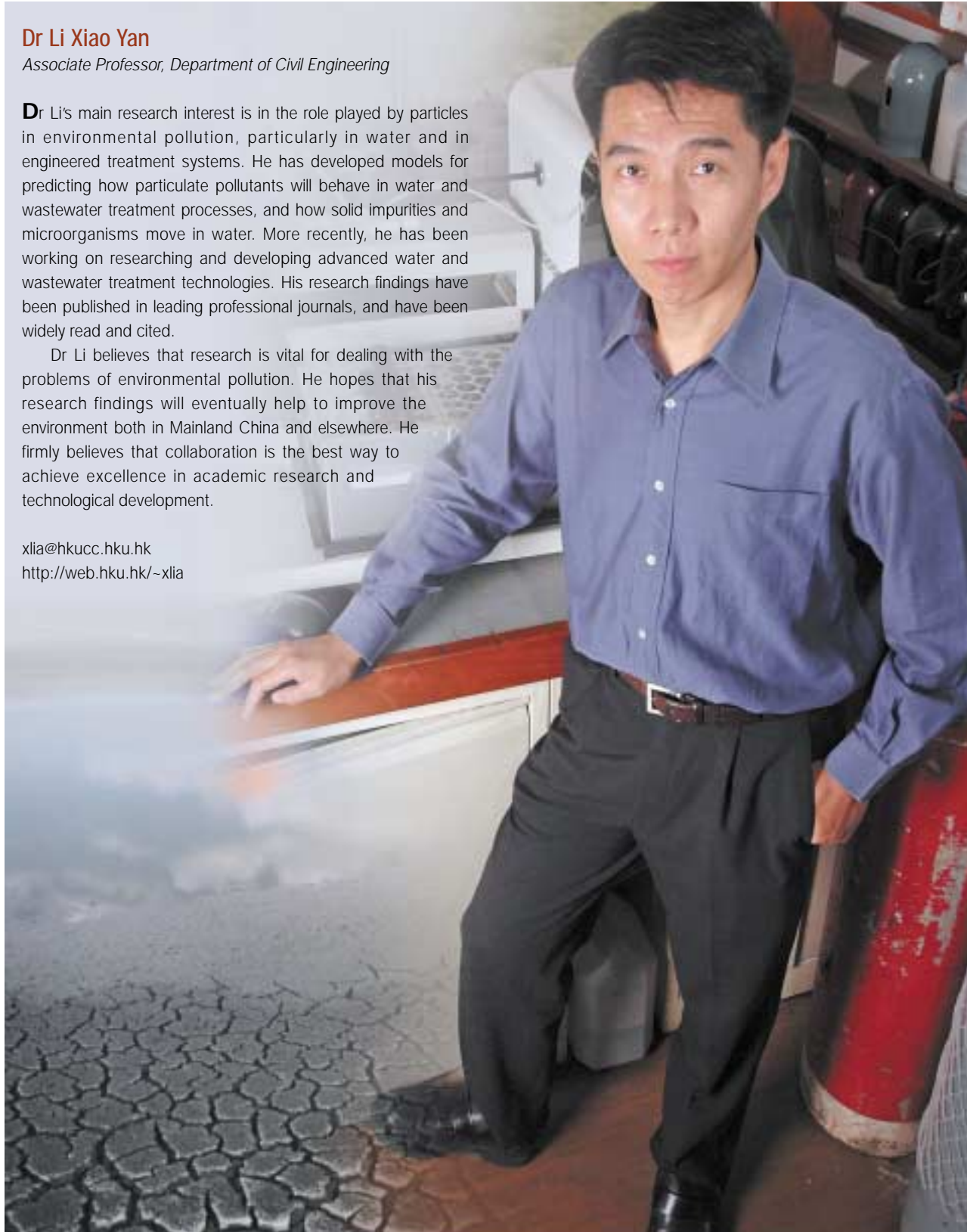
Dr Li Xiao Yan

Associate Professor, Department of Civil Engineering

Dr Li's main research interest is in the role played by particles in environmental pollution, particularly in water and in engineered treatment systems. He has developed models for predicting how particulate pollutants will behave in water and wastewater treatment processes, and how solid impurities and microorganisms move in water. More recently, he has been working on researching and developing advanced water and wastewater treatment technologies. His research findings have been published in leading professional journals, and have been widely read and cited.

Dr Li believes that research is vital for dealing with the problems of environmental pollution. He hopes that his research findings will eventually help to improve the environment both in Mainland China and elsewhere. He firmly believes that collaboration is the best way to achieve excellence in academic research and technological development.

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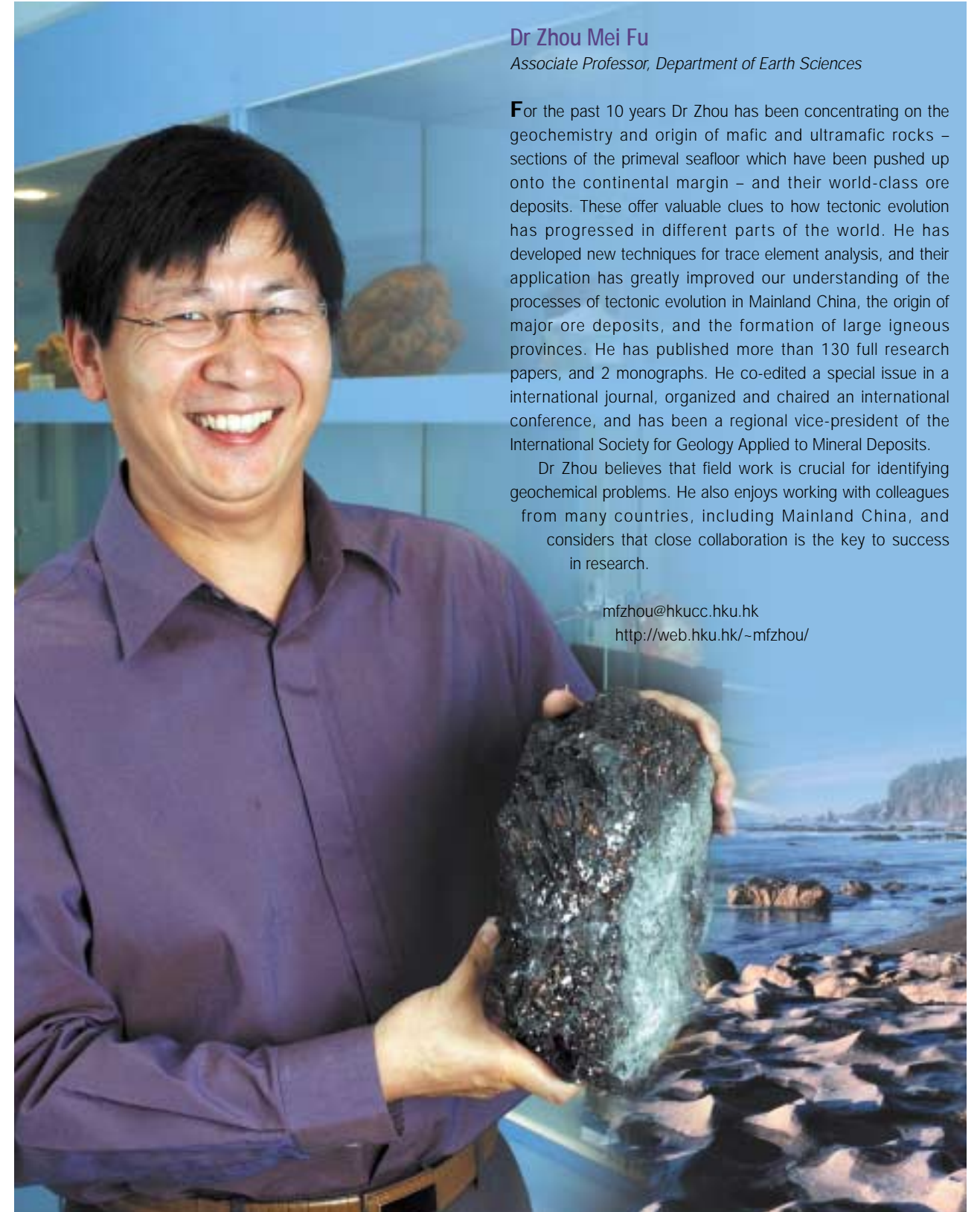
Dr Zhou Mei Fu

Associate Professor, Department of Earth Sciences

For the past 10 years Dr Zhou has been concentrating on the geochemistry and origin of mafic and ultramafic rocks – sections of the primeval seafloor which have been pushed up onto the continental margin – and their world-class ore deposits. These offer valuable clues to how tectonic evolution has progressed in different parts of the world. He has developed new techniques for trace element analysis, and their application has greatly improved our understanding of the processes of tectonic evolution in Mainland China, the origin of major ore deposits, and the formation of large igneous provinces. He has published more than 130 full research papers, and 2 monographs. He co-edited a special issue in an international journal, organized and chaired an international conference, and has been a regional vice-president of the International Society for Geology Applied to Mineral Deposits.

Dr Zhou believes that field work is crucial for identifying geochemical problems. He also enjoys working with colleagues from many countries, including Mainland China, and considers that close collaboration is the key to success in research.

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Outstanding Researcher Award

The Outstanding Researcher Award is conferred for exceptional research accomplishments of international merit.



Professor Lai Ching Lung

Professor: Chair of Medicine and Hepatology

Professor Lai's primary research interest is chronic hepatitis B, a disease presently estimated to affect 400 million people worldwide. Professor Lai and his team have been studying the disease's natural history, genotypes and molecular virology for more than 25 years. He has made pioneering studies of the efficacy of possible treatments for chronic hepatitis B, and has also looked into the use of vaccinations as a possible way of preventing infection. He has also taken pains to emphasize the continuing destructive activity of the hepatitis B virus, even at low viral levels. His research in this field is internationally respected. He has published over 250 peer-reviewed papers, which have been frequently cited, and was co-editor of the first book devoted entirely to the hepatitis B virus. In recognition of his original research into the origins of the disease, he was awarded the Bristol-Myers Squibb Unrestricted Infectious Disease Research Grant from 2001 to 2005.

In his research Professor Lai is careful to ensure that he is asking the right questions. He then brings meticulous analysis and careful interpretation to bear in order to solve the problem he has defined. He remains fascinated by the yet unlocked mysteries of the hepatitis B virus, and is conscious of the famous line from Shakespeare's *Hamlet*: 'There are more things in heaven and earth than are dreamed of in your philosophy.'

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Professor Joseph Lee Hun Wei

Professor: Redmond Chair of Civil Engineering

Professor Lee is interested in the use of hydraulics, the science of water flow, to solve environmental problems, particularly the prediction and control of water quality. He has helped to show how buoyant jet mixing works, and how this principle can be applied in environmental engineering. The methods and models that he developed for predicting initial dilution of wastewater jets in moving water represent a major advance in this field.

They have been widely cited, and are used internationally for environmental impact assessments and the design of sustainable water pollution control systems. In 1998 Professor Lee was awarded a Croucher Foundation Senior Research Fellowship. He has been appointed to a number of important professional posts, and was the winner of the Hong Kong Institution of Engineers Innovation Award for Construction Industry in 2002. Outside the laboratory, he has channeled the same spirit he has shown in his research into competitive table tennis.

Professor Lee believes that research is very much a way of life, and is the best way of training bright young students for working in a knowledge economy.

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Professor John Malpas

Professor: Chair of Earth Sciences

Professor Malpas's research interests range from the history of geology to the origin of high pressure minerals in the earth's mantle, but he is perhaps best known for his work on the geology of ocean basins, both modern and ancient. He was one of the first researchers to realize that the study of ophiolites – fragments of old oceans – could produce a better understanding of the processes that have produced more than 60% of the earth's crust, and has developed models to illustrate these processes. He has also shown the importance of ophiolites in the geological evolution of mountain belts. He was

part of a team which made a unique discovery of minerals from ophiolitic rocks in Tibet, which has shed important light on the volcanic processes that have shaped the earth's geology.

Professor Malpas likes to think of the University not as an institution where older, experienced minds simply pass on their knowledge to the young, but as a place where young, active, inquisitive minds challenge the experience of their teachers and mentors, and keep them young at heart, if not – sadly – in body!

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Professor Malik Peiris

Personal Professor, Department of Microbiology

Professor Peiris has been involved in investigating a number of emerging infectious disease threats, including Japanese encephalitis in Sri Lanka, and bird flu and Severe Acute Respiratory Syndrome (SARS) in Hong Kong. His recent research has focused on the ecology, epidemiology and pathogenesis of avian and human influenza. He has helped define the burden of disease associated with human influenza in the tropics, and has improved our understanding of why avian influenza H5N1 causes such severe disease in

humans. Last year, he was involved in identifying the causative agent of SARS. Together with other members of the University and Queen Mary Hospital team, he developed tests for diagnosing infection and helped unravel the disease process and its transmission.

Professor Peiris believes strongly that the primary aim of education is to challenge students to think for themselves. His supervisory approach is therefore aimed at nurturing creativity and fostering self-learning in his students.

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Special Research Achievement Award

The Special Research Achievement Award was made exceptionally this year to the research team in the Department of Microbiology (represented by Professor Malik Peiris, Professor Yuen Kwok Yung and Dr Guan Yi) which identified the novel coronavirus responsible for the Severe Acute Respiratory Syndrome (SARS).

The people of Hong Kong still remember the atmosphere of fear and tension that prevailed in the territory just a year and a half ago. Between November 2002 and February 2003 the world became aware of a lethal, highly-infectious, new respiratory illness. By March 2003 the new disease – known as Severe Acute Respiratory Syndrome, or SARS for short – was causing havoc. Hong Kong suffered particularly heavily. Nobody knew what caused the disease, or how it was transmitted, and for scientists around the world the challenge was to find the answer to these questions as quickly as possible.

The fight against SARS was a global effort, and the University was in the front line of the struggle. It was a time of great communal endeavour. Researchers in the Faculties of Engineering, Medicine and Science worked hard to answer the basic questions about SARS; the University's doctors treated sick patients; and many other staff members, students, and alumni reached out into the community to educate the public on hygiene and disease prevention. Some

of them, particularly the doctors dealing with SARS patients, were at great risk of infection themselves.

Our researchers in many disciplines scored several important and memorable successes during the early months of 2003. The Special Research Achievement Award commemorates the first momentous breakthrough in the fight against SARS, which was made by a virology team in the Department of Microbiology. The team first tested and rejected the plausible hypothesis that SARS was a form of bird flu. Having narrowed down the search, they successfully grew the viral agent responsible for SARS by using embryonic monkey kidneys, previously used for cultivating the hepatitis A virus. Next, they used a comparison of blood samples from SARS victims to confirm that the viral agent they had grown was indeed the causal agent of SARS. Finally they examined infected cells under a powerful electron microscope and identified a hitherto-unknown coronavirus as the agent responsible. Their findings were reported on March 27, 2003, and published in *The Lancet* on April 19, 2003. This was a remarkable discovery made in record time, under extreme pressure, and – for some members of the team – at considerable risk to themselves of infection. It brought the medical community worldwide significantly closer to pinpointing the cause of the disease, and laid the foundations for other important advances in the fight against SARS.



What It Takes to be a Good Teacher

In the most recent round of awards for teaching excellence five winners were selected for their outstanding contributions to teaching and learning.

Professor John Spinks, who as Pro-Vice-Chancellor oversaw the scheme, said that in making its decision the selection panel focused not only on excellent practice in the classrooms, but also on leadership roles over a wide range of teaching activities, such as curriculum development, the use of innovative methods to enhance teaching and the promotion of good practices in teaching and learning.

Here our teachers and their students talk about what makes an excellent educator.

Dr Chan Lung Sang, Associate Professor of the Department of Earth Sciences said: "I am certainly honoured to have been named a Teaching Fellow but I also owe it to many of my current and former students. Teaching for me would definitely not be enjoyable and fun without them.

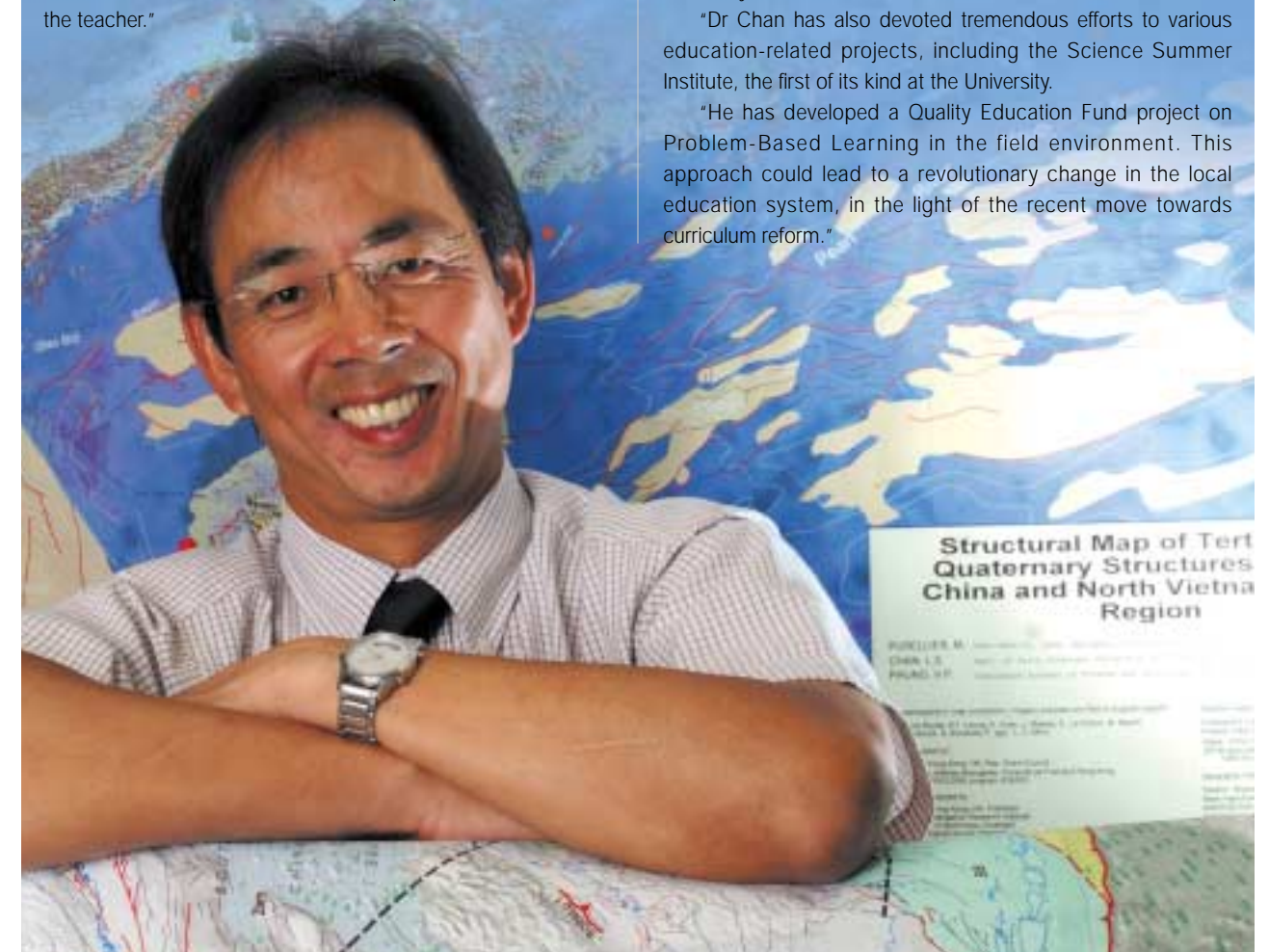
On what makes a good teacher he said: "I don't think it's merely good lectures or good handouts. It's probably many subtle things. I believe the starting point, however, is the teacher-student relationship. The teacher must believe in the student and, in turn, the student will place his or her trust in the teacher."

His former student Irene Or added: "Dr Chan is an enthusiastic teacher who takes his students' interests to mind and heart. His positive attitude and down-to-earth approach greatly motivate his students.

"I was fortunate to be under his supervision for my undergraduate final year project, which was lucky enough to win a Best Paper Award by the Hong Kong Institute of Education. His enlightenment and encouragement also motivated me to pursue my postgraduate studies at Oxford University.

"Dr Chan has also devoted tremendous efforts to various education-related projects, including the Science Summer Institute, the first of its kind at the University.

"He has developed a Quality Education Fund project on Problem-Based Learning in the field environment. This approach could lead to a revolutionary change in the local education system, in the light of the recent move towards curriculum reform."



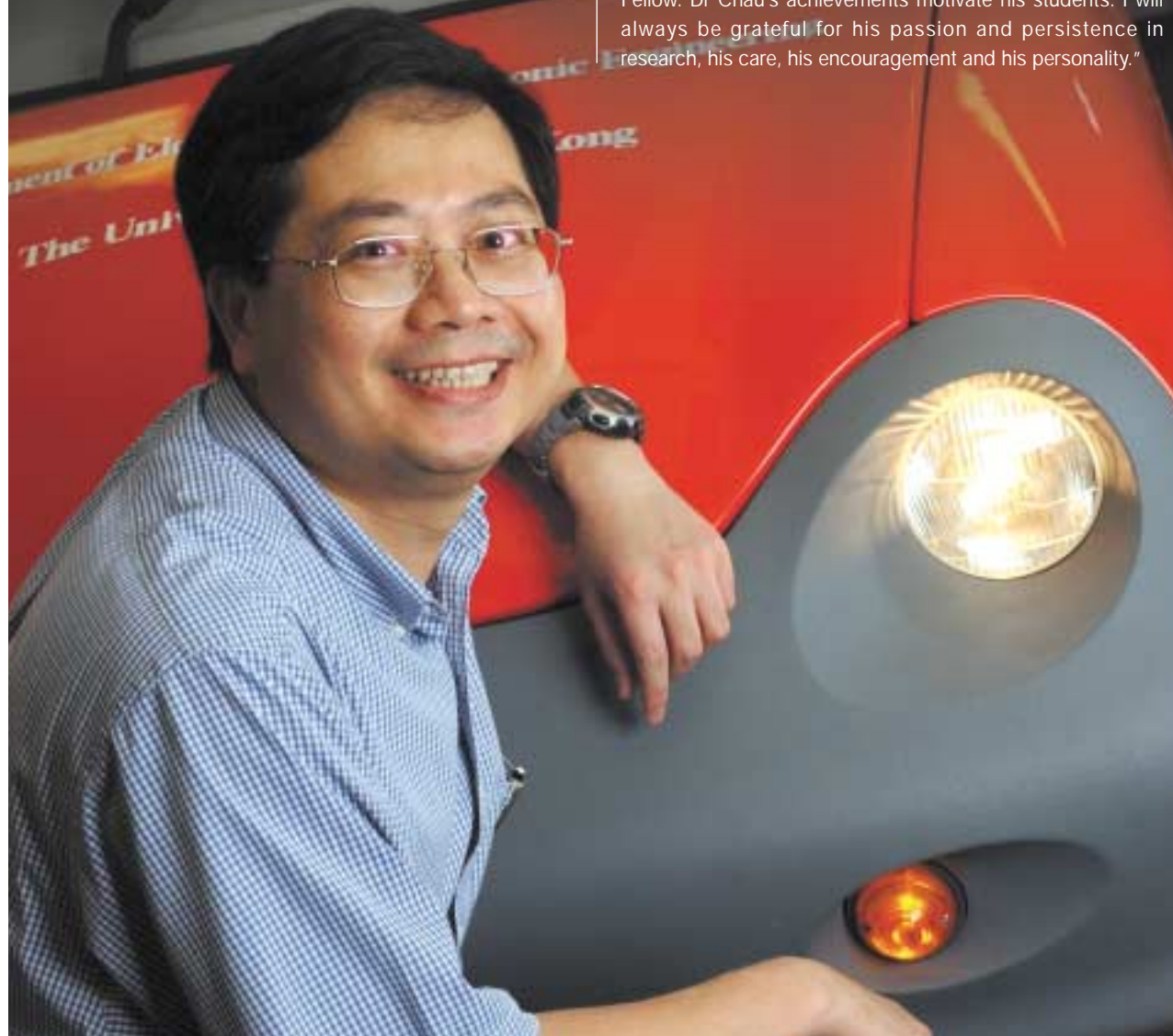
Dr Chau Kwok Tong, Associate Professor of the Department of Electrical and Electronic Engineering said: "A Confucian classic *Li Ji* 《禮記》 said, 'When you learn, you then know your deficiency; when you teach, you then realize your difficulty; by knowing the deficiency, you then self-evaluate; by realizing the difficulty, you then self-endeavor; teaching and learning are mutually motivating'.

"At tertiary education, teachers learn by research. I believe that this saying is everlasting for a good teacher. Since HKU is a research-led University, teaching and research are equally important. The University Teaching Fellow scheme signifies that HKU not only recognizes outstanding research, but also promotes teaching excellence."

His student, Sam Wong, added: "I love to attend his lectures because of his lecture notes – they are the most colourful notes I have ever seen – and because he is such a good teacher. He enjoys teaching and he is happy to hear students' questions. As for us, we enjoy asking him questions.

"Dr Chau was the supervisor of my final-year project. His passion for research encouraged me to follow his example and pursue a higher degree. He encourages us by reminding us how satisfying it will be to achieve the research project. He is an expert at energizing students.

"He has made his name with his research into electric vehicles. Last year he obtained an Outstanding Young Researcher Award and this year he is a University Teaching Fellow. Dr Chau's achievements motivate his students. I will always be grateful for his passion and persistence in research, his care, his encouragement and his personality."



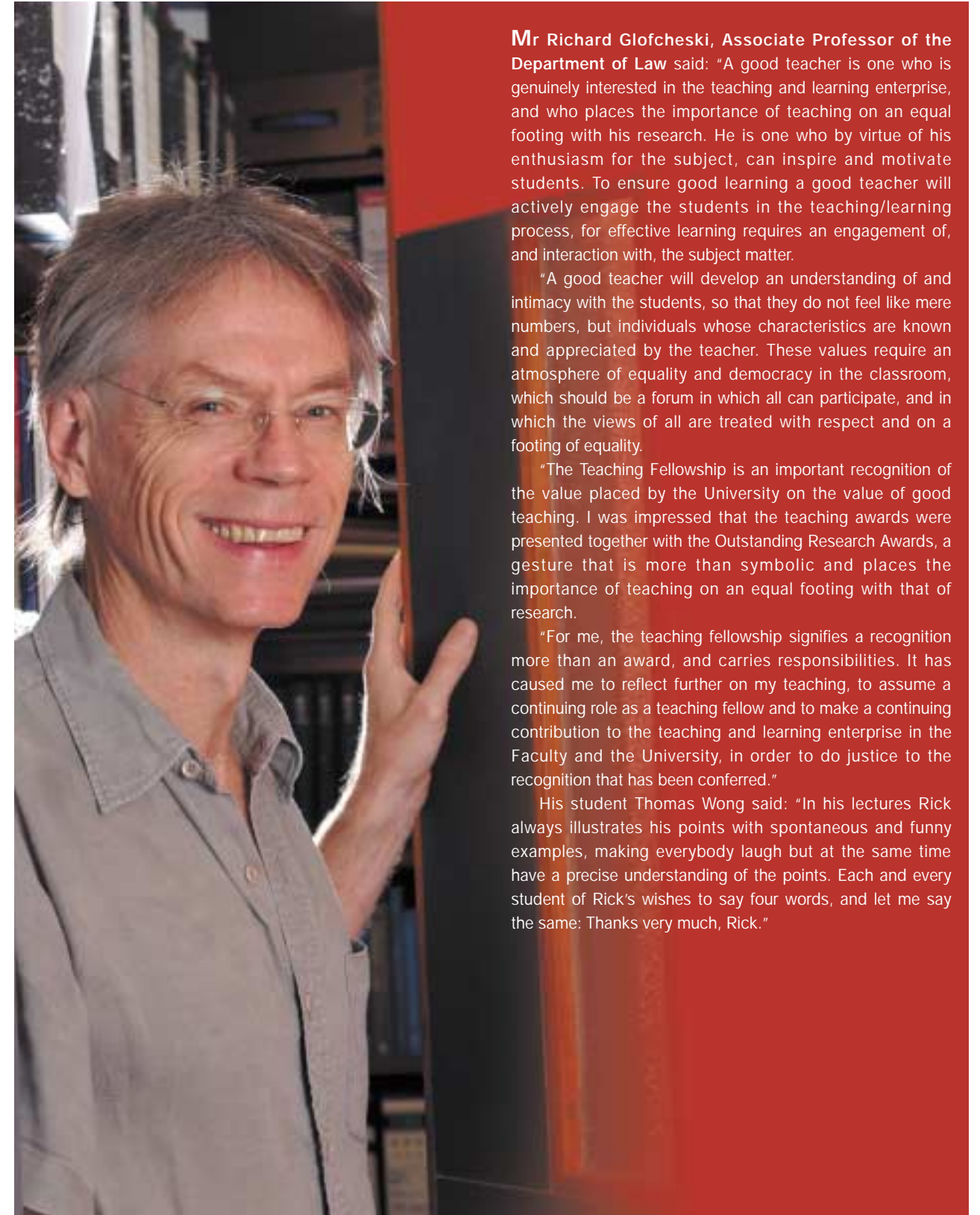
Mr Richard Glofcheski, Associate Professor of the Department of Law said: "A good teacher is one who is genuinely interested in the teaching and learning enterprise, and who places the importance of teaching on an equal footing with his research. He is one who by virtue of his enthusiasm for the subject, can inspire and motivate students. To ensure good learning a good teacher will actively engage the students in the teaching/learning process, for effective learning requires an engagement of, and interaction with, the subject matter.

"A good teacher will develop an understanding of and intimacy with the students, so that they do not feel like mere numbers, but individuals whose characteristics are known and appreciated by the teacher. These values require an atmosphere of equality and democracy in the classroom, which should be a forum in which all can participate, and in which the views of all are treated with respect and on a footing of equality.

"The Teaching Fellowship is an important recognition of the value placed by the University on the value of good teaching. I was impressed that the teaching awards were presented together with the Outstanding Research Awards, a gesture that is more than symbolic and places the importance of teaching on an equal footing with that of research.

"For me, the teaching fellowship signifies a recognition more than an award, and carries responsibilities. It has caused me to reflect further on my teaching, to assume a continuing role as a teaching fellow and to make a continuing contribution to the teaching and learning enterprise in the Faculty and the University, in order to do justice to the recognition that has been conferred."

His student Thomas Wong said: "In his lectures Rick always illustrates his points with spontaneous and funny examples, making everybody laugh but at the same time have a precise understanding of the points. Each and every student of Rick's wishes to say four words, and let me say the same: Thanks very much, Rick."



Ms Katherine Lynch, Associate Professor in the Department of Law said: "Receipt of this award has served to renew my enthusiastic commitment to the teaching of our talented HKU students and to striving for excellence in both my teaching and research related activities with the Law Faculty.

"My teaching experience at HKU has confirmed that if appropriately motivated and supported, our law students have the potential to compete with the best graduates from around the world.

"As such, I believe it is important to adopt an active student centered approach to teaching and learning, emphasizing the development of core legal analytical skills, active and critical reading skills, and research and language skills, as well as learning substantive legal knowledge.

"Innovations in teaching methodology and curriculum design will further enhance this problem-based inter-disciplinary approach to teaching and learning at HKU. This in combination with giving students close attention and immediate feedback, will help ensure that our students achieve their extraordinary potential and succeed in the international marketplace."

Her former student Ramie Tang added: "Katherine demands a lot of her students, yet at the same time is an extremely popular law teacher. She is interested in many aspects of law, but has made a particular specialty of arbitration and dispute resolution. Thanks to her efforts, this field now has a higher profile in the Faculty and is a teaching and research specialty.

"As a former student of Katherine's I can say she has three outstanding attributes as a teacher. Firstly, enthusiasm. She encourages students to systematically analyse and resolve legal problems on their own and to learn to trust their own abilities.

"Secondly, motivation. She is a fantastic motivator – not only as a teacher, but as a friend, mother and captain of various sporting teams.

"And thirdly, dedication. She is completely dedicated to her role as a teacher at HKU. She is at the service of her students and spends a tremendous amount of time giving them attention, guidance and concern."



Dr Nivritti Patil, Associate Professor of the Department of Surgery said he was honoured and humbled to receive the award.

"It's a great honour because teaching is a very noble cause; one can't equate it with anything else, like wealth or material goods. I feel humbled because there are many other teachers who were deserving. This award is a matter of honour and it makes you humble, but it does not stop there, it gives me an added challenge. The honour comes with a responsibility to do better.

"What do I think makes a good teacher? There are practical and philosophical issues. In terms of the philosophical issues I would say if you're going to be a good teacher you have to keep the learner in front of you all the time. Teaching is not a passive process. A teacher is there to facilitate the learning.

"In practical terms if you satisfy the four P's: punctuality,

preparation, presentation and participation, then you will be a good teacher."

His student Kelvin Wong said: "Dr Patil was awarded the MBE for his professional achievements and outstanding service to the people of Papua New Guinea. In 1997, the Faculty of Medicine revised its medical curriculum to emphasize student-centred, problem-based learning and his contributions to this curriculum reform are well known.

"Dr Patil is a great mentor and teacher. He is passionate about his role as a teacher and shows genuine interest in teaching students. He is aware of our needs and problems and is always willing to help by providing fair and constructive criticism.

"He is enthusiastic and his teaching is stimulating. His interesting and dynamic style of presentation motivates students to self-directed learning.

"Finally, he is a good role model as a surgeon and clinician."



Roots and Shoots

World-famous primatologist, Jane Goodall, delivered an inspirational talk to students in November 2004 in an effort to drum up support for her environmental organisation Roots and Shoots.

Goodall's groundbreaking research and unusual methodology has made her a household name. As the first scientist to discover the use of tools amongst chimpanzees she has documented what she terms a 'culture' amongst these primate groups; the handing down of information from one generation to the next through 'observation, imitation and practice'.

By naming the chimpanzees in her studies, instead of numbering them, she redefined research on primates, studying them as individuals with their own idiosyncrasies and distinct personalities.

She said of one: "David Greybeard helped me go through a magic door into a world no other human had gone through: the world of the wild chimpanzee."

Inspired by Dr Doolittle and Tarzan of the Apes, Goodall travelled to Africa in 1958 to work for anthropologist and palaeontologist Louis Leakey. He dispatched her to Gombe National Park where she studied chimpanzee communities.

Within the first six months she had witnessed and documented their use of tools; a revelation which 'blurred the sharp line that man had drawn between man and beast – the belief that only man could fashion and use tools.'

When she telegraphed the news to Leakey he replied: "Now we must redefine man, redefine tool or accept chimpanzees as human."

"It was the first time we realised that chimpanzees did have a primitive culture after all," she said.

She later observed chimpanzees hunting monkeys and sharing the kill very much as early man would have and noticed that their non-verbal communications were very similar to what is seen in cultures around the world today.

"I also learned about the fascinating relationships between



mothers and their offspring." She noted that individuals whose mothers were protective supportive, playful and affectionate tended to have offspring who went on to become individuals in their society who played quite an important role.

"I realised the tremendous importance of early experience and when I first came out of the field it was the child psychologists and psychiatrists who were most interested in the observations I'd made.

"I began to learn something about the personalities of chimpanzees. The male who first demonstrated tool using was also the first to lose his fear of this peculiar white ape. And I named him David Greybeard. Because he began to accept me without fear he was able to introduce me to his closest companions."

But despite her love of field research she realised that to save the forest she needed to leave. And she has used her fame to highlight the plight of the great apes. "More great apes are dying now than at any other time," she said.

In the 1960s chimpanzees in Africa numbered between one and two million. Today only 150,000 remain. Illegal logging and commercial hunting are decimating numbers. She now travels for 300 days of the year giving talks and

encouraging young people to be ambassadors for the animal kingdom.

She has established the Jane Goodall Institute and Tacare in Africa which is growing trees, delivering primary healthcare, starting micro-credit banks and empowering women by giving them access to education and, in turn, reducing the birth rate. Roots and Shoots which inspires young people to make a difference by becoming involved in their communities, is now established in 88 countries.

She believes many of us have lost our connection with our hearts. "What we've lost is the wisdom of indigenous people who consider how their decisions will affect their community seven generations ahead." But is not without hope. Her Roots and Shoots mantra is 'Inspire, take action, make a difference'.

Pride in Our Past

A Collection of artefacts belonging to the University's longest-serving Vice-Chancellor was formally established by his daughter in December 2004.

Sir Lindsay Ride served as Vice-Chancellor for 16 years, from 1948 to 1964, although his association with the University went back as far as 1928, when he joined as Professor of Physiology.

During the Second World War he escaped from Japanese-occupied Hong Kong and became instrumental in setting up the British Army Aid Group in Chungking, which gathered intelligence information and assisted escapes.

His daughter, Miss Elizabeth Ride, has kindly donated a wide range of his materials and artefacts to the University together

with records of Sir Lindsay's long and active life. These include his 1930's published work on genetics and the outer clothing he wore when escaping from the Japanese internment camp in Sham Shui Po.

Her wish is to make her father's documents available to present and future generations of students. In a speech at the ceremony she quoted Sir Lindsay's words.

"In the hands of our youth lies the key to the salvation of this community, but it must be a guided youth and not an exploited youth, and above all it must be a youth that is proud of its past and believes in its destiny".



Miss Ride and the Vice-Chancellor with Sir Lindsay's brigadier's uniform.