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Global Climate Change

Editor
The Registrar

Editorial Board
Allison Jones, Dora Yue

Writers
Kathy Griffin, Allison Jones

Photographer
Richard Jones, sinopix photo agency

Graphic Designer
trinity & co.

Printer
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telephone number: 2859 1929,
fax number: 2546 0456 or
e-mail: bulletin@hku.hk.

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The Iconic Gore Vidal at HKU

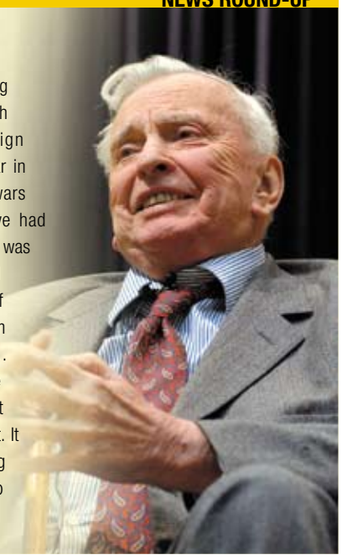
The curtain rose on the Man Hong Kong International Literary Festival at HKU this year with an engrossing conversation with the iconic American writer, Gore Vidal.

Talking to former New South Wales premier, Bob Carr, Vidal told a packed audience, at the Rayson Huang theatre, that the baton of world leadership had passed from the United States to China.

"Being in China I'm naturally reminded of Confucius," said the 81-year-old novelist and political commentator, "and the Mandate of Heaven which fell to us (the USA) in 1945 and we were the masters of the earth, which was far more than any Chinese emperor ever enjoyed. But it was ours, and were not going to let it go. And then we did everything wrong.

"And now we are at the end of it, and the Mandate of Heaven has come back here, which was my feeling as I looked out over Shanghai and saw new buildings, so much better than the ones we have in New York. And I thought, 'Oh it did change, we lost it.'"

He was scathing too about the Bush administration's foreign policy, particularly its war in Iraq. "We've had silly wars before," he said. "We've had disastrous wars. But this was something new. After 9/11 a very ambitious bunch of gas and oil people from Texas…seized control… and before we knew it, we have somebody who can't read or write as president. It is the most appalling thing that has ever happened to the US."



Student Wins International Award

HKU medical student, Kendrick Co Shih, has won an international award for his research on liver transplants.

Kendrick, 21, and his mentor Dr Kwan Man, Assistant Professor in the Department of Surgery, were the only team from Asia to receive the prestigious Rising Star award from the International Liver Transplantation Society, at its annual congress in Rio de Janeiro.

Supervised by Professor Lo Chung Mau, Chin Lan-Hong Professor in Hepatobiliary and Pancreatic Surgery, and Dr Man, Kendrick's research has shed new light on the causes of the high tumour recurrence rate in grafted liver transplants.

The number of adult-to-adult living donor transplants has increased in recent years thanks to cutting edge research and the shortage of organ donors in Hong Kong. However, the rate of tumour recurrence in grafted livers runs at 22 per cent, compared to zero recurrence in donated organs.

As the size of a grafted liver is almost always small for an adult recipient Kendrick's team hypothesized that this might provide a favourable environment for tumours to recur.

Using rat models he was able to demonstrate that the gene, IP10, was significantly over-expressed in small-for-size grafts and was active in promoting the invasive properties of cancer cells, causing cell migration and increased activity.

The findings will lay the foundation for the development of therapeutic strategies to suppress the activity of IP10 and help minimize the recurrence of tumours in small-for-size live organ transplants.

Booker Prize Winner Explores the Nature of Identity

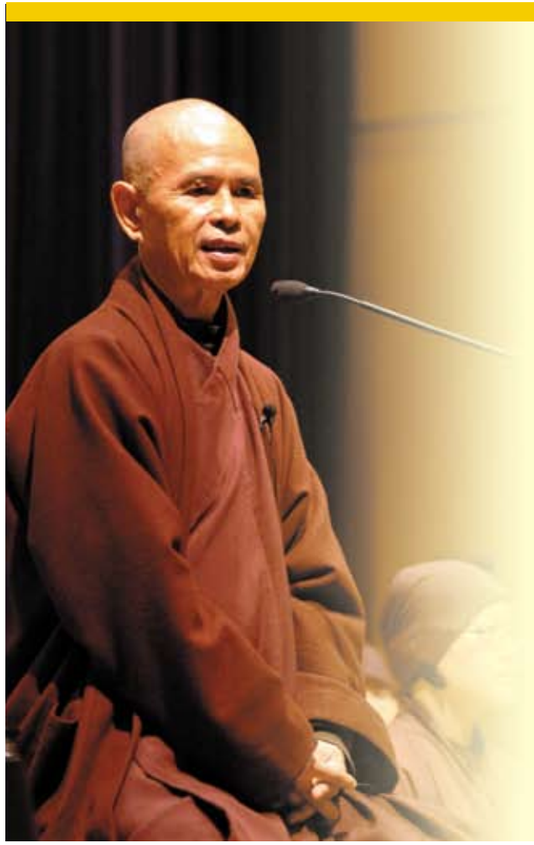
Man Booker Prize winner and author of *The Inheritance of Loss*, Kiran Desai, told audiences at HKU that moving to the US, from her native India, had made her "cruel and ruthless" about what she had left behind.

Speaking during the Man Distinguished Lecture, she gave an account of her journey from her first book to her second and she mirrored many of the themes in her award-winning novel, reflecting on the inequalities of immigration in a globalised world.

"We all know who gets on a ship that is leaving a war zone, what passport will save you," she said, adding that her own move across the globe had "made her desperate to stay on the right side of the class divide."

Kiran, daughter of the renowned Indian author, Anita Desai, explored the construct of identity saying that, despite living in a small village in India, she and her family spoke English.

"There was a reason why we spoke in English, why we loved our dogs in the way English people stereotypically love their dogs…and why we listened to opera. What on earth could be wrong about that? Nothing inherently, but…something in our past caused us to locate the centre far away…and it had the enormous result of making us feel like foreigners in our own country."



World-renowned Zen Master Visits HKU

Nearly ten thousand people benefited from the wisdom of one of the world's leading peace advocates, in May.

Zen Master the Venerable Thich Nhat Hanh, led a ten-day mindfulness programme, co-organized by the University's Centre for Buddhist Studies that emphasized ways of dealing with stress.

The programme opened with a lecture at the University on *True Power* and closed with a talk for 5000 people at the Convention and Exhibition Centre, on *Love and Understanding: the Path to True Well-being*.

In this, the Venerable Thich Nhat Hanh's third visit to Hong Kong, he said he had been prompted to come by reports of the stress levels endured by Hong Kong people.

"Hong Kong is a city that lives under constant pressure," he said, "and its people often experience loneliness and interpersonal alienations. The overwhelming response from the various professionals in participating in the programme is ample proof that there is a great demand for guidance in handling stress and dealing with changes in Hong Kong society."

His public talks provided opportunities for people to learn more about mindful breathing and awareness.

Born and brought up in Vietnam, the Venerable Thich Nhat Hanh is probably the West's best known Zen Master and is the author of more than 100 books of poetry, fiction and philosophy.

Projecting a Good Image

Katherine Ma, the new Director of Communications, is the kind of person who reads opportunity when a challenge is put before her. At the University she has one: to promote an institution that is undergoing unprecedented and rapid change, both physically and in terms of its identity.

"HKU is now 96, it will soon turn 100, and this is a time for people to rethink what the University is. Is it an established institution that mainly sticks to its traditions, or is it getting older but staying young with the vigour and momentum to step forward into the second century of its development? I think it's the latter and that's why I'm excited about this job," she said.

"There's very little complacency here. A lot of academics have been asking me what they can do. I also have a huge list of things they would like us to do and I find it most inspiring that there are these high expectations for this office and my team."

Even more encouraging, their aims match Ma's own priorities for the University's communications programme. Strategic planning, stakeholder management and brand building are all on her 'to-do' list.

"In the past, people tended to think that communications offices only worked on fanfare, speeches, wining and dining. I can tell you it's very little wining and dining but a lot of deep thinking, brainstorming and discussion," she said.

The focus of these efforts is the issues that arise from growing public expectations and the University's large number of stakeholders, who range from staff, students and alumni to donors and other interested parties. Ma pointed out that most universities in Hong Kong had to deal with crises in recent years under pressure from stakeholders and these situations had brought forth the need for greater transparency, fairness and social awareness.

"People have huge expectations and if a university is not seen to be delivering, it generates issues. We need to monitor the situation and be able to anticipate emerging issues," she said.

"Readiness is a part of communications and it's always better if colleagues can share with the communications office at a very early stage when they see the likelihood of an issue brewing into a crisis. I'd rather get a false alarm than a surprise attack!"

Another key area of focus for Ma is the University's international image. 'Internationalism', in terms of recruitment, outlook and reputation, is a necessity if universities want to stay competitive in the 21st century. Ma, who has a Master's degree in International and Public Affairs from HKU and previously worked in the media, agencies and other public organisations, appreciates this is an area requiring special effort.

"HKU, like other universities in Hong Kong, has to walk the extra mile to reach out to the international community and tell them who we are. It's something we can do, but it needs strategy, university-wide co-ordination and resources," she said.

The 'opinion market', in which scholars are available to the international media to comment on developments in their field, is important here, she said. So is making sure that the University presents a singular image to the world and promotes its research and other strengths.

"There's no point just doing something without saying that you've done it and you can do it well. Don't forget, everybody is going in this direction. Reputation management is a highly competitive task. It's a challenge that keeps us vibrant," she said, neatly summarising her new role at the University.

First Class Scientist: Top Honour for HKU Chemist who is Among the Best in the World

Professor Che Chi Ming, Dr Hui Wai Haan Chair of Chemistry, is the first Hong Kong recipient of the First Class Prize of the State Natural Science Award, an award so rigorous in its requirements that no one else in China has been deemed worthy of it since 2003. Yet he is unexpectedly modest about his abilities.

"I am not very smart. There are many people who are smarter than me," he insisted. "But it is true to say that I am devoted in my job. Research is my job, it's my hobby. I have a clear mind about what I want to do. If I can accomplish something, I will be very happy. If not, I won't complain too much."

Professor Che's 'job' for the past three decades has been to control and develop new chemical reactions, and there has been much to make him happy. He has conducted groundbreaking work that places him among the top 0.02 per cent of chemists in the world and brings him an H-index of 57, according to the ISI Web of Knowledge.

The project that won him the State Natural Science Award involves 'reactive metal-ligand multiple bonded complexes' which, until Professor Che's work, were considered too reactive to isolate and control. These molecules are key intermediates directly involved in many important multi-electron and atom transfer chemical reactions, but they have a short lifetime, some lasting as short as a microsecond, making it almost impossible to observe and study them. Professor Che developed means of prolonging their lifetime and has been able to control their reactivities. The results of his work have major implications for the development of new chemical reactions of importance to the green chemical industry.

One upshot of his research is that he has been able to introduce a metal atom into an organic compound, which led to the development of light-emitting materials and other related applications. He is currently working on ways to transfer oxygen molecules from the air into organic compounds, which would provide a safe, free and environmentally friendly catalyst for oxidation, which is used in the chemical and drug industries.

"Before my research, we couldn't understand the chemical reactions of reactive metal-ligand multiple bonded complexes. I created a means of studying them and now we can understand them at the molecular level and develop means to manipulate them," Professor Che said.

It is a proud achievement for a University of Hong Kong alumnus who has spent all but three years of his academic life here and helped to solidify the Department of Chemistry's international reputation. Basic research is rarely recognised outside of specialist circles, but the State Natural Science Award has brought Hong Kong scientists to the attention of the wider community.

"In Hong Kong, scientists don't get much recognition. Before this award I don't think many people knew the significance of my research or that of my colleagues. Now they are starting to recognise that we have good capabilities and we have accomplished something. It helps to bring honour to Hong Kong and it also gives confidence to the students who are studying here," he said.

He hopes the award will also help to convince the government to invest more money in basic research. In the Department of Chemistry, for example, the quality of work done by scientists has continued to improve but funding remains the same.

"This Department has a very good tradition in chemistry research that goes back to the 1960s," he said. "We are now in an even better position to sustain our excellence and develop new fields of research."

Professor Che emerged from the Department under the mentorship of Emeritus Professor Chan Sai Cheung and Professor Poon Chung Kwong, both accomplished researchers. He credits the University for providing him with opportunities he would not get elsewhere, such as a Chair Professorship at age 35. The Chinese Academy of Sciences similarly recognised him early, electing him to the body at age 38, then the youngest academician and first Hong Kong scientist to be so honoured.

The next step? Professor Che predicts that a scientist from this University could receive international recognition of the highest order for their research work. "I think this could happen in the next 15 years and bring the highest international honour to the nation," he said.

The Stresses of China on the Move

Although China's economic growth and the changes in its demographic profile have been analysed and studied by many, little attention has been given to the psycho-social implications of the rapid changes the country has experienced in recent years.

For that very reason Dr Daniel Wong Fu Keung, Associate Professor in the Department of Social Work and Social Administration, has been gathering data on migration and mental health on the Mainland.

And by collaborating with his former students, now at the East China University of Science and Technology in Shanghai, he has found that the migrant's lot is not always a happy one.

"There are about 98 million people living in cities in China now. They mainly come from the middle part of China and go to the richer eastern cities like Shanghai, Shenzhen, Canton," he said.

"One of the major reasons for the trend is the urban-rural income differential. In the poor areas a lot of these people live on the land and have no income. Whereas if they go to the city they are able to earn about 800 to 1,000 RMB a month, which is a very substantial difference for them.

"Another thing is that the central government's encouragement of industry and foreign investments of these coastal cities means that they need more labour. The migrants end up working in factories, construction and service industry."

However, the large number of people moving to the cities is causing concern. Many of the stresses associated with internal migration are a result of China's household registration system, known in Mandarin the *hukou* system.

As Wong explained, "Everyone in China is assigned a residency and if they live in the rural area they are not allowed to live in the city. Also, if they are not living in the correct area they will not be entitled to welfare benefits. So country migrants who move to Shanghai are not entitled to housing, medical or unemployment benefits or to schooling for their children.

"Employers should buy social security premiums for these employees so they can gain some of these benefits, but research tells us that only a small portion of these workers are covered, resulting in people leading stressful, marginalized lives.

"One of the major stresses is employment and financial-related difficulties – long working hours, lack of social security and bullying by the employers. Interpersonal tensions are the other major area of stress. The symptoms include obsessive compulsion, anxiety and interpersonal sensitivity. These migrants are excluded from society in the cities, they are being discriminated against quite badly and are seen as coming in to take others' jobs."

But how does this marginalized experience affect their mental health?

Wong has found that 25 per cent of the male population and about six per cent of women are at risk of developing mental illness.

"It's very interesting that there is such a difference in the numbers. Men in this composition are usually married and are traditionally expected to be the breadwinner. So there's a lot of pressure on them to find, and maintain a job and to send money home," said Wong.

"As for the females, they have less expectation placed on them, so although they do contribute to the family they don't have the same amount of work stress. Also many women find it liberating to escape the countryside, their jobs increase their autonomy and their pride. They see migration as a means of personal achievement."

Wong concludes that one of the major culprits of poor mental health might be the *hukou* system.

"The measures are in place to protect the migrants," he said. "It's a question of exercising the policy."

One way of regulating it would be to set up a governmental body to oversee the welfare of the migrants. "This is not a problem that is going to go away. The central government is very aware of this, but so far it has not found the best solution to deal with the issue."

Unlocking the Secret to Happiness

Philosophers down the ages have pondered the secrets of happiness, sometimes questioning both its value and its existence. Now scientists are close to unlocking its code and might even increase our collective sense of well-being in the process.

Thanks to the Chinese perspective, our understanding of that fleeting emotion has been greatly enhanced. Contributing to that knowledge is Dr Samuel Ho Mun Yin, Associate Professor in the Department of Psychology, who runs a Positive Psychology Laboratory in the Department.

As a proponent of the new positive psychology movement Ho has been researching the Chinese idea of happiness.

As he said: "Research on happiness is not new to psychology. There have been many psychologists doing it for some time, like Professor Ed Diener of the University of Illinois, who has been researching what he calls subjective well-being.

"So well before we had a term called positive psychology many psychologists were doing a lot of interesting research in this area. Hope, optimism, forgiveness have all been studied for many years."

But the Chinese perspective is slightly different. "The western model of psychotherapy is a remedial model," explained Ho. "This means you have a problem and we try to fix it. Chinese philosophy, however, is more focused on prevention, on helping you cultivate a better physical and psychological ideal. That is achieved through daily activities like tai chi and wellness activities. The Chinese philosophy is about cultivating a balance in your life and good human relationships, to cope with daily stress and disease."

The western model of happiness tends to be intra-individual, in which patients reflect on their own lives to measure happiness. Chinese philosophy, on the other hand, tends to be more inter-personal.

"When I ask my patients whether they are happy or not sometimes it's very difficult to answer. If I ask whether their wife or son is happy it is easier to answer. So in the Chinese collective culture we focus on the collective self," said Ho.

In 2000, when Diener asked people in 27 nations whether they were happy or not, many of the Chinese said happiness was not important to them. However their overall happiness level was not particularly low, despite the fact that their purchasing power parity was among the lowest of all nations included in the study (*Ho and Cheung, 2007*).

"Our hypothesis to explain the above findings is that in Chinese culture, if we know that those around us are happy that will contribute to our own individual happiness."

So Ho's use of Chinese philosophy has enhanced the current western model of happiness, which accepts that making others happy can contribute to our own sense of well-being.

He is now applying this philosophy to psychotherapy treatment for Chinese patients. "If you are physically sick and visit a Chinese herbalist they will say you need to build up your immunity. So it's a more long term holistic kind of care. In positive psychology, also, we focus on your strengths so that you can build on them."

To discover their strengths patients are asked to fill in a lengthy questionnaire which will reveal their 24 character strengths in descending order.

"So if a patient is depressed we might try to help them discover their character strengths, coach them to use these strengths."

"The preliminary results from Hong Kong are promising," he said. "We are pretty sure that Positive Psychotherapy Treatment (PPT) will not produce any negative side-effects. But some people receive PPT better than others and we are wondering if we can integrate it with traditional psychological treatments. People are happy to discover their own strengths so they are more likely to come back. Compliance is therefore quite high."

The study will now be repeated in three Chinese cities, followed by a long term follow up. "We hope when people use their strengths more they get more positive feedback and feel more positive and when they attend to their positive feelings they become happier. This is not just for depressed people, if we can help normal people to become happier there is a lot of data to show that they become more productive, healthier and more caring to society."

A Chinese website has been launched and plans to make it multi-lingual are in the pipeline, its address is www.authentichappiness.sas.upenn.edu/

Reference

Ho M.Y. and Cheung M.W.L. (2007). Using the combined etic-emic approach to develop a measurement of interpersonal subjective well-being in Chinese populations, In: Ong, Anthony D. van Dulmen, Manfred H. M., Oxford Handbook of Methods in Positive Psychology. New York, USA, Oxford University Press, 139-152.

Through the Lens of History: The Surprising Beginnings of Cantonese Cinema

Dr Lee Pui Tak is not your typical historian. Far from poring over fusty texts and dusty documents he spends his time watching movies.

"I thought this would be a good way for a historian to choose from the historical texts because it would attract students' attention and it's full of sources," said the Research Assistant Professor in the Centre of Asian Studies.

An historian of modern Chinese history, he said, "For example, from watching films I can tell you about urban history as well as cultural and social history."

Lee tells of the extraordinary reaction to the suicide of Chinese actress, Yuan Ling Yu, in Shanghai in the 1930s.

Yuan, one of the leading film stars of the era, poisoned herself after she was involved in a love triangle with her boyfriend and ex-husband. "The pressure of the media intrusion was too much for her. Her private life was disclosed and she was a very shy person and couldn't cope with the gossip," said Lee.

"But her action had a great impact on other women in Shanghai. The cases of suicide escalated after her death as other women followed her example. So this had a big social impact."

Interestingly, Lee stresses that the earliest Cantonese films were neither produced by Cantonese movie makers nor made in Hong Kong. They were, in fact, made by Shanghainese producers in Shanghai.

"In the 1920s Shanghai supported a very healthy Cantonese population of about 300,000 people. Most of these were compradors and wealthy merchants. They made up the middle and upper classes of society. So everything they subscribed to was Cantonese. And at the time the most popular form of entertainment was not film, but opera – Cantonese opera.

"The Shanghainese film makers, which included men like Sir Run Run Shaw, became some of the earliest pioneers in film. The earliest films had no sound, but the Shaw brothers made the first talkie movie and brought in the Cantonese opera element to beat their rivals," said Lee.

"The first Cantonese film with sound was the musical *The White Golden Dragon* or *Bai Jinlong*. It was hugely popular all over the country, even in Hong Kong. After that, Shaw brothers produced more Cantonese films and recruited Cantonese people, not just movie stars but also the camera people, artists, fashion designers. The Cantonese imported all the latest machinery to make films and run cinemas. So the Shaw brothers had a very successful business with their company Unique Film Production."

But competition, a clean-up campaign in the industry, and the Second Sino-Japanese war drove the Shaw brothers to Hong Kong where they contributed enormously to the fledgling movie industry.

"In the 1930s many Hong Kong producers modeled their own films on the Shanghainese ones. So they took the same story, tried to recruit the movie stars from Shanghai as well as the camera people and produced their own," said Lee.

Meanwhile on the Mainland, the Nationalist government launched the national language campaign to promote a single-language nation and demanded that filmmakers stop producing Cantonese films, thus forcing Cantonese to fall out of favour and sounding the death knell for Cantonese cinema on the Mainland.

But the Cantonese diaspora continues to play its part in the industry by supporting locally made films and soap operas in Chinatowns across the globe.

The Implications of Living in a Warmer World

Although research on the regional impact of climate change has experienced a low priority in Hong Kong, the University has identified it as a strategic research theme. Here we offer a glimpse of some of the research being conducted at HKU in this increasingly-important area.

A Quest for the Best Climate Projection Tools

Dr Chen Ji, an Assistant Professor in the Department of Civil Engineering, is using a regional climate model to study climate projection. Echoing a widely-held belief he said, "It's difficult to predict climate change exactly. The Hong Kong Observatory's projection is that there will be about a 3.5 degree increase in temperature over the next one hundred years in Hong Kong. But verifying this change and understanding the uncertainty of the projection require a lot of research."

Currently, the basic tool for studying, and projecting, climate change is the global climate model (GCM). It has the ability to consider different scenarios, including greenhouse gas emissions. But the problem, according to Chen, is that the current capability of the climate model may not exactly predict abrupt climate change features.

"There are a lot scientific issues involved in climate projection. We know that climate change, especially after the 1980s, has been quite rapid. Some of this is due to land cover changes, some to urbanization and greenhouse gas emissions."

But, although global climate models are important tools for studying climate change, they generally cannot give details on regional climate. The Global Spectral Model (GSM) is used to simulate global climate. Chen used the Regional Spectral Model (RSM) to downscale it for specific regions, like Southern China.

He then used climate projection data from the European Centre Hamburg Model (ECHAM) to project the temperatures in Hong Kong in the months of January and June between 2010-2014. ECHAM's data for January and June 1971 to 2000 was used to compare the pattern.

"After downscaling and taking the 30-year climate average for the region I looked at the domains from different spatial resolutions – 15 km for Hong Kong and 30 km, which covers the entire Pearl River Basin (PRB).

"In January for the PRB domain, the average temperature for the period was 14.53 degrees. But the ECHAM projection for 2010-2014, is above 17 degrees.

"If we look at June, and the smaller domain of 15 km for Hong Kong, the average increase in temperature is not so significant – only about point five degree increase.

"The temperature increase projected by the global model of 3.5 degrees for the next one hundred years generally combines everything together. But by using the regional model we can see that the significant increase is in January (or winter, dry season). In June (or summer, wet season) maybe it's not so significant."

Chen said he was confident about the results because his previous research showed a similar pattern. "So when I saw these results I thought they were very interesting and also quite reasonable.

"The observation data, station recorded data, for winter months in Hong Kong between 1980 and 2000 reflects this. So if this trend continues maybe we will end up with a less dramatic change in the seasons.

"There are still many challenges with downscaling but I think the way we are working now is very solid, we can move step by step towards understanding climate change. It's very important for human beings especially in terms of understanding extreme weather. To understand floods and droughts we have to understand climate and we have to understand atmosphere. And the way we are working can be useful for understanding water sources security for the region."

What his research has shown is the necessity of downscaling global models to study regional and local climate change.

"Although downscaling is a challenge, the simulation domain and spatial resolution are critical factors for evaluating projections and studying climate change."

We Must Do Better, Says Sustainability Expert

We should stop considering waste water a nuisance and look at it as a valuable substance, according to a leading expert in sustainability.

Time is running out, said Professor Peter Wilderer, Director of the Institute of Advanced Studies on Sustainability at the European Academy of Sciences and Arts, Munich, to change the way we utilize water.

At the William Mong Distinguished Lecture in Engineering and Computer Science, he told a packed audience that we have ten to 15 years to make the necessary shift.

We have plenty of motivation, he stressed, citing population growth, migration and urbanization, global warming and climate change and over-usage of natural resources.

“At the moment we have 6.5 billion people. By 2035 the world population is expected to be beyond eight billion, with 65 per cent of them living in cities.

“Growth of the urban population results in over-proportional increase in demand for water and food, and results in huge waste water generation. When people move to cities they demand a better lifestyle, this results in over-proportional use of water resources and land. Time is more than ripe to re-think what we are doing and shift the paradigm.”

Wilderer explained: “The old paradigm is to deliver water with sufficient quantity and quality and to remove waste. But when you look at it in practice we procure waste water and we want to get rid of it as fast as possible. We get water from a reservoir, treat it if necessary, then send it to customers. We use it, waste water is produced which goes through a system of sewage pipes; it will get some treatment, then goes back to nature. We call this the once-through system.

“The technology we use today dates back to ancient civilization, to the Romans. What we have is contemporary applications of ancient systems. The old paradigm for waste water is obsolete.”

Wilderer’s new paradigm is based on the fact that we are living in a knowledge society. “Shouldn’t we be able to come up with a more intelligent solution? We should use our brains instead of sewers.”

Instead of single discharge, he said, we should consider the re-use of water. We should see catchment, sanitation and water supply embedded in an enabling frame.

“As engineers we have to solve problems as they appear. To do this we cannot work alone. We need investment, insurance and professors to teach a new generation. But we also need artists, philosophers, law makers, politicians to be involved as well. We need the media to report. We need architects, urban planners, and the input of land users. We need co-operation with industry, agriculture, enterprises.

“Without the rest on board we can’t work. So we have to try to get the enabling environment right. We need a more intra-disciplinary approach, working with chemists, economists, social scientists, we should ask the customer what they want and respect the civil society so it becomes a trans-disciplinary approach.”

“So far ours has been a response to disaster approach,” he said. “And the technology has been developed under wet, moderate, wealthy conditions. Are we sure this also fits in situations where people do not have money? Is the old technology the best solution to those situations? Is it reasonable to apply the old technology to Calcutta, or Africa or places where the planet is hot and dry?”

Wilderer offered several options for moving forward. One is integrated water resources management (IWRM) - a philosophy of seeing the whole picture; a systems approach that sees the management of water in a holistic way. But success demands a change in the attitude by political decision makers.

Another hypothesis is to relieve pressure on metropolitan areas by investing in job opportunities in the countryside.

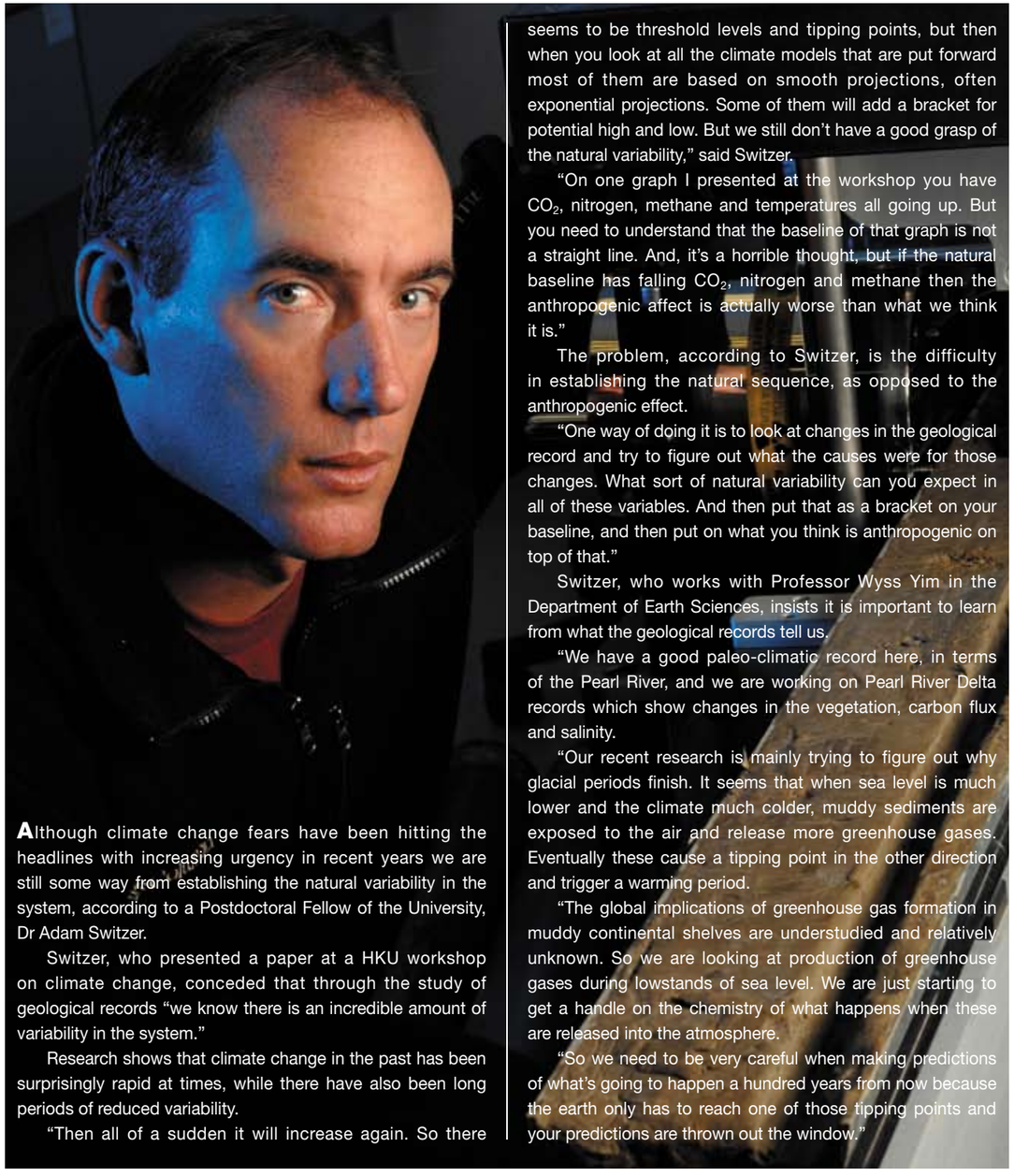
Source separation is also an option. “We could separate grey water from urine and faeces. It makes more sense to collect the grey, yellow and brown water separately. This would have to be done when the house is under construction so would need the architects on board.

“Grey water can be easily treated and directly used for flushing, cleaning or irrigation. Faeces could be used for making energy. We could have a decentralized approach, treating the water of single houses like they do in Tokyo. Separate collection and treatment will save a lot of energy.

“So the old assumption is that waste water is a nuisance, the new assumption is that waste water is a source. We have to develop this technology to bring it to the market quickly because this is a rapidly-changing world.”

But, he stressed, technology alone cannot solve the problems. “We have to consult with all the stakeholders, participation is very important.”

The Problems of Predicting the Future



Although climate change fears have been hitting the headlines with increasing urgency in recent years we are still some way from establishing the natural variability in the system, according to a Postdoctoral Fellow of the University, Dr Adam Switzer.

Switzer, who presented a paper at a HKU workshop on climate change, conceded that through the study of geological records "we know there is an incredible amount of variability in the system."

Research shows that climate change in the past has been surprisingly rapid at times, while there have also been long periods of reduced variability.

"Then all of a sudden it will increase again. So there seems to be threshold levels and tipping points, but then when you look at all the climate models that are put forward most of them are based on smooth projections, often exponential projections. Some of them will add a bracket for potential high and low. But we still don't have a good grasp of the natural variability," said Switzer.

"On one graph I presented at the workshop you have CO_2, nitrogen, methane and temperatures all going up. But you need to understand that the baseline of that graph is not a straight line. And, it's a horrible thought, but if the natural baseline has falling CO_2, nitrogen and methane then the anthropogenic affect is actually worse than what we think it is."

The problem, according to Switzer, is the difficulty in establishing the natural sequence, as opposed to the anthropogenic effect.

"One way of doing it is to look at changes in the geological record and try to figure out what the causes were for those changes. What sort of natural variability can you expect in all of these variables. And then put that as a bracket on your baseline, and then put on what you think is anthropogenic on top of that."

Switzer, who works with Professor Wyss Yim in the Department of Earth Sciences, insists it is important to learn from what the geological records tell us.

"We have a good paleo-climatic record here, in terms of the Pearl River, and we are working on Pearl River Delta records which show changes in the vegetation, carbon flux and salinity.

"Our recent research is mainly trying to figure out why glacial periods finish. It seems that when sea level is much lower and the climate much colder, muddy sediments are exposed to the air and release more greenhouse gases. Eventually these cause a tipping point in the other direction and trigger a warming period.

"The global implications of greenhouse gas formation in muddy continental shelves are understudied and relatively unknown. So we are looking at production of greenhouse gases during lowstands of sea level. We are just starting to get a handle on the chemistry of what happens when these are released into the atmosphere.

"So we need to be very careful when making predictions of what's going to happen a hundred years from now because the earth only has to reach one of those tipping points and your predictions are thrown out the window."

To the Ends of the Earth

Signs of life in Earth's driest corners provide clues to what Mars may offer.

Research involving the University's scientists is helping the American space agency, NASA, to develop strategies to detect life on Mars, and overturning traditional views that hyper-arid deserts are lifeless.

On field trips to Earth's driest deserts, researchers have encountered microscopic life forms amid desolate conditions similar to Mars. These areas receive less than 25 millimetres of rain per year – and may get as little as 10 millimetres in 10 years.

Nonetheless, colonies of bacteria cling to the undersides and insides of the desert rocks and have managed to survive up to 12,000 years, living on nothing but sunshine and miniscule amounts of water.

These one-celled organisms have also survived desiccation – they can recover after completely drying out – and they were even able to withstand radiation levels equivalent to those on Mars in experiments, so long as they were shielded by rocks.

"This research is not saying there is life on Mars, but it makes it more plausible that this is a useful model for those who are looking for life on Mars," Dr Stephen Pointing, Assistant Professor of the School of Biological Sciences said.

"They shouldn't be sending little Rovers out to search the surface for life, they need to look under rocks instead."

Pointing has studied hyper-arid deserts in China, South America, Australia and Africa, including Yungay in the Atacama desert in Chile, the driest place on Earth.

"Yungay was previously regarded as lifeless but there were these white quartz rocks on the surface and when we dug them up, we saw they were dark green below the surface. This was due to photosynthetic bacteria that had exploited tiny gains in moisture within this niche to survive," he said.

These bacteria have now been documented in most of the hyper-arid deserts visited, and although they are all related, it has been shown that they have evolved to become genetically distinct from each other as a result of isolation and adaptation to different climates.

The findings are of interest not only to astrobiologists, who look for life on Earth that is similar to what could exist on other planets, but also those who seek to understand changes in our environment.

"The abundance of these colonies could be a very good indicator of catastrophic environmental shifts from aridity to hyper-aridity. Arid conditions you can recover from, but hyper-arid ones you can't," Pointing said.

Arid deserts have average rainfall of 25 – 200 millimetres per year and can support more life forms than hyper-arid ones. They are also less likely to produce the sand storms that plague some areas of China, whose land mass is 28 per cent desert. Assessing microbial colonies there could be a useful tool in monitoring the spread of hyper-desertification and other environmental changes, he said.

The findings were recently published in two leading journals in their fields, *Environmental Microbiology* and *Microbial Ecology*, and are part of on-going work by Pointing and his Extremophiles Research Group into life in extreme environments.

Although they are also investigating volcanoes, geothermal hot springs and hyper-saline lakes, it is the hyper-arid deserts, in particular the Atacama, that provide the starkest picture of what life might be like on another planet.

"Most people think of deserts as having cacti and camels but you only find those in arid or semi-arid deserts. Where we go, there are no animals or plants. It's really hard field work, there's low oxygen levels, it's cold, it's very dry, the sun exposure is quite hard. The weirdest thing is the silence because there are no birds. Life is just hanging on in these places," Pointing said.

Excellence in Teaching and Research, 2005-06

Outstanding achievement on the part of the University's teachers and researchers was recognized at the Award Presentation Ceremony for Excellence in Teaching and Research 2006, held in the Rayson Huang Theatre. During the ceremony four University Teaching Fellowships were awarded and four Outstanding Research Student Supervisor Awards, three Outstanding Researcher Awards and eight Outstanding Young Researcher Awards were made. Under a new Faculty-based award scheme, ten Research Output Prizes were also presented in recognition of outstanding individual publications.

Speaking at this sixth 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.

He noted that the University could boast the highest number of peer-reviewed publications per researcher in the region, and continued to win the largest share of funding in the Research Grants Council's (RGC) annual Competitive Earmarked Research Grant exercise. It also pursued a successful and internationally-respected teaching philosophy, which focused on student-centred learning and whole-person development and employed a challenging, problem-based learning approach.

The Vice-Chancellor said that the high quality of its teachers and researchers had consistently attracted top students to join the University. He noted that the University's students did better in critical examinations than their counterparts at other local tertiary institutions, and that the University's levels of English proficiency were also the highest of any UGC-funded (University Grant Committee) institution.

Dr the Honourable David Li Kwok Po, the University's Pro-Chancellor *(pictured below)*, was the Guest of Honour at the ceremony and gave a concluding address. He reminded his audience of the strenuous efforts made by each of the award winners, and praised the University's commitment to excellence. "The high quality of the work recognized today is also a tribute to the unremitting efforts of the University's management teams at university, faculty and departmental levels to encourage innovation and the pursuit of excellence in the areas of research and teaching respectively."

This year's *Bulletin* includes features on the 2005-06 Teaching Fellows and the winners of the Outstanding Research Student Supervisor, Outstanding Young Researcher and Outstanding Researcher Awards. It is intended to feature a number of articles on the winners of the Research Output Awards in the next few issues of the *Bulletin*.

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

What it Takes to be Good Teacher

Every year the University recognizes teaching excellence by honouring outstanding educators. This year four teachers were selected for their contributions to teaching and learning.

Dr Carol Chan Kwai Kuen, Associate Professor in the Faculty of Education, said she was most honoured to be awarded with the University Teaching Fellowship.

"It affirms my belief in the pursuit of excellence in teaching and research. University teaching is a complex phenomenon," she said.

"I believe quality teaching goes beyond obtaining high scores in student evaluation. It involves teachers having visions, ideas or 'theories' about what we want students to accomplish, and pursuing these ideas using different strategies, inquiring, testing and refining them in the same way we do in research, and sharing the discoveries with others."

Her classrooms, Chan said, "were laboratories for me and my students to examine and improve the theory and design of learning. I also share my ideas with the scholarly community through publication.

"Over the years, I have had the good fortune of having taught many wonderful students and have continued to work with them long after they have graduated. It is gratifying to see them try out innovative ideas in their own work settings, influencing and inspiring others."

Her former student Mr Eddy Lee said Chan's teaching excellence comes from her research knowledge in learning and her dedication to helping students learn.

"Unlike many university lecturers who only preach theories, she is able to make research and teaching go together, and excels in both areas. She is internationally recognized for her work in knowledge building, and has a number of important awards to her credit.

"I first met Dr Chan in my MEd course in 1998. She helped me see what I am good at and inspired me so much that I applied what I learned from her in my school after graduation. I also worked with her as a PhD student, and under her tuition I was fortunate enough to obtain two international awards.

"Dr Chan is an excellent teacher who practices what she preaches. She strives for excellence in classroom teaching and I admire her use of inquiry-based learning, learning portfolios and computer-based learning. These strategies are strongly advocated by governments worldwide, and are now beginning to take root in Hong Kong. Of course, Dr Chan knows the theory behind these innovations, but it is her deep passion for learning that enables her to put them so successfully into practice. She is an unusual teacher who takes risks and goes beyond the norm. Not surprisingly, many of Hong Kong's most courageous and innovative teachers are former students of hers," he said.

Chan's teaching has had a lasting impact on her students. Lee said that she often continues to collaborate with her graduates in trying out new ideas and pedagogy.

"Learning and novel insights gained in our schools are brought back to Dr Chan's university classroom as one of her many teaching resources. Past graduates are invited from time to time to share how they have applied the theories they learnt from Dr Chan in their classrooms.

"Her approach to her vocation is best summed up by the motto on her office door: 'Learning has no limit'. Those of us who have learned so much from her can only hope that we can inspire our own students as she has inspired us," he added.

Dr Robert Fox, Associate Professor in the Faculty of Education and Honorary Deputy Director of the Centre for Information Technology in Education (CITE) said he felt strongly about making his courses relevant to what is happening in the real world. He is fortunate, he said, to have access to the excellent bank of research generated by CITE.

"This research not only informs my teaching and curriculum but provides a platform for student enquiry as they are encouraged to adapt emerging practices to their own workplace".

He links theory and research to the workplace by encouraging his students to read and discuss their ideas with regard to the current research on technology in education. They then reflect and collaborate on how the research might influence their own practices with a view to trialing new ideas, developing and changing their current practices. His students are then encouraged to contribute to the research by disseminating their experiences to the wider Hong Kong community.

Fox mentors his students through the process of becoming scholar teachers by encouraging them, throughout the course, to edit and submit their best assignment work for publication in ITEC, a CITE peer reviewed e-journal which he established in 2004.

He makes the experience of becoming scholar teachers even richer for his students by encouraging them to present their research to the Hong Kong community at an annual research symposium called CITERS, which he first instigated in 2002.

Fox said he was greatly honoured to receive the award and believed that in order to develop life-long learning and scholarship, university students need to be exposed to good teaching.

"It is gratifying to see excellence in teaching being valued and rewarded across the University. I will use this award to further validate my own efforts in raising the profile of excellence in teaching within the University."

His student Helen Law said: "Bob is primarily concerned with 'making a difference' to the lives of his students and in helping us to think differently about the use of technology in our professional lives.

"He sees the role of technology as facilitating new educational processes in teaching and learning practices, and he is passionate in sharing this vision with his students and his colleagues.

"We are proud to be Bob's students, and enjoy the positive learning environment he creates in his classroom. He ensures it is non-threatening, supportive, and based on mutual respect, and encourages experience sharing and collaborative learning. He is always sensitive and responsive to student feedback and we are grateful for his outside class support through email, blogs or appointments in person. All in all he is an excellent teacher and facilitator who fosters life long enquiry and learning beyond the classroom.

"Finally, the quality that makes Bob such an outstanding teacher is that he encourages his students to identify their own learning problems and make learning decisions, and then fully supports them in their efforts to achieve their own personal goals. He stresses the importance of the close relationship between research and teaching and learning and in establishing partnerships between staff and students. His award is richly deserved."

Dr Joe Lau Yen Fong, Associate Professor in the School of Humanities, said: "I have been teaching at HKU for over ten years. My own research area is the philosophy of mind and cognitive science, but the foundation of all my courses lies in the emphasis on critical thinking skills. The ability to think clearly and rationally is useful to all students. It is the basis of science, and it also contributes to the healthy development of a modern liberal democracy.

"I have developed lots of online resources related to thinking skills, including an open courseware web site at www.philosophy.hku.hk/think. The site receives over one thousand visitors each day from all over the world, and the free course material has been used in over 20 universities and community colleges. I am very grateful for the teaching award, which I think affirms the importance of the teaching of critical thinking."

Dr Kelly Inglis said she has been learning from Joe Lau, in the capacity of student and junior colleague, for over six years.

"In that time, I have come to have a great appreciation of his style of teaching, observing how he is able to relate philosophical issues to the real lives of his students, using technology to appeal to the interests of the young technophiles, using references to local and international pop culture and current events, and providing time and opportunity for interaction with the students through experiments and discussions, even within the course of lectures.

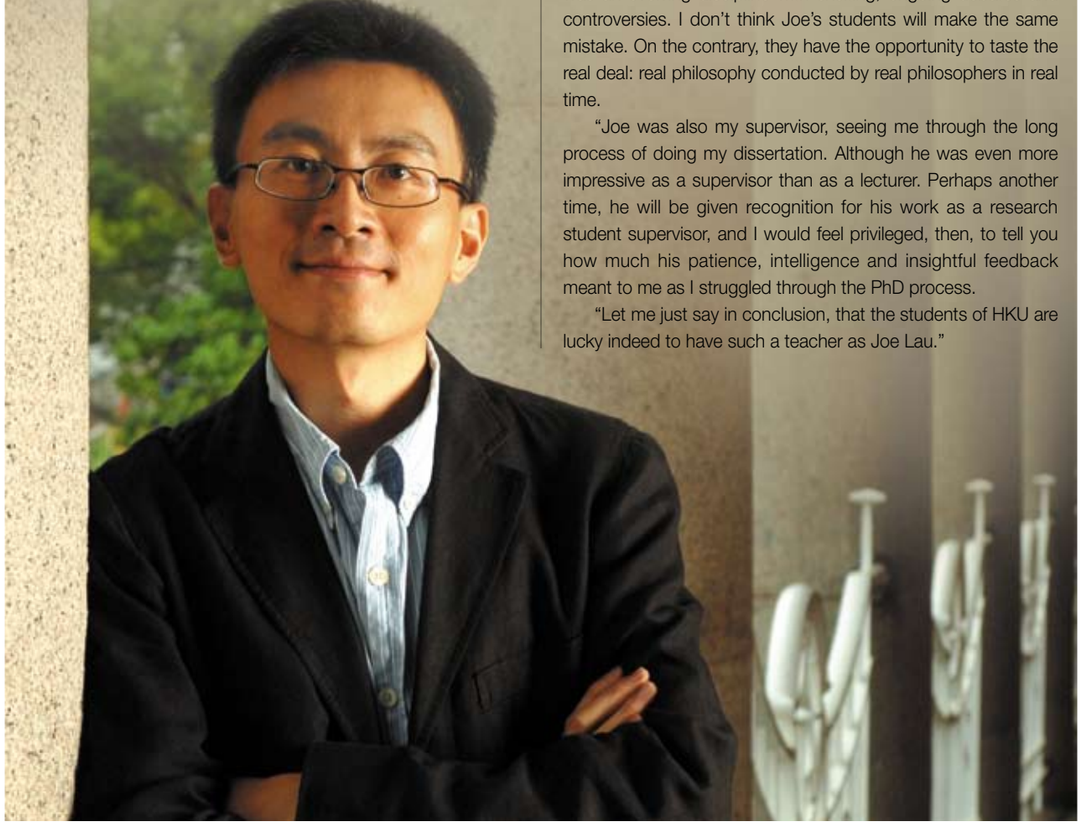
"But, most importantly, I appreciate the way that Joe presents philosophy as an ongoing project, giving students access to contemporary debates, and even letting his students glimpse his own ideas through discussion of his current projects and developing theories.

"When I was an undergraduate in the United States, I was an English Literature major, but having some leanings towards philosophy, I also took a few philosophy courses. Unfortunately, the teaching approach there was entirely unlike Joe's, and the courses I took concentrated on issues that seemed antiquated and entirely irrelevant to modern life.

"I came away with the impression that philosophy was merely a history of ideas, and genuinely had no idea that it was an evolving discipline with exciting, ongoing debates and controversies. I don't think Joe's students will make the same mistake. On the contrary, they have the opportunity to taste the real deal: real philosophy conducted by real philosophers in real time.

"Joe was also my supervisor, seeing me through the long process of doing my dissertation. Although he was even more impressive as a supervisor than as a lecturer. Perhaps another time, he will be given recognition for his work as a research student supervisor, and I would feel privileged, then, to tell you how much his patience, intelligence and insightful feedback meant to me as I struggled through the PhD process.

"Let me just say in conclusion, that the students of HKU are lucky indeed to have such a teacher as Joe Lau."



Dr Manolete Mora is Associate Professor in the School of Humanities.

He said: "The University Teaching Fellowship awards send the message to colleagues and the community that good teaching, as well as research, is valued. Indeed, good teaching and good scholarship are closely linked.

"In my teaching portfolio, I have attempted to demonstrate these links and show that I have made efforts to keep abreast of new teaching methods, curriculum development, and course design.

"My basic approach to teaching, however, lies in attempting to stimulate the discovery process in the student. Respect and empathy for the learner are essential to this approach. My encounters with a wide range of students from various faculties, programmes, and social backgrounds have underlined the different experiences, needs, and vocational aspirations that students bring to the study of music.

"Therefore, while I aim to obtain the highest commitment and quality of work from all students I try to do this with awareness of the different motives and personal circumstances that influence the degree of commitment to, interest in, and capability in understanding and articulating ideas about music. However, the biggest challenge for me is helping students transcend self-limiting attitudes as well as the limitations imposed by external circumstances."

His former student, Ms Ivy Man added: "I have known Dr Mora as a teacher for about ten years. I was one of his students in the undergraduate courses in the music department and he was also the supervisor of my master degree programme at HKU.

"Over the years, Dr Mora has constantly demonstrated what a knowledgeable and gifted teacher he is. Whatever the type of music he taught - from Africa, Latin America, Indonesia, the Philippines, or European music - he always showed a good grasp of the material. As a musician, he would demonstrate various kinds of music in lectures. As you can imagine, it was always a pleasant experience to attend his lectures. He also possesses the gift of being able to make complex musical concepts understandable.

"But what impressed me most was that he did not begrudge spending his free time with students to illustrate his lessons. For instance, in order to consolidate our understanding of Latin American music, he once took us to a pub restaurant where live Latin American music was performed and free salsa lesson were taught.

"In spite of being an internationally renowned ethnomusicologist, he is a humble, approachable and open-minded person who loves to share his extensive knowledge and experience. Because of his personal qualities he was, and doubtless still is, one of the most popular lecturers in the department.

"Dr Mora's example had a great influence on my own decision to pursue an academic career. He always advised me to strive for excellence, and when I was studying for my doctorate he continued to provide me with constructive advice and outstanding mentorship, even though it was no longer his duty to do so. In many areas, both personally and academically, Dr Mora has taught and encouraged me to meet challenges that I had never before thought possible."

Outstanding Research Student Supervisor Awards

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.

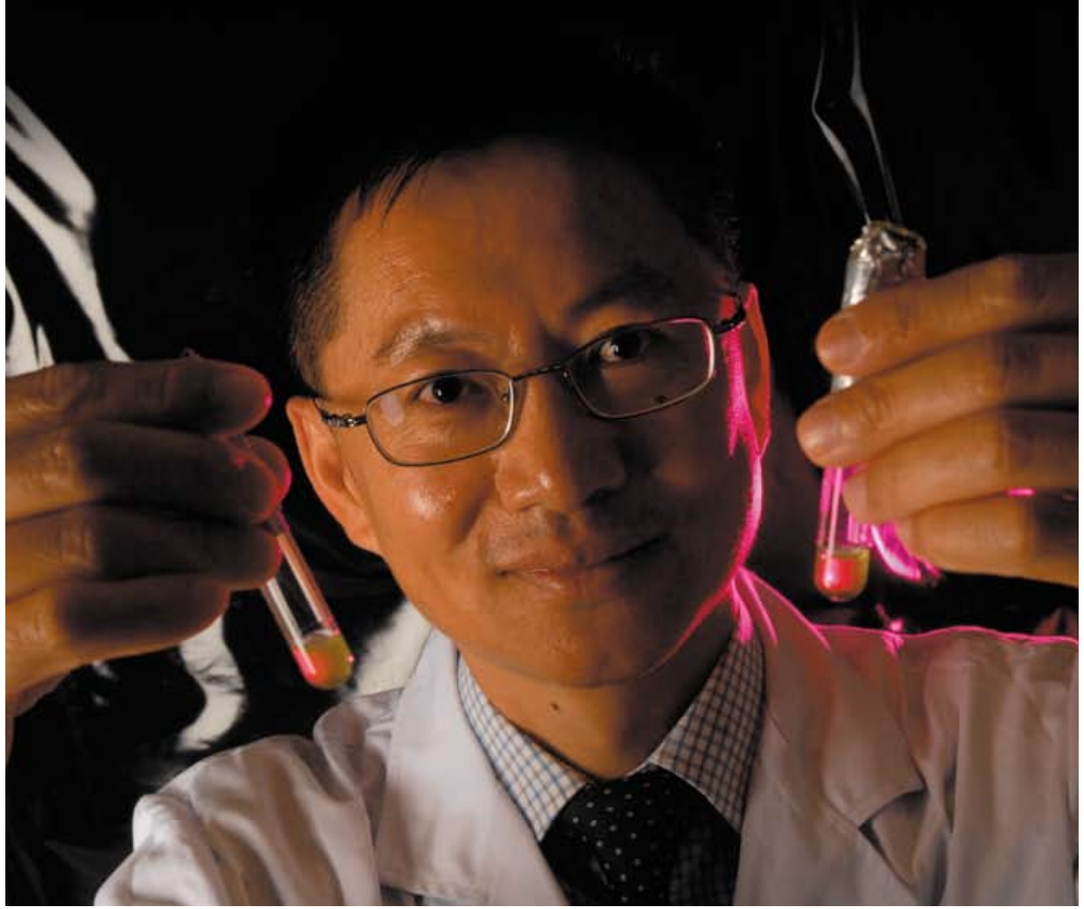
Professor Steven Chen Feng

Professor, School of Biological Sciences

Professor Chen is a renowned expert in algal biotechnology and natural products research. He is particularly interested in understanding the mechanism of the heterotrophic biosynthesis of microalgal metabolites, and the identification and development of functional natural products.

Since joining the University in 1993, Professor Chen has successfully supervised 14 PhD students and 6 MPhil students, many of whom have gone on to become excellent scientists. He believes that creativity is the most important element in training young scientists. The role of their supervisors, therefore, should be to guide and help their students to think for themselves. They should not oversee every detail of their students' work, because this would jeopardize their creativity. In line with this philosophy, Professor Chen encourages his students to work and think critically and independently, but also requires them to set clear milestones so that he can monitor their progress. 'If you succeed,' he said, 'I succeed even more.'

sfchen@hkusua.hku.hk
http://web.hku.hk/~sfchen/



Professor Lai Ching Lung

Professor: Chair of Medicine and Hepatology

Professor Lai Ching Lung is the Chair Professor of Medicine and Hepatology in the Department of Medicine. He is an outstanding researcher, having to his credit over 300 peer-reviewed papers, including four in the *New England Journal of Medicine*. He was co-author of the book *Hepatitis B Virus*, which rapidly required a second printing. He is among the top 8% of the most cited scientists, and his seminal paper on a new class of drugs for the treatment of hepatitis B has been quoted 828 times.

Dr Man-Fung Yuen, one of Professor Lai's students, remembers that his supervisory approach was highly effective. "Professor Lai is famous for requesting extra lectures, and then extra hours for his extra lectures. But we never fell asleep, only because we were flooded by his boundless energy! As for bedside teaching, his long ward rounds are traffic-blocking affairs, often with 20 to 30 students voluntarily following his rounds and hanging onto his every word. Every student knows how meticulous and fierce he can be. I used to feel so guilty at not knowing things that I should have known. Professor Lai's stern retorts soon ensured that I would know these things for life!" Dr Yuen says it was not for nothing that Professor Lai was voted Best Teacher twice by students and is the proud possessor both of a University Teaching Fellowship and the Li Ka Shing Faculty of Medicine's Faculty Teaching Award.

hrmelcl@hku.hk
http://www.hku.hk/medicine/gastroenterology_staff.htm

Professor Gerard A. Postiglione

Professor, Faculty of Education

Professor Postiglione's research focuses on the social and cultural underpinnings of reform and development in China. He has been a consultant for projects of the Academy of Educational Development, the Asian Development Bank, the United Nations Development Programme, the World Bank and the Ford Foundation. He has been invited to address China's Education Commission, UNESCO and the American Council on Education, and has spoken on education reform in many countries around the world.

Professor Postiglione has put enormous efforts into training China specialists at the University, and many of his former students are now working in leading academic institutions in China and the United States. In 2004 one of his PhD students, Dr Gregory Fairbrother, was awarded the University's Li Ka Shing Prize for his doctoral dissertation, which examined the relationship between patriotism and critical thinking among Hong Kong and Mainland Chinese university students. In 2006 another student, Zhu Zhiyong, won a Fulbright Scholarship to the United States.

postiglione@hku.hk
http://www.edu.hku.hk/postiglione/

Professor Sin Chow Yiu

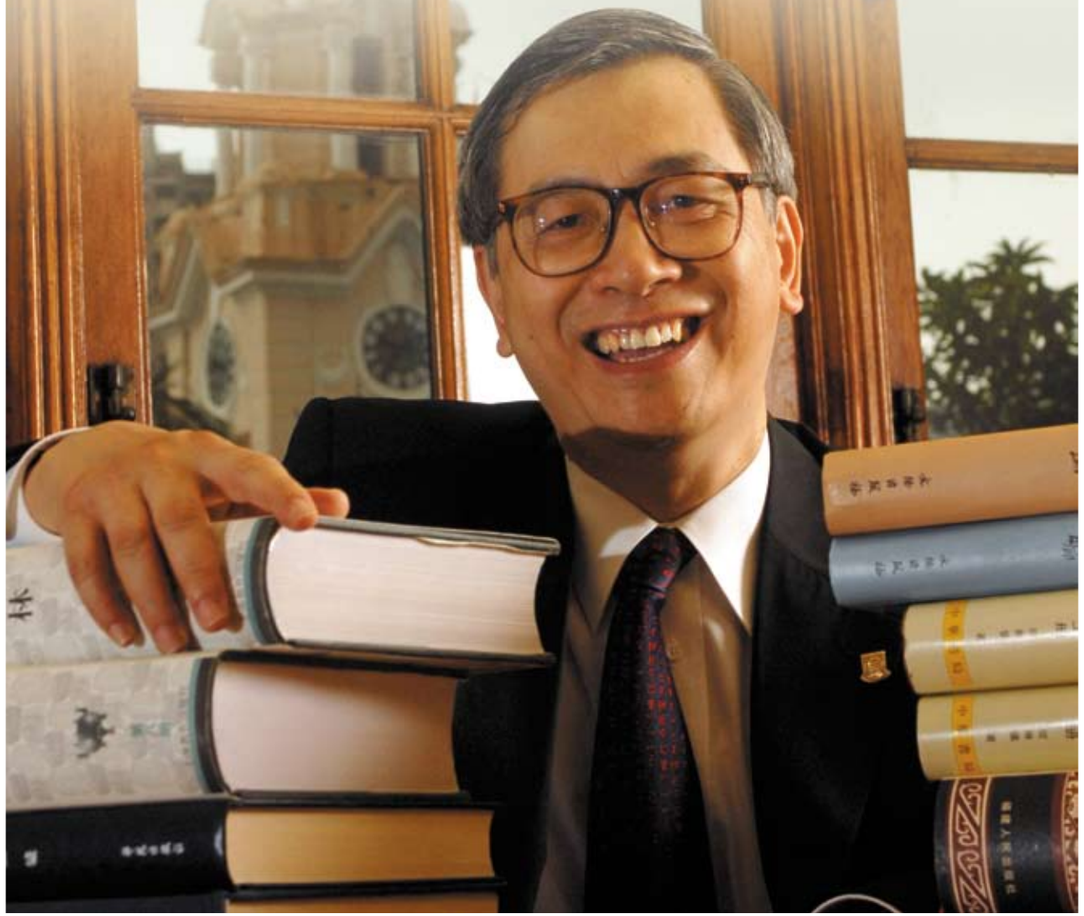
Hon-Yin and Suet-Fong Chan Professor in Chinese

Professor Sin joined the University in 1976, and is currently Hon-Yin and Suet-Fong Chan Professor in Chinese and Head of the School of Chinese. He has authored or co-authored more than two dozen books and around a hundred articles or book chapters. His interests include Confucianism, Chinese palaeography, etymology, lexicography, phonology, dialectology, history, poetry, translation, bibliography, and language policy and instruction.

Most of Professor Sin's former students now teach in tertiary institutions throughout the Greater China region, and have an impressive publication record including more than 50 books and over 100 journal articles. To Professor Sin, postgraduate student supervision is not altogether unlike journal editorship – careful proofreading is an obligation, whereas sound suggestion for further improvement is what separates excellence from mediocrity. The key, in either case, is to bring out the best in his students without forcing on them any particular style or methodology.

Professor Sin is famed for his perfectionism, but his students also know him as a very gentle and caring supervisor, who gives wise advice on their studies, career prospects and personal problems. A former student says that, following in the footsteps of such an outstanding master, he has learned one of life's great lessons – that there are no shortcuts to excellence.

cysin@hkucc.hku.hk
http://www.hku.hk/chinese/staff/c1h1b.html



Outstanding Young Researcher Awards

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. This year eight Outstanding Young Researcher Awards were made.

Dr Aleksandra B. Djurisic

Assistant Professor, Department of Physics

Dr Djurisic's research interests include nanocomposite optoelectronic devices such as light emitting diodes and organic solar cells, and the fabrication and characterization of metal oxide and wide band gap semiconductor nanostructures. She has synthesized several novel nanomaterial morphologies and has helped to clarify the optical properties of these materials. This is an area of research with very alluring practical applications in the form of cheap and highly efficient displays and solar cells. Dr Djurisic has published over 120 papers in international journals, and her research results have also appeared on the cover pages of several physics and materials science journals.

dalek@hkusua.hku.hk
http://alek.20m.com

Professor Lusina Ho Kam Shuen

Professor, Department of Law

Professor Ho researches and writes in the fields of equity, trusts and restitution. She has published in top-rate international journals in these fields. Some of her co-authored work has been cited, discussed, and endorsed by the House of Lords, the highest court in England, and the Court of Appeal. She also undertakes comparative studies on Chinese Trusts Law. She has given legal advice on the drafting of this kind of law and her book *Trust Law in China* is the first English-language work to deal with this area.

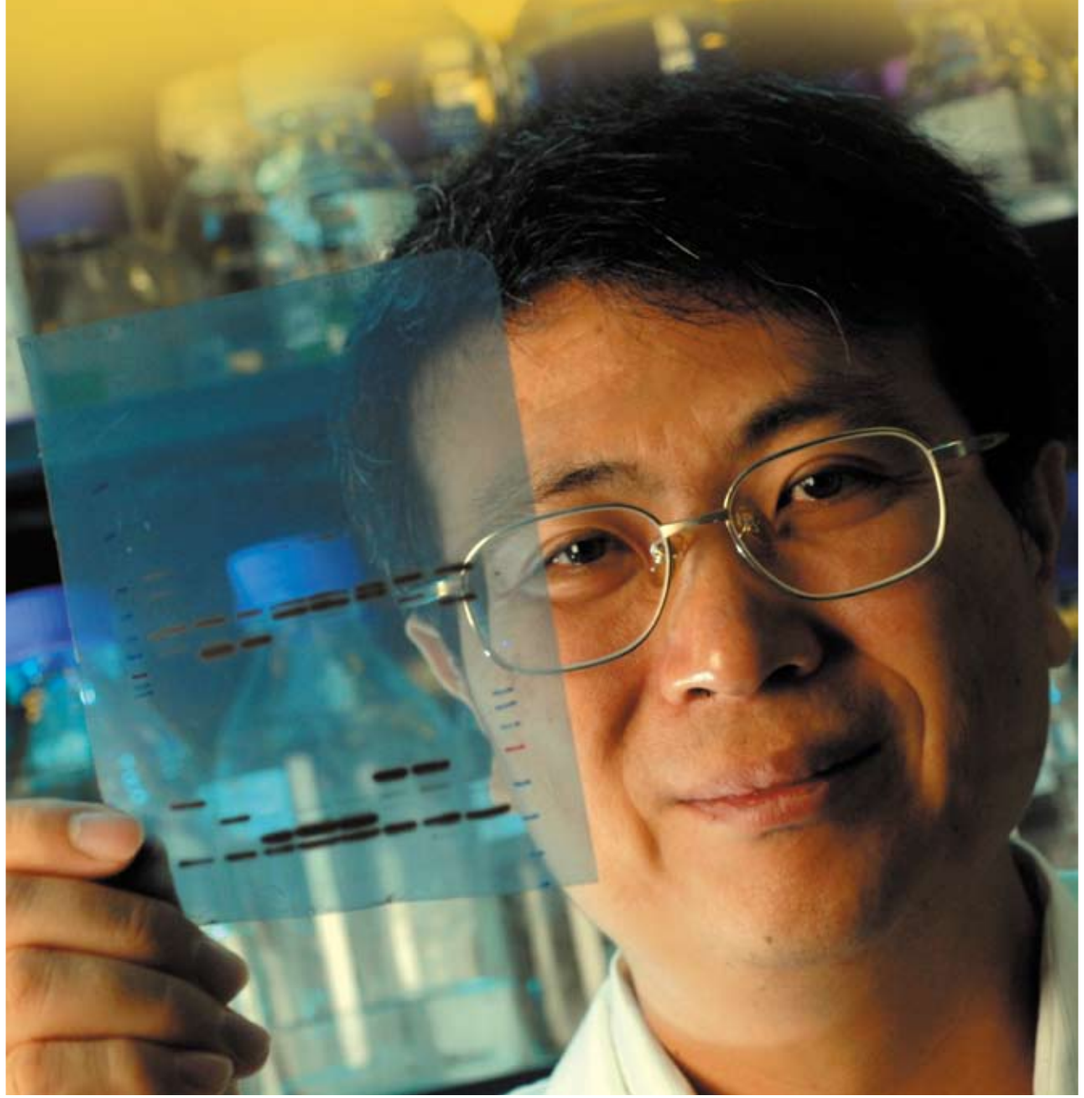
lusinaho@hku.hk
http://www3.hku.hk/law/staffHomepage.php?id=43

Dr Huang Jiandong

Associate Professor, Department of Biochemistry

Dr Huang has made a significant scientific contribution in the area of DNA engineering with a view to gene therapy and biotechnology applications. He has studied the mechanism of recombineering, a novel DNA engineering technology, and managed to improve its efficiency more than 1,000-fold in bacteria. He is now working on translating this technology into vaccine development and the treatment of cancer. Dr Huang responded very quickly to the outbreak of Severe Acute Respiratory Syndrome (SARS) in 2003. His laboratory was the first to study the SARS-CoV helicase, and was later able to characterize its biochemical properties and identify lead compounds against viral growth.

dhuang@hkucc.hku.hk
http://www.hku.hk/biochem/biochem/pi/pi_jdhuang.htm



Dr Becky Loo Pui Ying

Associate Professor, Department of Geography

Dr Loo uses surveys, quantitative techniques and spatial modelling to examine the spatial dimension of transport and development. She has published a set of articles on people's travel preferences and how they relate to the evolution of the city structure, and another set of articles on road safety. She recently identified major hazardous road sections of Hong Kong's road network by using and refining the so-called 'hot-zone' methodology. Her research on the Internet and the spatial movement of passengers and freight, especially container freight, has attracted considerable attention both in Hong Kong and abroad.

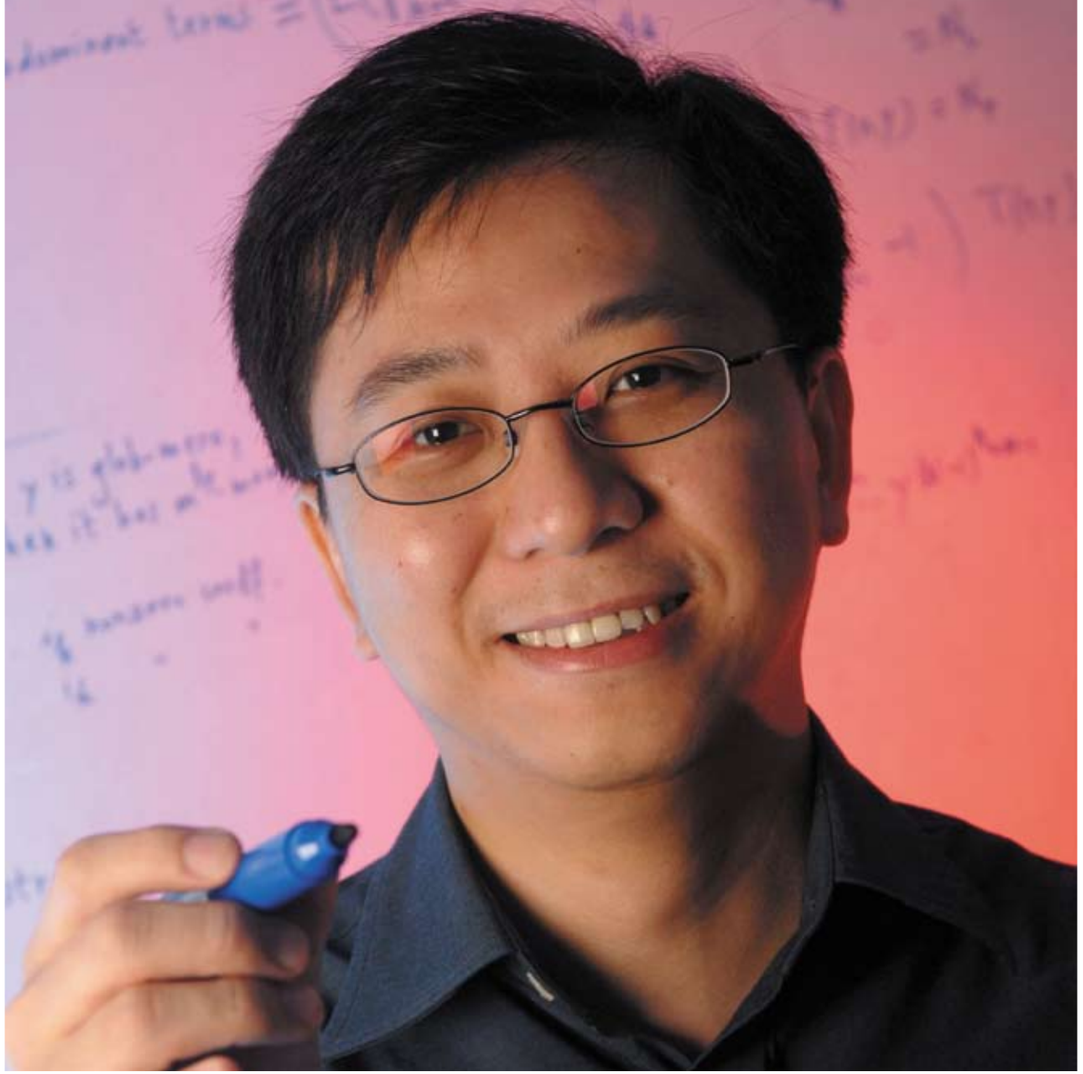
bpyloo@hkucc.hku.hk
http://geog.hku.hk/staff/loo.htm

Dr Patrick Ng Tuen Wai

Assistant Professor, Department of Mathematics

Ng's main research interest is function theory, in particular the complex dynamics of meromorphic functions. Complex dynamics studies how a function behaves under repeated substitutions, and its behaviour can be represented graphically by Julia Sets. One distinctive property of the Julia Set is its self-similarity and its extremely chaotic dynamics. Dr Ng has obtained the strongest results for two long-standing conjectures on Julia Sets, and has also obtained the first and the best published result so far on Smale's mean value conjecture, a classic outstanding mathematical problem with important applications in complex dynamics and the study of Newton's method.

ntw@maths.hku.hk
http://hkumath.hku.hk/~ntw/index.html

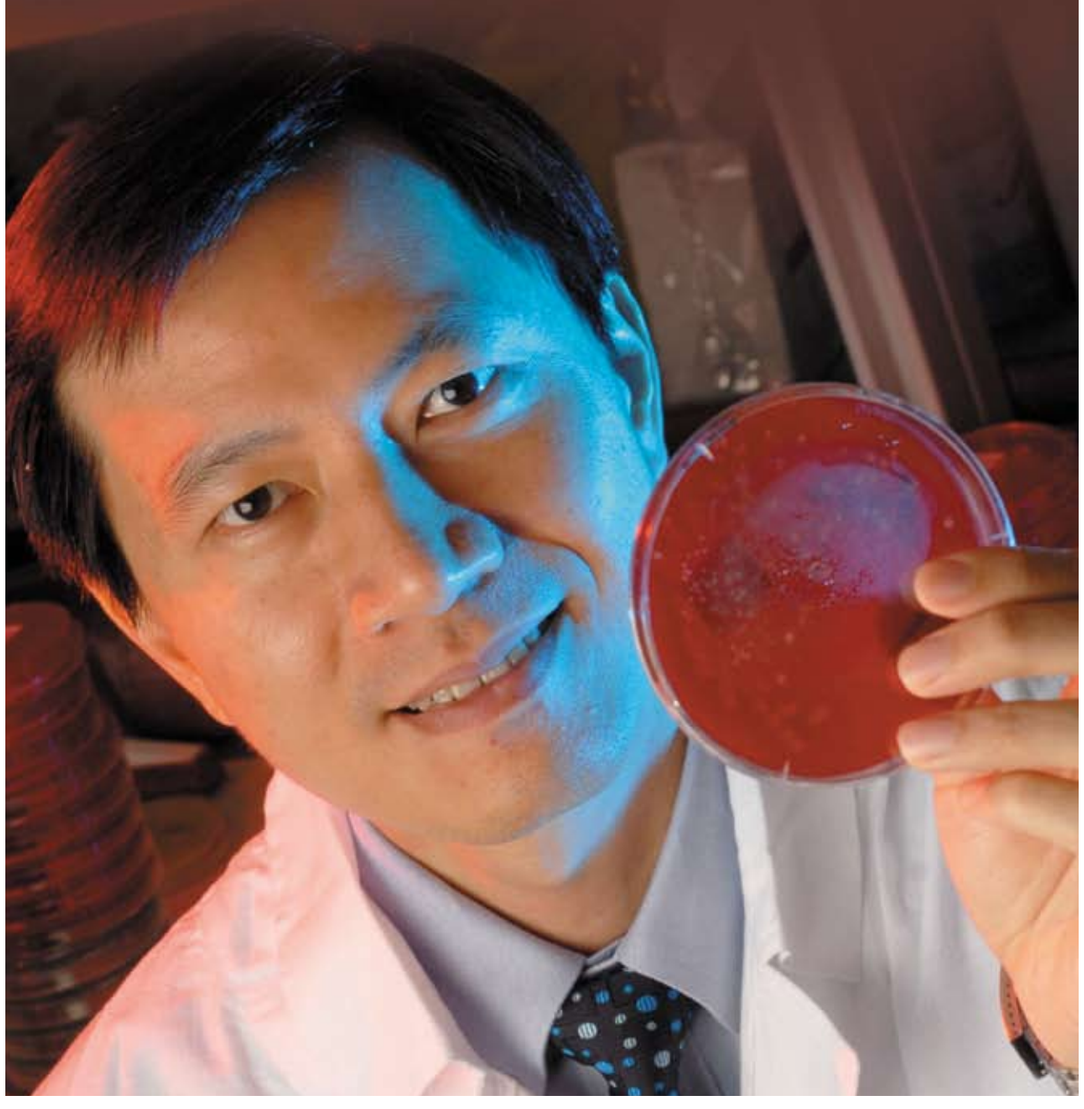


Professor Patrick Woo Chiu Yat

Professor, Department of Microbiology

Professor Woo's field of study is infectious diseases and microbiology, an area of research whose importance can hardly be overstated. His major research interest is the discovery and characterisation of novel pathogens for unexplained infectious disease syndromes. Using clinical, epidemiological, microbiological, molecular and genomic approaches, he has led the discovery and characterization of several novel human and animal microbes. The more notable discoveries include human coronavirus HKU1, bat SARS coronavirus, Laribacter hongkongensis, cell-wall-deficient bacteria in neutropenic patients and Streptococcus sinensis.

pcywoo@hkucc.hku.hk
http://www.hku.hk/mibpage/

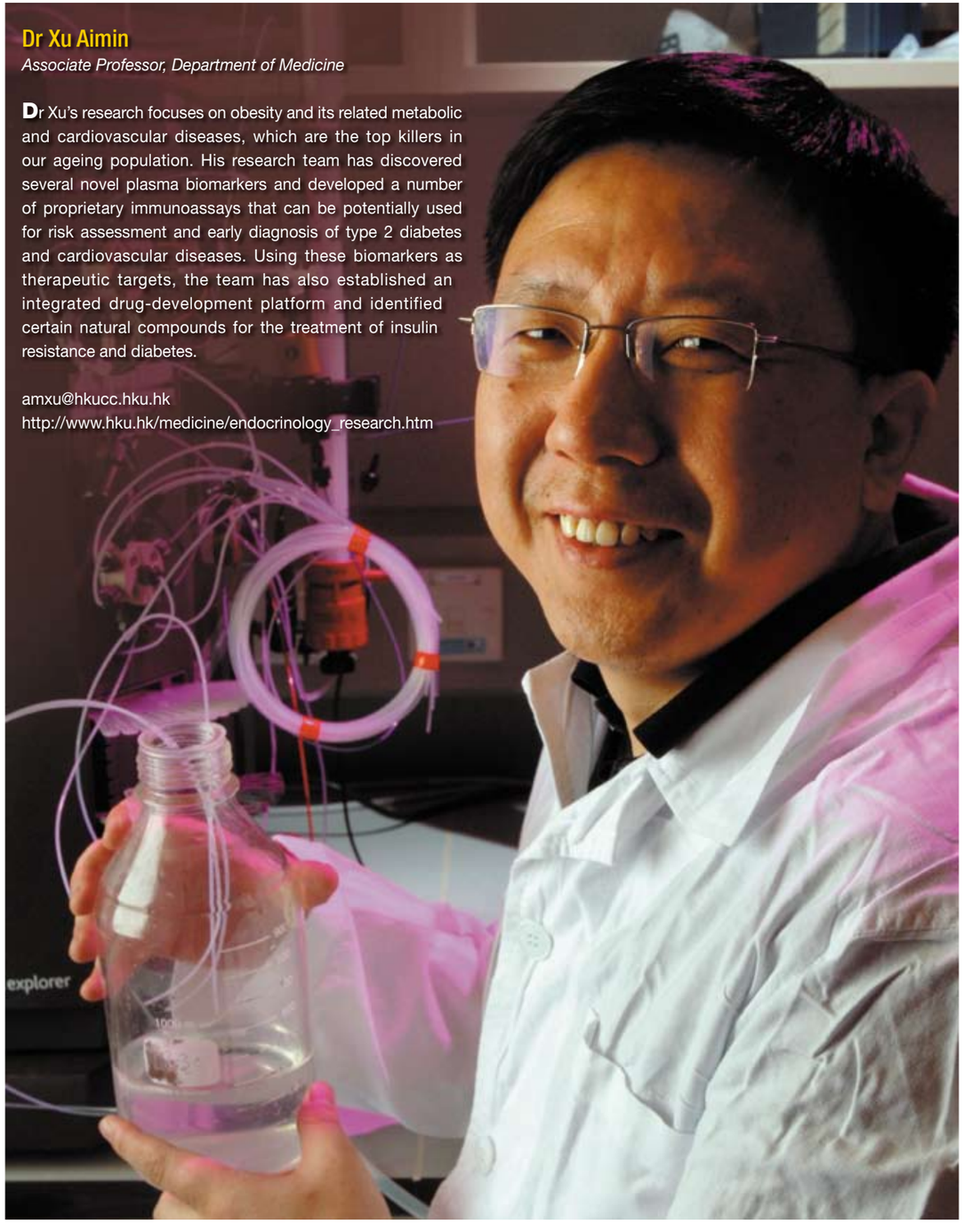


Dr Xu Aimin

Associate Professor, Department of Medicine

Dr Xu's research focuses on obesity and its related metabolic and cardiovascular diseases, which are the top killers in our ageing population. His research team has discovered several novel plasma biomarkers and developed a number of proprietary immunoassays that can be potentially used for risk assessment and early diagnosis of type 2 diabetes and cardiovascular diseases. Using these biomarkers as therapeutic targets, the team has also established an integrated drug-development platform and identified certain natural compounds for the treatment of insulin resistance and diabetes.

amxu@hkucc.hku.hk
http://www.hku.hk/medicine/endocrinology_research.htm

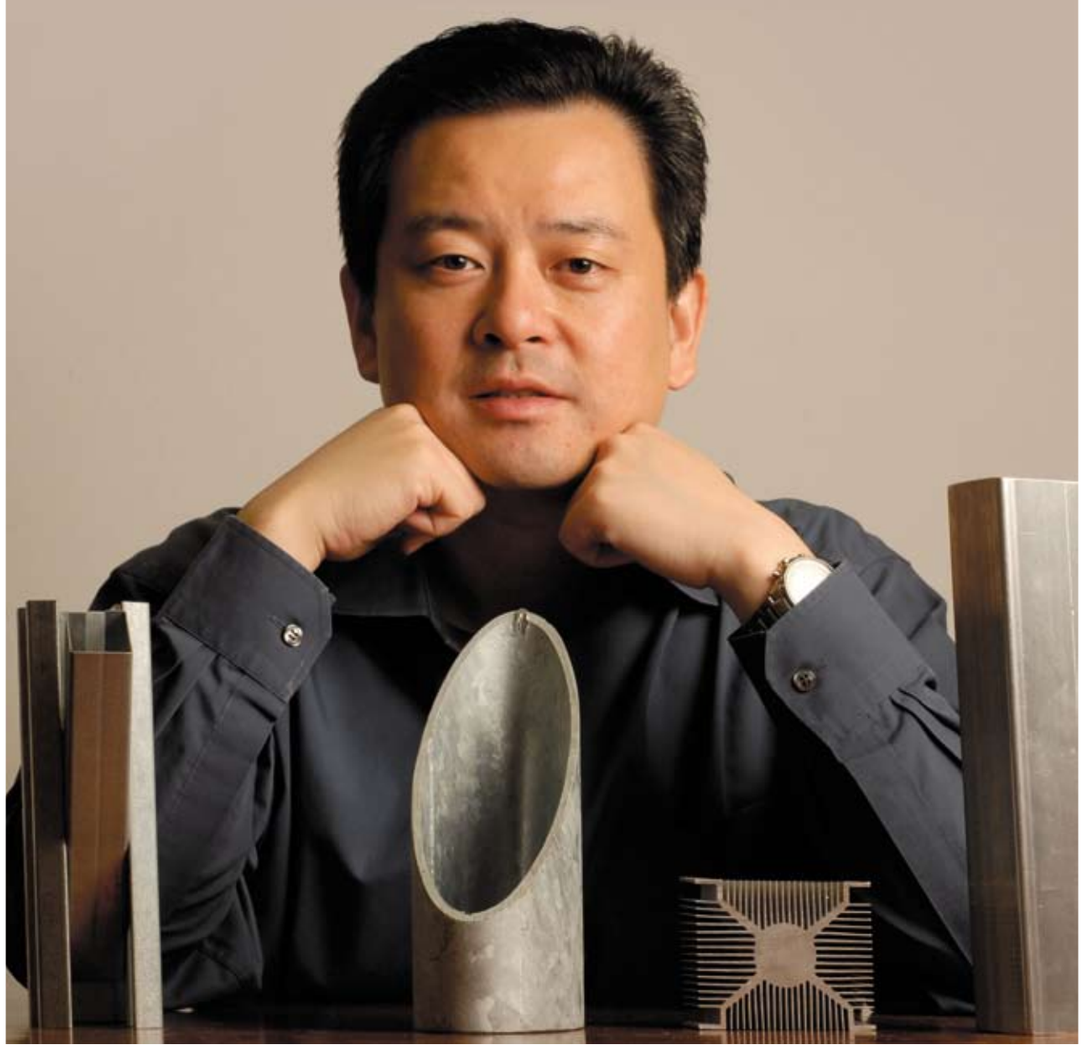


Dr Ben Young

Associate Professor, Department of Civil Engineering

Dr Young studies the fundamental behaviour of metal structures using advanced approaches and experimental techniques. He has developed a pioneering test rig for cold-formed steel column tests, which can measure the complex buckling modes of steel structures. He has also developed a unified equation for predicting the material properties of structural steel under fire conditions. Knowing how different metals behave under different conditions is crucial to good engineering design, and Dr Young's work has influenced government specifications for the design and use of steel in construction projects both in Hong Kong, the United States, Australia and New Zealand.

young@hku.hk
http://www.hku.hk/civil/staff/youngb.html



Outstanding Researcher Awards

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

Professor Daniel Chan Tak Mao

Personal Professor, Department of Medicine

Professor Chan's research interests include the treatment and disease mechanisms of lupus nephritis and viral hepatitis in patients with kidney failure. Lupus nephritis is a common cause of kidney failure, especially in Asian patients, and Professor Chan's basic research team showed how anti-DNA antibodies and kidney cells interacted to give rise to this disease. Professor Chan has won international acclaim for his pioneering work in establishing mycophenolate mofetil as a new treatment for lupus nephritis, and this treatment is becoming a standard therapy worldwide. His research has also helped to define the clinical course and improve the treatment of viral hepatitis in patients on dialysis or after transplantation.

dtmchan@hku.hk
http://www.hku.hk/medicine/nephrology_staff.htm

Professor David Lee Phillips

Professor, *Department of Chemistry*

Professor Phillips is an internationally-recognized scientist who uses time-resolved spectroscopy experiments to study very short-lived intermediates related to the chemical and photochemical damage of DNA. His recent work has focused on arylnitrenium ions, which attack guanine in DNA in the chemical carcinogenesis of aromatic amines (found in small amounts in automobile fumes and tobacco smoke). His research group has recently completed a pioneering study of an arylnitrenium reaction with a guanine derivative, which provides valuable new information about how arylnitrenium ions attack guanine in DNA.

phillips@hku.hk
http://chem.hku.hk

Professor Benjamin Wong Chun Yu

Professor, Department of Medicine

Professor Wong, a specialist in gastroenterology and hepatology in the Department of Medicine, is one of the top 1% most cited scientists in clinical medicine. His main research interest is the prevention and treatment of stomach cancer and colon cancer, and in recent years he has been looking at how stomach cancer is caused by a bacterium called Helicobacter pylori which has infected half of the world's population. Through a ground-breaking research programme launched in Fujian province in 1994, he has discovered that early treatment of the bacteria with antibiotics can decrease the rate of stomach cancer and save the lives of millions of people worldwide. These findings have been widely reported, and have significantly influenced international clinical practice and health care policy in stomach cancer prevention. With the active support of Professor S. K. Lam, the former Dean of the Faculty of Medicine, his team has recently launched a campaign against stomach cancer in Mainland China to spread this vital message to the public.

bcywong@hku.hk
http://www.hku.hk/medicine/gastroenterology_staff.htm

A New Perspective on Colonial Governance

The tragic fire that left 50,000 squatters homeless, at Shek Kip Mei in 1953, has long been considered the trigger for the Hong Kong government's public housing scheme.

But a new book argues that the colonial response may not have been as humanitarian as first appeared.

Anthropologist, Alan Smart, who spent several years living amongst squatter villagers in Hong Kong, offers a fresh explanation for the government's public housing efforts in his new book, *The Shek Kip Mei Myth: Squatters, Fires and Colonial Rulers in Hong Kong, 1950-1963*.

Smart, Professor in the Department of Anthropology at the University of Calgary, Canada, argues that the public housing programme was thanks more to the political wrestling between the colonial government of the time and Mainland China, than a direct and humane response to the Shek Kip Mei fire.

In so doing he sheds light on the development of Hong Kong, a society and landscape profoundly influenced by the government's role as provider of up to half of all housing.

Smart basis his argument on the inadequate government response to other large squatter fires in the 1950s. Through a thorough reading of government records he explores the failures of the colonial administration to control illegal settlements and in so doing, uncovers the serious handicaps inherent in a government that is unelected and undemocratic.

Smart's careful research is suffused with an obvious sympathy and respect for the plight of squatter villagers, upon whom he has based previous research.

As well as being a major contribution to Hong Kong's social history *The Shek Kip Mei Myth* offers new insights into the nature of governance in colonial cities, the policy making process, and the nature of colonial society.

The Shek Kip Mei Myth: Squatters, Fires and Colonial Rulers in Hong Kong, 1950-1963 is available from the Hong Kong University Press.

A History of Hong Kong's New Territories

Although the Chinese conceded Hong Kong to the British in 1842, the New Territories did not become part of the colony until some years later, in 1898.

It was immediately referred to as 'the great difference' by senior Hong Kong colonial official, James Stewart Lockhart.

On returning from an inspection tour of the newly-leased extension to Hong Kong territory in August 1898, Lockhart used the phrase to describe the enormous gulf between the rural stretches of Southern China, and the farmers who occupied it, and the British colony of Hong Kong and its people.

In his book *The Great Difference: Hong Kong's New Territories and Its People 1898-2004*, author, James Hayes, argues that the government's recognition of this 'great difference' resulted, from the outset, in a quite different approach to administering the territory and its people from the one adopted in the old urban areas. This resulted in repercussions that continue to affect Hong Kong to this very day.

Hayes, who worked in the New Territories for almost half his thirty-two years of government service, and was Regional Secretary in charge of district administration from 1985 to 1987, explores the crowded events and dramatic changes in the often tumultuous history of the lease period, and details the effects these had on the native inhabitants and their relationship with government.

The book examines the New Territories through the tumultuous period of Japanese occupation from 1941 to 1945, and looks at the end of subsistence farming, which opened up the way for urban development and the system of country parks.

Although largely rural throughout its history under colonial rule, the area has undergone rapid development since the 1960s. New towns, designed to accommodate the burgeoning population of Kowloon, have sprung up in what was once an idyllic green belt between the congested streets of Hong Kong and Southern Kowloon and Mainland China.

Based now in Sydney, Australia, James Hayes is a scholar of the Hong Kong region and its people. His previous publications include his memoir *Friends and Teachers: Hong Kong and Its People 1953-87*.

The Great Difference: Hong Kong's New Territories and Its People 1898-2004 is available from the Hong Kong University Press.

Planning the Future with a Little Help from the Past

The only surviving plans of the University's flagship building have been serendipitously returned to Hong Kong, after almost 95 years.

To the delight of the University, the original plans of the Main Building, which were presented to Lord Lugard in 1912 at the end of his five-year spell as governor, were gifted to the University by his great-niece, Mrs Shelagh Meade, at the end of last year.

"We have never had an original set of plans detailing what the architect's idea for the Main Building was, so this is very significant and hugely valuable," explained Dr Peter Cunich, Associate Professor of the School of Humanities.

"The interesting thing is that the building, as constructed, is different from the building, as planned. There are some small differences, mainly in terms of decoration, possibly for financial reasons," he adds.

The main benefactor of the building, Sir Hormusjee Mody, died very soon after the foundation stone was laid and costs increased during the construction forcing Mody's executors to pay more than originally agreed.

"So all sorts of things were left out," said Cunich. "The clock in the clock tower, for example, was a gift in memory of Sir Paul Chater in 1930, and the standard of the finishing wasn't quite what had been expected. In the original plans there are statues on the building. I think what (the Committee) went for in the end was economy; a sleeker style without the originally intended flourishes."

The plans, drawn up by architects Leigh and Orange and beautifully-rendered in ink and water colour, show what is now the northernmost half of the building.

"What a lot of people don't realize," said Cunich, "is that the back part was built after the Second World War. Now, for the first time we have an idea of what the original back of the building was like."

What the plans reveal is a deep verandah that ran along the rear of the structure and a domed apse behind the Great Hall, now the Loke Yew Hall.

Despite their age the plans are remarkably well-preserved. Rolled tightly and stored in a tin capsule they are thought to have spent decades in the English home of Lord Lugard, and latterly that of his great-niece.

The eight sheets, preserved in a faux-leather cover, show the north and east elevations of the Main Building, the ground and first floors, as well as plans of the long-demolished Professors' Houses and the Principal's home.

The collection is currently in the care of University Archivist, Ms Stacy Gould, who is relaxing the formerly rolled pages.

"These may not have been opened since they were presented to Lugard," she said. "And apart from some slight foxing (brown moisture spots), some exposure to light and a tear in one of the pages they are in pristine condition.

"What's really bad for preserving paper of this age is fluctuations in cold and wet, hot and dry, and exposure to light. I would say, judging by their condition, that they were kept in a warm room at a pretty constant temperature."

Gould will seek the services of a conservator and finally place each drawing in an acid-free folder, before storing them in a map drawer.

Both Cunich and Gould are of the view that the drawings could be reproduced for sale to friends of the University.

"They can also be used as a basis for all construction work that takes place on the Main Building," said Cunich. "These plans are of incalculable value, and given the level of interest in preserving our cultural heritage this is an area in which the University can take a lead and show the community what's possible."

In 2012 the building will celebrate its one hundredth anniversary, and will be vacated by the Faculty of Arts, which will relocate to the new Centennial Campus.

"Now that we know the original intentions of Mody, Lugard, and Leigh and Orange, there is an argument that preservation is not just about keeping what we've got, but it may well be that we could complete the building according to the plans one hundred years after they were first drawn," said Cunich.