Personal Response a Key to Active Learning

An innovative tool to help students learn more effectively is being installed in HKUST classrooms beginning this semester. The Personal Response System (PRS), consisting of a pocket-size transmitter for each student and a corresponding receiver for the instructor, allows students to respond electronically—and in private—to questions posed in class by the instructor.

Initial testing has confirmed that PRS can be an effective antidote to the traditional passivity of Hong Kong students, who often shy away from answering questions in class because of the potential embarrassment of giving wrong answers in front of their peers.

With PRS, an instructor can stop at any time during a lecture to pose a question and assess the students' grasp of the content. The students tap the answer into the wireless transmitter, and the answers are immediately sent to the instructor's receiver, where they are tabulated and projected on a display screen for all to see. Feedback and reinforcement—key elements of active learning—are immediately achieved.

By the end of the current academic year, the Hong Kong University of Science and Technology will be the first university in the world to have implemented a universal learning tool such as the Personal Response System throughout its campus.

The project is the brainchild of Prof Nelson Cue (Physics), who has been experimenting with what he calls a "learning aid" for students. Allowing students to respond privately and at ease removes the threat associated with speaking publicly in lectures, he says. "Students do not have to risk a loss of face when they give a wrong answer. Furthermore, the most important part of learning often takes place when mistakes are being discussed, and different approaches to questions are identified."

A recent study has shown that interactive teaching methods result in dramatic improvements in standardized test scores when compared to results obtained through traditional lectures. At HKUST, the campus-wide implementation of PRS will facilitate use of interactive teaching methods by any instructor who wishes to adopt them.

The system is funded by the University's Teaching Development Grants for 1997-98 and 1998-99.
SCIENCE, TECHNOLOGY, AND EDUCATION — Resolute Measures to Break Out of Our Current Economic Siege

The turmoil in many Asian economies has led to serious difficulties in Hong Kong. Heretofore, Hongkongers have always been able to face downturns with confidence, identifying advantageous factors so as to overcome economic difficulties. Not so this time. Many are calling for help from the Government while roundly criticizing the same, rather than looking for innovative ideas to break out of the siege. What has happened?

Has life gotten too easy and made us soft and complacent? Have new political thoughts driven us towards over-dependence on the Government? Maybe. My opinion is, however, that Hong Kong has fallen too far behind in technology and education, and therefore does not yet have a strong grip on modern-day engines of economic recovery. Clearly, resolute action will have to be taken immediately, with Government in the lead and the citizenry advancing with unity of purpose.

The first step for Government must be to establish a sound technological and industrial structure, and to set visionary policies. One, Hong Kong’s traditional manufacturing industries—including “off-shore investments”—need technological upgrading to increase their value-added capacity. Two, modern high-technology enterprises must be imported and created. Three, the technological components of our service industries must be greatly enhanced.

In the deliberations of the Commission on Strategic Development, chaired by the HKSAR Chief Executive, Mr Tung Chee Hwa, the two words “technology” and “industry” have emerged repeatedly. The Commission on Innovation and Technology, which he appointed, has now come up with concrete recommendations for near and mid-term developments.

I believe the Government should take the following actions without delay, including those which were mentioned in the Chief Executive’s October speech:

- set up the Applied Science and Technology research institute as one more bridge between the academic and industrial worlds;
- let experts take the lead in determining how to put the $5 billion fund to best use.

Next, Hong Kong people long ago reached a consensus on the urgency of education reform. Yet discussions have gone on for years concerning proper mother tongue education, civic education, pre-school education, adult education, revamping of our educational system, enhancing the quality of our teachers, and so on. Hong Kong’s government and citizenry have been well known for their efficiency. Somehow when it comes to education—the most important factor governing the level of success of a society—there has been more talk than action. After the return of Hong Kong to her motherland, some noticeable changes have surfaced: the Chief Executive’s concern for education has led to extensive consultations involving his Executive Council and the public. Directions are being determined, and reforms seem ready to begin.

My own view is that the following policies should be declared without hesitation:

- install a four-year university curriculum and a six-year secondary education;
- accelerate budget increases for primary and secondary education, and through legislation, fix the percentage of GDP to be applied to education;
- maintain the unit cost of instruction in the tertiary sector while significantly increasing budgets for research and for the establishment of areas of excellence;
- require each tertiary institution to carry out its predetermined mission and corresponding tasks;
- focus resources for extended education on support of the Open University, and strengthen vocational education at every level.

Next, we should turn the Hong Kong Bay Area into a stronghold of technology and education, and take along South China on our flight to further prosperity. Given its fertile soil and plentiful water resources, the Pearl River Delta has always been an ideal base for agriculture. Given the dynamism, aggressiveness, and adaptability of its people, it has also been a natural breeding ground for commerce. With Hong Kong’s influence and substantive participation coming right after implementation of the Mainland’s reform and open door policies, it has more recently become a home for traditional manufacturing. However,
insufficient effort has been devoted to developing technology and education—the two primary forces for further progress. The HKSAR, cast in a leadership role for the Pearl River Delta, must aggressively pursue the following goals:

- proactively and speedily set up a concrete framework and effective channels of cooperation between Guangdong Province and the SAR;
- work together with Shenzhen, Zhuhai, and other Hong Kong Bay Area cities to recruit experts in the fields of teaching, research, industry, and commerce;
- support cross-border projects in the Shenzhen High and New Technology and Industrial Park, the Nansha Information Technology Park, and Hong Kong and Shanghai’s efforts to co-develop the Pearl and Yangtze River basins;
- set policies to attract North American and East Asian investments in technology-based industries to the Hong Kong Bay Area; facilitate economic and industrial advances from Europe;
- host a T’EXPO—a World Expo on Technology and Innovation—distributed over a number of cities in the Hong Kong Bay Area, to publicly announce Hong Kong’s entry into the knowledge-based economy of the information age.

Finally, it is the Government’s responsibility to build an infrastructure for technology and industry. Over the years, the Hong Kong Government’s accomplishments in building physical infrastructure have been well known and highly praised. Now, a unique infrastructure policy is required for industrial development based on high and new technologies. Some of the infrastructure I talk about here has little to do with real property, and may not be particularly familiar to Government. In fact, it is probably not regarded by Government as infrastructure at all. I suggest that Hong Kong look at infrastructure with a broader conception: whatever facilitates participation and creative effort by people is infrastructure; whatever provides suitable working and living conditions for people is infrastructure. Here “people” refers to experts in science, technology, and industry.

To be successful, Hong Kong must, in short order, offer its experts a suitable environment:

- accelerate the start of planned projects on transportation;
- require companies that tender for government projects to employ local talent, returnees, and experts who immigrate to Hong Kong to stay; to train local staff; to import technologies; and to leave behind valuable experience;
- accelerate the development of information technology (especially Web technology); help place local IT talent in important positions; make seed funding available for startup of small and medium-size IT businesses;
- promote and support research, development, and their applications in the areas of environment, ecology, ocean, atmosphere, and energy;
- support and develop fields which will form the foundation for industry in the 21st century, including biotechnology, advanced materials, and microsystems;
- allocate land to set up residential “expert villages”.

Now, you might ask: what do all the above recommendations have to do with HKUST?

As I have repeatedly written in these Newsletters and in the newspapers, in order for a university of science and technology to excel, and in order for it to contribute, the right macroscopic ambience and climate must exist. The measures described above specify what is needed, in addition to what already exists, for the macroscopic ambience and climate to be right.

HKUST was endowed with a mission to contribute to the economic and social development of Hong Kong and her region—perhaps even the nation. In our seven years’ existence, we have advanced in precisely this direction, with our main focus on teaching and academic research, and a major push towards applied R&D. Take another look at the recommendations. Have we not actively taken part in most?

The University’s accomplishments are limited by its resources. If the SAR Government would show its full resolve, flex its muscles, and move forward without delay, we can surely count on accomplishments greater by orders of magnitude. I have no doubt that under our Chief Executive’s visionary leadership, the people of Hong Kong will advance with determination, confidence, unity, and ingenuity to fight their way out of the current economic siege and rebuild our prosperity.
Division of Humanities

It is a distinctive trait of undergraduate education at HKUST that students must balance acquisition of technical skills with opportunities for personal development. Within the constraints of a three-year program, each student strives to attain competence in a chosen discipline in business, science or engineering and at the same time enrolls in courses in other fields to experience different perspectives and ways of thinking.

At HKUST, this extra-disciplinary exposure is called 'general education', and it is seen as an essential part of a student's progress toward a complete education—in reality, a lifelong process. To learn to see, and to grow, beyond the boundaries of a single discipline, business students, for example, are required to take at least one course each in the Schools of Science and Engineering, respectively, and no fewer than four courses in the School of Humanities and Social Science. Science and engineering students have similar general-education requirements.

It is in the Division of Humanities—one of two interdisciplinary divisions in the School of Humanities and Social Science—that HKUST students are introduced to the study of art, literature, linguistics, history and anthropology, philosophy and religion. Here budding scientists, engineers, and business leaders encounter the enduring cultural achievements of mankind—and learn how to ask the human questions that underlie those achievements.

In a university dedicated to science and technology, the role of the humanities in the undergraduate curriculum is often described in terms of cultural enrichment, as if attaining an appreciation of art or history were simply a branch of polite learning. Students whose initial interest in a humanities course may be limited to the curiosity, says Prof Chang-tai Hung, a historian of modern China. “We teach our students the basic skills of learning—to read perceptively, to write clearly, and to speak effectively. But more than that, we teach them how to think critically, and how to equip themselves to deal with a rapidly changing world.”

In a Minor Key

In 1997, in response to growing student interest, the Senate approved the institution of minor programs in the School of Humanities and Social Science. A survey conducted the previous year had drawn 1,871 student responses, 46% of whom expressed an interest in studying for a minor in humanities.

The aim of the minor program is to allow motivated students to explore alternative avenues of interest and career paths, as well as lay a foundation for further study. In addition to meeting the requirements of their departmental major, students qualify for the minor by successfully taking six or more humanities courses, four of which must concentrate in one of three areas—literature, history and anthropology, or philosophy and religion.

Going for a minor on top of a student’s other requirements is an ambitious undertaking, to say the least, and the Humanities Division will appropriately honor its first crop of 31 graduates at this year's Congregation, including 10 who won Dean's list honors. “All of them made the most of their final semester to complete enough courses to graduate,” says Acting Dean of Humanities and Social Science Angelina Yee. “This speaks volumes for their initiative, motivation, and enterprise.”

Currently there are 59 students enrolled in the minor program in humanities, taking courses that range from introductory-level surveys to third-year seminars culminating in a research paper. Some of the course titles are suggestive of the breadth of intellectual interests—and breath of fresh air—animating the program: Art of Thinking, Chinese Art in the 20th Century, Anthropology of Food, Urban Culture of Hong Kong: 1950s-1970s, Taoism and the Chinese Tradition, Postmodern Intersections, Hong Kong Martial Arts Films, Seminar on Chinese Poets, History of the Common People in Late-Imperial and Modern China, East Asia and the West: Cultures in Contact.

The notable success of the Division's minor program, as measured by a growing student demand, has prompted the Humanities faculty to regard with cautious optimism the arrival of a day when they can offer a humanities major as one of the undergraduate degree options in the University. A small program for humanities majors could be achieved through internal adjustments, without injection of further external resources, says Dr Yee, and it would enhance the balance, flexibility, and intellectual atmosphere of the University.
The Question of Hong Kong

While fulfilling an important role in undergraduate education, the 27 faculty members in the Division of Humanities also conduct full-fledged graduate programs emphasizing interdisciplinary approaches to the study of modern China and contemporary Hong Kong. Ninety-two full-time and part-time graduate students are completing MA, MPhil, and PhD degrees during the current year.

Graduate research degrees in literature, history and anthropology, and philosophy and religion have been offered since the founding of the Division. A fourth area, Chinese linguistics, is being added with the arrival this semester of Prof. Samuel Hung-nin Cheung, a well-known linguist from Berkeley and the newly appointed division head.

"What we are doing in this Division is contributing to the whole notion of what Hong Kong is really like," says Prof. Cheung. "What I work on is the Hong Kong language—what constitutes Cantonese? How did it come to its present form?"

"The language is changing," he adds. "To a certain extent Hong Kong Cantonese has become a dialect in itself. It's very different from the Cantonese spoken in Guangzhou, so you could say that linguistically Hong Kong has acquired its own identity as well.

"Then there's language politics—the struggle between Cantonese and Putonghua, and also English on the other side. In the multilingual society of Hong Kong, where does Cantonese stand, and where does English stand? These are some of the issues we are probing and studying."

Interest in studying the unique qualities of local history and culture has prompted the creation of two new research centers in the Division of Humanities. The South China Research Center, established in 1997, focuses on the social history of Hong Kong and South China and is building an archive of oral history and documentary materials relating to the social structure and development of social networks in Kowloon and the New Territories. Scholars affiliated with the Center have also completed a survey of historical buildings for Hong Kong's Antiquities and Monuments Office. "We are in a race against time," says Center director Dr. Chi-Cheung Choi. "So many artifacts and other materials are disappearing rapidly."

A contrasting emphasis on contemporary culture and society characterizes the recently formed Center for Cultural Studies. "Cultural studies, as a discipline, implies a certain stance toward traditional elitist notions of culture," says Center director Dr. Angelina Yee. "It tells us that we should look at the everyday lived experience of people, including their beliefs and folk culture, to examine how the organization of society impacts not just intellectuals, but ordinary people as well. The question that is central to cultural studies is identity—what is it, what constitutes it, what changes it? And underlying that, how do we deal with these questions in contemporary society?"

In helping to redress the balance of cultural study in the region, the University's newest research center will still observe proper occasions to celebrate 'high culture' in all its splendor. In the fall semester of 1999, the Center of Cultural Studies will welcome its first incumbent to the Y. K. Pao Chair in Cultural Studies, established with funds donated by University Court member Dr. Helmut Sohmen. Conceived of as a rotating chair for prominent performing artists and scholars of superlative quality, the Y. K. Pao Chair will bring to the University, and to Hong Kong, stars of the first magnitude for a period of residence. The benefits are expected to be widespread and many.

With such exciting fare in the offing, together with solid teaching and research programs, increasing graduate enrollments, and a highly appreciative student response, it's no surprise that the Division of Humanities at HKUST at last beginning to receive its due recognition as one of the University's centers of academic excellence.
Monkeys Rampant in Hong Kong

It might come as a surprise to learn that Hong Kong has a growing monkey problem. How can an urban area with one of the highest population densities in the world even support the presence of wild monkeys?

Through field surveys and the tabulation of vital statistics, two researchers in HKUST’s Biology Department have been trying to answer this and related questions about a feral monkey population living in the Kowloon Hills of Hong Kong.

Anyone who has taken a walk near a famous Hong Kong landmark, Amah Rock, knows about the monkeys. They swing from the trees, play in pools of water, and approach walkers on sight—expecting to be fed.

Dr. I-Hsun Ni and his research student C. L. Wong have identified eight groups of macaques living around Amah Rock and Tai Po Road. In December 1993, they counted 690 monkeys and expect that the population could grow to 1,100 by the year 2000 if conditions remain favorable for the monkeys.

The macaques seem skilled in adapting to their environment, and even to be thriving in the shadow of Hong Kong’s high-rises. What, then, is the problem? “The feral monkey population has become very popular with those seeking a close encounter with a wild animal in Hong Kong,” Dr Ni explains. “During holidays, thousands of people go to the so-called monkey hill to watch and feed the monkeys. Under these circumstances, it’s natural for conflicts to arise between the monkeys and their visitors.”

The monkeys have come to expect that all humans will feed them, and they can be very aggressive, posing a danger to people unsure of what they are doing. Some have urged that the monkeys be eliminated from the area; others hope that difficulties in inter-species interaction can be resolved without harm to the animals.

The issue is complicated by the fact that the macaques are actually not indigenous to the area where they are now living. As early as 1819, the presence of wild monkeys in the Hong Kong area was noted, and in 1870 monkey populations were recorded on most small islands in Hong Kong waters. But the monkeys in the Kowloon Hills turn out not to be descendants of the wild monkeys. They were released in the area just prior to World War I.

As the HKUST researchers learned, the presence of the macaques in the Kowloon Hills is directly related to the construction of the reservoirs in the area. After the Kowloon Reservoir was opened in 1913, two species of the Strychnos plant that contain the toxins strychnine and brucine were discovered in the area. These plants contain poisonous alkaloids that are dangerous to livestock and humans if ingested but are favorite natural plant foods for macaques. Because of worry that the strychnos plants might poison the reservoir, a few rhesus macaques were released by a now unknown party with the idea that the monkeys would eat the plants before they dropped into the reservoir.

In the years following, the population of the monkeys grew and declined in response to changes in the environment. Most of the trees in the area were cut down for fuel and building materials during the Second World War, and the macaque population became scattered. After successful reforestation, the monkeys returned to the area. In the mid-1960s, two Tibetan macaques were released into the population when an acrobat troupe from China was not allowed to take their monkeys with them to their next destination.

Wong and Ni pieced this account together from scientific and historical documents, as well as from stories related by frequent feeders of the monkeys. One feeder claimed to have fed the monkeys every day for more than seventy years. In addition, Wong spent countless hours over two years observing and following the monkeys in their various habitats. He took photographs of them so that each individual could be identified and counted. He also spent many nights watching the monkeys’ activities after dark.

“This kind of study is necessary to understand the population dynamics of monkeys in Hong Kong,” says Dr Ni. “We need to assess the size of the population and how fast it will grow. Only then can we figure out how to manage Hong Kong’s feral monkey problem.”
Speech recognition systems are already being touted as the next hot accessory for your personal computer—what could be next? How about an automatic multilingual translator that you can hold in your hand and carry in your pocket?

The idea might sound like science fiction, but it's also the target of current developmental work in language technology. The goal is a handheld device into which a person could say something and have the device repeat the phrase in another language. The usefulness of such a device is obvious—speakers of different languages would be able to communicate without the intervention of a human translator.

At HKUST's Human Language Technology Center (HLTC), researchers are hard at work on developing the platform for such a system, aided with a $3,900,000 central allocation grant. The device itself will "take several more years to develop," says Prof Roland Chin, head of the Computer Science Department. "The projects we are working on now provide the building blocks to get us there."

The design of a handheld multilingual translator will build upon years of interdisciplinary work in the field of human language technology, defined by Dr Dekai Wu as "the techniques and algorithms enabling computers to understand and produce the normal everyday language used by humans to communicate with each other."

To arrive at a viable system, team members Gan Kok Wee, Brian Mak, and Dekai Wu from Computer Science, together with Oscar Au, Pascale Fung, and Bertram Sui from Electrical and Electronic Engineering, must solve a host of intricate problems in areas such as audio perception, acoustics and transducers, digital signal processing, data coding and compression, natural language understanding and generation, language translation, information retrieval, wired and wireless transmission, and so on.

Dr Wu, for example, recently unveiled his work on Silc, a machine translation service designed for use on the World Wide Web. The algorithms built into Silc automatically provide context-sensitive translations of terms found on Web pages, either from English into Chinese or from Chinese into English. Now "the entire Web becomes accessible to readers of Chinese who have limited knowledge of English," says Dr Wu. A preliminary release of Silc is available to readers of this Newsletter at http://silc.cs.ust.hk. After additional testing, it will soon be made available over the entire Web.

Silc solves some of the complex problems associated with machine translation between written Chinese and English. Other projects in HLTC are tackling additional problems related to speech recognition.

The SALSA system developed by Dr Pascale Fung enables a person to browse the World Wide Web using oral commands rather than a keyboard and mouse. The user simply talks to the computer to move between pages and hyperlinks on the Web. If, for example, the user says, "SALSA, go to HKUST," the computer will respond by bringing the University's homepage onto the screen.

More remarkable is the fact that SALSA is multilingual. It can understand commands in English, Putonghua, and Cantonese. Dr Fung hopes to install a version of SALSA in the express computer stations distributed throughout the HKUST campus to make use of a natural demonstration site for the system. In such a setting where computers with telecommunication links are available to anyone walking by, the system must be able to adapt instantly to a wide range of commands.

An English speaker from Canada could approach the computer to ask it for the library's operating hours. The next request could be in Putonghua from a visitor from the Mainland who wants to find a faculty member's office number. As designed, the system will be able to supply the needed information to both speakers, regardless of their language or even their accents.

"The next step is to combine SALSA with Silc," says Dr Fung. This would give speakers of Chinese unprecedented access to the World Wide Web because they would no longer be constrained by having to learn to type in Chinese on standard PC keyboards. Instead, they could give voice commands to SALSA in Cantonese or Putonghua and then use Silc to translate the contents of the desired Web page.

These real-time translation and speech recognition technologies constitute the working platform for the design of a handheld translation device. But that is still a few years away. For now, HLTC researchers have already gone a long way towards making the vast information resources of the World Wide Web available to readers and speakers of Chinese.
In mid-July, handball teams from eleven universities in Asia representing the Chinese Mainland, Taiwan, Hong Kong, Macau, and Singapore came to HKUST to compete in the Asia Inter-Varsity Handball Tournament, celebrating the first anniversary of Hong Kong’s return to China. The hard-fought, closely contested final round was played out between a team from Tongji University in Shanghai—the eventual winner—and the host team from HKUST.

Hong Kong’s Commission of Inquiry on the New Airport has appointed two HKUST professors to provide technical assistance during its assessment of the misfortunes attending the opening of the new airport. Prof Vincent Y. S. Shen (top right), an expert in software development with extensive industry experience, is advising the Commission on the operation of the computer systems at the airport, while Prof Xiren Cao (Electrical and Electronic Engineering) is serving as its expert on mechatronics. His expertise will help the Commission to understand the mechanical and electrical aspects of the cargo-handling system at the air cargo terminal facility and other related matters.

Five HKUST graduate students enjoyed a unique perspective on President Bill Clinton’s visit to Hong Kong in July. Working in the press room at the Grand Hyatt Hotel, the students were employed by CBS as interpreter-assistants for the American news reporters and camera crews covering the visit. Standing at the scene of the president’s press conference are Michelle Lui, Kevin Tse, Joe Yue (CBS), Veronica Lai, Antonio Wong, and Gavin Kwok.

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The opening of the fall semester brought to campus 1,888 first-year undergraduates—eager for their first taste of university life—and 669 new graduate students. Among the latter are 87 fresh graduates of leading Chinese Mainland universities, all of whom arrived in August for a month-long orientation before the start of classes.

Two HKUST faculty members—a molecular neuroscientist and a mathematician astronomer—are among five Hong Kong academics who won Croucher Foundation Senior Research Fellowships for 1998–99. The fellowships are awarded each year to scholars whose work is considered by their peers to be of critical importance to science in Hong Kong, enabling the recipients to take a year’s sabbatical from teaching duties to concentrate on research. Prof Nancy Y. Ip (Biology) will continue her work with neurotrophic factors representing a potential treatment or even cure for spinal cord injuries and debilitating neurodegenerative diseases such as Alzheimer’s disease, Lou Gehrig’s disease, and Parkinson’s disease. Dr Kwing Lam Chan (Mathematics) is studying the differential rotation of the sun with an eye to providing improved early warning of the solar flare cycles that cause havoc on earth by disrupting satellite telephony and television.
ACADEMIC APPOINTMENTS

VISITING PROFESSOR
DEPARTMENT OF MARKETING

Robert S. Wyer, Jr.

Prof Robert Wyer is a well-known authority in social psychology who has published widely on social cognition and related topics. He is a professor of psychology at the University of Illinois at Urbana-Champaign.

Originally trained as an electrical engineer, Prof Wyer switched to psychology following his master's degree and earned his PhD in psychology at the University of Colorado. He began teaching at the University of Iowa and the University of Illinois at Chicago, where he was promoted to full professor. He moved to the Urbana-Champaign campus of the University of Illinois in 1973.

Prof Wyer is the author and editor (with T. K. Srull) of Memory and Cognition in Its Social Context, Handbook of Social Cognition, and Advances in Social Cognition, a series now in its twelfth volume. He has won the Alexander von Humboldt Special Research Prize for Distinguished Scientists, awarded in Germany, and the first annual Ostrom Award for Distinguished Contributions to Person Memory and Social Cognition. He is a Fellow of the American Psychological Association.

PROFESSOR AND HEAD
DIVISION OF HUMANITIES

Samuel Hung-nin Cheung

Prof Samuel H. Cheung received his BA and MA from the Chinese University of Hong Kong and his PhD in oriental languages from the University of California at Berkeley. His research interests are in language as well as literature.

In the field of Chinese linguistics, he has published many works on topics in dialectology and grammar, including, most recently, A Practical Chinese Grammar. His research in vernacular and contemporary Chinese literature has produced a variety of studies on colloquial stories and classic novels. He has also written on the Hong Kong writer Zhong Xiaoyang.

Before joining HKUST, Prof Cheung was chairman of the Department of East Asian Languages at the University of California, Berkeley. He has been a member of the Berkeley faculty since 1974, teaching Chinese language, literature, and linguistics. He has also taught at Oregon University, the University of Hong Kong, and Hong Kong Baptist University. He is an editor of the Chinese Oral and Performing Literature Papers and the International Review of Chinese Linguistics.

PROFESSOR
DIVISION OF HUMANITIES

Hao Chang

Prof Hao Chang is a distinguished historian whose works have helped to explain the intellectual transformation that lay at the heart of the transition from traditional to modern China.

He joins HKUST after a 30-year career at Ohio State University, where he was professor of history and the Wiant Professor of Chinese History and Culture. He is a graduate of National Taiwan University and earned his MA and PhD in history at Harvard University, where his thesis on Liang Chi-ch'ao's early intellectual life formed the basis of his first book, Liang Chi-ch'ao and Intellectual Transition in China, 1890–1907.

Prof Chang's studies of Chinese intellectual history and the character of modern Chinese intellectuals have made him an authority on the roots of the cultural and intellectual ferment in twentieth-century China. A member of Academia Sinica, he is currently working on a study of the sense of darkness in Chinese thought, traditional and modern, and completing a book about the role of cosmological myths in the Neo-Confucian tradition.

PROFESSOR AND HEAD
DIVISION OF SOCIAL SCIENCE

Alvin Yiu-Cheong So

Prof Alvin So is a sociologist who has been studying social and historical change in Hong Kong, South China, and other East Asian societies throughout his academic career. He comes to HKUST from the University of Hawaii at Manoa, where he won a Regents' Medal for Excellence in Teaching.

Prof So first studied sociology at the Chinese University of Hong Kong. After receiving his MA and PhD from the University of California at Los Angeles, he worked on the professional staff of the National Center for Bilingual Research and taught at the University of Hong Kong before moving to Hawaii in 1984.

He has published four books and a steady stream of papers. A new book entitled Hong Kong's Embattled Democracy: A Societal Analysis will be published by Johns Hopkins University Press early next year. He is coeditor of the Bulletin of Concerned Asian Scholars and was president of the North American Chinese Sociologists' Association in 1997–98. Recently he won election as chair-elect of the Asia and Asian American Section of the American Sociological Association.
ASSOCIATE PROFESSOR OF CHEMICAL ENGINEERING

John Patrick Barford
包福特博士
University of New South Wales, Sydney (Biochemical Engineering)
Assoc. Professor, University of Sydney
Biochemical engineering (bacterial, yeast and animal cell cultivation); environmental biotechnology; metabolic simulation.

1979 PhD
1986-98
Research Interests

ASSISTANT PROFESSOR OF COMPUTER SCIENCE

Brian Kan-Wing Mak
麥鑑榮博士
Oregon Graduate Institute of Science and Technology (Computer Science)
Research Consultant, AT&T Labs
Speech recognition; spoken language understanding; dialog modeling; machine learning.

1998 PhD
1996-98
Research Interests

ASSISTANT PROFESSOR OF ACCOUNTING

Alison Li Aili
李艾莉博士
University of California, Berkeley (Business Administration)
Capital market efficiency; fundamental analysis; behavior of financial analysis; international harmonization of accounting standards.

1997 PhD
1998
Research Interests

ASSISTANT PROFESSOR OF FINANCE

Maurice A. Ewing
于永博士
Princeton University (Economics)
Research Fellow, Federal Reserve Bank of New York
International finance; banking and financial crises; economics of contracts; cooperative game theory.

1998 PhD
1996-97
Research Interests

ASSISTANT PROFESSOR OF FINANCE

Angela Ng
吳麗萍博士
Stanford University (Economics)
International capital asset pricing model; equity market volatility; return and trading volume.

1997 PhD
1998
Research Interests

ASSISTANT PROFESSOR OF INFORMATION AND SYSTEMS MANAGEMENT

Hugues Levecq
李樂德博士
New York University (Information Systems)
Electronic commerce; impact of information technology on financial markets; IT-enabled price discovery mechanisms.

1997 PhD
1990 PhD
Research Interests

VISITING ASSISTANT PROFESSOR OF MARKETING

Byong-Duk Rhee
李秉德博士
University of Michigan, Ann Arbor (Marketing)
Asst Professor, Washington University
Economic analysis of marketing problems; product differentiation; first-mover advantages and new product positioning; pricing and promotion strategies.

1990 PhD
1989-97
Research Interests