

## Lectures

April 3, 2009

**70<sup>th</sup> Anniversary Lecture: "Will China Run Out Of Water?"**  
by Professor Chunmiao ZHENG  
University of Alabama

April 15, 2009

**70<sup>th</sup> Anniversary Lecture: "Is Cancer a Disease?"**  
by Professor Robert Austin, Princeton University

April 28, 2009

**Science-in-action Talk and Campus Visit: "Does Applied Mathematics Exist? – A Lesson from Godfrey Harold Hardy"**  
by Professor M K Siu, Department of Mathematics

May 5, 2009

**Science-in-action Talk and Campus Visit: "Games and Zermelo's Theorem"**  
by Dr T W Ng, Department of Mathematics

June 17, 2009

**70<sup>th</sup> Anniversary Lecture: "The Relevance of a Science Degree to Life – A Self Reflection"**  
by Dr Rita Fan

July 10, 2009

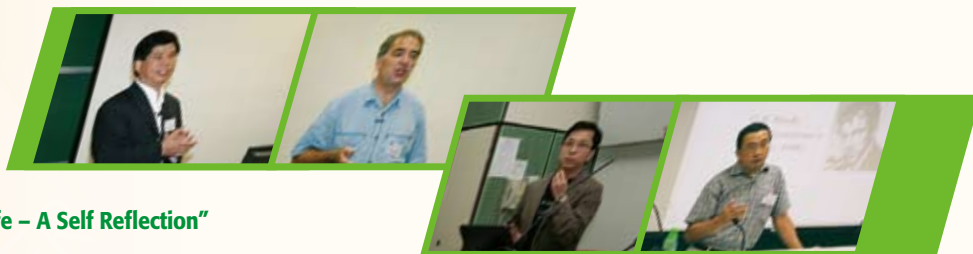
**Science-in-action Talk and Campus Visit: "Genes and Cancer"**  
by Dr A S T Wong, School of Biological Sciences

October 9, 2009

**Shaw Prize Lecture in Mathematical Sciences**  
by Professor Clifford H Taubes, Harvard University; and Professor Simon K Donaldson, Institute for Mathematical Sciences at Imperial College

October 13, 2009

**Science-in-action Talk and Campus Visit: "Was Ptolemy A Plagiarist? How Scientific Method Helps to Resolve in History of Science"**  
by Dr H F Chau, Department of Physics



## Upcoming Events

October 24, 2009

**"Science Corner of Information Day for Undergraduate Admissions"**



November 4, 2009

**Science-in-action Talk and Campus Visit "Marine Management and Conservation in the Pacific and Southeast Asia"**  
by Professor Y J Sadovy, School of Biological Sciences

November 15, 2009

**Faculty of Science 70<sup>th</sup> Anniversary Dinner**  
(For details: please visit [www.hku.hk/science](http://www.hku.hk/science))

## Brainteaser

### Question:

Write a short poem about me and you could win a prize:

**I am boy and I am girl.  
I live in waters close to your home but  
I also travel the world, and have even  
been to Hollywood.  
My home is an animal that looks  
like a plant.  
Some people like to look at me;  
others like to eat me.**

Who am I?

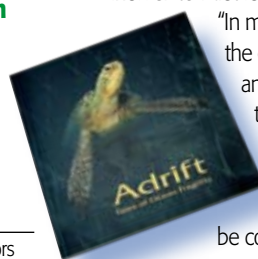
Prize: "Adrift – Tales of Ocean Fragility" by Professor Y J Sadovy and co-authors  
Deadline: December 31, 2009

Please email your answer together with your name and school (for students), to [scinews@hku.hk](mailto:scinews@hku.hk). The best **THREE** winners from the contestants will receive the prize.

**Answer to Last Issue's Quiz:**

"In most English texts the letters that appear most often are, in the order of their frequencies, e, t, a, o, i, n, s, h, and r. In fact e and t together will usually account for more than one fifth of the letters in the text. To decipher a long enough message one may replace the two most frequent symbols in it by e and t. Then with a few smart trials and some guesswork it is very likely that the whole message can be completely revealed."

Winners of the last issue have been informed individually.



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**Faculty of Science** G12 Chong Yuet Ming Physics Building, Pokfulam Rd, HK Tel: 2859 2683 Fax: 2858 4620 Email: [science@hku.hk](mailto:science@hku.hk) Website: <http://www.hku.hk/science>

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# The Faculty of Science in Evolution



by Professor Sun Kwok, Dean of Science

The Faculty of Science has undergone significant changes in the last several years. In preparation for the transition to a 4-year curriculum in 2012, we have taken active steps in several directions in curriculum reform. We have introduced the major/minor system to replace the old programme structure, and a common Faculty admission scheme where students are admitted to a common programme 6901 and have a year before committing to a specific major. These have resulted in greatly increased number of applications to the Faculty, with a corresponding significant improvement in quality of intake. The science programme 6901 was the most popular of all JUPAS programmes in 2007 and 2008, attracting 4049 first-round band-A applicants in 2007 and 3715 in 2008, in comparison to 1500 in 2006. The highly competitive nature of our admission has not deterred potential applicants, and 6901 remains the 2<sup>nd</sup> most popular programme in 2009 with 2933 band-A applicants.

In terms of intake quality, students admitted to 6901 having a score of 3.0 and 4.0, for 2AL and 1AS increased by 62% in 2007. In the 2008 admission, we had a dramatic increase in the number of students with entrance scores between 4.0 and 5.0, representing a 44% increase over 2007 and 68% over 2006. This trend continues in 2009, with the highest average entrance scores in the recent 10 years.

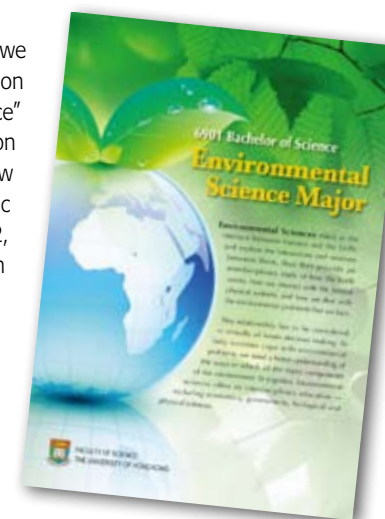
Our Actuarial Science programme remains the programme attracting the top students in Hong Kong, with admitted candidates having an average AL score of 4.89 (out of possible 5.0) in 2007, rising to 4.94 in 2008 and 2009 (the highest in HKU in 2008 and 2<sup>nd</sup> highest in Hong Kong in 2009).



To support our students in the selection of 15 majors, we have implemented an academic advising system to help students make intelligent choices in their newly found flexibility and freedom. To ensure that our students gain practical and international experience, we have introduced several experiential learning programmes including internships, field trips, summer research, and overseas research fellowships.

At the beginning of the academic year of 2008, we introduced a first trial of the future academic induction programme. Two lectures, one on "What is Science" and the other on "The Relevance of Science Education in an Ever-changing World" were given to the new students. This was expanded to a full day of academic induction for our 2009 incoming students. For 2012, we are planning a set of common Faculty foundation courses where students will get a broad overview of science.

A new interdisciplinary major – Environmental Science – has been introduced in 2009. This major will be jointly taught by faculty members from all six departments, including new staff who are world experts in this field.



## From The Editor

Dear readers,

The Faculty of Science celebrates her 70<sup>th</sup> anniversary this year. This is a good time to honor the outstanding achievements of our distinguished alumni. In this issue of science@HKU, we introduce the 43 alumni to be honored in our 70<sup>th</sup> Anniversary Dinner to be held on Nov 15. In addition, Professor S Kwok, our Dean, will tell us the evolution of the Faculty over the last few years.

University professors not only publish professional papers, some of us also write books, in particular, popular science books. Those who win this issue's Brainteaser will receive a copy of the popular science book "Adrift - Tales of Ocean Fragility" recently published by Professor Y J Sadovy of the School of Biological Sciences.

Yours sincerely,  
Dr H F Chau  
Chief Editor

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The Faculty of Science strongly supports the common core requirements initiated by the University. The Faculty has 10 common core courses approved for offering from 2010, and we look forward to the Faculty playing a larger role in the education of the entire student body of HKU.

In order to improve the quality of education to our students and the level of scholarship, we have actively recruited new academic staff through global searches. Among the newly hired faculty members are prominent scientists from Finland, Germany, South Africa, Switzerland, U.K. and USA. We are also committed to diversity and internationalization in our student body. In our 2009 undergraduate cohort, we have students from India, Macau, Malaysia, North Korea, Pakistan, and USA, in addition to students from Hong Kong and Mainland China.

HKU Science strives to be a force internationally by pursuing problems at the frontiers of science. In the past year, we have significant discoveries reported in leading journals such as *Science*, *Nature*, and the *Proceedings of the National Academy of Sciences*. In our rigorous tenure and promotion exercises, we emphasize quality over quantity in publications, and evaluations by international peers. We foresee that these will lead to a research performance competitive worldwide.

We are facing the curriculum reform challenges head on and are using it as an opportunity to improve our teaching and research performances. With the current momentum, we fully expect that we will be ready by 2012, with a much improved education platform for our students.



## Global Science Education Network

by Professor Sun Kwok

Science and technology have permeated all aspects of modern life and scientific literacy is a core requirement to participate on a personal, professional, social, political and cultural level. For this reason, we believe that all children should experience a rigorous, coherent and engaging science education.

On May 7-8, 2008, a group of science educators from US, France, Japan, Canada, China, and Hong Kong met at The University of Hong Kong to develop a set of goals and guidelines for science education. The group, known as Global Science Education Network, aims to conceptualize a modern coherent science curriculum, inform and support teacher preparation and professional development, facilitate global learning collaborations and support a modernized, integrated college science programme.



In addition to Practical Scientific Literacy which enables the individual to understand and appropriately interact with science related problems in everyday life, we also emphasize Functional Scientific Literacy which helps the individual understand and evaluate the science related problems affecting society and participate in the democratic process through scientific reasoning based on evidence. Furthermore, Cultural Scientific Literacy is important as it allows the individual to view scientific progress in the historical, cultural and political context and fosters a lifelong appreciation for the sciences.

A complete text of the Hong Kong Accord on Global Science Education is available at [www.hku.hk/science/people/hk\\_accord0909.pdf](http://www.hku.hk/science/people/hk_accord0909.pdf)

In the forthcoming HKU common core courses, we try to address these elements and incorporate these goals in the development of common core courses from Science, among which is a course on "Human's Place in the Universe" which discusses how historical developments in physics and astronomy have profoundly altered our view of ourselves and our place in the Universe.



## New Teachers in the Faculty

Our warmest welcome to 15 new professoriate staff who have joined us in the past year.

### School of Biological Sciences

**Dr Leszek KARCZMARSKI**, Associate Professor, PhD, University of Port Elizabeth

Dr Karczmarski will teach biology of marine mammals and his research interests are ecology, behaviour and conservation of marine mammals, comparative socio-ecology and population ecology of cetaceans, and socio-behavioural complexity of group living mammals.

**Dr David L THOMSON**, Associate Professor, PhD, University of Glasgow

Dr Thomson is interested in understanding how wildlife populations respond and adapt to environmental change. He is involved in teaching ecology courses as well as MSc courses on environmental management. He previously worked in the Max Planck Institute for Demographic Research.

**Dr Thiyagarajan VENGATESEN**, Assistant Professor, PhD, University of Madras

Dr Vengatesen studies the effects of ongoing environmental changes and predicts climate change scenarios on commercially important marine invertebrate, larval molecular proteome plasticity and skeletal calcification. He is teaching global environmental change and aquatic life.

**Dr Aixin YAN**, Assistant Professor, PhD, Peking University

Dr Yan explores how bacteria, especially bacterial pathogens, adapt to the rapid and constantly changing environment, such as antibiotic treatment. She teaches courses on microbial physiology and biochemistry and clinical microbiology.

### Department of Chemistry

**Dr Hao HU**, Assistant Professor, PhD, University of North Carolina at Chapel Hill

Dr Hu's research focuses are mechanistic simulation of enzyme catalysis, structure, dynamics, and function of proteins, development and application of QM and QM/MM method, and molecular design. He will be teaching computational chemistry, intermediate and advanced physical chemistry.

**Dr Xuechen LI**, Assistant Professor, PhD, Harvard University

Dr Li studies disease-related glycobiology and chemical agents for the treatment of glycosylation-related diseases (cancer metastasis and viral infections). He is teaching organic chemistry and chemical biology.

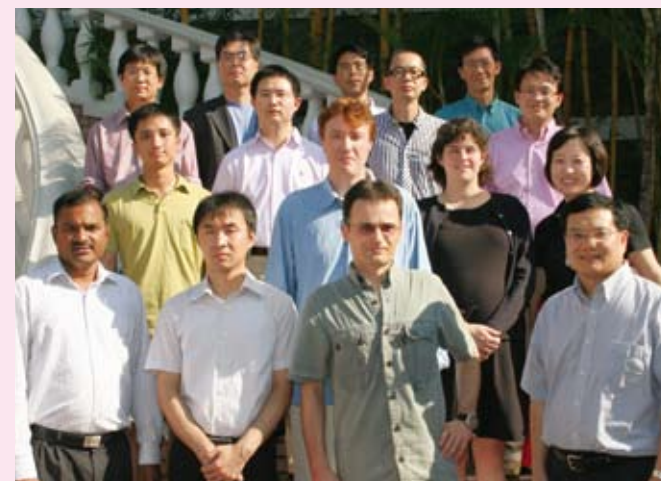
### Department of Earth Sciences

**Dr Zhonghui LIU**, Assistant Professor, PhD, Brown University

Dr Liu teaches undergraduate and MSc courses on climatology and he is interested in the study of earth's climatic and environmental changes in geological and human history using geochemical tools.

### Department of Earth Sciences/School of Biological Sciences

**Dr Nathalie F. GOODKIN EMAMI**, Assistant Professor, PhD, Massachusetts Institute of Technology and Woods Hole Oceanographic Institution



From Left to right:

**Row 1:** Dr Z Liu, Dr J Lim, Dr G Yin, Dr Y Zong

**Row 2:** Dr H Hu, Dr K C Cheung, Dr G Li

**Row 3:** Dr W Yao, Dr D L Thomson, Dr N F Goodkin Emami, Dr A Yan

**Row 4:** Dr T Vengatesen, Dr X Li, Dr L Karczmarski, Dr G Tian

Dr Goodkin is now teaching oceanography and environmental science. Her research interests are in the field of coral geochemistry and on reconstructing storm and climate histories or pollution history within the South China Sea.

**Dr Yongqiang ZONG**, Associate Professor, PhD, University of Durham

Dr Zong is the coordinator of the new Environmental Science major and teaches courses on environmental science. He studies climate change, natural hazards, and sea-level and coastal changes.

Both Drs Goodkin and Zong are jointly appointed in the Department of Earth Sciences and the School of Biological Sciences.

### Department of Physics

**Dr Jeremy LIM**, Associate Professor, PhD, Macquarie University

Dr Lim is a teacher of astronomy and interstellar medium, and his research interest is in astrophysics: star formation, stellar activities, evolved stars, external galaxies, radio interferometry.

**Dr Wang YAO**, Assistant Professor, PhD, University of California, San Diego

Dr Yao studies the open quantum systems and quantum environment, quantum controls, cavity quantum electrodynamics, semiconductor optics, and topological quantum transport. He will be teaching quantum mechanics and methods of physics.

### Department of Statistics and Actuarial Science

**Dr Ka Chun CHEUNG**, Associate Professor, PhD, The University of Hong Kong

Dr Cheung is teaching financial derivatives and corporate finance this year and his research interests are in dependence structures, risk measures, stochastic orders, and probability theory. He was with the University of Calgary before joining us.

**Dr Guodong LI**, Assistant Professor, PhD, The University of Hong Kong

Dr Li is a teacher of time series analysis and linear models and his research focuses are time series and econometrics. He previously worked in the Nanyang Technological University.

**Dr Gary G L TIAN**, Associate Professor, PhD, Chinese Academy of Sciences

Dr Tian teaches statistical models and statistics in biomedical research. His research interests include incomplete categorical data analysis, constrained parameter models and variable selection, and sample surveys with sensitive questions.

**Dr Guosheng YIN**, Associate Professor, University of North Carolina at Chapel Hill

Dr Yin will be teaching biomedical research and his research focuses are Bayesian adaptive designs and statistical issues in clinical trials and cancer drug development. He used to work in the University of Texas M.D. Anderson Cancer Center.



## 70<sup>th</sup> Anniversary Homecoming Day

May 9, 2009

The Faculty of Science 70<sup>th</sup> Anniversary Homecoming Day was held on May 9, 2009 at Rayson Huang Theatre where we saw several generations of science graduates rekindling ties and recalling the fondness of old school days. While reminiscing the bygone days with relish, participants also heard the latest development of both the University and the Faculty. They all had an enjoyable and unforgettable afternoon.



At the Homecoming Day, science alumni met old friends of the same root.



The exhibition depicted the achievements and development of different science departments.



Alumni were interested to learn about the progress of the Centennial Campus project.



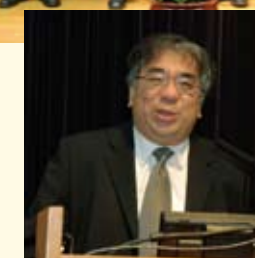
The Homecoming Day was a perfect time for Faculty members, alumni and friends to reconnect with each other.



The alumni revisited their alma mater with the student guides.



The ribbon-cutting ceremony marked the opening of the Homecoming Day.



Professor S Kwok, Dean of Science, thanked the alumni for their unfailing support.



Mr Patrick Poon delivered a speech on behalf of the officiating guests.



Professor A S C Cheung, Associate Dean of Science, outlined the latest development of the Faculty.



Science alumni of different generations shared their experience at the University.

## 70<sup>th</sup> Anniversary Lecture Series

*"The Relevance of a Science Degree to Life – A Self Reflection"*

by Dr Rita Fan, June 17, 2009

*"My study at the Faculty of Science has considerable impacts on me, of which the techniques and underlying principles I learnt here apply to both my work and daily life."*

– by Dr Rita Fan



Dr Rita Fan Hsu Lai-tai, one of our outstanding alumni, was invited to deliver a lecture "The Relevance of a Science Degree to Life – A Self Reflection" on June 17, 2009 at HKU to share her success story on how her education in science has shaped her value, personal growth and career advancement.

"The objective, systematic and analytical nature of science studies make me aware that the truth known to us may only be part of the whole truth. Thus, we may not allow ourselves to be too confident. Sometimes personal feeling has to give way to objectivity," Dr Fan said.

## Make a Gift Now

### 70<sup>th</sup> Anniversary Alumni Fund

In the past 70 years, the Faculty has made significant contributions to science education and research in the region and the world, and our Platinum Jubilee is a perfect time to reflect on our past and celebrate the future. Education has always been the Faculty's foremost mission. In this Platinum Jubilee, we have established a "70<sup>th</sup> Anniversary Alumni Fund" to benefit the development of our students direct. The Faculty would like to invite you to make a gift to enrich the experience of our undergraduate students.

The 70<sup>th</sup> Anniversary Alumni Fund is to provide financial support to our undergraduate students, enabling them to participate in exchange programmes and various learning opportunities under the new curriculum, which calls for broader learning experience for students. The target of the fund is HKD 7 million as endowment and the interest generated will be used to support different student learning activities. Donations received from HKU alumni will attract further dollar-to-dollar matching for HKU under the "Stanley Ho Alumni Challenge".

You may also wish to visit our anniversary webpage at [www.hku.hk/science/70th](http://www.hku.hk/science/70th) for more information.

COMING SOON!

### 70<sup>th</sup> Anniversary Dinner

Date : November 15, 2009 (Sunday)

Time : 19:00-22:00 (Reception from 18:00)

Venue : Convention Hall  
Hong Kong Convention and Exhibition Centre



# Distinguished Science Alumni

The Faculty of Science always regards its alumni the most important asset. Not only the unstinting support of alumni it treasures, but also their commitment and endeavours in contributing to society. On the occasion of its Platinum Jubilee, the Faculty is proud to honour its outstanding graduates from either an undergraduate or a postgraduate programme of the Faculty in various sectors' and salute their outstanding

achievements in their own profession; scientific research and science education; and contributions to the community and society. While paying tribute to the 43 Distinguished Alumni, the Faculty also hopes its students and future generations will be enlightened and learn from these role models – their devotion to their professions, their strong leadership and the attitude of giving.



**Professor CHAN Kwong-on Daniel, JP**  
陳鑛安教授

**BSc 1962, MSc 1965**  
Emeritus Professor, Faculty of Science,  
The University of Hong Kong  
Honorary University Fellow by  
The University of Hong Kong (2004)  
Research Fellow and Former Director of  
the Kadoorie Institute



**Dr CHAN Lam Lai-bing Alison**  
陳林麗冰博士

**BSc 1965**  
Council Member of Lingnan University  
Chairperson Board of Governors,  
The Alison Lam Foundation Limited  
Director, Lingnan Education Organization Limited



**Mr CHAN Wing-luk**  
陳永陸先生

**BSc 1973**  
Chairman, U Six Holdings Limited



**Professor CHE Chi-ming**  
支志明教授

**BSc General 1978, PhD 1982**  
Dr Hui Wai-Haun Chair of Chemistry, Department of Chemistry,  
The University of Hong Kong  
The first Hong Kong scientist elected as a member of the Chinese Academy  
of Sciences (elected 1995)  
Croucher Senior Research Fellow (1997)  
Recipient of Fellow, World of Innovation Foundation (elected 2004)  
Fellow, Federation of Asian Chemical Societies Foundations (elected 2005)

Listed as one of the ISI Highly Cited Researchers (2005)  
Recipient of TWAS Prize in Chemistry from the Academy of Sciences for  
the Developing World (2006)  
The first Hong Kong scientist to receive State Natural Science Award (First-class) (2007)  
Fellow, the Academy of Sciences for the Developing World (TWAS fellow, elected 2007)  
Recipient of Leader of the Year (2007)  
Recipient of the Prize of Ho Leung Ho Lee Foundation for Scientific  
and Technological Progress in China (2007)



**Professor CHENG Kai-ming, SBS**  
程介明教授

**BSc 1966, BSc (Special) 1967**  
Senior Advisor to the Vice-Chancellor, Chair Professor and  
Former Dean of the Faculty of Education, and  
Former Pro-Vice-Chancellor of The University of Hong Kong  
Honorary Fellow, University of London Institute of Education (1998)  
Fellow, Council of Consultant Fellows, International Institute for  
Educational Planning (1994)  
Fellow, Commonwealth Council for Educational Administration (1992)  
Fellow, Hong Kong Educational Research Association (1998)



**Professor CHENG Yiu-chung Patrick**  
鄭耀宗教授

**BSc 1963**  
Former Vice-Chancellor of The University  
of Hong Kong  
Former Vice-Chancellor of City University  
of Hong Kong  
Member, Chinese Academy of Sciences  
Recipient of Sixth National Natural Science  
Prize of China (Third Class)



**Dr CHEUNG Nim-kwan**  
張念坤博士

**BSc 1969, BSc (Special) 1970**  
Chief Executive Officer of the Hong Kong Applied Science  
and Technology Research Institute  
Former President of the IEEE Communications Society  
Former Vice President of Applied Research Government  
Programme in Telcordia Technologies  
Consulting Professor of Electrical Engineering at Stanford  
University  
Honorary Professor of The Chinese University of Hong Kong  
Member, Research Grants Council of Hong Kong



**Mr CHU Yu-lun Stanley**  
朱裕倫先生

**BSc General 1973**  
Founder and Chairman of the Adsale Group  
Chairman of Hong Kong Exhibition and Convention Industry Association  
Vice Chairman of UFI (The Global Association of the Exhibition Industry)  
Asia/ Pacific Chapter  
Member of Steering Committee on MICE of the Government of HKSAR  
Member of Advisory Board of the MBA Program for The Chinese University of Hong Kong  
Member of Board of Governors of Hong Kong Baptist University Foundation  
Vice Chairman of Hong Kong University Graduates Association Education Foundation  
Founding President of Hong Kong University Science Alumni Association Limited



**Mr CHUNG Shui-ming Timpson, GBS, JP**  
鍾瑞明先生

**BSc General 1976**  
Director - General of DAB, Director of China State Construction Limited, China Everbright Bank,  
Unicom Hong Kong Limited and several other companies listed in Hong Kong  
Member of National Committee of Chinese People Political Consultative Conference  
Former Vice Chairman of Nanyang Commercial Bank  
Former Director of Jardine Fleming Holdings Limited and Chairman of Jardine Fleming Asset Management  
Former CEO of the Hong Kong SAR Land Fund Trust  
Former member of Executive Council of the HKSAR  
Former Chairman of the Hong Kong Housing Society  
Former Chairman of the City University of Hong Kong Council



**Dr CHUNG Wai-ling Margaret**  
鍾惠玲博士

**BSc 1980, PhD 1987**  
Honorary President, American Institute of Natural Medicine  
Research Development Director, BeWell Global Limited  
Biomedicine Consultant, N.C.I. National Cancer & Immune. LLC.  
Biomedicine Consultant, Gene Life Biomedicine  
International Limited  
Director, Amazing Grace Holistic Health Care Center  
Founder and Honorary Chairperson, Regeneration Society  
Ten Outstanding Young Woman Volunteers, Hong Kong  
Ten Outstanding Young Person, Hong Kong



**Dr FAN HSU Lai-tai Rita**  
GBM, GBS, JP  
范徐麗巖博士

**BSc General 1967**  
Member of the Standing Committee of the  
Eleventh National People's Congress of the  
People's Republic of China  
Steward of The Hong Kong Jockey Club  
Former President of the Legislative Council



**Dr HO Hung-sun Stanley, GBS**  
何鴻燊博士

**War-time student from 1939 to 1941**  
Group Executive Chairman of  
Shun Tak Holdings Limited  
Chairman of SJM Holdings Limited  
Managing Director of Sociedade de Jogos de Macau, S.A.  
Standing Committee member of the  
11th National Committee of the Chinese People's  
Political Consultative Conference  
President of The Real Estate Developers Association of  
Hong Kong



**Mr HO Suen-wai Francis, JP**  
何宣威先生

**BSc 1976**  
Permanent Secretary for Transport  
and Housing (Transport), the  
Government of HKSAR  
Former Permanent Secretary for  
Commerce, Industry and Technology  
(Communications and Technology),  
the Government of HKSAR



**Professor HO Ting-sum John**  
何庭森教授

**BSc (General) 1964, BSc (Special) 1965**  
SUNY Distinguished Service Professor of Physics,  
Vice Provost for Graduate Education and Dean  
of the Graduate School, University at Buffalo,  
The State University of New York  
Fellow of American Physical Society (1990)  
John Simon Guggenheim Memorial Foundation  
Fellow (1990-91)



**Professor HO Wing-huen Frederick, SBS, OBE**  
何永煊教授

**BSc 1966**  
Former Commissioner of the Census and Statistics Department,  
the Government of HKSAR  
Honorary Professor at the Department of Statistics and Actuarial  
Science, The University of Hong Kong  
Adjunct Professor at the Statistics Department,  
The Chinese University of Hong Kong  
Statistical Advisor of the National Bureau of Statistics of China



**Dr HUANG Hsing-tsung (H T HUAG)**  
黃興宗博士

**BSc 1941**  
Deputy Director, the Needham Research  
Institute, Cambridge, England, 1990-95  
Programme Director,  
National Science Foundation,  
Washington DC, 1975-90  
Director, Biological Sciences,  
IMC Corp., Chicago IL, 1965-75



**Professor HUANG Li-sung Rayson**  
黃麗松教授

**BSc 1942, Hon DSc 1968**  
Former Vice-Chancellor and Life Member  
of Court, The University of Hong Kong  
Former Vice-Chancellor of Nanyang University  
Board of Trustees, Croucher Foundation  
and Rayson Huang Foundation,  
Kuala Lumpur



**Dr HUI Wai-haun**  
許慧嫻博士

**MSc 1954**  
Honorary Graduate of  
The University of Hong Kong (1981)



**Mr KWONG Ki-chi, GBS, JP**  
鄺其志先生

**BSc 1972**  
Executive Director of Macau Legend Development Limited  
Former Managing Director of Hsin Chong International Holdings Limited  
and Hong Kong Sales (International) Limited  
Former Executive Director and Chief Executive of the Hong Kong  
Exchanges and Clearing Limited  
Former Secretary for Information Technology and Broadcasting,  
the Government of HKSAR  
Former Secretary for the Treasury, the Government of HKSAR  
Council Member of the Chinese University of Hong Kong, the  
Government of HKSAR



**Mr LAM Chiu-ying, JP**  
林超英先生

**BSc General 1971, BSc (Special) 1972**  
Former Director of Hong Kong  
Observatory, the Government of  
HKSAR  
Former Vice-president of the Asia  
arm of the World Meteorological  
Organization



**Mr LAM Ko-yin Colin**  
林高演先生

**BSc 1973**  
Vice-Chairman of Henderson Land Development Company  
Limited  
Chairman of Hong Kong Ferry  
(Holdings) Company Limited  
Director of Hong Kong & China Gas Company Limited  
Director of Miramar Hotel and Investment Company Limited  
Honorary University Fellow of  
The University of Hong Kong (2008)  
Member of the Court of The University of Hong Kong



## Distinguished Science Alumni



**Professor LAU Ka-ming William**  
劉家銘教授

**BSc 1972, BSc (Special) 1973**  
Director, Laboratory for Atmospheres, NASA, Goddard Space Flight Center  
Senior Science Advisor for the Hong Kong Observatory  
Adjunct Professor, Department of Mathematics, The Hong Kong University of Science and Technology  
Adjunct Professor, Department of Atmospheric and Oceanic Sciences, University of Maryland, USA  
Goddard Senior Fellow of the American Meteorological Society  
Fellow of the American Geophysical Union  
Recipient of American Meteorological Society Meisinger Award  
Recipient of NASA John Lindsay Award  
Recipient of Goddard Exceptional Science Achievement Medal  
Recipient of William Nordberg Award in Earth Science



**Mrs LAW FAN Chiu-fun Fanny, GBS, JP**  
羅范椒芬女士

**BSc 1975**  
Former Commissioner, Independent Commission Against Corruption  
Former Permanent Secretary, Education & Manpower Bureau  
Former Secretary, Education & Manpower Bureau  
Former Director, Education Department  
Former Commissioner, Transport Department  
Former Director, HKSAR Chief Executive's Office



**Dr LEUNG Wing-tai**  
梁永泰博士

**BSc (Hon) 1972**  
General Secretary of Breakthrough Limited  
Council member of City University of Hong Kong  
Member of Social Welfare Advisory Committee, the Government of HKSAR  
International Advisor of ISACC (Philippines)  
Youth Ministry Coordinator of CCCOWE



**Dr LIAO Sau-tung Sarah, GBS, MBE, JP**  
廖秀冬博士

**BSc (Hon) 1973, MPhil 1978**  
Senior Advisor to the Vice-Chancellor on Sustainable Development, The University of Hong Kong  
Former Secretary for the Environment, Transport and Works, the Government of HKSAR  
Former Senior Environmental Advisor to Beijing's Olympic Organizing Committee



**Dr LUI Tat-yin Anthony**  
呂達賢博士

**BSc (Hon) 1969**  
Principal Professional Staff of Applied Physics Laboratory, Johns Hopkins University  
NASA/ESA International Sun-Earth Explorer Project Award (1987)  
National Aeronautics and Space Administration Group Achievement Awards (1990, 1993, 1998, 2008)  
Outstanding Publication Award by Applied Physics Laboratory, Johns Hopkins University (1988, 1990, 1991, 2008)  
Elected AGU Fellow (2007)



**Professor Clifford MATTHEWS**

*War-time student from 1938-1941*  
Professor Emeritus, University of Illinois at Chicago



**Professor Malcolm PEAKER**  
裴克爾教授

**PhD 1970, DSc (2000)**  
Former Director of Hannah Research Institute and Hannah Professor in the University of Glasgow  
Scientific Governor, British Nutrition Foundation  
Elected Scientific Fellow of the Zoological Society of London (1969)  
Elected Fellow of the Institute of Biology (1979)  
Elected Fellow of the Royal Society of Edinburgh (1983)  
Fellow of the Royal Society (1996)



**Professor POON Chung-kwong, GBS, DSc, JP**  
潘宗光教授

**BSc 1963, BSc (Special) 1964**  
President Emeritus of The Hong Kong Polytechnic University  
Head of Nanyang College of Xi'an Jiaotong University  
Dean, Faculty of Science, The University of Hong Kong (1983-1990)  
Appointed Member, Legislative Council (1985-1990)  
Recipient of Leader of the Year Awards (Education)(2008)



**Mr POON Sun-cheong Patrick**  
潘榮昌先生

**BSc (Hon) 1970**  
Chairman of Operation Committee and Director of China Pacific Life Insurance Company Limited  
Court member, The University of Hong Kong  
Treasurer, Council member, The Hong Kong Polytechnic University



**Dr POON Tin-yau Peter**  
潘天佑博士

**BSc 1965**  
Retired Manager of NASA Jet Propulsion Laboratory, California Institute of Technology; Stanford Certified Project Manager  
Recipient of 15 National Aeronautics and Space Administration Awards for missions including Voyager Interstellar Mission, Ulysses, Cassini-Huygens Mission to Saturn and Titan, Mars Exploration Rovers, Mars Odyssey, and Mars Global Surveyor  
Recipient of awards from German Space Operations Center and European Space Agency  
Recipient of awards from NASA Inventions Board



**Dr SO Shu-fai Ambrose**  
蘇樹輝博士

**BSc 1973**  
Chief Executive Officer of SJM Holdings Limited  
Chairman of Macauport Limited  
Honorary Consul of Portugal  
Committee Member of the 11th Chinese People's Political Consultative Conference  
Director of The University of Hong Kong Foundation for Educational Development and Research  
Honorary University Fellow of The University of Hong Kong (2005)



**The Hon SUEN Ming-yeung Michael, GBS, JP**  
孫明揚先生

**BSc 1966**  
Secretary for Education, the Government of HKSAR  
Former Secretary for Home Affairs; Secretary for Constitutional Affairs; Secretary for Housing, Planning and Lands, the Government of the HKSAR



**Professor SUN Samuel Sai-ming**  
辛世文教授

**BSc (Special) 1968, MPhil 1970**  
Chair Professor, Master of S H Ho College, Director of the Area of Excellence: Centre for Plant and Agricultural Biotechnology, Institute of Plant Molecular Biology and Agricultural Biotechnology, and State Key Laboratory of Agrobiotechnology, The Chinese University of Hong Kong  
Recipient of ARCO Distinguished Research Award (1984)  
Elected member of the Chinese Academy of Engineering (2003)  
Member of the International Eurasian Academy of Science (2008)



**Mr TAM Chung-ding, MBE, JP**  
譚宗定先生

**BSc 1966**  
Former President of Motorola in Asia and Japan  
Former Chief Executive Officer of Hong Kong Science and Technology Park  
Honorary Fellow of The Chinese University of Hong Kong (2003)



**Professor TAM Sheung-wai, GBS, JP**  
譚尚渭教授

**BSc 1958, BSc (Hon) 1959, MSc 1961**  
President Emeritus of the Open University of Hong Kong (OUHK)  
Recipient of Prize of Excellence for Individuals' by International Council for Open and Distance Education (2001)  
Recipient of Meritorious Service Award by Asian Association of Open Universities (2002)



**Dr TANG Shuk-ming Winnie, JP**  
鄧淑明博士

**PhD 1999**  
Founder and CEO of ESRI China (Hong Kong) Ltd.  
Recipient of The Ten Outstanding Young Persons (2006)  
Recipient of Women of Influence – Young Achiever of the Year Award (2004)  
Recipient of Ten Outstanding Young Digi Persons (2001)



**Dr Carrie WILLIS, MBE, JP, SBS**  
邱霜梅博士

**BSc 1971**  
Executive Director of the Vocational Training Council



**Dr WONG Chi-shing**  
黃志成博士

**BSc 1957, BSc (Hon) 1958, MSc 1961**  
Emeritus Scientist at Institute of Ocean Sciences  
Adjunct Professor at University of British Columbia and Adjunct Professor of University of Victoria  
Elected Fellow of Royal Society of Canada: Academies of Arts, Humanities and Sciences of Canada  
Fellow, Royal Society of Chemistry (UK) 1974  
Newcomb Cleveland Prize by Association for the Advancement of Science, for the best publication in Science for 1991-1992



**Mr WONG Kai-man, BBS, JP**  
黃啟民先生

**BSc 1972, BSc (Special) 1973**  
Director of Victor and William Fung Foundation Limited, and Li & Fung (1906) Foundation Limited  
Retired Audit Partner of PricewaterhouseCoopers, Hong Kong



**Professor YAM Wing-wah Vivian**  
任詠華教授

BSc (Hon) 1985, PhD 1988  
Philip Wong Wilson Wong Professor in Chemistry and Energy, Department of Chemistry, The University of Hong Kong  
Croucher Senior Research Fellow (2000-01)  
Member, Chinese Academy of Sciences (since 2001)  
Recipient of State Natural Science Award (2nd Class) (2005)  
Fellow, TWAS, The Academy of Sciences for the Developing World (since 2006)



**The Hon Mr Justice YAM Yee-kwan David**  
任懿君法官

**BSc 1971**  
Judge of the Court of First Instance of the High Court



**Professor YOUNG Chien-ming Enoch, BBS**  
楊健明教授

**BSc 1961, BSc (Special) 1962**  
Special Advisor and Director Emeritus of the School of Professional and Continuing Education, The University of Hong Kong (HKU SPACE)



# Success in Areas of Excellence Scheme



**Professor Zhang's** project "Theory, Modeling, and Simulation of Emerging Electronics" focuses on the modeling and simulation of sub-22nm technology and to develop emerging multi-scale electronic design automation (EDA) tools that combine the atomistic simulation of individual devices, the coarse-grained modeling of integrated circuitries and simulation of electric signals propagation and interference. The six principal investigators of this AoE project are: Professor F C Zhang (HKU), Professor P C H Chan (HKUST), Professor G Chen (HKU), Professor W C Chen (HKU), Professor H Guo (HKU), and Professor J Wang (HKU).



From left to right: Professor P C H Chan (HKUST), Professor W C Chew (HKU), Professor F C Zhang (HKU), and Professor G Chen (HKU)

The Faculty is pleased to announce that out of the three successful proposals awarded to HKU in the fifth round of the Areas of Excellence (AoE) Scheme, two are coordinated by our teachers in the Science Faculty.

## Institute of Molecular Functional Materials

(Project Coordinator: **Professor Vivian W W Yam**, Chair Professor, Department of Chemistry, HKU)

## Theory, Modeling, and Simulation of Emerging Electronics

(Project Coordinator: **Professor F C Zhang**, Chair Professor, Department of Physics, HKU)

The two projects together have been awarded HKD 182 million from UGC over a period of 8 years.

The UGC received a total of 28 initial proposals from six UGC funded institutions in the fifth round AoE. Only five proposals have been selected.

**Professor Yam's** project "Institute of Molecular Functional Materials" brings together inter-institutional efforts from the area of synthetic, polymer, material and physical chemistry, and interdisciplinary expertise through national/international collaboration in physics and device engineering towards developing an international eminent research centre in the area of molecular functional materials towards addressing energy-related issues. The project team includes six principal investigators from five universities in HK: Professor V Yam (HKU), Professor C M Che (HKU), Professor H F Chow (CUHK), Professor T C Lau (CityU), Professor B Z Tang (HKUST), and Professor R W Y Wong (HKBU).



## New / Re-appointment



**Professor Sun Kwok**, Dean of Science, has been re-appointed for his second term by the Council for 5 years until 2016



**Professor W K Chan**, Department of Chemistry, has been appointed as Associate Dean (Student Affairs) from June 1, 2009 to January 31, 2011

## Achievements

\* **Professor S Kwok**, Dean of Science, was elected as Vice President of the Division VI: Interstellar Matter at the XXVII General Assembly of the International Astronomical Union (IAU) in Rio de Janeiro, Brazil. Division VI has about 1000 members world wide and is the 3<sup>rd</sup> largest Division in the Union. Professor Kwok took up the position on August 13, 2009 and according to IAU rules will assume the presidency at the next IAU General Assembly in 2012.

\* An international team led by **Dr S B Pointing**, Associate Professor of School of Biological Sciences discovered unusual patterns of microbial colonization in the Dry Valleys region of Antarctica, yielding new insights into the ecology of polar deserts. In this major ice-free region microbes were found to retreat to 'refuges' within and beneath rocks where highly specialized communities developed to cope with the extreme environmental stresses. Landscape-scale patterns revealed that colonization was strongly correlated with water availability and



so potential has emerged for informing climate-related ecosystem shifts in this sensitive biome. The work was supported by the Hong Kong Research Grants Council, Antarctica New Zealand and NASA. The findings are presented in the journal *Proceedings of the National Academy of Sciences* (USA).

\* **Professor W K Fung**, Chair Professor in the Department of Statistics and Actuarial Science, has been named Fellow of the Institute of Mathematical Statistics (IMS). An induction ceremony took place on August 3, 2009 at the Joint Statistical Meetings/IMS Annual Meeting in Washington DC. Professor Fung received the award for significant contributions to robust statistics and forensic statistics, and for leadership in Asia for statistical research and education.

\* In response to the recent call from the Government of HKSAR to submit research proposals for studies related to the melamine incident, **School of Biological Sciences** (SBS) together with Li Ka Shing Faculty of Medicine submitted a proposal entitled "The melamine milk - kidney and developmental toxicity: impact on the foetus and the disease development later in life", and succeeded in bidding for this highly competitive call. The project combines the effort from the SBS (Dr Hani El-Nezami as Principal Investigator; Professor Steven Chen, Professor Fredrick Leung and Dr Mingfu wang as Co-Investigators), and the Department of Paediatric and Division of Paediatric Surgery of Li Ka Shing Faculty of Medicine (Dr Yan Chen as Co-PI; Professor Paul KH Tam, Professor Allan SY Lau and Dr Lawrence Lan as Co-Is).

\* **Miss Dong Sijia**, Year 3 student of Department of Chemistry, joined the programme of CCI Solar SURFs (Summer Undergraduate Research Fellows) 2009 held by Powering the Planet Center for Chemical Innovation, and participated in the project on the computational study of electronic structures of various iridium complexes that might be potential catalysts of important reactions.



\* Four undergraduate students, **Mr Chu Chun Kit**, **Mr Ren Yi**, **Miss Yuan Zhen** and **Mr Zhong Xingxin**, have been selected to participate in the Rising Stars of Research 2009 organized by The University of British Columbia. The main aim of the event is to give a chance for promising undergraduate students to manifest themselves, hence to excite them about continuing on into graduate study. Each student presented a poster of their own research work under the supervision of a HKU teacher, and Miss Yuan Zhen who presented her poster in Statistics won the Honourable mentions in the field of Computational Sciences and Technology in Rising Stars of Research 2009 ([www.risingstars.ubc.ca/winners09.htm](http://www.risingstars.ubc.ca/winners09.htm)). She is the only student from a Hong Kong university in the award list.

\* **Mr Cheng Ka Wing**, a PhD student supervised by Dr Mingfu Wang and Professor Steven F Chen of the School of Biological Sciences, has been conferred the First Place Withycombe-Charalambous Award for Excellence in Graduate Research in Agricultural and Food Chemistry at the 237th American Chemical Society National Meeting & Exposition in Salt Lake City, Utah, USA during March 22-26, 2009. This is the first PhD student from universities in Asia receiving such a prestigious award from the American Chemical Society since its inception in 1986.



\* **Miss Jamius W Y Yeung**, an MPhil student of School of Biological Sciences under the supervision of Dr Kenneth MY Leung, won the "Award for the Best Presentation" at the 15th International Symposium on Pollutant Responses in Marine Organisms (PRIMO15) which was held during May 17-20, 2009, at the Congrès et Expositions de Bordeaux, Bordeaux, France. In spite of intense competition among many postgraduate students, Jamius gave an excellent oral presentation to address an important environmental management issue "Deriving critical tissue concentrations of contaminants in marine mussels for ecological risk assessment" and won the prestigious award.

