



## AMA Newsletter No.5

July 2009

### Departmental Retreat 2009



Similar to previous years, the Department held its annual Retreat at the end of Semester 2. This year's Retreat was held in Foshan on 5<sup>th</sup> and 6<sup>th</sup> of June. Major items for discussion were Challenges of the 4-year Undergraduate Curriculum, Higher Education Review 2010, Teaching and Learning Issues in relation to OBE, Research Strategies as well as Management of the Department.

During the Retreat, this year's Best Teacher's Award, Best Instructor/Tutor Award and Best Paper Award were presented. Academic staff also elected Mr. Ben Or and Dr. Heung Wong as their representatives at DMC. On 6<sup>th</sup> June, the group visited several scenic spots before returning to Hong Kong.

### End of Semester Lunch

To show the Department's appreciation for the hard work done by colleagues during the second semester, a luncheon was held on Friday, 22 May at Hon King Restaurant on Chatham Road. All staff and research students were invited. Participants also bade farewell to Professor Min Sun, who returned to the University of Alabama after teaching in the Department for one semester.



### Formal Approval of BSc (Hons) in Investment Science by Senate

In mid-December, 2008, The Senate formally endorsed our 3-year full time BSc(Hons) Programme in Investment Science. The Programme will admit Hong Kong Advanced Level students through the JUPAS system from September 2009. This is a result of the concerted effort of most members of the Department, including academic and non-academic staff. We have also had the support of the School of Accounting and Finance. The first cohort of the 3-year programme will be admitted in September 2009. Meanwhile, our Department retains the flexibility of admitting some AD/HD graduates into the senior year of the programme.

### Changes in DMC membership

As of 1 June 2009, membership of the Departmental Management Committee consisted of the following colleagues:

Chairman: Liqun Qi (Head of Department)

Members: Cheong Ki Chan (Associate Head), Chan Chi Kin (Chairman of DLTC), Chen Xiao Jun (Chairman of DRC), Agnes Fung (Elected non-academic staff), Shui Hung Hou (Associate Head), Joseph Lee (Chairman of Committee for Undergraduate Study); Man Kam Kwong (Chair Prof), Ben Or (Elected academic staff), Colin Rogers (Chair Prof) and Heung Wong (Elected academic staff).

We wish to thank the outgoing DMC members Cynthia Hau, K.F. Hung, T.Y. Pong and X.Q. Yang for their contributions to the work of DMC over the past years.

## Outcome-Based Education

The development and implementation of Outcome-Based Education (OBE) is one of the key objectives of the Strategic Plan of the University for 2008-12. The Learning Outcomes Assessment Plan (LOAP) is a major component of OBE. Over the last few months, the Department has reviewed the intended student learning outcomes of its programmes and developed its programme LOAP's. These LOAP's will be implemented in September, 2009. The Departmental Learning and Teaching Committee and the Programme Leaders will closely monitor the implementation of the LOAP's to ensure the systematic collection of assessment data for evaluating and improving the effectiveness of our programmes.

## Conference and Workshop

### Second International Workshop on Successful Strategies in Supply Chain Management (IWSSSCM2)

A Supply chain consists of two or more parties linked by a flow of goods, information and funds. It has become one of the core activities of today's economies. As a result, research in supply chain management has expanded rapidly in order to address various problems arising from supply chain operations. We organized the Second International Workshop on Successful Strategies in Supply Chain Management (IWSSSCM2) to provide a unique forum for participants to promote joint research co-operation, exchange ideas and stimulate future research.

More than 100 professionals and experts from overseas and the Mainland attended the Workshop held on the PolyU Campus from January 8 - 10, 2009. The Workshop was sponsored by the Lee Hysan Foundation and the K.C. Wong Education Foundation.



### The International Conference on Engineering and Computational Mathematics 2009 (ECM2009)

The Department also successfully organized the International Conference on Engineering and Computational Mathematics from 26-29 May, 2009. This conference brought together mathematicians from around the world to present and discuss recent developments in engineering and computational mathematics, both from a theoretical and a practical point of view. About 250 participants from over 20 countries attended the conference. More than 200 talks were presented during those 4 days. More information on the conference may be found at the conference website <http://polyu.edu.hk/ama/ecm2009>.



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### Workshop on Computational Polynomial Optimization and Multi-linear Algebra

A workshop on Computational Polynomial Optimization and Multi-linear Algebra was held on 22<sup>nd</sup> and 23<sup>rd</sup> of December, 2008. It was organized by the AMSS-PolyU Joint Research Institute. It gathered together researchers working in Computational Polynomial Optimization and Numerical Multi-linear Algebra to exchange ideas and recent progress in these topics and to discuss links between their research work.

There were altogether 13 invited speakers from Austria, Belgium, China, Japan and U.S.A.

### JRI Distinguished Lectures

On 16<sup>th</sup> December, 2008, **Professor Jiangqing Fan** delivered an interesting talk on the impact of dimensionality and correlation learning on model classification using high-dimensional data. In his talk, Professor Fan proposed an innovative procedure to select the optimal number of features in model selection and classification. Professor Fan is Frederick L. Moore'18 Professor of Finance at Princeton University and a former president of the Institute of Mathematical Statistics. Professor Fan was awarded the 2000 COPSS President's Award, the Humboldt Research Award in 2006 and the Morningside Gold Medal in Applied Mathematics in 2007 for his outstanding achievement in statistics and applied mathematics.



*Professor Jiangqing Fan*

**Sir David Wallace**, the Director of the Isaac Newton Institute for Mathematical Sciences, delivered another Distinguished Lecture on 13th February, 2009. Sir David is a Fellow of the Institute of Physics and the Institute of Mathematics and its Applications. He has held a number of honorary positions, including Treasurer and Vice-President of the Royal Society, and President of the Institute of Physics. Sir David is also N.M. Rothschild & Sons Professor of Mathematical Sciences, and Master of Churchill College, Cambridge. In his talk, Sir David described how The Isaac Newton Institute for Mathematical Sciences works, including the proposal of programmes and participation. He also gave examples of the research work carried out at the Institute, including an insight into data analysis issues in futures trading in financial services.



*Sir David Wallace*

## Best Teacher Award and Best Instructor/Tutor Award

Following previous years' practice, a panel was formed with a view to selecting colleagues for the Best Teacher Award and Best Instructor/Tutor Award. Membership of the Panel consisted of Chi Kin Chan, Joseph Lee and YK Kwan. Based on established criteria on staff members' SFQ scores, the Panel short-listed in February several candidates for their consideration for the awards. They were Chi Kin Chan, Chun Wah Chan, Marjorie Lai Lin Chiu, Joseph Lee, Ping Kei Leung, W.K. Mak and Nora Man. After the final round of the selection, which consisted of actual class visits conducted in March, the Panel decided to recommend Ping Kei for the Best Teacher Award, and Marjorie for the Best Instructor/Tutor Award.

Prizes and souvenirs were presented to the Award Recipients and the remaining candidates during the Departmental Retreat on June 5.



(From left to right)  
Dr. Joseph Lee, Miss Nora Man,  
Dr. Chi Kin Chan, Prof. Liqun Qi,  
Dr. P.K. Leung, Dr. C.W. Chan,  
Dr. Marjorie Chiu,

## Best Paper Award

A "Best Paper Award" was launched earlier this year with a view to underscoring the Department's emphasis on research as an important part of academic staff duties and to encouraging everyone to enhance the quality of his/her research output.

Each year three awards will be given. Chair Professors are excluded from the competition. Selected papers must be published within the last ten years and winners are determined by a composite score calculated according to the quality of the journal in which the paper appeared, the number of citations, and the quality of the citing papers, in a manner compatible with the system adopted by PolyU in evaluating research publications. Winners in one given year will not be eligible for selection in the following two years.

### *This year's awards go to:*

Chen Xiao Jun (with Y.Y. Ye) On homotopy-smoothing methods for box-constrained variational inequalities, *SIAM Journal on Control and Optimization*, 37 (1999), pp. 589-616.

Cedric Yiu Ka Fai (with Y. Liu and K.L. Teo) A hybrid descent method for global optimization, *Journal of Global Optimization*, 28 (2004), pp. 229-238.

Li Xun, (with X.Y. Zhou and A.E.B. Lim) The dynamic mean-variance portfolio selection with no-shorting constraints, *SIAM Journal on Control and Optimization*, 40 (2002), pp. 1540-1555.



(From left to right) Dr. X. Li, Prof. X.J. Chen, Dr. Cedric Yiu

### Long Service Award



(From left to right) Dr. T.Y. Pong, Ms Jojo Au, Miss Eva Yiu, Mrs Fanny Cheung, Prof. K.Y. Wong (Dean of FAST), Dr. W.C. Ip, Dr. L.K. Li, Prof. S.H. Hou, Mr. C.W. Choy

To recognize committed service to the Institution by long serving staff, the Long Service Awards were introduced by PolyU in 1990. This year, a total of 8 staff members from AMA had completed their 15th, 20th and 30th year of service. They are Hou Shui Hung, Ip Wai Cheung and Pong Tak Yan for their 30th year, Fanny Cheung and Choy Chun Wai for their 20th year and Jojo Au, Eva Chiu and L.K. Li for their 15th year.

All award recipients received their Long Service Awards from the President during the ceremony held on 16 January 2009 at the Chiang Chen Studio Theatre.

### President's Award for Excellent Performance and Achievement in "Services" to PolyU

After serving the University for more than 25 years, Professor C.K. Chan was honoured at a ceremony on 24<sup>th</sup> November 2008 as a recipient of the President's Award for Excellent Performance and Achievement in Services to the PolyU in 2008. This award was a recognition of his contribution to his Department, to many circles within the University, to staff and student activities and also as a bridge of liaison between staff and management. In his typical reply when asked about his thought on the Award, he thanked all those colleagues and friends who entrusted him with the various "assignments" in all these years.

### Distinguished Achievement on Research Activities

Professors Liqun Qi and Xiaoqi Yang received recognition from the University for their distinguished achievements in research. Both of them have achieved a 100% success rate for RGC Grant applications over the past six years. A 2-year full-time MPhil studentship / 3-year full-time PhD studentship will be awarded to each of them.

We wish to congratulate Liqun and Xiaoqi for their outstanding achievements.

### New additions to the family



Ms Julia Yeung and her baby girl

We would like to warmly congratulate Julia Yeung who gave birth to a baby girl on 19 May 2009, and Mrs. Huang (wife of James) who gave birth to a baby boy on 8 June, 2009. Our heartfelt congratulations to the proud parents, and we wish the babies a healthy and successful future.



Dr. James Huang's baby boy

## China Visit

The Department organized a learning experience tour to Dalian in May this year for its Investment Science students to exchange with their counterparts in the Mainland. It also provided students with the opportunity of gaining a better understanding of recent developments in Mainland China, as well as to strengthen their sense of social and national responsibility.

The tour began on 17 May, and was led by C.K. Chan, Heung Wong, Phillip Yam and Cedric Yiu. To increase students' awareness of the economic and cultural developments of Dalian, the group visited places including Dalian Bank and the securities market. We were warmly welcomed by managers from Dalian Bank and had very fruitful discussions with them. We also visited a number of scenic places in Dalian City.

On the academic side, our students visited the North-east University of Finance and Economics. We were given some introductions by professors from both sides in order to have a mutual understanding on education and research in the two schools. After that, we visited their vast campus, where we managed to have only a glimpse of a small part of it. We went on to participate in seminars by local experts while our colleagues also had a chance to talk about their research. Students have also mingled with the local students in group activities, and they sang and socialized happily.



## Alumni Activities

The Department and the Alumni Association of Applied Mathematics (AAAM) jointly organized two outings on 21 February and 18 April respectively. Some 24 alumni and staff participated in the hiking tour on 21 February. Led by their superb honorary tour guide, Dr. Ip Wai Cheung, the group first took a chartered mini-bus to Wu Kau Tang. They then started their hike to Sam A Chung where they were treated to some excellent Hakka dishes, and to Lai Chi Wo before returning to Wu Kau Tang. While enjoying the beautiful scenery of Yan Chau Tong Marine Park, they also visited the historic walled village and ancient temples located at Lai Chi Wo.

Over 35 staff, alumni and students joined the tour to the Sha Tau Kok Frontier Closed Area on 18 April. They visited Sha Tau Kok Central Primary School, the historic Chung Ying Street and the Sha Tau Kok Local Market before taking a boat trip from the Sha Tau Kok Pier to Ap Chau, Crooked Island (吉澳) and Double Haven (印洲塘).



Hiking tour on 21 February 09



Visit to Sha Tau Kok Frontier Closed Area on 18 April 09

## Staff Movement

1. SIM Chee Khian was appointed Lecturer in 2008. Graduating from the Department of Mathematics, National University of Singapore with a BSc in 1993, he also obtained a PhD in optimization from the same department in 2005. In between, he got his MSc in optimization from the University of Washington, Seattle, in 1997 and is also a graduate of the postgraduate diploma programme conducted by the Institute of Systems Science, National University of Singapore. Chee-Khian has a few years' experience working in the R&D, IT, and publishing industries. His research interests include conic optimization and its applications, non-smooth optimization, and supply chain management.
2. NG Chi Tim joined the Department as a Lecturer in May 2009. Tim graduated from the Chinese University of Hong Kong with a BSc and a MPhil in Risk Management Science, and a PhD in Statistics. In 2007, he joined the Department of Statistics in Seoul National University as a Postdoc Research Fellow. Before coming back to Hong Kong, he spent a year as a Postdoc Research/Teaching Fellow at the University of British Columbia in Vancouver.
3. Mimi Chong was appointed Tutor in February 2009. She graduated from the University of Toronto in 2007 with a BSc (H) in Applied Mathematics. She obtained a MSc in Statistics in the following year from the same university.
4. Stephen Yuen resigned from his post as Tutor of the Department in February 2009, and has since then been working for his Ph.D. under the guidance of Professor M.K. Kwong. His research areas include analytical solutions to Navier-Stokes equations in fluid dynamics.
5. Elaine Ching joined the Department as a Temporary Clerk in February this year. She obtained a BEng Degree from PolyU's Department of Industrial and Systems Engineering. After graduation, she has worked as an Reseach Assistant on Ecodesign in ISE .
6. Peter LO Cham Tong joined the Department as an Assistant Technical Officer in August 2008. He graduated from City University's Department of Electronic Engineering in 2003, and has worked in the computer industry since then.
7. Renowned statisticians/mathematicians FAN Jian-qing (Princeton University), MA Zhi-ming (Applied Mathematics Institute, CAS) and Tyrrell Rockafellar (University of Washington at Seattle) were appointed Honorary Professors of the Department.
8. Timothy Yip was appointed Adjunct Professor of AMA. Dr. Yip obtained a DPhil from Oxford University in Particle Physics. He started his career as a Tutor at Oxford before changing to the investment industry as a Trader in London. Dr. Yip is currently Head of Exotic Trading, Fixed Income, Currencies and Commodities of Merrill Lynch (Asia Pacific).



(from left to right) Miss Mimi Chong, Miss Elaine Ching, Mr. Peter Lo, Dr. Chee-khian Sim, Dr. Timothy Ng

## Sharing of our MSc Student

很多人問我當初為什麼會選擇精算作為我一生的職業，坦白地講，與其說我當時選擇精算不如說我選擇的是理大。剛從金融本科畢業，我對精算充滿好奇但知之有限，吸引我的其實是理大驕人的歷史，及其理想的學習環境和優良的精算專業師資。在理大完成了精算學習後，為什麼我又會選擇來美國？我會毫不猶豫的說，我很愛我的專業，而美國又是精算體系最完善的地方，來這裏能讓我學習到更多的東西。

我在香港的時間不長，但在不足一年的光景中我所得到的對我一生都很重要。理大的學習體系和美國相做，研究式的學習教會了我如何利用圖書館，如何自己搜集及研讀資料，萃取精華。在這種寬鬆的氛圍中，成績變成了副產品，最寶貴的是我學到了什麼和如何學到的。我喜歡這種獲取知識的模式，因為在這個過程中我能自主地發掘自己喜歡什麼，自由選擇自己要研究什麼。University of Iowa 的精算學習要求嚴格，但得益於在理大時的訓練，我在 UI 畢業時能夠拿到 3.9/4.0 的成績。

受經濟形勢的影響，美國最近的就業有些緊張，我能很幸運地在畢業前已獲得聘任，想來和我在理大所接受的“熱身”有關。它不僅給了我在美國學習中成為佼佼者的資本，更教會了我團隊精神和溝通技巧，這三者在工作中至關重要。

現在我在 ING US 做助理精算師，進入職業生涯，生活方式和學校裏完全不同。今年五月份再度回到 UI 參加我的畢業典禮時，校園的一切又勾起了我對學校生活及對理大的無限懷念。工作和學習雖然不能用完全相同的思維模式去打造完美，但在理大的學習和生活習慣讓我受益終生。



劉璽 May 2008

[About the author: Miss LIU Xi was a graduate of our Taught Master's Programme in Actuarial and Investment Science in 2006.]

### Visit to AMA by School Children

A group of 60 pupils from Elegantia College (風采中學), HHCKLA Buddhist Chan Shi Wan Primary School (香海正覺蓮社佛教陳式宏學校), Pentecostal Gin Mao Sheng Primary School (五旬節靳茂生小學), and Wai Chow Public School (Sheung Shui) (上水惠州公立學校) visited our Department on Saturday, 30 May 2009. After a warm welcome given by our Department, pupils attended an introductory talk on PolyU programmes, campus facilities and students' activities delivered by Miss Perman Leung of the Academic Secretariat.



To motivate the pupils' interest in mathematics, they took part in some mathematical games. Prizes made by our Department were given to the winners. After the games, the group also had a chance to tour the Library, the sports complex and the Computer Centre.

### Result for 2009 GRF application

The result for the application of 2009 General Research Fund was announced by RGC on 30 June. Colleagues of our Department have been awarded 9 GRF Grants for a total funding of \$4.9 million, as compared to 6 GRF Grants for \$3.3 million in the previous year. More importantly, our success rate is 47.4% which is much higher than the overall success rate for PolyU.

This significant achievement is due to the concerted effort of staff of the Department. Apart from congratulating the successful applicants, we wish to urge all members of the academic staff to work even harder so that we may sustain or even better such an achievement in the years to come.

### In memory of Professor Clive Granger

We were deeply saddened by the news that Professor Sir Clive W. J. Granger of the University of California at San Diego passed away at the age of 74 on May 27 2009 in La Jolla, California.

Professor Granger visited the Department as a distinguished speaker in 2007 to celebrate the 70th Anniversary of PolyU. Sir Clive was one of the most prominent figures in time series analysis. The implications of his work spread far beyond academia, allowing bankers to better analyze stock prices and economists to better understand the intricacies of the economy. His methods are also applied in fields like biology and engineering. For his monumental work on methods of analyzing economic time series with common trends (cointegration), Prof. Granger was awarded a Nobel Prize in Economic Science in 2003.

### Editorial Board

C.K. Chan, Chi Kin Chan, Shui Hung Hou, Colin Rogers, Katie Cheung (Secretary), C.W. Chan (Convenor).

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