

# Newsletter 中大統訊

香港中文大學  
Department of Statistics, The Chinese University of Hong Kong

## Message from the Chairman

Dear Alumni and Friends,

Welcome to the 5th issue of the Department of Statistics' Newsletter. 2010 was a year of changes and challenges. The Chinese University of Hong Kong has a new President, a new Provost and the Faculty of Science has a new Dean. Under the new leadership, the 4-Year academic structure will be launched in 2012. The University is actively working with the department to ensure a smooth transition.

As we are well aware, uncertainty is inescapable: randomness, measurement error, deception, and incomplete or missing information complicates all our lives. Statistics is the science and art of making predictions and decisions in the face of uncertainty. Statistical issues are central to big questions in public policy, law, medicine, industry, computing, technology, finance, and science. Indeed, the tools of Statistics apply to problems in almost every area of human activity where data is collected. Statisticians must master diverse skills in computing, mathematics, decision making, forecasting, interpretation of complicated data, and design of meaningful comparisons. Moreover, statisticians must learn to collaborate effectively with people in other fields and, in the process, to understand the substance of these other fields. For all these reasons, Statistics students are highly sought-after in the marketplace.

In this issue, you will notice a number of changes and developments in the department. Professor Thomas Lee and Professor Sam Wong left for the University of California at Davis and a hedge fund respectively. However, they are still keeping close ties with our department. Since this summer, two new faculties joined the department: Professor Phillip Yam from Oxford University and Professor CY Yau from Columbia University. You may learn more about them on page 7.

With concerted efforts, ties with overseas institutions have become stronger. In addition to the regular seminars, the department conducted a Wei Lun Public Lecture on November 25, 2009 and organized a one day workshop on December 16, 2009. Both events were highly successful with an overwhelming attendance rate. Highlights of the events are reported on page 3-5.

Some of our alumni embarked on promising careers or are continuing their studies overseas. To learn more about them, please turn to page 8.

I sincerely hope you will enjoy reading this issue. If you have any comments regarding this newsletter, please do not hesitate to let us know.

Sincerely,

Ngai Hang Chan  
Chairman and Professor of Statistics

## In this Issue

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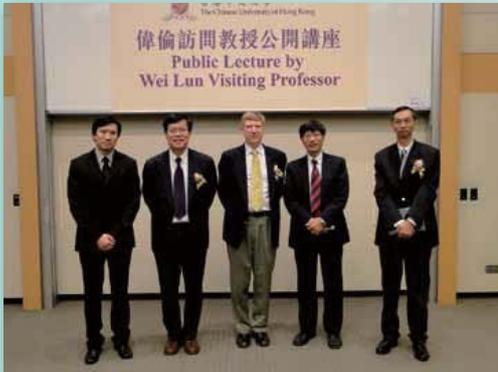
# Seminars

The department collaborates with universities worldwide. Regular seminars are held by renowned statisticians. Some of them are listed below. For seminar abstracts or past seminars, please visit our website at <http://www.sta.cuhk.edu.hk/Dept/Seminar/Seminar.htm>

Date	Speaker	Title
24 Nov 2009	Professor Iain Johnstone Stanford University	Sparse Principal Components Analysis -- Theory and Methods
23 Feb 2010	Prof. Pierre R. Bertrand INRIA Saclay and Clermont Université France	Estimation of the Hurst Index on Finite Frequency Bands. Applications in health
2 Mar 2010	Dr. Hiroshi Shiraishi Jikei University	Bootstrap Estimation of Optimal Portfolios
16 Mar 2010	Professor David A. van Dyk University of California, Irvine	Statistical Analysis of Stellar Evolution
23 Mar 2010	Dr. Yam Sheung Chi Phillip The Hong Kong Polytechnic University	Justification of Some Folklore in Finance and Insurance
26 Mar 2010	Dr. Zhang Jing Harvard University	Bayesian Inference of Interactions in Biological Problems
29 Mar 2010	Dr. Yau Chun Yip Columbia University	Likelihood Inference for Discriminating Between Long-range Dependence and Change-point Models
30 Mar 2010	Ms. Cao Hongyuan University of North Carolina-Chapel Hill	Large Scale Multiple Testing Based on Simultaneous Critical Values for t-tests
27 Apr 2010	Professor Qiwei Yao London School of Economics	Factor Modelling for Time Series: from Econometrics Models to Statistical Approaches
29 Jun 2010	Professor Yacine Ait-Sahalia Princeton University	Financial Crises and Mutually Exciting Jumps
13 Jul 2010	Professor Shui Feng McMaster University	Asymptotic Behavior of the Poisson-Dirichlet Distribution
10 Aug 2010	Dr. Takayuki Shiohama Tokyo University of Science	Empirical Likelihood Estimation of Discretely Observed Diffusion
30 Aug 2010	Professor Yury Kutoyants Universite du Maine Le Mans, France	Identification of Threshold Models of AR and Ergodic Diffusion Processes
7 Sep 2010	Dr. Enrico Biffis Imperial College of London	Optimal Insurance with Counterparty Default Risk
21 Sep 2010	Dr. Kevin Yuk-Lap Yip CUHK	Analysis of Genome-scale Datasets – Opportunities and Challenges
24 Sep 2010	Dr. Kwun Chuen Gary Chan University of Washington, USA	Efficiency and Robustness of Calibration Estimators in Missing Data Problems
26 Oct 2010	Dr. Qingshuo Song City University of Hong Kong	Outperforming the Market Portfolio with a Given Probability
10 Nov 2010	Dr. Eric C.K. Cheung University of Hong Kong	A Variant of the Gerber-Shiu Function in the Dual Risk Model and Its Applications

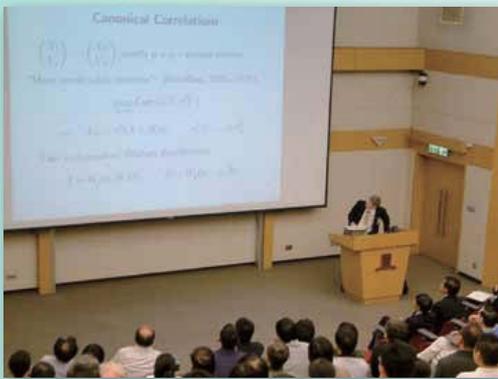


## Wei Lun Public Lecture



Prof. Iain Johnstone of Stanford University delivered a public lecture entitled *Wishart, Wigner and Weather: Eigenvalues in Statistics and Beyond* on 25 November, 2009.

Professor Johnstone has been recipient of a Guggenheim Fellowship, the Presidents' Award from the Committee of Presidents of Statistical Societies, the Alfred P. Sloan Research Fellowship, the Presidential Young Investigator Award and the Guy Medal in Bronze from the Royal Statistical Society. He is also an elected member of the US National Academy of Sciences, the American Academy of Arts and Sciences and the International Statistical Institute, and a fellow of the American Association for the Advancement of Science, the Institute of Mathematical Statistics and the American Statistical Association.



### Abstract

The Wishart distribution and its eigenvalues, perhaps better known through Principal Components Analysis, have played a fascinating role in statistics and its manifold areas of application, from genetics to signal processing and beyond. This talk will meander idiosyncratically through some of the ideas and connections that have arisen over nearly a hundred years, beginning with Fisher and Wishart, detouring (briefly) through nuclear physics and meteorology and arriving at some recent developments.

To view the video, please visit [www.cuhk.edu.hk/iso/weilun/en/home/index.html](http://www.cuhk.edu.hk/iso/weilun/en/home/index.html)



# International Workshop on Statistics and Its Interface

The Department of Statistics, The Institute of Mathematical Sciences and Statistics and Its Interface jointly organized an International Workshop on Statistics and Its Interface on 16 December 2009. The Workshop was well-received by academia and practitioners in the field and considered to be highly successful. Internationally renowned statisticians were invited to deliver talks at the Workshop and the titles of the talks are shown below.



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1/ Prof. H. Tong  
London School of Economics  
Title: Threshold Models in Time Series Analysis: 30 years on

4/ Prof. Peter Hall  
University of Melbourne  
Title: Modelling the Variability of Rankings

2/ Prof. W. Wu  
University of Chicago  
Title: Dependence

5/ Prof. C.K. Ing  
Academia Sinica, Taipei  
Title: Model Selection for Time Series and High-Dimensional Regression Models

3/ Prof. R. Liu  
Rutgers, The State University of New Jersey  
Title: Data Depth and Nonparametric Multivariate Statistics: Spacings, Ordering and Beyond

6-7/Prof. T.L. Lai (Stanford University) & Prof. P.S. Wong (CUHK)  
Title: Generalized Linear Mixed Models for Dynamic Panel Data with Applications to Mortgage Prepayment and Default



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B

C

D

E

F

A/ Speakers and guests exchange views during lunch

B/ Prof. Peter Hall (left) and Prof. H. Tong (right)

C/ Prof. K.L. Tsui of City University of Hong Kong

D/ Participants exchange views during coffee break

E/ Prof. Peter Hall shares insights with a PhD student

F/ Prof. N.H. Chan welcomes guests to attend the workshop

## Annual Dinners

### M.Sc. in Risk Management Science Programme

The Annual Dinner of the M.Sc. in Risk Management Science Programme was held on 8 May 2010 at Royal Plaza Hotel, Mong Kok. A total of 65 persons attended the event including teaching staffs, guest lecturers, students and graduates. In the Award Presentation Ceremony, scholarships and certificates were presented to the six 2009 graduates with outstanding academic performance. The award recipients gave an acceptance speech to share the joy with their fellow students.



**The Best Student Award:**

*Ms. Cheung Ka Yee Annie*

**The Academic Excellence Award:**

*Mr. Cheung Chi Chuen Archie*

*Ms. Cheung Yuen Heung Rity*

*Mr. Chu Chun Wai Roger*

*Mr. Lam Kin Sang Kinson*

*Ms. Yip Man Yi Yvonne*

### M.Sc. in Data Science and Business Statistics Programme

The Annual Dinner of the M.Sc. in Data Science and Business Statistics Programme was held on 27 February 2010 at Prince Marco Polo Hotel, Tsim Sha Tsui. A total of 112 persons attended the event including teaching staffs, guest lecturers, students and alumni. In the Award Presentation Ceremony, the lecturers presented the scholarships and the Certificate of Excellence to the five 2009 graduates with outstanding academic performance.

*Ms. Chan Hau Kwan Eliza*  
*Ms. Chan Ka Man Carman*  
*Ms. Tsoi Sin Ping Cammy*  
*Mr. Li Wai Nam Wilson*  
*Ms. Ko Chau Yuk Cheryl*



The scholarship recipients ascended the stage to give an acceptance speech. Lucky draw was held and all the attendants had an enjoyable evening.

### Alumni Dinner

Alumni link has been strengthened during 2009-10. With the concerted efforts from faculties and alumni alike, several important activities were conducted, including career talk, golf class and etc. On June 25, an alumni dinner gathering was held at Royal Plaza Hotel with an attendance rate over 100 people. The event has given alumni of different cohorts a valuable opportunity to mingle with each other.



To view more photos, please <http://alumni.sta.cuhk.edu.hk/album/annualdinner/> and <http://alumni.sta.cuhk.edu.hk/album/annualdinner2/>

The alumni has an account at Facebook, please add: <http://www.facebook.com/pages/Alumni-Association-of-Department-of-Statistics-CUHK/106782926133>

## Career Talks and Career Visit

The statistics student society of the department organized career talks and career visits to enhance students' knowledge of the statistics profession and get first hand information of the job market. Career talks were held on 2 November 2009 and on 8 November 2010. Statistics alumni from private and public sectors shared working experience with their younger counterparts. We would like to take this opportunity to extend our gratitude to Ms Tang Fung Chu, an alumna of the Department of statistics, for her generous donation support to the Career Talk 2010.



Speakers included:

*Mr. Au Yueng Sai Man (Bank of Tokyo – Mitsubishi UFJ)*

*Ms. Chan Wing Man (YWCA Hioe Tjo Yoeng College)*

*Ms. Hung King Chi (Census and Statistics Department, HKSAR)*

*Ms. Leung Kit Hung (Census and Statistics Department, HKSAR)*

*Mr. Ip Wing Yiu (Hospital Authority)*

*Mr. Lee Ho Lun (FedEx)*

*Mr. Lee Ka Yau (Marketing Asia Pacific, HSBC)*

*Ms. Heidi Chan (Reuters)*

*Mr. Chow Nok Hang (Bank of Communication)*

*Mr. Jacky Lo (Royal Bank of Scotland)*

Besides, students paid a visit to the Census and Statistics Department, HKSAR on 13 April, 2010.

## Exemplary Teaching Award

Professor H.Y. Wong was awarded the Exemplary Teaching Award 2009 in the Faculty of Science. Congratulations to Professor Wong.



## Elected Member of International Statistical Institute (ISI)

Professor P.S. Chan has been elected as a member of the International Statistical Institute (currently 9 in China and 31 in Hong Kong). Elected members of ISI are elected by virtue of their distinguished contributions to the development or application of statistical methods, or the administration of statistical services, or the development and improvement of statistical education. Established in 1885, the ISI is one of the oldest scientific associations operating in the modern world. It is composed of more than 2,000 elected members who are internationally recognised as the definitive leaders in the field of statistics.

## Personalia

### Appointments

We are pleased to introduce you to our two new teaching staffs who have joined the department since summer 2010.

**Dr. YAM Sheung Chi Phillip** (任尚智博士) has joined the department as Assistant Professor since 5 July 2010. Dr. Yam received his DPhil in Mathematics from the University of Oxford and MAST in Mathematics from the University of Cambridge. Before that, he got his BSc in Actuarial Science and MPhil from the University of Hong Kong. His research interests include actuarial science and mathematical finance, probability theory and stochastic analysis, rough path theory, and nonlinear control theory.



**Dr. YAU Chun Yip** (邱俊業博士) has joined the department as Assistant Professor since 11 August 2010. Dr. Yau received his PhD in Statistics from Columbia University, MPhil in Risk Management Science from CUHK and BSc in Actuarial Science from the University of Hong Kong. His research interests include long-memory time series, change-point analysis, extreme value theory, composite likelihood inference, spatial statistics and environmental statistics.



### Resignations

Professor Thomas Lee Chun Man and Professor Samuel Wong Po Shing have left the university since 15 January 2010 and 1 August 2010 respectively. We sincerely thank Professor Lee and Professor Wong for their contributions during the past few years.

## Admission Highlights for the Academic Year 2010-11

Programmes	Intake
STAT	55
RMSC	49
QFRM	28
MPhil in Statistics	3
MPhil in RMS	6
MSc in Data Science and Business Statistics	40
MSc in Risk Management Science	37
PhD in Statistics	5

## Recipients of Advantage Trust Statistics Scholarship

Scholarships have been given to award academic outstanding students.

Name	Major	Year	Amount (HK\$)
Ms. Chan Hoi Shan	STA	1st	10,000
Mr. Cheung Wai Tong	STA	2nd	2,000
Mr. Ho Ka Chun	STA	3rd	2,000
Mr. Kwan Wai Him	STA	3rd	2,000
Mr. Lam Cheuk Nam	RMS	1st	10,000
Ms. Lau Ga Yee	RMS	3rd	2,000
Mr. Lau Yuk Fai	STA	2nd	2,000
Mr. Lee Tsz Sang	STA	1st	10,000
Mr. Leung Man Hau	RMS	2nd	2,000
Ms. Lo Hei Lam	RMS	2nd	2,000
Mr. Luk Wing Pan	STA	3rd	2,000
Mr. Lun Ming Chung	STA	2nd	2,000
Mr. So Hon Yiu	RMS	3rd	2,000
Mr. Tang Tsz Wang	RMS	1st	10,000
Mr. Wong Hoi Chun	STA	1st	10,000

### 「蔡陳群英女士獎學金」得獎同學

承蒙 蔡女士慷慨捐贈，設立「蔡陳群英女士獎學金」，自2006-07年度，每年捐出港幣五萬元，獎勵五名成績優異的學生。本系衷心感謝蔡女士無私捐贈，造就學子。2009-10年度獲得「蔡陳群英女士獎學金」的同學包括：

周偉傑同學      岑靜雯同學      王尚茹同學      姚志健同學      姚永達同學



## Words from Alumni



"Life is like a box of chocolates. You never know what you're gonna get." This is one of the most memorable quotes from the hit movie *Forrest Gump*. When I left the Chinese University of Hong Kong (CUHK) in July 2010, I realized that I graduated from CUHK not only from a Ph.D. student's perspective but also from an academic perspective. Without the excellent teaching, guidance, and support from the staff of the Department of Statistics, I would not have been able to take up a position of lecturer at La Trobe University in Australia.

The Melbourne (Bundoora) campus of La Trobe University always reminds me of the appealing campus of CUHK. It is a large campus covering approximately 500 acres of stunning parkland within its own waterways and wildlife sanctuary, which is home to numerous breeds of birds, animals, and plants. Although it is 14 kilometers from Melbourne's city center, the campus is a little community in itself and is considered one of the largest and most beautiful university campuses in Australia.

"Yesterday is history, tomorrow is a mystery. Today? Today is a gift. That's why we call it the present." Let us all enjoy the present!

**Jing Zhao**  
**PhD in Statistics (2010)**  
**Lecturer, La Trobe University, Australia**

The undergraduate Risk Management Science Program is an all-around program that requires excellent mathematical skills. Through this program, I was able to touch on a wide range of subjects and develop unique technical skills. My professors not only inculcated me with professional knowledge but also shared their exposures and past working experiences in different fields with me. These experiences are very valuable for my future career.

The postgraduate RMS Program provided a platform for me to learn and solve problems by exchanging ideas with my professors and fellow classmates. Thus, I would like to express my gratitude to Dr. Wong for his guidance throughout my postgraduate studies.



**Edwin Cheung**  
**BSc in Risk Management Science (2008)**  
**MPhil in Risk Management Science (2010)**  
**Senior Officer, Citic Bank International**

It is my pleasure to share my recent news with you in this newsletter.

I have just started a new life as a research analyst in CASH. I am responsible for handling algorithm trading projects, which require advanced programming, database management skills, and financial knowledge. I need to learn them again from the basic level to the advanced level as soon as possible to catch up with the working pace of my teammates. Thanks to my postgraduate training, I have been trained to be a quick learner.



For this wonderful start, I would like to take this opportunity to thank my professors, STAT-mates, and members of the statistics societies for providing me with opportunities and unforgettable memories in the past several years. I hope we can meet again in the future and share our happy and successful lives!

**KY Alan Lo**  
**BSc in Statistics(2008)**  
**MPhil in Statistics(2010)**  
**Research Analyst, CASH Dynamic Opportunities Investment Limited**

How time flies! My fifth year in the Department of Statistics just passed this summer. It is my honor to be both an undergraduate and a graduate student of the Department of Statistics, CUHK. Throughout the first three years my undergraduate study, I learned much about statistics, from theoretical derivations to practical methodologies. The three-year training awakened my interest in how we deal with the world with randomness and more so in how randomness can help us solve deterministic problems. I can still recall the first time I learned about Monte Carlo Integration in Statistical Reasoning class. I was so excited about the fact that the deterministic integration problem could be solved by randomness. Aside from the ordinary class training, the Department also provided me with the opportunity to work as a research assistant in Colorado State University. I conducted research and joined academic conferences there. This valuable experience led me to the decision to continue with my studies.

After my undergraduate training, I was admitted to the master program. The graduate training equipped me with advanced statistical knowledge and various research techniques. Although statistical research is challenging, the Department provided a stimulating and fun environment for me to learn and grow. Currently, I am pursuing my doctorate degree in the University of California in Davis. I found that both the undergraduate and graduate training I received from the Department of Statistics in CUHK were very useful in my study here. The training I received equipped me with a solid background in statistics. Now I have the opportunity to build on that to learn more.

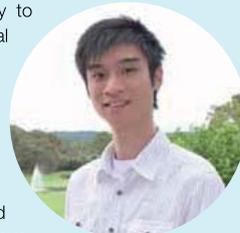
Thus, I would like to thank all the faculty members and the staff of the Department of Statistics, CUHK, for taking good care of me and running such a great department.

Wish you all the best!



**Raymond Wong**  
**BSc in Statistics (2008)**  
**MPhil in Statistics (2010)**  
**PhD Candidate in UC Davis**

It is my pleasure to have this opportunity to share my life as a Ph.D. candidate in Actuarial Studies in Macquarie University, Sydney, Australia. Although Sydney is one of the most popular metropolises in the southern hemisphere, its urban area is much smaller than that of Hong Kong. Life in Sydney seemed boring compared with the life in Hong Kong. However, it provides a very good environment for students who want to pursue their studies.



Having started my Ph.D. research in Macquarie University, I have collaborated with different scholars and other Ph.D. students from various countries. We always have time to share our views on different research regions. Through my discussions with other researchers here, I found that the comprehensive and rigorous training in Risk Management Science took me to the edge of our field. Most new research methodologies and ideas had been already been addressed during my study in CUHK. This helped me maintain my research standing on top and be more efficient.

I would like to take this chance to thank my M. Phil. supervisor Prof. H.Y. Wong, our department chair Prof. N.H. Chan, Prof. Sam Wong, and all the other faculty members and supporting staff for their care and infinite support during my undergraduate and postgraduate periods. The time I spent in the department has never been more valuable to me.

**Simon Wong**  
**BSc in Risk Management Science (2008)**  
**MPhil in Risk Management Science (2010)**  
**PhD candidate in Macquarie University**

