Message from the Chairman

Dear Alumni and Friends,

Welcome to the 5th issue of the Department of Statistic’s 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
## 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](http://www.sta.cuhk.edu.hk/Dept/Seminar/Seminar.htm)

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<tr>
<th>Date</th>
<th>Speaker</th>
<th>Title</th>
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<td>24 Nov 2009</td>
<td>Professor Iain Johnstone</td>
<td>Sparse Principal Components Analysis -- Theory and Methods</td>
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<td>23 Feb 2010</td>
<td>Prof. Pierre P. Bertrand</td>
<td>Estimation of the Hurst Index on Finite Frequency Bands, Applications in health</td>
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<td>2 Mar 2010</td>
<td>Dr. Hiroshi Shiraiishi</td>
<td>Bootstrap Estimation of Optimal Portfolios</td>
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<td>16 Mar 2010</td>
<td>Professor David A. van Dyk</td>
<td>Statistical Analysis of Stellar Evolution</td>
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<td>23 Mar 2010</td>
<td>Dr. Yam Sheung Chi Phillip</td>
<td>Justification of Some Folklore in Finance and Insurance</td>
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<td>26 Mar 2010</td>
<td>Dr. Zhang Jing</td>
<td>Bayesian Inference of Interactions in Biological Problems</td>
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<td>29 Mar 2010</td>
<td>Dr. Yau Chun Yip</td>
<td>Likelihood Inference for Discriminating Between Long-range Dependence and Change-point Models</td>
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<td>30 Mar 2010</td>
<td>Ms. Cao Hongyuan</td>
<td>Large Scale Multiple Testing Based on Simultaneous Critical Values for t-tests</td>
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<td>27 Apr 2010</td>
<td>Professor Qiwei Yao</td>
<td>Factor Modelling for Time Series: from Econometrics Models to Statistical Approaches</td>
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<td>29 Jun 2010</td>
<td>Professor Yacine Alt-Sahalla</td>
<td>Financial Crises and Mutually Exciting Jumps</td>
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<td>13 Jul 2010</td>
<td>Professor Shui Feng</td>
<td>Asymptotic Behavior of the Poisson-Dirichlet Distribution</td>
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<td>Dr. Takayuki Shiohama</td>
<td>Empirical Likelihood Estimation of Discretely Observed Diffusion</td>
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<td>30 Aug 2010</td>
<td>Professor Yury Kutoyants</td>
<td>Identification of Threshold Models of AR and Ergodic Diffusion Processes</td>
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<td>7 Sep 2010</td>
<td>Dr. Enrico Biffis</td>
<td>Optimal Insurance with Counterparty Default Risk</td>
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<td>21 Sep 2010</td>
<td>Dr. Kevin Yuk-Lap Yip</td>
<td>Analysis of Genome-scale Datasets – Opportunities and Challenges</td>
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<td>24 Sep 2010</td>
<td>Dr. Kwun Chuen Gary Chan</td>
<td>Efficiency and Robustness of Calibration Estimators in Missing Data Problems</td>
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<td>26 Oct 2010</td>
<td>Dr. Qinghuo Song</td>
<td>Outperforming the Market Portfolio with a Given Probability</td>
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<tr>
<td>10 Nov 2010</td>
<td>Dr. Eric C.K. Cheung</td>
<td>A Variant of the Gerber-Shiu Function in the Dual Risk Model and Its Applications</td>
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Wei Lun Public Lecture


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
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.

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

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

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

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

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

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
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 Ritty
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. Tsui 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/alumni/annualdinner/ and http://alumni.sta.cuhk.edu.hk/alumni/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 alumnus 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 Hoe 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 MASI 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 (姚俊業博士) 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

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<th>Programmes</th>
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<td>RMSC</td>
<td>49</td>
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<tr>
<td>QFRM</td>
<td>28</td>
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<tr>
<td>MPhil in Statistics</td>
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<tr>
<td>MPhil in RMS</td>
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<tr>
<td>MSc in Data Science and Business Statistics</td>
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<tr>
<td>MSc in Risk Management Science</td>
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<tr>
<td>PhD in Statistics</td>
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Recipients of Advantage Trust Statistics Scholarship

Scholarships have been given to award academic outstanding students.

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<thead>
<tr>
<th>Name</th>
<th>Major</th>
<th>Year</th>
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<tr>
<td>Ms. Chan Hoi Shan</td>
<td>STA</td>
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<tr>
<td>Mr. Cheung Wai Tong</td>
<td>STA</td>
<td>2nd</td>
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<tr>
<td>Mr. Ho Ka Chun</td>
<td>STA</td>
<td>3rd</td>
<td>2,000</td>
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<tr>
<td>Mr. Kwan Wai Him</td>
<td>STA</td>
<td>3rd</td>
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<tr>
<td>Mr. Lam Cheuk Nam</td>
<td>RMS</td>
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<tr>
<td>Ms. Lau Ga Yee</td>
<td>RMS</td>
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<tr>
<td>Mr. Lau Yuk Fai</td>
<td>STA</td>
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<tr>
<td>Mr. Lee Tsz Sang</td>
<td>STA</td>
<td>1st</td>
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<tr>
<td>Mr. Leung Man Hau</td>
<td>RMS</td>
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<tr>
<td>Ms. Lo Hei Lam</td>
<td>RMS</td>
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<td>Mr. Luk Wing Pan</td>
<td>STA</td>
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<tr>
<td>Mr. Lun Ming Chung</td>
<td>STA</td>
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<tr>
<td>Mr. So Hon Yiu</td>
<td>RMS</td>
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<tr>
<td>Mr. Tang Tsz Wang</td>
<td>RMS</td>
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<tr>
<td>Mr. Wong Hoi Chun</td>
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「蔡陳群英女士獎學金」得獎同學

承蒙蔡陳群英女士慷慨捐贈，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。本系衷心感謝蔡陳園女士無私捐贈，遂此舉措。2009-10年度獲「蔡陳群英女士獎學金」的同學包括：

周偉傑同學 李靜雯同學 王曉茹同學 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 (Dandenong) 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 with 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-round 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 inculturated 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 of 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 Mont 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