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## Message from the Chairman

Dear Alumni and Friends,

I feel deeply honored and privileged to have assumed the chairmanship in January 2013. I am truly grateful for the faculty and staff's unfaltering support in ensuring smooth transition during this period. I would also like to take this opportunity to thank Prof. NH Chan for his visionary leadership over the last decade. Now, a year has passed, and I would like to review a few of our recent developments and share with you our future plans.

Indeed, 2013 was a vibrant year for the Department. Many developments have occurred this year. On the human resource front, we engaged in a recruitment effort at the beginning of the year with an aim of recruiting additional faculty members to strengthen our research profile as well as to share the teaching load, which has increased due to the new curriculum and faculty retirements. We are very pleased to say that Dr. Tony Sit, an alumnus, would be joining the Department in January 2014. You can read further about him on Page 2. The Department has also hired a new executive officer, Ms. Wendy Tang, who would be joining us in mid-January 2014. Please join me in welcoming Tony and Wendy aboard. Recruiting teaching staff is a nonstop process. We will conduct another round of recruitment until all the vacancies have been filled. Moreover, Ms. Irene Cheng would only be working with us on a part-time basis for her to pursue her studies. I thank Irene for her help in the past two years. We wish her all the best.

On the research front, the Department has organized numerous seminars and workshops this year. Apart from the regular seminars, a distinguished lecture by Professor Jianqing Fan entitled *Big Data: Salient Features and Random Thoughts* was delivered on the 3rd of September. A workshop entitled 'Workshop in Recent Advances in Asymptotic Statistics' was held on the 29th of August, and the CUHK Symposium on Statistics 2013 was held on the 19th of December. Photos and highlights of the events can be viewed on Pages 3 to 4. Additionally, the Department plans to hold the CUHK Symposium on Statistics annually to promote interactions among our faculty members, graduate students, and invited prominent speakers.

From December 9 to 12, 2013, a visiting committee invited by the University conducted a holistic review of all the activities of the Department over the past six years. Several of the comments from the visiting committee are very encouraging. First, the visiting committee ranked us as "one of the best statistics departments in Asia." It is also mentioned that "The number of publications per faculty in the department is comparable with several major statistics departments in the United States." Furthermore, "The visiting committee thinks highly of the program designs and quality of instruction in all undergraduate programs."

I would like to take this opportunity to thank all of the faculty members and the supporting staff, especially Irene, for their unreserved support in the exercise. In addition, I express my gratitude to our alumni who have devoted their invaluable time to participate in the alumni meeting with the visiting committee. I look forward to meeting our alumni in other occasions in the near future. I am also grateful for the advice given by members of the visiting committee. We will make every effort to excel in teaching and research.

Regarding the undergraduate admission effort, the Science Faculty has begun to implement the broad-based admission scheme in 2012/13. To attract additional students who will major in Statistics, the Department doubled the number of scholarships and organized several academic information sessions to potential students, with the goal of providing them further information about the Department and our programs. With the dedication of our colleagues, 48 Science students have declared Statistics as their major.

We are also excited to inform you that outgoing opportunities are now made available to our PhD students. The Overseas Research Award is the recent endeavor of the Department, which aims to provide PhD students with an exchange opportunity at renowned overseas institutions as part of their research studies. The Award supports students who intend to undertake short-term research related to their thesis at other reputable higher education institutions or research facilities. The Department will also provide supplementary funding to support graduate students who wish to attend conferences/workshops and conduct joint research with overseas scholars. In addition, the Department has set up the Best Teaching Assistant Award to honor and reward graduate students who perform efficiently in their teaching assistant activities. The first award will be given out in 2013/14.

I hope this newsletter will continue to serve as a window through which you can keep abreast of the latest developments happening in our Department. Your feedback is important for our success. If you have any comments on our newsletter, curriculum, teaching and learning environment, and other areas, please do not hesitate to write to us.

I would like to take this opportunity to wish you all a prosperous and healthy Year of the Horse!

Qiman Shao  
Chairman

## Personalia



**Dr. SIT Tony** (薛賢鴻博士) has joined the department as Assistant Professor since 2<sup>nd</sup> January 2014. Tony is an outstanding alumnus of the department. He received his BSc and MPhil in Risk Management from the Chinese University of Hong Kong. Later he was awarded the Sir Edward Youde Memorial Fellowship for Overseas Studies to pursue his PhD at Columbia University. He then received his PhD in Statistics from Columbia University in 2012. Before joining the

department, Tony was working as quantitative analyst at a proprietary trading company. His research interests include statistical finance, econometrics, semiparametric inference, survival analysis. Now he is teaching RMSC2001 Introduction to Risk Management and leading a Statistics STOT course in the spring term of 2013-14.



**Ms. Wendy Tang** joined the department as Executive Officer II since 13<sup>th</sup> January 2014.

## Honors and Awards

## Faculty Exemplary Teaching Award

Prof. Chun-yip Yau was awarded the Faculty Exemplary Teaching Award for the academic year 2012/13. Congratulations to Prof. Yau!



## Choh-Ming Li Professorship

Professor NH Chan was appointed Choh-Ming Li Professor of Statistics. The Choh-Ming Li Professorship was conferred by the Vice-Chancellor at the 73<sup>rd</sup> Congregation held on Thursday 17<sup>th</sup> October 2013. Choh-Ming Li Professorships are appointed on a concurrent basis for a term of five years with effect from 1<sup>st</sup> January 2013. The University will provide \$100,000/year to support the



academic research activities until the cessation of the appointment. In addition, Professor Chan has been appointed by the Financial Secretary HKSAR as a member of Deposit Protection Board for a three-year term with effect from 1<sup>st</sup> January 2014. He is currently a member of the Risk Management Committee of Hong Kong Exchanges and Clearing Limited.

## Recipients of Advantage Trust Statistics Scholarship

Name	Major	Year	Amount (HK\$)
SHEK, Chung Ning	RMSC	Year 1	10,000
TSUI, Kwan Yu	RMSC	Year 2	2,000
XU, Yan	RMSC	Year 5	2,000
YIP, Hok Pan	RMSC	Year 3	2,000
CHAN, Lok Hang	STAT	Year 1	10,000
HO, Tsz Kin	STAT	Year 2	2,000
KU, Hong Nei	STAT	Year 2	2,000
LAI, Sai Yu	STAT	Year 3	2,000
LEE, Kin Man	STAT	Year 1	10,000
LEE, Mei Wah	STAT	Year 3	2,000
TSANG, Sheung Ho	STAT	Year 2	2,000
YIU, Ka Yee	STAT	Year 1	10,000
YUEN, Wa Tak	STAT	Year 4	2,000

## The 1<sup>st</sup> CUHK Symposium on Statistics 2013

The 1<sup>st</sup> CUHK Symposium on Statistics 2013 was held on 19<sup>th</sup> December. The symposium was well-received by audience who were from different institutions around the world. The symposium provided an excellent platform for staff and graduate students to mingle and interact with world renowned statisticians. Please find some of the photos highlight below.

### Prof. Peter Hall

*University of Melbourne*

Title \_\_\_\_\_

**Ranking Influence in General Statistical Problems**



### Prof. Samuel Kou

*Harvard University*

Title \_\_\_\_\_

**Multi-resolution Inference of Stochastic Models from Partially Observed Data**



### Prof. Bin Yu

*University of California, Berkeley*

Title \_\_\_\_\_

**Stability and Big Data**



### Prof. Zhi-ming Ma

*Chinese Academy of Sciences*

Title \_\_\_\_\_

**A New Model for Coalescent with Recombination**



### Prof. Tze-leung Lai

*Stanford University*

Title \_\_\_\_\_

**Health Care Reform and Translational Medicine: Innovations in Clinical Trials and Biostatistics**



### Prof. Xiao-li Meng

*Harvard University*

Title \_\_\_\_\_

**Resolving Simpson's Paradox is a Piece of Fruit**



1. Prof. Bin Yu (right), Prof. SY Lee (centre) and guest
2. Prof. NH Chan (left) and guest
3. Opening remarks by Prof. QM Shao, Chairman of Department of Statistics
4. (From left to right) Prof. XD Fan, Prof. Xiaoli Meng, Prof. Peter Hall, Prof. Samuel Kou and Prof. QM Shao
5. Seminar participants
6. Prof. Zhi-ming Ma with academic visitors of the Statistics Department, CUHK
7. Seminar lunch

## Workshop in Recent Advances in Asymptotic Statistics

Workshop in Recent Advances in Asymptotic Statistics was held on 29<sup>th</sup> August 2013. Prominent speakers were invited to deliver talks at the workshop.

### Prof. R.N. Bhattacharya

University of Arizona

Title

Nonparametric Inference by Fréchet Means on Manifolds and Other Non-Euclidean Spaces



### Prof. Marc Hallin

Université libre de Bruxelles

Title

Signal Detection in High Dimension: testing sphericity against spiked alternatives



### Prof. Richard A. Davis

Columbia University

Title

Largest eigenvalues of the sample covariance matrix for  $p$ -variate time series with heavy-tails



### Prof. Wei Biao Wu

University of Chicago

Title

Covariance Matrix Estimation for High-Dimensional Time Series

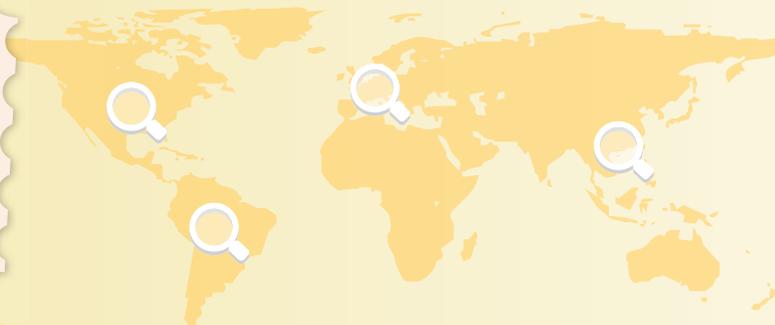


### Prof. Phillip S.C. Yam

The Chinese University of Hong Kong

Title

Empirical Balancing Weights and Global Efficient Estimation of Average Treatment Effect



- 1 Welcoming remarks by Prof. NH Chan
- 2 Session I Chair: Prof. QM Shao
- 3 Participants interact with speakers during tea reception
- 4 Session II Chair: Prof. CY Yau
- 5 Workshop organizing committees and speakers. (From left to right): CY Yau, XD Fan, XY Song, Gopal K. Basak, Richard A. Davis, Weibiao Wu, NH Chan, Marc Hallin, R.N. Bhattacharya, QM Shao, SCP Yam

## DEPARTMENT ACTIVITIES 2013



Academic exchanges during tea reception.

A distinguished lecture entitled *Big Data: Salient Features and Random Thoughts* was delivered by Prof. Jianqing Fan on 3<sup>rd</sup> September 2013. The lecture attracted some 80 persons to attend. The abstract is obtainable at <http://www.sta.cuhk.edu.hk/Dept/Seminar/topics/030913A.pdf>.



(From left to right): QM Shao, SY Lee, Jianqing Fan, WY Poon, XY Song



## BIG DATA: SALIENT FEATURES & RANDOM THOUGHTS



## DEPARTMENT ACTIVITIES 2013

**Department BBQ**

A fun and enjoyable BBQ was held on 9<sup>th</sup> November 2013 at Tai Mei Tu. A total of 50 persons attended the event including teaching staff, non-teaching staff, postgraduate students and guests. The event provided a good opportunity for student-staff interaction.

**Career Visits**

Some 25 undergraduate students visited the Census and Statistics Department, HKSAR on 12<sup>th</sup> November, 2013. The visit was jointly organized by the Statistics Student Association and the department. Students observed the work environment and gained useful information on working at Census and Statistics Department.

**Open House for Science Students**

The department organized an open house on 27<sup>th</sup> February 2013. Professors, alumni and current students introduced to the potential science students the interesting curriculum of Statistics, how Statistics connects to different areas in Science and the career prospect of Statistics graduates. A tea reception was held after the introductory talk. Participants raised questions during the tea reception.



## DEPARTMENT OF STATISTICS INTERNSHIP 2013

### INTERNSHIP 2013

#### Karen Foo

I am currently working as an intern in Gottex Penjing Asset Management. Although the internship program still has a few months to go, this would definitely be a fruitful experience to me.

My department, Investment Department, is mainly responsible for conducting researches in hedge fund to construct the fund of hedge fund portfolio and monitoring the underlying fund performance. For me, my major duties include assisting in the researches and updating the reports for governance or marketing use. One of my projects is to compare the performance of single country funds with that of multi-country funds within Asia-pacific region.

With the guidance given by my supervisor, I was able to grab a rough but clear picture of hedge fund industry. This would be useful for my career planning in the near future. Having chances to conduct analyses independently, I could bridge my knowledge learnt from the coursework, especially the statistical skills, with the real-world market practice and allow me to further develop it in a more practical sense. And it was very satisfying to see my findings being accepted.

Moreover, what I gained from this internship are beyond the technical skills. Communication skills, working attitude and time management are a few examples that I have learnt. I believe that acquiring these soft skills can benefit my personal growth.

Despite the short time that I have been working in Penjing, I really enjoy it as all the colleagues are friendly and always ready to give a helping hand to me. Here, I would like to give a deep thanks to the Statistic Department for connecting me with the company which offered me such a memorable experience.

## INTERNSHIP 2013

**Eric Liu Yik Yu**

Spending 10 weeks in the Group Risk and Capital Management Department at AIA Group Limited is a fruitful experience that has prepared me for my future career planning. Such opportunity enabled me to learn further about the credit risk management area in a qualitative manner. Specifically, it imparted me with first-hand knowledge that complemented what I had learned in school.

As a credit risk intern who works in a life insurance company, I must understand the investment framework of the firm as well as its internal rating methods. The credit risk team serves as a supervisor that monitors whether the investment department has exceeded its investment limit or concentration for specified industries or countries. We hold regular meetings to discuss whether or not the investment proposals submitted by the investment department should be accepted.

To keep pace with the global economic situation and the actions of credit rating agencies, I am tasked to update the database of the team by linking with different financial information sources, such as Bloomberg. Although the size of the credit risk team is relatively small, the team needs to cover a wide range of areas. For example, it must maintain an internal credit rating system, because not all of the counter parties our company invested in are covered by credit-rating agencies. Therefore, we hold credit discussions for new entities, in which the company will invest, but are not rated by Moody's or S&P. Joining the discussion is an interesting and valuable experience that has enabled me to understand how ratings and investment limits are assigned by applying rating methods and peer comparison.

Another highlight of the internship program provided by AIA Group Limited is the privilege of meeting fellow interns from other departments arranged by the Human Resources Department. I gained new friends with whom I shared the joys and hardships of daily tasks. During the internship, we participated in several workshops together, such as the Assessment Center workshop. I believe that these workshops enhanced my soft skills, which can boost my job interview performance in the future.

The internship experience ultimately served as an alternative way of learning for me. It helped me identify my future career path and realize the skill sets that I must acquire and develop to gain a more advanced competitive edge. I appreciate the internship program provided by AIA Group Limited because it builds a bridge between universities and the financial industry. It also enables students to learn the necessary skills and expertise that will facilitate an improved course planning after the completion of the internship.



## INTERNSHIP 2013

**Shek Kai Chung**

I am grateful to have joined the internship program in Aon Service Limited. If I would be given a chance to decide again whether I would take this internship, I would still make the same decision to work under the Health and Benefit team in Aon. The remarkable experiences I gained in the past six months brought me insights that I may have not learned with a University education alone. Such insights shall be useful in my future career.

Let me first introduce the nature of our team. Aon is an insurance broker that provides services to clients in various sectors. We mainly provide expert consultations regarding our clients' benefit plans that usually cover their employees. To promote comprehensibility, we compare the clients' benefit plans with those offered by other companies in different sectors and of varying sizes, thus setting a standard for reference. Then, to produce an accurate analytical report, I must apply the statistical and programming knowledge I learned in class. However, unlike school work, merely providing numerical answers to requests is insufficient. I need to carefully consider which approach or method is most appropriate and efficient under limited information and time, all because of the real-life implications of the information I will present to the client.

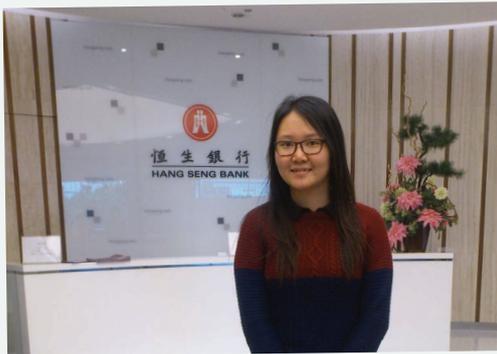


The practicum program allowed me to apply my school-gained knowledge to real-life work problems. The program gave me independence to learn and modify my knowledge in order to meet the requirements of daily office work. Whenever I encountered problems that I cannot solve by myself, I usually consult my supervisors and discuss with other interns, thus improving my knowledge further.

Aon is a multi-national company that helped me to acquire soft skills in interacting with people of different nationalities. The internship is a precious opportunity through which I learned further about other cultures as well as the working attitude in other countries. This exposure is one of the most unforgettable experiences in my life.

Finally, I would like to take this opportunity to express my heartfelt gratitude to all of those who taught me during the six-month internship period as well as those who organized this internship program. The real-life education I gained through the internship program serves as a set of valuable assets for my future career. I hope that this same opportunity can be provided to many other students who will surely benefit from the internship program as much as I did.

## INTERNSHIP 2013



Kong Mei Wa

When I started to write this, I reminisced all of the fruitful experiences I gained this year working in Hang Seng Bank. All of the memories made me feel grateful. Since January 2013, I have been working in the Retail Credit Risk Management Department where I handle portfolio management, which involves the management of various products, such as credit cards and personal loans. The major scope of my work is not exactly the same as what I have learned from school. However, the essential skills I gained from my course enabled me to handle large volumes of data, which is required in my job.

This internship brought me new insights about credit risk, which is currently a hot topic in the banking industry. I have been able to assist in numerous projects, which advanced my knowledge of the latest market news and provided me with experience in analyzing their impacts. This sector captured my interest because it is related to our daily life. Moreover, the work is similar to an investigation, in which I must identify the trend and its explanation by examining voluminous data using my statistical skills. I also learned that results based on data are more convincing than those derived from guessing by common sense or those presented through verbal explanation.

Aside from being a new area of study, this internship offers me a chance to engage in real bank operations instead of solely depending on classroom instruction. The compliances in the banking industry are more than I can imagine. Carefulness is a key consideration in my work. Definite answers can hardly be achieved, and thus, rigorous effort is needed in checking or modifying the research method. As a professional, I must provide a numerical answer and efficiently handle confidential data and files at the same time. In addition, I have learned to present my analysis results in an organized and practical manner, which is an essential skill required in all kinds of work. This internship indeed serves as a bridge that links my studies with a real-life working environment.

Another aspect of this internship that I treasure the most is the fact that I gained new friends when I worked with my colleagues. All of them are very courageous and helpful, and can seek counsel from them when I have work-related problems. Having observed how they work and cooperate fostered my teamwork skills. I enjoy supporting them and contributing to the team. I intend to emulate their outstanding qualities to further improve my competence.

It has already been a year since I worked at Hang Seng Bank. I truly treasure this experience and feel thankful to my Department and the company for affording me this privilege. I hope I can add value to the team and gain further from my work in the future.

## INTERNSHIP 2013

**So Tsz Chung**

I have been working in PAREXEL International as a project financial management intern since May 2013. PAREXEL is a multinational contract research organization based in Waltham in Massachusetts, United States. Since its establishment in 1982, it has developed significant expertise in assisting clients in pharmaceutical, biotechnology, and medical device industries throughout the world with its aim of bringing safe and effective treatments to patients in the global market. I am truly glad to be part of this company and render contributions as an intern.



As an intern in the Project Financial Department, my major responsibilities include generating and analyzing project financial reports, such as revenue forecasts and variance analyses using Microsoft Excel and VBA Macro. I am also responsible for sending the reports to the clinical operation managers and conducting quality checks for the returned files to ensure accuracy. The knowledge and skills in using Microsoft Excel and VBA programming, which I acquired from several RMSC courses, substantially helped me accomplish my duties. Gradually, I familiarized myself with the monthly financial process of the team, and my efficiency greatly improved. Appreciated by my supervisor, my contract was extended to the end of December, and I was even entrusted with additional responsibilities—from setting up procedural guides for preparing the reports for internal use to helping to training new interns. Such a challenging job enabled me to learn to cooperate closely with my colleagues as well as harness my ability to prioritize workloads and manage tight schedules while paying attention to details.

This internship is a valuable experience for me, through which I gained practical work experience before graduation. My experience in PAREXEL International means more than a career-related endeavor because of the friends I have gained in the team. All of them are very helpful and good natured. I usually ask for their advice whenever I encounter difficulties. In fact, I feel more comfortable calling them “friends” rather than “colleagues.” Our team even sang karaoke and had dinner together last month, which was a fun experience I will never forget. All of these make me feel truly glad to have met such wonderful friends. This friendship is absolutely a significant bonus to my internship.

Nowadays, many people argue that attaining a degree in a university is not just the main requirement in preparing for one’s future work. I must admit that in the real working environment, 80% of the knowledge learned in the university cannot be applied. However, the remaining 20% is crucial for one’s future job. In my internship, this 20% involves my knowledge on Excel and VBA programming. Therefore, substantial attention should be paid to every course taken in CUHK because one can never know which 20% of the university-acquired knowledge would be crucial in a future job.

## INTERNSHIP 2013

**Carlos AU YEUNG**

The internship program in the Business Assessment Team at Aegon is certainly a joyful experience to me. It opened valuable opportunities through which I was able to apply my university-acquired knowledge to contribute to the success of the team and equip myself with several practical skills, thus making me an "all-rounder."

In Aegon, I am responsible for performing experience studies for life and health insurance as well as for conducting reconciliation for

reinsurance payment. Experience study compares the actual experience with the experience expected from the business model. It aims to minimize the anti-selection problem by changing decision in underwriting practice. It also intends to contribute to the development process of future products. To perform the task, I am required to use Excel VBA, Access Query, and other software to extract the required data to conduct the analysis. I am also required to apply certain knowledge of actuarial science in the experience studies process. This work experience exposed me to different insurance products and benefits as well as the practices of major insurance companies.

With Hong Kong as the location of Aegon's regional office, I have numerous opportunities to work with people from different backgrounds. By working with them, I continuously harness various skills that range from technical skills, such as being proficient with computer software, to soft skills, such as interacting with internal clients. Moreover, the staff members in Aegon are helpful and self-motivated. They are willing to spend an hour to teach me new tasks and encourage me to finish a project independently. Although the workload is sometimes heavy, the staff members do not put too much pressure on me.

Apart from the above, the discussions I had with my supervisors and other colleagues beyond work have helped me ascertain my future career path. My supervisors and colleagues generously gave their advice and thoroughly explained the career path of being an actuary. Participating in the events organized by the company enables me to expand my social circle and enhance my sense of belonging as part of the company.

The practicum program is one of the courses that I enjoyed the most as it bridged the classroom to the real business world. I feel privileged to have joined the internship program. I firmly believe that the internship program can benefit students in all aspects, and I hope that an increasing number of students can avail of this wonderful opportunity to join the meaningful program in the future.