Chair’s Report by Jamie Stafford

Over the past five years I’ve been fortunate to steward a Department experiencing significant transition. This has affected nearly every feature of the Department from space to curriculum to faculty complement, staff, and students. Indeed the Department’s new name Statistical Sciences reflects the wider range of academic research now conducted, the evolution of the discipline as well as who we are and what we do. The unfolding renaissance of our culture can be credited to those individuals who have stepped forward and led critical initiatives, and there are many. For the past four years our graduate students have been solely responsible for organizing and hosting the Department’s Research Day. Here they’ve consistently invited international and local stars to speak directly to them as they launch their careers. Curricular innovation has led to the creation of new programs and courses, at the graduate and undergraduate level. These in turn have lead to partnerships with other units both within the Faculty of Arts and Science and across campus. The quality of research in the Department continues to be outstanding as evident from the number of faculty awards, the increase in research funding despite lean times at NSERC, the emergence of new initiatives, the hiring of outstanding junior faculty and the sheer level of productivity of our research faculty.

The Department’s mandate is to serve as a centre of excellence for statistical research and education, across the campus, nationally and internationally. We are united in the conviction that advances in science and health depend critically on statistical leadership, on the involvement of a critical mass of statistical expertise and on environments that engage highly skilled collaborative statistical scientists. As data become ubiquitous and easier to acquire, particularly on a massive scale, models for data are becoming increasingly complex. In many areas of science and industry there is strong demand for statistical expertise and the ability to collect large and complex data sets has outpaced the capability of existing statistical methodology. This provides strong impetus for new research in statistical science, and for new interdisciplinary collaborations. In addition, the data acquisition trend has been accompanied by an increasing demand for statistical expertise where it is widely acknowledged that there is an acute shortage of statistical scientists locally and nationally. Central to the Department’s goals is the creation of structures that strengthen both collaborative research and collaborative training at the undergraduate and graduate level. The pages within detail, through reports and images, recent progress towards achieving this goal.

New PhD Field in Actuarial Science and Mathematical Finance

The Department of Statistical Sciences is pleased to announce its new PhD program in Mathematical Finance and Actuarial Science. The program is built on the strong and diverse research agenda of the department and the continually growing demand from both industry and academia for PhDs who have solid quantitative training in probability and statistics as it pertains to finance and insurance.

To meet this demand, our new 4-year program trains students at the interface of probability, statistics, finance and insurance with a mixture of theoretical and applied courses. The program is accessible to students who have solid training in Mathematics, Statistics and /or Actuarial Science but students with degrees in Physics, Economics and Engineering are also encouraged to apply.
Awards: Faculty & Students

Alison Gibbs wins Dean’s Outstanding Teaching Award

For her clear leadership and achievements in teaching and the widespread enthusiasm for her performance as an instructor, Dr. Gibbs is a leading innovator of statistics education and curriculum renewal in our Department and more broadly the Faculty of Arts and Science at the University of Toronto, Alison is also actively involved in research in statistics education. Examples of this include an invited talk at the annual meeting of the Statistical Society of Canada, developing graduate students’ supervisory skill, an invited lecture at the University of Chicago, What is Statistics, Some thoughts on Education and the manuscript Lessons from Medicine for the training of Statistical Consultants. She chairs the Statistical Education Committee for the SSC and attends several conferences on statistics education on an annual basis. She was Guest editor for the Canadian Journal of Statistics, is an Associate Editor for the SSC newsletter Liaison and was a member of the Canadian committee of the International Statistical Literacy Competition. We are fortunate to include Alison in our faculty ranks and we are particularly grateful to the Statistical Society of Canada for their support through the nomination process.

Fang Yao earns Discovery Accelerator Supplement

For his research program entitled “Functional and High-dimensional Data Analysis: Regularization, Representation and Regression,” Professor Yao was recruited to the University of Toronto from Colorado State University and we are fortunate to have him as one of our more prolific and widely read researchers. One of his published articles, which appeared in the Journal of the American Statistical Association, was rated as the most read paper for the year 2010 based on the number of times it was downloaded. While on research leave he spent one term at the Statistical and Applied Mathematical Sciences Institute as an esteemed Research Fellow. There he gave the opening address for a thematic program and subsequently led one of the working groups.

Ruslan Salakhutdinov earns Early Researcher Award

For his election to the Royal Society of Canada: the citation reads: For profound and deep contributions to probabilistic models and statistical inference, including highly original and influential results on the mathematical analysis of Markov chain Monte Carlo methods. For exceptional breadth, as evidenced in his many collaborations, his application of statistics and statistical computing to problems in several areas of science and social science, and his enthusiasm for encouraging students and junior researchers to reach their potential for public service through his dedicated and skilled communication of probability and statistics to the broader public with his many popular writings, including his best-selling book, Stuck in the Middle.

Congratulations to Don Fraser

Congratulations to Don Fraser for his recent appointment by the Governor General as an Officer of the Order of Canada. This honour was bestowed upon Don for his contributions to the advancement of statistical sciences in Canada. Don’s impact within Canada can hardly be overstated: he has schooled several generations of leaders in the statistical and actuarial sciences, has made deep and original contributions to the theory of statistics, and is one of the foremost intellectual leader of the discipline in Canada for the past 60 years.

Fang Yao earns Discovery Accelerator Supplement

For his research program entitled “Functional and High-dimensional Data Analysis: Regularization, Representation and Regression,” Professor Yao was recruited to the University of Toronto from Colorado State University and we are fortunate to have him as one of our more prolific and widely read researchers. One of his published articles, which appeared in the Journal of the American Statistical Association, was rated as the most read paper for the year 2010 based on the number of times it was downloaded. While on research leave he spent one term at the Statistical and Applied Mathematical Sciences Institute as an esteemed Research Fellow. There he gave the opening address for a thematic program and subsequently led one of the working groups.

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Congratulations to Jeff Rosenthal

For his election to the Royal Society of Canada: the citation reads: For profound and deep contributions to probabilistic models and statistical inference, including highly original and influential results on the mathematical analysis of Markov chain Monte Carlo methods. For exceptional breadth, as evidenced in his many collaborations, his application of statistics and statistical computing to problems in several areas of science and social science, and his enthusiasm for encouraging students and junior researchers to reach their potential for public service through his dedicated and skilled communication of probability and statistics to the broader public with his many popular writings, including his best-selling book, Stuck in the Middle.

Recent graduate Gun Ho Jan’s Ph.D. dissertation has been selected by the ISBA Prize Committee, as a finalist for the prestigious Savage Award in 2011. Currently Gun Ho is a postdoctoral fellow in the Department of Biostatistics and Epidemiology, University of Pennsylvania.

Program News

Tenure & Promotion

Congratulations to Andrei Badescu who has been granted tenure and was promoted to the rank of Associate Professor on July 1, 2011. Professor Badescu is a Professor in Actuarial Science. He is an internationally renowned expert in ruin theory, particularly for his work connecting risk processes with stochastic fluid flows.

GRADUATE STUDIES REPORT

First off, I would like to thank Prof. Knight, my predecessor, for handling the reigns as Graduate Chair so expertly, for his guidance and for his assistance in bringing me up to speed—thanks Keith! Second, I would like to thank the staff: Andrea, Angela, Annette and Carolyn who have made my transition into the role so all the more smoothly. Finally, but not least; the new Associate Chair, Susan, who is in charge of the Graduate Committee (Profs. Badescu, Cuai, Feuerverger, Yao, and Zhou) who were invaluable in helping me make admission decisions and for providing support with other administrative issues.

There have been a number of exciting changes in the graduate program since I began in January 2010. Two of the most important ones are the creation of six new graduate courses (STA 4594Y) and the creation of the new PhD field in Mathematical Finance and Actuarial Science.

The new courses are the first installment of what will eventually be fourteen 4500 level courses. There are concentrated six-week courses focusing on faculty’s areas of interest and research. They provide an introduction to the tools, methods, and theory that arise in our faculty’s research problems, but are accessible to non-experts. This year we have introduced: Statistical Dependence; Gompel Models and Beyond; Functional Data Analysis and Related Topics; Monte Carlo Estimation; Advanced Monte Carlo Methods; Applications; An Introduction to Bootstrap Methods; and Applied Statistical Control: High-Frequency and Algorithmic Trading.

The new PhD field in Mathematical Finance and Actuarial Science builds on the strength of the research faculty in this area and reflects the historical fact that many of our graduates produced focused PhD theses in this field, and more importantly to me—meet the demand from industry and incoming and prospective students for course work and supervision in this fast-paced, dynamically expanding field. The new field has specialized course and comprehensive examination requirements, but statistics and probability is still at its core. I look forward to seeing this new field grow into a successful and integral part of the graduate program.

There are plans in the works for a number of other graduate program modifications and additions—so stay tuned.

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New Faculty: Ruslan Salakhutdinov

Ruslan Salakhutdinov received his PhD in computer science from the University of Toronto in 2009. After spending two post-doctoral years at the Massachusetts Institute of Technology Artificial Intelligence Lab, he joined the University of Toronto as an Assistant Professor in the Department of Statistical Sciences.

Dr. Salakhutdinov’s research field is Statistical Machine Learning.

Machine Learning is a broad subfield of Artificial Intelligence (AI), is the study of algorithms that allow computers to efficiently process and automatically discover structure from high-dimensional data using complex probabilistic models. Numerous applications include visual object recognition, language understanding, speech recognition, information retrieval, anomaly detection, and time series analysis.

In recent years, there has been a massive increase in both computational power and the amount of data available from web, video, camera, and high-throughput genomic sequencing technologies, and various laboratory measurements. Building statistical models that can efficiently process and automatically discover meaningful representations from these data, should lead to many new scientific discoveries. New advances in machine learning will have a far-reaching impact on many research areas. For example, they can help neuroscientists analyze high-dimensional fMRI brain imaging data, or improve product recommendation engines in companies like Amazon.

Dr. Salakhutdinov’s main scientific interest is to understand the computational and statistical principles required for discovering structure in large amounts of data. His research focuses on developing large scale hierarchical models that support inferences at multiple levels. This class of models provides a powerful tool for defining flexible probability distributions over high-dimensional data, and allows us to build rich probabilistic models that can automatically discover semantic hierarchies from large volumes of high-dimensional data.

Many existing machine learning systems today are fundamentally limited in their ability to learn complex structural relations from high-dimensional input. Dr. Salakhutdinov’s research aims to develop rich probabilistic models that are multi-functional, contain multiple levels of abstraction, and are capable of extracting higher-order knowledge from high-dimensional data, and successfully transfer acquired knowledge to learning new tasks. These models hold great promise for making a big impact on many research areas, including computational biology, neuroscience, medical diagnosis, computer vision, data mining, and robotics.

Dr. Salakhutdinov’s published over two dozen research papers, including a highly cited paper in Science. He is the recipient of the Early Researcher Award from the Government of Ontario, the Connaught New Researcher Award, and a Scholar of the Canadian Institute for Advanced Research.

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This speech was followed by a student presentation by Andriy Derkach on Robust Association Tests for Rare Genetic Variants. He presented his current work on hybrid test statistics for rare variants that borrow strength from two classes of tests using Fisher’s method and the minimal p-value approach of combining p-values from the complementary linear and quadratic tests.

The morning continued with a second keynote address by Professor Xenia Melia, who discussed statistical models for user preferences. While her talk involved estimation of a general parametric model, her presentation was well grounded in several real examples of modeling ranked preferences, including voter preferences and boosting of search engines.

We closed the morning with a second student presentation by Nitish Srivastava on a deep belief network for learning joint features over multimodal data. Easily interpretable experimental results were presented using the MS-Flickr dataset, where the “joint features” were tagged images (image features and tags). It should be noted that this talk built on a similar talk he gave in the Machine Learning seminar series on March 15, allowing him to present new results following feedback in that seminar.

Afternoon - Bahen Centre, Room 1170
The afternoon began with a presentation by Paul Nguyen on mapping cancer risk in portions of Ontario. He presented the background of his statistical model and inference methods, placing it in the context of the Lambton and Middlesex counties in Ontario. Professor David Dunson followed with his talk on Nonparametric Bayesian Learning from Big Data. He outlined the problems of the “large p, small n paradigm,” and reviewed current work on nonparametric Bayesian models that favour low-dimensional representations.

The event closed with a panel discussion involving the three keynote speakers and two professors from the University of Toronto Department of Statistical Sciences:
- Jeffrey Rosenthal: Professor, Department of Statistical Sciences, University of Toronto
- Marina Meila, Associate Professor, Department of Statistical Sciences, University of Washington

The panel focused on three main topics:
- Adapting the graduate curriculum to meet current demands in industry and academia.
- The apparent advantage of a PhD from a well-known “top school”.
- The distinction between Machine Learning and Statistics.

These three topics sparked active involvement from both panelists and the audience. Professor Dunson emphasized the importance of breadth and being involved in more than just research. All panelists had much to say in regard to the importance of a school’s “name” or “reputation” for future career options. In particular, her consulting work compensated for the lack of an industry panelist this year. In particular, her consulting work compensated for the lack of an industry panelist this year.

CONCLUSION
Overall, the event was a huge success and an important academic and social event for all those who participated. It had heavy participation from neighbouring universities (ex. University of Waterloo). In particular, students benefited greatly as they were able to exchange ideas and have direct interaction with top researchers in the field and establish connections for future collaborations. I personally encouraged the three keynote speakers to consider collaborative ventures with department members in a “Thank you” email sent after the event.

Participants in Graduate Student Research Day

“Students benefited greatly as they were able to exchange ideas and have direct interaction with top researchers in the field.”

WITH ADDITIONAL THANKS TO:
- Professor James Stafford, Chair, Department of Statistical Sciences
- Christine Buluyuvaris, Assistant to the Chair, Department of Statistical Sciences
- Edwin Loi, Secretary, Statistics Graduate Student Union, Department of Statistics
- Alison Conway, Manager of Scientific Programs, Fields Institute
- Claire Durispal, General Scientific Program Coordinator, Fields Institute
- Andrea Heo mans, Communications Officer, Fields Institute

REPORT AND PAPERS
Available from the Graduate Student Research Day 2012 Organizing Committee.

ACKNOWLEDGEMENTS
The Graduate Student Research Day 2012 would not have been possible without the support of the University of Toronto Department of Statistical Sciences, the Fields Institute, and the Statistics Graduate Student Union. We would especially like to thank Associate Professor, Department of Statistical Sciences, for her work in organizing this event.

ORGANIZING COMMITTEE
- Cody Severinik, Chair, Department of Statistical Sciences
- Ramya Thennur, Co-Chair, Department of Statistical Sciences
- Avishek Sabeti, PhD Candidate, Department of Statistical Sciences
- Xuming Xi, PhD Candidate, Department of Statistical Sciences
- Andriy Derkach, PhD Candidate, Department of Statistical Sciences
- Ruslan Salakhutdinov, Assistant Professor, Department of Statistical Sciences
- Zhou Zhou, Assistant Professor, Department of Statistical Sciences

Students benefited greatly as they were able to exchange ideas and have direct interaction with top researchers in the field.

THIS PHD PROGRAM IS SUPPORTED BY:
The department is extremely proud of Sam and we look forward to seeing his career continue to blossom. We had a chance to (virtually) chat with Sam for a short Q & A here’s the correspondence...

What motivated you to focus at graduate work? I felt it was a great opportunity to dig into deep quantitative topics and develop original research ideas; grad school offers boundless opportunity to do creative intellectual work. Also, I’ve always been motivated by intellectual challenges in general, so aiming at doing good academic work felt like a natural progression for me.

How has your PhD research equipped you for work in the real world? Developing a pragmatic sense for which research problems are worth your time is crucial (in academia or anywhere else). I’ve very much improved those practical skills during my graduate studies and it served me well since then.

What advice would you give your current graduate MSc and PhD students? Be proactive - research is an entrepreneurial activity; it typically requires a lot of exploration, readings and excursions off the beaten roads.

What’s one of your fondest memory of your time at U Toronto? Collaboration with my supervisor! Hanging out with other grad students...I used to organize a lot of “social pub evenings” back then, a good opportunity to socialize with grad students and under graduates. It was so good times!

I always appreciate a good pint with friends. It pays to have some interests around and added much to camaraderie within the Department – both within the student body and between the student body and faculty. After graduation, Sam decided to take the industrial route (for now!) and from 2008-2010 worked as a Quant Researcher at CRIIF in Toronto on algorithmic trading and low-frequency trading strategies. Then he moved to Austin, Texas in 2010 and took up a position as Quant Researcher at RGM Advisors (one of the top hedge funds in the world) where he now develops high-frequency trading strategies.

Several faculty have been successful in creating new innovative courses in the Department through successful applications to the Arts and Science Curriculum Renewal Initiatives Fund (CRIF). Ensuring the best possible quality of academic experience for our students is the highest single priority in the Faculty of Arts & Science. To this end, the Faculty of Arts & Science created CRIF as an opportunity for academic units to pilot, begin, or improve and solidify curricular innovations to enhance the learning experience of our undergraduate students. The Department has had three successful CRIF applications.

**Statistical Collaborations**

by Jamie Stafford

The fourth-year capstone course aligns with new directions in both statistics education and the discipline. Its nature, statistics is collaborative, motivated by the need to develop new methods in the context of pressing scientific problems, including problems arising as a result of the proliferation of data generated by new technologies. Recent research in statistical education emphasizes the need to immerses students in the process of statistical reasoning and engage them in real, collaborative, out-of-class experience. The fourth-year capstone course is designed to teach non-science students about the importance of Quantitative Reasoning to so many different areas (poetry, gambling, politics, music, medicine, cryptography, finance, sports, demographics, and more).

Quantitative Reasoning (QR) has never been more important for multidisciplinary research, handling modern technology, following news reports, and being a productive and responsible citizen. The Faculty of Arts & Science has recognized this fact by making QR a core competency to be addressed in all undergraduate programs. It is our hope that students taking this new course will gain new technical knowledge and understanding, and also fundamentally change their attitudes about numerical matters—becoming pattern-recognition and more productive citizens throughout their lives.

**Why Numbers Matter**

This new second-year Statistics course is designed to teach non-science students about the importance of Quantitative Reasoning for those emerging as a result of the proliferation of data generated by new technologies. Recent research in statistical education emphasizes the need to immerses students in the process of statistical reasoning and engage them in real, collaborative, out-of-class experience.

**Issues in Actuarial Practice**

Effective communication skills are critical and a professional Actuarial Life. Actuaries must often prepare written reports and deliver presentations, on highly technical material, to co-workers and clients in an easy to digest manner. U of T’s Actuarial Science Industry Advisory Board, which consists of eight senior practicing actuaries, has identified this skill as a weakness in university graduates. They are not aware of any university program that explicitly addresses these essential skills in a targeted manner as this course does.

**Statistical Significance of the Netflix Challenge**


**Bayesian analysis or evidence based statistics.**


**Duplicate彗星**


**Fitting The Department partners with a CRIF program for Strategic Training in Advanced Genetic Epidemiology. This fourth year capstone course is designed to train individuals at the interface of genetics and population health sciences in genetic science and statistical genetics—two disciplines currently facing a massive shortage of qualified individuals in Canada and elsewhere.**

**ANDREI BADESCU**


**SAMBROVERMAN**


**RADU CRAIU**


**MIKE EVANS**


**ANDREY FEUERVERGER**


**DON FRASER**


ALISON GIBBS

KEITH KNIGHT

SEBASTIAN JAIMUNAL
S. Jaimungal and G. Sigloch. Incorporating Ambiguity and Risk Aversion into a Stochastic Model for駥;

JEFF ROSENTHAL

RUSLAN SALAKHUTDINOV

LEI SUN

MUNI S. SRIVASTAVA

SHELDON LIN

The staff at the Department of Statistical Sciences have seen a few changes over the past year. We welcomed our new Office Assistant Annette Courtemanche in June 2012. Annette has come to us from OISE/UT and the Munk School of Global Affairs and is the tireless, problem-solving extraordinaire whose smiling face greets everyone who comes to the front office.

Christine Bulguryemez, Assistant to the Chair and Financial office assistant, went on leave in July 2011 and had a baby girl on August 7 named Lauren Bulguryemez. Congratulations to Christine and her family!

We welcomed Carolyn Brioux this summer to fill in for Christine and she had to hit the ground running for September and hasn't stopped since! She has been tireless with her organizational abilities, which are always in demand. Carolyn has come to us from the Dean's office at Arts and Science and OISE/UT.

Andrea Carter continues to shine in her role as Undergraduate and Graduate Administrator. Students, staff and faculty all rely on her vast knowledge of things well beyond her position and her willingness to jump in and help anyone who needs it.

Laurel Duquette continues to engage with all kinds of interesting projects as the staff member of the Statistical Consulting Service. Most notably this year were a project on the probability of Falling Glass panels and a project to quantify damages from a large warehouse fire.

Dermot Whelan continues to keep us all connected and bring new ideas to technological and server issues for staff and faculty. No one at Statistical Sciences could manage the work they do without him!

FANG YAO


The news release for Sun et al. Nature Genetics might be also relevant to the newsletter (http://www.sickkids.ca/AboutSickKids/Newsroom/PressNews/2012/multiple-genes-linked-to-differences-in-cf.html). (2012). This work highlights the benefit of integrating statistical methodology with other disciplines in scientific studies, says Dr. Lei Sun, an Associate Professor at the Dalla Lana School of Public Health and the Department of Statistics at U of T.

Laurel Duquette continues to keep us all connected and bring new ideas to technological and server issues for staff and faculty. No one at Statistical Sciences could manage the work they do without him!
### Department of Statistical Sciences Seminars 2011-12

#### September 22, 2011
**Speaker:** Gareth Roberts University of Warwick
**Title:** Efficient forms of individual-level models for large-scale spatial infectious disease systems
**Host:** RC

#### October 13, 2011
**Speaker:** Wenguang Sun University of Southern California
**Title:** Large-Scale Multiple Testing Under Dependence and Beyond
**Host:** ZZ

#### October 20, 2011
**New TA Training**

#### October 27, 2011
**Speaker:** Jiahua Chen University of British Columbia
**Title:** Properties of the Adjusted Empirical Likelihood
**Host:** SL

#### November 3, 2011
**Speaker:** Paul McNicholas University of Guelph
**Title:** Non-Gaussian model-based clustering and classification
**Host:** NR

#### November 10, 2011
**Speaker:** Zhizhao Zhao Penn State University
**Title:** Efficient Regressions via Optimally Combining Quantile Information
**Host:** ZZ

#### November 17, 2011
**Speaker:** Jan Hannig UNC Chapel Hill
**Title:** On Generalized Fiducial Inference
**Host:** NR

#### December 8, 2011
**Speaker:** Chris Wild University of Auckland
**Title:** Visualising randomisation and the bootstrap
**Host:** AG

#### January 19, 2012
**Speaker:** Xiaoli Meng Harvard University
**Title:** Statistical Education and Educating Statisticians: Producing wine connoisseurs and master winemakers
**Host:** AG

#### January 20, 2012
**Title:** The kick is in the residual (augmentation)!
**Host:** AG

#### January 26, 2012
**Speaker:** Mia Zhu University of Waterloo
**Title:** Ensemble Learning: Classification and Variable Selection
**Host:** RC

#### February 7, 2012
**Speaker:** Jason Ricci, PhD candidate, year 2
**Title:** Producing winemakers
**Host:** AG

#### March 1, 2012
**Speaker:** Hanna Jankovski York University
**Title:** Asymptotics of the discrete log-concave maximum likelihood estimator
**Host:** RC

#### March 15, 2012
**Speaker:** Yongtao Guan, University of Miami
**Title:** Optimal intensity estimation of the intensity function of an inhomogeneous spatial point process
**Host:** ZZ

#### March 22, 2012
**Speaker:** Pengfei Li University of Waterloo
**Title:** Hypothesis testing in finite mixture models: from the likelihood ratio test to EM-Test
**Host:** FY

#### April 5, 2012
**Speaker:** Zhizhao Zhao Penn State University
**Title:** Why do cars with bigger engines really use more gas?
**Host:** ZZ

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### Undergraduate Students

The club aims to broaden students’ understanding and importance of statistics in our everyday lives, while, at the same time, helping statistics to grow in popularity at firstly at this institution. Statistics tends to be an assistant to a vast majority of fields of study, with most taking the courses because of other program requirements. We will provide students with opportunities to meet with fellow colleagues that share common interest, and to learn from each other and communicate different ideas. PhD Students will also be available at certain times to hold discussions with numerous students. Interactive seminars given by PHD students, professors, and career specialists on different topics, ranging from career possibilities to intriguing topics such as “Do cars with bigger engines really use more gas?” will be given in an attempt to build a community-like environment for affiliated members. The club will always strive to build and maintain a professional relationship with departments both inside and outside of the University.

The University of Toronto Statistics Club

The club is open to all undergraduate students, graduate students, and statistics teachers. The club aims to provide students with opportunities to meet with fellow colleagues that share common interest, and to learn from each other and communicate different ideas. PhD students will also be available at certain times to hold discussions with numerous students. Interactive seminars given by PHD students, professors, and career specialists on different topics, ranging from career possibilities to intriguing topics such as “Do cars with bigger engines really use more gas?” will be given in an attempt to build a community-like environment for affiliated members. The club will always strive to build and maintain a professional relationship with departments both inside and outside of the University.

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### Executives for 2012-2013 Academic Year:

- **President:** Di Wang
- **VP Membership:** Shiva Adita
- **VP Public Relations:** Faizan Mohsin
- **Executive Assistant:** Dennis Lu
- **Executive Assistant:** Haseong Kim
- **Marketing Director:** Zhibiao Zhao
- **VP Membership:** Nadia Muhe
- **Treasurer:** Jinhyung Lee

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*On October 20, 2010 the Department of Statistical Sciences at the University of Toronto marked World Statistics Day with the Public Lecture “Statistics in the Headlines” by Professor Jeffrey Rosenthal. World Statistics Days is a U.N. sponsored event to “acknowledge and celebrate the role of statistics in the social and economic development of our societies.” - Ban Ki-Moon, Secretary-General*
PUBLIC LECTURE SERIES

On the Causes of Effects
STEPHEN E. FIENBERG PROFESSOR
DEPARTMENT OF STATISTICS, MACHINE LEARNING DEPARTMENT, HEINZ COLLEGE, AND CYLAB, CARNEGIE MELLON UNIVERSITY

JANUARY 21 @ 4:00pm

Uncertain Weather, Uncertain Climate
DOUG NYCHKA DIRECTOR
INSTITUTE FOR MATHEMATICS APPLIED TO GEOSCIENCES NATIONAL CENTER FOR ATMOSPHERIC RESEARCH UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH

MARCH 7 @ 12:00pm

Hot Enough for You? Uncertainty Quantification for Regional Climate Projections in North America
NOEL A. CRELLIE PROFESSOR
DEPARTMENT OF STATISTICS THE OHIO STATE UNIVERSITY

APRIL 1 @ 4:00pm

Statistics: the new sexy?
ROB TIBSHIRANI PROFESSOR
DEPARTMENTS OF STATISTICS AND HEALTH RESEARCH AND POLICY STANFORD UNIVERSITY

SEPTEMBER 12 @ TBA

Computationally Intensive Biology Problems
ROBERT GENTLEMAN SENIOR DIRECTOR
BIOINFORMATICS AND COMPUTATIONAL BIOLOGY GENENTECH, INC.

October 10 @ TBA

Smart Use of Smartphones and other Mobile Devices to Improve Health
SUSAN MURPHY PROFESSOR
H.E. ROBBINS PROFESSOR OF STATISTICS AND PROFESSOR OF PSYCHIATRY, RESEARCH PROFESSOR, INSTITUTE FOR SOCIAL RESEARCH, UNIVERSITY OF MICHIGAN

NOVEMBER 21 @ TBA

For more information about this lecture series visit our website www.utstat.utoronto.ca

Statistical Sciences UNIVERSITY OF TORONTO

International Year of 2013 Statistics