Pierre Robillard Award 2019



This prize recognizes the best PhD thesis in probability or statistics defended at a Canadian university in a given year.

Peijun Sang is the winner of the Pierre Robillard Award of the Statistical Society of Canada. Peijun's thesis, entitled "New Methods and Models in Functional Data Analysis" was written while he was a doctoral student at the Simon Fraser University, working under the supervision of Jiguo Cao.

Peijun joined the Department of Statistics and Actuarial Science at the University of Waterloo in September 2018 as an assistant professor.

His current research interests are focused on functional data analysis methods. Data from electroencephalogram signals, function magnetic resonance imaging and diffusion tensor imaging are important examples. He is interested in applying functional data analysis techniques to study functional connectivity between imaging data collected from different regions of the brain. He is concerned with large sample properties of high dimensional functional regression models that have been proposed for this type of data. He is also interested in dependence modelling with copulas for discrete and time-to-event outcomes.

In July 2010, Peijun earned a B.Sc. degree in Statistics from Zhejiang University in Hangzhou, China and then, in August 2014, he earned an M.Sc. degree in Statistics from the University of British Columbia under the supervision of Harry Joe.

The criteria used in selecting the winner of the Pierre Robillard Award include the originality of ideas and techniques, the possible applications and their treatment, and the potential impact of the work. The award is named in memory of Professor Pierre Robillard, an outstanding dynamic young statistician at the Université de Montréal, whose untimely death in 1975 cut short what promised to be a highly distinguished career.

Peijun Sang will present an overview of his work in a special session at this year's SSC Annual Meeting at the University of Calgary.

The citation for the award reads:

"To Peijun Sang, for the thesis entitled "New Methods and Models in Functional Data Analysis"

Thanks to Gordon Fick, who was primarily responsible for producing this material.

CRM-SSC Prize in Statistics 2019









Photo credit: Astrid Eckert

The CRM-SSC Prize in Statistics is awarded annually by the Centre de recherches mathématiques (CRM) and the Statistical Society of Canada (SSC) in recognition of outstanding research carried out primarily in Canada by a statistician during the first fifteen years after completing a PhD. The 2019 recipient of this prize is professor Johanna Nešlehová of McGill University.

Born in Prague, Johanna is the daughter of Czech painter Pavel Nešleha and art historian Mahulena Nešlehová. She studied mathematics and statistics in Czechia (Univerzita Karlova, 1999) and Germany (Universität Hamburg, 2000; Carl von Ossietzky Universität, PhD, 2004). Her interests in multivariate analysis, nonparametric statistics and applications were stimulated by Marie Hušková, Georg Neuhaus and Dietmar Pfeifer. At ETH Zürich, where she was postdoc and later Heinz Hopf Lecturer, her expertise expanded to extreme-value theory and quantitative risk management under the guidance of Paul Embrechts. She joined McGill in 2009, was promoted to Associate Professor in 2012, and is currently Chair of the Undergraduate Programs in Mathematics and Statistics at that institution.

Since 2004, Johanna has published over 40 papers in high-caliber international journals such as *Bernoulli, Biometrika, The Annals of Statistics (AoS)*, and the *Journal of Multivariate Analysis (JMVA)*. In addition to making deep and lasting contributions to statistical theory and risk management, she coauthored with Erhard Cramer an undergraduate text in mathematics now in its 7th edition at Springer.

Johanna's early papers with Paul Embrechts and others, studied the impact of extreme events on risks, developed extreme-value tools for the analysis of loss data, and critically assessed the use of infinite-mean models in operational risk. These seminal works, published in the *Journal of Operational Risk* and the *Journal of Banking and Finance*, are frequently cited.

In parallel, Johanna undertook a thorough reexamination of the prevalent dependence structures used for multivariate data modeling with copulas, most notably the Archimedean class, which extends Cox's proportional hazards model. Her groundbreaking 2009 AoS paper with Alex McNeil provided key new insights into this class of models that faciliate their use and inspired much work, including some by Johanna and her collaborators. For example in a 2011 discussion paper in TEST, she generalized a well-known rank-based estimation technique for Archimedean models. In a 2019 AoS paper, she also uses a sophisticated rank-based approach to develop semiparametric estimators of Archimedean which describe various forms of dependence in pre-extreme regimes.

However, Johanna's greatest contributions are probably those concerned with the extension of rank-based copula inference techniques to the analysis of mixed data. She started investigating this issue in her PhD thesis, which led to her 2007 solo paper in JMVA. The same year, she coauthored a paper on this topic in the ASTIN Bulletin which was identified as one of the three "must-read" of copula modeling in the Journal of Risk and Insurance. She is actively pursuing this line of research, mostly with Christian Genest and Bruno Rémillard. Noteworthy are her 2014 Bernoulli and 2017 JMVA papers, which make heavy use of the theory of empirical processes to resolve the thorny issue of ties in validating rank-based inference procedures for mixed data. A 2019 Biometrika paper of hers exploits these results to develop powerful tests of independence for sparse contingency tables whose dimension increases with sample size. She has also devised techniques for detecting patterns in large-scale correlation matrices.

Beyond her great productivity in research, which includes applications in environmental and health sciences, Johanna has an outstanding record of graduate training. She is also an exceptionally inspiring lecturer who receives frequent invitations to speak at international meetings. She has served the community in many ways, foremost as an Associate Editor for journals such as *JMVA* and *The Canadian Journal of Statistics*, but also on committees for the SSC and Bernoulli Society, and as an organizer for two thematic semesters at the CRM. She was elected a member of the International Statistical Institute in 2011 and held a John von Neumann Guest Professorship at Technische Universität München in 2016. Outside work, she has a keen interest in art and history; she also enjoys skiing and family activities with her husband Christian and their son Richard.

Johanna will present an overview of her work in a Special Session at the 47 th Annual Meeting of the Statistical Society of Canada to be held in Calgary, Alberta, May 26 to 29, 2019.

Thanks to Bruno N. Rémillard and David A. Stephens, who were primarily responsible for producing this material.

The Canadian Journal of Statistics Award 2019



The Canadian Journal of Statistics Award is presented each year by the Statistical Society of Canada to the author(s) of an article published in the journal, in recognition of the outstanding quality of the methodological innovation and presentation. This year's winner is the article entitled "Likelihood inflating sampling algorithm." (Volume 46, no. 1, pp. 147-175) by R. Entezari, R.V. Craiu, and J. Rosenthal.

The paper investigates Markov Chain Monte Carlo (MCMC) sampling from a posterior distribution corresponding to a massive data set. This can be computationally prohibitive as producing a single sample requires a number of operation that is linear in the data size. A new parallel method, the likelihood inflating sample size algorithm (LISA), is proposed for carrying out the inference. It splits the data into smaller parts and runs the MCMC independently on each one, thereby creating several

sub-posterior distributions. A strategy to combine the sub-posteriors from each part into a single posterior is proposed and studied in the context of a Bayesian Additive Regression Tree (BART) model. The committee was very impressed by the real data example that used data from the American Community Survey; its shows that the proposed LISA can provide inference that is as precise as a standard analysis with a substantial reduction in computational costs.

Reihaneh Entezari is a Data Scientist at Bosch Center for Artificial Intelligence. She received her PhD in Statistics from University of Toronto in 2018. Her research interests include Machine Learning, Bayesian Inference, Scalable Methods, Markov Chain Monte Carlo, Deep Learning, and Probability.

Radu V. Craiu is Professor and Chair of Statistical Sciences at the University of Toronto. He studied Mathematics at the University of Bucharest (BS 1995, MS 1996) and received a PhD from the Department of Statistics at The University of Chicago in 2001. He was trained to improve the efficiency of sampling algorithms, prove their theoretical validity and build new ones when needed. His main research interests are in computational methods in statistics, especially, Markov chain Monte Carlo algorithms, Bayesian inference, copula models, model selection procedures and statistical genetics. He is currently Associate Editor for the Journal of Computational and Graphical Statistics, The Canadian Journal of Statistics and STAT - The ISI's Journal for the Rapid Dissemination of Statistics Research. He received the 2016 CRM-SSC prize and is an Elected Member of the International Statistical Institute.

Jeffrey S. Rosenthal is a professor of Statistics at the University of Toronto. He received his BSc from the University of Toronto at the age of 20, his PhD in Mathematics from Harvard University at the age of 24, and tenure at the University of Toronto at the age of 29. He received the 2006 CRM-SSC Prize, the 2007 COPSS Presidents'; Award, the 2013 SSC Gold Medal, and teaching awards at both Harvard and Toronto. He is a fellow of the Institute of Mathematical Statistics and of the Royal Society of Canada. Rosenthal's book for the general public, Struck by Lightning: The Curious World of Probabilities, was published in 16 editions and 10 languages, and was a bestseller in Canada, leading to numerous media and public appearances, and to his work exposing the Ontario lottery retailer scandal. It was followed by a second book for the general public, Knock On Wood: Luck, Chance, and the Meaning of Everything. He has also dabbled as a computer game programmer, musical performer, and improvisational comedy performer, and is fluent in French. His web site is www.probability.ca, and on Twitter he is @ProbabilityProf. Despite being born on Friday the 13th, Rosenthal has been a very fortunate person.

The citation for the award reads:

The article entitled "Likelihood inflating sampling algorithm" by Reihaneh Entezari, Radu V. Craiu and Jeffrey S. Rosenthal is recognized for creativity and computational excellence.

Thanks to Louis-Paul Rivest, who was primarily responsible for producing this material.

SSC 2019: Join Us at the University of Calgary for An Exciting Line-Up of Committeeand Section-Sponsored Invited Sessions



The 2019 meeting is a little more than two months away. Thanks to the many SSC members and colleagues who have contributed to the invited program. Here is a listing of committee-sponsored and section-sponsored sessions. Start planning the ones that you will attend!

Lisa Lix, University of Manitoba

Program Chair, SSC 2019, on behalf of the Program Committee



Committee-Sponsored Invited Sessions

Committee	Title	Organizer	Affiliation
The International Chinese Statistical Association - Canada Chapter	Recent Advances in Statistical Inference for Complex Data Structures	Liqun Wang	The University of Manitoba
CANSSI	CANSSI Postdoctoral Showcase	John Braun	The University of British Columbia, Okanagan Campus
CANSSI	Collaborations Across CANSSI Health Science Collaborating Centres	John Braun	The University of British Columbia, Okanagan Campus
New Investigators	Recent Statistics Research of New Investigators Across Canada	Reza Ramezan	The University of Waterloo
New Investigators	Tenure and Promotion: Insightful Tips From the Applicants and Reviewers	Hua Shen	The University of Calgary
Women in Statistics	Novel Statistical Methods and Applications in Genomics	Mireille Schnitzer	The University of Montreal

Section-Sponsored Invited Sessions

Section	Title	Organizer	Affiliation
Actuarial Science	Capital Allocation	Hélène Cossette	Laval University
	Recent Advances in Risk Theory	Bin Li	The University of Waterloo
	Recent Advances in Actuarial and Quantitative Finance	Jean- François Bégin	Simon Fraser University
	Graduate Students in Actuarial Science	Anne MacKay	The University of Quebec in Montreal
	Advanced Statistical Methods for the Integration of Omic Data	Thierry Chekouo	The University of Calgary
	Recent Developments in Survival Analysis with Complex Data	Xuewen Lu	The University of Calgary
Biostatistics	Measurement Error Models and	Mahmoud Torabi	The University of Manitoba

3/2019			Liaiso
	Its Impacts in Health Sciences		
	Making Sense of Complex Featured Data with Statistical Methods	Grace Y. Yi	The University of Waterloo
	Biostatistics Section Presidential Invited Address	Patrick Brown	The University of Toronto
	Analytics in Sports	Shirley Mills	Carleton University
	Designed Experiments for Complex Engineered Systems	Ryan Lekivetz	JMP
Business and Industrial Statistics	Implementation, Advances, and Precision in Mixture Model- Based Classification	Brian C. Franczak	MacEwan University
	Isobel Loutit Invited Address: Max Morris, Iowa State University	Devon Lin	Queen's University
	Applications of Nonstandard Analysis to Probability Theory and Statistics	Daniel Roy	The University of Toronto
	Stochastic Processes and Applications	Mary Thompson	The University of Waterloo
Dood of His	Extreme Values	Gail Ivanoff	The University of Ottawa
Probability	New Directions in Mathematical Finance	Alexandru Badescu	The University of Calgary
	Innovations in Data Science for Undergraduates in Canada	Bruce Dunham	The University of British Columbia
	Effective Implementation of Statistics Capstone Courses	Asokan Mulayath Variyath	Memorial University of Newfoundland
	Best Practices in Experiential Learning	Sohee Kang	The University of Toronto
Statistical Education	Building the Pipeline: The International Data Science in Schools Project	Alison L. Gibbs	The University of Toronto
Survey Methods	Integration of Probability and Non-Probability Samples	Jean- François Beaumont	Statistics Canada
	Modeling, Imputation, and Non-Response	Susie Fortier	Statistics Canada
	Measuring the Quality of Multisource Statistics	Wesley Yung	Statistics Canada

Survey Methods Section Presidential Invited Address: Jack Gambino, Statistics Canada	Susie Fortier	Statistics Canada		
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SSC 2019 CAREER CONNECTIONS & NETWORKING SESSIONS



Job seekers and employers are invited to participate in the "Career Connections & Networking Sessions" that will be held in conjunction with the 2019 SSC Annual Meeting in Calgary.

Job seekers will have free participation in the networking sessions with the SSC Annual Meeting registration.

Employers will be charged \$200 to participate in the networking sessions; this amount will be reduced to \$150 for SSC institutional members or employers with at least one SSC accredited statistician (P. Stat. or A. Stat.). Employers shall submit the application form for the networking sessions to both the event coordinator, **Dr. Bingrui** (Cindy) Sun (cindy_bsun@ucalgary.ca), and the SSC office (info@ssc.ca). The application form can be found here. Employers can either send a cheque to the SSC office or call in to the office and pay via credit card. The SSC office can issue receipts. More details about the application are provided on the application form.

Format: Each career connections and networking session consists of a 30-minute panel discussion followed by a roundtable networking event. At the beginning of the panel discussion, the student moderator will introduce the panelists and give them the opportunity to briefly introduce themselves and their company (5–10 minutes). Each panel will consist of five to six industry professionals. During the roundtable networking event, each organization can host a table to connect in small group conversations. Each table has a capacity of eight. There are three rounds of roundtable networking sessions, each lasting 30 minutes.

Time: May 28, 3:00–5:00 p.m., 2019. Location: The University of Calgary.

Job Posting and Interview Scheduling Services

Career Services at the University of Calgary, local partner of the 2019 SSC Career Connections & Networking Sessions, is happy to offer employers job posting and interview scheduling services.

- In order to use such services, employers must have an active **CareerLink** account.
- Employers that do not have accounts can fill out this form, and Career Services will review and approve the accounts.
- Once the account is approved, employers can post their jobs for free. Here is the information with regards to <u>Posting a Job</u>.
- In order to facilitate interview scheduling, the job must be posted in CareerLink, and applications must be set to "accumulate online."
- Once the job posting has reached the deadline, the employer needs to request an interview room and scheduling in their CareerLink account. The fee to book an interview room and scheduling is \$240 + GST. For more information regarding Career Services' fees, please click here.
- For other questions, please email recruit@ucalgary.ca.

Employers: please note that the fees for the career networking sessions and interview scheduling are separate.



Bingrui (Cindy) Sun (2019 SSC Career Connections & Networking Sessions Coordinator, SSC Committee on Membership, cindy.bsun@ucalgary.ca)
Cynthia Chan (Career Services, University of Calgary)
Kifah Alramahi (Career Services, University of Calgary)
Nora Molina (Career Services, University of Calgary)

CANSSI News



Canadian Statistical Sciences Institute Institut canadien des sciences statistiques

> Data • Discoveries • Decisions Données • Découvertes • Décisions

New Collaborative Research Teams for 2019

CANSSI is pleased to announce two new collaborative research teams that will start in 2019.

Statistical Methods for the Analysis of Genetic Data with Survival Outcomes will be led by Lajmi Lakhal-Chaieb, Université Laval; Richard Cook, University of Waterloo; and Laurent Briollais, Lunenfeld Tanenbaum Research Institute of Mount Sinai Hospital, Toronto.

Contingent Capital and Calibration of Capital Structure Models will be led by Mark Reesor, Wilfrid Laurier University; Hatem Ben-Ameur, HEC Montreal; and Adam Metzler, Wilfrid Laurier University.

Both teams will collaborate for three years. The aim of CANSSI's Collaborative Research Team Program is to enable cross-disciplinary collaborations and training opportunities for postdoctoral fellows and graduate students.

CANSSI National Headquarters Grand Opening

<u>CANSSI's headquarters</u> at Simon Fraser University was opened in December 2018. We kicked off with a public lecture by **Jeffrey Rosenthal**: "The Puzzle of Luck." The next day, we celebrated the official launch. A series of Lightning Talks showcased CANSSI projects. The speakers and audiences at Dalhousie University, McGill University, Western University of Manitoba and Simon Fraser University took part via webcast. You can see a <u>video of the event here</u>.

CANSSI's Evolution

There's a lot happening behind the scenes at CANSSI. In May we incorporated as a federal not-for-profit corporation. We've opened our national headquarters at Simon Fraser University. To maintain our national character, we're in the process of creating regional nodes. A collaboration agreement (CANSSI-Quebec) with Concordia University was signed in December 2018 and a collaboration agreement (CANSSI-Ontario) with the University of Toronto is almost completed. We're starting to work with Dalhousie University and the University of Manitoba to create CANSSI-Atlantic and CANSSI-Central Canada. The development of regional centres contributes to our vision and mission by strengthening the national reach of CANSSI and its community of statistical scientists, and by serving as focal points for activity in their regions. A more detailed version of this story is available on our website.

Upcoming Deadlines

- Call for Collaborative Research Team Project LOIs—due April 30, 2019
- Call for Workshop and Conference Proposals—due June 15, 2019
- Call for Proposals for the Distinguished Visitor Program—due July 31, 2019
- Call for Proposals for the Kick Start Research Program—applications accepted at any time
- Support for Undergraduate Datathons—applications accepted at any time

Save the Date

The CANSSI Annual General Meeting will take place Saturday, May 25, 2019, 3:00 p.m. at the University of Calgary.

Results of 2018 Best Student Paper Award of the Survey Methods Section



The Survey Methods Section is pleased to announce that **Kanika Grover** from the University of Manitoba has won the 2018 best student paper award of \$300 for her paper co-authored with **Elif Acar** and **Mahmoud Torabi** from the University of Manitoba. The winning paper is entitled "Using Copulas in Small Area Estimation." This award was open to all students who presented at the 2018 annual meeting of the Society in the area of survey methods.

Here is the abstract of the winning paper:

Small area estimation has received considerable attention in recent years due to a growing interest in analyzing domains/areas with very small sample sizes. In order to achieve reliable predictions for such areas, improvised small area techniques need to be adopted. One such technique has been recently proposed using multivariate exchangeable copulas to characterize the error distribution under the linear regression model. While this model offers a highly flexible framework for small area predictions, obtaining reliable estimators of the mean squared prediction error (MSPE) under this model is not straightforward. In addition, the MSPE estimators may perform poorly when such a complex model is misspecified. This paper introduces a likelihood framework to estimate the intra-class dependence of the multivariate exchangeable copula for empirical best unbiased prediction (EBUP) of small area means. We consider both parametric and semi-parametric approaches, and outline a bootstrap method under each approach to obtain a nearly unbiased estimate of the MSPE of the EBUP of small area means. A Monte Carlo simulation study is conducted to evaluate performance of the proposed methods under potential model misspecifications.

The First Waterloo Conference in Statistics, Actuarial Science, and Finance



The First Waterloo Conference in Statistics, Actuarial Science, and Finance

Waterloo, Ontario

April 25 & 26, 2019

The Waterloo Conference in Statistics, Actuarial Science, and Finance (WatSAF) is a series of annual conferences hosted by the Department of Statistics and Actuarial Science at the University of Waterloo, Canada. The aim of these conference series is to bring in top Canadian and international scholars, as well as relevant industry leaders, in the broad fields of statistical, actuarial, and financial studies to present and discuss the most cutting-edge advances in the respective fields. The specific theme of the WatSAF series varies annually, reflecting the strength and interests of the different research groups within the department.

The first WatSAF features the theme "Quantitative Risk Management and Financial Technology (FinTech)." Risk management and FinTech have been rapidly developing over the past few years. New challenges and practical issues arise on a daily basis, and they become increasingly important for scholars, investors, entrepreneurs, policy makers, and society at large. The conference serves as an academic platform that provides experts from both academia and industry an opportunity to present their research advances on these two active research fields and their interplay. Topics include mathematical, computational, and learning methods as well as conceptual and technological innovations developed for finance, insurance, risk management, or policy making.

The first WatSAF will be jointly hosted with the David A. Sprott Distinguished Lecture to be delivered by Damir Filipovic (EPFL Lausanne and Swiss Finance Institute).

Confirmed invited speakers:

Jose Blanchet (Stanford University)

Agostino Capponi (Columbia University)

Michel Dacorogna (Prime Re Solutions)

Chris Frei (The University of Alberta)

Steven Kou (Boston University)

Christiane Lemieux (The University of Waterloo)

Andreea Minca (Cornel University)

Jan Obloj (The University of Oxford)

Dan Rosen (dlglt Inc)

Steven Vanduffel (Vrije Universiteit Brussel)

Mario Wuthrich (ETH Zurich)

Ricardas Zitikis (Western University)

Registration for the conference is now open.

Visit the conference website at:

uwaterloo.ca/sas/watsaf-conference

Questions regarding the scientific program can be sent through email to the Chair of the Organizing Committee, **Ruodu Wang** (wang@uwaterloo.ca). For any other information, contact **Greg Preston** (gpreston@uwaterloo.ca).

Master of Quantitative Finance ranks #1 in Canada



The Master of Quantitative Finance program has been recognized as the top quantitative finance master's program in Canada.

Risk.net's Quant Finance Master Guide 2019 has updated its world ranking of the top 15 leading quantitative finance master's programs. University of Waterloo's Master of Quantitative Finance (MQF) secured the top spot within Canada and 12th globally.

Risk.net lists that they have determined their ranking by considering "metrics including graduate salaries, programme selectivity, student-lecturer contact hours and faculty research scores to run the rule over more than 40 leading quantitative finance-focussed master's programmes worldwide. Particular weight was given to average graduate salaries and a strong employment rate."

RISK.NET, Quant Finance Master's Guide 2019

Master of Actuarial Science (MACTSC) 10th Anniversary



In 2019, the Master of Actuarial Science (MActSc) professional degree program will be celebrating 10 wonderful years at the University of Waterloo.

MActSc is an internationally renowned program in actuarial science and risk management, and is located within the Department of Statistics and Actuarial Science. This fast track professional program is only offered to the best and brightest students from around the world. Once accepted, these students receive one-on-one interpersonal training from prominent faculty in the field of actuarial science. After 10 rigorous and demanding years, staying on the cutting edge of the industry and training the most elite in this field, the MActSc program will be celebrating by hosting a banquet dinner on May 31, 2019.

This event will be a great opportunity for past and current students, faculty, and industry supporters to celebrate their hard work over the past decade.

News from McGill Biostat



Faculty News

Recent McGill Biostatistics graduate Sahir Bhatnagar has joined our faculty in a joint position with Radiology. Welcome Sahir!

Student News

We are happy to say that PhD student **Kevin McGregor** has been awarded a Queen Elizabeth II Diamond Jubilee Scholarship to spend several months at the University of Warwick in Coventry, UK.

We extend strong congratulations to PhD student **Maxime Turgeon**, who has accepted a position at the University of Manitoba as Assistant Professor in the Departments of Statistics and Computer Science, starting this fall.

McGill Summer School in Health Data Analytics

Following last year's success, we are happy to invite you for the Summer School in Health Data Analytics, which will be held at McGill University in Montreal, May 6-9, 2019. This is part of the McGill Health Statistics Training Network (CANSSI).

The school will consist of four days of courses aimed primarily at upper undergraduate and MSc students who are interested in pursuing further university education, and curious about modern topics in statistics that they are unlikely to have encountered in their training. Topics that will be covered include: Bayesian inference and Markov chain Monte Carlo methods, Bayesian disease mapping, statistical approaches to adaptive treatment strategies, propensity score as a tool for causal inference, penalized regression methods, individual patient data meta analysis, misclassification in health care data, and survival analysis.

For further information contact Alexandra M. Schmidt at alexandra.schmidt@mcgill.ca.

2022 ISBA World Meeting in Montreal

We are delighted to announce that Montreal was chosen (among three candidates) to host the 2022 ISBA World Meeting to be held in late June 2022. The local organizing committee is formed by

- Rob Deardon (University of Calgary)
- Aurelie Labbe (HEC, Université de Montréal)
- Geneviève Lefebvre (Université du Québec à Montréal)
- Nancy Reid (University of Toronto)
- David A. Stephens (McGill University)
- Alexandra M. Schmidt (McGill University), chair
- James V. Zidek (University of British Columbia)

We have no doubt that every effort will be made to ensure that attendees will have an enriching and enjoyable meeting in one of the world's most cosmopolitan cities. We hope to see you there!

University of Waterloo Team Wins Munich Re Cup!



The Department of Statistics and Actuarial Science congratulates the University of Waterloo Team, consisting of **Ryan Goldford**, **Jasmine Sirohi**, **Adaijah Wilson**, and **Jillian Zhu Ge**, for winning the 2019 <u>Munich Re Cup</u>. The Munich Re Cup is the premier actuarial case competition open to students in Canada and the United States. Competing teams present their work on a real-world business problem requiring significant technical analysis and high-level business decision making to a panel of Munich Re executives. The 2019 competition examined the very timely problem of IFRS 17 implementation. We are very proud of the Waterloo team for placing first and winning the \$20,000 grand prize!