



Société Statistique  
statistique Society  
du Canada of Canada

# LIAISON

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# Assistant Professor, teaching stream—contractually limited term appointment— statistical sciences

The Department of Statistical Sciences in the Faculty of Arts and Science at the University of Toronto invites applications for up to three (3) contractually-limited term appointments (CLTA) in the field of statistical sciences. Each appointment will be at the rank of Assistant Professor, teaching stream for a one-year term with an anticipated start date of July 1, 2024.

This search aligns with the university's commitment to strategically and proactively promote diversity among our community members ([Statement on Equity, Diversity & Excellence](#)). Recognizing that Black, Indigenous, and other racialized communities have experienced inequities that have developed historically and are ongoing, we strongly welcome and encourage applicants from those communities to apply.

Applicants are required to have earned a PhD in statistics, biostatistics, data science or a related field by the time of appointment or short-applicants are required to have (i) a master's degree in statistics, biostatistics, data science or related field with (ii) at least 18 months of excellent teaching experience in postsecondary institutions or a degree-granting program/ and (iii) demonstrated excellent scholarly or creative professional activity in areas such as, but not limited to, exemplary teaching practices, development of pedagogical software tools, course or curriculum development, or engagement with statistics, biostatistics and/or data science education research.



Applicants must have a minimum of one-year experience teaching a variety of university-level, degree-granting courses in statistics, biostatistics or data science that include computation using R, Python, or another programming language, including lecture preparation and delivery, curriculum development, and development of online material/lectures. The successful applicant should be prepared to teach advanced and introductory undergraduate statistics and data science courses to students with a range of mathematical and computational backgrounds. A full list of courses can be found at <https://artsci.calendar.utoronto.ca/section/Statistical-Sciences>.

Applicants must have a demonstrated record of excellence in teaching statistics, biostatistics or data science teaching, including lecture preparation and delivery of innovative course materials, activities and assessments with a demonstrated commitment to pedagogical growth. Experience teaching large classes is considered an asset. Additionally, applicants must possess a demonstrated commitment to excellent pedagogical inquiry and a demonstrated interest in teaching-related scholarly activities. We seek applicants whose teaching interests complement and strengthen our existing departmental strengths in [statistical sciences](#).

Evidence of excellence in teaching and a commitment to pedagogical inquiry can be demonstrated through teaching accomplishments, awards and accolades, presentations at significant conferences, the teaching dossier submitted as part of the application including a strong teaching statement, sample syllabi and course materials, and teaching evaluations, as well as strong letters of reference from referees of high standing.

Applicants are also expected to show evidence of a commitment to equity, diversity, inclusion, and the promotion of a respectful and collegial learning and working environment demonstrated through the application materials.

Salary will be commensurate with qualifications and experience.

All qualified applicants are invited to apply online at Academic Jobs Online, <https://academicjobsonline.org/ajo/jobs/27350> and must submit a cover letter; a current curriculum vitae; and a complete teaching dossier to include a teaching statement, sample syllabi and course materials, and teaching evaluations. Equity and diversity are essential to academic excellence. We seek applicants who value diversity and whose teaching and service bear out our commitment to equity. Applicants therefore must submit a 1–2 page statement of contributions to equity and diversity, which

# Assistant Professor, teaching stream—contractually limited term appointment— statistical sciences

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Applicants must also arrange to have three recent letters of reference (on letterhead, dated and signed) uploaded through Academic Jobs Online directly by the writers by the closing date. At least one reference letter must primarily address the candidate's teaching.

All application materials, including signed recent reference letters, must be received by **April 25, 2024**.

For more information about the Department of Statistical Sciences, please visit our website at <https://www.statistics.utoronto.ca> or contact Katrina Mintis at [katrina.mintis@utoronto.ca](mailto:katrina.mintis@utoronto.ca).

All qualified applicants are encouraged to apply; however, Canadians and permanent residents will be given priority.

## **Diversity Statement**

The University of Toronto is strongly committed to diversity within its community and especially welcomes applications from racialized persons/persons of colour, women, Indigenous/Aboriginal People of North America, persons with disabilities, LGBTQ2S+ persons, and others who may contribute to the further diversification of ideas.

## **Accessibility Statement**

The university strives to be an equitable and inclusive community, and proactively seeks to increase diversity among its community members. Our values regarding equity and diversity are linked with our unwavering commitment to excellence in the pursuit of our academic mission.

The university is committed to the principles of the Accessibility for Ontarians with Disabilities Act (AODA). As such, we strive to make our recruitment, assessment and selection processes as accessible as possible and provide accommodations as required for applicants with disabilities.



# Assistant Professor, teaching stream—statistical sciences

The Department of Statistical Sciences in the Faculty of Arts and Science at the University of Toronto invites applications for a full-time, teaching stream position in the area of statistical sciences. The appointment will be at the rank of Assistant Professor, teaching stream with an anticipated start date of August 1, 2024.

Applicants must have earned a PhD in statistics, computer science, data science or a related area by the time of appointment, or shortly thereafter. Candidates must have a demonstrated record of excellence in teaching. We seek candidates whose teaching interests complement and strengthen our existing [departmental strengths](#).

Candidates must have teaching expertise in a degree-granting program at the undergraduate-program level for statistics majors and those with a significant computational component, including lecture preparation and delivery, curriculum development, and development of online materials/lectures. Candidates must also have experience in collaborating on data analysis with non-statisticians. Additionally, candidates must possess a demonstrated commitment to excellent pedagogical practices and a demonstrated interest in teaching-related scholarly activities.

Candidates must have teaching expertise in a degree-granting program at the undergraduate-program level for statistics majors and those with a significant computational component, including lecture preparation and delivery, curriculum development, and development of online materials/lectures. Candidates must also have experience in collaborating on data analysis with non-statisticians. Additionally, candidates must possess a demonstrated commitment to excellent pedagogical practices and a demonstrated interest in teaching-related scholarly activities.



Statistical Sciences  
UNIVERSITY OF TORONTO

This search aligns with the university's commitment to strategically and proactively promote diversity among our community members ([Statement on Equity, Diversity & Excellence](#)). Recognizing that Black, Indigenous, and other racialized communities have experienced inequities that have developed historically and are ongoing, we strongly welcome and encourage candidates from those communities to apply.

Evidence of excellence in teaching and a commitment to pedagogical inquiry can be demonstrated through teaching accomplishments, awards and accolades, presentations at significant conferences, the teaching dossier submitted as part of the application including a strong teaching statement, sample syllabi and course materials, and teaching evaluations, as well as strong letters of reference from referees of high standing.

Candidates are also expected to show evidence of a commitment to equity, diversity, inclusion, and the promotion of a respectful and collegial learning and working environment demonstrated through the application materials.

Salary will be commensurate with qualifications and experience.

All qualified candidates are invited to apply online at Academic Jobs Online, <https://academicjobsonline.org/ajo/jobs/27278> and must submit a cover letter; a current curriculum vitae; and a complete teaching dossier to include a teaching statement, sample syllabi and course materials, and teaching evaluations. Equity and diversity are essential to academic excellence. We seek candidates who value diversity and whose teaching and service bear out our commitment to equity. Candidates are therefore also asked to submit a 1–2 page statement of contributions to equity and diversity, which might cover topics such as (but not limited to): teaching that incorporates a focus on underrepresented communities, the development of inclusive pedagogies, or the mentoring of students from underrepresented groups.

Applicants must also arrange to have three letters of reference (dated, on letterhead and signed) uploaded through Academic Jobs Online directly by the writers by the closing date.

All applicant materials, including recent signed reference letters, must be received by **April 16, 2024**.

# Assistant Professor, teaching stream—statistical sciences

For more information about the Department of Statistical Sciences, please visit our website at <https://www.statistics.utoronto.ca> or contact Katrina Mintis at [katrina.mintis@utoronto.ca](mailto:katrina.mintis@utoronto.ca).

All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority.

## **Diversity Statement**

The University of Toronto embraces diversity and is building a culture of belonging that increases our capacity to effectively address and serve the interests of our global community. We strongly encourage applications from Indigenous Peoples, Black, and racialized persons, women, persons with disabilities, and people of diverse sexual and gender identities. We value applicants who have demonstrated a commitment to equity, diversity, and inclusion and recognize that diverse perspectives, experiences, and expertise are essential to strengthening our academic mission.

## **Accessibility Statement**

The university strives to be an equitable and inclusive community, and proactively seeks to increase diversity among its community members. Our values regarding equity and diversity are linked with our unwavering commitment to excellence in the pursuit of our academic mission.

The university is committed to the principles of the Accessibility for Ontarians with Disabilities Act (AODA). As such, we strive to make our recruitment, assessment and selection processes as accessible as possible and provide accommodations as required for applicants with disabilities.

If you require any accommodations at any point during the application and hiring process, please contact [uoft.ca-reers@utoronto.ca](mailto:uoft.ca-reers@utoronto.ca).



# SARGC Comic Strip Competition results

## Résultats du concours de bande dessinée du CÉDIR

The SSC's student and recent graduate committee (SARGC) recently hosted its inaugural Comic Strip Competition. The purpose of the competition was to provide students and recent graduates with a fun outlet to engage with the Canadian statistics community. The SARGC would like to thank all students and recent graduates who participated in the competition; your comic strips were fantastic! Prizes were awarded for first (\$100), second (\$75), and third (\$50) place.

Le comité des étudiants et diplômés récents (CÉDIR) de la SSC a récemment organisé son premier concours de bandes dessinées. L'objectif de ce concours était de fournir aux étudiants et diplômés récents un moyen amusant de s'engager dans la communauté de la statistique canadienne. Le CÉDIR tient à remercier tous les étudiants et diplômés récents qui ont participé au concours; vos bandes dessinées étaient fantastiques! Des prix ont été décernés pour la première place (100 \$), la deuxième place (75 \$) et la troisième place (50 \$).



The third prize was awarded to **Md. Ashiqul Haque**, a PhD student from the University of Manitoba, for the following comic strip:

Le troisième prix a été décerné à **Md. Ashiqul Haque**, docteurant à l'Université du Manitoba, pour la bande dessinée suivante :

*ADVENTURES IN BIOSTATISTICS: THE STATISTICAL SUPERHEROES*

<p>In the world of biological science, where uncertainty looms, one hero stands tall – Statsman!</p> <p>Meet Statsman, the Biostatistical Superhero!</p>	<p>Fear not, fellow scientists! I'm here to bring clarity to the chaos with the power of biostatistics!</p> <p>STATSMAN</p> <p>My data are a mess! I don't understand these data! What do I do? Hey, Statsman! My distribution looks weird. What's going on? Is my experiment a success or a failure?</p> <p>Statsman faces a perplexed scientist.</p> <p>BIOLOGIST</p>
<p>Let me introduce you to my allies, the mighty Outlier Detector, Mr Transformer, and P-value Girl to help you get out of this mess!</p> <p>STATSMAN</p> <p>Zap! Beep! Boop!</p> <p>Data disasters don't stand a chance with the statistical superheroes!</p>	<p>Statman, you've saved the day! my results are now statistically significant and biologically plausible!</p> <p>BIOLOGIST</p> <p>I'll confuse these variables and throw off their analysis- Hah Hahh Hahhh!</p> <p>CONFOUNDER</p> <p>Not so fast, Confounder! We'll control for your tricks in model-based analysis and reveal the real associations!</p> <p>STATSMAN</p> <p>Meanwhile, in the world of questionable research... A villain, trying to distort data</p>

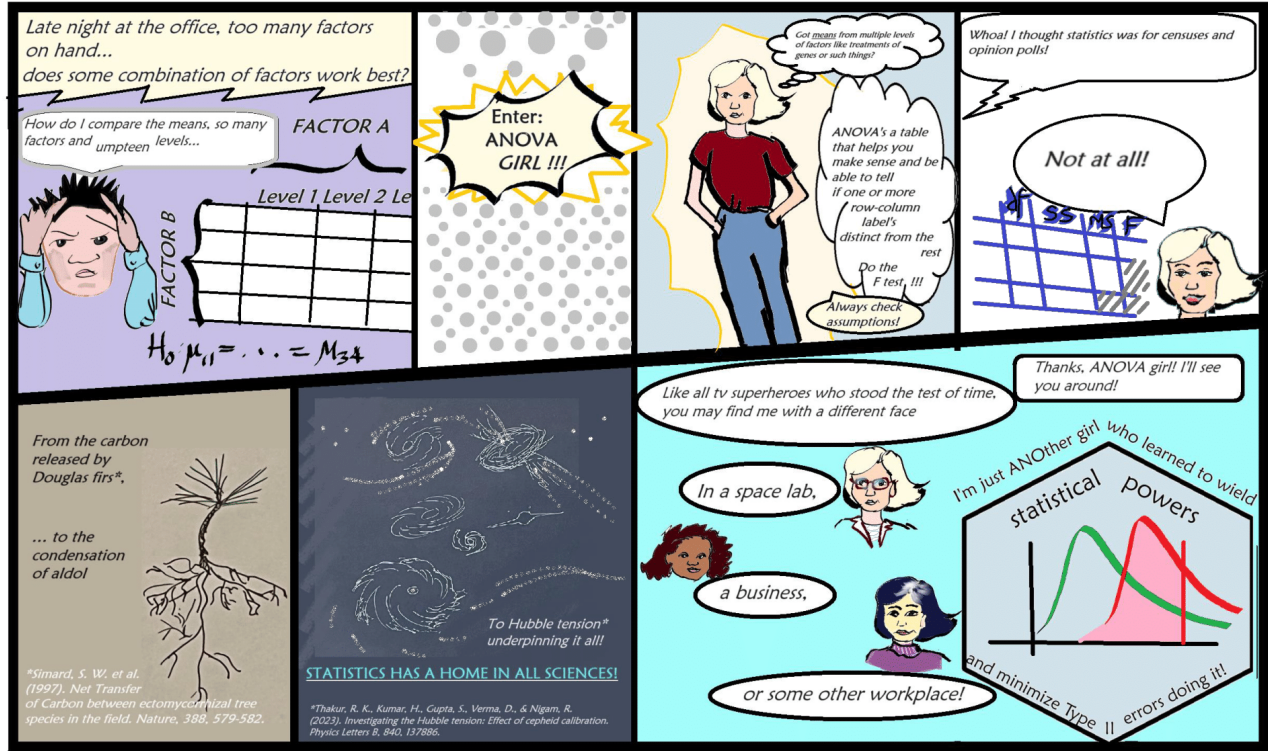
# SARGC Comic Strip Competition results

## Résultats du concours de bande dessinée du CÉDIR

The second prize was awarded to **Yuliya Nesterova**, a master's student from Carleton University, for the following comic strip:

Le deuxième prix a été décerné à **Yuliya Nesterova**, étudiante en maîtrise à l'Université Carleton, pour la bande dessinée suivante :

### ANOVA Girl



# SARGC Comic Strip Competition results

## Résultats du concours de bande dessinée du CÉDIR

The first prize was awarded to **Umar Khan**, an undergraduate student from Queen's University, for the following comic strip:

Le premier prix a été décerné à **Umar Khan**, étudiant de premier cycle de l'Université Queens, pour la bande dessinée suivante :





# Life history analysis and survey sampling methodology— Celebrating the 80th birthdays of Jerry Lawless and Mary Thompson

## Analyse du cycle de vie et méthodologie d'échantillonnage des enquêtes— célébration des 80 ans de Jerry Lawless et Mary Thompson

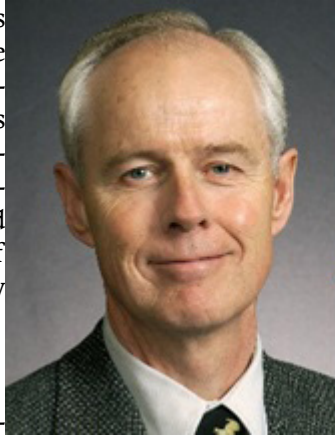
Conference dates: May 28–29, 2024

Dates de la conférence : 28–29 mai 2024

Location: University of Waterloo

Lieu : Université de Waterloo

The Department of Statistics and Actuarial Science at the University of Waterloo is delighted to announce that it is hosting a conference to celebrate the remarkable contributions of **Jerry Lawless** and **Mary Thompson** to the fields of life history analysis and survey sampling methodology.



Le Département de statistique et science actuarielle de l'Université de Waterloo a le plaisir d'annoncer la tenue d'une conférence pour célébrer les contributions remarquables de **Jerry Lawless** et de **Mary Thompson** aux domaines de l'analyse du cycle de vie et de la méthodologie d'échantillonnage des enquêtes.

An exciting program of speakers has been lined up for what promising to be a stimulating and enjoyable 2 days of talks by leading researchers including collaborators, friends, and former students of Mary Thompson and Jerry Lawless. A banquet will be held on the evening of May 28.

Un programme passionnant d'orateurs a été mis en place pour ces deux jours qui promettent d'être à la fois stimulants et agréables. Des chercheurs de premier plan, y compris des collaborateurs, des amis et d'anciens étudiants de Mary Thompson et de Jerry Lawless, y prendront la parole. Un banquet sera organisé dans la soirée du 28 mai.

[Registration details](#) are now available online. For more information, please visit our [conference website](#).

[Les modalités d'inscription](#) sont désormais disponibles en ligne. Pour plus d'informations, veuillez consulter le [site Web de la conférence](#).

### Confirmed speakers:

**Per Kragh Andersen**, University of Copenhagen  
**Jiahua Chen**, University of British Columbia  
**Charmaine Dean**, University of Waterloo  
**Vern Farewell**, University of Cambridge  
**Geoffrey Fong**, University of Waterloo  
**David Hammond**, University of Waterloo  
**Peisong Han**, Gilead Sciences  
**Joan Hu**, Simon Fraser University  
**Jack Kalbfleisch**, University of Michigan  
**Vijay Nair**, University of Michigan  
**John Neuhaus**, University of California San Francisco  
**Ross Prentice**, Fred Hutchinson Cancer Center  
**Rhonda Rosychuk**, University of Alberta  
**Jing Qin**, National Institutes of Health (NIH)  
**Jon Rao**, Carleton University  
**Peter Song**, University of Michigan  
**Jianguo Sun**, University of Missouri  
**Lei Sun**, University of Toronto  
**Christina Wolfson**, McGill University  
**Grace Yi**, Western University

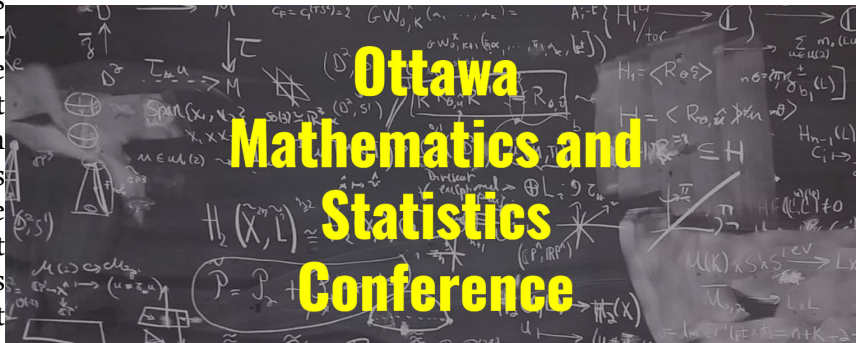
### Intervenants confirmés:

**Per Kragh Andersen**, Université de Copenhague  
**Jiahua Chen**, Université de la Colombie-Britannique  
**Charmaine Dean**, Université de Waterloo  
**Vern Farewell**, Université de Cambridge  
**Geoffrey Fong**, Université de Waterloo  
**David Hammond**, Université de Waterloo  
**Peisong Han**, Gilead Sciences  
**Joan Hu**, Université Simon-Fraser  
**Jack Kalbfleisch**, Université du Michigan  
**Vijay Nair**, Université du Michigan  
**John Neuhaus**, Université de Californie à San Francisco  
**Ross Prentice**, Centre du cancer Fred Hutchinson  
**Rhonda Rosychuk**, Université de l'Alberta  
**Jing Qin**, Instituts nationaux de la santé (NIH)  
**Jon Rao**, Université Carleton  
**Peter Song**, Université du Michigan  
**Jianguo Sun**, Université du Missouri  
**Lei Sun**, Université de Toronto  
**Christina Wolfson**, Université McGill  
**Grace Yi**, Université Western

# The Ottawa Mathematics and Statistics Conference

## La Conférence mathématiques et statistiques d'Ottawa

The Ottawa Mathematics and Statistics Conference (OMSC) provides a venue for graduate students in mathematics and statistics to showcase their original research. Alongside the student talks, expert mathematicians from Canadian universities and industry will give keynote talks and host workshops. Participants are encouraged to submit abstracts to present their



research during seminar sessions. We will also be hosting a Three-Minute Thesis competition; students are welcome to register with a thesis title. Moreover, to facilitate networking, we will be hosting a variety of social events. Although this conference is built for graduate students in mathematics and statistics programs, the conference remains open to all undergraduate students and postdoctoral researchers wishing to participate.

The conference will be hosted in-person at the University of Ottawa from May 22–24, 2024. You must register to attend, contribute a talk, or compete in the 3MT competition. Registration will open in March!

La Conférence mathématiques et statistiques d'Ottawa (CMSO) offre aux étudiant.e.s diplômé.e.s en mathématiques et en statistiques un lieu où ils pourront présenter leurs recherches originales. En plus des exposés des étudiant.e.s, des mathématicien.n.e.s expert.e.s des universités et de l'industrie canadiennes donneront des conférences et animeront des ateliers. Les participant.e.s sont invité.e.s à soumettre des résumés pour les sessions de séminaire, où ils et elles présenteront leurs recherches. Nous organiserons également un concours de thèse de trois minutes; les étudiant.e.s sont invité.e.s à s'inscrire avec un titre de thèse. Pour faciliter le réseautage, nous organiserons une série d'événements sociaux. Bien que cette conférence soit destinée aux étudiant.e.s diplômé.e.s de mathématiques et de statistiques, elle reste ouverte à tou.te.s les étudiant.e.s de premier cycle et aux chercheurs postdoctoraux qui souhaitent y participer.

La conférence se déroulera en personne à l'Université d'Ottawa du 22 au 24 mai 2024. Vous devez vous inscrire pour participer, contribuer à un exposé ou concourir au concours 3MT. L'inscription ouvrira au mois de mars!

# 2024 Joint Research Conference on Statistics in Quality, Industry and Technology

[The 2024 Joint Research Conference \(JRC\) on Statistics in Quality, Industry and Technology](#) will be held in Waterloo, Ontario, Canada from June 17–20, 2024 at the University of Waterloo. This is a joint meeting of the *29th Spring Research Conference on Statistics in Industry and Technology* and the *40th Quality and Productivity Research Conference*. The conference is co-sponsored by the ASA Section on Quality and Productivity and the ASA Section on Physical & Engineering Sciences, and the IMS. Organization of this conference is also in partnership with Virginia Tech.

The theme of this year's conference is *data science and statistics for industrial innovation*, and it will honour **Dr. Stefan Steiner**, professor and past chair of the Department of Statistics and Actuarial Science at the University of Waterloo. The technical program will focus on statistical methodology and creative problem-solving to address scientific, industrial, and business challenges, drawing upon advances from the fields of statistics, machine learning, and data science. For an additional fee, participants may register for a full-day, interactive short course (held on June 17) concerning an [Introduction to Large Language Models](#). This course will be instructed by **Ming Li**, director of Data Science at PetSmart and adjunct instructor at the University of Washington.

[Registration](#) and [abstract submission](#) are now open. And thanks to generous support from the NSF and CANSSI, [financial aid for student participation](#) is available. For more information see the conference website (<https://www.uwaterloo.ca/jrc-2024>) or contact **Nathaniel Stevens** ([nstevens@uwaterloo.ca](mailto:nstevens@uwaterloo.ca)).



[La Joint Research Conference \(JRC\) on Statistics in Quality, Industry and Technology 2024](#) se tiendra à Waterloo, Ontario, Canada du 17 au 20 juin 2024 à l'Université de Waterloo. Il s'agit d'une réunion conjointe de la *29e Spring Research Conference on Statistics in Industry and Technology* et de la *40e Quality and Productivity Research Conference*. La conférence est coparrainée par le Groupe de qualité et productivité de l'ASA, le Groupe de sciences physiques et d'ingénierie de l'ASA et l'IMS. Cette conférence est également organisée en partenariat avec Virginia Tech.

Le thème de la conférence de cette année est *la science des données et la statistique pour l'innovation industrielle*, et elle rendra hommage à **Dr. Stefan Steiner**, professeur et ancien président du Département de statistique et sciences actuarielles de l'Université de Waterloo. Le programme scientifique mettra l'accent sur les méthodes statistiques et la résolution créative de problèmes pour relever les défis scientifiques, industriels et commerciaux, en s'appuyant sur les progrès réalisés dans les domaines de la statistique, de l'apprentissage automatique et de la science des données. Moyennant un supplément, les participants pourront s'inscrire à un cours interactif d'une journée (le 17 juin) d'[introduction aux grands modèles de langage](#). Ce cours sera dispensé par **Ming Li**, directeur de la science des données chez PetSmart et enseignant auxiliaire à l'Université du Washington.

L'[inscription](#) et la [soumission de résumés](#) sont désormais ouvertes. Grâce au soutien généreux de la NSF et de l'INCASS, [les étudiants peuvent bénéficier d'une aide financière pour participer à la conférence](#). Pour plus d'informations, consultez le site Web de la conférence (<https://www.uwaterloo.ca/jrc-2024>) ou contactez **Nathaniel Stevens** ([nstevens@uwaterloo.ca](mailto:nstevens@uwaterloo.ca)).

# CJS Editor's corner // Le coin de la rédactrice en chef de la RCS



The March issue of the CJS comes under the sign of spring renewal. On the one hand, it is the first issue which is merely electronic. On the other, a more stringent data sharing policy has been implemented to ensure better reproducibility of the data analyses. Authors are now expected to share their data unless there are privacy or ethical concerns, and they are also strongly encouraged to share their code. You will see this new editorial policy take effect in papers that will start appearing in early view shortly, once Wiley has ironed out a few remaining wrinkles of their emulation of our new design.

This issue is already available online and consists of 14 research articles. It opens with two contributions to biostatistics. Zhang, Yin, and Rubin [1] propose a novel re-randomization strategy to improve estimation of average treatment effects in high-dimensional settings. Prior to calculating covariate means using the Mahalanobis distance, their idea is to first identify suitable covariate subspaces using principal component analysis, thereby significantly reducing dimensionality and increasing computational simplicity. For their part, Le, Bai, and Qin [2] suggest a simultaneous strategy for subgroup analysis assuming a linear regression model in order to identify different population subgroups in which a given treatment has different effects and to estimate these effects when measurement errors are present.

The next two papers consider testing problems. To detect differences between covariance operators of several populations of functional data, Ramsay and Chenouri [3] propose robust, nonparametric Kruskal-Wallis tests which rely on functional data depth ranks. Zhao and Sun [4] develop tests to identify polygenetic signals in high-dimensional generalized linear models for genetic association studies of complex traits. Their procedure utilizes repeated sample splitting to ensure valid and stable post-variable-selection inference.

Le numéro de mars de la RCS s'inscrit sous le signe du renouveau printanier. D'une part, c'est le premier qui soit purement électronique. D'autre part, une nouvelle politique de partage d'information a été instaurée en vue d'assurer une meilleure répétabilité des analyses de données. Les auteur.e.s ne pourront dorénavant s'y soustraire que pour certains motifs de confidentialité ou d'éthique, en plus d'être vivement encouragés à partager leur code informatique. Les effets de cette nouvelle politique éditoriale seront perceptibles dès que certains écueils techniques liés à l'implantation du nouveau style de la revue auront été aplanis par Wiley.

Ce numéro est déjà disponible en ligne et compte 14 titres. Les deux premiers contribuent à la biostatistique. Dans le premier article, Zhang, Yin et Rubin [1] proposent une nouvelle stratégie de re-randomisation pour améliorer l'estimation des effets de traitement moyens en grande dimension. Avant de calculer les moyennes de covariables par la distance de Mahalanobis, leur idée est de commencer par identifier les sous-espaces de covariables appropriés par le truchement d'une analyse en composantes principales, ce qui a pour effet de réduire considérablement la dimension et de simplifier les calculs. Pour leur part, Le, Bai et Qin [2] décrivent une stratégie d'analyse de sous-groupes simultanée par régression linéaire en vue d'identifier les sous-groupes de population sur lesquels un traitement donné agit différemment et d'en estimer les effets en présence d'erreurs de mesure.

Les deux articles suivants proposent des tests. Pour distinguer entre les opérateurs de covariance de plusieurs populations de données fonctionnelles, Ramsay et Chenouri [3] élaborent des tests de rangs non paramétriques robustes de type Kruskal-Wallis qui reposent sur la profondeur des données fonctionnelles. Quant aux tests de Zhao et Sun [4], ils permettent d'identifier les signaux polygénétiques dans des modèles linéaires généralisés de grande dimension pour les études d'association génétique de traits complexes. Leur procédure fait appel à un partage répété d'échantillons pour garantir la validité et la stabilité de l'inférence post-sélection de variable.



The next five articles contribute to regression modeling. Ordoñez, Prates, Bazán, and Lachos [5] introduce a penalized complexity prior for the skewness parameter of power links in generalized linear models for binary, binomial or bounded data. This skewness parameter provides extra modeling flexibility, e.g., when dealing with imbalanced data. As for Basa, Cook, Forzani, and Marcos [6], they establish the asymptotic properties of the partial least squares estimator in one-component linear regression models when the number of covariates grows with the sample size. To help identify subgroups in complex, heterogeneous populations, Liu and Li [7] propose a model averaging approach for segment regression models with multiple threshold variables and multiple structural breaks. Wen, Chen, Wang, and Pan, for the Alzheimer's Disease Neuroimaging Initiative [8] consider variable selection in generalized additive models. Their novel penalized procedure, which enjoys support recovery consistency, allows them to perform joint selection of variables and basis functions. Tsao [9] contributes a novel method for model selection for general regression models based on likelihood ratio tests.

The paper by Feng, Tang, and Ding [10] advances inference for incomplete data, an omnipresent issue in applications. They develop both graphical model validation techniques and formal goodness-of-fit tests for additive hazards models for case II interval-censored data.

The article by Yuan, Zhou, Zhang, and Cui [11] contributes to financial data modeling. To forecast volatility of financial securities, a GARCH-Itô-type model is used that integrates three major information sources: low and high frequency historical price data and option data. Instead of using option prices directly, however, their procedure rests on option-implied volatility.

Les cinq articles suivants portent sur la modélisation par régression. D'abord, Ordoñez, Prates, Bazán et Lachos [5] mettent de l'avant une loi a priori à complexité pénalisée pour le paramètre d'asymétrie des liens à puissance des modèles linéaires généralisés pour les données binaires, binomiales ou bornées. Ce paramètre d'asymétrie accroît la flexibilité de ces modèles, notamment en présence de données déséquilibrées. Puis, Basa, Cook, Forzani et Marcos [6] s'intéressent au comportement asymptotique de l'estimateur des moindres carrés partiels dans le cadre des modèles de régression linéaire à composante unique dont le nombre de covariables croît avec la taille de l'échantillon. Pour faciliter l'identification de sous-groupes dans des populations complexes et hétérogènes, Liu et Li [7] proposent une approche par combinaison de modèles de régression segmentaires avec plusieurs variables de seuil et ruptures structurelles. Wen, Chen, Wang et Pan [8], porte-parole de l'initiative en neuroimagerie de la maladie d'Alzheimer, étudie la sélection de variables dans des modèles additifs généralisés. Une nouvelle procédure pénalisée, qui jouit d'une cohérence de récupération de support, leur permet de sélectionner simultanément des variables et des fonctions de base. Enfin, Tsao [9] décrit une nouvelle méthode de sélection de modèles de régression généraux fondée sur des tests de rapport de vraisemblance.

L'article de Feng, Tang et Ding [10] concerne les données incomplètes. Les auteurs y développent des techniques graphiques de validation de modèles et des tests formels d'adéquation pour les modèles à risques additifs pour données censurées par intervalle de type II.

L'article de Yuan, Zhou, Zhang et Cui [11] contribue à la modélisation de données financières. Pour prévoir la volatilité des actifs, les auteurs ont recours à un modèle de type GARCH-Itô qui intègre trois sources d'information principales : les données historiques sur les prix à basse et à haute fréquence, ainsi que les données sur les options. Toutefois, la procédure qu'ils élaborent repose sur la volatilité implicite des options plutôt que sur leurs prix.

# CJS Editor's corner // Le coin de la rédactrice en chef de la RCS



The next pair of articles offers solutions for selected issues that arise when handling massive data. On one hand, Chen, Wang, and Chang [12] show how to conduct several adaptive sequential procedures simultaneously in a way that ensures similar statistical properties of the resulting estimates. This facilitates their subsequent integration, as the authors detail on two-sided confidence set estimation in a linear model. On the other hand, Wang, Wang, and Xiong [13] consider optimal subsampling schemes under measurement constraints that are particularly convenient when responses are expensive to measure. They propose an unweighted estimator and show, using martingale methods, that it is more efficient than existing weighted techniques.

The closing article by Li and Sun [14] contributes a novel way of constructing space-filling designs for computer experiments. Their proposal has more economical run sizes, fulfills column-orthogonality, and enjoys many desirable low-dimensional stratification properties, in addition to being able to generate designs with 3-orthogonality.

Wishing you inspirational readings,

Johanna G. Nešlehová  
Editor-in-Chief, The Canadian Journal of Statistics

Les deux articles suivants proposent des solutions à certains problèmes qui surviennent lors du traitement de données massives. D'une part, Chen, Wang et Chang [12] montrent comment effectuer simultanément plusieurs procédures séquentielles adaptatives de sorte que les estimations résultantes aient des propriétés statistiques semblables. Cela facilite leur intégration ultérieure, comme le montrent les auteurs à propos de l'estimation d'un ensemble de confiance bilatéral dans un modèle linéaire. D'autre part, Wang, Wang et Xiong [13] considèrent des schémas de sous-échantillonnage optimaux sous contraintes de mesure qui sont particulièrement commodes lorsque les réponses sont coûteuses à mesurer. Ils proposent un estimateur non pondéré et montrent, à l'aide de martingales, qu'il est plus efficace que les techniques pondérées existantes.

Dans le dernier article, Li et Sun [14] décrivent une nouvelle façon de construire des devis pour expériences informatiques qui meublent tout l'espace. Ceci conduit à des économies de calcul tout en respectant l'orthogonalité des colonnes et en offrant moult propriétés de stratification souhaitables en basse dimension, en plus d'engendrer des devis orthogonaux tripartites.

Je vous souhaite d'inspirantes lectures,

Johanna G. Nešlehová  
Rédactrice en chef, La revue canadienne de statistique



- [1] PCA rerandomization, by/par Hengtao Zhang, Guosheng Yin & Donald B. Rubin
- [2] Subgroup analysis of linear models with measurement error, by/par Yuan Le, Yang Bai & Guoyou Qin
- [3] Robust nonparametric hypothesis tests for differences in the covariance structure of functional data, by/par Kelly Ramsay & Shoja'eddin Chenouri
- [4] A stable and adaptive polygenic signal detection method based on repeated sample splitting, by/par Yanyan Zhao & Lei Sun
- [5] Penalized complexity priors for the skewness parameter of power links, by/par José A. Ordoñez, Marcos O. Prates, Jorge L. Bazán & Victor H. Lachos
- [6] Asymptotic distribution of one-component partial least squares regression estimators in high dimensions, by/par Jerónimo Basa, R. Dennis Cook, Liliana Forzani & Miguel Marcos
- [7] Segment regression model average with multiple threshold variables and multiple structural breaks, by/par Pan Liu & Jialiang Li
- [8] Variable selection in additive models via hierarchical sparse penalty, by/par Canhong Wen, Anan Chen, Xueqin Wang & Wenliang Pan, for the Alzheimer's Disease Neuroimaging Initiative
- [9] Regression model selection via log-likelihood ratio and constrained minimum criterion, by/par Min Tsao
- [10] Method of model checking for case II interval-censored data under the additive hazards model, by/par Yanqin Feng, Ming Tang & Jieli Ding
- [11] Volatility analysis for the GARCH-Itô model with option data, by/par Huiling Yuan, Yong Zhou, Zhiyuan Zhang & Xiangyu Cui
- [12] Distributed sequential estimation procedures, by/par Zhuojian Chen, Zhanfeng Wang & Yuan-chin Ivan Chang
- [13] Unweighted estimation based on optimal sample under measurement constraints, by/par Jing Wang, Hai-Ying Wang & Shifeng Xiong
- [14] A class of space-filling designs with low-dimensional stratification and column orthogonality, by/par Pengnan Li & Fasheng Sun