

Third ICOSA-Canada Chapter Symposium

List of Invited Sessions

1. *Plenary Speech*

Organizer: Changbao Wu, University of Waterloo, Canada

Email: cbwu@uwaterloo.ca

(1) Title: A Statistical Tale of Subgroup Analysis for Managerial Decision Making

Speaker: Xuming He, University of Michigan, USA

Email: xmhe@umich.edu

2. *Integrating big and complex data with new statistical methods and applications*

Organizer: Linglong Kong, University of Alberta, Canada, Canada

Email: lkong@ualberta.ca

(1) Title: Network of networks: A large scale graphical model for whole brain networks using fMRI

Speaker: Xi Luo, Brown University, USA

Email: xi_luo_1@brown.edu

(2) Title: Hybrid conditional quantile inference for conditional heteroscedastic time series models

Speaker: Guodong Li, University of Hong Kong, Hongkong

Email: gdli@hku.hk

(3) Title: Testing structural changes and change point estimation in panel data without boundary issue

Speaker: Michal Pesta, Charles University, USA

Email: pesta@karlin.mff.cuni.cz

(4) Title: Robust Accelerated Failure Time Model for High-Dimensional Survival Data

Speaker: Sijian Wang, University of Wisconsin-Madison, USA

Email: swang@biostat.wisc.edu

3. *Variable Selection and Model Checking*

Organizer: Lixing Zhu, Beijing Normal University and Hong Kong Baptist University,

China

Email: lzhu@bnu.edu.cn

(1) Title: Pending

Speaker: Liqun Wang, University of Manitoba, Canada

Email: liqun.wang@umanitoba.ca

(2) Title: Pending

Speaker: Weixin Song, Kansas State University, USA

Email: songwx@gmail.com

(3) Title: Pending

Speaker: Xu Guo, Beijing Normal University, China

Email: liushengjunyi@163.com

(4) Title: Pending

Speaker: Lixing Zhu, Beijing Normal University, China

Email: lzhu@bnu.edu.cn

4. *Recent Development of Statistical Methods for Large Genomic Data*

Organizer: Ximing Xu, Nankai University, China

Email: ximing@nankai.edu.cn

(1) Title: Low-rank Recovery for Large Metagenomic Data

Speaker: Wei Lin, Peking University, China

Email: weilin@math.pku.edu.cn

(2) Title: Assessing the Accuracy of Predictive Models with Interval-Censored Data

Speaker: Ying Wu, Nankai University, China

Email: ywu@nankai.edu.cn

(3) Title: Copy number analysis of whole-genome data using BIC-seq2 and its application to detection of cancer susceptibility variants

Speaker: Ruibin Xi, Peking University, China

Email: ruibinxi@math.pku.edu.cn

(4) Title: Issues in the statistical analysis of human gut metagenomic data

Speaker: Ximing Xu, Nankai University, China

Email: ximing@nankai.edu.cn

5. *Advances in Statistical Analysis for Complex Data*

Organizer: Amy Yuehua Wu, York University, Canada

Email: wuyh@mathstat.yorku.ca

(1) Title: Pending

Speaker: Zhou Zhou, University of Toronto, Canada

Email: zhou@utstat.toronto.edu

(2) Title: Pending

Speaker: Ming Yuan, University of Wisconsin, USA

Email: myuan@stat.wisc.edu

(3) Title: Pending

Speaker: Xiaoping Shi, Thompson Rivers University, Canada

Email: xshi@tru.ca

(4) Title: Temporal curve alignment for normalizing different batches of time course genomic experiments

Speaker: Xuekui Zhang, University of Victoria, Canada

Email: ubcxzhang@gmail.com

6. *Improving Financial Modeling and Asset Pricing Theory with Advanced Statistical Analysis*

Organizer: Yonggan Zhao, Dalhousie University, Canada

Email: yonggan.zhao@dal.ca

(1) Title: Pending

Speaker: Leonard C. MacLean, Dalhousie University, Canada

Email: L.C.MacLean@Dal.Ca

(2) Title: Pending

Speaker: Chanaka Edirisinghe, Rensselaer Polytechnic Institute, USA

Email: edirin@rpi.edu

(3) Title: Pending

Speaker: Zhiping Chen, Xi'an Jiatong University, China

Email: zchen@xjtu.edu.cn

(4) Title: Pending

Speaker: Weixing Wu, University of International Business and Economics, China

Email: wxwu@uibe.edu.cn

- (5) Title: Pending
Speaker: Peiming Wang, Auckland University of Technology, New Zealand
Email: peiming.wang@aut.ac.nz

7. *Recent Advances in Statistical Methods for Modeling Large-Scale Health data*

Organizer: Cindy Xin Feng, University of Saskatchewan, Canada

Email: cindy.feng@usask.ca

- (1) Title: Nonparametric statistical tools for genome-wide detection of clustering and spatial association among mutations under a microarray probe sampling system
Speaker: Charmaine Dean, Western University, Canada
Email: cbdean@uwo.ca
- (2) Title: Association rule mining for genome-wide association study and market basket analysis
Speaker: Amy Yuehua Wu, York University, Canada
Email: wuyh@mathstat.yorku.ca
- (3) Title: Pattern Discovery of Health Curves with an Ordered Probit Model,
Speaker: Liangliang Wang, Simon Fraser University, Canada
Email: liangliang_wang@sfu.ca,
- (4) Title: Parametric Functional Principal Component Analysis
Speaker: Peijun Song, Simon Fraser University, Canada
Email: NA

8. *Functional Data Analysis*

Organizer: Jiguo Cao, Simon Fraser University, Canada

Email: jiguo_cao@sfu.ca

- (1) Title: A new testing procedure for functional linear models
Speaker: Chongzhi Di, Fred Hutchinson Cancer Research Center, USA
Email: cdi@fredhutch.org
- (2) Title: S-estimators for functional principal component analysis
Speaker: Matias Salibian Barrera, University of British Columbia, Canada
Email: matias@stat.ubc.ca
- (3) Title: Probabilistic and distance based approaches for clustering whole genome bisulfite sequencing data from single cells

Speaker: Camila P. E. de Souza, BC Cancer Research Centre, Canada
Email: desouzacpe@gmail.com

- (4) Title: Supervised functional principal component analysis
Speaker: Yunlong Nie, Simon Fraser University, Canada
Email: nyunlong@sfu.ca

9. *Statistical Methods in Actuarial Science*

Organizer: Yi Lu, Simon Fraser University, Canada
Email: yilu@sfu.ca

- (1) Title: Risk measures based on the behavioural economics theory and their estimation
Speaker: Jun Cai, Department of Statistics and Actuarial Science, University of Waterloo
Email: jcai@uwaterloo.ca
- (2) Title: Regression Tree Credibility Model
Speaker: Chengguo Weng, Statistics and Actuarial Science, University of Waterloo
Email: c2weng@uwaterloo.ca
- (3) Title: Pending
Speaker: Yi Lu, Simon Fraser University, Canada
Email: yilu@sfu.ca

10. *Recent Statistical Advances and Applications in Biomedical Research*

Organizer: Dongdong Li, Simon Fraser University, Canada
Email: dli@bccrc.ca

- (1) Title: Statistical methods to improve cardiovascular disease risk prediction.
Speaker: LihuiZhao, Northwestern University, USA
Email: lihui.zhao@northwestern.edu
- (2) Title: Pending
Speaker: Karen Kopciuk, Alberta Health Services CancerControl Alberta Calgary, Canada
Email: Karen.Kopciuk@albertahealthservices.ca

- (3) Title: Flexible Competing Risks modeling of the effects of time-varying exposures with Applications in Drug Safety and Effectiveness research
 Speaker: Coraline Danieli, McGillUniversityHealth Center, Canada
 Email: coraline.danieli@rimuhc.ca
- (4) Title: Variable selection via penalized GEE for a marginal survival model for clustered survival data
 Speaker: Yi Niu, DalianUniversityof Technology, China
 Email: niuyi@dlut.edu.cn
11. *Statistical Approaches are in Great Demand*
 Organizer: Joan Hu, Simon Fraser University, Canada
 Email: joanh@sfu.ca
- (1) Title: Pending
 Speaker: Teresa Cheung, Simon Fraser University, Canada
 Email: tpc5@sfu.ca
- (2) Title: Pending
 Speaker: Jing Li, Simon Fraser University, Canada
 Email: jingli@sfu.ca
- (3) Title: Pending
 Speaker: Yue Wang, Simon Fraser University, Canada
 Email: yuew@sfu.ca
- (4) Title: Discussion
 Speaker: Trevor Thomson, Simon Fraser University, Canada
 Email: tta51@sfu.ca
12. *Advanced Methodologies in Survival Analysis*
 Organizer: Jiajia Zhang, University of South Carolina, USA
 Email: jzhang@mailbox.sc.edu
- (1) Title: Instrumental Variables in Survival Analysis
 Speaker: Gary Chan, University of Washington, USA
 Email: kcgchan@u.washington.edu
- (2) Title: Semiparametric Models and Estimation on the Dependence Structure of Bivariate Recurrent Events

Speaker: Jing Ning, The University of Texas M.D. Anderson Cancer Center, USA
Email: jning@mdanderson.org

- (3) Title: High Dimensional Censored Quantile Regression

Speaker: Qi Zheng, University of Louisville, USA

Email: qi.zheng@louisville.edu

- (4) Title: Joint modeling longitudinal proportional data and survival times

Speaker: Yingwei Peng, Queen's University, Canada

Email: pengp@queensu.ca

13. *Recent Advance on Computer Experiments*

Organizer: Chunfang Devon Lin, Queen's University, Canada

Email: cdlin@mast.queensu.ca

- (1) Title: Analysis of computer experiments: what can be learned from physical experiments?

Speaker: Will Welch, University of British Columbia, Canada

Email: will@stat.ubc.ca

- (2) Title: Design of Computer Experiments with Input Constraints

Speaker: Shirin Golchi, University of British Columbia, Canada

Email: golchi.shirin@gmail.com

- (3) Title: Space-Filling Designs with categorical factors for restricted regions

Speaker: Ryan Lekivetz, JMP Inc., USA

Email: Ryan.Lekivetz@jmp.com

- (4) Title: Additive Gaussian Process for Computer Experiments with Qualitative and Quantitative Input Factors

Speaker: Xinwei Deng, Virginia Tech, USA

Email: xdeng@vt.edu

14. *Analysis of Complex Longitudinal Data*

Organizer: Lang Wu, University of British Columbia, Canada

Email: lang@stat.ubc.ca

- (1) Title: A mixture of Bayesian hierarchical models for detecting disease-associated genomic probes for data generated from paired/matched designs

Speaker: Weiliang Qiu, Harvard University, USA

Email: stwxq@channing.harvard.edu

- (2) Title: Functional data analysis for complex data
Speaker: Jin Qiu, Zhejiang University of Finance and Economics, China
Email: Qiujin.71@hotmail.com
- (3) Title: A mixture growth model for covariate misclassification and missingness in longitudinal data
Speaker: Michelle Xia, Northern Illinois University, USA
Email: cxia@niu.edu
- (4) Title: Measurement error in longitudinal models
Speaker: Taraneh Abarin, Memorial University of Newfoundland, Canada
Email: tabarin@mun.ca

15. *Advanced Statistical Methods for Complex Data*

Organizer: Wei Liu, York University, Canada

Email: liuwei@mathstat.yorku.ca

- (1) Title: A zero-inflated logistic model for human microbiome data
Speaker: Zhigang Li, Dartmouth College, USA
Email: Zhigang.Li@dartmouth.edu
- (2) Title: Analysis of large forest fire occurrences in Canada using multiple Poisson mixed models
Speaker: Guohua Yan, University of New Brunswick, Canada
Email: gyan@unb.ca
- (3) Title: A mechanistic nonlinear model for censored and mis-measured covariates in longitudinal models, with application in AIDS studies
Speaker: Hongbin Zhang, City University of New York, USA
Email: hongbinzhang711@yahoo.com
- (4) Title: causal inference on cancer recurrence
Speaker: Ji Luo, Zhejiang University of Finance and Economics, China
Email: luoji0409@126.com

16. *Facets of Modern Data Science*

Organizer: Richard Hahn, University of Chicago, USA

Email: richard.hahn@chicagobooth.edu

- (1) Title: Pending
Speaker: Tyler McCormick, University of Washington, USA
Email: tylermc@u.washington.edu
- (2) Title: Pending
Speaker: Richard Hahn, University of Chicago, USA
Email: richard.hahn@chicagobooth.edu
- (3) Title: Pending
Speaker: Tengyuan Liang, University of Pennsylvania, USA
Email: tengyuan@wharton.upenn.edu
- (4) Title: Pending
Speaker: Luke Bornn, Simon Fraser University, Canada
Email: lbornn@sfu.ca

17. *Recent Developments in Event History and Survival Data Analysis*

Organizer: Xuewen Lu, University of Calgary, Canada
Email: lux@math.ucalgary.ca

- (1) Title: Mixture models for left-censored and irregularly interval-censored data:
Applications to a cancer screening cohort assembled from electronic health records
Speaker: Li Cheung, National Cancer Institute, USA
Email: lichung@gwmail.gwu.edu
- (2) Title: Event History Data Analysis in Wildland Fire Control
Speaker: Yi Xiong, Simon Fraser University, Canada
Email: yi_xiong@sfu.ca
- (3) Title: Analysis of bivariate gap time with competing risks
Speaker: Chiung-Yu Huang, Johns Hopkins University, USA
Email: cyhuang@jhu.edu
- (4) Title: Testing for clusterlevel random effects in joint modeling of survival time
and marker responses in clinical trials
Speaker: Wenyu Jiang, Queen's University, Canada
Email: wjiang@mast.queensu.ca

18. *Recent Developments in Complex Data Analysis and Its Applications*

Organizer: Yichuan Zhao, Georgia State University, USA
Email: yichuan@gsu.edu

- (1) Title: Pending
Speaker: Yi Li, University of Michigan, USA
Email: yili@umich.edu
 - (2) Title: Pending
Speaker: Xuewen Lu, University of Calgary, Canada
Email: lux@math.ucalgary.ca
 - (3) Title: Pending
Speaker: Jiayang Sun, Case Western Reserve University, USA
Email: jsun@case.edu
 - (4) Title: Pending
Speaker: Min-ge Xie, Rutgers University, USA
Email: mxie@stat.rutgers.edu
19. *Statistical Methods for Complex Data from Biomedical Studies*
Organizer: Ying Zhang, Indiana University, USA
Email: yz73@iu.edu
- (1) Title: A multivariate single-index regression model
Speaker: Jingwei Wu, Temple University, USA
Email: jingwei.wu@temple.edu
 - (2) Title: Addressing unmeasured confounders in comparative effectiveness research with patient registry data
Speaker: Bin Huang, Cincinnati Children's Hospital, USA
Email: Bin.Huang@cchmc.org
 - (3) Title: Adjusting for longitudinal adherence measure in HIV prevention trials
Speaker: Jingyang Zhang, Fred Hutchinson Cancer Center, USA
Email: jzhang2@fredhutch.org
 - (4) Title: Analysis of competing risks data for cohort studies with double-sampling designs
Speaker: Giorgos Bakoyannis, Indiana University, USA
Email: gbakogia@iu.edu
20. *Recent Development of Statistical Methods for Complex Data*
Organizer: Weixin Yao, University of California (Riverside), USA
Email: weixin.yao@ucr.edu

- (1) Title: Efficient estimation in partially linear single-index models for longitudinal data
 Speaker: Suojin Wang, Texas A&M University, USA
 Email: sjwang@stat.tamu.edu
 - (2) Title: Maximizing the Utility of Statistical Classification with Applications to Medical Diagnostics
 Speaker: Daniel Jeske, University of California (Riverside), USA
 Email: djeske@ucr.edu
 - (3) Title: A partial linear multivariate model - a difference approach
 Speaker: Michael Levine, Purdue University, USA
 Email: mlevins@purdue.edu
 - (4) Title: Pending
 Speaker: Xinping Cui, University of California(Riverside), USA
 Email: xinping.cui@ucr.edu
21. *Novel Clinical Trial Designs for Precision Medicine and Immunotherapy*
 Organizer: Ying Yuan, The University of Texas MD Anderson Cancer Center, USA
 Email: yyuan@mdanderson.org
- (1) Title: A Novel Bayesian Phase I Clinical Trial Design for Delayed Toxicity
 Speaker: Suyu Liu, The University of Texas MD Anderson Cancer Center, USA
 Email: syliu@mdanderson.org
 - (2) Title: A Novel Bayesian Adaptive Platform Design for Efficiently Screening Oncology Combo Therapies in Drug Development Portfolio
 Speaker: Rui Tang, Vertex Pharmaceuticals, USA
 Email: Rui_Tang@vrtx.com
 - (3) Title: A Bayesian Phase I-II Trial Design for Immunotherapy
 Speaker: Ying Yuan, University of Texas MD Anderson Cancer Center, USA
 Email: yyuan@mdanderson.org
 - (4) Title: Computing optimal regression designs via semidefinite programming
 Speaker: Julie Zhou, University of Victoria, Canada
 Email: jzhou@uvic.ca
22. *Advance in Statistical Methods for Large and Complex Data*
 Organizer: Dehan Kong, University of Toronto, Canada
 Email: kongdehan@utstat.toronto.edu

- (1) Title: Nonparametric Inference via Bootstrapping the Debiased Estimator
Speaker: Yen-chi Chen, University of Washington, USA
Email: yenchic@uw.edu
 - (2) Title: High Dimensional Propensity Score via Covariate Balancing
Speaker: Peisong Han, University of Waterloo, Canada
Email: peisonghan@uwaterloo.ca
 - (3) Title: Estimation for bivariate quantile varying coefficient model
Speaker: Linglong Kong, University of Alberta, Canada
Email: lkong@ualberta.ca
 - (4) Title: Independence testing: Bayesian and non-Bayesian approaches
Speaker: Weining Shen, University of California (Irvine), USA
Email: weinings@uci.edu
23. *Some New Perspectives in Biostatistical Research with Different Data Types/Features*
Organizer: Peisong Han, University of Waterloo, Canada
Email: peisonghan@uwaterloo.ca
- (1) Title: Nonlinear Multivariate Multilevel Functional Data Analysis
Speaker: Haocheng Li, University of Calgary, Canada
Email: haocheng.li@ucalgary.ca
 - (2) Title: Analysis of heterogeneous lifetime data with missing covariates
Speaker: Hua Shen, University of Calgary, Canada
Email: hua.shen@ucalgary.ca
 - (3) Title: Optimally Weighted Estimation in Case-Cohort Studies
Speaker: Ying Yan, University of Calgary, Canada
Email: ying.yan@ucalgary.ca
 - (4) Title: Matching using sufficient dimension reduction for causal inference
Speaker: Yeying Zhu, University of Waterloo, Canada
Email: yeying.zhu@uwaterloo.ca
24. *Recent Developments in Empirical Likelihood Methods*
Organizer: Song Cai, Carleton University, Canada
Email: scai@math.carleton.ca

- (1) Title: Monitoring test by empirical likelihood and resampling method
 Speaker: Jiahua Chen, University of British Columbia, Canada
 Email: jhchen@stat.ubc.ca
 - (2) Title: Transforming the empirical likelihood towards better accuracy
 Speaker: Min Tsao, University of Victoria, Canada
 Email: mtsao@uvic.ca
 - (3) Title: A unified semiparametric inference framework for multiple nonnegative distributions with excess zero observations
 Speaker: Pengfei Li, University of Waterloo, Canada
 Email: pengfei.li@uwaterloo.ca
 - (4) Title: Empirical Likelihood Inferences for Public-Use Survey Data
 Speaker: Changbao Wu, University of Waterloo, Canada
 Email: cbwu@uwaterloo.ca
25. *Large-Scale Statistical Inference and Confidence Bands for Low Dose Risk*
 Organizer: Jianan Peng, Acadia University, Canada
 Email: jianan.peng@acadiau.ca
- (1) Title: Detecting Adverse Drug Reactions from Pharmacovigilance Databases
 Speaker: Kun Liang, University of Waterloo, Canada
 Email: kun.liang@uwaterloo.ca
 - (2) Title: Multiple Testing with Heterogeneous Data
 Speaker: Joshua Habiger, Kansas University Medical Center, USA
 Email: jhabiger@kumc.edu
 - (3) Title: Identifying and Removing the Cell-cycle Effect from Single-cell RNA-Sequencing Data
 Speaker: Jun Li, University of Notre Dame, USA
 Email: jun.li@nd.edu
 - (4) Title: Low Dose Risk Estimation for Quantal Data via Simultaneous Confidence Bands
 Speaker: Lucy Kerns, Youngstown State University, USA
 Email: xlu@ysu.edu
26. *Statistical Issues and Methods for Analysing Administrative Health Data*
 Organizer: Cindy Xin Feng, University of Saskatchewan, Canada
 Email: cindy.feng@usask.ca

- (1) Title: Multiple imputation models for misclassification bias in administrative health data
Speaker: Lisa Lix, University of Manitoba, Canada
Email: Lisa.Lix@umanitoba.ca
 - (2) Title: Impact of Misspecified Covariance Structure on the Parameter Estimates in a Shared Spatial Frailty Model
Speaker: Cindy Xin Feng, University of Saskatchewan, Canada
Email: cindy.feng@usask.ca
 - (3) Title: Classification Trees for Misclassified Responses
Speaker: Liqun Diao, University of Waterloo, Canada
Email: l2diao@uwaterloo.ca
 - (4) Title: Tracing Studies in Cohorts with Loss to follow-up
Speaker: Leilei Zeng, University of Waterloo, Canada
Email: lzung@uwaterloo.ca
27. *Recent advances in high-dimensional complex data modeling.*
Organizer: Weining Shen, University of California Irvine, USA
Email: weinings@uci.edu
- (1) Title: Gaussianity test for high-dimensional data
Speaker: Hao Chen, University of California (Davis), USA
Email: hxchen@ucdavis.edu
 - (2) Title: Pairwise difference approach for partially linear models: some real gains
Speaker: Fang Han, University of Washington, USA
Email: fanghan@uw.edu
 - (3) Title: Matrix linear discriminant analysis
Speaker: Dehan Kong, University of Toronto, Canada
Email: kongdehan@utstat.toronto.edu
 - (4) Title: Variable Selection with Prior Information and Its Applications to Genetic Association Studies.
Speaker: Yuan Jiang, Oregon State University, USA
Email: yuan.jiang@stat.oregonstate.edu
28. *Model Selection in Big Data*
Organizer: Jingjing Wu, University of Calgary, Canada
Email: jinwu@ucalgary.ca

- (1) Title: Estimating an inverse space via Fourier transformation
 Speaker: Xiangrong Yin, University of Kentucky, USA
 Email: yinxiangrong@gmail.com
- (2) Title: A optimal subsampling in a linear regression model with big sample sizes and fast algorithms
 Speaker: Hanxiang Peng, IUPUI, USA
 Email: hanxpeng@iupui.edu
- (3) Title: Big data analysis in generalized linear models using A-optimal subsampling
 Speaker: Fei Tan, IUPUI, USA
 Email: hanxpeng@iupui.edu
- (4) Title: Bi-level variable selection in transformation models
 Speaker: Wenyan Zhong, University of Calgary, Canada
 Email: zhongw@ucalgary.ca

29. *Statistical methods for errors in variables*

Organizer: Juxin Liu, University of Saskatchewan, Canada
 Email: liu@math.usask.ca

- (1) Title: A spline based semiparametric approach to non- parametric measurement error models.
 Speaker: Yanyuan Ma, Pennsylvania State University, USA
 Email: yzm63@psu.edu
- (2) Title: Bayesian adjustment for measurement error: How much prior knowledge is needed to make it worthwhile?
 Speaker: Paul Gustafson, University of British Columbia, Canada
 Email: gustaf@stat.ubc.ca
- (3) Title: Effect of covariate measurement error on classification
 Speaker: Wenqing He, Western University, Canada
 Email: whe@stats.uwo.ca
- (4) Title: Semiparametric deconvolution methods in back- ground correction problems with medical applications
 Speaker: Xiaofeng Wang, Cleveland Clinic, USA
 Email: xfwang@gmail.com

30. *Recent Advances in High-Dimensional Data Analysis and Small Area Estimation*

Organizer: Ying Yan, University of Calgary, Canada

Email: ying.yan@ucalgary.ca

- (1) Title: Constrained Instruments and its Application to Mendelian Randomization with Pleiotropy

Speaker: Lai Jiang, Lady Davis Institute and McGill University, Canada

Email: lai.jiang@mail.mcgill.ca

- (2) Title: Sparsity Oriented Importance Learning for High-dimensional Linear Regression

Speaker: Yi Yang, McGill University, Canada

Email: yi.yang6@mcgill.ca

- (3) Title: One Dimensional Historical Functional Linear Regression via Group Bridge Approach

Speaker: Tianyu Guan, Simon Fraser University, Canada

Email: tianyug@sfu.ca

- (4) Title: Semi-parametric small area estimation under informative sampling

Speaker: Golshid Chatrchi, Carleton University, Canada

Email: gchatrchi@gmail.com

31. *Statistical Methods for Environmental Data*

Organizer: Jianan Peng, Acadia University, Canada

Email: jianan.peng@acadiau.ca

- (1) Title: Comparison of Water Quality Indicators

Speaker: Sylvia R. Esterby, University of British Columbia Okanagan, Canada

Email: sylvia.esterby@ubc.ca

- (2) Title: Parametric Functional Principal Component Analysis

Speaker: Jiguo Cao, Simon Fraser University, Canada

Email: jiguo_cao@sfu.ca

- (3) Title: Measures of Distance and Seal Diets

Speaker: Connie Stewart, University of New Brunswick, Canada

Email: connie.stewart@unb.ca

- (4) Title: Empirical likelihood ratio test for the means of zero-inated populations

Speaker: Jianan Peng, Acadia University, Canada

Email: jianan.peng@acadiau.ca

32. *Statistical analysis and modeling of complex data*

Organizer: Guohua Yan, University of New Brunswick, Canada

Email: gyan@unb.ca

(1) Title: Biomarker threshold models in cancer clinical trials

Speaker: Bingshu Chen, Queens University, Canada

Email: bechen@ctg.queensu.ca

(2) Title: Localized quantile regression of realized volatility

Speaker: Zhaozhi Fan, Memorial University, Canada

Email: zhaozhi@mun.ca

(3) Title: Two-step and likelihood methods for HIV viral dynamic models with co-variate measurement errors and missing data

Speaker: Wei Liu, York University, Canada

Email: liuwei@mathstat.yorku.ca

(4) Title: Nonmonotone missingness patterns in semiparametric maximum likelihood inference for regression analysis

Speaker: Yang Zhao, University of Regina, Canada

Email: Yang.Zhao@uregina.ca

33. *Recent advances in statistical genetics*

Organizer: Kun Liang, University of Waterloo, Canada

Email: kun.liang@uwaterloo.ca

(1) Title: Combining phenotypes, genotypes and genealogies to uncover genomic variants that influence complex traits

Speaker: Jinko Graham, Simon Fraser University, Canada

Email: jgraham@sfu.ca

(2) Title: Statistical methods to assess host genetic association with human gut microbiome

Speaker: Wei Xu, University of Toronto, Canada

Email: wxu@uhnresearch.ca

(3) Title: Integrated analysis of genetic and environmental data from multiple sources

Speaker: Wendy Lou, University of Toronto, Canada

Email: wendy.lou@utoronto.ca

- (4) Title: Particle MCMC methods for Bayesian phylogenetics
Speaker: Shijia Wang, Simon Fraser University, Canada
Email: shijiaw@sfu.ca

34. *Statistical Methods and Applications with Big Data*

Organizer: Xikui Wang, University of Manitoba, Canada
Email: xikui.wang@umanitoba.ca

- (1) Title: MCMC Estimation of Spatial Autoregressive Panel Data Model with Time Varying Spatial Weights Matrices
Speaker: Xiping Xiao, Wuhan University of Technology, China
Email: xiaoxp@whut.edu.cn
- (2) Title: Nonparametric K-sample Test using Kernel Functional Estimation and its Optimal Bandwidth Selection
Speaker: Su Chen, University of Memphis, USA
Email: schen4@memphis.edu
- (3) Title: Portfolio Optimization for Agricultural Reinsurance
Speaker: You Liang, University of Manitoba, Canada
Email: you.liang@umanitoba.ca
- (4) Title: Post-selection inference in regression models with change points and shape constraints
Speaker: Matus Maciak, Charles University, Czech Republic
Email: maciak@karlin.mff.cuni.cz

35. *New methods for analyzing complex and high dimensional data*

Organizer: Bei Jiang, University of Alberta, Canada
Email: bei1@ualberta.ca

- (1) Title: Modeling within-family dependence in disease onset times with biased samples by design
Speaker: Richard Cook, University of Waterloo, Canada
Email: rjcook@uwaterloo.ca
- (2) Title: Shape-constrained density estimation
Speaker: Ivan Mizera, University of Alberta, Canada
Email: imizera@ualberta.ca

- (3) Title: A concentration inequality based methodology for high dimensional sparse covariance matrix estimation
Speaker: Adam Kashlak, University of Cambridge, UK
Email: ak852@cam.ac.uk
- (4) Title: Longitudinal Clustering for Binary Data
Speaker: Annie Qu, University of Illinois at Urbana-Champaign, USA
Email: anniequ@illinois.edu

36. *New Developments in Time Series and Regression models*

Organizer: Guodong Li, University of Hong Kong, Hong Kong
Email: gdli@hku.hk

- (1) Title: A new approach to dimension reduction for multivariate time series
Speaker: Xiaofeng Shao, University of Illinois at Urbana-Champaign, USA
Email: xshao@illinois.edu
- (2) Title: On a measure of lack of fit in nonlinear cointegrating regression
Speaker: Ke Zhu, University of Hong Kong, Hong Kong
Email: mazhuke@hku.hk
- (3) Title: Spectral analysis of high-dimensional time series with applications to the mean-variance frontier
Speaker: Alexander Aue, University of California, Davis, USA
Email: aaue@ucdavis.edu
- (4) Title: Robustify mean regression: phase transition and new insights
Speaker: Qiang Sun, Princeton University, USA
Email: qsun.ustc@gmail.com

37. *Dimension reduction and network data analysis*

Organizer: Bing-Yi Jing, University of Science and Technology of Hong Kong, Hong Kong
Email: majing@ust.hk

- (1) Title: Sufficient Dimension Reduction under Dimension-reduction-based Imputation with Predictors Missing at Random
Speaker: Qihua WANG, Chinese Academy of Sciences, China
Email: qhwang@amss.ac.cn

- (2) Title: Community detection for sparse network
Speaker: Xianshi YU, HKUST, Hongkong
Email: xyuai@connect.ust.hk
- (3) Title: Scaling variables in pro-processing data
Speaker: Ting LI, HKUST, Hongkong
Email: tlial@connect.ust.hk
- (4) Title: Link prediction for network data
Speaker: Ningchen Ying, HKUST, Hongkong
Email: nying@connect.ust.hk

38. *Recent developments in experimental designs*

Organizer: Po Yang, University of Manitoba, Canada
Email: Po.Yang@umanitoba.ca

- (1) Title: Designs from Good Hadamard Matrices
Speaker: Boxin Tang, Simon Fraser University, Canada
Email: boxint@sfu.ca
- (2) Title: Pending
Speaker: Sauman Mandal, University of Manitoba, Canada
Email: Saumen.Mandal@umanitoba.ca
- (3) Title: Robust Population Designs for Longitudinal Regression Models with Random Intercepts.
Speaker: Rongxian Yue, Shanghai Normal University, China
Email: yue2@shnu.edu.cn
- (4) Title: Contamination and Beta-aberration Criteria for Screening Quantitative Factors.
Speaker: Chang-Yun Li, National Chung Hsing University, Taiwan
Email: chlin6@nchu.edu.tw

39. *Distributed Statistical Learning for Large-scale Data*

Organizer: Chen Xu, University of Ottawa, Canada
Email: cx3@uottawa.ca

- (1) Title: Efficient Distributed Learning with Sparsity
Speaker: Jialei Wang, University of Chicago, USA
Email: jialei@cs.uchicago.edu

- (2) Title: A Sequential Split-Conquer-Combine Approach for Gaussian Process Modeling in Computer Experiments
 Speaker: Ying Hung, Rutgers University, USA
 Email: yhung@stat.rutgers.edu
 - (3) Title: Distributed Estimation
 Speaker: Qiang Liu, Dartmouth College, USA
 Email: Qiang.Liu@dartmouth.edu
 - (4) Title: The Distributed Learning of Eigenspace
 Speaker: Ziwei Zhu, Princeton University, USA
 Email: ziweiz@princeton.edu
40. *Recent advances in analysis of correlated health data*
 Organizer: Ying Zhang, Acadia University, Canada
 Email: ying.zhang@acadiau.ca
- (1) Title: Poisson Nonlinear Mixed Models for Dose-Response Curve Data
 Speaker: Renjun Ma, University of New Brunswick, Canada
 Email: renjun@unb.ca
 - (2) Title: Prediction and Inference under Competing Risks in High Dimension - An EHR demonstration Project for Prostate Cancer
 Speaker: Ronghui Xu, University of California, San Diego, USA
 Email: rxu@ucsd.edu
 - (3) Title: Growth Trajectory Models for Longitudinal Outcomes and Survival Data
 Speaker: Depeng Jiang, University of Manitoba, Canada
 Email: depeng.jiang@umanitoba.ca
 - (4) Title: Tests of Concordance between Groups of Incomplete Rankings: with R Package
 Speaker: Ying Zhang, Acadia University, Canada
 Email: ying.zhang@acadiau.ca
41. *Recent developments in statistical inference for high dimensional data*
 Organizer: Ping-Shou Zhong, Michigan State University, USA
 Email: pszhong@msu.edu
- (1) Title: Simultaneous Multistage Adaptive Ranking and Thresholding for Sparse Signal Recovery

Speaker: Wenguang Sun, University of Southern California, USA
Email: wenguans@marshall.usc.edu

- (2) Title: A Subsampled Double Bootstrap for Massive Data

Speaker: Srijan Sengupta, Virginal Tech, USA
Email: sengupta@vt.edu

- (3) Title: Partition Based Ultrahigh Dimensional Variable Screening

Speaker: Jian Kang, University of Michigan, USA
Email: jiankang@umich.edu

- (4) Title: Test for Temporal Homogeneity of High-Dimensional Means with Application to fMRI Studies

Speaker: Ping-Shou Zhong, Michigan State University, USA
Email: pszhong@msu.edu

42. *Strategies for Complex Data Analysis*

Organizer: Wenqing He, Western University, Canada
Email: whe@stats.uwo.ca

- (1) Title: Bayesian Scalar on Image Regression with Nonignorable Nonresponse

Speaker: Xin Yuan Song, Chinese University of Hong Kong, Hong Kong
Email: xysong@sta.cuhk.edu.hk

- (2) Title: Better Autologistic Regression

Speaker: Mark Wolters, Fudan University, China
Email: mark@mwolters.com

- (3) Title: Information Geometry and Restrictive Boltzmann Machines

Speaker: Paul Marriott, University of Waterloo, Canada
Email: pmarriott@uwaterloo.ca

- (4) Title: Some recent work on linear models of coregionalization

Speaker: Ying MacNab, University of British Columbia, Canada
Email: ying.macnab@ubc.ca

43. *Methodological Advances on Analyzing Complex Survey Data*

(Session Sponsored by CANSSI CRT Statistical Inference for Complex Surveys with Missing Observations)

Organizer: Changbao Wu, University of Waterloo, Canada
Email: cbwu@uwaterloo.ca

- (1) Title: Multiply Robust Imputation Procedures for Populations Containing a Large Number of Zeros
Speaker: David Haziza, University of Montreal, Canada
Email: haziza@dms.umontreal.ca
- (2) Title: The impact of Calibration Distances and Constraints on Weighting and Estimation for Complex Surveys
Speaker: Wilson Lu, Acadia University, Canada
Email: Wilson.lu@acadiu.ca
- (3) Title: Empirical Likelihood and Semiparametric Inference with Survey Data
Speaker: Puying Zhao, University of Waterloo, Canada
Email: pyzhao@live.cn
- (4) Title: Resampling Techniques for Estimation and Inferences for Variances
Speaker: Zilin Wang, Wilfrid Laurier University, Canada
Email: zwang@wlu.ca

44. *Recent Development in Integrative Analysis of Large-Scale Genetic Datasets*

Organizer: Yuan Jiang, Oregon State University, USA
Email: yuan.jiang@stat.oregonstate.edu

- (1) Title: Embracing heterogeneity: beware of YETI
Speaker: Yong Chen, University of Pennsylvania, USA
Email: ychen123@mail.med.upenn.edu
- (2) Title: Integrative analysis of GWAS data from different platforms by group-level regularization
Speaker: Chi Song, Ohio State University, USA
Email: song.1188@osu.edu
- (3) Title: SSE: A Summary-statistics-based approach to estimating heritability, co-heritability and effect sizes in GWAS data analysis
Speaker: Jin Liu, National University of Singapore, Singapore
Email: jin.liu@duke-nus.edu.sg
- (4) Title: Integrative analysis of multiple genetic studies guided by biomedical literature mining

Speaker: Dongjun Chung, Medical University of South Carolina, USA
Email: chungd@musc.edu

45. *Sparsity Estimation in High-dimensional Data Analysis*

Organizer: Yi Yang, McGill University, Canada
Email: yi.yang6@mcgill.ca

- (1) Title: Sparse precision matrix estimation via lasso penalized D-trace loss
Speaker: Teng Zhang, University of Central Florida, USA
Email: teng.zhang@ucf.edu
- (2) Title: Sparsity Oriented Importance Learning for High-dimensional Linear Regression
Speaker: Yi Yang, McGill University, Canada
Email: yi.yang6@mcgill.ca
- (3) Title: Communication-efficient Distributed Kernel Regression via ADMM
Speaker: Chen Xu, University of Ottawa, Canada
Email: cx3@uottawa.ca