ICSA-Canada Symposium 2019

Invited sessions

Session Title: Handling Complex Featured Data: Challenges and Methods

Organizer and Chair: Grace Y. Yi, University of Waterloo

Speakers and Titles:

1. Suojin Wang, Texas A&M University

Title: Simultaneous confidence bands for partially linear single-index models with longitudinal data

2. Speaker: Minge Xie, Rutgers University

Title: Repro Sampling Method for Statistical Inference

3. Zhezhen Jin, Columbia University

Title: Modeling treatment outcomes in transplant

4. Gang Li, Johnson & Johnson

Title: New Challenges in Design and Analysis for Clinical Trials with Survival Data

Session Title: Recent Developments in Statistical Methods for Skewed Data, Time Series, and Text Data

Organizer and Chair: Ying Zhang, Acadia University

Speakers and Titles:

1. Renjun Ma, University of New Brunswick

Title: Tweedie Mixed Models for Skewed Longitudinal Data

2. Zhou Zhou, University of Toronto

Title: Frequency Detection and Change Point Estimation in Complexly Oscillating Medical Time Series

3. Tobias Kenney, Dalhousie University

Title: On Consistency of Approaches to Ranking Problems

4. Hao Yu, Western University

Title: Text Ranking based on Time Series and Entropy

Session Title: Multivariate Data Exploratory and Modeling Methods

Organizer and Chair: Renjun Ma, University of New Brunswick

Speakers and Titles:

1. Hong Gu, Dalhousie University

Title: Semiparametric Transformed PCA for Exploring Microbiome Data

2. Jianhua Hu, Shanghai University of Finance and Economics

Title: Response and Predictor Variables Selection for High-dimensional Multivariate Linear Model

3. Wilson Lu, Acadia University

Title: A New Procedure in Unequal Probability Sampling without Replacement.

4. Connie Stewart, University of New Brunswick

Title: A folded model for compositional data analysis

Session Title: Recent Advances in Statistical Methodology

Organizer and Chair: Amy Wu, York University

Speakers and Titles:

1. Yingying Fan, University of Southern California

Title: Large-scale inference for networks

2. Baisuo Jin, University of Science and Technology of China

Title: Detection of communities in large matrix

3. Yichen Qin, University of Cincinnati

Title: Model confidence bounds for variable selection

4. Xiaoping Shi, Thompson Rivers University

Title: Non-Euclidean graph-based change-point test

Session Title: Functional Data Analysis

Organizer and Chair: Peijun Sang, University of Waterloo

Speakers and Titles:

1. Bing Li, PennState University

Title: On post dimension reduction statistical inference

2. Pang Du, Virginia Tech University

Title: Functional ANOVA test with spectral data

3. Greg Rice, University of Waterloo

Title: Inference for the autocovariance of a functional time series under conditional heteroscedasticity

4. Zhenhua Lin, University of California Davis

Title: Mean and Covariance Estimation for Functional Snippets.

Session Title: Innovative Computing Methods in Biostatistics

Organizer and Chair: Yeying Zhu, University of Waterloo

Speakers and Titles:

1. Yingwei Paul Peng, Queen's University

Title: Support Vector Machine in Cure Models

2. Liqun Diao, University of Waterloo

Title: Bregman Divergence Survival Trees and Ensembles

3. Dehan Kong, University of Toronto

Title: Nonparametric Matrix Response Regression with Application to Calcium Imaging

4. Wenqing He, Western University

Title: Dynamic Tilted Current Correlation for High Dimensional Variable Screening

Session Title: Causal Inference for Complex Data Challenges

Organizer and Chair: Dehan Kong, University of Toronto

Speakers and Titles:

1. Bei Jiang, University of Alberta

    Title: A Bayesian Approach to Joint Modeling of Matrix-valued Imaging Data and Treatment Outcome with Applications to Depression Studies

2. Michael Wallace, University of Waterloo

    Title: Measurement error and personalized medicine.

3. Linbo Wang, University of Toronto

    Title: Causal Inference with Network Interference: Beyond Local Dependence

4. Yeying Zhu, University of Waterloo

    Title: Causal inference by optimizing covariate balance

Session Title: Statistical inference in mixture and other nonregular models.

Organizer: Pengfei Li, University of Waterloo

Chair: Chunlin Wang, Xiamen University

Speakers and Titles:

1. Jiahua Chen, University of British Columbia

Title: Estimation based on Wesserstein distance under mixture model

2. Paul Marriott, University of Waterloo

Title: Non-regular Models: A Geometric Approach

3. Abbas Khalili, McGill University

Title: Penalized Likelihood Estimation of the Number of Components in Finite Mixture Models

4. Pengfei Li, University of Waterloo

Title: Full likelihood inference for abundance from capture-recapture data.

Session title: Recent developments in empirical likelihood method.

Organizer and Chair: Pengfei Li, University of Waterloo

Speakers and Titles:

1. Chunlin Wang, Xiamen University, China

Title: A semiparametric homogeneity test for comparing quality of life outcomes in cancer clinical trials

2. Puying Zhao, Yunnan University, China

Title: Generalized empirical likelihood Inference for nonsmooth moment functions with nonignorable missing values

3. Yilin Chen, University of Waterloo

Title: Estimation of proportion with nonprobability survey samples using pseudoempirical likelihood method

4. Meng Yuan, University of Waterloo

Title: Semiparametric empirical likelihood inference with general estimating equations

Session Title: Challenges in the analysis of survival data

Organizer and Chair: Lang Wu, University of British Columbia

Speaker and Titles

1. Grace Yi, University of Waterloo

Title: Semiparametric Methods for Survival Data with Measurement Error under Additive Hazards Cure Rate Models

2. Qi Cui, Simon Fraser University

Title: A Copula Model-based Method for Regression Analysis of Dependent Current Status Data by Joint Modeling

3. Tao Wang, Yunnan Normal University, China

Title: A joint model of longitudinal and time-to-event data for HIV Clinical Data

4. Hongbin Zhang, City University of New York

Title: Joint modeling of nonlinear covariate process with AFT, a biologically plausible model with application in HIV/AIDS

Session Title: "Statistical inference with constrains and complexities"

Organizer and Chair: Lang Wu, University of British Columbia

Speakers and Titles:

1. Jianan Peng, Acadia

Title: A Generalization of Dykstra's Iterative Algorithm for Restricted Least Squares Regression

2. Sanjoy K. Sinha, Carleton University

Title: Constrained inference in mixed models for clustered data

3. Abdus Sattar, Case Western University

Title: Longitudinal data analysis with complexities

4. Michelle Xia

Title: Simultaneous adjustment of covariate misclassification and missingness in regression models

Session Title: Advances in Longitudinal and Survival Studies

Organizer and Chair: Wei Liu, York University

Speakers and Titles

1. Zhigang Li, University of Florida

Title: Joint modeling of quality of life and survival data under informative censoring in palliative care studies.

2. Guohua Yan

Title: Poisson mixed models for longitudinal binomial data with random number of trials

3. Wei Liu, York University

Title: A Semiparametric Nonlinear Mixed-Effects Model with Covariate Measurement Errors and Change Points

4. Bingrui Sun, University of Calgary

Title: GQL estimation in linear dynamic models for panel data

Session title: New Developments of Statistical Methods for High-Dimensional Data and Complex Sampling Designs

Organizer and Chair: Xuewwen Lu

Chair: Yuehua (Amy) Wu, York University

1. Qihua Wang, AMSS

Title: Bias-corrected Kullback-Leibler distance criterion based model selection with covariates missing at random.

2. Zhonglei Wang, Xiamen University, China

Title: Bootstrap inference for the finite population total under complex sampling designs.

3. Yuehua (Amy) Wu, York University

Title: Simultaneous multiple change-point estimation.

4. Hao Ding, York University

Title: General M-estimation in high-dimensional data analysis.

Title of session: Statistical Inferences and Applications

Organizer: Jingjing Wu, University of Calgary

Chair: Brian Franczak, MacEwan University

Speakers and Titles:

1. Weiwei Zhuang, University of Science and Technology of China

Title: Some improvement about stochastic dominance between first- and second-order

2. Shan Wang, Northeastern Illinois University

Title: Efficiency improvement in estimating structural equation models with an easy empirical likelihood approach

3. Brian Franczak, MacEwan University

Title: Applications using Mixtures of Asymmetric Distributions

Session Title: Predictive methods in insurance and finance

Organizer and Chair: Chengguo Weng, University of Waterloo

Speakers and Titles:

1. Guojun Gan, University of Connecticut.

Title: Nested Stochastic Valuation of Large Variable Annuity Portfolios: Monte Carlo Simulation and Synthetic Datasets

2. Hong Li, University of Manibota

Title: Gompertz Law Revisited: Forecasting Old-age Mortality in a Multi-Factor Framework

3. Chengguo Weng, University of Waterloo

Title: Clustering Methods for Enhancement of Mortality Forecast

4. Jiandong Ren, University of Western Ontario

Title: Analysis of a Multivariate Compound Loss

Session Title: Recent Advances of Statistical Methods for Emerging High-dimensional Biomedical Applications

Organizer and Chair: Yize Zhao, *Cornell University*

Speakers and Titles:

1. Linglong Kong, *University of Alberta*

Title: High-Dimensional Spatial Quantile Function-on-Scalar Regression in Neuroimaging Analysis

2. Gen Li, *Columbia University*

Title: Zero-inflated Poisson Factor Model with Application to Microbiome Absolute Abundance Data

3. Yuping Zhang, *University of Connecticut*

Title: Integrative Structural Learning of Heterogeneous Exponential Markov Random Fields

4. Zhengwu Zhang, *University of Rochester*

Title: Analyzing Dynamical Brain Functional Connectivity as Trajectories on Space of Covariance Matrices

Session Title: Bayesian Methods in Biostatistics

Organizer and Chair: Shirin Golchi, McGill University

Speakers and Titles:

1. Alexandra Schmidt, McGill University

Title: A multivariate spatio-temporal model for Dengue, Zika, and Chikungunya outbreaks in Rio de Janeiro, Brazil

2. Bingshu Chen, Queen's University

Title: Non-parametric Bayesian analysis of biomarker in clinical trial

3. Eleanor Pullenayegum, University of Toronto/ Hospital for Sick Children

Title: Bayesian approaches to health utility estimation for economic evaluations

4. Audrey Beliveau, University of Waterloo

Title: BUGSnet: a New All-in-One R Package to Improve the Quality and Reporting of Bayesian Network Meta-Analyses

Session Title: Advances in Statistical Prediction with Real World Applications

Organizer and Chair: Dr. Yan Yuan, University of Alberta

Speakers and Titles:

1. Amy Liu, University of Toronto

Title: Dosimetric Predictors of Acute And Late Toxicity After Radiation And Concurrent Chemotherapy for Anal Cancer

2. Joel Dubin, University of Waterloo

Title: Some Prediction Problems in Health Research

3. Xu Wang, Wilfrid Laurier University

Title: Analyzing Polysomnographs (PSGs) using Convolutional Neural Network for Obstructive Sleep Apnea Prediction

4. Anis Sharafoddini, University of Waterloo

Title: A New Insight into Missing Data in Predicting Outcomes of Intensive Care Unit Patients

Session Title: Statistical Methods For Complex Data

Organizer and Chair: Juxin Liu, University of Saskatchewan

Speakers and Title:

1. Xuejing Meng, Simon Fraser University

Title: Parameter estimation with stochastic differential equation on SIS epidemic mode

2. Alexander De Leon, University of Calgary

Title: Classification and prediction with mixed measurements subject to misclassification

3. Mary Thompson, University of Waterloo

Title: Spatial multilevel modelling in the Galveston Bay Recovery Study survey

4. Lang Wu , University of British Columbia

Title: Survival models with truncated time-varying covariates

Session Title: Stochastic Models for Dynamic Biological Data

Organizer and Chair: Ximing Xu, Nankai University, China

Speakers and Titles:

1. Yun Cai, Dalhousie University

Title: Deconvolution density estimation with MLE method

2. Yue Zhang, University of Ottawa

Title: Stochastic model for the speciation and rate variation in paleopolyploid plants

3. Libai Xu, Nankai University

Title: An SDE approach to modelling dynamic microbial data

4. Shen Ling, Dalhousie University

Title: Handling block-missing data with model combination methods

Session Title: Recent Development in the Statistical Modeling of Complex Data

Organizer and Chair: Dongsheng Tu, Queen's University

Speakers and Titles:

1. Yi Niu, Dalian University of Technology

Title: Variable selection for marginal mixture cure models via penalized GEE

2. Xinyi Ge, Queen's University

Title: A single-index threshold linear mixed model for identification of treatment-sensitive subsets

3. Xin Liu, Shanghai University of Finance and Economics, China

Title: Dynamic Prediction Incorporating Spatio-temporal Association and Measurement Error

4. Juan Xiong, Shengzhen University, China

Title: Diagnosis of esophageal cancer through RNA sequencing analysis

Session Title: Statistical Learning Methods for High-dimensional Data

Organizer and Chair: Longhai Li, University of Saskatchewan

Speakers and Titles:

1. Wei Xu, University of Toronto

Title: Statistical learning in high-dimensional microbiome and genomic data

2. Xuewen Lu, University of Calgary

Title: Bi-level Variable Selection Method for Multivariate Failure Time Data

3. Karen Kopciuk, University of Calgary

Title: Modelling ordinal response data with high dimensional, mixed covariate types.

4. Maxime Turgeon, University of Manitoba

Title: A Tracy-Widom Empirical Estimator For Valid P-values With High-Dimensional Datasets

Session Title: New Techniques for Modern Data Analysis

Organizer and Chair: Linglong Kong, University of Alberta

Speaker and Titles:

1. Ejaz Ahmed, Brock University

Title: Implicit Bias in Big Data Analytics

2. Lingzhu Li, University of Alberta

Title: Model checking for parametric regression models

3. Guodong Li, HongKong University

Title: High-dimensional Vector Autoregressive Modeling via Tensor Decomposition

4. Mihye Ahn, University of Nevada at Reno

Title: Spatially weighted reduced-rank framework for group analysis of functional neuroimaging data

Session Title: Advances in Analysis of Complex Data

Organizer and Chair: Changbao Wu, University of Waterloo

Speakers and Titles:

1. Song Cai, Carleton University

Title: A Simple Variable Selection Method Under Two-fold Subarea Models in Small Area Estimation

2. Henry So, University of Waterloo

Title: Correlated and Misclassified Binary Observations in Complex Surveys

3. Steven Wang, York University

Title: Statistical Analysis of Complex Clinical Data

4. Zilin Wang, Wilfrid Laurier University

Title: Analysis of Heath Surveys with Multilevel Models

SessionTitle: New advances in nonparametric statistics for big data

Organizer and Chair: Zhengwu Zhang, University of Rochester

Speakers and Titles:

1. Yize Zhao, Cornell University

Ttitle: Bayesian nonparametric clustering analysis with an incorporation of biological network for high-dimensional multi-scale molecular data

2. Yafei Wang, Beijing University of Technology

Title: Functional linear model with incomplete observations

3. Xing Qiu, University of Rochester

Title: iSPREAD: A personalized inference pipeline for medical images

4. Haiying Wang, University of Connecticut

Tentative title of the talk: Optimal subsampling: sampling with replacement vs Poisson sampling

Session Title: New Development in the Analysis of Complex Structured Data

Organizer: Wenqing He, University of Western Ontario

Chair: Dongsheng Tu, Queen's University

Speakers and Titles:

1. Lixing Zhu, Hong Kong Baptist University and Beijing Normal University

Title: Recent development in the Statistical Inferences of Measurement Error Models

2. Jianguo Sun, University of Missourri

Title: A Copula Model Approach for Regression Analysis of Informatively Interval-censored Failure Time Data

3. Xingqiu Zhao, The Hong Kong Polytechnic University, Hong Kong

Title: Semiparametric Statistical Inference for Functional Cox Model

4. Zhanfeng Wang, University of Science and Technology of China

Title: Nonparametric Random Effect Functional Regression Model with Gaussian Process Priors

Session Title: The Analysis of Complex Structured Data

Organizer: Wenqing He, University of Western Ontario

Chair: Longhai Li, University of Saskatchewan

Speaker and Title:

1. Liqun Wang, University of Manitoba

Title: Variable selection with measurement error

2. Wenyu Jiang, Queen's University

Title: Joint modeling of survival outcome and another response

3. Longhai Li, University of Saskatchewan

Title: High-dimensional or correlated data analysis

4. Ying Zhang, Acadia University

Title: Some nonparametric rank-based statistics in time series trend analysis

Session Title: New advances in complex data analysis

Organizer and Chair: Weixin Yao, University of California, Riverside

Speaker and Title:

1. Xin Zhang, Florida State University, Common Reducing

Title: Subspace Model and Network Alternation Analysis

2. Derek Young, University of Kentucky

Title: Some Depth-Based Approaches to Statistical Regions

3. Bing Han, RAND Corporation

Title: Rand Synthetic Estimation for Causal Inference

4. Yanglei Song, Queen's University

Title: Distribution approximation and bootstrap for suprema of incomplete U-processes