

YIJUN XIE

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EDUCATION

University of Waterloo

September 2017 - Present

PhD in Statistics

Department of Statistics and Actuarial Science

University of British Columbia

August 2015 - April 2017

MSc in Statistics

Department of Statistics

University of Notre Dame

August 2012 - May 2015

BSc in Applied Mathematics

Department of Applied and Computational Mathematics and Statistics

RESEARCH INTERESTS

High Dimensional Data Analysis, Functional Data Analysis, Machine Learning

RECENT PROJECTS

Longitudinal Data Analysis with High Dimensional Covariates

September 2019 - Present

- Proposed supervised and unsupervised learning framework for handling time-varying biomarkers in cancer related applications.

Dimensional Reduction for High Dimensional and Functional Data

January 2018 - Present

- Proposed an innovative framework for efficient dimension reduction of high dimensional and functional data, which can serve as alternative to principal component analysis (PCA).

Legal Study on Labor Unions in British Columbia, Canada

September 2016 - November 2019

- Conducted appropriate statistical analysis, provided oral and written reports, and prepared the data analysis for the research paper.

Bayesian Inference for Time Series

January 2016 - April 2017

- Proposed an innovative inference method for autoregressive stochastic volatility model using Markov chain Monte Carlo (MCMC).

RESEARCH PAPERS

1. Xie, Y., Rice, G., and Kolkiewicz, A. (2020+). Projection pursuit based tests of normality with functional data. Under revision. Journal of Statistical Planning and Inference.
2. Slinn, S. and Xie, Y. (2020+). Unfair Labour Practices and the Dilemma of Certification Vote Timing. Submitted to Canadian Labour and Employment Law Journal.
3. Xie, Y., Rice, G., and Kolkiewicz, A. (2020+). Functional time series forecasting via projection pursuit. Ready for submission.
4. Jiang, S. and Xie, Y. (2020+). Dynamic prediction for time-to-event data based on a functional projection pursuit algorithm. Working paper.

5. Xie, Y., Rice, G., and Kolkiewicz, A. (2020+). Dimension reduction using projection pursuit in functional change-point detection. Working paper.
6. Xie, Y., Rice, G., and Kolkiewicz, A. (2020+). Change-point detection based on empirical characteristic functions. Working paper.
7. Xie, Y. and Nolde, N. (2020+). A flexible inference method for an autoregressive stochastic volatility model. Working paper.

CONFERENCES

**11th International Conference on Bioinformatics Models,
Methods and Algorithms**

February 2020

Xie, Y. and Jiang, S. (2020). Variable Selection Based on a Two-stage Projection Pursuit Algorithm.

2019 Statistical Society of Canada Annual Meeting

May 2019

Xie, Y., Rice, G., and Kolkiewicz, A. (2019). An Application of Projection Pursuit in Functional Data Analysis: Functional Normality Test.

2018 Statistical Society of Canada Annual Meeting

June 2018

Xie, Y. and Nolde, N. (2018). A Flexible Inference Method for an Autoregressive Stochastic Volatility Model with an Application to Risk Management.

HONORS AND AWARDS

UWGS Scholarship

2017, 2018, 2019

Department Chairs Award

2018

Statistical Society of Canada Annual Meeting Best Poster Award

2018

Statistical Society of Canada Annual Meeting Student Travel Award

2016

TEACHING EXPERIENCE

Teaching Assistant

September 2017 - December 2018

Mathematical Statistics, Applied Linear Models,
Computational Statistics and Data Analysis

University of Waterloo

Teaching Assistant

September 2015 - April 2017

Elementary Statistics for Applications

University of British Columbia

PROGRAMMING SKILLS

R, Python, Tensorflow, Keras, SQL, Winbugs

REFERENCES

Name Shu (Joy) Jiang
Assistant Professor
Email jiang.shu@wustl.edu
Phone 314-286-0383
Address Division of Public Health Sciences
Washington University in St.Louis

Name Adam Kolkiewicz
Associate Professor
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Address Department of Statistics
and Actuarial Science
University of Waterloo

Name Gregory Rice
Assistant Professor
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