## Weijia (Grace) Yin

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https://github.com/graceyin06

RESEARCH INTERESTS

Cronbach's Alpha, Bayesian Inference in MCMC, Optimal Transport in Statistics

EDUCATION

University of British Columbia

September 2015 - May 2020 (Expected)

Bachelor of Science, Honours in Statistics

Relevant Coursework: Probability Theory, Stochastic Process, Real Analysis, Statistical Inference, Methods for Statistical Learning, Design and Analysis of Experiments, Relationships in Data

RESEARCH EXPERIENCE Bayesian Estimation for Cronbach's Alpha

July 2019 - March 2020

Research Supervisor: Professor Bruno Zumbo and Professor Edward Kroc

 Conducted Simulation studies and tests in R to explore the deep understanding of Bayesian estimators for Cronbach's Alpha

## Hardy Inequalities

May 2018 - December 2018

Research Supervisor: Professor Nguyen LAM

 Calculated the exact remainder terms of some versions of Hardy-type Inequalities with Bessel Pairs and radial derivatives

## Caffarelli-Kohn-Nirenberg Inequalities

May 2018 - December 2018

Research Supervisor: Professor Nguyen LAM

 $\circ\,$  Used suitable quasiconformal mappings to study the sharp versions and the optimizers of Caffarelli-Kohn-Nirenberg Inequalities

Publications

- N. T. Duy, N. Lam-Hoang, N. A. Triet, and W. Yin: Improved Hardy inequalities with exact remainder terms, submitted.
- N. T. Duy, P. Le-Long, and W. Yin: Hardy inequalities and Caffarelli-Kohn-Nirenberg inequalities with radial derivative, submitted. Mentored by Dr. Nguyen LAM.

Conference Talks

- Improved Hardy Inequalities with Exact Remainder Terms, 2018 Canadian Mathematical Society (CMS) Winter Meeting in Vancouver. (December 8th 2018)
- Hardy Inequalities and Bessel Pairs, BC Undergraduate Mathematics and Statistics Conference. (April 25th 2019)

OTHER TALKS

- Vine Copula in Statistical Modelling, UBC Machine Learning Reading Group mentored by Alexandre Bouchard, with uheng Xu and Kevin Chern. (2019 Fall (Expected))
- Calculus on Manifolds, UBC Machine Learning Reading Group mentored by Trevor Campbell, with uheng Xu.(2019 August)
- $\circ$  PAC-Bayes Bound of Neural Networks, UBC Machine Learning Reading Group mentored by Benjamin Bloem-Reddy, with Matteo Lepur.(2019 June)

Professional Service Journal of IEEE Transaction on Cybernetics

March 5th 2019

SELECTED COURSEWORK

- Probability Theory (graduate) Stochastic Process (graduate)
- Statistical Inference (graduate)
- $\circ\,$  Real Analysis
- Methods for Statistical Learning Design and Analysis of Experiments
- Relationships in Data

Relevant Skills

Languages: English, Mandarin

Programming: IATEX, Python,R, MATLAB, MySQL, Java,

EMPLOYMENT

Look4Tutor Institute, Vancouver, B.C.

University-Level MATH Tutor,

September 2018 - Present

- $\circ\,$  Teach calculus, linear algebra and mathematical proof courses Chinese courses
- Support students with exam preparation to help them improve their grades

LAST UPDATED

August 20, 2019