

Xiangjie Xue

PASSIONATE ABOUT PROGRAMMING · DRIVEN BY STATISTICS

☎ (+64) 21-0828-3585 | ✉ xxjiexjie@gmail.com | 📍 xiangjiexue

Overview

- A PhD student in Statistics. Thesis has been submitted and is currently under examination.
- Received Bachelor of Science (Honours) in Statistics with First Class, Bachelor of Science in Applied Mathematics and Operations Research.
- A strong background in R and C++, and comfortably working in a large data environment.

Research

Large-scale Inference Using Non-parametric Mixtures

The University of Auckland

PHD PROJECT SUPERVISED BY DR. WANG YONG

May. 2016 - Sep. 2020

A new approach to solving large-scale inferential problems using non-parametric mixtures is proposed. The new approach not only takes the advantages of the great flexibility in non-parametric mixture methods, but it is also able to make use of the common features among observations in order for a more efficient and accurate estimation. This new approach is then applied to multiple hypothesis testing and covariance matrix estimation.

NOTE: The thesis is not available since it is confidential to the examination process.

Gap Properties of Brownian Motion on the Two-dimensional Unit Torus

The University of Auckland

HONOURS DISSERTATION SUPERVISED BY DR. MARK HOLMES AND DR. JESSE GOODMAN

Mar. 2015 - Nov. 2015

The tail distribution of the global largest radius in the complement of the Brownian motion on two-dimensional unit torus is studied using simulations. Observations are simulated using computer programs and then fitted with power-law distributions using two different approaches. The accuracy of the estimated circles is also assessed by looking at the movement of a Brownian motion between two conservative points in the simulated random walks. The dissertation is available [HERE](#).

Education

The University of Auckland

Auckland

PHD IN STATISTICS (THESIS SUBMITTED)

May. 2016 - Sep. 2020

- Received University of Auckland Doctoral Scholarship. The intention of the Scholarship is to encourage high achieving students enrolled in doctoral study.
- Took courses in multivariate analysis and data science practice.
- Some work was presented externally as a presentation in NZSA2017 (New Zealand Statistical Association 2017 in Auckland) and as a poster in JSM2019 (Joint Statistical Meeting 2019 in Denver, US.)

The University of Auckland

Auckland

BACHELOR OF SCIENCE (HONOURS) IN STATISTICS

Mar. 2015 - Nov. 2015

- Graduated with First Class Honours
- Took courses in probability theory, financial mathematics, R programming and statistical inference with First in Course Awards in two courses on statistical inference
- Summer Research Scholarship in statistical computing. Some work has been incorporated into **VGAM** package in **R**.

The University of Auckland

Auckland

BACHELOR OF SCIENCE IN APPLIED MATHEMATICS AND OPERATIONS RESEARCH

Mar. 2012 - Nov. 2014

- Received Senior Scholar Award in the Faculty of Science. The purpose of the Awards is to recognise graduating students who obtained the highest marks in their undergraduate programme.
- Courses taken in Applied mathematics include differential equations, numerical computation. Courses taken in Operations Research include stochastic processes, stochastic modelling and optimisation in Operations Research.
- Summer Research Scholarship with topics in partial differential equations (PDE). Numerical techniques were used to explore solutions to Hodgkin-Huxley equations as parameters were varied.

The University of California, Los Angeles

Los Angeles, US

A NON-DEGREE EXCHANGE PROGRAMME PROVIDED BY THE UNIVERSITY OF AUCKLAND

Sep. 2014 - Dec. 2014

- Received the 360° Auckland Abroad Exchange Travel Awards. The main purpose of the Awards is to assist students on an approved student exchange.
- Took courses including real analysis, mathematical modelling and financial mathematics.

Experience

The University of Auckland

Auckland

PART-TIME (GRADUATE) TEACHING ASSISTANT

Mar. 2013 - Jul. 2020

- Tutorial Tutor in courses such as general mathematics, probability, statistical inference, **R** programming and data science practice.
- Assistance Room Tutor mainly helping with undergraduate mathematics and statistics courses as well as programming required by those courses.