Curriculum Vitae

Yiran Wang

CONTACT
INFORMATION
350 George Street, Academic Office
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Personal Website

EDUCATION

University of Waterloo

Ph.D., Statistics, Sep 2019 - Aug 2024
- Thesis: *Modeling and Bayesian Computations for Capture-Recapture Studies*
- Advisor: Audrey Béliveau, Ph.D., Martin Lysy, Ph.D.

University of California, Irvine

M.S., Statistics, Sep 2017 - Jun 2019

Donghua University

B.S., Statistics, Sep 2013 - Jun 2017
- Thesis: *Influence of China's Innovation on Total Factor Productivity Based on Quantile Regression*
- Advisor: Rong Jiang, Ph.D.

PROFESSIONAL
EXPERIENCE

Postdoctoral Associate
Yale School of Public Health, New Haven, CT   Nov 2024 - Present
- Advisor: Bhramar Mukherjee, Ph.D.

Teaching Assistant
University of Waterloo, Waterloo, ON   Sep 2019 - Apr 2024

- Held regular office hours, proctored tests, marked assignments and tests for:

STAT 202 Introductory Statistics for Scientists	Fall 2019
STAT 230 Probability	Winter 2020, Spring 2020
STAT 330 Mathematical Statistics	Winter 2021, Fall 2021
STAT 331 Applied Linear Models	Spring 2020, Fall 2020, Winter 2021
STAT 371 Applied Linear Models and Process Improvement for Business	Fall 2019, Fall 2020, Winter 2022, Fall 2022
STAT 431 Generalized Linear Models and their Applications	Spring 2022, Spring 2023
STAT 436/836 Introduction to the Analysis of Spatial Data in Health Research	Winter 2023, Winter 2024

University of California, Irvine, Irvine, CA   Apr 2018 - Mar 2019

- Held regular office hours, conducted weekly discussion sections, graded homework and examinations for:
  STATS 7 Basic Statistics
  STATS 67 Introduction to Probability and Statistics for Computer Science

Research Assistant
University of Waterloo, Waterloo, ON   Jan 2020 - Apr 2024

- Built a new framework for the plant-capture method to estimate population size by incorporating uncertainty in the plants' assessments and also other factors with Bayesian and frequentist inference approaches.

    – Analyzed the stock population, proposed new Bayesian genetic mark-recapture methods, and applied to simulation studies and real-data analysis.

    – Supervisor: Audrey Béliveau, Ph.D., Martin Lysy, Ph.D.

Consultant
UW Statistical Consulting & Collaborative Research Unit, Waterloo, ON
                                                   Sep 2023 - Apr 2024

    – Advising students and faculty members on how to leverage sound statistical approaches in their analyses, with more active involvement in enhanced service projects.

PUBLICATIONS

1. **Y. Wang**, M. Lysy and A. Béliveau. Plant-Capture Methods for Estimating Population Size from Uncertain Plant Captures. *Under revision at Epidemiology*. [Arxiv]

2. **Y. Wang**, M. Lysy and A. Béliveau. Rapid Scaling of Compositional Uncertainty from Sample to Population Levels. *In Progress*.

3. **Y. Wang**, M. Lysy and A. Béliveau. Method of Moments Estimation of the Bayesian Credible Interval for Markov Chain Monte Carlo. *In Progress*.

PRESENTATIONS

1. **Y. Wang** "Plant-Capture Methods for Estimating Population Size from Uncertain Plant Captures" (Invited)   Jun 2024
The Statistical Society of Canada 2024 Annual Meeting
St. John's, Canada

2. **Y. Wang** "Plant-Capture Methods for Estimating Population Size from Uncertain Plant Captures"   Oct 2023
2023 Waterloo Student Conference in Statistics, Actuarial Science and Finance
Waterloo, Canada

3. **Y. Wang** "Bayesian Genetic Mark-Recapture Methods for Estimating Seasonal River Run Size of Stock Populations"   Aug 2023
2023 Joint Statistical Meetings
Toronto, Canada

4. **Y. Wang** "Genetic Mark-Recapture Methods for Estimating Population Size of Stock Populations"   May 2023
The Statistical Society of Canada 2023 Annual Meeting
Ottawa, Canada

5. **Y. Wang** "Bayesian Genetic Mark-Recapture Methods For Estimating Seasonal River Run Size Of Stock Populations"   Apr 2023
EURING Analytical Meeting & Workshop 2023
Virtual

6. **Y. Wang** "Genetic Mark-Recapture Methods For Estimating Seasonal River Run Size Of Stock Populations" (Poster)   Jun 2022
The 2022 International Society for Bayesian Analysis World Meeting
Montréal, Canada

7. **Y. Wang** "Genetic Mark-Recapture Methods For Estimating Seasonal River Run Size Of Stock Populations"   Jun 2022
International Statistical Ecology Conference 2022
Virtual

8. **Y. Wang** "Genetic Mark-Recapture Methods For Estimating Seasonal River Run Size Of Stock Populations" Jun 2022
   The Statistical Society of Canada 2022 Annual Meeting
   Virtual

9. **Y. Wang** "Bayesian Genetic Mark-Recapture Methods For Estimating Seasonal River Run Size Of Stock Populations" Jun 2021
   The Statistical Society of Canada 2021 Annual Meeting
   Virtual

10. **Y. Wang** "Bayesian Genetic Mark-Recapture Methods For Estimating Seasonal River Run Size Of Stock Populations" (Poster) Jun 2021
    EURING 2021 Analytical Meeting & Workshop
    Virtual

11. **Y. Wang** "Assessing Integrated Population Model Using Parametric Bootstrap"
    Feb 2021
    Bayesian Club Meeting, University of Waterloo
    Virtual

12. **Y. Wang** "Introduction to Markov Chain Monte Carlo" Jan 2021
    Bayesian Club Meeting, University of Waterloo
    Virtual

13. **Y. Wang** "A Simple Simulation about Convergence Diagnostics" Jan 2021
    Bayesian Club Meeting, University of Waterloo
    Virtual

SERVICE

Event and Organization
Committee Member May 2023 - Apr 2024
University of Waterloo Graduate International Student Advisory Committee (ISAC-G)

Conference Organizing Committee Sept 2022 - May 2023
The Eleventh Annual Canadian Statistics Student Conference (CSSC)

Conference Organizing Volunteer Nov 2021
The 2nd Waterloo Student Conference in Statistics, Actuarial Science and Finance

Mentorship
Mentor Jan 2024 - Apr 2024
University of Waterloo Women in Mathematics Directed Reading Program

Mentor May 2023 - Aug 2023
University of Waterloo Women in Mathematics Directed Reading Program

Mentor Volunteer Apr 2021, Apr 2022, Apr 2023, Apr 2024
ASA DataFest

PROFESSIONAL DEVELOPMENT

Canadian Statistical Sciences Institute CRT Workshop: *Modern Methods in Survey Sampling* 2024
University of Ottawa

Canadian Ecological Forecasting Initiative Summer School: *Forecasting for Decision-Making: An Epidemiological & Ecological Perspective*   2023
The Fields Institute for Research in Mathematical Sciences

Workshop: *NIMBLE virtual short course*   2023
NIMBLE Development Team

Canadian Statistical Sciences Institute CRT Summer School: *Modern Methods in Survey Sampling*   2022
University of Ottawa

AWARDS **University of Waterloo**
- Doctoral Thesis Completion Award   Apr 2024
- Women in Mathematics Directed Reading Program Distinguished Service Award
                Apr 2024
- Women in Mathematics Directed Reading Program Mentorship Award
                Aug 2023, Apr 2024
- Graduate Student Research Dissemination Award   May 2023, Mar 2024
- The Eleventh Annual Canadian Statistics Student Conference Travel Award
                May 2023
- Graduate Studies Conference Assistantship   May 2022
- University of Waterloo Senate Graduate Scholarship   Mar 2022
- Waterloo Special Graduate Student Entrance Award   Sep 2019

Donghua University
- Donghua University Outstanding Graduate   Jun 2017
- Donghua University Merit Scholarship   Dec 2016
- Donghua University Tianji Scholarship   Dec 2016
- Donghua University Social Work Excellence Scholarship   Dec 2015, Dec 2016
- Donghua University Outstanding Student Leader   Dec 2015, Dec 2016
- 1st Prize in Donghua University Mathematical Modelling Contest   Jun 2015

Other Awards
- Statistical Society of Canada Annual Meeting Student Grant   May 2024