

Vivian Yun Meng

☎ +1 604 889 3961 @ vivian.meng@stat.ubc.ca

EDUCATION

McGill University

PhD in Mathematics and Statistics

- Thesis “The θ -augmented Model for Bayesian Semiparametric Inference on Functional Parameters”

Montreal, Quebec, Canada

September 2014 – June 2022

University of British Columbia

Masters in Statistics

- Thesis “Extensions to the Multiplier Method for Inferring Population Size”

Vancouver, B.C., Canada

September 2012 – August 2014

TECHNICAL SKILLS

- + Quarto and Quarto-live for publishing interactive teaching resources
- + R programming
- + Git for version control
- + Jupyter notebook for production of reproducible class notes with coding examples

TEACHING EXPERIENCE

Lecturer, Department of Statistics, UBC

January 2023 – Present

Courses

STAT 536E/F

2024W2

STAT 305 Intro Statistical Inference

2024S2, 2023W1

STAT 302 Intro Probability

2024W2, 2023W2, 2022W2

STAT 200 Intro Statistics

2024WI

DSCI 100 Intro Data Science

 $2024W_2, 2024W_I, 2024S_I, 2023W_I$

Job Description

- Developing new teaching resources to facilitate student-led learning, including iclickers activities and pre-class/in-class/after-class worksheets.
- Teaching a wide range of courses from first-year to graduate level with class size ranging from 10 - 300 students.
- Managing course logistics both independently and collaboratively with as many as 4 co-instructors.
- Managing teaching assistants and student relations.

Teaching Assistant, Department of Statistics, UBC

September 2012 – December 2012

Courses and Job description

- Graduate TA for STAT 344 Sample Survey (1 semester), and STAT 305 Intro Statistical Inference (1 semester).
- Grading of student assignments.
- Conducting lab sessions and office hours.

RESEARCH EXPERIENCE

Department of Mathematics and Statistics, McGill University

Graduate Student Researcher

Supervisor: Prof. David A. Stephens

Montreal, Quebec, Canada

September 2014 – December 2022

- Developed Bayesian semiparametric inference technique for functional parameters to avoid misspecified likelihood models.
- The method repurposes the importance sampling formula for the construction of a Bayesian nonparametric model with the required marginal prior for the target functional parameter.
- The method is applicable to missing data analysis, causal inference, and for Bayesian inference of plug-in estimators. It also has the potential to improve small-sample inference over typical Bayesian misspecified models by employing a data-driven likelihood.

Department of Statistics, University of British Columbia

Graduate Research Assistant

Supervisor: Prof. Paul Gustafson

Vancouver, B.C., Canada

May 2012 – August 2014

- Developed model for population size estimation using capture-recapture data from multiple data-streams.
- Performed analysis on real data from the BC Centre for Disease Control (BCCDC), data-cleaning/filtering.
- Prepared report for BCCDC internal reporting.

Westcoast Women in Engineering, Science, and Technology

Work-study Student Researcher

Vancouver, B.C., Canada

September 2012 – August 2014

- Designed, conducted, and analyzed program evaluations for Westcoast Women in Engineering, Science, and Technology (WWEST).
- Analyzed data from external organizations regarding gender equity.
- Presented workshop on evaluation methodology to community organizations.

PUBLICATIONS

Meng, V. Y. and Stephens, D. A. (2022), “Targeting functional parameters with semiparametric Bayesian inference”, *arXiv preprint*: <https://doi.org/10.48550/arXiv.2204.09862>, November 2022

Meng, V. Y. and Gustafson, P. (2017) “Inferring population size: extending the multiplier methods to incorporate multiple traits with a likelihood-based approach”, *Stat*, 6(1):4–13, 2017

AWARDS & HONOURS

2015 Canada Graduate Scholarship – Doctorate, NSERC

2014 Marshall Prize, Department of Statistics, UBC

2014 Gertrude M. Cox Scholarship – Honorable Mention, American Statistical Association

2012, 2013 UBC Faculty of Science Graduate Award, UBC

2012 Canada Graduate Scholarship – Master’s, NSERC

REFEREES**Dr. Paul Gustafson**

Professor, Department of Statistics, UBC, Vancouver, B.C.

- Contact: gustaf@stat.ubc.ca

Dr. Jiahua Chen

Professor, Department of Statistics, UBC, Vancouver, B.C.

- Contact: jhchen@stat.ubc.ca

Prof. Euenia Yu

Associate Professor of Teaching, Department of Statistics, UBC, Vancouver, B.C.

- Contact: euenia@stat.ubc.ca