

Joe Watson

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Department of Statistics
3182 Earth Sciences Building, 2207 Main Mall
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Suite 209, 1690 Nelson Street,
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EDUCATION

University of British Columbia

Doctor of Philosophy in Statistics

Supervisor: James V Zidek Co. Supervisor: Marie Auger-Méthé

Vancouver, Canada

Expected completion: 2020

University of Bath and Simon Fraser University

Master of Mathematics with Study Year Abroad

Bath, UK and Vancouver, Canada

1st Class Honours (GPA 4.25 and 89%)

Research Experience

May 2017 -
onwards.

Research assistant, University of British Columbia
Supervisor – James V Zidek

- Developing a general framework for both detecting and correcting for preferential sampling within a spatio-temporal setting.

May 2017 -
Onwards

Research assistant, University of British Columbia
Supervisor – Gabriela V. Cohen Freue

- Writing a review paper for high-dimensional instrumental variables problems with an application to causal statistical genomics.

July 2017 –
Onwards

Short-term research consultant, University of British Columbia

- Helping to provide short-term statistical consulting through the STCS service at UBC.

Teaching Experience

Sep 2016 -
onwards.

Teaching assistant, University of British Columbia

- Running tutorial and lab sessions for introductory statistics courses.

May 2017 –
Onwards

Teaching assistant trainer and mentor, University of British Columbia

- Helping to design and run teaching workshops to help train future TAs in Statistics. Providing continual performance feedback.

May 2018 -
Onwards

Data Science for Social Good coordinator, University of British Columbia

- Providing statistical training to the cohort for the DSSG program, through the conducting of 9-hour intensive workshops. Mentoring the DSSG teams from concept creation through to delivery.

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Professional Experience

Sagentia

Summer Intern

Cambridge, United Kingdom

Summer 2014

- Involvement with the development of several consumer, medical and industrial products. Designing statistical quality control tests for new products and bespoke algorithm creation.

Works in Progress

A general theory for preferential sampling in environmental networks. *Submitted.*

A general theory for preferential sampling in environmental networks via a log-Gaussian Cox Process approach. *For submission shortly.*

A review of sparse methods for optimal instruments and their applications in high-dimensional genomics settings. *For submission shortly.*

Combining multiple data sources for estimating the presence of Southern Resident Killer Whales of the Coast of Vancouver Island using a thinned spatio-temporal point process. *Expected publication date September 2019. Contract with the Fisheries and Oceans Canada.*

Presentations and Posters

Apr 2018

University of Toronto Statistics Graduate Student Research Day

- Presented current work on preferential sampling in spatio-temporal networks as an invited speaker.

June 2018

SSC annual meeting 2018

- Presented current work on preferential sampling in spatio-temporal networks at the SSC annual meeting 2018.

Causal Inference in the Presence of Dependence Workshop

- Presented the same work as an invited speaker

July 2018

JSM Data Expo competition

- Presented a speed talk and poster on the problem of extreme weather predictions in the US at the Joint Statistical Meeting 2018.

Sept 2018

The Future of Statistical Modeling in Medical Data Leiden

- Presented work on high dimensional instrumental variable methods and participated in discussions as an invited guest.

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Research Interests

- Spatial statistics
- Spatio-temporal modeling
- Statistical Ecology
- Causal Inference
- Point Processes
- Novel applications for r-INLA

Awards, Scholarships and Bursaries

Sep 2016 -
onwards.

- UBC Four Year Fellowship
- UBC Tuition Award
- UBC International Tuition Award.

May 2016

James Duthie Award for Excellence in Statistics, awarded to the graduating student with the highest average grade in statistics courses at University of Bath.

Sep 2013 –
Apr 2015

Sagentia STEM bursary

Professional Memberships

Mar 2018 -
onwards.

- **American Statistical Association**, student member
- **Statistical Society Canada**, member

References

James V Zidek
Relationship: Supervisor
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Marie Auger-Méthe
Relationship: Co-Supervisor
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