

# Blair Laurence Bilodeau

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## EDUCATION

**University of Toronto**, PhD, Statistics  
Advisor: Prof. Daniel Roy

Sept 2018 – Present

**Western University**, Honours BSc, Financial Modelling  
GPA: 3.97 / 4.00

Sept 2014 – Apr 2018

## RESEARCH GRANTS

NSERC Michael Smith Foreign Study Supplement: \$6,000	2020
NSERC Alexander Graham Bell Canada Graduate Scholarship – Doctoral: \$105,000	2019 – 2022
NSERC Alexander Graham Bell Canada Graduate Scholarship – Master's: \$17,500	2018 – 2019
Queen Elizabeth II Graduate Scholarship in Science and Technology: \$15,000 (Declined)	2018 – 2019
NSERC Undergraduate Student Research Award: \$4,500	2018
NSERC Undergraduate Student Research Award: \$4,500	2017

## HONOURS AND AWARDS

Department of Statistical Sciences Student Ambassador Award	2020
New York Academy of Sciences ML Symposium Best Poster Award	2020
E.F. Burton and F.W. Burton Graduate Scholarship	2018
Robert and Ruth Lumsden Scholarships in Science	2017
Borwein Memorial Prize for top grade in Analysis I	2017
Western University Continuing Admission Scholarship	2014 – 2018

## EMPLOYMENT EXPERIENCE

### **Vector Institute, Toronto, Ontario**

*Graduate Researcher, Advised by Prof. Daniel Roy*

Jan 2019 – Present

Studying regret bounds for sequential prediction. Current projects focus on non-Lipschitz loss, data-dependent regret bounds, and dimension-free results.

### **Western University, London, Ontario**

*Undergraduate Researcher, Advised by Prof. David Stanford*

May – Aug 2018

Provided the first characterization of the effect on high priority customers from introducing a delay period for low priority customers in the M/G/1 accumulating priority queue.

*Undergraduate Researcher, Advised by Prof. David Stanford*

May – Aug 2017

Developed a Python simulation model of the internal medicine ward at London's University Hospital to study physician-nurse collaboration efficiency.

### **Canada Life Insurance, London, Ontario**

*Risk Research Intern, Wealth Management*

May – Aug 2016

### **Bell Canada, London, Ontario**

*Data Analyst Intern, Access Network*

May – Aug 2015

## RESEARCH VISITS

**Institute for Advanced Study**, Princeton, New Jersey

Jan – Mar 2020

Program: *Special Year on Optimization, Statistics, and Machine Learning*

**Simons Institute for Theoretical Computing**, University of California, Berkeley

July 2019

Program: *Foundations of Deep Learning*

- [4] B. Bilodeau\*\*, J. Negrea\*\*, D. M. Roy. (2020). **Relaxing the i.i.d. assumption: Adaptive minimax optimal sequential prediction with expert advice.** *arXiv:2007.06552*.
- [3] B. Bilodeau\*, D. A. Stanford. (2020). **Average waiting times in the two-class M/G/1 delayed accumulating priority queue.** *arXiv:2001.06054*.

## REFEREED PUBLICATIONS

- [2] B. Bilodeau\*, D. J. Foster, D. M. Roy. (2020). **Improved bounds on minimax regret under logarithmic loss via self-concordance.** *International Conference on Machine Learning*.
- [1] B. Bilodeau\*, D. A. Stanford, M. Goldszmidt, A. Appleton. (2019). **Simulated co-location of patients admitted to an inpatient internal medicine teaching unit: Potential impacts on efficiency and physician-nurse collaboration.** *INFOR: Information Systems and Operational Research*.

## INVITED TALKS

**Workshop on efficient literature reviews using Python.**

Canadian Statistics Student Conference, Virtual.

May 2020

## CONTRIBUTED TALKS

**Improved bounds on minimax regret under logarithmic loss via self-concordance.**

American Statistical Association Joint Statistical Meetings, Virtual. Poster.

Aug 2020

New York Academy of Sciences ML Symposium, Virtual. Poster.

Mar 2020

**Average waiting times in the two-class M/G/1 delayed accumulating priority queue.**

Canadian Queueing Conference, Toronto, Ontario. Oral.

Aug 2019

Southwestern Ontario Graduate Math and Stats Conference, Guelph, Ontario. Oral.

June 2019

Canadian Operational Research Society Annual Meeting, Saskatoon, Saskatchewan. Oral.

May 2019

**Simulated co-location of patients admitted to an inpatient internal medicine teaching unit.**

Canadian Queueing Conference, Edmonton, Alberta. Oral.

Aug 2018

EURO Operational Research Applied to Health Services Annual Meeting, Oslo, Norway. Oral.

July 2018

## TEACHING EXPERIENCE

**University of Toronto***Course Instructor*

STA347: Probability Theory

Summer 2020

*Head Teaching Assistant*

STA442: Methods of Applied Statistics

Fall 2019

STA261: Probability and Statistics II

Summer 2019

*Teaching Assistant*

STA257: Probability and Statistics I

Fall 2019

STA457: Time Series Analysis

Winter 2019

STA355: Theory of Statistical Practice

Winter 2019

STA347: Probability Theory

Fall 2018

ACT230: Mathematics of Finance for Non-Actuaries

Fall 2018

## VOLUNTEER POSITIONS

**Statistics Graduate Student Association, University of Toronto***Treasurer*

Sept 2019 – Present