Blair Laurence Bilodeau

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EDUCATION

University of Toronto, PhD, Statistics — Sept 2018 – Present
Advisor: Prof. Daniel Roy

Western University, Honours BSc, Financial Modelling — Sept 2014 – Apr 2018
GPA: 3.97 / 4.00

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

PREPRINTS

*lead author; **equal contribution

[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

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*

Volunteer Positions

Statistics Graduate Student Association, University of Toronto
Treasurer — Sept 2019 – Present