Olivier Binette | CV

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Research Interests

Bayesian and nonparametric statistics, posterior consistency, information inequalities, topological consistency.

Education

2017–2019 **M. Sc. in Mathematics**
Université du Québec à Montréal
Thesis: Bayesian Nonparametrics for Directional Statistics (Advisor: Prof. Simon Guillotte).

2014–2017 **B. Sc. in Mathematics**
Université du Québec à Montréal

Awards / Scholarships

2019	Alexander-Graham-Bell Canada Graduate Scholarship (**NSERC**[1]; 105 000$)
2019	**FRQNT**[2] Doctoral Research Scholarship (84 000$)
2019	Offered admission to **Stanford University** (Statistics PhD)
2017–2018	Alexander-Graham-Bell **NSERC** Master's Award (17 500$)
2017–2019	**FRQNT** Master's Award (30 000$)
2017	**NSERC** Undergraduate Research Award
2016	**NSERC** Undergraduate Research Award

Publications / Preprints / Posters

Binette, O. (2019). A Note on Reverse Pinsker Inequalities. *IEEE Transactions on Information Theory* (to appear).

Preprints..

Binette, O. et Guillotte, S. (2018). Bayesian Nonparametrics for Directional Statistics. *arXiv:1807.00305*. Submitted.

Posters...

Binette, O. & Coache, A. The Significance of the Adjusted R Squared. (Bio)Statistics Research Day. Montréal (Canada). September 21, 2018.

Binette, O. Classification and Topology, or Consequences of Sobolev Consistency. Canadian Statistics Student Conference. June 2, 2018.

Binette, O. et Guillotte, S. Semiparametric density modelling for directional statistics. 11th Conference on Bayesian Nonparametrics. Paris (France). June 26, 2017.

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[1]Natural Sciences and Engineering Research Council of Canada
[2]Fonds de recherche du Québec – Nature et technologies (Québec Research Fund - Nature and Technologies)

Talks

MLBytes Speaker Series (Duke University): Classification and Topology. North Carolina (United States). November 15, 2018.

Texas A&M University Nonparametrics Group: On Bayesian Nonparametric Estimation of Discontinuous Densities. Texas (United States). November 1, 2018. Invited by Professor Debdeep Pati.

Université du Québec à Montréal: A Circular Analogue to the Bernstein Polynomial Densities, Bayesian Nonparametrics and Large Support Asymptotics. Montréal (Canada). October 4, 2018. Invited by Professor Jean-François Coeurjolly.

Sherbrooke University: A Circular Analogue to the Bernstein Polynomial Densities. Sherbrooke (Canada). March 29, 2018. Invited by Professor Taoufik Bouezmarni.

Contributed . . . .

Graduate Student Seminar - UQAM: Computing the Hausdorff Alpha-Entropy. Montréal (Canada). July 24, 2018.

Statistics Society of Canada Annual Meeting: A Circular Analogue to the Bernstein Polynomial Densities. Montréal (Canada). June 4, 2018.

Mathematical Sciences Institute's Student Conference: Topology and Machine Learning. Sherbrooke (Canada). May 25, 2018.

Probability and Statistics Student Seminar - UQAM: Information, Likelihood and Divergence. Montréal (Canada). May 17, 2018.

Graduate Student Seminar - UQAM: Infinite Dimensional Probabilities. Montréal (Canada). December 4, 2017.

Mathematical Congress of the Americas: Bayesian Learning. Montréal (Canada). July 28, 2017.

Canadian Undegraduate Mathematics Conference: Bayesian Learning. Montréal (Canada). July 23, 2017.

Probability and Statistics Student Seminar - UQAM: Constructive Approximation. Montréal (Canada). May 25, 2017.

Academic Work Experience

2017–Now **Instructional Teaching Assistant at Université du Québec à Montréal**
Statistics I, Probability II, Analysis I & II, Analysis and Algebra for the Actuarial Sciences, Complex Analysis. Animation of weekly problem-solving sessions for classrooms of 10 to 80 students.

Summer 2017 **NSERC Research Internship**

Summer 2016 **NSERC Research Internship**

Leadership and Service

o Organizer of UQAM's Probability and Statistics Student Seminar during the 2016 and 2017 summers.

o Co-organizer of the Statistics Student Summit in Montréal (March 2019; `http://sesam2019.ca`).

o Co-organizer of UQAM's Graduate Student in Mathematics Seminar (2018-2019).

o Member of UQAM's Graduate Mathematics Programs Committee.

o Co-organized an activity for children on behalf of the *Institut des Sciences Mathématiques* (ISM) at the Montréal Science Center (summer 2018).