

# Mufan (Bill) Li

<https://mufan-li.github.io/>

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## DEGREES

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### University of Toronto

Ph.D. Statistics

Sept 2017 – Expected 2023

M.Sc. Statistics

June 2016

B.A.Sc. Engineering Science

June 2015

## RESEARCH ARTICLES

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### The Neural Covariance SDE: Shaped Infinite Depth-and-Width Networks at Initialization

Mufan (Bill) Li, Mihai Nica, and Daniel M. Roy

*NeurIPS 2022 (Selected for oral, nominated for award), arXiv Preprint, arXiv:2206.02768*

### Acceleration of Gossip Algorithms through the Euler–Poisson–Darboux Equation

Raphaël Berthier and Mufan (Bill) Li

*IMA Journal of Applied Mathematics, arXiv Preprint, arXiv:2202.10742*

### Analysis of Langevin Monte Carlo from Poincaré to Log-Sobolev

Sinho Chewi, Murat A. Erdogdu, Mufan (Bill) Li, Ruqi Shen, and Matthew Zhang

*COLT 2022 Extended Abstract, arXiv Preprint, arXiv:2112.12662*

### The Future is Log-Gaussian: ResNets and Their Infinite-Depth-and-Width Limit at Initialization

Mufan (Bill) Li, Mihai Nica, and Daniel M. Roy

*NeurIPS 2021, arXiv Preprint, arXiv:2106.04013*

### Higher Order Generalization Error for First Order Discretization of Langevin Diffusion

Mufan (Bill) Li and Maxime Gazeau

*arXiv Preprint, arXiv:2102.06229*

### Riemannian Langevin Algorithm for Solving Semidefinite Programs

Mufan (Bill) Li and Murat A. Erdogdu

*To appear in Bernoulli, arXiv Preprint, arXiv:2010.11176*

*Student Research Presentation Award at Statistical Society of Canada (SSC) Annual Meeting 2021*

## AWARDS

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### Ontario Graduate Scholarship

2019–2023

*University of Toronto*

### MITACS Accelerate Fellowship

August 2018

*with Borealis AI*

## Faculty of Applied Science and Engineering Undergraduate Summer Research Fellowship

May 2012

*with Professor Birsen Donmez*

### WORK EXPERIENCE

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#### **Borealis AI**

*Machine Learning Research Intern*

Supported by the MITACS Accelerate Fellowship.

August 2018 - April 2019

*Toronto, ON*

#### **Ontario Teachers' Pension Plan**

*Investment Analyst, Global Credit Products*

July 2016 - July 2017

*Toronto, ON*

#### **RBC Capital Markets**

*Intern, Electronic and Algorithmic Trading*

May 2013 - August 2014

*Toronto, ON*