

Mufan (Bill) Li

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

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DEGREES

University of Toronto

Ph.D. Statistics

Sept 2017 – Expected 2023

M.Sc. Statistics

June 2016

B.A.Sc. Engineering Science

June 2015

RESEARCH ARTICLES

Riemannian Langevin Algorithm for Solving Semidefinite Programs

Mufan (Bill) Li and Murat A. Erdogdu

To appear in *Bernoulli* (2022+), *arXiv Preprint*, [arXiv:2010.11176](https://arxiv.org/abs/2010.11176)

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

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](https://arxiv.org/abs/2206.02768)

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

Raphaël Berthier and Mufan (Bill) Li

IMA Journal of Applied Mathematics (2022), *arXiv Preprint*, [arXiv:2202.10742](https://arxiv.org/abs/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](https://arxiv.org/abs/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](https://arxiv.org/abs/2106.04013)

Higher Order Generalization Error for First Order Discretization of Langevin Diffusion

Mufan (Bill) Li and Maxime Gazeau

arXiv Preprint, [arXiv:2102.06229](https://arxiv.org/abs/2102.06229)

AWARDS

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

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