

CONTACT

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EDUCATION

THE UNIVERSITY OF BRITISH COLUMBIA 2021–Present

Doctor of Philosophy (PhD) in Statistics

Supervisors: Dr. Trevor Campbell and Dr. Benjamin Bloem-Reddy.

Advanced to candidacy in August 2024.

THE UNIVERSITY OF BRITISH COLUMBIA

2019–2021

Master of Science (MSc) in Statistics

Thesis: *Locally-Adaptive Boosting Variational Inference*.

Supervisors: Dr. Trevor Campbell and Dr. Benjamin Bloem-Reddy.

GPA: 94.2% out of 100%.

INSTITUTO TECNOLÓGICO AUTÓNOMO DE MÉXICO

2013–2017

Bachelor of Science (BSc) in Applied Mathematics, *summa cum laude*

Thesis: *Bayesian Design of Experiments for Generalized Linear Models*.

Supervisor: Dr. Ernesto Barrios-Zamudio.

GPA: 96.9% out of 100%.

PUBLICATIONS AND SOFTWARE

PEER-REVIEWED PUBLICATIONS

*First Author

- 2024 [G. C. Diluvi](#)*, B. Bloem-Reddy, and T. Campbell. **Mixed variational flows for discrete variables**. In *International Conference on Artificial Intelligence and Statistics*.
- 2022 [G. C. Diluvi](#)*, B. Dunham, N. Heckman, M. Lee, and R. Lourenzutti. **Structured, interactive resources for teaching Bayesian inference**. In *International Conference on Teaching Statistics*.

WORKSHOPS AND CONFERENCES

- 2024 [G. C. Diluvi](#)*, S. Isberg*, B. Dunham, N. Heckman, and M. Lee. **Using online student focus groups in the development of new educational resources**. In *The Royal Statistical Society International Conference*.

SOFTWARE

- 2023 MAD Mix: Learn discrete distributions with Measure-preserving And Discrete MixFlows. <https://github.com/giankdiluvi/madmix>.
- 2021 First Bayes R: Teach and learn Bayesian statistics with interactive Shiny apps! <https://github.com/giankdiluvi/first-bayes-r>.
- 2019 LBVI: Bayesian inference via locally-adapted boosting variational inference. <https://github.com/ubc-bayes/mixinf>.

NON-REFEREED PUBLICATIONS

- 2019 [G. C. Diluvi](#). **How does it make you feel?** *Significance*, 16(3), 26–29.
- 2018 [G. C. Diluvi](#)*, M. Mendoza, and G. Orantes. **Statistics in the 2018 Mexican general election quick counts**. *Laberintos e Infinitos*, 48, 29–37.
- 2018 M. Mendoza, [G. C. Diluvi](#), and G. Orantes. **Description of the Bayesian estimation model, stratification design, and sample size for Chiapas.** *Scientific, logistic, and operational criteria for the Quick Counts and sampling design protocol*, 43–45 and 53–67.

TALKS AND POSTERS

TALKS

- 2025 WNAR Annual Meeting: *Student Experiences Navigating Graduate School*. (Panelist.)
- 2024 UBC Statistics Seminar: *Using online student think-alouds to develop Shiny apps for teaching statistics*. (Co-presenter.)
- 2024 RSS International Conference: *Using student focus groups in the development of new educational resources*.
- 2023 SFU/UBC Joint Statistics Seminar: *Mixed variational flows for discrete variables*.
- 2022 ICOTS 11: *Structured, interactive resources for teaching Bayesian inference*.
- 2021 UBC Statistics Seminar: *Locally-adaptive boosting variational inference*.
- 2020 UBC Social Exposome Cluster Research Day: *Reliable statistical inference with complex, heterogeneous data*. (Prize for best master's presentation.)
- 2019 SFU/UBC Joint Statistics Seminar: *Quick counts in the 2018 Mexican general election*.
- 2018 ITAM Mathematics Colloquium: *Statistics behind the 2018 Mexican general election quick counts*.

ORGANIZED

- 2021 SFU/UBC Joint Statistics Seminar (co-organizer).
- 2019–21 Weekly graduate student-run seminars at UBC Statistics (co-organizer).

CHAired

- 2021 WNAR of IBS Distinguished Speaker Q&A with Dr. Michael I. Jordan (co-chair).

POSTERS

- 2024 AISTATS: *Mixed variational flows for discrete variables*.
- 2024 RSS International Conference: *Using student focus groups in the development of new educational resources*.

RESEARCH POSITIONS

- THE UNIVERSITY OF BRITISH COLUMBIA 2021–Present
Research Assistant, Department of Statistics
Supervisors: Dr. Trevor Campbell and Dr. Benjamin Bloem-Reddy
Doctoral research focused on developing algorithms for Bayesian inference over discrete variables.

- THE UNIVERSITY OF BRITISH COLUMBIA 2020–2024
Research Assistant, Department of Statistics
Supervisor: Dr. Nancy Heckman
Research focused on improving introductory instruction of Bayesian inference and on assessing interactive simulations in development via think-aloud sessions with students.

- THE UNIVERSITY OF BRITISH COLUMBIA 2020–2021
Research Assistant, Department of Statistics
Supervisors: Dr. Trevor Campbell and Dr. Benjamin Bloem-Reddy
Master's research project that combined ideas from MCMC and boosting variational inference to develop a novel algorithm for Bayesian inference.

TEACHING POSITIONS

THE UNIVERSITY OF BRITISH COLUMBIA	2019–Present
Teaching Assistant , Department of Statistics	
2025 Fall	STAT 306: Finding Relationships in Data.
2025 Spring	STAT 450: Case Studies in Statistics.
2022 Spring	STAT 450: Case Studies in Statistics.
2020 Spring	STAT 302: Introduction to Probability.
2020 Spring	STAT 200: Elementary Statistics for Applications.
2019 Fall	STAT 203: Statistical Methods.
THE UNIVERSITY OF BRITISH COLUMBIA	2021–2024
Teaching Assistant Trainer , Department of Statistics	
<ul style="list-style-type: none">• Organize and facilitate the yearly TA orientation workshop for incoming TAs.• Revamp the 2022 and 2023 orientation workshops, including redesigning most of the modules and restructuring it from two days to one day.• Automate the deployment, data gathering and analysis, and result emailing of the TA evaluation surveys carried out each term.• Supervise and give 1-on-1 feedback to new TAs.	
INSTITUTO TECNOLÓGICO AUTÓNOMO DE MÉXICO	2016
Teaching Assistant , Department of Statistics	
2017 F&S	Undergraduate Faculty (answer questions from all courses).
2016 Fall	EST-14102: Multivariate Probability.
2016 Spring	EST-14102: Multivariate Probability.

SERVICE

REVIEWER	
<ul style="list-style-type: none">• Transactions on Machine Learning Research (TMLR).• International Conference on Teaching Statistics (ICOTS).	
SERVICE TO UBC	
2022–24	UBC Statistics Graduate Student Association, graduate student representative.
2023	UBC Faculty of Science external review, graduate student participant.
2021	UBC Statistics external review, graduate student participant.
SERVICE TO ITAM	
2015–17	ITAM Math, Stats, and Actuarial Science student journal, Laberintos & Infinitos, editor (2015–2016) and editor in chief (2017).

DISTINCTIONS AND AWARDS

2021–25	UBC President’s Academic Excellence Initiative PhD Award (\$5,500 CAD).
2021–24	UBC Four Year Doctoral Fellowship (\$95,800 CAD).
2024	UBC Graduate Student Travel and Research Dissemination Fund (\$500 CAD).
2021–23	UBC Department of Statistics Entrance Scholarship (\$15,000 CAD).
2019–23	UBC International Tuition Award (\$16,000 CAD).
2021	UBC Department of Statistics Teaching Assistant Award (\$500 CAD).
2020	UBC SEC Research Day: prize for best master’s presentation (\$500 CAD).
2019	XXIV ITAM Alumni Research Awards: Honorable Mention, applied math category.

THE UNIVERSITY OF BRITISH COLUMBIA

2020–Present

Statistical Consultant, Department of Statistics

Projects that I have worked on:

- 2025 The effect of estrogen and progesterone on the way we breathe during exercise in hypoxia and normoxia (*mentor as TA of STAT 450*).
(Research based on subsequent consulting published in client's MSc thesis: S. Arn. (2025). *Hormones, hypoxia and exercise hyperpnoea: considerations of the menstrual cycle and hormone replacement therapy*. University of British Columbia.)
- 2022 The use of the R sounds in the variety of Portuguese spoken by Santomean immigrants in Portugal (*mentor as TA of STAT 450*).
- 2021 The right to Vancouverism: social reproduction placemaking in the revanchist city.
- 2021 An investigation on the role of urban neighborhood green spaces in mitigating stress inflicted due to the COVID-19 isolation.
- 2021 Sample size calculations and statistical analysis of key e-commerce metrics.
- 2020 Functional consequences of TMEM30A mutations in the survival of lymphoma.
- 2020 The sporting history and athlete development pathway of Canadian university athletes.
- 2020 Humane pigeon pest control management: Ovocontrol P at TransLink Skytrain stations.
- 2020 Navigational strategies in rats that lack newborn neurons.
- 2020 An analysis on commercial real estate property assessment and property tax in BC.
- 2020 Exploring the effect of environmental drivers on salmon condition during outmigration.

PFIZER INC

2016–2019

Business Analytics

Intern (2016), Analyst (2017), Coordinator (2018), Sr. Coordinator (2019)

I developed data-driven analyses and presented them to marketing directors with no formal statistical training. My last two projects were leading the development of a company-wide dashboard used in monthly in-depth business reviews and training a random forest model to identify potentially-loyal physicians.

MEXICO'S NATIONAL ELECTORAL INSTITUTE (INE)

2018

Research Assistant

The INE formed a nine-member and twelve-assistant committee to carry out quick counts for the 2018 Mexican general election. I worked as a research assistant for committee-member Dr. Manuel Mendoza. We improved his original Bayesian model, defined the sampling design used in Chiapas, and I developed the code for generating the official report for the Presidential election.