Gian Carlo Di-Luvi M.

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Contact

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Education

The University of British Columbia 2019–Present
Master of Science (M.Sc.) in Statistics
Thesis supervisors: Dr. Trevor Campbell and Dr. Benjamin Bloem-Reddy.
GPA: 9.42/10.

Instituto Tecnológico Autónomo de México 2013–2017
Bachelor of Science (B.Sc.) in Applied Mathematics, *summa cum laude*
Thesis: *Bayesian Design of Experiments for Generalized Linear Models.*
Thesis supervisor: Dr. Ernesto Barrios-Zamudio.
GPA: 9.69/10.

Research Interests

- Developing theoretically-sound, scalable algorithms for Bayesian inference.
- Statistical emulation (Gaussian process regression).
- Probability theory (sufficiency, exchangeability, other types of symmetry).
- Bayesian design of experiments.

Academic Positions

The University of British Columbia 2020–Present
Research Assistant, Department of Statistics and Department of Chemistry
Tri-agency-administered New Frontiers in Research Fund — Explore project
I am working with Drs. Trevor Campbell, Tao Huan, and Martin Guhn on a project which aims to integrate qualitative social determinants with quantitative environmental measurements to investigate their synergistic effects on child development. My tasks include helping with developing the statistical model as well as devising an efficient algorithm to train the model.

The University of British Columbia 2020–Present
Research Assistant, Department of Statistics
I am working under Drs. Benjamin Bloem-Reddy and Trevor Campbell on a research project that combines ideas from MCMC and boosting variational inference to develop a novel scalable algorithm for Bayesian inference.

The University of British Columbia 2020–Present
Research Assistant, Department of Statistics
I am working under Dr. Nancy Heckman in the Flexible Learning project, an initiative that brings together open and vetted resources to help promote the teaching and learning of introductory Statistics. My tasks include developing resources such as Shiny apps and activities, as well as organizing and analyzing the results of focus groups.

The University of British Columbia 2019–2020
Teaching Assistant, Department of Statistics
- STAT 302 Introduction to Probability.
- STAT 203 Statistical Methods.
- STAT 200 Elementary Statistics for Applications.

Instituto Tecnológico Autónomo de México 2017

Editor in Chief, Laberintos & Infinitos

As editor in chief of Laberintos & Infinitos, ITAM's Mathematics' student journal, I led a 10-people team; during my tenure, three numbers were published and the fifteen-year anniversary of the journal was successfully celebrated.

Instituto Tecnológico Autónomo de México 2017

Undergraduate Faculty Member, Department of Mathematics

The Undergraduate Faculty of the Department of Mathematics is made up of senior students of academic excellence who tutor and answer questions from younger students about any of the courses offered in the Applied Mathematics B.Sc.

Instituto Tecnológico Autónomo de México 2016

Teaching Assistant, Department of Statistics

EST-14102 Probability II.

- Multivariate random variables and probability distributions.
- Sequences of random variables and types of convergence.
- Law of large numbers and Central Limit Theorem.

Instituto Tecnológico Autónomo de México 2015–2016

Editor, Laberintos & Infinitos

Publications

- Di-Luvi, G. C. (2019). **How does it make you feel?** *Significance, 16*(3), 26-29.
- Di-Luvi, G. C., Mendoza, M., and Orantes, G. (2018). **Statistics in the 2018 Mexican general election quick counts**. *Laberintos e Infinitos, 48*, 29-37.
- Di-Luvi, G. C. (2018). **Bayesian design of experiments**. *Laberintos e Infinitos, 46*, 43-50.
- Mendoza, M., Di-Luvi, G. C., and Orantes, G. (2018). **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.
- Di-Luvi, G. C. (2017). **Generalized linear models: a Bayesian perspective**. *Laberintos e Infinitos, 45*, 36-45.
- Di-Luvi, G. C. (2017). **Decision theory and Bayesian statistics**. *Laberintos e Infinitos, 44*, 6-13.

Conferences

Presentations

- 2020 UBC Social Exposome Cluster Resarch Day: *Reliable statistical inference with complex, heterogeneous data.* (Accepted.)
- 2019 Winter SFU/UBC Joint Statistics Seminar: *Quick counts in the 2018 Mexican general election.*
- 2018 ITAM's Mathematics Colloquium, Mexico City: *Statistics behind the 2018 Mexican general election quick counts.*
- 2017 ITAM's Mathematics Colloquium, Mexico City: *Generalized linear models.*

Organized

- Co-organizer of the 2021 SFU/UBC Joint Statistics Seminar.
- Co-organizer of the weekly graduate student-run seminars at UBC Statistics (2019–2021).

Distinctions and Awards

- 2020 UBC International Tuition Award.
- 2019 UBC International Tuition Award.
- 2019 Honorary Mention in the XXIV ITAM Alumni Research Awards.
- 2013–2017 GPA in the top 1% of my undergraduate cohort.
- 2013–2016 75% scholarship at ITAM.

Other Activities

The University of British Columbia 2020–Present

Consultant, Department of Statistics

Projects that I have worked in as a consultant:

- Humane pigeon pest control management: Ovocontrol P at TransLink Skytrain stations.
- Navigational strategies in rats that lack newborn neurons.
- An analysis on commercial real estate property assessment and property tax in BC.
- Exploring the effect of environmental drivers on salmon condition during outmigration.

The University of British Columbia 2020–Present

Member, Social Exposome Cluster

Professional Experience

Pfizer Inc 2016–2019

Business Analytics

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

I developed data-driven models and analyses to discover business insights. These were usually presented to directors and managers with little to no formal statistical training.

Mexico's National Electoral Institute (INE) 2018

Research Assistant

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