LAMBERT DE MONTE

✓ l.demonte@ed.ac.uk

4 +44 7865 017268

Ohttps://lambertdem.github.io/

♀ Edinburgh, United Kingdom

EDUCATION

University of Edinburgh, Edinburgh, United Kingdom

Sep. 2022 -

PhD Statistics

Supervisors: Dr. Ioannis Papastathopoulos, Prof. Gabriele C. Hegerl

King Abdullah University of Science and Technology, Thuwal, Saudi Arabia

Feb. 2024 - May 2024

Visiting PhD student

Supervisor: Prof. Raphaël Huser

McGill University, Montréal, Canada

Sep. 2020 – June 2022

MSc Mathematics and Statistics Supervisor: Prof. Christian Genest

McGill University, Montréal, Canada

Sep. 2017 – May 2020

BSc Mathematics and Computer Science

RESEARCH INTERESTS

- Extreme value theory, Multivariate and spatial statistics, Probabilistic forecasting

- Machine learning, generative modelling
- Environmental applications in the context of climate change.

PUBLICATIONS

Research

- De Monte, L., Huser, R., Papastathopoulos, I., and Richards, J. (2025) *Generative modelling of multivariate geometric extremes using normalising flows*, arXiv preprint.
- Papastathopoulos, I., De Monte, L., Campbell, R., and Rue, H. (2023) *Statistical inference for radially-stable generalized pareto distributions and return level-sets in geometric extremes*, arXiv preprint.

Other

- Richards, J., De Monte, L. Review of "Risk Revealed: Cautionary Tales, Understanding and Communication" by Paul Embrechts, Marius Hofert, and Valérie Chavez-Demoulin. JABES (2024).
- Genest, C. and De Monte, L. (2021) À la recherche de la Rondurie, Accromath, Volume 16 p.24-29.

Thesis

- De Monte, L. A Spatial Gamma-Gamma Model for the Statistical Postprocessing of Ensemble Weather Forecasts. Master's thesis. McGill University, 2022.

SOFTWARE

- R package geometricExtremes: Creator and maintainer. Based on Papastathopoulos et al. (2023).

PRESENTATIONS AND POSTER SESSIONS

Invited

- Generative AI Modelling for Extreme Events, University of Edinburgh Generative AI Laboratory: Generative modelling of multivariate geometric extremes using normalising flows

 Jun. 2025
- Statistics seminar, University of Exeter: Geometric extreme value theory A normalising flows approach. Feb. 2025
- CMStatistics: Geometric extreme value theory A normalising flows approach. Dec. 2024
- CMStatistics: Bayesian inference for radially-stable distributions.

Dec. 2023

- BIRS-IMAG Modern Statistical and Machine Learning Approaches for High-Dimensional Compound Spatial Extremes (short presentation): Geometric inference for Hüsler–Reiss random vectors.

 May 2023
- Séminaires de sciences de la décision HEC Montréal: *Multivariate extremes A geometric Bayesian inference approach.*Sep. 2023

Contributed

- 14th International Conference on Extreme Value Analysis: *Generative modelling of multivariate geometric extremes* using normalising flows

 Jun. 2025
- 15th International Meeting on Statistical Climatology: *Flood risk modelling using geometric extreme value theory. Jun.* 2024
- CfS Annual Conference 2024 (poster): Multivariate radial Pareto distributions: a geometric approach to the statistical modelling of multivariate extremes.

 Jun. 2024
- 13th International Conference on Extreme Value Analysis (poster): *Bayesian approach to geometric inference for multivariate extremes.*Jun. 2023

AWARDS

School of Mathematics, University of Edinburgh

Sep. 2023

- Full PhD Studentship: £27,600 tuition and £19,200 stipend per year

Mitacs Canada Jan. 2022

- Funding for research on extreme value modeling in partnership with Hydro-Québec. \$30,000 (CAD)

SCIENTIFIC ARTICLE REVIEWING

Journals: Statistics and Computing.

WORK EXPERIENCE

Hydro-Québec Research Institute (IREQ)

Jan. 2022 - Aug. 2022

- Research partnership to develop methods for the statistical post-treatment of weather forecasts, specifically of extreme meteorological events.

DataHub, National Bank of Canada

May 2019 - Sept. 2020

- Development and automation of the official DataHub credit card data base.
- Statistical modeling of credit card use and behaviors.

RELEVENT EXPERIENCE

Postgraduate representative, School of Mathematics (University of Edinburgh)

Representative of the postgruadate students of the School of Mathematics

Sept. 2024 – Aug. 2025

- Intermediary between the students and the School administration.
- Representing the School of Mathematics to a Martingale foundation event for future scholars.

Teaching Assistantships (University of Edinburgh)

Tutoring workshops. Marking of assignments and examinations. List of courses:

- MATH10064 – Multivariate Data Analysis	Jan. 2025 – May. 2025
- MATH10093 – Statistical Computing	Jan. 2025 – May. 2025
- MATH10096 – Applied Statistics	Jan. 2025 – May. 2025
- MATH11176 – Extended Statistical Programming	Sep. 2023 – Dec. 2023
- MATH11187 – Generalised Regression Models	Sep. 2023 – Dec. 2023
- MATH08066 – Probability	Sep. 2023 – Dec. 2023
- MATH10093 – Statistical Computing	Jan. 2023 – May 2023
- MATH08051 – Statistics	Jan. 2023 – May 2023

Teaching Assistantships (McGill University)

Preparation of tutorial sessions, office hours availabilities for course related questions. Marking of midterm and final exams, supervision of assignment marking. List of courses:

- MATH 324 – Statistics	Jan. 2022 – May 2022
- MATH 323 – Probability	Sep. 2021 – Dec. 2021
- MATH 203 – Principles of Statistics	Jan. 2021 – May 2021

Statistics Helpdesk (McGill University)

Sep. 2020 – Dec. 2021

Providing help to undergraduate students in Statistics and Probability. Theoretical and programming guidance for courses in the range MATH 2XX - 5XX.

Undergraduate Project Guidance (McGill University)

Guidance of three students towards the completion of an undergraduate project in extreme value theory.

- MATH 470 Jan. 2022 – May 2022

- MATH 410 Jan. 2021 – May 2021 and Sep. 2021 – Dec. 2021

PROGRAMMING

Languages: R, Python, Julia, Bash, SQL, LaTeX.

High-performance computing: Eddie (University of Edinburgh), Ibex (King Abdullah University of Science and

Technology), CASIR (Hydro-Québec).

Cloud computing: Microsoft Azure (National Bank of Canada).

LANGUAGES

Bilingual: French, English.