LAMBERT DE MONTE

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EDUCATION

PhD Statistics, University of Edinburgh, United Kingdom *Sep. 2022 – Aug. 2026*
Supervisors: Dr. Ioannis Papastathopoulos, Prof. Gabriele C. Hegerl

Visiting PhD student, King Abdullah University of Science and Technology, Saudi Arabia *Feb. 2024 – May 2024 and Nov. 2025*
Supervisor: Prof. Raphaël Huser

MSc Mathematics and Statistics, McGill University, Canada *Sep. 2020 – June 2022*
Supervisor: Prof. Christian Genest

BSc Mathematics and Computer Science, McGill University, Canada *Sep. 2017 – May 2020*

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.

Book chapter

- Auld, G., De Monte, L., Papastathopoulos, I. Time series in extremes. In M. de Carvalho, R. Huser, P. Naveau, and B. J. Reich, editors, *Handbook on Statistics of Extremes*. Chapman & Hall, 2026.

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

- Python code geometricExtremesNF: Creator and maintainer. Based on De Monte et al. (2025)
- R package geometricExtremes: Creator and maintainer. Based on Papastathopoulos et al. (2023).
- R code TSExtremes: Collaborator. Based on Auld et al. (2026).

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 £20,800 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:
- MATH11199 – Python Programming *Sep. 2025 – Dec. 2025*
- MATH08066 – Probability *Sep. 2025 – Dec. 2025*
- 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.