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Ryan Campbell

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Research Interests

Multivariate extreme value theory and its applications, dependence modeling, stochastic processes, estimation of quantiles.

Education

2021–2025 PhD Statistics, Lancaster University

Thesis: Statistical Exploits of New Insights for Multivariate Extremes

Supervisor: Jennifer L. Wadsworth

2019–2020 MSc Mathematics & Statistics, McGill University

Thesis: Deterministic Gaussian Averaged Neural Networks

Supervisor: Adam Oberman

2015–2018 BSc Mathematics, McGill University

Papers

Preprints

- [1] J. L. Wadsworth and R. Campbell. Statistical inference for multivariate extremes via a geometric approach, 2022. URL https://arxiv.org/abs/2208.14951
- [2] R. Campbell, C. Finlay, and A. M. Oberman. Adversarial Boot Camp: label free certified robustness in one epoch, 2020. URL https://arxiv.org/abs/2010.02508
- [3] R. Campbell, C. Finlay, and A. M. Oberman. Deterministic Gaussian averaged neural networks, 2020. URL https://arxiv.org/abs/2006.06061

Teaching Assistantships

Lancaster University

Winter 2023	MATH 140	Statistics
Winter 2022	MATH 456/556	Extreme Value Theory
Winter 2022	MATH 235	Statistics II
Fall 2021	MATH330	Likelihood Inference

McGill University

Fall 2020	MATH 208	Intro. to Statistical Computing
Fall 2019	MATH 597	Topics in Applied Mathematics: Mathematics of Machine Learning
Fall 2019	MATH 223	Linear Algebra

Research & Professional Activities

• Data Science Intern

Desjardins General Insurance Group. Lévis, Québec. June–December 2020 (part-time), January–June 2021 (full-time)

• Undergraduate Summer Research

Department of Mathematics & Statistics, McGill University.

Supervisor: Johanna Nešlehová

May-September 2018

Honours, Awards, and Funding

2023-2027	FRQNT Doctoral research scholarship (CAD \$25,334)
2023-2026	NSERC Postgraduate Scholarship-Doctoral (CAD \$63,000)
2021-2025	EPSRC Mathematical Sciences studentship (minimum £62,436)
2020	Mitacs internship at Desjardins (CAD \$13,000)
2019-2020	Master's degree funding (CAD \$20,500)
2019-2020	McGill University Graduate Excellence Award (CAD \$3,400)
2018	Dr. Kenneth Davis Science Undergraduate Research Award (CAD \$6,500)

Languages & Skills

- Fluent in English and French.
- Proficient in R, Python (incl. PyTorch), Matlab, LaTeX, Java, HTML, Linux

Extracurricular Activities

- Treasurer, Lancaster University Folk Society Lancaster University 2023–2024 academic year.
- **VP Finance**, Graduate Student Association for Mathematics and Statistics (GSAMS) McGill University 2019–2020 academic year.
- Volunteer at the 2018 Statistical Society of Canada annual meeting Roles: Setting up audio-visual equipment for presentations and directing conference attendees to presentations.

 Location: McGill University
 3–6 June 2018