Thomas Tendron

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Education

University of Oxford, Oxford, UK — September 2020 - August 2024 (expected)
DPhil at the Centre for Doctoral Training (CDT) in Mathematics of Random Systems
Advisor: Julien Berestycki.

McGill University, Montréal, Canada — January 2019 - June 2020
M. A. in Mathematics
Advisors: Louigi Addario-Berry and Jessica Lin.

McGill University, Montréal, Canada — September 2015 - December 2018
B. A. Honours Mathematics, Minor in Computer Science
First Class Honours in Mathematics.

Research interests

Broad interest in probability theory and partial differential equations. Branching processes, reaction-diffusion equations, interacting particle systems, stochastic differential equations, stochastic partial differential equations. Applications in ecology, biology, physics, and machine learning.

Publications

L. Addario-Berry, J. Lin, T. Tendron, (2021) Barycentric Brownian Bees, *Annals of Applied Probability*, to appear, AAP.

Invited Talks

Etheridge Group Seminar - Department of Statistics - University of Oxford, July 7, 2021.
Title: A central limit theorem for a class of spatial coalescence-fragmentation processes in the slow coalescence regime.

Spring Retreat - CDT in Mathematics of Random Systems - University of Oxford, June 10, 2021.
Title: A central limit theorem for a class of spatial coalescence-fragmentation processes in the slow coalescence regime.

Contributed Talks and Posters

Workshop: Branching Systems, Reaction-Diffusion Equations and Population Models - CRM Montréal, May 3, 2022.
Poster Title: Barycentric Brownian Bees.

Seminars and Workshops Attended

Unifying Concepts in PDEs with Randomness, Centre de Recherches Mathématiques, Montréal, May 16-27, 2022.
Branching Systems, Reaction-Diffusion Equations and Population Models, Centre de Recherches Mathématiques, Montréal, May 2-13, 2022.
Probability Seminar, Department of Statistics, University of Oxford, Oxford, 2021-2022.
Stochastic Analysis Seminar, Department of Mathematics, Imperial College London, London, 2020-2022.
Stochastic Analysis and Mathematical Finance, Mathematical Institute, University of Oxford, Oxford, 2020-2022.
Northeast Probability Seminar, City University of New York, New York, November 21-22, 2019.

Schools Attended

2022 PIMS-CRM Summer School in Probability, University of British Columbia, Vancouver, May 30 - June 24, 2022.
Applied Stochastic Processes and Statistical Modelling, Academy for PhD Training in Statistics and Durham University, Durham, April 4-8, 2022.
Dynamics of Random Systems, Institut des Sciences Mathématiques, Montréal, June 10-14, 2019.

Teaching Experience

At the University of Oxford
Teaching Assistant and Tutor:
Probability on Graphs and Lattices — Michaelmas 2021
Applied Probability and Probabilistic Combinatorics — Hilary 2022

At McGill University
Teaching Assistant:
Ordinary Differential Equations — Winter 2020
Calculus 2 — Winter 2019, Fall 2019

Marker:
Advanced Probability Theory 1 — Fall 2019
Honours Probability — Fall 2017

Work Experience and Other Projects

Freelance June 2021-
Mathematician and Programmer

9 relevant short projects with 5 star reviews by clients. Applications of graph algorithms, probability theory, high-dimensional statistics, and coding in Python, C++ and Javascript to implement solutions to real world problems for engineering companies, start-ups, econometrics researchers, and students in quantitative fields. Clients from the UK, the US, Australia, France, Germany, and Canada.

DataSig May 2021
Data Preprocessing

Two-week long project as part of the CDT in Year 1. Normalization of 2D face and lip landmarks for lip-reading task. Improved the testing accuracy by 3.9% on average.

Ericsson Summer 2017
Software Developer Intern

Developed multiple continuous integration pipelines as code to automate the build, unit testing, feature testing, SonarQube analysis, unit and feature tests coverage reports, code-review scores and publishing for both Maven and Gradle based projects.

McGill University Health Center Summers 2016 and 2018
Software Developer Intern

2018: Developed the front-end for a questionnaire system in the Opal app, an application which connects cancer patients with their treatment team.

2016: Developed a web portal to connect cancer patients with their treatment team.

Honours and Awards

Research Travel Grant - University College - University of Oxford	March 2022
Oxford-Radcliffe Graduate Scholarship - University College - University of Oxford	2020-2024
Graduate Excellence Award - Dept of Maths & Stats - McGill University	Winter 2019-Winter 2020
Arts Undergraduate Research Internship Award - McGill University	Summer 2018
HackHarvard Grand Prize - Harvard University	November 2015
Wolfram Overall Winner - Wolfram	November 2015