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, machine learning and quantitative finance.

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. Language: Python.

Ericsson Summer 2017
Software Developer Intern

Developed of 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. The pipelines are Jenkins 2 jobs that are triggered upon patch set creation or merging with the master branch and run on Docker containers. Wrote in Groovy, Bash, YAML, XML and Java. Pipelines helped teams to adopt CI practices and increased code quality and testing by up to 50%.

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.

Languages: JavaScript, HTML, CSS, Angular, Bootstrap, Firebase Database.

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