# 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:

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| Probability on Graphs and Lattices | Michaelmas 2021 |
| Applied Probability and Probabilistic Combinatorics | Hilary 2022 |

**At McGill University**
Teaching Assistant:

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|---|---|
| Ordinary Differential Equations | Winter 2020 |
| Calculus 2 | Winter 2019, Fall 2019 |

Marker:

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| Advanced Probability Theory 1 | Fall 2019 |
| Honours Probability | Fall 2017 |

## Work Experience and Other Projects

**Freelance**                                                      June 2021- January 2022
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