RIVKA MITCHELL

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EDUCATION

University of Oxford   *Sept. 2021 - Sept. 2025 (estim.)*
DPhil (PhD) in Mathematics

EPSRC Centre for Doctoral Training (CDT): Mathematics of Random Systems
Research Supervisor: Professor Christina Goldschmidt

McGill University   *Jan. 2020 - Apr. 2021*
MSc in Mathematics and Statistics   *CGPA: 4.0*

Research Supervisor: Professor Louigi Addario-Berry

McGill University   *Sept. 2015 - Dec. 2019*
BSc in Honours Mathematics, Minor in Computer Science   *First Class Honours, CGPA: 3.68*

RESEARCH INTERESTS

Probability theory, random graphs and trees, scaling limits, mixing times of Markov chains.

EXPERIENCE

St. Hugh's College, **University of Oxford**
Stipendiary Lecturer in Mathematics   *Oct. 2022 - Present*

- Teaches tutorials in mathematics to undergraduate students and assists in conducting undergraduate admissions.
- Courses: Analysis I, II & III, Linear Algebra I & II, Groups and Group Actions, Differential Equations 2, Integral Transforms.

University of Oxford
Teaching Assistant   *Oct. 2021 - Present*

- Courses: Probability on graphs and lattices and Probability, measure, and martingales.

Mathematics Education for Social Mobility and Excellence Academic Mentor   *Jan. 2022 - Jul. 2022*

- Ran a weekly maths circle for elementary school students at Wykham Park Academy.
- Worked with students on problems encouraging thinking beyond process-focused responses to mathematical questions.

McGill University
Undergraduate Research Student   *May 2018 - Sept. 2018, May 2019 - Sept. 2019*

- Research student in the probability group under the supervision of Professor Louigi Addario-Berry.
- Researched the asymptotic behavior of a family of random functions on complete binary trees. This work culminated in a publication, see 3. under preprints and publications.

Teaching Assistant   *Sept. 2018 - Apr. 2019, Sept. 2020 - Apr. 2021*

- Courses: Calculus A, Calculus 1, Calculus 3, Honours Analysis 3, and Honours Analysis 4.

PREPRINTS AND PUBLICATIONS

1. Buckland, M., Kolesnik, B., Mitchell, R., and Przybyłowski, T. Random walks on Coxeter Interchange graphs, 2023, preprint arxiv:2401.17210, submitted.
2. Kolesnik, B., Mitchell, R., and Przybyłowski, T. Tournaments on signed graphs, 2023, preprint arXiv:2312.04532, submitted.
3. Addario-Berry, L,. Cairns, H., Devroye, L., Kerriou. C, and Mitchell, R. Hipster random walks, 2020, *Probability Theory and Related Fields*, 178: 437-473.

AWARDS AND GRANTS

- The Queen's College Academic Support Grant   *2024*
- The Queen's College Academic Support Grant   *2023*
- CDT in Mathematics of Random Systems Award   *2021 - 2026*
- McGill Math & Stats Grad Award   *2021*
- McGill Graduate Excellence Award   *2020, 2021*
- Mitacs Research Training Award   *2020*
- FQRNT Student international mobility support for team research projects (rejected due to COVID-19) *2020*
- NSERC Undergraduate Research Award   *2019*

TALKS, CONFERENCES, AND WORKSHOPS

- Bellair's Institute Probability & Combinatorics Eighteenth Annual Workshop, Holetown   *Mar. 2024*
- YEP: Interplay between local and global graph structures, Eindhoven   *Mar. 2024*
- EPSRC CDT Random Systems Workshop, London (invited talk)   *Jan. 2024*
- Random Walks in Bath, Bath   *Jun. 2023*
- Bellair's Institute Probability & Combinatorics Seventeenth Annual Workshop, Holetown   *Apr. 2023*
- Mathematics of Random Systems Summer School, Oxford   *Sept. 2022*
- RandNET Workshop on Random Graphs, Eindhoven   *Aug. 2022*
- MSRI Graduate School on Random Graphs, Berkeley   *Jul. 2022*
- The Mathematics of Large Networks Summer School, Budapest   *Jun. 2022*
- Online Open Probability School   *May - Jul. 2020*
- Summer School on Random Processes and Complex Networks, Nice   *Jul. 2019*
- ISM Discovery School: Dynamics of Random Processes Summer School, Montreal   *Jun. 2019*
- MIGSAA Summer School on Random Processes, Edinburgh   *Jun. 2018*