

Lawrence Hollom

Institute of Mathematics, EPFL SB MATH, 1015 Lausanne, Switzerland

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Current Position

Postdoctoral Researcher

Supervisor: Marius Tiba

February 2026 – Present

EPFL

Research Interests

- Infinitary and structural combinatorics
- Extremal and probabilistic combinatorics
- Random graphs and percolation
- High-dimensional geometry

Education

PhD in Pure Mathematics

Supervisor: Béla Bollobás

September 2022 – January 2026

University of Cambridge

Part III of the Mathematical Tripos

Master's degree

September 2019 – July 2020

University of Cambridge

Bachelor's degree in Mathematics

First class, ranked 2nd in year

September 2016 – July 2019

University of Cambridge

Awards

Foundation of Science Award

ICBS, 2026

Smith–Knight and Raleigh–Knight First Prize

University of Cambridge, 2024

Previous roles

Jane Street Capital

Quantitative Trader

September 2020 – January 2022

London, UK

Invited Talks

2025 October

Combinatorics Seminar, University of Cambridge

2025 February

Discrete Mathematics Seminar, London School of Economics

2025 January

Combinatorics Seminar, University College London

2024 May

Combinatorics Seminar, University of Cambridge

Teaching

Teaching assistant Convex Geometric Analysis, Spring semester

EPFL, 2026

Supervisions Part II Logic and Set Theory, Lent term

University of Cambridge, 2025

Supervisions Part IA Numbers and Sets, Michaelmas term

University of Cambridge, 2024

Supervisions Part II Logic and Set Theory, Lent term

University of Cambridge, 2024

Supervisions Part IA Numbers and Sets, Michaelmas term

University of Cambridge, 2023

Supervisions Part IB Analysis and Topology, Michaelmas term

University of Cambridge, 2022

Technical skills

Programming Languages/Tools Languages

Rust, Lean, OCaml, Java, Python, C#, L^AT_EX
English (native), French (intermediate)

Publications and preprints

- Hypercube geodesics with few colour changes** 2026
arXiv preprint
- Uniformly balanced H -factors in multicoloured complete graphs** 2026
arXiv preprint
with A. Banerjee
- Counterexamples to conjectures on strong maximality and minimality** 2026
Electronic Journal of Combinatorics
with B. Randall Shaw
- Reverse Littlewood–Offord problems with parity conditions** 2025
arXiv preprint
with G. B. Sorkin
- Connecting hypercube 1-factors** 2025
arXiv preprint
with B. Randall Shaw
- Approximate Itai-Zehavi conjecture for random graphs** 2025
arXiv preprint
with L. Lichev, A. Mond, J. Portier, and Y. Wang
- Finding a long cycle in a percolated vertex expander graph** 2026
Random Structures & Algorithms
- Monotonicity and decompositions of random regular graphs** 2025
arXiv preprint (Annals of Applied Probability, accepted)
with L. Lichev, A. Mond, J. Portier, and Y. Wang
- Double-jump phase transition for the reverse Littlewood–Offord problem** 2026
Journal of the London Mathematical Society
with J. Portier and V. Souza
- The Aharoni–Korman conjecture is false** 2025
arXiv preprint (Israel Journal of Mathematics, accepted)
- A note on high-dimensional discrepancy of subtrees** 2024
arXiv preprint (Discrete & Computational Geometry, accepted)
with L. Lichev, A. Mond, and J. Portier
- Discrepancies of spanning trees in dense graphs** 2024
arXiv preprint
with L. Lichev, A. Mond, and J. Portier
- A uniform bound on almost colour-balanced perfect matchings in colour-balanced complete graphs** 2025
Electronic Journal of Combinatorics
- Almost colour-balanced spanning forests in complete graphs** 2024
arXiv preprint
with A. Mond and J. Portier

- The bunkbed conjecture is not robust to generalisation** 2025
European Journal of Combinatorics
- On graphs with maximum difference between game chromatic number and chromatic number** 2025
Discrete Mathematics
- On monotonicity in Maker-Breaker graph colouring games** 2024
Discrete Applied Mathematics
- Tight Anti-Concentration of Rademacher Sums** 2025
Random Structures & Algorithms
with J. Portier
- A note on interval colourings of graphs** 2024
European Journal of Combinatorics
with M. Axenovich, A. Girão, J. Portier, E. Powierski, M. Savery, Y. Tamitegama, and L. Versteegen
- A new proof of the bunkbed conjecture in the $p \uparrow 1$ limit** 2024
Discrete Mathematics