

Ian C. George

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Waterloo, ON
Canada

Education

- 2023- PhD Combinatorics and Optimization, University of Waterloo. Supervisor: Ren Yeats.
- 2021-2023 MSc Mathematics, Dalhousie University. Supervisor: Jason Brown.
- 2017-2021 BSc Mathematics and Physics with certificate in Information Technology, Dalhousie University.

Teaching and related experience

- 2026 Marker and tutorial instructor for MATH 136 *Linear Algebra 1 for Honours Mathematics*, University of Waterloo. Graded student assignments and delivered tutorial sessions.
- 2025 Marker for CO 330 *Combinatorial Enumeration*, University of Waterloo. Graded student assignments.
- 2025 Marker for CO 480 *History of Mathematics*, University of Waterloo. Graded student assignments.
- 2025 Marker for MATH 136 *Linear Algebra 1 for Honours Mathematics*, University of Waterloo. Graded student assignments.
- 2025 Marker and tutorial instructor for MATH 239 *Introduction to Combinatorics*, University of Waterloo. Delivered tutorial sessions and graded student assignments and exams.
- 2025 Mentor for the Women in Math (WiM) Directed Reading Program (DRP), University of Waterloo. Supervised undergraduate students on a research project investigating poset invariants in Causal Set Theory (CST).
- 2024 Marker for MATH 239 *Introduction to Combinatorics*, University of Waterloo. Graded student assignments and exams.
- 2024 Marker for MATH 136 *Linear Algebra 1 for Honours Mathematics (online)*, University of Waterloo. Graded student assignments.
- 2024 Marker and tutorial instructor for MATH 239 *Introduction to Combinatorics*, University of Waterloo. Delivered tutorial sessions and graded student assignments and exams.
- 2023 Marker for MATH 239 *Introduction to Combinatorics*, University of Waterloo. Graded student assignments and exams.
- 2023 Tutorial instructor for MATH 1010 *Differential and Integral Calculus II*, Dalhousie University. Delivered tutorial sessions and assigned/graded quizzes.
- 2021 - 2023 Learning centre TA, Dalhousie University. Helping undergraduate students with calculus, linear algebra, discrete, and related mathematics courses.
- 2022 Quiz marker for MATH 1280 *Engineering Math*, Dalhousie University. Grading and providing feedback on students' quizzes.

- 2021 Assignment marker for MATH 2110 *Logic and Set Theory*, Dalhousie University. Grading and providing feedback on students' assignments.

Publications

JOURNAL ARTICLES

- 2025 Jason I. Brown and Ian C. George. On the roots of degree polynomials. *Australasian Journal of Combinatorics*, 92(2):164–183, 2025
- 2024 Jason I. Brown and Ian C. George. Modulation Graphs in Popular Music. *The Mathematical Intelligencer*, pages 1–8, 2024

PREPRINTS

- 2025 Ian George and Karen Yeats. The Generalized Interval Polynomial of a Poset. *arXiv:2511.14924*, 2025 (extended abstract submitted to FPSAC 2026)

THESES

- 2023 Ian George. On the Degree Polynomial of Graphs. Master's thesis, Dalhousie University, 2023

Grants, honours & awards

- 2026 Graduate Research Studentship (University of Waterloo)
- 2025 Graduate Research Studentship (University of Waterloo)
- 2024 Combinatorics and Optimization Graduate Award (University of Waterloo)
- 2023-2024 Graduate Research Studentship (University of Waterloo)
- 2023-2024 Math Domestic Graduate Student Award (University of Waterloo)
- 2022-2023 NSERC Canada Graduate Scholarships - Master's (CGS-M)
- 2021 NSERC Undergraduate Summer Research Award (USRA)
- 2020 Faye Sobey Undergraduate Research Award, Sobey Foundation
- 2019 Archibald Award, Department of Physics and Atmospheric Science, Dalhousie University
- 2019 A.S. MacKenzie Award, Department of Physics and Atmospheric Science, Dalhousie University
- 2019 Faye Sobey Undergraduate Research Award, Sobey Foundation
- 2018 J.G. MacGregor Award, Department of Physics and Atmospheric Science, Dalhousie University
- 2017 Entrance scholarship, Dalhousie University

Talks

- 2026 *Enumerating Convex Sets of Posets*, in the Algebraic and Enumerative Combinatorics Seminar, University of Waterloo.

Outreach/volunteering

- 2024

Co-organizer for MITP YOUNGST@RS *Combinatorics in Fundamental Physics* virtual workshop. Located virtually at the Mainz Institute for Theoretical Physics, Johannes Gutenberg University, November 26-29. Held invited talks about the role of combinatorics in several areas of fundamental physics, and had a cross-disciplinary discussion session.