

# Ian C. George

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Waterloo, ON  
Canada

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## Education

- 2023-        PhD Combinatorics and Optimization, University of Waterloo. Supervisor: Karen 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

- 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 Brown, Jason I. & George, Ian C. *On the roots of degree polynomials*. Australasian Journal of Combinatorics (accepted).
- 2024 Brown, Jason I. & George, Ian C. *Modulation Graphs in Popular Music*. The Mathematical Intelligencer.

### THESES

- 2023 *On the Degree Polynomial of Graphs*. MSc thesis. Supervisor: Jason Brown.

## Grants, honours & awards

- 2025 Graduate Research Studentship (University of Waterloo) (\$ 8478)
- 2024 Combinatorics and Optimization Graduate Award (University of Waterloo) (\$ 3187)
- 2023-2024 Graduate Research Studentship (University of Waterloo) (\$ 13240)
- 2023-2024 Math Domestic Graduate Student Award (University of Waterloo) (\$ 6000)
- 2022-2023 NSERC Canada Graduate Scholarships - Master's (CGS-M) (\$ 17500)
- 2021 NSERC Undergraduate Summer Research Award (USRA) (\$ 6000)
- 2020 Faye Sobey Undergraduate Research Award, Sobey Foundation (\$ 5500)
- 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 (\$ 5500)
- 2018 J.G. MacGregor Award, Department of Physics and Atmospheric Science, Dalhousie University
- 2017 Entrance scholarship, Dalhousie University (\$20 000)

## 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.