

HAOYANG HE

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Department of Mathematics and Statistics, Memorial University of Newfoundland, St. John's, NL, Canada

EDUCATION

- **Memorial University of Newfoundland** 2024–present
Doctor of Philosophy in Mathematics St. John's, NL, Canada
 - Supervisor: Prof. Eduardo Martínez-Pedroza
 - Research interests: geometric group theory, low-dimensional topology
- **University of Warwick** 2023–24
Master of Advanced Study in Mathematical Sciences (MASt) Coventry, England
 - MASt research project: Surface homeomorphisms without fixed points, supervised by Dr. Saul Schleimer
- **University of Manchester** 2019–23
Master of Mathematics with Honours (MMath (Hons)) Manchester, England
 - MMath project: Topology and algebra of finite graphs, supervised by Dr. Richard Webb
 - Third-year project: Geometric group theory, supervised by Dr. Richard Webb

EXPERIENCE

- **Teaching Skills Enhancement Programme** 2025–26
Memorial University of Newfoundland St. John's, NL, Canada
 - Attends weekly seminar on teaching strategies and course design during Autumn 2025.
 - Teaching apprenticeship scheduled in Winter 2026. This involves teaching, planning and design of the module MATH3331 Projective Geometry with the instructor Dr. Thomas Baird.
- **Graduate Teaching Assistant** 2024–25
Department of Mathematics and Statistics, Memorial University of Newfoundland St. John's, NL, Canada
 - Tutor at Maths Help Centre
 - Invigilator for mid-term and final exams
 - Teaching assistant for the following courses: MATH1001 Calculus II in Spring 2025; MATH4300/6332 General Topology/Point-set Topology in Winter 2025; MATH3300 Set Theory in Autumn 2024.
- **Peer Assisted Study Sessions Leader** 2020–21
Department of Mathematics, University of Manchester Manchester, England
 - Held weekly session across two semesters for a group of first-year undergraduate students in maths
 - Answered questions from students about first-year courses in mathematics

PREPRINTS

- [1] Haoyang He and Eduardo Martínez-Pedroza. **The curve complex as a coset intersection complex**, 2025. See <https://arxiv.org/abs/2510.23955> or https://haoyang-he.github.io/files/cc_as_cic.pdf.

AWARDS AND HONOURS

- **BP Achievement Award** April 2020
Department of Mathematics, Faculty of Science and Engineering, University of Manchester GB£1000
 - Awarded to two 1st-year undergraduate students in the Department for academic excellence

CONFERENCES ATTENDED

- **Focus Programme on Algebraic Topology in memory of Fred Cohen** 23rd–25th July 2025
Fields Institute Toronto, Ontario, Canada
- **Thematic Programme in Discrete Group in Topology and Algebraic Geometry** 9th–20th June 2025
Centre for Mathematics, University of Notre Dame Notre Dame, Indiana, United States