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) with Merit 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)), First Class 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