

Henry J. Twiss

MATHEMATICS UNDERGRADUATE

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Education

University of Minnesota Twin Cities

Minneapolis, MN

B.S. IN MATHEMATICS

Expected May 2021

- Major GPA: 3.86
- Cumulative GPA: 3.88
- Dean's List
- Honors Program

Selected Coursework

University of Minnesota Twin Cities

GRADUATE

Aug. 2017 - Present

- Algebraic Number Theory
- Manifolds and Topology
- Algebraic Topology
- Riemannian Geometry
- Topics in Algebra: Quantum Groups

Experience

Art of Problem Solving Inc.

San Diego, CA

GRADER AND CLASS ASSISTANT

Aug. 2017 - Jan. 2019

- Provided instruction and real-time comments to students in a live online classroom setting
- Gave thorough written feedback to high-achieving middle and high-school students on their mathematical reasoning and writing abilities

Extracurricular Activity

The Modular Perspective

Minneapolis, MN

OWNER

Jan. 2019 - Present

- Creating posts explaining mathematics pertaining to fields of interest
- Uploading written versions of presentations I have delivered
- Keeping an online archive of notes for graduate textbooks and classes

Directed Reading Program

University of Minnesota Twin Cities

MENTEE

Oct. 2018 - Present

- Mentor/mentee study in representation theory with weekly meetings and culminating in a presentation
- Mentor/mentee study in Hecke algebras with weekly meetings and culminating in a presentation
- Mentor/mentee study in linear algebraic groups and root systems with weekly meetings and culminating in a presentation

Geometry & Topology RTG

University of Notre Dame

ATTENDEE

Aug. 2019

- Attended the Geometry & Topology RTG workshop at the University of Notre Dame
- The workshop consisted of three days of talks and explorations into modern geometry and topology research

Honors & Awards

DOMESTIC

Dec. 2019 **National Nominee**, Barry M. Goldwater Scholarship

Minneapolis, MN

Apr. 2019 **Awarded**, William H. Burgum Scholarship

Minneapolis, MN

Presentation

Directed Reading Program Seminar

University of Minnesota Twin Cities

SPEAKER

Feb. 2019 - Dec. 2019

- Discussed the root datum of reductive linear algebraic groups and Chevalley's classification theorem
- Spoke about root systems and Hecke algebras and their use in representation theory of finite groups
- Delivered a talk on using representations to deduce the abelianness of finite groups

Student Number Theory Seminar

University of Minnesota Twin Cities

SPEAKER

Dec. 2019

- Delivered a seminar on computing moments of multiple Dirichlet L-series using infinite Kac-Moody Lie algebras

Miscellaneous Presentations

University of Minnesota Twin Cities

SPEAKER

Apr. 2019 - Dec. 2019

- Spoke about Riemannian holonomy, the de Rham decomposition theorem, Ambrose-Singer theorem, and Berger's classification
- Presented on the proof of the functional equation for the Riemann zeta-function for global function fields