HENRY TWISS

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RESEARCH INTERESTS

Weyl group multiple Dirichlet series – Half-integral weight modular forms – Siegel zeros

EDUCATION

Brown University, Providence, RI 2021-Present
PhD Mathematics, *expected May 2026*
Advisor: Jeff Hoffstein

University of Minnesota, Minneapolis, MN May 2021
B.S. Mathematics, *summa cum laude*
Advisor: Adrian Diaconu

PUBLICATIONS AND PREPRINTS

1. A. Diaconu, H. Twiss. Secondary terms in the asymptotics of moments of L-functions. Preprint, 2020; arXiv:2008.13297. *JNT Prime.*
2. S. Creech, H. Twiss. An extension of Venkatesh's converse theorem to half-integral weight forms in the Selberg class. *Preprint.*
3. K. Benli, S. Goel, H. Twiss, A. Zaman. Explicit zero-repulsion of Dirichlet L-functions. *In preparation.*
4. H. Twiss. A multiple Dirichlet series approach to shifted convolution sums of holomorphic cusp forms. *In preparation.*

AWARDS, SCHOLARSHIPS, FELLOWSHIPS, AND GRANTS

DOMESTIC
- Brown Mathematics First Year Fellowship, Brown University 2021
- NSF Graduate Research Fellowship, National 2021
- Barry M. Goldwater Scholarship, National 2020
- Hans H. Dalaker Scholarship, University of Minnesota 2020
- William H. Burgum Scholarship, University of Minnesota 2019
- Honors, every semester at University of Minnesota 2017-2021
- Dean's List, every semester at University of Minnesota 2017-2021

TRAVEL GRANTS
- BIRS Travel Grant, Inclusive Paths in Explicit Number Theory 2023
- University of Chicago RTG Travel Grant, Notre Dame Topology & Geometry Workshop 2019

EXPERIENCE

RESEARCH
DRS The Nonabelian Delta-symbol Method Research Group, Durham, NC
Analytic Number Theory and Automorphic Forms Dec. 2023 - Feb. 2024
BIRS Inclusive Paths in Explicit Number Theory Summer School, Kelowna, CA
Explicit Analytic Number Theory Jul. 2023 - Jul. 2023
University of Minnesota REU, Minneapolis, MN
Algebra, Combinatorics, and Representation Theory Jun. 2020 - Aug. 2020

TEACHING

Brown University, Providence, RI
Lecturer, Analytic Number Theory II — Mar. 2024 - May 2024

Art of Problem Solving, Online
TA, Introduction to Algebra B — May 2018 - Aug. 2018
TA, Introduction to Algebra A — May 2018 - Aug. 2018

WORKSHOPS AND CONFERENCES

AMS New England Graduate Student Conference — 2022
Spring Graduate Student Conference, Providence, RI

Online Conference in Automorphic Forms — 2020
Summer Conference in Automorphic Forms, Online

Algebraic Combinatorics Workshop — 2020
Spring Workshop in Algebraic Combinatorics, Online

Notre Dame RTG Topology & Geometry Workshop — 2019
Summer Workshop in Topology and Geometry, Notre Dame, IN

SEMINARS

Graduate Student Seminar, Brown University — 2021-Present
Algebra and Number Theory Seminar, Brown University — 2021-Present
Student Combinatorics and Algebra Seminar, University of Minnesota — 2020-2021
Student Number Theory Seminar, University of Minnesota — 2019-2021
Undergraduate Mathematics Research Seminar, University of Minnesota — 2017-2021
Summer Student Representation Theory Seminar, University of Minnesota — 2019-2020

PRESENTATIONS AND POSTERS

RESEARCH TALKS

Explicit zero-repulsion and Linnik's constant. — Nov. 2023
Brown University

A converse theorem in half-integral weight. — May 2023
Brown University

Root systems attached to moments of quadratic Dirichlet L-functions. — May 2021
University of Minnesota

EXPOSITORY TALKS

Statistics of L-functions modeled by random matrix theory. — Mar. 2023
Brown University

A synopsis of the origin story of WMDS. — Apr. 2022
Brown University

An introduction to Weyl group multiple Dirichlet series. — Apr. 2022
Brown University

k-Schur functions. — Jul. 2020
University of Minnesota

OUTREACH

Organizer, AMS New England Graduate Student Conference, Brown University — 2024
Mentor, Directed Reading Program, Brown University — 2020-2022

Organizer, Undergraduate Mathematics Research Seminar, University of Minnesota 2020 - 2021
Panelist, Mathematics Project Minnesota, University of Minnesota 2020
Panelist, Mathematics Major Exploration Event, University of Minnesota 2020

SKILLS

Programming Languages	Python, C++
Computer Algebra Systems	SageMath, Mathematica
Typeset	LaTeX, Tikz, Beamer