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. JNT PRIME, 2023; jnt.2023.04.010.

2. S. Creech, H. Twiss. A converse theorem in half-integral weight. Preprint, 2023; arXiv:2306.02872.

3. K. Benli, S. Goel, H. Twiss, A. Zaman. Explicit Deuring–Heilbronn phenomenon for Dirichlet L-functions. Preprint, 2024; arXiv:2410.06082.

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

Analytic Number Theory Learning Seminar, Brown University	2023-Present
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

Subconvexity for $\mathrm{GL}(2)$ *L-functions in the conductor aspect.*	Oct. 2024
PIMS CRG: L-functions in Analytic Number Theory	
Simultaneous non-vanishing for products of elliptic L-functions.	Sep. 2024
Brown University	
Explicit zero-repulsion of Dirichlet L-functions.	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