

# HENRY TWISS

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## RESEARCH INTERESTS

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

## EDUCATION

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**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

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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. Subconvexity for  $GL(2)$   $L$ -functions via multiple Dirichlet series. *In preparation*.
5. H. Twiss. Simultaneous non-vanishing for products of elliptic  $L$ -functions. *In preparation*.

## AWARDS, SCHOLARSHIPS, FELLOWSHIPS, AND GRANTS

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### 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

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### 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

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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

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<b>Analytic Number Theory Learning Seminar</b> , Brown University	2023-Present
<b>Graduate Student Seminar</b> , Brown University	2021-Present
<b>Algebra and Number Theory Seminar</b> , Brown University	2021-Present
<b>Student Combinatorics and Algebra Seminar</b> , University of Minnesota	2020-2021
<b>Student Number Theory Seminar</b> , University of Minnesota	2019-2021
<b>Undergraduate Mathematics Research Seminar</b> , University of Minnesota	2017-2021
<b>Summer Student Representation Theory Seminar</b> , University of Minnesota	2019-2020

## PRESENTATIONS AND POSTERS

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### RESEARCH TALKS

Subconvexity for $GL(2)$ $L$ -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	
<i>Explicit zero-repulsion of Dirichlet <math>L</math>-functions.</i>	Nov. 2023
Brown University	
<i>A converse theorem in half-integral weight.</i>	May 2023
Brown University	
<i>Root systems attached to moments of quadratic Dirichlet <math>L</math>-functions.</i>	May 2021
University of Minnesota	

### EXPOSITORY TALKS

<i>Statistics of <math>L</math>-functions modeled by random matrix theory.</i>	Mar. 2023
Brown University	
<i>A synopsis of the origin story of WMDS.</i>	Apr. 2022
Brown University	
<i>An introduction to Weyl group multiple Dirichlet series.</i>	Apr. 2022
Brown University	
<i><math>k</math>-Schur functions.</i>	Jul. 2020
University of Minnesota	

## OUTREACH

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<b>Organizer</b> , AMS New England Graduate Student Conference, Brown University	2024
<b>Mentor</b> , Directed Reading Program, Brown University	2020-2022
<b>Organizer</b> , Undergraduate Mathematics Research Seminar, University of Minnesota	2020 - 2021
<b>Panelist</b> , Mathematics Project Minnesota, University of Minnesota	2020
<b>Panelist</b> , Mathematics Major Exploration Event, University of Minnesota	2020

## SKILLS

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<b>Programming Languages</b>	Python, C++
<b>Computer Algebra Systems</b>	SageMath, Mathematica
<b>Typeset</b>	LaTeX, Tikz, Beamer