

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

| | |
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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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| 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

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| 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 L-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 L-functions.</i> | May 2021 |
| University of Minnesota | |

EXPOSITORY TALKS

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| <i>Statistics of L-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>k-Schur functions.</i> | Jul. 2020 |
| University of Minnesota | |

OUTREACH

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| 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

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