EDUCATION University of Cambridge

June 2025

June 2024

MASt in Pure Mathematics funded by Churchill Scholarship.

Williams College

BA in Mathematics and Computer Science, GPA 3.94/4.00.

Magna Cum Laude, Highest Honors in Mathematics.

RESEARCH EXPERIENCE Williams College

September 2022 – May 2023

Undergraduate thesis work in analytic number theory under Steven J. Miller.

University of Virginia

June 2022 – July 2022

Research in analytic number theory under Ken Ono and Jesse Thorner.

Williams College

June 2021 – August 2021

Research in analytic number theory and random matrix theory under Steven J. Miller. MIT Computer Science and Artificial Intelligence Lab June 2020 – June 2021 Research in applied machine learning under Erik Hemberg and Una-May O'Reilly.

Preprints

- 1. Low lying zeros of Rankin-Selberg L-functions. Submitted.
- 2. Extending support for the centered moments of the low lying zeros of cuspidal newforms (with Peter Cohen, Justine Dell, Oscar E. González, Geoffrey Iyer, Simran Khunger, Chung-Hang Kwan, Steven J. Miller, Alicia Smith Reina, Carsten Sprunger, Nicholas Triantafillou, Nhi Truong, Roger Van Peski, Stephen Willis, Yingzi Yang). Submitted.

Publications

- 3. Modular forms and an explicit Chebotarev variant of the Brun-Titchmarsh theorem (with Daniel Hu and Hari Iyer). Research in Number Theory (2023).
- 4. Adversarial Agent-Learning for Cybersecurity: A Comparison of Algorithms (with Erik Hemberg, Miguel Tulla, and Una-May O'Reilly). *The Knowledge Engineering Review* (2023).
- 5. Limiting Spectral Distributions of Families of Block Matrix Ensembles (with Teresa Dunn, Henry L. Fleischmann, Faye Jackson, Simran Khunger, Steven J. Miller, Luke Reifenberg, and Stephen Willis). *PUMP Journal of Undergraduate Research* (2022).
- 6. Self-similar sets with arbitrary Hausdorff and box-counting dimension. The Pi Mu Epsilon Journal (2021).
- 7. Analyzing student reflection sentiments and problem-solving procedures in MOOCs (with Robert Gold, Erik Hemberg, Byeong Jo Kong, Ana Bell, and Una-May O'Reilly). Proceedings of the Eighth ACM Conference on Learning @ Scale (2021).

RESEARCH TALKS

- Extending support for the centered moments of the low lying zeros of cuspidal newforms. 34th Automorphic Forms Workshop, March 2022.
- Extending support for the centered moments of the low lying zeros of cuspidal newforms (with Simran Khunger). Maine-Quebec Number Theory Conference, October 2021.
- Limiting Spectral Distributions of Families of Block Matrix Ensembles (with Teresa Dunn, Henry Fleischmann, and Stephen Willis). Young Mathematicians Conference, August 2021.

• Analyzing student reflection sentiments and problem-solving procedures in MOOCs. Eighth ACM Conference on Learning @ Scale, June 2021.

Conferences Attended	Maine-Quebec I	Institute hic Forms Workshop Number Theory Conference onference on Learning @ Scale	July – August 2022 March 2022 October 2021 June 2021
Awards	Rosenburg Prize in Mathematics, Williams Math Dept. Phi Beta Kappa, Williams College Sigma Xi, Williams College Churchill Scholarship Goldwater Scholarship		June 2024 June 2024 June 2024 December 2023 April 2023
Other Experience	Teaching Asst. Teaching Asst. Teaching Asst. Referee Referee Mentor	Math 250 Linear Algebra Math 409 Putnam Seminar Math 383 Complex Analysis Journal of Number Theory PUMP Journal of Undergraduate Research Prison Math Project	Williams College Williams College Williams College
Relevant Skills	Languages: English (native speaker), Russian (fluent) Programming: C++, Java, Mathematica, Python		