Education

Georgia Institute of Technology	August 2023-Present
Doctor of Philosophy, Mathematics	
Advisor: Michael Lacey	
Duke University	August 2019 - May 2023
Bachelor of Science, Mathematics, with Distinction	
Honors Thesis: The Schrödinger Maximal Function and	Generalizations
Advisor: Lillian Pierce	
Budapest Semesters in Mathematics	May 2022 - August 2022

Research Interests

I am broadly interested in number theory and harmonic analysis, with a focused interest in arithmetic combinatorics, ergodic Ramsey theory, and applications of discrete harmonic analysis to number-theoretic problems.

Preprints and Publications

- (1) An Elementary Proof of Landau's Prime Ideal Theorem and Associated Results, *Research in Number Theory.* arXiv:2406.08565. 2025.
- (2) (with S. Goldberg, T. Keleti, C. Macmahon, X. Wang) Large Sets Avoiding Infinite Arithmetic/Geometric Progressions, *Real Analysis Exchange*. arXiv:2210.09284. 2023.

Selected Awards and Honors

October 2024
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2025-2026
$A pril \ 2025$
November 2024
August 2024
April 2024
Function
Spring 2024
2023
2022-2023
2022

Talk entitled: "What is the Riemann Zeta Function (an analytic approach)?"	
Presenter, UIC Undergraduate Mathematics Symposium	2022
Honorable Mention, Math Contest in Modeling	2022
Top 20% of Putnam Participants	2019

Undergraduate Research Projects

The Schrödinger Maximal Function and Generalizations (Lillian Pierce)	2022-2023
Erdos Similarity Conjecture & Related Problems (Tamas Keleti)	2022
Modular Forms with Application to the Partition Function (Heekyoung Hahn)	2021

Mathematical Activities, Outreach, and Service

Graduate Student Representative, GT School of Math	2025-2026
Directed Reading Program Mentor (Georgia Tech)	2023-Present
President, Duke University Math Union (DUMU)	2022

Conferences and Workshops

AMS Fall Southeaster Sectional Meeting (invited speaker)	October 2025
Special session on Function spaces and Operators in Harmonic Analysis	
and their applications	
Perspectives on Ergodic Theory and its Interactions	June 2025
Institute of Mathematics of the Polish Academy of Sciences	
INTEGERS 2025	May 2025
University of Georgia	
AMS Fall Southeastern Sectional Meeting (invited speaker; canceled)	October 2024
Special session on Ergodic Theory and Discrete Analysis	
NU Trends in Ergodic Theory (workshop)	July 2024
Northwestern University	
Pointwise Ergodic Theory and Connections, II (invited)	June 2024
University of Bristol	