

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) **Sárközy's Theorem for Shifted Primes with Restricted Digits**, arXiv:2510.13076. 2025.
- (2) **An Elementary Proof of Landau's Prime Ideal Theorem and Associated Results**, *Research in Number Theory*. arXiv:2406.08565. 2025.
- (3) (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

- Invited Speaker, Joint Math Meeting *January 2026*
Special session on Ergodic Theory and its Connections with Combinatorics and Harmonic Analysis
- Invited Speaker, Joint Math Meeting *January 2026*
Special session on Recent Advances in Harmonic Analysis with applications to Discrete Analysis and Geometric Measure Theory
- Invited Speaker, AMS Fall 2025 Southeastern Sectional *October 2025*
Special session on Function spaces and Operators in Harmonic Analysis and their applications
- Graduate Student Representative (elected), GT School of Math *2025-2026*
- David Brown Fellowship Award, GT School of Math *April 2025*
- Georgia Tech School of Math GAANN Fellow *November 2024*
- Invited Speaker, AMS Fall 2024 Southeastern Sectional *August 2024*

Special session on discrete analysis and ergodic theory	
Invited Speaker, Vanderbilt Computational Analysis Seminar	<i>April 2024</i>
Talk entitled: “Orthogonality & Equidistribution of the Prime-Omega Function over Ideals in Number Fields”	
Graduate Research Assistant (GRA), Georgia Tech Math	<i>Spring 2024</i>
Supported by Michael Lacey, through NSF grant award # 2247254.	
Graduation with Distinction in Mathematics, Duke University	<i>2023</i>
President, Duke University Math Union (DUMU)	<i>2022-2023</i>
Invited Speaker, Duke Math PhD learning seminar	<i>2022</i>
Talk entitled: “What is the Riemann Zeta Function (an analytic approach)?”	
Presenter, UIC Undergraduate Mathematics Symposium	<i>2022</i>
Honorable Mention, Math Contest in Modeling	<i>2022</i>
Top 20% of Putnam Participants	<i>2019</i>

Mathematical Activities, Outreach, and Service

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

Conferences and Workshops

<i>Joint Math Meeting (invited speaker)</i>	<i>January 2026</i>
Special session on Ergodic Theory and its Connections with Combinatorics and Harmonic Analysis	
<i>Joint Math Meeting (invited speaker)</i>	<i>January 2026</i>
Special session on Recent Advances in Harmonic Analysis with applications to Discrete Analysis and Geometric Measure Theory	
<i>AMS Fall Southeastern Sectional Meeting (invited speaker)</i>	<i>October 2025</i>
Special session on Function spaces and Operators in Harmonic Analysis and their applications	
<i>Perspectives on Ergodic Theory and its Interactions</i>	<i>June 2025</i>
Institute of Mathematics of the Polish Academy of Sciences	
<i>INTEGERS 2025</i>	<i>May 2025</i>
University of Georgia	
<i>AMS Fall Southeastern Sectional Meeting (invited speaker; canceled)</i>	<i>October 2024</i>
Special session on Ergodic Theory and Discrete Analysis	
<i>NU Trends in Ergodic Theory (workshop)</i>	<i>July 2024</i>
Northwestern University	
<i>Pointwise Ergodic Theory and Connections, II (invited)</i>	<i>June 2024</i>
University of Bristol	