

## 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

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

*April 2024*

Talk entitled: "Orthogonality &amp; Equidistribution of the Prime-Omega Function"

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| 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

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| 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

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|---|---------------------|
| <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   |                     |