

Education

University of South Carolina

Columbia, SC

Ph.D. Mathematics

(August 2023)

- Coursework topics include: Computational Number Theory, Algebraic Number Theory, Analytic Number Theory, Transcendental Number Theory, Graph Theory, Approximation Theory, etc.
- Dissertation: Widely digitally delicate Brier primes and irreducibility results for some classes of polynomials (Advised by Dr. Michael Filaseta)

Eastern Connecticut State University (ECSU)

Willimantic, CT

Bachelor of Science in Mathematics and Economics, *Summa Cum Laude* with Honors

(May 2018)

- Honors Thesis: Lattice Tetrahedra (Advised by Dr. Mizan Khan)

Technical Skills

- Experience with Python, Matlab, Magma, SageMath, LaTeX, Microsoft Office, C, C++, R, Minitab

Memberships

- American Mathematical Society (AMS)
- Mathematical Association of America (MAA)
- Fibonacci Association

Work Experience

Flagler College, Saint Augustine, FL

(2023-present)

- Assistant Professor of Mathematics
 - Design class structure and instruct various levels of undergraduate mathematics
 - Service the college by engaging with activities outside of my academic duties
 - Improve as a professional in my field as both an educator and a scholar

University of South Carolina, Columbia, SC

(2018-2023)

- Instructor of Record (2019-2023)
 - Design class structure and instruct various levels of undergraduate mathematics
- Mathematics Assessment of Prerequisite (MAP Test) Assistant (Summer 2023)
 - Helped in the taking and improving of the MAP all students must take prior to registering for courses
- Mathematics Department Peer-mentoring Program Mentor (2021-2022)
 - Facilitated small groups meetings to discuss strategies to better educate students in the classroom including but not limited to active learning strategies, classroom atmosphere, inclusivity, and more
 - Workshopped ways to improve our abilities as mentors including but not limited to roles in discussion, handling conflict in discussion, different forms of discourse, and more
 - Learned/discussed ways to improve our abilities as instructors/mentors using the MAA's IPG book as goals
- Teaching Assistant (2018-2019)
 - Run recitations and computer labs for MATH 141 (Calculus 1) and MATH 142 (Calculus 2)

Thule Inc., Milford, CT

(Summer 2018)

- Intern
 - Maximized pallets of product from a distribution center to in turn minimize cost
 - Computed cost efficiency for distribution licenses and alternatives for distribution planning software to optimize distribution spending

Analog Devices Inc., West Lafayette, IN

(Summer 2017)

- Cyber Security Engineering Intern
 - Learned and put into practice C programming language
 - Researched an original algorithm and a more modern/efficient algorithm for BCH error-correcting code
 - Implemented a BCH error-correcting code in C for commercial use

Eastern Connecticut State University, Willimantic, CT

(2014-2018)

- Head Math Tutor (2015-2018)
 - Monitor coworkers to make sure they are on time and students are receiving the help they ask for
- Math Tutor (2014-2015)
 - Supply students in a self-serving atmosphere with tutoring in all levels of college mathematics

Teaching Experience

Flagler College	University of South Carolina
MAT 171 Business Calculus: Fall 2026, Sum. 2026, Spring 2026, Fall 2025, Sum. 2025, Spring 2025, Fall 2024, Sum. 2024, Spring 2024, Fall 2023	MATH 151/152 Calculus I/II Workshops: Spring 2023, Fall 2022, Spring 2021
MAT 203 Calculus III: Spring 2026, Spring 2025, Spring 2024, Fall 2023	MATH 111 Basic College Mathematics: Fall 2022, Fall 2021
MAT 331 Abstract Algebra: Spring 2026, Spring 2024	MATH 241 Vector Calculus: Summer 2022
MAT 335 Number Theory: Fall 2025, Fall 2023	MATH 115 Precalculus: Spring 2022, Fall 2019
CIS 115 Introduction to Python: Fall 2026, Fall 2025, Spring 2024, Fall 2024, Spring 2024	MATH 374 Discrete Structures: Summer 2021
MAT 401 Real Analysis: Spring 2025	MATH 334L/544L Applied Linear Algebra Lab: Fall 2020, Summer 2020
MAT 201 Calculus I: Fall 2024	MATH 344 Applied Linear Algebra: Summer 2020
	MATH 122 Calculus for Business and Science: Spring 2020, Summer 2019

Publications/Recent Work

TBD (*writing in progress*)

- J. Juillerat and **T. Luckner**, *Unitary Unstable Primes*

TBD (*writing in progress*)

- **T. Luckner** and R. Philpott (Flagler Graduate), *d-Translated Unit Sensitive Primes*

Indagationes Mathematicae, Vol. **35**, 1 (*published* – 1/1/2024)

- M. Filaseta and **T. Luckner**, *On n th order Euler polynomials of degree n that are Eisenstein*

Colloquium Mathematicum, Vol. **174**, 2 (*published* – 11/17/2023)

- M. Filaseta, R. Groth and **T. Luckner**, *Generalized Sierpiński Numbers*

Integers, **23** (*published* – 10/2/2023)

- M. Filaseta, J. Juillerat and **T. Luckner**, *Consecutive primes which are widely digitally delicate and Brier numbers*

Proquest (*published* – 10/4/2023)

- **T. Luckner**, *Widely digitally delicate Brier primes and irreducibility results for some classes of polynomials*

Research Students

Emily Wright, *Exp. Grad.* December 2027

- *Alternative Collections of Sierpiński and Riesel Numbers in the Narayana Cow Arithmetic Progression* (project in progress), Fall 2025-present

Christina Mark, *Grad.* May 2026

- *Modeling the Collective Behavior of Ant Species* (honors capstone-in progress), Spring 2025-present
- *Visible and Nonvisible Lattice Points and Polygons*, Spring 2024-Spring 2025
 - Poster Presentation-Southeast Undergraduate Research Conference 2025 (SURC)
 - Poster Presentation-National Conference for Undergraduate Research 2025 (NCUR)
 - Poster Accepted-Nebraska Conference for Undergraduate Women in Mathematics 2025 (NCUWM)
 - Poster Accepted-Florida Undergraduate Research Conference 2025 (FURC)
 - Poster Accepted-Southern Regional Honors Conference 2025 (SRHC)

Robert “Jamie” Philpott, *Grad.* May 2025

- *d-Translated Unit Sensitive Primes* (paper in progress), Spring 2024-Spring 2025
 - Oral Presentation-Southeast Undergraduate Research Conference 2025 (SURC)
 - Oral Presentation-National Conference for Undergraduate Research 2025 (NCUR)

Presentations

Joint Mathematics Meetings (JMM) of the MAA-Florida Section 2025, Embry-Riddle Aeronautical University, FL

- T. Luckner, *d-Translated Unit Sensitive Primes* (Oral)

Joint Mathematics Meetings (JMM) of the MAA-Florida Section 2024, Florida Gulf Coast University, FL

- T. Luckner, *Widely Digitally Delicate Brier Primes* (Oral)

Joint Mathematics Meeting (JMM) 2024 – Special Session on Covering Systems, San Francisco, CA

- T. Luckner, *Consecutive primes which are widely digitally delicate and Brier numbers* (Oral-Invited Lecturer)

Integers Conference 2023, University of Georgia, GA

- T. Luckner, *Consecutive primes which are widely digitally delicate and Brier numbers* (Oral)

Graduate Colloquium Spring 2023, University of South Carolina, SC

- T. Luckner, *An Example Research Talk for Interviews: Covering Systems, Newton Polygons, and Other Constructive Proof Techniques* (Oral)

Palmetto Number Theory Series 34 (PANTS) 2022, University of North Carolina Charlotte, NC

- T. Luckner, *Consecutive primes which are widely digitally delicate and Brier numbers* (Oral)

National Conference for Undergraduate Research (NCUR) 2018, University of Central Oklahoma, OK

- T. Luckner, *Lattice Tetrahedra* (Oral)

Northeast Regional Honors Conference (NRHC) 2018, Providence, RI

- T. Luckner, *Lattice Tetrahedra* (Oral)

Northeast Regional Honors Conference (NRHC) 2017, Pittsburgh, PA

- T. Luckner, *Modular Sum-Set Application to the Sum of Two Squares* (Poster)

Northeast Regional Honors Conference (NRHC) 2016, Cambridge, MA

- A. Burkhart and T. Luckner, *Study of Special Cases in Prime Numbers* (Poster)

Celebrating Research Excellence and Artistic Talent at Eastern Conference (Create) 2016, Eastern Conn. State Univ., CT

- A. Burkhart and T. Luckner, *Study of Special Cases in Prime Numbers* (Poster)

Attended Conferences

- National Conference for Undergraduate Research 2025 (NCUR), Pittsburgh, PA
- Southeast Undergraduate Research Conference 2025 (SURC), Kennesaw State University, GA
- Joint Mathematics Meetings (JMM) of the MAA-Florida Section 2025, Embry-Riddle Aeronautical University, FL
- Joint Mathematics Meetings (JMM) of the MAA-Florida Section 2024, Florida Gulf Coast University, FL
- Joint Mathematics Meeting (JMM) 2024, San Francisco, CA
- Integers Conference 2023, University of Georgia, GA
- Palmetto Number Theory Series 35 (PANTS) 2022, University of South Carolina, SC
- Palmetto Number Theory Series 34 (PANTS) 2022, University of North Carolina Charlotte, NC
- Palmetto Joint Arithmetic, Modularity, and Analysis Series 2 (PAJAMAS) 2020, Online
- Palmetto Number Theory Series 33 (PANTS) 2019, Clemson University, SC
- Palmetto Number Theory Series 32 (PANTS) 2019, University of North Carolina Charlotte, NC
- Palmetto Number Theory Series 31 (PANTS) 2018, University of South Carolina, SC
- Southeast Regional Meeting on Numbers (SERMON) 2019, University of North Carolina Greensboro, NC
- National Conference for Undergraduate Research (NCUR) 2018, University of Central Oklahoma, OK
- Northeast Regional Honors Conference (NRHC) 2018, Providence, RI
- Northeast Regional Honors Conference (NRHC) 2017, Pittsburgh, PA
- Northeast Regional Honors Conference (NRHC) 2016, Cambridge, MA
- Celebrating Research Excellence and Artistic Talent at Eastern Conference (Create) 2016, Eastern Conn., CT

Notable Achievements and Activities

University of South Carolina

- Outstanding Graduate Teaching Award in Mathematics 2022
- South Carolina High School Math Contest Coordinator 2019, 2020, 2023

Eastern Connecticut State University

- Nominee for the Barry M. Goldwater Scholarship 2018
- Honors Program Service Award 2018
- Honors Thesis Fellowship 2017
- Honors Advisory Committee 2016-2017
- Math Club President 2016-2018, Vice President 2015-2016