

Eleanor S. Waiss

CONTACT INFORMATION

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EDUCATION

Butler University, Indianapolis, IN USA May 2025
B.S., Mathematics and Actuarial Science
Cum laude with High Distinction
Minor in Computer Science

Society of Actuaries
Exam P/Probability July 2022
Exam FM/Financial Mathematics February 2023

RESEARCH INTERESTS

Broadly speaking, my research interests lie in the intersection between dynamics, number theory, and computational mathematics. I am interested in complex dynamics and fractal geometry, computer visualizations of fractals, and interesting number-theoretic properties that arise in this study.

AWARDS AND HONORS

Amos Carpenter Memorial Award, *Butler University*
Robert O. Whitesell Endowed Scholar in Mathematics, *Butler University*

PAPERS

Analysis of Algorithms for Moser's Problems on Sums of Consecutive Primes
with J. Sorenson, 29 August 2025
<https://doi.org/10.48550/arXiv.2509.00236>
Available on arXiv, submitted to INTEGERS 2025 conference proceedings

(submitted to journal)
Geometric Limits of Sums of Iterated and Fixed Polynomials
with A. Kapiamba and S. Kaschner

INVITED PRESENTATIONS

A Limited History of Complex Dynamics
Department of Mathematics Colloquium Series, Butler University, 12 April 2024

Developing Intentional Practices and Cultivating an Inclusive Environment for Trans, Non-Binary, and Genderqueer Students (with D. Beh, et al.)
Inclusive Pedagogy Workshop, Butler University, 24 March 2023

CONTRIBUTED LECTURES AND POSTERS

Algorithms to Write Integers as Sums of Consecutive Primes
Integers 2025, Athens, GA USA, May 2025

An Atlas of Differential Topology: From Fundamentals to Stokes
URC 2025, Butler University, 11 April 2025

A Gleeful Algorithm: Enumerating Sums of Consecutive Primes
URC 2025, Butler University, 11 April 2025
BIGEAST Research Poster Symposium, New York City, NY USA, 15 March 2025
(poster)

Geometric Limits of Julia Sets of Sums of Iterates and Powers of Polynomials
Joint Mathematics Meetings, San Francisco, CA USA, 6 January 2024
Dynamical Systems and their Applications, Miami, OH USA, 29 September 2023

Dabbling in Dobble!: An Exploration of Monomatching Games (poster)
Indiana MAA Fall Sectional Meeting, Terra Haute, IN USA, 22 October 2022

EXPERIENCE

Researcher Department of Computer Science
May 2024–Present Butler University, Indianapolis IN
Research assistant funded by internal grant. Worked with Dr. Jon Sorenson on computational number theory and theoretical computer science. Outcomes include presentations at national conferences and a paper, in-progress.

Mathematics Tutor Department of Mathematical Science,
August 2022–May 2025 Butler University, Indianapolis IN
Elevated student success through developing understanding, improving communication, and overcoming anxiety towards mathematics. Classes supported include single- and multivariate-calculus, linear algebra, elementary statistics, and discrete mathematics. Supported drop-in lab hours, private tutor requests, and course-wide final exam reviews.

Actuarial Intern OneAmerica Financial Partners, Inc.
May 2023–August 2023 Indianapolis IN
Intern with individual life pricing team. Projects include rate setting for indexed products, creation of a rate update memo to be distributed monthly to general agents, database creation for annual financial planning, and decrement model sensitivity/competitiveness analysis for term life products.

COURSES TUTORED **Butler University:**

MA106 Calculus I
MA107 Calculus II
MA125 Business Calculus
MA162 Elementary Statistics
MA200 Introduction to Proofs
MA205 Discrete Mathematics
MA208 Calculus III
MA310 Linear Algebra
MA334 Differential Equations
MA361 Statistical Theory
MA413 Rings and Fields
MA426 Real Analysis I
AR210 Statistically Speaking
AR212 Win-Lose-Draw

Purdue University:

MA16200 Calculus II
MA45300 Abstract Algebra I

Rose-Hulman Institute of Technology:

MA112 Calculus II

DEPARTMENTAL
SERVICE

Butler University, Indianapolis, IN USA
Coordinator, Mathematics Lab
Athletics Tutor - Mathematics
Mathematics Lab Tutor

May 2024 to May 2025
June 2023 to May 2025
August 2022 to April 2024

EXTRACURRICULAR
SERVICE

Resident Assistant, Butler Residence Life
President, Dawgs and Dice TTRPG Club
President, Actuarial Science Club
Treasurer, LGBTQIA+ Alliance

May 2024 to May 2025
May 2023 to May 2024
September 2022 to August 2023
May 2022 to May 2023