Peter Alspaugh
Curriculum Vitae

Contact Information
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EDUCATION

Bachelor of Arts, Mathematics   August 2022—May 2026
University of South Florida

- GPA: 3.98 (4.0 USF GPA)
- Pure Mathematics Concentration
- Minor in Economics
- Graduate Math courses: Algebra 1 & 2, Algebraic Automata Theory, Complex Analysis (in progress)
- Mathematics independent studies: Category Theory (in progress) and the Word Problem & Rewriting Systems
- Graduate Economics courses taken: Mathematical Economics 1 & 2, Microeconomics 1, Issues in Antitrust & Regulation

RESEARCH INTERESTS

Semigroup theory, universal algebra, combinatorics on words, pseudovarieties of finite semigroups, algebraic automata theory, the word problem and rewriting systems, DNA bioinformatics.

PUBLICATIONS & PREPRINTS

[1] Peter Alspaugh, James Garrett, Nataša Jonoska, Masahico Saito. Aug. 18, 2025. "Structures of Monoids Motivated by DNA Origami", *Semigroup Forum,* Springer New York, https://doi.org/10.1007/s00233-025-10564-9. 2025.

ACADEMIC POSITIONS

Research Assistant, Student Assistant   May 2024—August 2025
Dept. of Mathematics, University of South Florida   Tampa, FL

- Knot Theory Group
- Faculty Mentors: Nataša Jonoska, Masahico Saito
- Job title was Research Assistant for Summer 2024 and Student Assistant for academic year 2024/25 and Summer 2025.

Managing Editor   July 2025—Present
American Journal of Graduate Mathematics   Tampa, FL

- Open access Elsevier/Bepress journal will be aimed at primarily graduate students, along with advanced undergraduates and early career researchers. Most editors are University of South Florida Mathematics faculty.

Maintenance Volunteer   May 2024—Present
Undergraduate Journal of Mathematical Modeling: One + Two   Tampa, FL

- Maintaining the journal during the development of the *American Journal of Graduate Mathematics.*

Mathematics Tutor   January 2024—May 2024
USF Athletics   Tampa, FL

- Tutored student athletes in Intermediate (Remedial) Algebra, College Algebra, and Precalculus during the Spring 2024 semester.

PRESENTATIONS

Peter Alspaugh, *"Structures of Monoids Motivated by DNA Origami"* Poster. USF Math-Fest. University of South Florida, Tampa, FL, USA. May 9, 2025.

Peter Alspaugh, *"Structures of Monoids Motivated by DNA Origami"* Poster. Southeast Center for Mathematics and Biology Final Annual Symposium. Georgia Institute of Technology, Atlanta, GA, USA. Apr. 10-11, 2025.

Peter Alspaugh, *"Monoid Motivated by DNA Origami"* Talk. National Conference on Undergraduate Research. Pittsburgh, PA, USA. Apr. 7-9, 2025.

Peter Alspaugh, *"Structures of Monoids Motivated by DNA Origami"* Talk. MAA Florida Section Annual Meeting. Embry-Riddle Aeronautical University, Daytona Beach, FL, USA. Feb. 21-22, 2025.

Peter Alspaugh, *"Monoids Motivated by DNA Origami"* Poster. Florida Undergraduate Research Conference. University of South Florida, Tampa, FL, USA. Feb. 14-15, 2025.

HONORS, AWARDS & MEMBERSHIPS

Nominated by USF for Churchill Scholarship	May 2025
Best Undergraduate Poster Content at USF MathFest	May 2025
USF Pi Mu Epsilon Outstanding Scholar Award	April 2025
Member of Phi Beta Kappa	April 2025–Present
Member of Sigma Xi	April 2025–Present
Barry M. Goldwater Scholarship	March 2025
President, Florida Epsilon Chapter of Pi Mu Epsilon	August 2024–Present
Member of Pi Mu Epsilon	August 2024–Present
National Merit USF Scholarship (full-ride)	August 2022