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 taken: Algebra 1 & 2 and Algebraic Automata Theory
- Graduate economics courses taken: Mathematical Economics 1 & 2, Microeconomics 1, Issues in Antitrust & Regulation

RESEARCH INTERESTS

Semigroup theory, 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. "Structures of Monoids Motivated by DNA Origami", *accepted to Semigroup Forum with minor revisions,* arXiv:2501.14966v1, https://doi.org/10.48550/arXiv.2501.14966. 2025.

ACADEMIC POSITIONS

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

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

Associate Editor   May 2024—Present
American Journal of Pure and Applied Mathematics   Tampa, FL

- In the process of renaming and expanding the scope of the former *Undergraduate Journal of Mathematical Modeling: One + Two* at the University of South Florida
- Open access Elsevier journal will be aimed at and undergraduates and graduate students
- ISSN: 2326-3652

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
Member of Sigma Xi	April 2025
Barry M. Goldwater Scholarship	March 2025
President, Florida Epsilon Chapter of Pi Mu Epsilon	August 2024–Present
Member of Pi Mu Epsilon	August 2024
National Merit USF Scholarship (full-ride)	August 2022