LILITH GAITHER
(530) 558-1405 ⬦ lilith.emmy.gaither@gmail.com ⬦ legaither@arizona.edu

EDUCATION

University of Arizona   2021-2025
B.S. Mathematics, Comprehensive Algebra Emphasis   GPA 3.5
Minor in Music

TECHNICAL SKILLS

Computer Languages	Python, R, HTML, JavaScript, Befunge-93
Software & Tools	LaTeX, Excel, Maple, GAP, Lean 4, Microsoft ICE, Movavi Video Suite, Cartes du Ciel, StarTools, PixInsight, N.I.N.A., Obsidian MD, OBS Studio

PRIOR PEDAGOGICAL EXPERIENCE

UArizona CRR & Americorps   2025-2026 School Year
School Engagement Specialist under Shanna Gray, Gretchen Stickney, Jessica Jarrett, Elizabeth Lowe

· Played an active and vital role in encouraging student community building, positive learning, and mindful socialization on campus
· Emphasis on academic and behavioral intervention and helping school staff create a safe and engaging environment for learners at Nash Elementary, an Amphitheater district K-5 school.
· Worked across district and county lines for the success of the entire SES program and my community peers

UArizona Mathematics   2024-2025 Academic Year
Undergraduate Learning Assistant under Mitchell Wilson, Aaron Eckstrom, Tina Deemer

· Worked as part of MATH163 Basic Statistics instructional team to design summative assessments and assist students in formative instructional time
· Held weekly office hours, an opportunity for students to ask questions, review material, and complete homework

MATHEMATICS RESEARCH EXPERIENCE

UArizona Math Directed Research   2022-2024
Project Mentee under Dr. Aparna Upadhyay

· Negotiated and initiated a research program in applied algebra and combinatorics
· Worked tirelessly over two years to polish definitions and justify new theorems about a group of automorphisms for a family of graphs, with implications as to the coefficients in their clique polynomials
· Constructed a theoretical framework sufficient to generate a universal nontrivial term, which forms the theoretical basis necessary to establish a generating function for all cases

RUSIS@IU   2023 Summer
Undergraduate Researcher at Indiana University in Bloomington, IN, under Dr. Javier Rojo

· Contracted to work on a special project in statistics & mathematical sciences, placed on a team focusing on simulations based research in extreme value theory, classification of distributions by tail index
· Presented results to an advisory committee composed of several academics and researchers spanning the country
· Collaborated on a fifty page TeX report to capture every detail of our work and findings, emphasizing connections

MATHEMATICS AREAS I AM READY TO DEVELOP FURTHER

Analysis:	Calculus	Real Analysis	Complex Analysis
Linear Algebra:	Matrix Computation	Abstract Vector Spaces	
Differential Equations:	ODEs	Stability Theory	
Probability:	Probability Theory		
Topology:	Metric Spaces	Point-Set Topology	Algebraic Topology
Combinatorics:	Group Actions	Graphs & Trees	Combinatorial Designs
Algebra:	Groups, Sylow Theorems	Rings, Fields	(finite) Galois Theory
	Projective Modules	Semisimple Algebras	Representation Theory
	Exterior Algebras	Differential Geometry	