

Hailey Garcia – CV

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Department of Mathematics, Louisiana State University, Baton Rouge, LA, 70803

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Education

Louisiana State University

Fall 2025 – Present

Baton Rouge, LA

PhD in Mathematics (Advisor: Christin Bibby)

Louisiana State University

Fall 2022 – Spring 2025

Baton Rouge, LA

Bachelors of Science in Mathematics

Papers

- [1] M. Fairchild, H. Garcia, J. Murphy, H. Percle. Non-orientable 4-genus of torus knots. *Journal of Knot Theory and its Ramifications* (to appear 2026+). <https://doi.org/10.48550/arXiv.2405.04737>.

Talks

Noncontractive Function Systems

Spring 2023

At 6th TX-LA Mathematics Undergraduate Conference

On the "Kelly Sequence"

Spring 2023

At 6th TX-LA Mathematics Undergraduate Conference

Service

Webmaster, RTG@LSU

Spring 2026 – Present

As above. Additional duties: graphic design; development with Bootstrap

Manager, LSU Math 3D Print Lab

Spring 2026 – Present

Basic 3D modelling; CAD for mathematical objects; maintenance and repair

Mentor for Undergraduates, Vertically Integrated Research Courses

Fall 2025, Spring 2026

Mentored undergraduates learning and researching graph theory, simplicial complexes, and polytopes.

Officer, LSU's AWM Student Chapter

President, Fall 2025 – Spring 2026

Event planning; leadership; writing charter

Secretary, Spring 2026– Present

Maintaining records; managing communications

Webmaster, Fall 2025– Present

Web development; writing journalistic articles; developing tools to assist in web dev for an environment without server-side scripting

Teaching

Louisiana State University

MATH1431, Business Calculus. Sections 7, 11, 19.

Spring 2026

Lab Leader/TA. Lectures; writing and giving quizzes; assigning grades.

MATH1431, Business Calculus. Sections 7, 8, 11, 25, 28.

Fall 2026

Lab Leader/TA. Lectures; writing and giving quizzes; assigning grades.

Arden Cahill Academy High School

Honors Calculus 1

Fall 2023 – Spring 2024

Primary instructor. Lectures; writing and giving quizzes, homework, and tests; assigning grades.

Awards

Pasquale Porcelli Graduate Student Academic Excellence Award

“To recognize students whose dedication to the study of mathematics and whose success in such study makes that student a strong role-model for his or her fellow students.”

Spring 2026

Robert and Betti Giles Senior Mathematics Award

“In recognition of Outstanding Academic Achievement by an Undergraduate Student in the Department of Mathematics.”

Spring 2025

Peg and Tom Madden Mathematics Research Scholarship

“To Encourage and Support Scholarship and Research in Mathematics.”

Spring 2024

Porcelli Junior Scholarship

“In recognition of Outstanding Academic Achievement by an Undergraduate Student in the Department of Mathematics.”

Spring 2023

Programming

Python (with Sage), Javascript, Unix Shell Scripts (sh, bash, zsh), $\text{\LaTeX} 2_{\epsilon}$

Experience in Lisp (elisp), Lua

Exposure to Java, C, C++, Rust, $\text{\LaTeX} 3$ (expl3)