

MAXWELL AUERBACH

CURRICULUM VITÆ

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RESEARCH INTERESTS Riemannian and Pseudo-Riemmanian Geometry, Geometric Inverse Problems, Microlocal Analysis, Mathematics Education

EDUCATION **Emory University**, Atlanta, GA
PhD Mathematics Expected Jul 2025
Advisor: Yiran Wang
University of Redlands, Redlands, CA
B.S. Mathematics and Computer Science Graduated Apr 2020

SCHOLARSHIP **Thesis: A Hopf Type Theorem and Related Results for Pseduo-Riemannian Geometry.** In Preparation
Emory University Work done under Yiran Wang.
Paper: Shortest Paths in Generalizations of the Sierpinski Carpet. Preprint
Lafayette College
Talk: Strategies for Creating a Student Driven Environment for the COMAP Modeling Contests, from Students' Perspectives. Presented Jan 2021
JMM 2021
Talk: Shortest Paths in Generalizations of the Sierpinski Carpet. Presented Jan 2020
JMM 2020

TEACHING EXPERIENCE **Instructor of Record** Emory University
Calculus Sequence Aug 2022 – May 2025
Calculus 1 Fall 2022
Taught under co-ordination by Juan Villete-Garcia
Calculus 2 Spring 2023, Spring 2024 , Fall 2024 and Spring 2025
Taught and developed a syllabus under the guidance of James Nagy
TA Emory University
Advanced Calculus for Data Science Aug 2021 – May 2022
Fall 2021 lead a lab and graded under Mike Carr
Spring 2022 lead a lab and graded under Andrew Kobin
Teaching Seminar Jan 2025 – May 2025
Guided first year mathematics graduate students on teaching under Bree Ettinger
Grader Emory University
Department of Mathematics Aug 2020 – May 2021
Worked under Professor Mike Carr for the class Advanced Calculus for Data Science.

TECHNICAL SKILLS **Coding Proficiency:** Java, Godot, JavaScript, \LaTeX , HTML/CSS
Languages: English (fluent), American Sign Language (aspirational)

CITIZENSHIP **American**

HOBBIES & PASSIONS Board games, cooking, rock climbing and baking.