KADEN SAUCEDO

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ABOUT

Born December 29, 2000, in Wichita, KS, USA. Age: 23. United States Citizen.
Address: 285 Cherokee Ave, Athens, GA 30606

EDUCATION

University of Georgia — August 2023 – Present
Pursuing advanced studies — *Athens, GA*

Kansas State University — May 2021 – May 2023
Bachelor of Science in Mathematics — *Manhattan, KS*

Wichita State University — August 2019 – May 2021
Undergraduate Studies in Mathematics — *Wichita, KS*

INDEPENDENT STUDIES AND DIRECTED READINGS

Intro to Homological Algebra DRP | *Advised by David Marcus, Dr. Zongzhu Lin* September 2022 – May 2023
- Studied Dr. Sophie Morel's lecture notes on homological algebra under the guidance of Ph.D. student David Marcus and Prof. Zongzhu Lin.
- Covered topics such as limits, abelian categories, complexes, exact functors, triangulated/derived categories, and model categories.
- Concluded with a presentation titled "Additive Categories" discussing categorical notions and kernel proofs.

Quintic Polynomials & Geometry Independent Study | *Advised by Dr. Buma Fridman* May 2021 – May 2022
- Worked through exercises that led to concepts in field theory and straightedge-compass geometry.
- Explored automorphisms, Galois theory, Kummer extensions, solvability by radicals, and polygon constructibility.
- Current work is directed towards aspects related to Hilbert's thirteenth problem.

Intro to Category Theory DRP | *Advised by David Marcus, Dr. Gabriel Kerr* September 2021 – December 2021
- Studied Saunders Mac Lane's *Categories For the Working Mathematician* with guidance from Ph.D. student David Marcus.
- Topics included categories, functors, natural transformations, universal properties, Yoneda's lemma, pushouts/pullbacks, and adjunctions.
- Delivered a chalk-talk titled "Introduction to Categories," introducing definitions, examples, and Yoneda's lemma.

WORKSHOPS ATTENDED

CMND Undergraduate Workshop – Geometry & Topology RTG August 1, 2022 – August 5, 2022
University of Notre Dame — *Notre Dame, IN*
- Participated in a two-part workshop covering topics in topology, differential geometry, and undergraduate research projects.
- Topics included topological spaces, surfaces, knots, curvature, and the Gauss-Bonnet theorem.

TALKS ATTENDED

Function Theory Study Seminar — Weekly, Spring 2023
Kansas State University — *Manhattan, KS*

Junior M-Seminar (Mirror Symmetry/Tropical Geometry) — Weekly, Fall 2022 – Spring 2023
Kansas State University — *Manhattan, KS*

Topics in Topology — Weekly, Fall 2022
Kansas State University — *Manhattan, KS*

Skills

Languages: English; basic Spanish reading and writing
Programming Languages: C++
Software: LaTeX and Office 360 proficiency