

# Lucas Kerbs

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## EDUCATION

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### Washington University

*PhD. in Mathematics*

Saint Louis, MO

*Expected June 2027*

### California Polytechnic University, San Luis Obispo

*Masters of Science in Mathematics*

San Luis Obispo, CA

*Received June 2022*

- Thesis: Searching for Holes in the Matrix Universe, or the Beginnings of Algebraic Topology in Free Analysis.
- Honors: With Distinction

### Biola University

*Bachelor of Science in Mathematics*

La Mirada, CA

*Received May 2020*

- Honors: Summa Cum Laude, Dean's List Every Semester

## RESEARCH EXPERIENCE

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### Summer Research + Graduate Thesis

June 2021 – June 2022

*Advisor: Dr. Ryan Tully-Doyle*

Working closely with Dr. Tully-Doyle, we spent the summer reading various papers in noncommutative function theory and real algebraic geometry with an emphasis on the algebraic structures that underlies the theory. Throughout the academic year, we are using a recent paper by J.E. Pascoe to build new topological techniques that can help us understand noncommutative sets and the functions defined on them.

## TEACHING

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### Full Responsibility Instructor

Summer 2023: Quantitative Reasoning

Winter 2022: Pre-Calculus

Fall 2021: Pre-Calculus

Spring 2021: Business Calculus

Winter 2021: Pre-Calculus

Fall 2020: Pre-Calculus

### Teaching Assistant

Fall 2023: Calculus I

## ACADEMIC RECOGNITION

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### Edward N. Van Duyne Scholarship

Awarded to Mathematics Majors who excel academically.

2021

### Charles J. Hanks Excellence in Mathematics Award

Awarded for outstanding accomplishment and talent in mathematics.

2022

## SELECTED TALKS

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November 2022: Szego Seminar, Washington University  
**Searching for a Free Fundamental Group**