# **Zhong Zhang**

5734 S. University Avenue, Chicago, IL | +1-267-530-9898 | zhongz@uchicago.edu

### **EDUCATION**

## The University of Chicago, Chicago, IL

Sep 2023 - present

First year PhD Student

# University of Pennsylvania, Philadelphia, PA

Sep 2020 - May 2023

Bachelor of Arts and Master of Arts in Mathematics

Phi Beta Kappa, Summa Cum Laude

- Thesis Advisor: Mona Merling and Thomas Brazelton
- Thesis Title: "Milnor Numbers of Complex Hypersurfaces"

Smith College, Northampton, MA

Sep 2019 - May 2020

### INTERESTS

Topology and Geometry

### RESEARCH EXPERIENCE

# REU participant, University of Chicago

June 2022 - Aug 2022

- Worked on Quillen's proof of the Adams Conjecture and how it relates to the K-theory of finite fields, joint with Matthew Niemiro, advised by Peter May.
- Paper: http://math.uchicago.edu/ may/REU2022/REUPapers/Niemiro.pdf

### DIRECTED READINGS

#### Participant, Intersection theory

Jan 2024 - present

 Read 3264 & All That Intersection Theory in Algebraic Geometry, supervised by Akhil Matthew.

#### Participant, Hodge Theory

Oct 2023 - Dec 2023

• Read about real and complex hodge theory, with an emphasis on its applications to Kahler manifolds, supervised by Benson Farb.

### Participant, Linear Algebraic Groups

May 2023 - August 2023

• Read about linear algebraic groups, supervised by Julia Hartmann.

# Participant, Vertex Operator Algebra

Sep 2022 - Dec 2022

• Read about vertex operator algebras and its connections with moduli space of curves, supervised by Angela Gibney.

#### Mentee, Penn Directed Reading Program

Sep 2021 - May 2023

- Milnor numbers and their generalizations, mentored by Thomas Brazelton
- $\bullet$  Algebraic geometry from an  $\mathbb{A}^1$ -viewpoint, mentored by Thomas Brazelton
- Enumerative Geometry and String Theory, mentored by Thomas Brazelton
- Enumerative Geometry, mentored by Thomas Brazelton

TALKS	eCHT Seminar on Algebraic Vector Bundles Quillen's solution to Serre's problem Sep 2023
	Penn Geometry/Topology Grad Seminar $\mathbb{A}^1$ -Milnor numbersMarch 2023Quillen's work on the Algebraic $K$ -theory of Finite FieldsSep 2022
	Reading Project Presentations  Polynomial roots and convex polyhedra Modules over Vertex Operator Algebras Excess Intersection in Enumerative Geometry Enumerative Geometry Dec 2021
	Class Presentations Mackey Functors, MATH 520 Representation Theory Function Spaces, MATH 500 Topology Dec 2021
TEACHING	TA for (Honors) Calculus, University of Pennsylvania Jan 2023 - May 2023 TA for Multi-Variable Calculus, University of Pennsylvania Sep 2022 - Dec 2022 TA for Bio Stats, University of Pennsylvania Jan 2022 - May 2022 TA for Single-Variable Calculus, University of Pennsylvania Sep 2021 - Dec 2021 TA for Discrete Math, Smith College Jan 2020 - May 2020
SERVICE	<ul> <li>Board Member, Penn Undergraduate Math Society</li> <li>Sep 2022 - May 2023</li> <li>Organized events for undergrads, including graduate school advising session, Friday Quiz Pizza Party for Calculus, REU information session, CV workshop, TA Experience Sharing, and math talk series for undergrads.</li> </ul>
	Board Member, Association for Women in Math Sep 2022 - May 2023  • Helped organize the study hall sessions for Calculus students and mentored two underclass students.
AWARDS & FELLOWSHIPS	McCormick Fellowship, The University of ChicagoFall 2023Departmental Good Teaching Award, University of PennsylvaniaFall 2022Second Prize, Class of 1880 Prize, University of PennsylvaniaApr 2021
LANGUAGES	Mandarin (Native), English (Advanced), French (Intermediate)