

**Zachary Gardner**  
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## Education

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### **Boston College**

Ph.D. in Mathematics 2020-2026  
Thesis: “Moduli of  $(\mathcal{G}, \mu)$ -apertures,” advised by Keerthi Madapusi

### **The University of Texas at Austin**

B.S. in Mathematics with Departmental Honors 2016-2020

## Publications & Preprints

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### **Submitted**

*An algebraicity conjecture of Drinfeld and the moduli of  $p$ -divisible groups* (with K. Madapusi) 2025

### **Preprints**

*A note on ideals in derived geometries* (with J. Hekking) 2025

### **In Preparation**

*Moduli of  $(\mathcal{G}, \mu)$ -apertures*

*Toward a prismatic Torelli theorem for K3 surfaces* (with K. Ito, D. Rostamloo, A. Roy Choudhury, and X. Zhang)

## Research Presentations

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*Moduli of prismatic  $(\mathcal{G}, \mu)$ -apertures*, Summer Research Institute in Algebraic Geometry July 28, 2025

*Moduli of prismatic  $(\mathcal{G}, \mu)$ -apertures*, Universität Bielefeld June 25, 2025

*$\mathcal{O}$ -prismatic  $F$ -gauges and their moduli*, Universität Regensburg June 24, 2025

*Moduli of prismatic  $(\mathcal{G}, \mu)$ -apertures*, Max-Planck-Institut für Mathematik June 20, 2025

*Prismatic Rapoport-Zink spaces associated to general linear groups*, Kyoto University October 27, 2024

*Moduli of prismatic  $(\mathcal{G}, \mu)$ -apertures and applications*, The University of Tokyo October 9, 2024

*Prismatic  $(\mathcal{G}, \mu)$ -apertures and 1-bounded derived stacks*, Universität Münster August 14, 2024

*Moduli of prismatic  $(\mathcal{G}, \mu)$ -apertures*, Young Topologists Meeting August 7, 2024

## Service

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### **Seminars & Conferences Organized**

Derived Arithmetic Intersection Theory (DAIT) Learning Group Spring-Summer 2022

*Virtual seminar on conjectural derived formulation of  $*$ -products and arithmetic intersection theory*

Derived Algebraic Geometry (DAG) Learning Group Fall 2021

*Virtual seminar following assorted notes of Adeel Khan*

UT Summer Minicourses Summer 2020

*Recruited speakers for week-long courses, managed documents and other secretarial work*

### **Other Service**

Treasurer: BC Math Graduate Student Association Fall 2022–

*Secured funding for weekly graduate student seminar and prospective student visit, managed reimbursements*

Secretary: BC Math Graduate Student Association Fall 2021–Spring 2022

*Organized weekly graduate student seminar and prospective student visit, managed documents*

Graduate Student Representative: NSF Project #1950222 Fall 2021–Spring 2022

*Met with high school math teachers in the Boston area to do collaborative math exercises together and discuss math pedagogy and their needs in the classroom*

Head Math Representative: Physics, Math, & Astronomy Board for Student Advocacy Fall 2019–Spring 2020

*Strengthened communication and transparency between students and administration, helped formalize TA recruitment procedures, successfully obtained new physical shared space for physics, math and astronomy majors*

President: UT Math Club Fall 2017–Spring 2019

*Built community with underclassmen, graduate students, faculty and administrators, formalized club structure, created and recruited for new club officer roles (outreach coordinator and social coordinator)*

Counselor: Ross Mathematics Program Summer 2017 & 2019

*Trained other counselors, taught courses, mentored first- and second-year students, managed documents*

## Teaching Experience

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### Boston College

Instructor of record for <i>Math 2210 Linear Algebra</i>	Spring 2026
Instructor of record for <i>Math 1100 Calculus I</i>	Spring 2024 & Fall 2022
Instructor of record for <i>Math 1004 Finite Probability and Applications</i>	Fall 2023
Teaching assistant for <i>Math 1101 Calculus II</i>	Spring 2022
Teaching assistant for <i>Math 2202 Multivariable Calculus</i>	Fall 2021
Grader for <i>Math 3312 Algebra II</i>	Spring 2021
Teaching assistant for <i>Math 1102 Calculus I (Math/Sci)</i>	Fall 2020

### UT Summer Minicourses

<i>Abelian Varieties and the Mordell-Weil Theorem</i>	Summer 2020
<i>Class Field Theory</i> (with R. Gregoric)	Summer 2019

### Ross Mathematics Program

<i>Ross 55: From algebraic number theory to smooth manifolds</i>	Summer 2019
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## Honors, Awards, & Fellowships

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### Boston College

Boston College Dissertation Fellowship	Fall 2025
Donald J. White Teaching Excellence Award	Spring 2022

### The University of Texas at Austin

CNS Dean's Honored Graduate	Spring 2020
CNS Service & Leadership Distinction	Spring 2020
Barrett Fellowship	Fall 2019
Carmelina Cutro Albino Memorial Endowed Presidential Scholarship	Spring 2018

## Conference & Workshop Attendance

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<b>AMS Spring Eastern Sectional Meeting</b>	March 28-29, 2026
<i>Boston College, Chestnut Hill, Massachusetts, USA</i>	
<b>New <math>p</math>-adic perspectives on canonical integral models for Shimura varieties</b>	March 2-6, 2026
<i>American Institute of Mathematics, Pasadena, California, USA</i>	
<b>Summer Research Institute in Algebraic Geometry (week 3)</b>	July 28-August 1, 2025
<i>Colorado State University, Fort Collins, Colorado, USA</i>	
<b>Workshop on Shimura varieties and related moduli stacks</b>	October 27, 2024
<i>Kyoto University, Kyoto, Japan</i>	
<b><math>p</math>-adic cohomology and arithmetic geometry (in honor of Nobuo Tsuzuki)</b>	October 21-25, 2024
<i>Tohoku Forum for Creativity, Tohoku University Katahira campus, Sendai, Japan</i>	
<b>Workshop on Shimura varieties, representation theory and related topics</b>	October 7-11, 2024
<i>The University of Tokyo, Tokyo, Japan</i>	
<b>Young Topologists Meeting</b>	August 5-9, 2024
<i>Universität Münster, Münster, Germany</i>	
<b>Algebraic geometry and cohomology in mixed characteristic</b>	May 15-19, 2023
<i>Evanston, Illinois, USA</i>	
<b>Homotopy Theory with Applications to Arithmetic and Geometry</b>	June 27-30, 2022
<i>Fields Institute, Toronto, Ontario, Canada</i>	
<b>Arizona Winter School on Topology and Arithmetic</b>	March 2-6, 2019
<i>Southwest Center for Arithmetic Geometry, Tucson, Arizona, USA</i>	

## Languages

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English	Native
Hindi	Beginner
French	Beginner