

# Zachary Gardner

zachary.gardner@bc.edu

(214) 493-7284

U.S. Citizen

## Education

---

### Boston College

Ph.D. in Mathematics

2020–

*Advised by Keerthi Madapusi*

### University of Texas at Austin

B.S. in Mathematics with Departmental Honors

2016-2020

*Advised by Sam Raskin*

## Preprints

---

*An algebraicity conjecture of Drinfeld and the moduli of  $p$ -divisible groups*, joint with K. Madapusi and A. Mathew. 2024. (available on my website)

*Prismatic Rapoport-Zink spaces and integral local Shimura varieties*. (forthcoming)

*Moduli of  $L$ -typical prismatic  $(\mathcal{G}, \mu)$ -apertures and applications*. (forthcoming)

## Research Talks

---

*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*, Universität Münster, August 7, 2024

## Service

---

### Seminars & Conferences Organized

Derived Arithmetic Intersection Theory (DAIT) Learning Group

Spring-Summer 2022

K-Theory and Differential Cohomology Learning Group

Spring 2022

Derived Algebraic Geometry (DAG) Learning Group

Fall 2021

Galois Representations Reading Group

Summer 2021

UT Summer Minicourses

Summer 2020

### Other Service

Treasurer: Math Graduate Student Association

Fall 2022–

*Managed finances, secured funding for events and standard activities*

Secretary: Math Graduate Student Association

Fall 2021-Spring 2022

*Co-organized GIST, helped with prospective student logistics, and managed internal communications*

Developing Exemplary Mathematics Teacher Leaders for High-Need Schools

Fall 2021-Spring 2022

*Served as Graduate Student Representative for Content initiative*

Counselor: Ross Mathematics Program

Summer 2017 & 2019

*Mentored students, trained other counselors, taught courses, and helped with administration*

## Teaching Experience

---

### Boston College

Teaching fellow for Math 1100 Calculus I	Spring 2024
Teaching fellow for Math 1004 Finite Probability and Applications	Fall 2023
Teaching fellow for Math 1100 Calculus I	Fall 2022
Teaching assistant for Math 1101 Calculus II	Spring 2022
Teaching assistant for Math 2202 Multivariable Calculus	Fall 2021
Grader for Math 3312 Algebra II	Spring 2021
Teaching assistant for Math 1102 Calculus I (Math/Sci)	Fall 2020

### University of Texas at Austin

UT Summer Minicourses	
<i>Taught course titled “Abelian Varieties and the Mordell-Weil Theorem”</i>	Summer 2020
<i>Taught course titled “Class Field Theory”</i>	Summer 2019

## Scholarships, Honors, & Awards

---

### Boston College

Donald J. White Teaching Excellence Award	Spring 2022
---	-------------

### 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
Highest Ranking High School Graduate Tuition Exemption	Fall 2016-Spring 2017

## Conferences & Programs Attended

---

<b><i>p</i>-adic cohomology and arithmetic geometry (in honor of Nobuo Tsuzuki)</b>	October 21-25, 2024
<i>Tohoku University, Sendai, Miyagi, 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

---

English	Native
Hindi	Intermediate

