

Baiqing Zhu
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Princeton, NJ 08544

Employment

2025– **Instructor** of Mathematics, Princeton University

Education

2020–25 **Ph.D.** in Mathematics, Columbia University
2016–20 **B.Sc.** in Mathematics, Fudan University

Research Interests

Number theory, automorphic forms, arithmetic geometry.

Papers / Preprints

- Weighted special cycles on Rapoport–Zink spaces with almost self-dual level (joint work with Qiao He and Zhiyu Zhang). submitted. [arXiv:2502.07768](https://arxiv.org/abs/2502.07768)
- Intersections of Hecke correspondences on modular curves (joint work with Qiao He). submitted. [arXiv:2502.19600](https://arxiv.org/abs/2502.19600)
- Arithmetic Siegel–Weil formula on $\mathcal{X}_0(N)$: singular terms. submitted. [arXiv:2401.06368](https://arxiv.org/abs/2401.06368)
- Arithmetic Siegel–Weil formula on $\mathcal{X}_0(N)$. *Algebra & Number Theory*, 19 (9):1771–1822, (2025).
- The regularity of difference divisors. *Mathematische Annalen*. 391, 1433–1466 (2025).

Selected Talks

2025 *Intersections of Hecke correspondences on modular curves*, Joint PU/IAS Number Theory seminar, Princeton.

Intersections of Hecke correspondences on modular curves, MCM, Beijing.

Intersections of Hecke correspondences on modular curves, Number Theory and Representation Theory seminar, ZJU, Hangzhou.

Weighted special cycles on Rapoport–Zink spaces with almost self-dual level, BICMR, Beijing.

Intersections of Hecke correspondences on modular curves, YMSC, Beijing.

2024 *Intersections of Hecke correspondences on modular curves*, The Mathematics Colloquium at Rutgers-Newark.

The full arithmetic Siegel–Weil formula on $\mathcal{X}_0(N)$, AIM workshop on Arithmetic intersection theory on Shimura varieties.

2023 *Arithmetic Siegel-Weil formula on $\mathcal{X}_0(N)$* , Number Theory seminar. University of Wisconsin – Madison, Madison.

Teaching

Instructor

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| 2025 Fall | Instructor for MAT104 Calculus II. |
| 2024 Summer | Instructor for Math S1101 Calculus I . |
| 2024 Spring | Instructor for Math 1003 College algebra and analytic geometry . |
| 2023 Summer | Instructor for Math S1202 Calculus IV . |

Teaching Assistant

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| 2023 Fall | Teaching assistant for Math 1103 Calculus III (two sections). |
| 2023 Spring | Teaching assistant for Math 1102 Calculus II. |
| 2022 Fall | Teaching assistant for Math 1102 Calculus II (two sections). |
| 2022 Summer | Teaching assistant for Math S1102 Calculus II (two sections). |
| 2022 Spring | Teaching assistant for Math 1102 Calculus II. |
| 2021 Fall | Teaching assistant for Math 1001 Calculus I. |

Languages

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| English | Fluent |
| Chinese | Mother tongue |

Last updated: December 29, 2025