Songyu Ye

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Education

2021-2025	**B.A. Mathematics and Computer Science**
	Cornell University
	Advisor: Allen Knutson
	Coursework: Algebraic Geometry, Algebraic Topology, Smooth Manifolds, Lie Groups and Lie Algebras, Algebraic Number Theory, Commutative Algebra, Noncommutative Algebra, Real Analysis
	GPA: 4.12 / 4.3

Research Interest

Moduli problems, geometric invariant theory, algebraic groups, representation theory, equivariant cohomology, equivariant K-theory, symplectic and algebraic quotients

Teaching Experience

- **Teaching Assistant** CS 4820 Introduction to Algorithms (FA 23)
- **Teaching Assistant** CS 2802 Honors Discrete Structures (SP 23)
- **Teaching Assistant** CS 2800 Discrete Structures (FA 22)

Publications

- *Software and Analysis for Dynamic Voronoi Diagrams in the Hilbert Metric* with Bumpus, Dai, Gezalyan, Munoz, Santhoshkumar, Mount. Canadian Conference on Computational Geometry 2023. arXiv:2304.02745

Conference/Summer School/REU participation

- Binghamton University Graduate Conference in Algebra and Topology (Nov 2023)
- Maine Quebec Number Theory Conference (Oct 2023)
- University of Notre Dame Rationality and Hyperbolicity Undergraduate Workshop (Jun 2023)
- Binghamton University Graduate Conference in Algebra and Topology (Nov 2022)
- University of Notre Dame Geometry and Topology RTG Undergraduate Workshop (Aug 2022)
- University of Notre Dame Special Program on p-adic L-functions and eigenvarieties (May 2022)
- University of Maryland Combinatorics, Algorithms, Artificial Intelligence REU (Jun 2021 - Aug 2021)

Hobbies

Rock climbing, weightlifting, biking, Mandarin Chinese, Pot Limit Omaha