

Yilong Zhang

University of Georgia, Department of Mathematics

Email: yilong.zhang@uga.edu • [personal website](#)

Education

- 2015-2022 **The Ohio State University** – Columbus, OH, USA
Ph.D. in Mathematics, Advisor: Herb Clemens.
- 2012-2015 **Harbin Institute of Technology** – Harbin, China
B. S. in Mathematics, Advisor: Sheng Chen.
- 2010-2014 **Harbin Institute of Technology** – Harbin, China
B. Eng. in Electrical Engineering.

Employment

- 2025 July - **University of Georgia**, Limited Term Assistant Professor
- 2022 - 2025 **Purdue University**, Golomb Visiting Assistant Professor of Mathematics

Research Papers

1. *Algebraicity of Hodge classes on some Generalized Prym Varieties*, with Deepam Patel, [preprint](#) (2025)
2. *Hilbert Scheme of a Pair of Skew Lines on a Cubic Hypersurface*, [preprint](#) (2025)
3. *Elliptic-Elliptic Surfaces and Hesse Pencil*, with Francois Greer, [preprint](#) (2024).
4. *Degeneration of Dual Varieties of Hypersurfaces*, [preprint](#) (2024).
5. *Monodromy of Primitive Vanishing Cycles for Hypersurfaces in \mathbb{P}^4* , [preprint](#) (2024).
6. *Extension of the Topological Abel-Jacobi Map for Cubic Threefolds*, submitted, [preprint](#) (2023).
7. *Hilbert Scheme of a pair of Skew Lines on Cubic Threefolds*, *J. Pure Appl. Algebra* **229** (2025), no. 6.
8. *Topological Abel-Jacobi map and mixed Hodge structures*, *Math. Res. Lett.* **31**, No. 4, 1215–1247 (2024).

Selected Invited Talks

- 2026 • *Special session on "Riemann-Hilbert and Singularities of Algebraic Varieties" at the AMS Sectional Meeting*, March 28-29, Boston, MA
- 2025 • *Special session on "Hodge theory, Algebraic cycles, and Arithmetic" at the AMS Central Sectional Meeting*, October 18-19, St. Louis, MO
- *Arithmetic, K-theory and Algebraic Cycles*, May 27-31, Ohio State University
- *Lefschetz Centennial*, March 24-29, Miami, FL
- University of Arkansas, Algebra Seminar (also in 2023, 2024)
- University of Oregon, Algebra Seminar
- 2024 • Michigan State University, Algebra Seminar (also in 2023)
- Northwestern University, Algebraic Geometry Seminar

- New York University, Algebraic Geometry Seminar
- 2023 • Duke University, Algebraic Geometry Seminar
- ShanghaiTech University, Algebraic Geometry Seminar (online)
- 2022 • *Midwest Algebraic Geometry Graduate Conference*, Aug 10-11, University of Illinois at Chicago
- University of Arizona, Algebraic Geometry Seminar (online)
- University of California, Riverside, Algebraic Geometry Seminar (online)
- 2021 • University of California, Santa Barbara, Seminar on Geometry and Arithmetic (online)
- University of Illinois at Chicago, Algebraic Geometry Seminar (online)

Teaching Experience

University of Georgia

Fall 2025 Math2250: Calculus I (2 sections, 20 students each)

Purdue University

Spring 2025 MA26500: Linear Algebra (2 sections, 40 students each)

Fall 2024 MA26500: Linear Algebra (2 sections, 40 students each)

Spring 2024 MA35100: Elementary Linear Algebra (2 sections, 40 students each)

Fall 2023 MA26500: Linear Algebra (2 sections, 40 students each)

Spring 2023 MA26600: Ordinary Differential Equations (2 sections, 40 students each)

Fall 2022 MA26600: Ordinary Differential Equations (2 sections, 40 students each)

Ohio State University

Fall 2021 Designed exercises for an [online Linear Algebra book](#).

Summer 2021 TA, Math 2153: Calculus III (3 sections, 30 students each).

Spring 2021 TA, Math 2173: Engineer Math B (2 sections, 30 students each).

Fall 2020 TA, Math 2153: Calculus III (3 sections, 30 students each).

Fall 2018 TA, Math 1172: Engineer Math A (2 sections, 30 students each).

Spring 2017 TA, Math 1151: Calculus I (2 sections, 30 students each).

Fall 2016 TA, Math 1151: Calculus I (2 sections, 30 students each).

Awards and Fellowships

2023-2025 **AMS-Simons Travel Grant**

Spring 2018 & Spring 2020 **Special Graduate Assignment (departmental fellowship)**, The Ohio State University.

2012 **National Scholarship**, Harbin Institute of Technology.

Professional Services

Seminar (co)-organization

2023 - 2025 Purdue University, Algebraic Geometry Seminar

2019 - 2020 Ohio State University, Graduate Student Algebraic Geometry Seminar

Mentoring and outreach

- April 2025 Served on career panel in the [Condensed Mathematics Workshop](#), Purdue University, Indianapolis campus, April 26-27.
- Summer 2024 Organized a problem-solving seminar for graduate students at Purdue University (10 participants).
- Summer 2023 Mentored two students in an REU project at Purdue University. (Students: Kisal Wijesooriya and Alan A. Mobley Burgos)
- Mentored a graduate student reading Riemann Surfaces. (Student: Mansimar Singh)
- Spring 2022 Mentored an undergraduate student exploring the mathematical formulation of a "figure-eight" phenomenon in astronomy. Here is [my student's poster](#). Give an introductory talk in the Math Cycle conference. Here is the [slide](#). (Student: Yuchen Zhang)
- Mentored an undergraduate student studying Stereographic Projection and Mobius Transformations. (Student: David Kruzel)
- Nov. 2020 Volunteered in the Ohio High School Mathematics Invitational Olympiad (online).
- 2019 & 2020 Mentored two first-year graduate students. (Students: James Marshall Reber and Shifan Zhao)

Contributed Talks

Seminar talks

- 2022-2025 Various talks given at Ohio State University, Purdue University, and University of Georgia
- 2023 Seminar on [Geometry, Arithmetic and Differential Equations of Periods](#) (online)
- 2022 University of Wisconsin-Madison, [Graduate/Postdoc Topology and Singularities Seminar](#) (online)

Conference talks (short/preliminary)

- July 2025 *Summer Research Institute in Algebraic Geometry*, Colorado State University
- May 2024 *Conference on Local System in Algebraic Geometry*, Ohio State University
- May 2024 *Commutative Algebra and Algebraic Geometry in TUCSon*, University of Arizona
- Sep. 2021 *The South Central Topology Conference*, Texas A&M University
- May 2021 *Graduate Student Conference on Algebra, Geometry and Topology* (online), Temple University

Poster presentations at conferences

- Nov 2025 *Algebraic Geometry Northeastern Series*, University of Massachusetts, Amherst
- Nov 2025 *Western Algebraic Geometry Symposium*, University of Oregon
- May 2024 *Singularities in Ann Arbor*, University of Michigan
- Nov. 2023 *Western Algebraic Geometry Symposium*, Washington University in St. Louis
- June 2022 *Geometric Structures (re)United*, University of Illinois Chicago
- Oct. 2021 *Algebraic Geometry North Eastern Series*, Boston College (online)
- Aug. 2021 *miniMAGNTS 2021*, Ohio State University (online)
- Oct. 2020 *Algebraic Geometry North Eastern Series*, Stony Brook University (online)