Yoyo Jiang

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Education

MASt in Mathematics, University of Cambridge   Expected June 2025

BA/MA in Mathematics, Johns Hopkins University   May 2025

Papers

- **Braidings on Non-Split Tambara-Yamagami Categories over the Reals** (joint with David Green, Sean Sanford). Preprint. https://arxiv.org/abs/2412.21012

- **Interface Resistance of Biomolecular Condensates** (joint with Yaojun Zhang, Andrew G.T. Pyo, Ross Kliegman, Clifford P. Brangwynne, Howard A. Stone, Ned S. Wingreen). eLife 12 (2024). https://doi.org/10.7554/eLife.91680.3

Talks

7. *Espace étalé is a Kan extension.* Cambridge Part III Seminar, December 2025.

6. *Braidings on Tambara-Yamagami Categories over the Reals.* JHU Graduate Student Seminar, November 2024.

5. *A Geometric Introduction to Representation Theory (Expository).* JHU Math Club, April 2024.

4. *Braidings on Non-Split Tambara-Yamagami Categories over the Reals.* Mid-Atlantic Research Exchange (JHU MATRX), March 2024.

3. *Braidings on Non-Split Tambara-Yamagami Categories over the Reals (Poster).* Joint Mathematics Meeting, January 2024.

2. *Braidings on Non-Split Tambara-Yamagami Categories over the Reals.* Young Mathematicians Conference, August 2023.

1. *Introduction to Monoidal Categories (Expository).* JHU Math Club, May 2023.

Conferences/Workshops Attended

Introduction to Shifted Symplectic Structure, Henri Lebesgue Centre.	December 2025
IWoAT Summer School, Westlake University.	July 2025
Algebra and Number Theory Day, Johns Hopkins University.	Nov 2024
Atlantic Meeting on Topology, Representation theory, and K-theory (AMTRaK), Johns Hopkins University.	Nov 2024
Women+ and Mathematics, Institute for Advanced Study.	May 2024
Gender Minorities in Topology and Related Areas Konference (GeMTRAK), University of Pennsylvania.	Apr 2024

Awards

Trinity Studentship in Mathematics	October 2025
Best Presentation, JHU MATRX Conference	March 2024
Woodrow Wilson Research Fellowship, Johns Hopkins University	2021 – 2025
Dean's List, Johns Hopkins University	2021 – 2025

Independent Study

Cambridge Part III essay — *Log Concavity Conjectures for Matroids*, advised by Dhruv Ranganathan	2025-2026
Undergraduate thesis — *Homotopy Limits: An ∞-categorical perspective*, advised by Emily Riehl	Spring 2025
Reading course (thesis preparation) on ∞-category theory, supervised by Emily Riehl	Fall 2024

- Read selections from Cisinski's *Higher Categories and Homotopical Algebra* and Riehl and Verity's *Elements of ∞-Category Theory*

Reading course on higher algebra, supervised by Rok Gregoric	Fall 2024

- Read parts of chapter 1 of Lurie's *Higher Algebra*

Directed reading on algebraic curves, supervised by Anish Chedalavada	Fall 2024

- Read selections from Fulton's *Algebraic Curves* and Hartshorne's *Algebraic Geometry*

Reading course on representation theory, supervised by Yiannis Sakellaridis	Spring 2024

- Read Erdmann's *Introduction to Lie Algebras* and selections from Fulton and Harris' *Representation Theory*

Reading course on category theory, supervised by Emily Riehl	Spring 2024

- Read chapters 4-6 of Riehl's *Category Theory in Context* and selections from Dwyer and Spalinski's *Homotopy theories and model categories*

Directed reading on differential forms, supervised by Anish Chedalavada	Spring 2024

- Read chapter 1 of Bott and Tu's *Differential Forms in Algebraic Topology* and selections from Tu's *An Introduction to Manifolds*

Directed reading on sheaf theory, supervised by Anish Chedalavada	Fall 2023

- Read chapters 1 and 2 of Vakil's *Rising Sea* and selections from Wedhorn's *Manifolds, Sheaves, and Cohomology*

Reading course on category theory, supervised by Maru Sarazola	Spring 2023

- Read chapters 1-4 of Riehl's *Category Theory in Context*

Teaching Experience

Johns Hopkins University

- Course Assistant, Calculus 1 (fall 2022).
- Learning Assistant, Physics 1 (spring 2022, fall 2022).
- Learning Assistant, Physics 2 (spring 2023).

Organization

President of JHU Math Club (Ex Numera)	Jan 2023 – Dec 2024
Board member of JHU Society of Physics Students	Sep 2021 – May 2023

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[1]Updated December 17, 2025