

# MENGWEI HU

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## EDUCATION

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<b>Ph.D. in Mathematics</b> , Yale University	<i>2020–2026</i>
Advisor: Prof. Ivan Losev	
<b>B.Sc. (Honor) in Mathematics</b> , Sichuan University	<i>2016–2020</i>

## RESEARCH INTERESTS

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Geometric representation theory and its connections to algebraic and symplectic geometry. In particular, modules over quantizations and involutions of quiver varieties.

## PUBLICATIONS

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- Hu, M. On certain Lagrangian subvarieties in minimal resolutions of Kleinian singularities. *Submitted*. DOI: 10.48550/arXiv.2504.08717.
  - Hu, M. Presentations of diagram categories. *PUMP J. Undergrad. Res.* 2019, 3, 1–25. DOI: 10.46787/pump.v3i0.2256.

## FELLOWSHIPS & AWARDS

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<b>Fan Family Fellowship</b> , Yale University	<i>2020–2021</i>
<b>Conference Travel Fellowship</b> , Yale University	<i>2025</i>
<b>Symposium Travel Grant</b> , Association for Women in Mathematics	<i>2025</i>

## INVITED TALKS

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AMS Southeast Sectional (Algebraic, Combinatorial & Geometric Representation Theory), GU	<i>Mar 2026</i>
Cluster Algebras and Lie Theory Seminar, University of Notre Dame	<i>Mar 2026</i>
Geometry, Algebra, and Theoretical Physics Seminar, Imperial College London	<i>Dec 2025</i>
Representation Theory Seminar, UMass Amherst	<i>Nov 2025</i>
AMS Central Sectional (Geometry, Representation Theory & Noncommutative Algebra), SLU	<i>Oct 2025</i>
Algebra Seminar, University of Georgia	<i>Oct 2025</i>
Topology Seminar, Johns Hopkins University	<i>Sep 2025</i>
Algebra Seminar, University at Buffalo	<i>Sep 2025</i>
Algebra Seminar, Syracuse University	<i>Sep 2025</i>
AWM Research Symposium (Mathematical Physics & Representation Theory), UW-Madison	<i>May 2025</i>
Algebra Seminar, University of Oregon	<i>Mar 2025</i>
Algebra Seminar, UCLA	<i>Mar 2025</i>
Geometry, Symmetry and Physics Seminar, Yale	<i>Jan 2025</i>
AMS Western Sectional (Geometric & Categorical Representation Theory), UC Riverside	<i>Oct 2024</i>
AMS Eastern Sectional (Singularities in Commutative Algebra), UAlbany	<i>Oct 2024</i>

## Contributed Presentations

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International Congress of Mathematicians (ICM) 2026, Philadelphia (short communication)	<i>Jul 2026</i>
Categorification and Symplectic Duality Workshop, Northeastern University (poster)	<i>Jun 2025</i>

## TEACHING

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- **Instructor of Record**, Yale University
  - MATH 115: Calculus of Functions of One Variable II *Fall 2024, Spring 2026*
  - MATH 112: Calculus of Functions of One Variable I *Fall 2022, Fall 2023*
  - MATH S118E: Introduction to Functions of Several Variables, **Syllabus** *Summer 2024*
- **Certificate of College Mathematics Teaching Preparation** *2025*
- **Teaching Assistant**: Linear Algebra, Calculus *Spring, Summer, Fall 2021, Summer 2023*

## MENTORING

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- **REU Mentor**, Superalgebras and Polynomial Spaces *Summer 2025*
- Mentor, American Women in Mathematics Mentor Network *2025–present*
- Mentor, Yale Math Buddies Program for First-Year Graduate Students *Fall 2022*
- Mentor, Yale Take an Undergraduate to School *Spring 2022*

## SERVICE AND OUTREACH

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### Referee Service

- Referee for Journals: *Representation Theory*

### Panel Service

- Graduate School Panelist, Women in Mathematics in New England *Sep 2024*
- Graduate Instructor Panelist, Lang Teaching Seminar at Yale *Mar 2024*

### Organizational Service

- Organizer, Joint Yale-Columbia Representation Seminar *Fall 2022*
- Organizer, Yale Graduate Student Seminar *Spring 2022*

### Community Service

- Sports Chair, Yale Research Experience for Undergraduate Students *Summer 2025*
- Committee Member, Yale Graduate Student Advisory Committee *2023–2026*
- Network Member, American Women in Mathematics Research Networks: WINART, WICA *2025–present*