

Daigo Ito

Curriculum Vitae

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Research interests	Derived categories of coherent sheaves, birational geometry, tensor triangular geometry, homological mirror symmetry	
Education	University of California, Berkeley Ph.D. in Mathematics Advisor: David Nadler	Berkeley, CA August 2021 – May 2026 (expected)
	Princeton University A.B. in Mathematics Advisor: János Kollár, Coadvisor: Joaquín Moraga	Princeton, NJ September 2017 – May 25, 2021
Honors and fellowships	Simons Foundation Fellowship (Department of Mathematics, UC Berkeley) Summer Grant Award (Department of Mathematics, UC Berkeley) Phi Beta Kappa, Beta Chapter of New Jersey (Princeton University)	2025 2024 2021
Publications	1. A new proof of the Bondal-Orlov reconstruction using Matsui spectra (with Hiroki Matsui), <i>Bull. Lond. Math. Soc.</i> : Volume 57, Issue 7 (2025), arXiv version .	
Preprints	4. Geometric construction of quiver tensor Products (with John S. Nolan), arXiv:2510.05277 (2025). 3. A derived category analogue of the Nakai–Moishezon criterion (with Noah Olander), arXiv:2507.17681 (2025), submitted. 2. Polarizations on a triangulated category , arXiv:2502.15621 (2025), submitted. 1. Gluing of Fourier-Mukai partners in a triangular spectrum and birational geometry , arXiv:2309.08147 (2023), submitted.	
Teaching	Graduate student instructor (University of California, Berkeley) Math 52: Calculus Math 16A: Analytic Geometry and Calculus Math 1B: Calculus Math 1B: Calculus Math 1B: Calculus Math 54: Linear Algebra and Differential Equations Math 1B: Calculus	Spring 2026 Fall 2024 Spring 2024 Fall 2023 Fall 2022 Spring 2022 Fall 2021

Mentoring

Directed reading program (University of California, Berkeley)

Nathan Han (ongoing) (topics: Introduction to algebraic curves)	Fall 2025
Nathan Mann (topics: Introduction to algebraic geometry and 27 lines)	Spring 2025
Junchang Wang (topics: Riemann surfaces and scheme theory)	Fall 2024
Vivasvat Vatatmaja (topics: Derived category on an elliptic curve)	Spring 2024
Vivasvat Vatatmaja (topics: Model categories and \mathbb{A}^1 -homotopy theory)	Spring 2023

Research talks

Conferences & Workshops

- <i>AMS 2026 Spring Eastern Sectional, Special Session on Derived Categories, Stability Conditions, and Homological Mirror Symmetry</i>	
Boston College, USA	March 2026
- <i>Joint Mathematics Meetings (JMM) 2026, Special Session on Moduli of Surfaces</i>	
Washington, D.C., USA	January 2026
- <i>Western Algebraic Geometry Symposium</i> (flash talk)	
University of Oregon, USA	November 2025
- <i>Derived Representation Theory and Triangulated Categories</i> (contributed talk)	
Aristotle University of Thessaloniki, Greece	June 2025
- <i>Triangulated Categories in Algebra and Geometry</i> (contributed talk)	
Charles University and Czech Academy of Sciences, Czechia	September 2024
- <i>Simple-mindedness, Silting and Stability</i> (flash talk)	
Lancaster University, UK	July 2024
- <i>Classifications of Subcategories of Abelian and Triangulated Categories</i>	
Tokyo University of Agriculture and Technology, Japan	June 2024

Seminars

- <i>D.A.N.C.E. (Derived And Non-Commutative Enthusiasts) Seminar</i>	May 2026
- <i>Caltech/USC Algebra & Geometry Seminar</i>	April 2026
- <i>Syzygies and Mirror Symmetry Virtual Seminar</i>	April 2026
- <i>BIMSA Seminar on Disquisitions on Monoidal Categories and Operads</i>	March 2026
- <i>UC Santa Barbara Seminar on Geometry and Arithmetic</i>	January 2026
- <i>UCLA Algebra Seminar</i>	November 2025
- <i>Stony Brook Algebraic Geometry Seminar</i>	November 2025
- <i>University of Washington Algebra and Algebraic Geometry Seminar</i>	October 2025
- <i>UC Berkeley Commutative Algebra and Algebraic Geometry Seminar</i>	October 2025
- <i>Utah Algebraic Geometry Seminar</i>	September 2025
- <i>UC Berkeley Commutative Algebra and Algebraic Geometry Seminar</i>	October 2024
- <i>Tokyo-Nagoya Algebra Seminar</i>	June 2024
- <i>UC Berkeley Commutative Algebra and Algebraic Geometry Seminar</i>	October 2023

Poster presentations

- <i>Workshop on Mirror Symmetry and Related Topics</i> (upcoming)	
Kyoto University, Japan	December 2025
- <i>Western Algebraic Geometry Symposium</i>	
University of Oregon, USA	November 2025

- *Workshop on Derived Categories, Noncommutative Geometry and Deformation Theory*
Hotel San Michele, Cetraro, Italy July 2025
- *Western Algebraic Geometry Symposium*
The University of Arizona, USA November 2024
- *Western Algebraic Geometry Symposium*
University of California, Davis, USA April 2024
- *SLMath Workshops on Commutative Algebra and Noncommutative Algebraic Geometry*
SLMath (formerly known as MSRI), USA Spring 2024
- *Higher Dimensional Algebraic Geometry: James 60*
University of California, San Diego, USA January 2024

Organized seminars

- Reading group on K3 surfaces and derived categories* Spring 2024
- Geometric Representation Theory Seminar* (with Ansuman Bardalai) Spring 2024
- Geometric Representation Theory Seminar* (with Ansuman Bardalai) Fall 2023
- Reading group on homological mirror symmetry for elliptic curves* Spring 2023
- Reading group on Milnor's characteristic classes* Summer 2022

Skills

Python (SageMath)