

# Daigo Ito

*Curriculum Vitae*

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<https://daigo.github.io/>

**Research interests** Derived categories of coherent sheaves, birational geometry, tensor triangular geometry, homological mirror symmetry

**Education**

<b>University of California, Berkeley</b>	Berkeley, CA
Ph.D. in Mathematics	August 2021 – Present
Advisor: David Nadler	

<b>Princeton University</b>	Princeton, NJ
A.B. in Mathematics	September 2017 – May 2021
Advisor: János Kollár, Coadvisor: Joaquín Moraga	

**Honor and fellowships**

Simons Foundation Fellowship (Department of Mathematics, UC Berkeley)	2025
Summer Grant Award (Department of Mathematics, UC Berkeley)	2024
Phi Beta Kappa (Beta Chapter of New Jersey)	2021

**Publication**

1. **A new proof of the Bondal-Orlov reconstruction using Matsui spectra** (j.w. Hiroki Matsui), *Bull. Lond. Math. Soc.*: Volume 57, Issue 7 (2025), [arXiv version](#).

**Preprints**

4. **Geometric Construction of Quiver Tensor Products** (j.w. John S. Nolan), [arXiv:2510.05277](#) (2025).

3. **A derived category analogue of the Nakai–Moishezon criterion** (j.w. 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 16A: Analytic Geometry and Calculus	Fall 2024
Math 1B: Calculus	Spring 2024
Math 1B: Calculus	Fall 2023
Math 1B: Calculus	Fall 2022
Math 54: Linear Algebra and Differential Equations	Spring 2022
Math 1B: Calculus	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

- <i>AMS 2026 Spring Eastern Sectional, Special Session on Derived Categories, Stability Conditions, and Homological Mirror Symmetry</i> (upcoming)	
Boston College, USA	March 2026
- <i>Joint Mathematics Meetings (JMM) 2026, Special Session on Moduli of Surfaces</i> (upcoming)	
Washington, D.C., USA	January 2026
- <i>Algebra Seminar</i> (upcoming)	
University of California, Los Angeles, USA	November 2025
- <i>Algebraic Geometry Seminar</i> (upcoming)	
Stony Brook University, USA	November 2025
- <i>Algebra and Algebraic Geometry Seminar</i> (upcoming)	
University of Washington, USA	October 2025
- <i>Commutative Algebra and Algebraic Geometry Seminar</i>	
University of California, Berkeley, USA	October 2025
- <i>Algebraic Geometry Seminar</i>	
The University of Utah, USA	September 2025
- <i>Derived Representation Theory and Triangulated Categories</i>	
Aristotle University of Thessaloniki, Greece	June 2025
- <i>Commutative Algebra and Algebraic Geometry Seminar</i>	
University of California, Berkeley, USA	October 2024
- <i>Triangulated Categories in Algebra and Geometry</i>	
Charles University and Czech Academy of Sciences, Czechia	September 2024
- <i>Simple-mindedness, Silting and Stability</i>	
Lancaster University, UK	July 2024
- <i>Tokyo-Nagoya Algebra Seminar</i>	
University of Tokyo & Nagoya University, Japan (online)	June 2024
- <i>Classifications of Subcategories of Abelian and Triangulated Categories</i>	
Tokyo University of Agriculture and Technology, Japan	June 2024
- <i>Commutative Algebra and Algebraic Geometry Seminar</i>	
University of California, Berkeley, USA	October 2023

## Poster presentations

- <i>Workshop on Derived Categories, Noncommutative Geometry and Deformation Theory</i>	
Hotel San Michele, Cetraro, Italy	July 2025
- <i>Western Algebraic Geometry Symposium</i>	
The University of Arizona, USA	November 2024
- <i>Western Algebraic Geometry Symposium</i>	
University of California, Davis, USA	April 2024
- <i>SLMath Workshops on Commutative Algebra and Noncommutative Algebraic Geometry</i>	

SLMath (formerly known as MSRI), USA	Spring 2024
- <i>Higher Dimensional Algebraic Geometry: James 60</i>	
University of California, San Diego, USA	January 2024

Organized seminars	<i>Reading group on K3 surfaces and derived categories</i>	Spring 2024
	<i>Geometric Representation Theory Seminar</i> (with Ansuman Bardalai)	Spring 2024
	<i>Geometric Representation Theory Seminar</i> (with Ansuman Bardalai)	Fall 2023
	<i>Reading group on homological mirror symmetry for elliptic curves</i>	Spring 2023
	<i>Reading group on Milnor’s characteristic classes</i>	Summer 2022

Skill	Python (SageMath)
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