

James Hotchkiss

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Columbia University
Mathematics Hall, Room 415

Employment

NSF Postdoc, Columbia University	2024–present
Ritt Assistant Professor, Columbia University	2023–2024

Education

University of Michigan, Ph.D. in Mathematics Advisor: Alexander Perry	2023
Harvard College, A.B. in Mathematics <i>cum laude</i>	2018

Visiting Positions

Vincent Della Pietra Endowed Postdoctoral Fellow, SLMATH (formerly MSRI) Semester program in Noncommutative Algebraic Geometry	Spring 2024
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Fellowships and awards

NSF Postdoctoral Research Fellowship	2024
Donald J. Lewis Fellowship, University of Michigan	2022
Herb Alexander Award, Harvard College	2018

Publications and Preprints

The period-index conjecture for abelian threefolds via Donaldson–Thomas theory
(with A. Perry),
arXiv:2405.03315 (2024).

On decompositions for Fano schemes of intersections of two quadrics
(with Pieter Belmans, Jishnu Bose, Sarah Frei, Benjamin Gould, Alicia Lamarche,
Jack Petok, Cristian Rodriguez Avila, Saket Shah),
arxiv:2403.12517 (2024).

The period-index problem for complex tori,
arxiv:2301.09293 (2023).

Hodge theory of twisted derived categories and the period-index problem,
arxiv:2212.10638 (2022).

The gonality of complete intersection curves (with B. Ullery and C. Lau),
J. Alg. 560 (2020), 579–608.

Lecture series

PRAGMATIC Catania, Sicily	September 2025
Bridgeland Stability and Applications CIMPA, Brazil	August 2025
Brauer Groups and Derived Categories (3 lectures) FRG Workshop, Northwestern	October 2023

Conference Talks

Derived Categories and Moduli Spaces UC Santa Barbara	May 2024
Ramification in Algebraic and Arithmetic Geometry AMS Central Sectional, Milwaukee	April 2024
Derived Categories, Arithmetic and Geometry, Join Mathematics Meeting, San Francisco	January 2024
Workshop on Derived Categories, Hausdorff Research Institute	November 2023
Algebraic Geometry and Singularities in Mixed and Positive Characteristic, FRG Special Month in Ann Arbor	May 2023
Brauer Groups in Algebraic Geometry and Arithmetic, AMS Central Sectional, Cincinnati	April 2023
Michigan Algebraic Geometry Symposium, University of Michigan	March 2023

Seminar Talks

Dartmouth College, Algebra and Number Theory Seminar	May 2024
SLMath (formerly MSRI), Noncommutative Projective Schemes Seminar	February 2024
Columbia University, Algebraic Geometry Seminar	December 2023
Stony Brook University, Algebraic Geometry Seminar	December 2023
University of Toronto, Algebraic Geometry Seminar	December 2023
Princeton University, Algebraic Geometry Seminar	November 2023
Valley Geometry Seminar, UMass Amherst	October 2023
University of Wisconsin, Madison, Algebra and Algebraic Geometry Seminar	May 2023
University of Maryland, Algebra–Number Theory Seminar	May 2023
Leibniz Universität Hannover, Algebraic Geometry Seminar	April 2023
Harvard–MIT Algebraic Geometry Seminar	February 2023

Other Invited Events

Algebraic Geometry and Noncommutative Projective Varieties, Oberwolfach	September 2024
Arithmetic Geometry, Group Actions and Rationality Problems, Simons Foundation, New York	May 2024
Conference on Higher Dimensional Geometry, Simons Foundation, New York	October 2023
Stacks Project Workshop, University of Michigan, Ann Arbor	August 2023
Derived Categories, Arithmetic and Geometry, AMS Mathematical Research Community	June 2023

Seminars Co-organized

Hyperkähler varieties, Columbia University	Fall 2023
Donaldson–Thomas Theory, University of Michigan	Spring 2022
Hodge Theory, University of Michigan	Spring 2020
Étale Cohomology, University of Michigan	Spring 2019

Other Service

Referee for: Journal of the American Mathematical Society; Mathematische Zeitschrift; Homology, Homotopy and Applications

Teaching*Columbia University*

Calculus I	Fall 2023
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University of Michigan

Calculus I	Spring 2023, Spring 2022, Spring 2021, Fall 2020, Spring 2020, Fall 2019, Spring 2019
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Precalculus	Fall 2018
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Harvard College

Course Assistant, Undergraduate Algebraic Geometry	Spring 2018
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