James Hotchkiss

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Columbia University
Mathematics Hall, Room 415

Employment

Ritt Assistant Professor, Columbia University   2023–present

Education

University of Michigan, Ph.D. Candidate in Mathematics   2018–2023
Advisor: Alexander Perry

Harvard College, A.B. in Mathematics *cum laude*   2018

Visiting Positions

Postdoctoral Fellow, MSRI (SLMath)   Spring 2024
Semester program in Noncommutative Algebraic Geometry

Awards

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),
In preparation.

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.

Conference Talks

Derived Categories, Arithmetic and Geometry,   January 2024
Join Mathematics Meeting, 2024

Brauer Groups and Derived Categories (lecture series)   October 2024
FRG Workshop, Northwestern

Workshop on Derived Categories,   November 2023
Hausdorff Research Institute

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, Cincinatti	April 2023
Michigan Algebraic Geometry Symposium, University of Michigan	March 2023

Seminar Talks

University of Toronto, Algebraic Geometry Seminar	December 2024
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
Ohio State University, Arithmetic Geometry Seminar	February 2023

Other Invited Events

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

Teaching

Columbia University

Calculus I	Fall 2023

University of Michigan

Calculus I	Spring 2023, Spring 2022, Spring 2021, Fall 2020, Spring 2020, Fall 2019, Spring 2019

Precalculus   Fall 2018

Harvard College

Course Assistant, Undergraduate Algebraic Geometry   Spring 2018