

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

Vincent Della Pietra Endowed Postdoctoral Fellow, 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, San Francisco

Brauer Groups and Derived Categories (3 lectures) October 2024
FRG Workshop, Northwestern

Workshop on Derived Categories, November 2023
Hausdorff Research Institute

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| 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

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| 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 |
| Ohio State University, Arithmetic Geometry Seminar | February 2023 |

Other Invited Events

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| 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

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| Hyperseminar on 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