

Danny Bragg

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ACADEMIC EMPLOYMENT

2022 – now Wylie Assistant Professor, University of Utah
2019 – 2022 NSF Postdoctoral Fellow, UC Berkeley (advisor: Martin Olsson)
2019 Postdoc, MSRI (Spring semester)
2018 RTG Postdoctoral Scholar, UC Berkeley (Fall semester)

EDUCATION

2013 – 2018 Ph.D. Mathematics,
University of Washington, Seattle (advisor: Max Lieblich)
2010 – 2013 B.A. Mathematics,
University of Colorado, Boulder, summa cum laude (advisor: Nat Thiem)

RESEARCH INTERESTS

Algebraic geometry and arithmetic geometry.

GRANTS AND AWARDS

2019 – 2022 NSF Postdoctoral Research Fellowship DMS-1902875

INVITED RESEARCH TALKS

2025 Research program on Arithmetic geometry of K3 surfaces at the Bernoulli Center,
EPFL, Lausanne, Switzerland.
Colloquium, University of Wisconsin
Special colloquium, USC
2024 Algebraic geometry seminar, Texas A&M University
Joint Mathematics Meeting Special Session on Derived Categories, Arithmetic, and
Geometry.
Algebraic geometry seminar, CU Boulder
Algebraic geometry seminar, UIUC
2023 NTAG seminar, Simon Fraser University
Algebraic geometry seminar, University of Virginia
Algebraic Geometry Seminar, University of Wisconsin

- Algebraic geometry and cohomology in mixed characteristic, in celebration of Bhargav Bhatt's Nemmers Prize (May 2023 at Northwestern)
- Algebraic Geometry Seminar, University of Washington
- 2022 Zoom Algebraic Geometry Seminar (ZAG) (virtual, worldwide)
- MIT/Harvard: Algebraic Geometry Seminar
- Banff International Research Station (BIRS): Workshop on Derived Categories, Arithmetic, and Reconstruction in Algebraic Geometry
- Algebraic Geometry Seminar, University of Michigan
- AMS Western Sectional Meeting (Fall 2022, University of Utah): Special Session on Recent Advances in Algebraic Geometry and Commutative Algebra in or Near Characteristic p
- Algebraic Geometry Seminar, University of Utah
- 2021 JMM - AMS Special Session on Galois Cohomology in Arithmetic Geometry
- MSU: Algebra Seminar
- The Derived Seminar (virtual, worldwide)
- 2020 Berkeley Commutative Algebra and Algebraic Geometry Seminar
- UCSB: Algebraic Geometry Seminar
- Stacks Project Workshop
- 2019 University of California, Santa Cruz: Algebra and Number Theory Seminar
- Stanford: Algebraic Geometry Seminar
- MIT/Harvard: Algebraic Geometry Seminar
- Fudan University, Shanghai: Workshop on Algebraic Geometry
- Rice: Algebraic Geometry and Number Theory Seminar
- WAGS (Western algebraic geometry symposium) University of Utah
- Banff International Research Station (BIRS): Workshop on Brauer Groups
- University of Washington: Algebraic Geometry Seminar
- 2018 Columbia: Algebraic Geometry Seminar
- University of California, Berkeley: RTG Arithmetic Geometry Seminar
- University of Illinois, Chicago: Algebraic K-theory Seminar
- University of Illinois, Chicago: Algebraic Geometry Seminar
- Southern California Algebraic Geometry Seminar
- 2017 University of California, Berkeley: Special Seminar in Arithmetic Geometry
- University of Utah, Salt Lake City: Algebraic Geometry Seminar
- University of Washington, Seattle: Algebraic Geometry Seminar
- University of Michigan, Ann Arbor: Algebraic Geometry Seminar
- University of Oregon: Algebra Seminar

CONFERENCE AND SEMINAR ORGANIZATION

- 2025 – Organizer, University of Utah Algebraic Geometry Seminar.
- 2022 – 2024 Organizer, University of Utah Algebraic Geometry Preprint Seminar.
- 2018 – 2022 Organizer, Berkeley Arithmetic Geometry and Number Theory Seminar.

- 2022 Organizer, Berkeley RTG Conference in Number Theory.
- 2020 Organizer, Berkeley Undergraduate Number Theory Conference.
- 2019 Organizer, Western Algebraic Geometry Symposium (WAGS) (Spring 2019 at UC Berkeley).

OUTREACH

- 2020 – 2021 Organizer, Undergraduate Brown Bag Lunches Series (with MUSA)
- 2016 – 2017 Washington Experimental Mathematics Lab (WXML) mentor

TEACHING

- Instructor**, University of Utah
 - Fall 2025 Math 1105: Business Mathematics
 - Math 1060: Trigonometry
 - Spring 2025 Math 1090: Business Algebra
 - Fall 2024 Math 2200: Discrete Mathematics
 - Spring 2024 Math 1090: Business Algebra
 - Fall 2023 Math 3210: Foundations of Analysis I
 - Spring 2023 Math 2200: Discrete Mathematics
 - Fall 2022 Math 2210: Calculus III
- Instructor**, UC Berkeley
 - Spring 2022 Math 143: Introduction to Algebraic Geometry
 - Spring 2022 Math 199: Independent study. Algebraic topology.
 - Fall 2021 Math 113: Introduction to Abstract Algebra
 - Spring 2021 Math 143: Introduction to Algebraic Geometry
 - Fall 2020 Math 113: Introduction to Abstract Algebra
 - Fall 2018 Math 116: Cryptography
- Instructor**, University of Washington
 - 2017 Math 126: Calculus with Analytic Geometry III
 - 2016 Math 324: Advanced Multivariable Calculus I
 - 2015 Math 124: Calculus with Analytic Geometry I
 - 2015 Math 308: Matrix Algebra with Applications
- Teaching Assistant**, University of Washington
 - 2013 – 2017 Math 124, 125, 126

PUBLICATIONS AND PREPRINTS

All publications and preprints are available on the arXiv. Links can be found on my professional website: <https://www.math.utah.edu/~bragg/>

Publications

- [1] D. Bragg. Fourier-Mukai transforms commuting with Frobenius. *Bulletin of the London Mathematical Society*, doi.org/10.1112/blms.13145., (2024).
- [2] D. Bragg and J. Hall and S. Mathur. Unipotent morphisms. To appear in *Geometry & Topology*
- [3] N. Addington and D. Bragg. Hodge numbers are not derived invariants in positive characteristic. *Math. Ann.*, Vol. 387 (2023): pgs 847–878.
- [4] D. Bragg and Z. Yang. Twisted derived equivalences and isogenies between K3 surfaces in positive characteristic. *Algebra & Number Theory*, Vol. 17, no. 5 (2023): pgs 1069–1126.
- [5] D. Bragg. Lifts of twisted K3 surfaces to characteristic 0. *Int. Math. Res. Not. (IMRN)*, Vol. 5 (2023): pgs 4337–4407.
- [6] J. Alper, P. Belmans, D. Bragg, J. Liang, and T. Tajakka. Projectivity of the moduli space of vector bundles on a curve *London Mathematical Society Lecture Note Series*. Cambridge University Press. (2022): pgs 90–125.
- [7] B. Antieau and D. Bragg. Derived invariants from topological Hochschild homology. *Algebraic Geometry*, Vol. 9, no. 3 (2022): pgs 364–399.
- [8] D. Bragg and M. Lieblich. Perfect points on genus one curves and consequences for supersingular K3 surfaces. *Compositio Mathematica*, Vol. 158, no. 5 (2022): pgs 1052 - 1083.
- [9] D. Bragg. Derived equivalences of twisted supersingular K3 surfaces. *Advances in Mathematics*, Vol. 378 (2021): 107498.
- [10] D. Bragg and N. Thiem. Restrictions of rainbow supercharacters. *Journal of Algebra*, Vol. 451 (2016): pgs 357–400.

Preprints

- [11] D. Bragg and E. Brakkee and A. Várilly-Alvarado. Moduli of lattice polarized K3 surfaces and boundedness of Brauer groups. Preprint available at arXiv:2510.11477. (2025)
- [12] D. Bragg. On the logarithmic Hodge-de Rham spectral sequence for curves on K3 surfaces. Preprint available at arXiv:2505.12139. (2025)

- [13] D. Bragg and M. Olsson and R. Webb. Ample vector bundles and moduli of tame stacks. Preprint available at arXiv:2407.01743. *Submitted September 2024 to Algebraic Geometry, Foundation Compositio Mathematica. Currently under review.*
- [14] D. Bragg and M. Lieblich. Murphy's Law for Algebraic Stacks. Preprint available at arXiv:2402.00862. *Submitted August 2024 to Inventiones Mathematicae. Currently under review.*
- [15] D. Bragg. Automorphism groups of curves over arbitrary fields. Preprint available at arXiv:2304.02778. (2023)
- [16] D. Bragg and M. Olsson. Representability of cohomology of finite flat abelian group schemes. Preprint available at arXiv:2107.11492. *Submitted September 2022 to Journal für die reine und angewandte Mathematik. Referee report received and currently awaiting response.*
- [17] D. Bragg and M. Lieblich. Twistor spaces for supersingular K3 surfaces. Preprint available at arXiv:1804.07282. *Submitted October 2021 to Bulletin de la Société Mathématique de France. Currently under review.*