

# ZHIJIA ZHANG

zhijia.zhang@cims.nyu.edu, zz1753@nyu.edu  
<https://zhijiazhangz.github.io>  
251 Mercer str., New York, NY 10012

## Education

New York University	New York, NY
Ph.D. in Mathematics	2021 – present
New York University Shanghai	Shanghai, China
B.S. in Honors Mathematics	2017 – 2021

## Publications (in reverse chronological order)

1. *Equivariant geometry of singular cubic threefolds*, (with I. Cheltsov and Yu. Tschinkel), to appear in **Forum of Mathematics, Sigma**, 65 pp.,
2. *Equivariant geometry of the Segre cubic and the Burkhardt quartic*, (with I. Cheltsov and Yu. Tschinkel), **Selecta Math. (N.S.)** 31(1):7, 36 pp., (2025)
3. *Equivariant birational geometry of linear actions*, (with Yu. Tschinkel and K. Yang), **EMS Surveys in Mathematical Sciences** 11(2), 235–276, (2024)
4. *Combinatorial Burnside groups*, (with Yu. Tschinkel and K. Yang), **Research in Number Theory** 8(2):33, 17 pp., (2022)

## Preprints

5. *Rationality of singular cubic threefolds over  $\mathbb{R}$* , (with I. Cheltsov and Yu. Tschinkel), 27 pp., (2024)
6. *Computing the equivariant Brauer group*, (with A. Pirutka), 40 pp., (2024)
7. *Birational invariants of volume preserving maps*, (with K. Loginov), 34 pp., (2024)
8. *Stable equivariant birationalities of cubic and degree 14 Fano threefolds*, (with Yu. Tschinkel), 22 pp., (2024)
9. *Modular symbols and equivariant birational invariants*, 18 pp., (2024)
10. *Equivariant geometry of singular cubic threefolds, II*, (with I. Cheltsov, L. Marquand and Yu. Tschinkel), 51 pp., (2024)
11. *Rationality of forms of  $\overline{\mathcal{M}}_{0,n}$* , (with B. Hassett and Yu. Tschinkel), 35 pp., (2024)

## Other writing

1. *Equivariant geometry of singular cubic threefolds, ZAG report*, 5 pp., (2024)

## Awards

Wilhelm T. Magnus Memorial Prize, Courant Institute of Mathematical Sciences <i>for significant contributions to the Mathematical Sciences</i>	2024
MacCracken Doctoral Fellowship, NYU	2021–2026

## Conference talks

ICMS Edinburgh, Birational Geometry and Number Theory	2024
Boston College, Algebraic Geometry Northeastern Series (Short Talk)	2024
Princeton University, Monodromy and Its Applications (Lightning Talk)	2023

## Seminar talks

University of Nottingham, Pure Mathematics Seminar	2024
Imperial College London, Algebraic Geometry Seminar	2024
NYU, Algebraic Geometry Seminar	2024

## Attended and invited conferences

Polarized Varieties and Their Applications University of Hawaii	2025
Cremona Groups CIRM, Marseille	2025
Simons Collaboration on Moduli of Varieties Conference University of California San Diego	2025
Birational Geometry and Number Theory International Centre for Mathematical Sciences, Edinburgh	2024
Conference on Arithmetic Geometry, Group Actions and Rationality Problems Simons Foundation	2024
Conference on Higher Dimensional Geometry Stony Brook University	2024
Algebraic Geometry Northeastern Series (AGNES) Boston College	2024
Monodromy and Its Applications Princeton University	2023
Higher Invariants in Equivariant and Geometric Topology University of Miami	2023
Algebraic Geometry Northeastern Series (AGNES) Stony Brook University	2023
Conference on Higher Dimensional Geometry Simons Foundation, <b>presented a poster</b>	2022
PCMI Graduate Summer School: Number Theory Informed by Computation IAS/Park City Mathematics Institute, Park City, UT	2022

## Teaching experience

*New York University*

Teaching assistant, MATH-UA.0348 Honors Algebra I	Fall 2024
Grader, MATH-GA.2140 Algebra II	Spring 2024
Instructor, Complex Variables Written Exam Workshop	January 2024
Grader, MATH-GA.2210 Introduction to Number Theory	Spring 2023, 2024
Grader, MATH-GA.2130 Algebra I	Fall 2022, 2023

## Services

PhD student survey committee, NYU Courant	2024–2025
Co-organizer, Graduate Student and Postdoc Seminar, NYU Courant	2021–2023

## Relevant skills

Languages: Chinese and English  
Softwares: **Magma** (computer algebra system)