

## Jiahui Huang

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### Research Interest

Mathematics. Algebraic geometry. Motivic integration. Artin stacks. Floer theory.

### Education

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| <b>PhD in Pure Mathematics</b>   | 2023 - present |
| University of Waterloo, Canada   |                |
| Supervisor: Matthew Satriano   |                |
| <b>Master in Mathematics</b>   | 2021 - 2023    |
| ETH Zürich, Switzerland  |                |
| Supervisors: Arkadij Bojko, Rahul Pandharipande                            |                |
| Thesis: <i>Equivariant Segre and Verlinde invariants for Quot schemes.</i> |                |
| <b>Bachelor in Pure Mathematics</b>  | 2017 - 2021    |
| University of Waterloo, Canada   |                |
| Supervisors: Matthew Satriano, David McKinnon                              |                |

### Publications and Preprints

|   |      |
|---|------|
| <i>Contact loci of semihomogeneous singularities.</i>                       | 2025 |
| Eduardo de Lorenzo Poza, Jiahui Huang.                                      |      |
| <i>Arxiv preprint.</i>  |      |
| <i>Equivariant Segre and Verlinde invariants for Quot schemes.</i>          | 2023 |
| Arkadij Bojko, Jiahui Huang.  |      |
| <i>Moduli (Foundation Compositio Mathematica), accepted.</i>                |      |
| <i>What fraction of an <math>S_n</math>-orbit can lie on a hyperplane?.</i> | 2021 |
| Jiahui Huang, David McKinnon, and Matthew Satriano.                         |      |
| <i>Linear Algebra and Its Applications</i> , 613C pp. 1-23.                 |      |

### Talks

|   |      |
|---|------|
| <i>Arc-Floer conjecture for isolated homogeneous singularities.</i> | 2024 |
| Ontario Graduate Mathematics Conference, Waterloo                   |      |
| <i>Arc-Floer conjecture for double point singularities.</i>         | 2024 |
| Canadian Mathematical Society Summer Meeting, Saskatoon.            |      |
| <i>Equivariant Segre and Verlinde invariants for Quot schemes.</i>  | 2023 |
| Algebraic geometry and moduli seminar, ETH Zürich                   |      |

### Honours and Awards

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|---|------------|
| Women in Mathematics - Directed Reading Program Mentorship  | 2024, 2025 |
| <i>This award recognizes the valuable time and commitment that mentors invested in helping two undergraduate students throughout the term to develop insight and skills in Mathematics.</i>         |            |
| Undergraduate Research Assistanceship   | 2019, 2020 |
| <i>This award provides research experience that nurtures an interest in research careers and mathematics experience with financial support during a full-time, on-campus position for 16 weeks.</i> |            |
| J.D. Kalbfleisch Scholarship for International Students   | 2017-2021  |
| <i>Several awards, valued at \$1750 each, are provided accross undergraduate study totaling \$15750.</i>  |            |

### Conference Activities

|   |      |
|---|------|
| Singularities in Algebraic Geometry Spring School, University of Rennes.  | 2025 |
| Ontario Graduate Mathematics Conference, University of Waterloo.          | 2024 |
| Canadian Mathematical Society Summer Meeting, University of Saskatchewan. | 2024 |
| Equivariant Methods in Geometry, Cambridge University.                    | 2024 |

|   |      |
|---|------|
| Algebraic Geometry Summer School, Fudan University. | 2023 |
| Algebraic Geometry Summer School, Fudan University. | 2021 |

### Teaching Assistantships

|   |      |
|---|------|
| Algebraic Geometry (grading, office hour, supplement notes) | 2025 |
| Algebraic Number Theory (grading, office hour)              |      |
| Linear Algebra 2 (grading, office hour, guest lecture)      |      |
| Advanced Linear Algebra 3 (grading)                         | 2024 |
| Linear Algebra 2 (grading, guest lecture)                   |      |
| Algebraic Number Theory (grading, office hour)              |      |
| Algebraic Topology (grading)                                |      |
| Advanced Linear Algebra 2 (grading)                         |      |
| Linear Algebra 1 (tutoring)                                 | 2023 |
| Advanced Linear Algebra 1 (grading)                         |      |
| Linear Algebra 2 (grading)                                  | 2020 |
| Calculus 1 and Linear Algebra 1 (tutoring)                  | 2019 |
| Calculus 1 and Linear Algebra 1 (tutoring)                  | 2018 |

### Others

|   |      |
|---|------|
| Volunteer for Graduate Student Association. | 2025 |
| Volunteer for CEMC contest marking.         |      |

### Languages

Chinese: Native speaker.  
English: Fluent.  
Japanese: Fluent (certified up to N3 level).  
German: Basic (certified A1 level).