# Haoyu Wu

## Curriculum Vitae
Last updated: June 17, 2023

## Education

2018–  **Ph.D. student in Pure Mathematics**, *Fudan University*
*Advisor*: Zhiyuan Li

2014–2018  **B.S. in Pure & Applied Mathematics**, *Fudan University*

## Research Interests

*Algebraic geometry* and related areas. Some keywords:
- Moduli space of sheaves, hyperkähler varieties and log Fano pairs
- Stability Conditions: Bridgeland stability, K-stability, GIT stability
- Derived category of schemes
- Algebraic cycles, motives
- ...

## Publications and Preprints

1   Long Pan, Fei Si, and Haoyu Wu. *K moduli of log del Pezzo pairs*. 2023. arXiv: 2303.05651 [`math.AG`].

2   Yitao Chen, Haoyu Wu, and Hanyu Yao. *Compactifications of moduli space of (quasi-)trielliptic K3 surfaces*. 2022. arXiv: 2212.14635 [`math.AG`].

3   Yiran Cheng, Zhiyuan Li, and Haoyu Wu. *Mukai's program for non-primitive curves on K3 surfaces*. 2022. arXiv: 2208.07226 [`math.AG`].

## Teaching Experience

2023 Spring  **TA**, *Modern Algebra III(H)*
2022 Spring  **TA**, *Modern Algebra III(H)*
2020 Fall  **TA**, *Abstract Algebra*
2020 Spring  **TA**, *Advanced Algebra II*
2018 Fall  **TA**, *Abstract Algebra*

## Activities

## Seminars and Talks

| | |
|---|---|
| 2023 Spring | Learning Seminar on "Motives" |
| | ○ *Chow-Künneth decomposition for abelian scheme* |
| 2022 Spring | Learning Seminar on "Derived category of hypekähler varieties" |
| | ○ *extended Mukai vector and integral structure* |
| | Learning Seminar on "Moduli of sheaves and stability conditions in families" |
| | ○ *boundedness of semistable sheaves in arbitrary characteristic* |
| 2021 Spring | Learning Seminar on "K-stability & K-moduli space II" |
| | ○ *optimal degeneration & optimal destabilization conjecture* |
| 2020 Fall | Learning Seminar on "K-stability & K-moduli space" |
| | ○ *boundedness of K-stable Fano varieties* |
| | ○ *introduction to HKL program* |
| 2020 Spring | Learning Seminar on "Hodge conjectures" |
| | ○ *Hodge conjecture on abelian varieties (I)*: Mumford-Tate group, HC for simple CM abelian |
| | ○ *Hodge conjecture on abelian varieties (II)*: Kuga fiber variety, variational Hodge conjecture on abelian |
| 2019 Fall | Learning Seminar on "Derived categories of GIT quotients and good moduli space" |
| | ○ *variations of GIT quotients* |
| 2019 Spring | Learning Seminar on "Derived category and stability conditions" |
| | ○ *base change for semi-orthogonal decomposition* |

## Conferences and Workshop

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|---|---|
| 2023.1 | *Curves on K3 surfaces and Mukai's program*, NCTS East Asia Core Doctoral Forum in Mathematics |
| 2022.6 | 3rd National Algebraic Geometry Conference, Shanghai China |
| 2019.6 | Tianyuan Advanced Seminar in Algebraic Geometry, Tianjin China |
| 2018.9-11 | Fall Program of Moduli Spaces and Varieties, Shanghai China |
| 2018.4 | Tianyuan Advanced Seminar on the Moduli Spaces in Algebraic Geometry, Shanghai China |

## Languages

Working Language: Chinese & English.

I'm also a beginner in French.