ZOU, HAITAO

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EDUCATION

Fudan University, Shanghai, China	*Sep. 2021 - Jun. 2023*

Ph.D, Pure Mathematics,
Shanghai Center of Mathematical Sciences.
Advisor: Zhiyuan Li

Fudan University, Shanghai, China	*Sep. 2017 - Jun. 2021*

Master of Science, Pure Mathematics,
School of Mathematical Science.
Advisor: Zhiyuan Li

Sichuan University, Chengdu, Sichuan, China	*Sep. 2012 - Jul. 2017*

Bachelor of Science, Pure and Applied Mathematics
Mentor: Xiaojun Chen

PROFESSIONAL POSITIONS

Universität Bielefeld, Germany	*2024 - 2026*

Post-Doc, Mentor: Charles Vial
SFB-TRR 358, C8, "Integral Structures in Geometry and Representation Theory"

RESEARCH INTERESTS

- Algebraic geometry:

    ⋆ irreducible symplectic varieties in positive characteristic

    ⋆ derived category of schemes

    ⋆ moduli of (twisted) sheaves

    ⋆ ...

- Arithmetic geometry and applications of algebraic topology on it:

    ⋆ p-adic Hodge theory

    ⋆ orthogonal Shimura varieties and their integral canonical models

    ⋆ ...

PUBLICATIONS AND PREPRINTS

1. Supersingular O'Grady's varieties of dimension six (with Lie Fu and Zhiyuan Li), *Int. Math. Res. Not*, 2022, arXiv:2009.10959.

2. A note on Fourier-Mukai partners of abelian varieties over positive characteristic fields (with Zhiyuan Li), *Kyoto J. Math.* 63 (4), 893-913, (November 2023), arXiv:2107.05404.

3. Derived isogenies and isogenies for abelian surfaces (with Zhiyuan Li), *submitted*, arXiv:2108.08710.

4. Unpolarized Shafarevich conjectures for hyper-Kähler varieties (with Lie Fu, Zhiyuan Li and Teppei Takamatsu), *submitted*, arXiv:2203.10391.

5. On the derived category of varieties in positive characteristics (Master Thesis, in Chinese).

6. The arithmetic algebraic geometry of abelian varieties and hyper-Kähler varieties over general fields (Ph.D Thesis, in Chinese)

PROJECTS IN PROGRESS

1. Rigidity of family of hyper-Kähler varieties (with Lie Fu, Zhiyuan Li and Teppei Takamatsu)

2. ℓ-independence and p-adic monodormy of hyper-Kähler varieties

3. On the Tate conjecture for generalized Kummer sixfolds (with Salvatore Floccari)

TEACHINGS

- 2020.2-2020.6, Modern Algebra III(H), TA

- 2019.9-2019.12, Algebraic Geometry, TA

- 2019.2-2019.7, Linear Algebra II, TA

- 2018.9-2018.12, Abstract Algebra I, TA

- 2018.2-2018.7, PDEs in Mathematical Physics, TA

- 2017.9-2017.12, Advanced Mathematics C (I), TA

LANGUAGES

Working languages: Chinese & English.

I'm also a beginner in learning French.