Shuai Zong Ph.D. Student

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Education

Department of Mathematics, Hong Kong University of Science and Technology — Hong Kong, China
Ph.D. in Mathematics — 2024–2027 *(expected)*

- Advisor: Qingyuan Jiang
- Research area: Derived algebraic geometry and geometric representation theory

School of Mathematics and Statistics, Wuhan University — Wuhan, China
B.S. in Mathematics and Applied Mathematics — 2020–2024

- Graduated with honors

Research Interests

Derived algebraic geometry, derived categories, and geometric representation theory.

Research Projects

Clifford Relations and Derived Grassmannian Flops *joint with Qingyuan Jiang; manuscript in preparation*
Categorical structures arising from flag correspondences for derived Grassmannians, including a categorical enhancement of Clifford relations in positive rank and spherical and flop relations in rank zero.

Linear Koszul Duality *ongoing*
A derived-geometric approach to linear Koszul and Cartier duality and their relation to categorical Fourier duality.

Talks

Introduction to Hall Algebras
HKUST, Fall 2026, MATH 6908A

Derived Rings and Affine Stacks
HKUST, 12 May 2025

Derived Categories in Algebraic Geometry
HKUST, Spring 2025, MATH 6912O
Course page

Introduction to Derived Algebraic Geometry
Wuhan University, 26 December 2024

Seminars

Geometric Representation Theory: Reading course, Fall 2026.

Algebraic K-Theory: Student seminar, Fall 2024–Spring 2025.

- Continuous K-theory in Fall 2024: following Efimov's paper and the lecture notes *Sheaves on Manifolds* by Achim Krause, Thomas Nikolaus, and Phil Putzstuck.
- THH and p-adic methods in Spring 2025: following *On Topological Cyclic Homology* and *Topological Hochschild Homology and Integral p-adic Hodge Theory*.

Analytic Stacks: Student seminar, Summer 2024. Following lectures by Dustin Clausen and Peter Scholze.

References

Prof. Qingyuan Jiang: jiangqy@ust.hk