Xun Lin

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Affil Yau Mathematical Sciences Center, Beijing

Education

2014 – 2018   **Undergraduate student. Southern University Of Science And Technology, Shenzhen.** Mathematics.

2018 – 2023   **Ph.D, Yau Mathematical Sciences Center, Beijing.** Mathematics.
Supervisor: *Will Donovan*

Preprints and pulblications

1. Jacovskis, A., Lin, X., Liu, Z., & Zhang, S. (2022). Infinitesimal categorical Torelli theorems for Fano threefolds (submitted). 🔗 doi:10.48550/ARXIV.2203.08187

2. Jacovskis, A., Lin, X., Liu, Z., & Zhang, S. (2021). Categorical Torelli theorems for Gushel–Mukai threefolds (submitted). 🔗 doi:10.48550/ARXIV.2108.02946

3. Lin, X. (2021a). Noncommutative Hodge conjecture (submitted). 🔗 doi:10.48550/ARXIV.2102.03481

4. Lin, X. (2021b). On nonexistence of semi-orthogonal decompositions in algebraic geometry (submitted). 🔗 doi:10.48550/ARXIV.2107.09564

5. Lin, X. (2021c). Some remarks of Hochschild homology and semi-orthogonal decompositions. 🔗 doi:10.48550/ARXIV.2112.10312

6. Lin, X., & Yu, C. (2021). Indecomposability of the bounded derived categories of Brill-noether varieties (submitted). 🔗 doi:10.48550/ARXIV.2111.10997

Honors

Awards

2017   **Winner prize**, Shing-Tung Yau mathematical contest for College students in China, Geometry and Topology, 2017.

2021   **Ruolin prize for graduate student, Yau Mathematical Sciences Center, 2021.**

Scholarships

2014   **Basic scholarship of Tsinghua University for graduate students, 2018 - 2023.**

2006   **Yau MSC scholarship, 2018-2022.**

Talks

Oct 2022   Tsinghua preprint seminar. Categorical Torelli.

July 2022   University of Warwick, online poster session of VBAC seminar. Indecomposibility of the bounded derived categories of Brill-Noether varieties.

Talks (continued)

April 2022	■	Stony Brook university, algebraic geometry seminar. Nonexistence of semi-orthogonal decompositions and sections of para-canonical systems.
March 2022	■	Cornell university, algebraic geometry seminar. Nonexistence of semi-orthogonal decompositions and sections of para-canonical systems.
Jan 2022	■	Southern University of Science and Technology, Shenzhen, Geometry and Topology seminar. Nonexistence of semi-orthogonal decompositions and sections of para-canonical systems.
Fall 2021	■	Tsinghua University, student seminar, VGIT and derived categories.
Sept 2021	■	Tata Institute of Fundamental Research, India. Nonexistence of semi-orthogonal decompositions and the base locus of para-canonical systems.
June 2021	■	Edinburgh University, Internal seminar. Derived categories of symmetric product of curves.
May 2021	■	Tsinghua University, Geometry representation seminar. Noncommutative Hodge conjecture.
March 2021	■	Southern University of Science and Technology, Shenzhen. Noncommutative Hodge conjecture.
	■	Shanghaitech University, Shanghai. Noncommetative Hodge conjecture.
Fall 2019	■	Tsinghua University, student algebraic geometry seminar. Examples of Shimura varieties.
Spring 2019	■	Tsinghua University, student algebraic geometry seminar. Derived Torelli of K3 surfaces.
	■	Tsinghua University, student algebraic geometry seminar. Nonexistence of semi-orthogonal decompositions and sections of canonical bundle.
Fall 2018	■	Tsinghua University, student algebraic geometry seminar. Geometry of moduli space of sheaves on surfaces.

Teaching

2018	■	General Topology, Teaching Assistant.
	■	Mathematical Analysis, Teaching Assistant.
2019	■	Functional Analysis, Teaching Assistant.
	■	Calculus A, Teaching Assistant.
2020	■	Algebraic geometry I, Teaching Assistant.

Teaching (continued)

2022   ▌   Algebra I in Qiuzhen college, Teaching Assistant.

Visiting and seminars

March 2022 - June 2022   ▌   Cornell University.

March, 2021   ▌   Shanghai Technology University.

Sept 2019   ▌   Geometry of derived categories, Liverpool University, UK.

May 2019   ▌   Derived categories seminar in Sun Yat-Sen University, GuangZhou.

▌   Algebraic geometry for Young scholars in USTC, Hefei.

Languages

Native

▌   **Cantonese, Madarin Chinese**

Advanced

▌   **English**