

Rixin Fang – Curriculum Vitae*

Contact

Position: PhD student, Shanghai Center for Mathematical Sciences, Jiangwan Campus, Fudan University
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Education

Ph.D. in Mathematics, Fudan University, Shanghai China. Sep. 2021- Jun. 2026 (expected)

Advisor: Guozhen Wang.

M.S. in Mathematics, University of Science and Technology of China, Anhui China. Sep. 2019- Jun. 2021

Advisor: Yongqi Liang.

Visiting student, University of Science and Technology of China, Anhui China. Feb. 2019- May. 2019

B. S. in Mathematics, Xiangtan University, Hunan China. Sep. 2015-Jun. 2019

Research Interests

Algebraic K-theory, trace method, motivic method.

Stable homotopy theory, chromatic homotopy theory, motivic homotopy theory.

Preprints and Publications

1. Algebraic K-theory of finite algebras over higher local fields, <https://arxiv.org/abs/2503.20383>, submitted.
2. On K-theory of coordinate axes over higher local number rings, with Guozhen Wang, in preparation.

Seminars and Talks

Invited talks

Chromatic redshift and Segal conjecture, Zhejiang University, Hangzhou Zhejiang China, April 2025.

Chromatic redshift and Segal conjecture, University of Science and Technology of China, Hefei Anhui China, April 2025.

*Last updated: September 17, 2025

Conference talks

Generalized Leibniz rule, International Workshop on Algebraic Topology Summer School 2025, Hangzhou Zhejiang China, July 2025.

Algebraic K-theory and redshift phenomena, Workshop on Computer-Assisted Research in Geometry and Topology, Kunming Yunnan China, September 2024 ([note](#)).

On motivic homotopy theory, International Workshop on Algebraic Topology 2023 Winter School on Motivic Stable Homotopy Theory and Synthetic Spectra, Shenzhen China, December 2023 ([note](#)).

Seminar talks

Spring 2025 learning seminar at SCMS.

1. Generalized Leibniz rule.
2. Adams spectral sequence and extension spectral sequence.

Winter 2025 special seminar on "Topics around synthetic spectra", online, [syllabus](#).

1. Synthetic spectra and Segal conjecture ([note](#)).

Fall 2024 learning seminar on "Dyer–Lashof operations" at SCMS.

1. Extended power construction and H_∞ -ring.

Spring 2023 learning seminar on "Algebraic K-theory" at SCMS ([notes are available online](#)).

1. Higher algebraic K-theory and rigidity.
2. Higher algebraic K-theory and computations.
3. Plus construction and Q -construction.
4. $K_2(\mathbb{Q})$, tame symbols and norm-residue symbols.
5. Low dimensional algebraic K-theory (II).
6. Low dimensional algebraic K-theory (I).
7. K-theory of assembler of varieties (II).
8. K-theory of assembler of varieties (I).
9. Grothendieck ring of varieties.

Fall 2022 learning seminar on "Chromatic homotopy theory" at SCMS ([notes are available online](#)).

1. On the periodicity theorem (II),
2. On the periodicity theorem (I).

Fall 2021 and Spring 2022 learning seminar on "Stable homotopy theory" at SCMS ([notes are available online](#)).

1. On lambda algebra and Adams spectral sequence (II).
2. On lambda algebra and Adams spectral sequence (I).

Master thesis defense at USTC, May 2021 ([slides](#)).

Master thesis proposal at USTC, January 2021 ([notes](#)).

Fall 2019 seminar at USTC.

1. Introduction to class field theory ([notes](#)).

Conferences

1. International Workshop on Algebraic Topology 2025, Hangzhou China, July 2025.
2. Special International Conference in Honor of Prof. Peter May at SUSTech, Shenzhen China, March 2025.
3. Workshop on Computer-Assisted Research in Geometry and Topology, Kunming China, September 2024.
4. PCMI 2024 Graduate Summer School, Utah USA, July 2024.
5. International Workshop on Algebraic Topology 2024, Shanghai China, July 2024.
6. International Workshop on Algebraic Topology 2024 Summer School, Shanghai China, June 2024.
7. International Workshop on Algebraic Topology 2023: Winter School on Motivic Stable Homotopy Theory and Synthetic Spectra, Shenzhen China, December 2023.
8. Mini-Workshop on Topology and Arithmetic, Shenzhen China, August 2023.
9. International Workshop on Algebraic Topology 2023, Beijing China, July 2023.
10. International Workshop on Algebraic Topology 2022: Summer School on Chromatic Homotopy Theory and Higher (infinity-categorical) Algebra, Online, August 2022.
11. International Workshop on Algebraic Topology 2021: Summer School on Equivariant Homotopy Theory, Shanghai China, July 2021.
12. 2021 SCMS Algebraic Geometry Summer School, Shanghai China, July 2021.
13. When Number Theory meets Algebraic Geometry, Hefei China, April 2021.
14. Summer School on Geometry of Submanifolds, Online, July 2020.
15. The 6th Multi-university Joint Workshop in Arithmetic Geometry, Shenzhen China, November 2019.
16. Program on Derived Algebraic Geometry IMT-SCU Mini Course IV: Derived Loop Spaces, Chengdu China, October 2019.
17. Algebra and Number Theory Summer School, Chinese Academy of Sciences, Beijing China, August 2019.
18. Young Mathematicians Academic Forum - Séminaire Mathjeunes, Hefei China, May 2019.

Teaching Experience and Mentor Experience

SCHOOL OF MATHEMATICAL SCIENCES, FUDAN UNIVERSITY

Teaching Assistant for Topology II (MATH130112.01)

Fall 2023, Fall 2025

SCHOOL OF MATHEMATICS AND COMPUTATIONAL SCIENCE, XIANGTAN UNIVERSITY

Mentor for Class 4 in School of Mathematics and Computational Science ¹ Fall 2017 & Spring 2018

¹Includes weekly discussions, monthly quizzes. It's like a volunteer recruited by the school of mathematics and computational science for helping freshman to learn undergraduate math.

Services, Skills and Languages

PROGRAMMING

C, Matlab, \LaTeX , HTML.

SERVICES

zbMATH reviewer (2 reviews).

LANGUAGES

Chinese, English.