

Xiaoyang Chen

Incoming Ph.D. Student in Mathematics · Tsinghua University

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Education

Incoming Ph.D. in Mathematics (expected 2031) <i>Qiuzhen College, Tsinghua University, Beijing, China</i> Expected advisor: Prof. Penghui Li. Intended research area: Geometric representation theory.	Starting September 2026
B.Sc. in Mathematics <i>Qiuzhen College, Tsinghua University, Beijing, China</i>	2023–2026

Fellowships, Scholarships, and Awards

Outstanding undergraduate thesis award <i>Qiuzhen College, Tsinghua University</i>	June 2026
Fellowship 2024 of Tsinghua University <i>Qiuzhen College, Tsinghua University</i>	2024

Research Interests

Geometric representation theory; geometric Langlands; graded sheaves; derived algebraic geometry; higher category theory.

Research Experience

Undergraduate Thesis — “Langlands duality of affine Hecke categories” <i>Qiuzhen College, Tsinghua University</i> Advisor: Prof. Penghui Li. The paper gives a graded lift of the Bezrukavnikov-Arkhipov equivalence. The paper is available on my website.	2025–2026
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Seminar Talks and Presentations

The geometric Satake equivalence Joint presentation with: Mingyu Bai, Kun Zheng	December 2025
Equivariant K-theory and index theory	June 2025
The moduli stack of formal groups and chromatic homotopy theory	May 2025
Galois extensions of structured ring spectra and Goerss–Hopkins theory	May 2025

The notes of these talks are also available on my website.

Conferences and Workshops

International Workshop on Algebraic Topology 2026 (IWAT 2026) <i>Peking University, Beijing</i>	August 2026
International Congress of Mathematicians 2026 (ICM 2026) <i>IMU, Pennsylvania Convention Center, Philadelphia, USA</i>	July 2026
International Congress of Chinese Mathematicians 2025 (ICCM 2025) <i>SIMIS, Shanghai</i>	January, 2026
Beijing–Shanghai Summer School in Mathematics 2025 <i>SIMIS, Shanghai</i>	June-July 2025
The course topic contains various aspects of the geometric Langlands programs	
International Congress of Basic Science <i>BIMSA, Beijing</i>	July 2023, July 2024, July 2025, August 2026