

Xingzhi Huang

RESEARCH INTERESTS

Algebraic Topology and Algebraic Geometry, with a particular emphasis on homotopy theory.

EDUCATION

• University of Wisconsin–Madison	<i>Sep 2024 – Present</i>
VISP-MA in Mathematics	Madison, WI, USA
• Shanghai Jiao Tong University	<i>Sep 2021 – Jun 2025</i>
B.S. in Mathematics and Applied Mathematics (Zhiyuan Honors Program)	Shanghai, China

PAPERS

• Motivic Homotopy Theory	<i>Shanghai, China</i>
Undergraduate thesis - A comprehensive exposition of unstable and stable motivic homotopy theory. Supervised by Pr.Yong Hu. [PDF]	May 2025

SEMINAR TALKS

• Serre Spectral Sequence-I, II, III & Adams Spectral Sequence-I, II	<i>Sep–Nov 2025</i>
Spectral Sequence in Algebraic Topology Reading Seminar (Organizer) [Link]	University of Wisconsin–Madison
• Sheaf Theory & Properties of Schemes & Homological Algebra	<i>Sep–Nov 2024</i>
Algebraic Geometry Reading Seminar	University of Wisconsin–Madison
• Topology of Profinite Groups	<i>May 2024</i>
Topic Course IV	Shanghai Jiao Tong University
• Characteristic Classes and Vector Bundles	<i>Dec 2023</i>
Topic Course III	Shanghai Jiao Tong University
• Reinforcement Learning	<i>Apr 2023</i>
Topic Course II	Shanghai Jiao Tong University
• Non-standard Analysis	<i>Dec 2022</i>
Topic Course I	Shanghai Jiao Tong University

CONFERENCES & SUMMER SCHOOLS ATTENDED

• Equivariant, Motivic, and Physical Topology in the Midwest	<i>Oct 2025</i>
Developments in equivariant and motivic homotopy theory	Minnesota, USA
• International Workshop on Algebraic Topology 2025	<i>Jul 2025</i>
Computations with the Adams Spectral Sequence and the Last Kervaire Invariant Problem	Hangzhou, China
• International Workshop on Algebraic Topology 2024	<i>May 2024</i>
Motivic Stable Homotopy Theory	Shanghai, China
• AI for Mathematics(Winter Training Program 2023-2024)	<i>Jan 2024</i>
Mathematical Formalization and Theorem Proving	Beijing, China
• ∞-type Café Summer School 2023	<i>Jul 2023</i>
Type Theory	[Online]
• Fudan Logic Summer School 2023	<i>Jul–Aug 2023</i>
Model Theory of Nonabelian Free Groups & Nonstandard Analysis and Combinatorial Number Theory	Shanghai, China

DIRECTED STUDY

• Intersection Homology & Perverse Sheaves	<i>Sep 2025 – Present</i>
Supervised by Laurentiu Maxim	University of Wisconsin–Madison
• Algebraic Geometry-II	<i>Sep–Dec 2024</i>
Co-supervised by Dima Arinkin, Andrei Caldararu, and Joshua Mundinger	University of Wisconsin–Madison

INTERNSHIPS

• "AI for Mathematics" Internship Program

Formal Data annotation in abstract algebra

Aug–Sep 2025

Beijing International Center for Mathematical Research

HONORS AND AWARDS

Outstanding Undergraduate Scholarship, Shanghai Jiao Tong University	Dec 2024
Zhiyuan Honors Scholarship, Shanghai Jiao Tong University	Nov 2024
Zhiyuan Honors Scholarship, Shanghai Jiao Tong University	Nov 2023
Zhiyuan Honors Scholarship, Shanghai Jiao Tong University	Nov 2022
Zhiyuan Honors Scholarship, Shanghai Jiao Tong University	Nov 2021

SKILLS

Languages: Mandarin Chinese (Native), English (Fluent)

Programming: LaTeX, Lean

Development: Git