



Sihao Ma

Curriculum Vitae
September, 2024

Department of Mathematics
University of Notre Dame
255 Hurley Hall
Notre Dame, IN 46556

 <https://masihao.github.io/>
 sma2@nd.edu

RESEARCH INTERESTS Computational homotopy theory, especially in equivariant and chromatic aspects,
with the tools of motivic homotopy theory and synthetic spectra.

EDUCATION	University of Notre Dame	Indiana, USA
	Ph.D. candidate in Mathematics	2020-present
	Advisor: Mark Behrens	
	Peking University	Beijing, China
	B.S. in Mathematics	2016-2020
	Advisor: Houhong Fan	

PAPERS **Towards the $K(2)$ -local homotopy groups of $\mathbb{R}P^2 \wedge \mathbb{C}P^2 \wedge \mathbb{H}P^2$ at $p = 2$.** In preparations.

A proof of the generalized geometric boundary theorem using filtered spectra. [arXiv:2309.14650](https://arxiv.org/abs/2309.14650)

Topology and its Applications 355 (2024): 109006.

The Borel and genuine C_2 -equivariant Adams spectral sequences. [arXiv:2208.12883](https://arxiv.org/abs/2208.12883)

Last updated: 09/10/2024.

TALKS	Towards the $K(2)$-local homotopy groups of $\mathbb{R}P^2 \wedge \mathbb{C}P^2 \wedge \mathbb{H}P^2$ at $p = 2$.	
	AMS JMM Special Session on Homotopy Theory	01/2025
	Towards the $K(2)$-local homotopy groups of $\mathbb{R}P^2 \wedge \mathbb{C}P^2 \wedge \mathbb{H}P^2$ at $p = 2$.	
	UIUC Topology Seminar	12/2024
	The Borel and genuine C_2-equivariant Adams spectral sequences.	
	Notre Dame Graduate Student Topology Seminar	03/2024
	The Borel and genuine C_2-equivariant Adams spectral sequences.	
	UCSD Topology Seminar	02/2024
	The Borel and genuine C_2-equivariant Adams spectral sequences.	
	AMS Sectional Meeting Special Session on Homotopy Theory	10/2023

The Borel and genuine C_2 -equivariant Adams spectral sequences.

UCSD Topology Seminar

03/2023

TEACHING	Teaching Assistant, Honor Calculus III, University of Notre Dame	Fall 2023
EXPERIENCE	Instructor , Calculus B, University of Notre Dame	Spring 2023
	Teaching Assistant, Calculus II, University of Notre Dame	Fall 2022
	Teaching Assistant, Linear Algebra and Differential Equations, University of Notre Dame	Spring 2022
	Teaching Assistant, Calculus I, University of Notre Dame	Fall 2021
	Teaching Assistant, Mathematical Analysis II, Peking University	Spring 2020
	Teaching Assistant, Mathematical Analysis I, Peking University	Fall 2019
UNDERGRADUATE	The homotopy of tmf at the prime 2.	PDF
RESEARCH	Advised by Zhouli Xu	Summer 2019