

Zhonghui Sun (she/her/hers)

CONTACT INFORMATION	Michigan State University Department of Mathematics C525 Wells Hall 619 Red Cedar Rd East Lansing, MI 48824	(607) 727-1128 sunzhon1@msu.edu https://sites.google.com/msu.edu/zhonghuisun/
RESEARCH INTERESTS	Algebraic K -theory, trace methods, equivariant homotopy theory	
EDUCATION	Michigan State University, East Lansing, MI Ph.D. Candidate, Mathematics (expected 2025) <ul style="list-style-type: none">• Advisor: Dr. Teena Gerhardt University of Rochester, Rochester, NY B.S. in Mathematics with Honor B.A. in Statistics B.A. in Dance: Creative Expression and Performance	
PREPRINTS	Equivariant bicategorical shadows and traces. In preparation, 2024. Zhonghui Sun Twisted Witt vectors and the combinatorics of traces. In preparation, 2024. Sanjana Agarwal, Jonathan Campbell, Diego Manco, Kate Ponto, and Zhonghui Sun	
TALKS	<i>Equivariant bicategorical shadows and traces</i> , AMS Sectional Meeting, University of Kansas, (Coming March 2025) <i>Equivariant bicategorical shadows and traces</i> , Homotopy Theory Seminar, Ohio State University (November 2024) <i>Equivariant bicategorical shadows and traces</i> , Homotopy Theory Seminar, Ohio State University (November 2024) <i>Equivariant bicategorical shadows and traces</i> , Topology Seminar, Indiana University Bloomington (November 2024) <i>Equivariant bicategorical shadows and traces</i> , Topology Seminar, Wayne State University (October 2024) <i>Simplicial Categories and Homotopy in an Infinity-Category</i> , Learning Seminar in Infinity Categories, Michigan State University (February 2024) <i>Quillen Equivalence and Homotopy Colimit</i> , Learning Seminar in Infinity Categories, Michigan State University (October 2023) <i>Homotopy Category of Simplicial Sets and Infinity Categories</i> , Learning Seminar in Infinity Categories, Michigan State University (September 2023) <i>Morita Invariance of Hochschild Homology and Topological Hochschild Homology</i> ,	

Summer School on Scissors Congruence, Algebraic K-theory and Trace Methods, Indiana University Bloomington (June 2023)

Galois Covers and Monodromy Action, Learning Seminar on Grothendieck's Theory of Fundamental Groups, Michigan State University (March 2023)

Algebraic K-Theory and Trace Methods, Student Geometry and Topology Seminar, Michigan State University (February 2023)

Algebraic K-Theory and Trace Methods, Kan Seminar, eCHT (December 2022)

Symmetric Spectra, Student Geometry and Topology Seminar, Michigan State University (September 2022)

CONFERENCES
ATTENDED

Summer Schools and Workshop

New horizons for equivariance in homotopy theory, Isaac Newton Institute for Mathematical Sciences in Cambridge (Coming May 2025)

Hot Topics: Life after the Telescope Conjecture, Simons Laufer Mathematical Sciences Institute (December 2024)

Collaborative Workshop in K-theory and Scissors Congruence, Vanderbilt University (July 2024)

Scissors Congruence, Algebraic K-theory, and Trace Methods, Indiana University Bloomington Summer School (June 2023)

Motivic Stable Homotopy Theory, MIT Talbot Workshop, Minnesota (June 2023)

Homotopical Methods in Fixed Point Theory, University of Colorado, Boulder Summer School (July 2022)

Conferences and Seminars

Midwest Topology Seminar, University of Chicago (November 2024)
Algebraic Structures in Topology, Puerto Ricco (June 2024)
Midwest Topology Seminar, Indiana University (April 2024)
Midwest Topology Seminar, Loyola University Chicago (March 2024)
Midwest Topology Seminar, University of Illinois (September 2023)
Midwest Topology Seminar, Purdue University (April 2023)
Mid-Atlantic Topology Conference, University of Pennsylvania (April 2023)
Homotopy Theory Conference, Northwestern University (March 2023)
RTG Seminar, Michigan State University (Spring 2022–Fall 2024)
Learning Seminar in ∞ -Categories, Michigan State University (Fall 2023–Spring 2024)
Geometry/Topology Seminar, Michigan State University (Fall 2022–Fall 2024)
Student Geometry/Topology Seminar, Michigan State University (Fall 2022–Fall 2024)
FRG Group Meeting, Online (Fall 2022–Spring 2024)
Learning Seminar in Grothendieck's Theory of Fundamental Groups, Michigan State University (Spring 2023)
eCHT Kan Seminar, Online (Fall 2022)

HONORS AND AWARDS	2024	College of Natural Science Dissertation Completion Fellowship, Michigan State University
	2024	Dr. Paul and Wilma Dressel Endowed Scholarship, Michigan State University
	2018	Award for Undergraduate Women in Mathematics, University of Rochester
	2018	Phi Beta Kappa, University of Rochester
	2014-2018	Dean's List, University of Rochester

MATHEMATICS COURSEWORK	<input type="checkbox"/>	Algebraic Topology	<input type="checkbox"/>	Algebraic Geometry
	<input type="checkbox"/>	Homological Algebra	<input type="checkbox"/>	Low Dimensional Topology
	<input type="checkbox"/>	Number Theory	<input type="checkbox"/>	Lie Groups and Algebras
	<input type="checkbox"/>	Khovanov Homology	<input type="checkbox"/>	Representation Theory
	<input type="checkbox"/>	Equivariant Homotopy and Cohomology	<input type="checkbox"/>	Group cohomology

SCIENTIFIC RESEARCH EXPERIENCE	REU Program	
	University of Rochester	Summer 2017
	<ul style="list-style-type: none"> Project Instructor: Dr. Alex Iosevich and Jonathan Pakianathan Spectral Graph Theory and Pseudo-random graph 	

ORGANIZATION	Co-organized the Student Geometry/Topology Seminar in Fall 2022, Spring 2023
	Co-organized the Learning Seminar in ∞ -Categories in Fall 2023, Spring 2024

TEACHING EXPERIENCE	Michigan State University		
	<i>Mentor</i>		
	Center for Instructional Mentoring	Lead TA	Fall 2024
	Summer Topology Program	Graduate RTG Mentor	Summer 2024
	<i>Instructor</i>		
	MTH 101	Quantitative Literacy I	Summer 2023, Fall 2023, Summer 2024
	MTH 124	Survey of Calculus I	Summer 2021
	<i>Teaching Assistant</i>		
	MTH 309	Linear Algebra I	Fall 2021, Spring 2022
	MTH 133	Calculus II	Spring 2020, Spring 2021, Fall 2022
	MTH 124	Survey of Calculus I	Fall 2020
	MTH 132	Calculus I	Fall 2019
	<i>Grader</i>		
	MTH 421	Analysis II	Fall 2021
	<i>Tutor</i>		
Math Learning Center Tutor		2018–2021	
University of Rochester			
<i>Teaching Assistant</i>			
STT 211	Applied Statistics for Social Sciences I	Fall 2016, Spring 2017	
<i>Tutor</i>			
Statistics and Mathematics Tutor		2014–2018	