

# Adela (YiYu) Zhang

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CONTACT INFORMATION	Department of Mathematics Massachusetts Institute of Technology 182 Memorial Drive Cambridge, MA 02142	adelayyz@mit.edu
EDUCATION	<p><b>Massachusetts Institute of Technology</b> B.S. in Mathematics, May 2018</p> <p><b>Massachusetts Institute of Technology</b> Ph.D. Candidate, Mathematics (expected May 2023) Advisors: Jeremy Hahn and Haynes Miller</p>	
PAPERS AND PREPRINTS	<p><i>Inertia groups of <math>(n - 1)</math>-connected <math>2n</math>-manifolds</i> with Andrew Senger. arXiv: 2211.00782.</p> <p><i>Mod <math>p</math> homology of unordered configurations spaces of surfaces</i> with Matthew Chen. arXiv:2208.10293. Submitted.</p> <p><i>Operations on spectral partition Lie algebras and TAQ cohomology.</i> arXiv:2203.15771. Submitted.</p> <p><i>Quillen homology of spectral Lie algebras, with application to mod <math>p</math> homology of labeled configuration spaces .</i> arXiv:2110.08428. Submitted.</p> <p><i>Diagonal form of the Verchanko matrices,</i> joint with Yibo Gao. Journal of Algebraic Combinatorics 48 (3), 351-368, 2018.</p>	
SEMINARS ORGANIZED	<p>Co-organizer of the MIT Juvitop Seminar on <math>K(n)</math>-local <math>\mathbb{E}_\infty</math>-rings and the Chromatic Nullstellensatz. (Fall 2022)</p> <p>Co-organizer of the MIT Juvitop Seminar on Goodwillie Calculus and spectral (partition) Lie algebras. (Spring 2022)</p> <p>Organizer of the MIT Algebraic Topology Seminar. (Summer and Fall 2020)</p>	
TALKS	<p><i>Universal differentials in the bar spectral sequence,</i> UCSD Topology Seminar. (November 2022)</p> <p><i>Universal differentials in the bar spectral sequence,</i> Columbia Algebraic Topology Seminar. (November 2022)</p> <p><i>Mod <math>p</math> homology of labeled configuration spaces via spectral Lie algebras,</i> UCLA Algebraic Topology Seminar. (November 2022)</p> <p><i>Mod <math>p</math> homology of labeled configuration spaces via spectral Lie algebras,</i> University of Chicago Topology Seminar. (October 2022)</p> <p><i>Mod <math>p</math> homology of labeled configuration spaces via spectral Lie algebras,</i> Northwestern Topology Seminar. (October 2022)</p> <p><i>Mod <math>p</math> homology of labeled configuration spaces via spectral Lie algebras,</i> MHTRT-Seminar (Manifolds, homotopy theory, and related topics). (October 2022)</p>	

*Mod  $p$  homology of labeled configuration spaces via spectral Lie algebras*, Notre Dame Topology Seminar. (October 2022)

*Mod  $p$  homology of unordered configuration spaces via spectral Lie algebras*, Purdue Topology Seminar. (September 2022)

*Inertia groups of  $(n-1)$ -connected  $2n$ -manifolds*, Union College Mathematics Conference 2022. (June 2022)

*Operations on generalized TAQ (co)homology*, University of Michigan, Ann Arbor Algebraic Topology Seminar. (March 2022)

## EXPOSITORY TALKS

*Weiss calculus and derivatives of the identity functor*, Harvard Thursday Seminar. (April 2022)

*Overview for the Juvitop Seminar on Goodwillie calculus and spectral (partition) Lie algebras*, Massachusetts Institute of Technology. (February 2022)

*Power operations on Morava  $E$ -theory of  $\mathbb{E}_\infty$ -algebras*, Harvard algebraic topology group meeting. (December 2021)

*A Global Ambidexterity result*, Talbot Workshop on Ambidexterity. (October 2021)

*Blueshift and a converse for highly structured ring spectra*, Harvard Thursday Seminar. (April 2021)

*Topological Conformal Field Theories and String Topology*, Juvitop Seminar, Massachusetts Institute of Technology. (November 2020)

*Bökstedt's computation of  $\mathrm{THH}(\mathbb{F}_p)$* , eCHT reading seminar. (February 2020)

*Chern-Simons forms and applications to (the configuration spaces of) Lens spaces*, Juvitop Seminar, Massachusetts Institute of Technology. (October 2020)

## AWARDS

MIT Graduate Appreciation Fellowship (2022)

George Lusztig PRIMES Mentorship (2021)

MENTORING  
EXPERIENCE AND  
DEPARTMENTAL  
SERVICE

Research mentor for the MIT PRIMES-USA (Program for Research in Mathematics, Engineering and Science for High School Students) program. (2020-present)

Research mentor for the Research Science Institute (RSI) program. (Summer 2019 and 2022)

Research mentor for the Undergraduate Research Opportunities Program (UROP) at MIT. (Summer 2020)

Mentor for Directed Reading Program at MIT. (Winter 2021)

Academic mentor for the MathROOTS program at MIT. (Summer 2019-2022)

Mentor for MIT PRIMES Circle reading group. (Spring 2016 and 2017)

Mentor for MIT Grad-Undergrad Math Mentoring Initiative. (2020-present)

TEACHING  
EXPERIENCE

MIT 18.02: Multivariable Calculus, Recitation leader. (Fall 2021 and Winter 2022)

MIT 18.01A: Calculus, accelerated, Recitation leader. (Fall 2021)

MIT 18.100P: Real Analysis, Recitation leader. (Spring 2021)

MIT 18.065: Matrix Methods in Data Analysis, Signal Processing, and Machine Learning, Teaching assistant. (Spring 2020)

MIT 18.112: Complex Analysis, Grader. (Fall 2019)