

Foling Zou

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EDUCATION

- PhD in Mathematics (in progress)** 2014-present
University of Chicago
Thesis advisor: Peter May
- MS in Mathematics** 2015
University of Chicago
- BS in Mathematics** 2010-2014
Peking University, China
Thesis: Real Division Algebra from the Topological Viewpoint

RESEARCH PROJECTS

1. Equivariant factorization homology and nonabelian Poincaré duality, preprint upon request.
2. Equivariant factorization homology of Thom spectra, joint with A. Horev and I. Klang, in preparation.
3. Loday constructions on twisted products and on tori, joint with A. Hedenlund, S. Klanderma, A. Lindenstrauss and B. Richter, in preparation.
4. Operads, monoids, monads, and bar constructions, joint with P. May and R. Zhang, in progress.

RESEARCH TALKS

1. Equivariant factorization homology of framed manifold
 - International Workshop on Algebraic Topology, Shanghai, 2019
 - Northwestern University Algebraic Topology Seminar, Chicago, 2019
 - AMS sectional meeting, Michigan, 2018
2. Equivariant factorization homology of the Thom spectra
 - AMS sectional meeting, Binghampton, 2019
 - AMS sectional meeting, Wisconsin, 2019
3. Instability of the Loday construction of $\mathbb{Q}[t]/t^m$, Bonn, 2019

EXPOSITARY TALKS

1. Basics of spectra[\[notes\]](#) , Monoidal structures[\[notes\]](#), August 2019,
at [Summer School on Equivariant Homotopy Theory](#), Shanghai
2. Rational homotopy theory of automorphisms of highly connected manifolds, April 2019,
at Talbot Workshop, Texas
3. Robinson's obstruction theory, May 2017,
at Talbot Workshop, Gooding, Idaho
4. The odd primary Arf invariant problem, April 2016,
at Talbot Workshop: Equivariant stable homotopy theory and the Kervaire invariant, Herriman, Utah
5. On James's exponent theorem, Mar 2016,
at Topic Exam, University of Chicago

TEACHING

- 2019-2020: Instructor for two sessions of Math 195 Mathematical methods for social sciences
- 2018-2019: Instructor for Math 152,153 Calculus
- 2017-2018: Instructor for Math 151,152,153 Calculus
- 2016-2017: Instructor for Math 151,152,153 Calculus
- 2015-2016: TA and Grader for Math 235 Markov Chains, Martingales and Brownian Motions,
Math 176 Basic Geometry (Inquiry-Based Learning), Math 277 Mathematical Logic

SERVICE

- 2017-present: Committee member of Directed Reading Program, University of Chicago
In the DRP program, the undergraduate students learn about an advanced math topic and give a talk on it under the guidance of a paired graduate student. We organize about 15-20 pairs each quarter.
- 2015 Fall, 2016 Fall, 2017 Winter, 2018 Winter, 2019 Winter, 2019 Spring:
Mentor for DRP, University of Chicago
Projects include algebraic topology, homological algebra, logic, representation theory.
- 2015 Summer, 2017 Summer, 2019 Summer:
Mentor for REU (Research Experience for Undergrads), University of Chicago

OUTREACH

- 2018 Fall: Volunteer for the Math Circle Chicago
Math circles are enrichment programs for participants to investigate math non-competitively. I assisted in the Haynes group (5 and 6 graders).
- 2015-2017: Volunteer for the Field Museum
I was a docent for the Cyrus Tang Hall of China.