Foling Zou

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EDUCATION

PhD in Mathematics 2014-2020
University of Chicago
Area: algebraic topology Advisor: J. Peter May
Thesis: A Geometric Approach to Equivariant Factorization Homology and Nonabelian Poincaré Duality

MS in Mathematics 2015
University of Chicago

BS in Mathematics 2010-2014
Peking University, China
Thesis: Real Division Algebra from the Topological Viewpoint

APPOINTMENTS

Tenure Track Associate Professor 2024-
Chinese Academy of Science

Assistant Professor 2023-2024
Chinese Academy of Science

Postdoctoral Assistant Professor 2020-2023
University of Michigan, USA

PUBLICATIONS

1. Examples of étale extensions of Green functors, with A. Lindenstrauss and B. Richter, Proceedings of the American Mathematical Society, accpeted. arxiv:2304.01656
2. A geometric approach to equivariant factorization homology and nonabelian Poincaré duality, *Math. Z*, 303, 98 (2023). arxiv:2008.08234.
3. Loday constructions on twisted products and on tori, with A. Hedenlund, S. Klanderman, A. Lindenstrauss and B. Richter, *Topology Appl.*, 316:108103, 2022.
4. Notes on equivariant bundles, *Expo. Math.*, 39(4):644–678, 2021.
5. Equivariant nonabelian Poincaré duality and equivariant factorization homology of Thom spectra, with A. Horev and I. Klang, preprint arxiv:2006.13348.
6. Operads, monoids, monads, and bar constructions, with P. May and R. Zhang, preprint arxiv:2003.10934.
7. The $\mathbb{Z}/p$-equivariant dual Steenrod algebra for an odd prime p, with P. Hu, I. Kriz and P. Somberg, preprint arxiv:2205.13427.

8. Equivariant orientation of vector bundles over disconnected base spaces, with P. Bhattacharya, preprint arxiv:2303.10259.
9. Loday Constructions of Tambara functors, with A. Lindenstrauss and B. Richter, preprint arxiv:2401.04216
10. Group completions and the homotopical monadicity theorem, with P. May and H. Kong, preprint arxiv:2402.03649

RESEARCH TALKS (INCLUDING UPCOMING)

1. A C_3-equivariant computation of tmf, PekingU topology seminar, 2023
2. Unital operads, monoids and monads,
   - Chinese Academy of Sciences topology seminar, 2023
   - ECHT seminar [recording], 2023
3. Equivariant dual Steenrod algebra
   - JMM meeting, Boston, 2023
   - Topology seminar at (2022):

     University of Washington; University of Chicago;
     New Mexico State University; Columbia University; University of Hamburg
     Institute of Mathematics of the Czech Academy of Sciences
4. Fixed set systems of G-operads and monads
   - JMM meeting, virtual, 2022
5. Equivariant factorization homology of framed manifold
   - Algebraic topology seminar at University of Warwick, 2022
   - Algebraic topology seminar at (2019-2020):

     Johns Hopkins University; Ohio State University; UIUC;
     University of Kentucky; UI Bloomington; Purdue University;
     University of Notre Dame; UCLA; Northwestern University
   - International Workshop on Algebraic Topology, Shanghai, 2019
   - AMS sectional meeting, Michigan, 2018
6. Equivariant factorization homology of the Thom spectra
   - MIT topology seminar, 2021
   - UCSD topology seminar, 2021
   - AMS sectional meeting, Binghampton, 2019
   - AMS sectional meeting, Wisconsin, 2019
7. Stability of Loday constructions
   - ECHT seminar [recording], 2020
   - Bonn, 2019

EXPOSITARY TALKS

1. The approximation theorem , August 2023,
   at Summer School on Operads, Spectra and Multiplicative Structures, BIMSA
2. Monoidal structures in ∞-categories, [Lecture 7 notes] , [Lecture 8 notes], August 2022,
   at Summer School on Chromatic Homotopy Theory and Higher Algebra, Fudan University, BIMSA and remote
3. Equivariant spaces, Equivariant stable category [notes: Lectures 9&10, 17&18], July 2021,
   at Summer School on Equivariant Homotopy Theory, Fudan University, Shanghai and remote
4. Basics of spectra [notes] , Monoidal structures [notes], August 2019,
   at Summer School on Equivariant Homotopy Theory, Fudan University, Shanghai
5. Rational homotopy theory of automorphisms of highly connected manifolds, April 2019,
   at Talbot Workshop, Texas
6. Robinson's obstruction theory, May 2017,
   at Talbot Workshop, Gooding, Idaho
7. The odd primary Arf invariant problem, April 2016,
   at Talbot Workshop: Equivariant stable homotopy theory and the Kervaire invariant, Herriman, Utah
8. On James's exponent theorem, Mar 2016,
   at Topic Exam, University of Chicago

TEACHING

- 2020-2023: Instructor for 8 sessions of Math 116 Calculus II and 4 sessions of Math 417 matrix algebra
- 2019-2020: Instructor for 2 sessions of Math 195 Mathematical methods for social sciences
- 2016-2019: Instructor for 8 sessions of Math 151,152,or 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

- 2023: Organizer of IWoAT Summer School, BIMSA and CAS
  Topic: Operads, spectra, and multiplicative structures.
- 2017-2020: Committee member of Directed Reading Program, University of Chicago
  In the DRP program, the undergraduate students learn about an advancd math topic and give a talk on it under the guidiance of a paired grauate 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, 2020 Summer:
  Mentor for REU (Research Experience for Undergrads), University of Chicago

- 2017 Spring: Organizer of Midwest Topology Seminar

OUTREACH

- 2018 Fall: Volunteer for the Math Circle Chicago
  Math circles are enrichment programs for participants to investigate math non-competively. 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.