Wanchen Zhao

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Education

Ph.D. in Mathematics (Advisor: Peter Bubenik) 2026(Expected), University of Florida
M.A. in Mathematics 2023, University of Florida
B.Sc. in Applied Physics 2021, Columbia University

Research Interests

Topological Data Analysis, Persistent Homology, Homological Algebra, Category Theory

Awards

2025   Best Poster Award for the AWM Graduate Student Poster Session at JMM

Presentations

Talks

(Upcoming)
Wasserstein Stability for Persistence Landscapes and Barcodes, Annual Symposium of the Southeast Center for Mathematics and Biology. (Atlanta, GA, USA; April 2025)

(Past)
Wasserstein Stability for Persistence Landscapes and Barcodes, AMS 2025 Spring Southeastern Sectional Meeting Special Session on Topological Data Analysis, Theory and Applications. (Clemson, SC, USA; Mar 2025)
Tracking Topological Features as Weather Regimes in Climate Science Data, JMM AMS Special Session on MRC Climate Science at the Interface Between Topological Data Analysis and Dynamical Systems Theory. (Seattle, WA, USA; Jan 2025)

Persistent Homology, Measure Theory, and Vectorization, AWM Graduate Talk. (Gainesville, FL, USA; Nov 2024)

(Canceled due to hurricane Helene)*Persistence Measures and Continuous Persistence Landscapes*, AMS 2024 Fall Southeastern Sectional Meeting Special Session on Topological Data Analysis, Theory and Applications. (Savannah, GA, USA; Oct 2024)

Persistence Measures and Persistence Landscapes, AMS 2024 Spring Southeastern Sectional Meeting Special Session on Topological Algorithms for Complex Data and Biology. (Tallahassee, FL, USA; Mar 2024)

Posters

Wasserstein Stability for Persistence Landscapes, JMM AWM Workshop Poster Presentation. (Seattle, WA, USA; Jan 2025)

Persistence Measures and Continuous Persistence Landscapes, Applications of Representation Theory in Topological Data Analysis and Geometric Invariant Theory. (Montreal, QC, Canada; Jun 2024)

Workshops

(Upcoming)
Fields Institute. Operator Algebras and Quantum Information. (Toronto, ON, Canada; Jun 2025)

(Past)
AMS Mathematics Research Communities. Climate Science at the Interface Between Topological Data Analysis and Dynamical Systems Theory. (Java Center, NY, USA; Jul 2024)

Applications of Representation Theory in Topological Data Analysis and Geometric Invariant Theory. (Montreal, QC, Canada; Jun 2024)

Teaching

University of Florida

Spring 2025	Teaching Assistant for Precalculus and Trigonometry
Fall 2024	Teaching Assistant for Computational Linear Algebra
Spring 2024	Teaching Assistant for Linear Algebra for Data Scientists
Fall 2021- Fall 2023	Teaching Assistant and Weekly Discussion Leader for Calculus I and II
Summer 2022, Summer 2023	Teaching Assistant for Differential Equations for Physicists and Engineers

Volunteer

UF Math Festival. Feb 2025, Apr 2023.