

Yandi Wu

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Education	University of Wisconsin, Madison PhD Mathematics, Advisors: Tullia Dymarz, Caglar Uyanik Minor in Computer Science	2018 - Madison, WI
	University of California, Berkeley BA Mathematics (High Honors)	2014 - 2018 Berkeley, CA
	Budapest Semesters in Mathematics Semester Abroad	Fall 2017 Budapest, Hungary
Research Interests	Low-dimensional topology, geometric group theory, hyperbolic geometry, and geometric rigidity theory, including applications to orbifolds, manifolds, and generalizations.	
Publications & Preprints	<ol style="list-style-type: none">1. A Topologically Rigid Set of Quotients of the Davis Complex. Geom. Dedicata, 217 (2023), 1-20.2. Marked Length Spectrum Rigidity for Surface Amalgams. arXiv Preprint, 2023.	
Honors & Awards	Excellence in Research Graduate Student Award “For significant and substantial contributions to research”	2023 Madison, WI
	Elizabeth S. Hirschfelder Award “For exceptional research done by a female graduate student”	2022 Madison, WI
	Outstanding Service Award “For special service to the department”	2022 Madison, WI
	Outstanding TA Award “For excellence in the classroom across multiple semesters”	2021 Madison, WI
Invited Talks (Conferences)	AMS Central Sectional Meeting (Milwaukee, Wisconsin) Special session in developments in hyperbolic-like geometry and dynamics	April 2024
	Joint Math Meetings (San Francisco, CA) Special Session in Geometric Group Theory	Jan 2024 Jan 2024
	World of GroupCraft III (online)	Sept 2023
	Spring Topology and Dynamics Seminar (online) Special Session in Geometric Group Theory	Mar 2023
Invited Talks (Seminars)	Wesleyan University Topology, Geometry, & Dynamics Seminar	Dec 2023
	University of Minnesota, Twin Cities Geometry Seminar	Nov 2023
	Vanderbilt University Topology & Group Theory Seminar	Nov 2023

	Brandeis University Topology Seminar	Nov 2023
	University of Illinois, Chicago Geometry, Topology, & Dynamics Seminar	Nov 2023
	University of Wisconsin, Madison Dynamics Seminar	Oct 2023
	Rice University Topology Seminar	Aug 2023
	University of Wisconsin, Milwaukee Topology Seminar	April 2023
	The Ohio State University Topology and GGT Seminar	Nov 2022
	BSU-Toledo Joint Geometry and Topology Seminar	Sept 2022
Contributed Talks	Underrepresented Students in Topology and Algebra Research Symposium	Mar 2023
Service & Outreach	AMS Student Chapter Seminar Co-organizer	Spring 2021 - Spring 2023 Madison, WI
	Committee on TA Policies and Procedures Graduate Student Representative	Fall 2021- Spring 2022 Madison, WI
	Gender Minorities in Mathematics At Wisconsin Co-organizer	Fall 2020 - Spring 2022 Madison, WI
Mentoring	Madison Experimental Mathematics Lab Project: <i>Hyperbolic Geometry and Crochet</i> Graduate mentor for four undergraduate students	Spring 2023 Madison, WI
	Big Ideas in Dynamics Topic: <i>Length functions on currents and applications to dynamics & counting</i> Graduate Mentor for graduate reading group	Fall 2022 Online
	Madison Experimental Mathematics Lab Project: <i>Random Symmetries of Hyperbolic Space</i> Graduate mentor for four undergraduate students	2022 - 2023 Madison, WI
	Girls' Night Out Project: Mathematics of Epidemics Graduate Mentor for three high school students	Spring 2020 Madison, WI
	Directed Reading Program Topic: <i>Office Hours with a Geometric Group Theorist</i> Graduate mentor for three undergraduate students	Fall 2018 Madison, WI
Outreach Talks	SIAM Student Chapter Seminar <i>How I landed my summer internship</i>	Mar 31, 2023
	UW Madison Math Circle <i>Cut and Paste Topology</i>	Feb 2019, Sept 2021 Madison, WI
Teaching Experience	Instructor Math 131 (Problem solving in Algebra, Geometry, and Statistics)	Madison, WI Summer 2021

Teaching Assistant Coordinator	Madison, WI
Math 234 (Calculus III)	Fall 2021*, Spring 2021*, Fall 2020, Spring 2020*
Math 222 (Calculus II)	Fall 2022*, Spring 2023*
Math 221 (Calculus I)	Fall 2019

Teaching Assistant	Madison, WI
Math 222 (Calculus and Analytic Geometry II)	Fall 2018, Spring 2019*

* Received “superior” rating awarded to top 30% of TAs every semester

Industry Experience

Reddit, Ads Prediction Team	New York, NY
Data Science Intern	Summer 2023

- **Machine Learning:** Implement model calibration techniques to decrease calibration error of decision tree model in production by up to 30 percent.
- **Data Science:** Build Mode dashboards to visualize how different sectors, such as geographic location, ad industry, and user frequency, affect model calibration.
- Present on state-of-the-art model calibration techniques for modern Deep Neural Networks at company-wide Ads Journal Club.

US Army Corps of Engineers, Geospatial Research Lab	Alexandria, VA
NSF Mathematical Sciences Graduate Internship Program	Summer 2022

- **Computer vision:** Implement automated building damage assessment by GPU-powered neural networks on satellite images of natural disaster sites.
- **Transfer Learning:** Implement domain adaptation techniques that increased model accuracy by up to 6 percent.
- White paper, *Transfer Learning Techniques for Building Damage Assessment*, and NSF MSGI Research Symposium slides available on website.