Yandi Wu

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| **Employment** | **Lovett Instructor** | 2024 - |
| | Rice University | Houston, TX |

Education	**University of Wisconsin, Madison**	2018 - 2024
	PhD Mathematics, Advisors: Tullia Dymarz, Caglar Uyanik	Madison, WI
	Minor in Computer Science	
	University of California, Berkeley	2014 - 2018
	BA Mathematics (High Honors)	Berkeley, CA
	Budapest Semesters in Mathematics	Fall 2017
	Semester Abroad	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

1. Subactions for Locally CAT(-1) Spaces.
   arXiv Preprint, 2024. (w/ D. Constantine, E. Shrestha)

2. Isospectral Hyperbolic Surface Amalgams.
   arXiv Preprint, 2024.

3. Marked Length Spectrum Rigidity for Surface Amalgams.
   Accepted: to appear in **Trans. Amer. Math. Soc.**

4. A Topologically Rigid Set of Quotients of the Davis Complex.
   Geom. Dedicata, 217 (2023), 1-20.

Honors & Awards	**Excellence in Research Graduate Student Award**	2023
	"For significant and substantial contributions to research"	Madison, WI
	Elizabeth S. Hirschfelder Award	2022
	"For exceptional research done by a female graduate student"	Madison, WI
	Outstanding Service Award	2022
	"For special service to the department"	Madison, WI
	Outstanding TA Award	2021
	"For excellence in the classroom across multiple semesters"	Madison, WI

Invited Talks (Conferences)	Midwest Summer School in Geometry, Topology, and Dynamics (Madison, WI)	Jun 2025
	Spring Topology and Dynamics Conference (Newport News, VA) Session on Geometric Topology	March 2025
	Joint Math Meetings (Seattle, WA) Women in Groups, Geometry, and Dynamics Special Session	Jan 2025

	KIAS-Rice Workshop on Geometric Topology (Seoul, Korea)	Sept 2024
	AMS Central Fall Sectional Meeting (San Antonio, TX) Geometric group theory and low dimensional topology	Sept 2024
	AMS Central Spring Sectional Meeting (Milwaukee, Wisconsin) Special session in developments in hyperbolic-like geometry and dynamics	April 2024
	Joint Math Meetings (San Francisco, CA) Session on 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)	Yale University Geometry & Topology Seminar	Dec 2024
	Wake Forest Dynamics Seminar	Nov 2024
	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

Member, Rice Math Department Colloquium Committee (Fall 2024): Invite and host external speakers for weekly departmental colloquium.

Co-organizer, UW Madison AMS Student Chapter Seminar (Spring 2021 - Spring 2023): Plan and organize weekly department-wide graduate student seminar.

Co-organizer, Gender Minorities in Mathematics At Wisconsin (Fall 2020 - Spring 2022): Organize professional development and social events for gender minorities in the department, coordinate GMMaW colloquiums.

Member, UW Madison Committee on TA Policies and Procedures (Spring

2022): Evaluate TAs in the math department, determine policies for TA responsibilities.

Referee Work (2024 - present): *Groups, Geom., Dyn.*

Mentoring	**Madison Experimental Mathematics Lab**	Spring 2023
	Project: *Hyperbolic Geometry and Crochet*	Madison, WI
	Graduate mentor for four undergraduate students	

Big Ideas in Dynamics   Fall 2022
Topic: *Length functions on currents and applications to dynamics & counting*   Online
Graduate Mentor for graduate reading group

Madison Experimental Mathematics Lab   2022 - 2023
Project: *Random Symmetrics of Hyperbolic Space*   Madison, WI
Graduate mentor for four undergraduate students

Girls' Night Out   Spring 2020
Project: Mathematics of Epidemics   Madison, WI
Graduate Mentor for three high school students

Directed Reading Program   Fall 2018
Topic: *Office Hours with a Geometric Group Theorist*   Madison, WI
Graduate mentor for three undergraduate students

Outreach Talks   SIAM Student Chapter Seminar   Mar 31, 2023
How I landed my summer internship   Madison, WI

UW Madison Math Circle   Feb 2019, Sept 2021
Cut and Paste Topology   Madison, WI

Teaching Experience

Instructor   Houston, TX
Math 102 (Calculus II)   Fall 2024

Instructor   Madison, WI
Math 131 (Problem solving in Algebra, Geometry, and Statistics)   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.