

## Yandi Wu

University of Wisconsin, Madison  
Department of Mathematics  
Madison, WI 53706

yandi.wu@wisc.edu  
<https://www.math.wisc.edu/~ywu495>

---

<b>Education</b>	<b>University of Wisconsin, Madison</b> PhD Mathematics, Advisors: Tullia Dymarz, Caglar Uyanik Minor in Computer Science	2018 - Madison, WI
	<b>University of California, Berkeley</b> BA Mathematics (High Honors)	2014 - 2018 Berkeley, CA
	<b>Budapest Semesters in Mathematics</b> Semester Abroad	Fall 2017 Budapest, Hungary
<b>Research Interests</b>	Low-dimensional topology, geometric group theory, hyperbolic geometry, and geometric rigidity theory, including applications to orbifolds, manifolds, and generalizations.	
<b>Publications &amp; Preprints</b>	<ol style="list-style-type: none"><li>1. A Topologically Rigid Set of Quotients of the Davis Complex. <b>Geom. Dedicata</b>, 217 (2023), 1-20.</li><li>2. Marked Length Spectrum Rigidity for Surface Amalgams. <i>In preparation.</i></li></ol>	
<b>Honors &amp; Awards</b>	<b>Elizabeth S. Hirschfelder Award</b> For exceptional research done by a female graduate student	2022 Madison, WI
	<b>Outstanding Service Award</b> For special service to the department	2022 Madison, WI
	<b>Outstanding TA Award</b> For excellence in the classroom across multiple semesters	2021 Madison, WI
<b>Invited Talks (Conferences)</b>	Joint Math Meetings (San Francisco, CA), Special Session in GGT	Jan 2024
	World of GroupCraft III	Sept 2023
	Spring Topology and Dynamics Seminar, Special Session in GGT	Mar 2023
<b>Invited Talks (Seminars)</b>	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
<b>Contributed Talks</b>	Underrepresented Students in Topology and Algebra Research Symposium	Mar 2023
<b>Service &amp; Outreach</b>	<b>AMS Student Chapter Seminar</b> Co-organizer	Spring 2021 - Spring 2023 Madison, WI
	<b>Committee on TA Policies and Procedures</b> Graduate Student Representative	Fall 2021- Spring 2022 Madison, WI
	<b>Gender Minorities in Mathematics At Wisconsin</b> Co-organizer	Fall 2020 - Spring 2022 Madison, WI
<b>Mentoring</b>	<b>Big Ideas in Dynamics</b> Topic: <i>Length functions on currents and applications to dynamics &amp; counting</i> Graduate Mentor for graduate reading group	Fall 2022 Online
	<b>Madison Experimental Mathematics Lab</b> Project: <i>Random Symmetries of Hyperbolic Space</i> Graduate mentor for four undergraduate students	2022 - 2023 Madison, WI
	<b>Girls' Night Out</b> Project: Mathematics of Epidemics Graduate Mentor for three high school students	Spring 2020 Madison, WI
	<b>Directed Reading Program</b> Topic: <i>Office Hours with a Geometric Group Theorist</i> Graduate mentor for three undergraduate students	Fall 2018 Madison, WI
<b>Outreach Talks</b>	UW Madison Math Circle <i>Cut and Paste Topology</i>	Feb 2019, Sept 2021 Madison, WI
<b>Teaching Experience</b>	<b>Instructor</b> Math 131 (Problem solving in Algebra, Geometry, and Statistics)	Madison, WI Summer 2021
	<b>Teaching Assistant Coordinator</b> Math 234 (Calculus III) Math 222 (Calculus II) Math 221 (Calculus I)	Madison, WI Fall 2021*, Spring 2021*, Fall 2020, Spring 2020* Fall 2022*, Spring 2023* Fall 2019
	<b>Teaching Assistant</b> Math 222 (Calculus and Analytic Geometry II)	Madison, WI Fall 2018, Spring 2019*
	* Received "superior" rating awarded to top 30% of TAs every semester	
<b>Industry Experience</b>	<b>US Army Corps of Engineers, Geospatial Research Lab</b> NSF Mathematical Sciences Graduate Internship Program	Alexandria, VA 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.

**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.