

Neža Žager Korenjak, PhD

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Research interests: hyperbolic & affine geometry, (higher) Teichmüller theory, geometric group theory

Positions	University of Michigan postdoc under supervision of Dick Canary	<i>Fall 2024-current</i>
	SLMath Research Member for the program Topological and Geometric Structures in Low Dimensions	<i>April May 2026</i>
	Max Plank Institute Leipzig postdoc under supervision of Anna Wienhard	<i>Fall 2023 - Summer 2024</i>
Education	University of Texas at Austin Ph.D. Program in Mathematics advisor: Jeffrey Danciger Ph.D. thesis: <i>Constructing proper affine actions via higher strip deformations.</i>	<i>Spring 2023</i>
	University of Ljubljana Bologna second cycle master's study program, Mathematics	<i>2016</i>
	Master's thesis: <i>Hypercyclic Operators</i> ◊ advisor: Roman Drnovšek	
	Bologna first cycle academic study program, Mathematics	<i>2014</i>
	Undergraduate thesis: <i>Theorems on Compactness</i> ◊ advisor: Žiga Virk	
Papers	<i>Proper affine deformations of positive representations.</i> Joint with J.-P. Burelle. arXiv: 2405.14658.	<i>2024</i>
	Accepted for publication in <i>Journal of Topology</i> .	
	<i>Constructing proper affine actions via higher strip deformations.</i> arXiv: 2205.14712.	<i>2022</i>
	Accepted for publication in <i>Algebraic and Geometric Topology</i> .	
	<i>Theorems on compactness.</i> Overview article. <i>Matrika</i> 1 (2014) 4 .	
Selected research talks & presentations	<i>Proper affine deformations of positive representations</i>	<i>January 2026</i>
	Pathways Workshop: Topological and Geometric Structures in low dimensions & Geometry and Dynamics for Discrete Subgroups of Higher Rank Lie Groups, SLMATH	
	<i>Proper affine deformations of positive representations</i>	<i>May 2025</i>
	Higher rank geometric structures, Higgs bundles and physics, IHP Paris	
	<i>Constructing proper affine actions</i>	<i>April 2025</i>
	Lorentzian, Affine, and Hyperbolic Differential Geometry – in Memory of Todd Drumm, University of Maryland	
	<i>Proper affine deformations of positive representations</i>	<i>October 2024</i>
	2024 Fall Western Sectional Meeting, UC Riverside, Special Session on Geometry, Topology and Dynamics of Character Varieties.	
	<i>Proper affine deformations of positive representations</i>	<i>July 2024</i>
	AMS-UMI International Joint Meeting, Palermo, Anosov Representations and Higher Teichmüller Theory Special Session	
	<i>Proper affine deformations of positive representations</i>	<i>April 2024</i>
	University of Texas in Austin geometric geometry seminar	
	<i>Constructing proper affine actions via higher strip deformations</i>	<i>September 2023</i>
	Diverse Aspects of Groups, Geometry and Dynamics, Heidelberg University.	
	<i>Constructing proper affine actions via higher strip deformations</i>	<i>December 2022</i>

	University of Maryland geometry seminar	
	<i>Constructing proper affine actions via higher strip deformations</i>	September 2022
	University of Virginia geometry seminar	
	<i>Constructing proper affine actions via higher strip deformations</i>	September 2022
	Nearly carbon neutral topology & geometry conference (virtual.)	
	<i>Constructing proper affine actions</i>	July 2022
	GT GAPS (virtual.)	
	<i>Proper affine actions of free groups</i> , lightning talk.	June 2022
	Geometry, Arithmetic, and Groups, UT Austin	
	<i>Constructing proper affine actions</i>	February 2022
	TWIMS 2022, Rice	
	<i>Constructing proper affine actions</i>	October 2021
	The University of Sherbrooke, SAG seminar	
Teaching	Instructor at University of Michigan	
	<i>Introduction to point-set topology (490)</i>	Fall 2026
	<i>Principles of real analysis (351)</i>	Fall 2024, Winter & Fall 2025
	<i>Explorations in Euclidean geometry (431)</i>	Fall 2025
	Assistant Instructor at the University of Texas at Austin	
	<i>Mentor at the University of Michigan LoG(M)</i>	Spring & Fall 2026
	Mentored two groups of undergraduates on a math research and visualization project	
	Learning assistant experience in math (M 371E)	Fall 2021 - Spring 2023
	A class for undergraduates about math pedagogy, where they get hands-on experience tutoring at CalcLab, which I was also organizing.	
	Summer mini-course leader	Summer 2021
	<i>Measured laminations and train tracks</i>	
	Led a weeklong online course aimed at graduate students as part of UT's Summer minicourse program	
	Mentor at the University of Texas at Austin's Geometry Lab	Spring 2021
	Mentored a small group of undergraduates in a computer visualization problem in projective geometry, helped make the project's website	
	Teaching Assistant at the University of Texas at Austin	
Outreach	<i>Differential Equations with Linear Algebra (M 427J)</i>	Spring 2020
	<i>Honors Advanced Calculus for Applications II (M 427L)</i>	Fall 2019
	<i>Advanced Calculus for Applications II (M 427L)</i>	Spring 2019
	<i>Differential Calculus (M 408K)</i>	Fall 2018
	Teaching Assistant at the University of Ljubljana	
	<i>Computer Practical</i>	Fall 2015
	<i>Mathematics 1</i> , Grader	Spring 2015 - Summer 2016
	Additional training and certificates	
	<i>Inclusive Classrooms Leadership Certificate</i>	UT Austin, 2022
	<i>Inclusive Instructor Certificate</i>	UT Austin, 2022
	Instructor at Ypsilanti MathCorps 2026	Summer 2026
	Designed and taught a class on the math of the game SET to 8th graders	
	Volunteering at Ypsilanti Community Middle School	Spring 2026
	Volunteered twice a week to help out in a 7th grade math classroom	
	DRP Mentor at the University of Michigan	Summer 2026
	Mentored two undergraduates in a reading project on geometric group theory	
	Speaker at U(M) Math Club	Spring 2026
	Gave a talk titled <i>The many hats of the circle for undergraduates</i>	
	Speaker at Michigan Math Circle	Spring 2026
	Gave a talk titled <i>πs and circles, oh my! for middle schoolers</i>	
	Instructor at Ypsilanti MathCorps 2025	Summer 2025
	Taught a class of 8th grade math and a class of high school precalculus in a Summer program for kids from local underserved middle and high schools	

Service	DRP Mentor at the University of Texas at Austin	<i>Spring 2017 - Spring 2023</i>
	Mentored undergraduates in reading projects on hyperbolic geometry, knot theory, low-dimensional topology, number theory, differential geometry	
	Volunteer at a tutoring pod at local middle school	<i>Fall 2020</i>
	Helped middle school math teachers hold virtual office hours for students.	
	Speaker and volunteer at SMMG	
	<i>an outreach program about mathematics aimed at middle and high schoolers</i>	
	Regular volunteer & gave two talks:	
	<i>An invitation to non-Euclidean geometry</i>	<i>Spring 2020</i>
	<i>The Towers of Hanoi</i>	<i>Fall 2018</i>
	UT Math Club speaker	
	<i>Hyperbolic geometry</i>	<i>Spring 2020</i>
	Co-organizer and mentor of MaRS	<i>August 2015</i>
	<i>a Slovenian summer math camp for high schoolers</i>	
	Volunteer tutor for undergraduate students	<i>Fall 2013- Spring 2016</i>
	at University of Ljubljana	
	Leader and speaker of a math club for middle schoolers	<i>2010-2011</i>
	<i>dealing with fun math problems and preparations for math competitions</i>	
	Referee for <i>Israel Journal of Mathematics</i> ,	<i>2025,2026</i>
	<i>Transactions of the American Mathematical Society</i>	
	IBL Lunch organizer , organizing monthly lunch discussions	<i>2025/2026</i>
	about inquiry-based learning and teaching at Michigan	
	Co-organizer of a one-day conference <i>Queer in Math day</i>	<i>June 2024, MPI Leipzig</i>
	A one-day conference highlighting the work of queer mathematicians and promoting equity and diversity in math	
	Graduate Representative	
	serving on an elected committee of math grad students that helps deal with grad student concerns and well-being, organizes social and academic events, and helps mediate between students and faculty	<i>2020-2021,</i> <i>2022-2023</i>
	Graduate Student Association	<i>2020-2021</i>
	Represented the math department graduate students in the legislative association of all UT Austin grad students	
	Organizer of the <i>Junior Topology Seminar</i>	<i>Spring 2020</i>
	The University of Texas at Austin	
	Co-organizer of the <i>Geometric Topology seminar</i>	<i>Spring 2018-Spring 2022</i>
	The University of Texas at Austin	
	Co-organizer of the <i>Teichmuller theory learning seminar</i>	<i>Spring 2019</i>
	The University of Texas at Austin	
	Co-organizer of Directed Reading Program , UT Austin	<i>Spring 2019 - Spring 2021</i>
	<i>pairing graduate students in mathematics and related fields with undergraduate students interested in getting started in mathematical research to work on a reading project together, and organising the symposium for students to present their work</i>	
Honors and Awards	B. Alan Taylor Award for Outstanding Postdoctoral Assistant Professor ◊ University of Michigan	<i>2026</i>
	Frank Gerth III teaching excellence award ◊ <i>UT Autin</i>	<i>2020</i>
	Provost's Graduate Excellence Fellowship ◊ <i>UT Austin</i>	<i>2016 - 2021</i>
	State merit scholarship (Zois scholarship)	<i>2007 - 2014</i>
	<i>rewarded by Republic of Slovenia</i>	
	Dean's Award for academic achievement in the first year of study	<i>2012</i>
	<i>University of Ljubljana</i>	
	Honorable mention at International Mathematical Olympiad	<i>2011</i>
	Bronze medal at Middle-European Mathematical Olympiad	<i>2010</i>