Jenya (Eugenia) Sapir

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Research Interests:

Low Dimensional Topology, Geometric Group Theory, Teichmuller Theory

Education:

Ph.D, Stanford University, Stanford, CA Advisor: Maryam Mirzakhani	2009 - 2014
B.S. with honors in Mathematics, University of Chicago, Chicago, IL	2004 - 2008

Academic Appointments:

Assistant Professor, Binghamton University, Binghamton, NY	2017 - present
Postdoctoral Fellow, Max Planck Institute for Mathematics, Bonn, Germany	2018
Viterbi Postdoctoral Fellow, Geometric Group Theory program, MSRI, Berkeley, CA	Fall 2016
J. L. Doob Assistant Professor, University of Illinois at Urbana-Champaign, Urbana, IL	2014 - 2017

Awards and Fellowships:

Simons Foundation: Collaboration Grant for Mathematics Project: Coarse and Fine Geometry of Negatively Curved Surfaces	September 2022- August 2027
Research member at MSRI Program on Holomorphic Differentials in Mathematics and Physics	November 13 - December 13, 2019
Visiting scientist Max Planck Institute for Mathematics- Bonn	June, 2019
NSF Graduate Research Fellowship	2009 - 2014
Fulbright U.S. Student Scholarship to France for study at ENS-Lyon, Lyon, France under Etienne Ghys	2008 - 2009

Papers and Preprints:

Sapir, J. (2022) *An extension of the Thurston metric to projective filling currents.* arXiv:2210.08130.

Sapir, J. (2022) *A length comparison theorem for geodesic currents.* arXiv:2210.00925.

Dozier, B., Sapir, J. (2022) *Simple vs non-simple loops on random regular graphs.* arXiv:2209.11218.

Hensel, S., Sapir, J. (2021). *A projection from filling currents to Teichmuller space.* arXiv:2109.14768. Accepted for publication in Proceedings of the American Mathematical Society.

Dozier, B., Sapir, J. (2021). *Coarse density of subsets of moduli space.* Annales de l'Institut Fourier, Online first, 14 p.

Athreya, J., Lalley, S., Sapir, J., Wroten, M. (2021). *Local geometry of random geodesics on negatively curved surfaces.* Annales Henri Lebesgue. 4. 187-226.

Sapir, J. (2020). *A Birman-series type result for geodesics with infinitely many self-intersections.* Transactions of the American Mathematical Society, 1–.

Aougab, T., Gaster, J., Patel, P., & Sapir, J. (2017). *Building hyperbolic metrics suited to closed curves and applications to lifting simply.* Mathematical Research Letters, 24(3), 593–617.

Sapir, J. (2016). *Orbits of non-simple closed curves on a surface.* arXiv:1602.09093 Geometric Topology.

Sapir, J. (2016). *Bounds on the number of non-simple closed geodesics on a surface.* International Mathematics Research Notices, 2016(24), 7499-7545.

Sapir, J. (2015). *Lower bound on the number of non-simple closed geodesics on surfaces.* Geometriae Dedicata, 184, 1-25.

Bleak, C., Bowman, H.E., Lynch, A.G., Graham, G., Hughes, J., Matucci, F., & Sapir, E. (2013). *Centralizers in the R. Thompson group V_n.* Groups, Geometry, and Dynamics, 7, 821-865.

Chestnut, J., Sapir, J., & Swartz, E. (2008). *Enumerative properties of triangulations of spherical bundles over S^1.* Eur. J. Comb., 29, 662-671.

Graduate students:

Garrett Proffitt (current),

Meenakshy Jyothis (current)

Teaching at Binghamton University:

Course		Semesters taught
Math 463	Differential Geometry	Spring 2022, Spring 2020
Math 304	Linear Algebra	Spring 2022, Fall 2020, Fall 2017
Math 513	Point Set Topology	Fall 2021, Fall 2019
Math 330	Number Systems	Spring 2021, Spring 2020, Spring 2019
Math 601	Teichmuller Theory	Fall 2020
Math 601	Mapping Class Groups	Spring 2019

Select invited research talks at conferences and seminars

Event	Location	Date	Title
Yale University Geometry and Topology seminar	New Haven, CT	12/06/2022	The geometry of projective geodesic currents
University of North Carolina, Greensboro ANT-CoG seminar	Online	10/21/2022	A projection from geodesic currents to Teichmuller space
Billiards and Surfaces à la Teichmüller and Riemann, Online (BISTRO)	Online	4/30/2022	A projection from geodesic currents to Teichmuller space
Bristol University Geometry and Topology seminar	Online	4/22/2022	A projection from geodesic currents to Teichmuller space
U. Wisconsin, Milwaukee Colloquium	Milwaukee, WI	11/19/2021	A length minimizing projection to Teichmuller space
Queen's University Colloquium	Kingston, Canada	11/12/2021	A projection from geodesic currents to Teichmuller space
Geometric and Asymptotic Group Theory and Applications (GAGTA) Plenary speaker	Online	7/10/2021	Coarse density of subsets of moduli space
ETH Zurich Online geometry seminar	Online	4/13/2020	Tessellations from long geodesics on surfaces
Yale University Geometry and Topology seminar	New Haven, CT	10/22/2019	Tessellations from long geodesics on surfaces
U. Michigan, Ann Arbor Topology seminar	Ann Arbor, MI	10/17/2019	Tessellations from long geodesics on surfaces
Cornell University Topology Seminar	Ithaca, NY	5/9/2019	Tessellations from long geodesics on surfaces
Columbia University Geometry and Topology Seminar	New York, NY	4/9/2019	Tessellations from long geodesics on surfaces
Queen's University Dynamics, Geometry & Groups Seminar	Kingston, Canada	4/5/2019	Tessellations from long geodesics on surfaces
MPIM - Bonn Differential Geometry Oberseminar	Bonn, Germany	11/22/2018	Tessellations from long geodesics on surfaces
AraFest Connecticut college	New London, Connecticut	8/9-11/2018	A Combinatorial Approach to Curve Counting
University of Heidelberg Geometry seminar	Heidelberg, Germany	5/29/2018	Tessellations from long geodesics on surfaces
Conference on The Mathematical Legacy of Maryam Mirzakhani Stanford University	Stanford, CA	5/18/2018	Tessellations from long geodesics on surfaces

Conferences and seminars organized

Event organized	Coorganizers	Location	Date
Binghamton Geometry and Topology Seminar	Matthew Haulmark, Cary Malkiewich	Binghamton University Binghamton, NY	Spring 2019, Fall 2020
Fall Eastern Sectional meeting of the AMS: Special Session on Effective and Quantitative Advances in Low Dimensional Topology and Geometric Group Theory	Edgar Bering	Binghamton University Binghamton, NY	10/12-13/2019
Conference on Geometric and Combinatorial Methods in Group Theory In honor of Mark Sapir's 60th birthday	Gili Golan, Kate Juschenko, Curtis Kent, Alexander Olshanskiy, Denis Osin	UIUC Urbana, IL	5/16-18/2017

Outreach talks

Event	Location	Date	Title
Women in Math inspired by Maryam Mirzakhani	Online panel event	1/09/2021	Panelist
Women in Mathematical Physics Workshop (online) Hosted by the Banff International Research Station	Online conference	9/22/2020	Tribute to Mirzakhani: Talk about the work of Maryam Mirzakhani
Young Geometric Group Theory Conference	Bilbao, Spain	6/30 - 7/5, 2019	Tessellations from long geodesics on surfaces
Fields medal symposium on the work of Maryam Mirzakhani Hosted by the Fields Institute Public opening	Toronto, Canada	11/05/2018	Introduction
Graduate Topology and Geometry Conference at UIC	Chicago, IL	4/07/2018	Counting curves on a hyperbolic surface

Conferences attended by invitation

Conference		Location	Date
Ventotene 2021	Counting Problems	Ventotene, Italy	9/6-11/2021
Oberwolfach	Enumerative Geometry of Surfaces	Oberwolfach, Germany	6/14-18/2021
Ventotene 2017	Moduli Spaces	Ventotene, Italy	9/11-16/2017