

# RYLEE ALANZA LYMAN

---

CONTACT	Department of Mathematics and Computer Science Smith Hall, Rutgers University at Newark Newark, NJ 07102	<i>E-mail:</i> rylee.alanza@gmail.com <i>Mobile:</i> 952.465.6895 <i>Webpage:</i> <a href="https://ryleealanza.org">https://ryleealanza.org</a>
INTERESTS	Geometric group theory, geometric topology, outer automorphism groups, mapping class groups, Coxeter groups, deformation spaces of group actions, hyperbolic and CAT(0) geometry.	
APPOINTMENTS	<b>Rutgers University at Newark</b> , Postdoctoral Associate	2020–2023
EDUCATION	<b>Tufts University</b> , PhD in Mathematics (Advisor: Kim Ruane)	May 2020
	<b>Tufts University</b> , MS in Mathematics	May 2017
	<b>Columbia University</b> , BA in Mathematics (honors) & Music, <i>cum laude</i>	May 2015
RESEARCH	<b>Folding-like Techniques for CAT(0) Cube Complexes</b> <i>Submitted.</i> (with Michael Ben-Zvi and Robert Kropholler) Available at arXiv:2011.05374 [Math.GR]	
	<b>Some New CAT(0) Free-by-Cyclic Groups</b> <i>To appear in the Michigan Math Journal.</i> Available at: arXiv:1909.03097 [Math.GR]	
	<b>Nielsen Realization for Infinite-Type Surfaces</b> <i>To appear in Proceedings of the AMS.</i> (with S. Afton, D. Calegari and L. Chen) Available at arXiv:2002.09760 [Math.GT]	
	<b>Train Tracks on Graphs of Groups and Outer Automorphisms of Hyperbolic Groups</b> <i>PhD thesis.</i> Available at arXiv:2005.00164 [Math.GR]	
	<b>Doubly-Uniform Exponential Growth for Free-By-Cyclic Groups</b> <i>In preparation.</i> (with Robert Kropholler and Thomas Ng)	
	<b>Train Track Maps and CTs on Graphs of Groups</b> <i>In preparation.</i>	
AWARDS	Robert P. Guertin Student Leadership Award finalist	2020
	Head Teaching Assistant	AY 2019–20
CONFERENCE & SEMINAR	<b>Random and Arithmetic Structures in Topology Seminar</b> Mathematical Sciences Research Institute	Dec 2020
TALKS	<b>Geometry and Topology Seminar</b> City University of New York	Nov 2020
	<b>Geometry and Topology Seminar</b> Binghamton University	Oct 2020
	<b>Pure Math Seminar</b> University of North Carolina–Greensboro	Oct 2020
	<b>Big Surf(aces) Seminar</b>	Oct 2020
	<b>Mathematics Colloquium</b> Rutgers University–Newark	Sep 2020
	<b>Geometric Group Theory without Boundaries</b> Mini-course on Bass–Serre Theory	July 2020
	<b>Trends in Low-Dimensional Topology</b>	June 2020
	<b>Geometry and Topology Online</b> Warwick Mathematics Institute	June 2020
	<b>Topology Seminar</b> University of California Riverside	May 2020
	<b>Geometric Topology Seminar</b> Columbia University	Apr 2020
	<b>Topology Seminar</b> University of Wisconsin at Milwaukee	Mar 2020
	<b>Pick My Brain Seminar</b> Northeastern University	Feb 2020
	<b>Geometric Group Theory Seminar</b> McGill University	Jan 2020

	<b>Hyperbolic Lunch</b> University of Toronto	Jan 2020
	<b>Dynamics, Geometry and Groups Seminar</b> Queens University	Jan 2020
	<b>Boston Topology Seminar</b> Brandeis University	Jan 2020
	<b>Special Session, AMS Sectional Meeting</b> <i>Effective and Quantitative Advances in Low Dimensional Topology and Geometric Group Theory</i> , Binghamton University	Oct 2019
	<b>Algebra/Topology Seminar</b> State University of New York at Albany	Oct 2019
	<b>Graduate Seminar</b> Temple University	Sep 2019
	<b>Geometry and Topology Seminar</b> Temple University	Sep 2019
	<b>LG&amp;TBQ</b> University of Michigan	June 2019
	<b>Graduate Student Conference in Algebra, Geometry and Topology</b> Temple University	June 2019
	<b>Spring Topology and Dynamical Systems Conference</b> University of Alabama at Birmingham	Mar 2019
	<b>Geometric Group Theory and Topology Seminar</b> Tufts University	Nov 2018
	<b>Eminar</b> Tufts Student Seminar, 6 talks	2017–2019
CONFERENCE PARTICIPATION	<b>RTG Mini-Conference</b> University of Utah	Feb 2020
	<b>Tech Topology Conference</b> <i>Lightning Talk</i> , Georgia Institute of Technology	Dec 2019
	<b>Algorithms in Complex Dynamics and Mapping Class Groups</b> ICERM, Brown University	Nov 2019
	<b>Junior Geometry and Topology in the Midwest</b> University of Wisconsin at Madison	Oct 2019
	<b>Wasatch Topology Conference</b> University of Utah, Brigham Young University	Aug 2019
	<b>Aspects of Geometric Group Theory</b> Institut des Hautes Études Scientifiques	July 2019
	<b>Young Geometric Group Theory VIII</b> <i>Lightning Talk</i> , Colegio Mayor Miguel de Unamuno	July 2019
	<b>Spring Opportunities Workshop</b> American Institute of Mathematics	Apr 2019
	<b>Graduate Student Topology and Geometry Conference</b> <i>Lightning Talk</i> , University of Illinois at Urbana-Champaign	Mar 2019
	<b>Junior Geometry and Topology in the Midwest</b> University of Wisconsin at Madison	Oct 2018
	<b>Women and Mathematics Program</b> Institute for Advanced Study	May 2016
	Co-organizer, Graduate Development Seminar	AY 2019–20
	Instructor of Record, Math of Social Choice, Tufts University	Spring 2019, Summer 2019
	Recitation Leader, Calculus I, Tufts University	Fall 2019
	Recitation Leader, Calculus II, Tufts University	Spring 2017, Spring 2018, Fall 2018
TEACHING		

SERVICE	Co-organizer, Geometric Group Theory Without Boundaries Summer School	July 2020
	Co-organizer, Tufts Directed Reading Program	AY 2018–20
	Mentor, Tufts Directed Reading Program	Fall 2019
	Organizer, Geometric Group Theory Reading Seminar	AY 2019–20
	Treasurer, Tufts Organization of Graduate Students in Mathematics	AY 2018–19
	Mathematics Department Graduate Union Steward	AY 2017–19
	Mathematics Department Representative, Tufts Graduate Student Council	AY 2017–18
	Graduate Student Member, Tufts Committee on Curricula	AY 2017–18
	Mentor, Tufts Directed Reading Program	Summer 2016
REFERENCES	<b>Kim Ruane</b> (Advisor)	kim.ruane@tufts.edu
	<b>Mladen Bestvina</b>	bestvina@math.utah.edu
	<b>Mark Hagen</b>	mark.hagen@bristol.ac.uk
	<b>Robert Kropholler</b>	robert.kropholler@tufts.edu
	<b>Zachary Faubion</b> (Teaching reference)	zachary.faubion@tufts.edu
OTHER	<b>Languages:</b> English (native), German (intermediate), Japanese (intermediate)	
	<b>Citizenship:</b> United States of America	