

# Priyam Patel

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CONTACT INFORMATION	Department of Mathematics University of California, Santa Barbara Santa Barbara, CA 93106	<i>E-mail:</i> patel@math.ucsb.edu <i>Mobile:</i> (201) 388-2225 <i>Webpage:</i> www.patelp.com
RESEARCH INTERESTS	My research interests lie in the fields of low-dimensional topology, hyperbolic geometry, and geometric group theory. In particular, I study hyperbolic manifolds, the mapping class groups of surfaces (of both finite and infinite type), separability properties of groups, right-angled Artin groups, cube complexes, Teichmüller theory, the combinatorics of 3-manifolds, and representations of surface and 3-manifold groups.	
POSITIONS	<b>University of California, Santa Barbara</b> , Visiting Assistant Professor <b>Purdue University</b> , Golomb Visiting Assistant Professor	2016–present 2013–2016
EDUCATION	<b>Rutgers University, New Brunswick</b> , Ph.D. in Mathematics (Advisor: Feng Luo) <b>New York University</b> , B.A. in Mathematics (Magna Cum Laude with Honors)	May 2013 May 2008
AWARDS & GRANTS	NSF Grant DMS-1812014: The Covers, Symmetries, and Combinatorics of Manifolds AWM Travel Grant AIM Workshop Grant "Surfaces of infinite type" AMS-Simons Travel Grant Spira Teaching Award for Excellence in Undergraduate Teaching National Society for Collegiate Scholars Inspiring Integrity Award Purdue Favorite Faculty Award GAANN Fellowship for Graduate Studies in Mathematics Rutgers University, Teaching Excellence Award	2018-2021 2018 2018 2015–2017 2016 2016 2015 2011 & 2008 2011
PUBLISHED PAPERS	<b>Algebraic and topological properties of big mapping class groups</b> <i>Algebr. Geom. Topol.</i> ( <i>Accepted</i> ) Available at: arXiv:1703.02665 [math.GT] (with N.G. Vlamis) <b>Building hyperbolic metrics suited to closed curves and applications to lifting simply</b> <i>Math. Res. Lett.</i> <b>24</b> (2017), no. 3, p. 593-617. (with T. Aougab, J. Gaster, and J. Sapir) <b>Zariski closures and subgroup separability</b> <i>Selecta Math.</i> <b>23</b> (2017), Issue 3, p. 2019-2027. (with L. Louder and D.B. McReynolds) <b>Quantifying separability in virtually special groups</b> <i>Pacific J. Math.</i> <b>284-1</b> (2016), p. 103-120. (with M.F. Hagen) <b>On the residual finiteness growths of particular hyperbolic manifold groups</b> <i>Geom. Dedicata.</i> <b>185</b> (2016), Issue 1, p. 87-103. <b>Residual finiteness growths of virtually special groups</b> <i>Math. Z.</i> <b>279</b> (2015), no. 1-2, p. 297-310. (with K. Bou-Rabee and M.F. Hagen) <b>On a theorem of Peter Scott</b> <i>Proc. Amer. Math. Soc.</i> <b>142</b> (2014), p. 2891-2906.	
PREPRINTS	<b>Covers of surfaces, Kleinian groups, and the curve complex</b> (with T. Aougab and S. Taylor) <b>Effective virtual and residual properties of some arithmetic hyperbolic 3-manifolds</b> (with J. Deblois and N. Miller) Available at: arXiv:1806.02360 [math.GT] <b>The first integral cohomology of pure mapping class groups</b> (with J. Aramayona and N.G. Vlamis) Available at: arXiv:1711.03132 [math.GT]	

MENTORING	Mark Pengitore, Ph.D. student at Purdue University (advisor: Ben McReynolds)	2013–2016
	Milana Golich, undergraduate student at Purdue University	2014–2016
UPCOMING INVITED TALKS	<b>University of Washington Rainwater Seminar</b>	Oct 2018
	<b>Classical and quantum 3-manifold topology</b> , Melbourne, Australia	Dec 2018
	<b>5th Annual Graduate Student Conference in Algebra, Geometry, and Topology</b> , Temple University	Jun 2019
	<b>Combinatorial and algebraic aspects of geometric structures</b> , Chiang Mai, Thailand	Jul 2019
PAST INVITED TALKS (CONFERENCES & COLLOQUIA)	<b>Geodesics on real hyperbolic manifolds</b> , Connecticut College	Aug 2018
	<b>Thin groups in Number Theory, Geometry and Topology</b> , Rice University	May 2018
	<b>Geometry of Teichmüller space and mapping class groups</b> , University of Warwick	Apr 2018
	<b>Graduate Student Topology and Geometry Conference</b> , UIC	Apr 2018
	<b>Mathematical Congress of the Americas</b> , Special Session on Geometric Group Theory	Jul 2017
	<b>Shanks Conference on Low-dimensional Topology and Geometry</b> , Vanderbilt	May 2017
	<b>Redbud Geometry/Topology Conference</b> , University of Arkansas	Apr 2017
	<b>AWM Research Symposium</b>	Apr 2017
	<i>Special session on Geometric Group Theory</i> , UCLA	
	<b>Spring Topology and Dynamics Conference</b>	Mar 2017
	<i>Special session on Geometric Group Theory</i> , NJCU	
	<b>Bowdoin College Colloquium</b>	Jan 2017
	<b>Louisiana State University Colloquium</b>	Jan 2017
	<b>University of Fribourg Colloquium</b>	Dec 2016
	<b>Temple University Colloquium</b>	Nov 2016
	<b>Effective and Algorithmic Methods in Hyperbolic Geometry and Free Groups</b>	May 2016
	<b>Women and Math Research Seminar Series</b> , Institute for Advanced Study	May 2016
	<b>Eastern Illinois Geometry, Dynamics and Topology Conference</b>	Apr 2016
	<b>Bloomington Geometry Workshop</b>	Apr 2016
	<b>Sectional AMS Meeting Special Session</b>	Nov 2015
	<i>Geometry of groups, surfaces and 3-manifolds</i> , Rutgers University	
	<b>Wasatch Topology Conference</b> , Park City, UT	Aug 2015
	<b>Sectional AMS Meeting Special Session</b>	Mar 2015
	<i>Interactions Between Geometry, Group Theory &amp; Number Theory</i> , Michigan State University	
	<b>Sectional AMS Meeting Special Session</b>	Mar 2015
	<i>Geometric Group Theory and Topology</i> , University of Alabama	
	<b>Third Annual Midwest Women in Mathematics Symposium Special Session</b>	Mar 2015
	<i>Algebraic and Geometric Topology</i> , Dominican University	
	<b>Geometry, Groups and Dynamics</b> , Rose-Hulman Institute	Feb 2015
<b>Young Geometric Group Theory in the Midwest</b> , Madison, WI	Nov 2014	
<b>Topology Students Workshop</b> Research Talk, Georgia Tech	Jun 2014	
<b>Geometric Groups on the Gulf Coast Conference</b>	Mar 2013	
<b>Joint Meetings of the AMS Special Session</b>	Jan 2013	
<i>Topics in geometric and analytic methods in Teichmüller theory and hyperbolic geometry</i>		

PAST  
INVITED TALKS  
(SEMINARS)

<b>Berkeley Topology Seminar</b>	Feb 2018
<b>Rice University Topology Seminar</b>	Feb 2018
<b>Rutgers Topology Seminar</b>	Oct 2017
<b>University of Southern California Geometry and Topology Seminar</b>	Apr 2017
<b>Caltech Geometry and Topology Seminar</b>	Apr 2017
<b>University of Glasgow Geometry and Topology Seminar</b>	Dec 2016
<b>University of Chicago Geometry/Topology Seminar</b>	Nov 2016
<b>San Francisco State University Algebra/Geometry/Combinatorics Seminar</b>	Oct 2016
<b>Rutgers University Topology/Geometry Seminar</b>	Apr 2016
<b>CUNY Hyperbolic Geometry Seminar</b>	Feb 2016
<b>University of Texas at Austin Topology Seminar</b>	Oct 2015
<b>Temple University Geometry-Topology Seminar</b>	Apr 2015
<b>Rutgers University Topology Seminar</b>	Apr 2015
<b>Cornell University Topology/Geometric Group Theory Seminar</b>	Apr 2015
<b>University of Toronto Geometry &amp; Topology Seminar</b>	Feb 2015
<b>Purdue University Geometry Seminar</b>	Feb 2015
<b>Stanford University Geometry &amp; Topology Seminar</b>	Oct 2014
<b>University of California, Berkeley Topology Seminar</b>	Oct 2014
<b>University of Illinois at Urbana-Champaign GEAR Seminar</b>	Oct 2014
<b>Arizona State University Differential Geometry Seminar</b>	Sep 2014
<b>Michigan State University Geometry Seminar</b>	Apr 2014
<b>Indiana University, Bloomington Teichmüller Theory Seminar</b>	Sep 2013
<b>CUNY Geometry and Topology Seminar</b>	Apr 2013
<b>Purdue University Geometry Seminar</b>	Feb 2013
<b>University of Michigan Topology Seminar</b>	Jan 2013

SERVICE  
ACTIVITIES

<b>Co-organizer</b> , AIM Workshop "Surfaces of infinite type"	Apr 2019
<b>Organizer</b> , UCSB Topology Seminar	2018–present
<b>Panelist</b> , UCSB Promise Scholar Panel "How to talk to your professors."	Aug 2018
<b>Panelist</b> , UCSB AWM Panel "Graduate school and beyond."	Apr 2018
<b>Host</b> , UCSB Faculty Nights, "An uncensored discussion about gender discrimination." <i>Faculty Nights is an interactive event that bridges the gap between students and faculty through the exploration of a hot topic.</i>	Feb 2018
<b>Speaker</b> , UCSB AWM Research Talk for Undergraduates	Feb 2018
<b>Speaker</b> , Research talk for REU at UCSB	Jul 2017
<b>Co-organizer</b> , UCSB AWM and Hypatian Seminar joint events	2016–2017
<b>Panelist</b> , Women in STEM Mentorship Program, Life in Academia Panel, UCSB	Mar 2017
<b>Co-organizer</b> , Topology Students Workshop, Georgia Institute of Technology <i>Professional development workshop for graduate students.</i>	Jun 2016
<b>Teaching Assistant</b> , Institute for Advanced Study Women and Mathematics Program	May 2016
<b>Co-organizer</b> , Geometry, Groups, and Dynamics Conference, Indianapolis, IN	Mar 2016
<b>Referee Work</b> , <i>Int. Math. Res. Not., Algebr. Geom. Topol.</i>	2015–present

	<b>Co-organizer</b> , Purdue University Geometry Seminar	2013–2016
	<b>Speaker</b> , Basic Skills Workshop- Networking, CVs, and webpages, Purdue University	Oct 2015
	<b>Panelist</b> , Basic Skills Workshop - Job Market Panel, Purdue University	Sep 2014
	<b>Mentor</b> , Topology Students Workshop, Georgia Institute of Technology <i>Professional development workshop for graduate students.</i>	Jun 2014
	<b>Founder and organizer</b> , Math Women’s Tea, Rutgers University	2011–2013
	<b>Co-organizer</b> , Rutgers University Women in Math Networking/Mentoring Dinners <i>Funded by Rutgers University NSF ADVANCE grant.</i>	2011–2013
	<b>Grad representative</b> , Graduate Student-Faculty Liaison Committee, Rutgers University	2010–2013
	<b>Teaching consultant</b> , Rutgers University	2012
	<b>Co-organizer</b> , Graduate Student Seminar, Rutgers University	2010–2011
EDUCATIONAL OUTREACH	<b>Volunteer</b> , Math outreach event at The Wolf Museum of Exploration + Innovation	May 2018
	<b>Speaker</b> , High school outreach, Avenues: The World School, New York, NY	Dec 2017
	<b>Instructional assistant</b> , NJ Partnership for Excellence in Middle School Mathematics <i>Assisted middle school teachers in daily problem solving sessions and led discussions on ways to engage students more effectively.</i>	2012 & 2013
TEACHING EXPERIENCE	<b>University of California, Santa Barbara</b>	
	Instructor, Math 34A Calculus for the Life and Social Sciences (275 students)	Spring 2018
	Instructor, Math 34A Calculus for the Life and Social Sciences (300 students)	Winter 2018
	Instructor, Math 113 Non-Euclidean Geometry	Fall 2017
	Instructor, Math 8 Transition to Higher Mathematics and Math 6A Multi-Variable Calculus	Spring 2017
	Instructor, Math 8 Transition to Higher Mathematics	Winter 2017
	Instructor, Math 6A Multi-Variable Calculus (100 students)	Fall 2016
	<b>Purdue University</b>	
	Instructor, Math 265 Linear Algebra for Engineers	Spring 2016
	Instructor, Math 351 Elementary Linear Algebra	Fall 2015
	Instructor, Math 351 Elementary Linear Algebra	Spring 2015
	Instructor, Math 351 Elementary Linear Algebra	Fall 2014
	Instructor, Math 351 Elementary Linear Algebra	Spring 2014
	Instructor, Math 265 Linear Algebra for Engineers	Fall 2013
	<b>Rutgers University</b>	
	Instructor, Math 103 Topics in Math for the Liberal Arts	Fall 2012
	Instructor, Math 250 Introductory Linear Algebra	Summer 2011
	Instructor, Math 135 Calculus I	Summer 2010
	Head Teaching assistant, Math 135 Calculus I	2010–2011
	Teaching assistant, Math 151 Calculus I	Fall 2009
REFERENCES	<b>Feng Luo</b> fluo@math.rutgers.edu	
	<b>Alan Reid</b> alan.reid@rice.edu	
	<b>Ruth Charney</b> charney@brandeis.edu	
	<b>Darren Long</b> long@math.ucsb.edu	
	<b>Christopher Leininger</b> clein@math.uiuc.edu	
	<b>David Ben McReynolds</b> dmcreyno@purdue.edu	
	<b>Maria Isabel Bueno Cachadina</b> (Teaching reference) mbueno@math.ucsb.edu	
MISCELLANEOUS	<b>Citizenship:</b> United States of America	