

# 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, separability properties of groups, right-angled Artin groups, the mapping class groups of surfaces, 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 "Big Mapping Class Groups" 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
PAPERS	<b>On a Theorem of Peter Scott.</b> <i>Proc. Amer. Math. Soc.</i> <b>142</b> (2014), p. 2891–2906. <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 the Residual Finiteness Growths of Particular Hyperbolic Manifold Groups.</b> <i>Geom. Dedicata.</i> <b>185</b> (2016), Issue 1, p. 87–103. <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>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>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>Algebraic and topological properties of big mapping class groups.</b> <i>Submitted.</i> Available at: arXiv:1703.02665 [math.GT] (with N.G. Vlamis) <b>The first integral cohomology of pure mapping class groups.</b> <i>Submitted.</i> Available at: arXiv:1711.03132 [math.GT] (with J. Aramayona and N.G. Vlamis) <b>Residual finiteness growths of closed hyperbolic manifolds in non-compact right-angled reflection orbifolds.</b> <i>Preprint.</i> (with J. Deblois, D.B. McReynolds, J. Meyer, and N. Miller) <b>Electric distance and quasi-isometries between curve complexes.</b> <i>In preparation.</i> (with T. Aougab and S. Taylor)	

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>Thin groups in Number Theory, Geometry and Topology</b> , Rice University	May 2018
	<b>B is for Basmajian</b> , Connecticut College	August 2018
PAST INVITED TALKS ( <i>CONFERENCES &amp; COLLOQUIA</i> )	<b>Geometry of Teichmüller space and mapping class groups</b> , University of Warwick	April 2018
	<b>Graduate Student Topology and Geometry Conference</b> , UIC	April 2018
	<b>Mathematical Congress of the Americas</b> , Special Session on Geometric Group Theory	July 2017
	<b>Shanks Conference on Low-dimensional Topology and Geometry</b> , Vanderbilt	May 2017
	<b>Redbud Geometry/Topology Conference</b> , University of Arkansas	April 2017
	<b>AWM Research Symposium:</b> <i>Special session on Geometric Group Theory</i> , UCLA	April 2017
	<b>Spring Topology and Dynamics Conference</b> <i>Special session on Geometric Group Theory</i> , NJCU	March 2017
	<b>Bowdoin College Colloquium</b>	January 2017
	<b>Louisiana State University Colloquium</b>	January 2017
	<b>University of Fribourg Colloquium</b>	December 2016
	<b>Temple University Colloquium</b>	November 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>	April 2016
	<b>Bloomington Geometry Workshop</b> , Bloomington, IN	April 2016
	<b>Sectional AMS Meeting Special Session:</b> <i>Geometry of groups, surfaces and 3-manifolds</i> , Rutgers University	November 2015
	<b>University of Texas at Austin Topology Seminar</b>	October 2015
	<b>Wasatch Topology Conference</b> , Park City, UT	August 2015
	<b>Sectional AMS Meeting Special Session:</b> <i>Interactions Between Geometry, Group Theory &amp; Number Theory</i> , Michigan State University	March 2015
	<b>Sectional AMS Meeting Special Session:</b> <i>Geometric Group Theory and Topology</i> , University of Alabama	March 2015
	<b>Third Annual Midwest Women in Mathematics Symposium Special Session:</b> <i>Algebraic and Geometric Topology</i> , Dominican University	March 2015
	<b>Geometry, Groups and Dynamics</b> , Rose–Hulman Institute	February 2015
	<b>Young Geometric Group Theory in the Midwest</b> , Madison, WI	November 2014
	<b>Topology Students Workshop</b> Research Talk, Georgia Tech	June 2014
	<b>Geometric Groups on the Gulf Coast Conference</b>	March 2013
	<b>Joint Meetings of the AMS Special Session:</b> <i>Topics in geometric and analytic methods in Teichmüller theory and hyperbolic geometry</i>	January 2013
	PAST INVITED TALKS ( <i>SEMINARS</i> )	<b>Berkeley Topology Seminar</b>
<b>Rice University Topology Seminar</b>		February 2018
<b>Rutgers Topology Seminar</b>		October 2017

<b>University of Southern California Geometry and Topology Seminar</b>	April 2017
<b>Caltech Geometry and Topology Seminar</b>	April 2017
<b>University of Glasgow Geometry and Topology Seminar</b>	December 2016
<b>University of Chicago Geometry/Topology Seminar</b>	November 2016
<b>San Francisco State University Algebra/Geometry/Combinatorics Seminar</b>	October 2016
<b>Rutgers University Topology/Geometry Seminar</b>	April 2016
<b>CUNY Hyperbolic Geometry Seminar</b>	February 2016
<b>Temple University Geometry-Topology Seminar</b>	April 2015
<b>Rutgers University Topology Seminar</b>	April 2015
<b>Cornell University Topology/Geometric Group Theory Seminar</b>	April 2015
<b>University of Toronto Geometry &amp; Topology Seminar</b>	February 2015
<b>Purdue University Geometry Seminar</b>	February 2015
<b>Stanford University Geometry &amp; Topology Seminar</b>	October 2014
<b>University of California, Berkeley Topology Seminar</b>	October 2014
<b>University of Illinois at Urbana-Champaign GEAR Seminar</b>	October 2014
<b>Arizona State University Differential Geometry Seminar</b>	September 2014
<b>Michigan State University Geometry Seminar</b>	April 2014
<b>Indiana University, Bloomington Teichmüller Theory Seminar</b>	September 2013
<b>CUNY Geometry and Topology Seminar</b>	April 2013
<b>Rutgers University Topology Seminar</b>	February 2013
<b>Purdue University Geometry Seminar</b>	February 2013
<b>University of Michigan Topology Seminar</b>	January 2013
<b>SERVICE ACTIVITIES</b>	
Panelist: UCSB AWM Panel "Graduate School and Beyond"	April 2018
Host: 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>	February 2018
Speaker: UCSB AWM Research Talk for Undergraduates	February 2018
Co-organizer: UCSB Topology Seminar	2016–2017
Speaker: Research talk for REU at UCSB	July 2017
Co-organizer: UCSB AWM and Hypatian Seminar joint events	2016–present
Panelist: Women in STEM Mentorship Program, Life in Academia Panel, UCSB	March 2017
Co-organizer: Topology Students Workshop, Georgia Institute of Technology <i>Professional development workshop for graduate students.</i>	June 2016
Teaching Assistant: Institute for Advanced Study Women and Mathematics Program	May 2016
Co-organizer: Geometry, Groups, and Dynamics Conference, Indianapolis, IN	March 2016
Referee Work: <i>Int. Math. Res. Not., Algebr. Geom. Topol.</i>	2015–present
Co-organizer: Purdue University Geometry Seminar	2013–2016

	Basic Skills Workshop, Purdue University <i>Ran a workshop on networking, CVs, and academic webpages</i>	October 2015
	Panelist: Basic Skills Workshop - Job Market Panel, Purdue University	September 2014
	Mentor: Topology Students Workshop, Georgia Institute of Technology <i>Professional development workshop for graduate students.</i>	June 2014
	Co-founder and co-organizer: Math Women's Tea, Rutgers University	2011–2013
	Co-organizer: Rutgers University Women in Math Networking/Mentoring Dinners <i>Funded by Rutgers University NSF ADVANCE grant.</i>	2011–2013
	Grad representative: Graduate Student-Faculty Liaison Committee, Rutgers University	2010–2013
	Teaching consultant, Rutgers University	Summer 2012
	Co-organizer: Graduate Student Seminar, Rutgers University	2010–2011
EDUCATIONAL OUTREACH	High school outreach, Avenues: The World School, New York, NY	December 2017
	NJ Partnership for Excellence in Middle School Mathematics <i>Instructional assistant for summer institute for middle school mathematics teachers.</i> Assisted teachers in daily problem solving sessions. Helped generate discussion regarding improving methods of communication with students and ways to engage students more effectively.	Summers 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 (35 students)	Winter 2017
	Instructor, Math 6A Multi-Variable Calculus (100 students)	Fall 2016
	<b>Purdue University</b>	
	Instructor, Math 265 Linear Algebra for Engineers (two sections–40 students each)	Spring 2016
	Instructor, Math 351 Elementary Linear Algebra	Fall 2015
	Instructor, Math 351 Elementary Linear Algebra (two sections–40 students each)	Spring 2015
	Instructor, Math 351 Elementary Linear Algebra (two sections–40 students each)	Fall 2014
	Instructor, Math 351 Elementary Linear Algebra (two sections–40 students each)	Spring 2014
	Instructor, Math 265 Linear Algebra for Engineers (two sections–40 students each)	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 TA, Math 135 Calculus I <i>Shared administrative responsibilities with faculty course coordinator, and maintained online homework systems for the course.</i>	2010–2011
	Teaching assistant, Math 135 Calculus I	Spring 2010
	Teaching assistant, Math 135 Calculus I	Fall 2010
	Teaching assistant, Math 135 Calculus I	Spring 2011
	Teaching assistant, Math 151 Calculus I	Fall 2009

REFERENCES

**Feng Luo** fluo@math.rutgers.edu

**Alan Reid** areid@math.utexas.edu

**Ruth Charney** charney@brandeis.edu

**Darren Long** long@math.ucsb.edu

**Christopher Leininger** clein@math.uiuc.edu

**David Ben McReynolds** dmcreyno@purdue.edu

**Maria Isabel Bueno Cachadina** (Teaching reference) mbueno@math.ucsb.edu

MISCELLANEOUS

Citizenship: United States of America