

Kasia Jankiewicz

CONTACT INFORMATION

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RESEARCH INTERESTS

My research is in geometric group theory. I am particularly interested in non-positive curvature, cube complexes, Artin groups, Coxeter groups, random groups, small cancellation theories, separability properties, algebraic fibering and coherence.

APPOINTMENTS

University of Chicago, L.E. Dickson Instructor 2018 - now
Mathematical Sciences Research Institute, Research Member Fall 2020

EDUCATION

McGill University, PhD in Mathematics 2014 - 2018
• Advisors: Piotr Przytycki and Daniel Wise
• Dissertation: *Cubical dimension and obstructions to actions on $CAT(0)$ cube complexes*
University of Warsaw, Poland, MSc in Mathematics 2011 - 2013
University of Warsaw, Poland, BSc in Mathematics (summa cum laude) 2008 - 2011

PUBLICATIONS AND PREPRINTS

Towards the boundary rigidity of lattices in product of trees (with A. Karrer, K. Ruane, B. Sathaye), in preparation.

Right angled Artin subgroups of Artin groups (with K. Schreve), submitted, 2020. ([arXiv](#))

Residual finiteness of certain 2-dimensional Artin groups, submitted, 2020. ([arXiv](#))

$CAT(0)$ cubical groups with uniform exponential growth (with R. Gupta and T. Ng), submitted, 2020. ([arXiv](#))

Curiously cubulated group (with D.T. Wise), to appear in *Geom. Ded.*, 2019. ([arXiv](#))

Lower bounds on cubical dimension of $C'(1/6)$ groups, *Proc. Am. Math. Soc.* 148 (2020), 3293-3306. ([arXiv](#))

Cubulating small cancellation free products (with D.T. Wise), preprint, 2018.

Virtually fibering right-angled Coxeter groups (with S. Norin and D.T. Wise), to appear in *J. Inst. Math. Jussieu*. ([arXiv](#))

Cocompactly cubulated 2-dimensional Artin groups (with J. Huang and P. Przytycki), *Comment. Math. Helv.* 91 (2016), 519-542. ([arXiv](#))

Incoherent Coxeter groups (with D.T. Wise), *Proc. Amer. Math. Soc.* 144 (2016) 1857-1866. ([arXiv](#))

A sharper threshold for random groups at density one-half (with M. Duchin, S.C. Kilmer, S. Lelièvre, J. M. Mackay, A. Sanchez), *Groups Geom. Dyn.* 10 (2016) no. 3, 985-1005. ([arXiv](#))

The fundamental theorem of cubical small cancellation theory, *Trans. Amer. Math. Soc.* 369 (2017) 4311-4346. ([arXiv](#))

AWARDS AND FELLOWSHIPS	AWM-NSF Travel Grant	2020
	Various scholarships from the Institut des Sciences Mathématiques: Graduate Scholarship, Travel Bursary, Scholarship for Outstanding PhD Candidates	2016 - 2018
	Various scholarships at McGill University: Schulich Graduate Fellowship, Lorne Trottier Science Accelerator Fellowship, Graduate Excellence Fellowship, Graduate Research Enhancement and Travel Awards	2014 - 2018
	Support from the grant Harmonia of Damian Osajda, Polish National Science Center	2016 - 2017
	First Prize (ex aequo) in the <i>Marcinkiewicz Competition for the best student paper in Poland</i> organized by the Polish Mathematical Society	2014
	Support from the Foundation for Polish Science: grant <i>Cubulating groups</i> of Piotr Przytycki, grant MISTRZ of Tadeusz Januszkiewicz	2012 - 2013
	Various scholarship for outstanding students at the University of Warsaw	2009 - 2013
TEACHING	University of Chicago	
	Instructor of Record for <i>Introduction to Proofs in Analysis</i>	Winter 2020, 2021
	Instructor of Record for <i>Calculus 3</i>	Fall 2018, 2019
	Instructor of Record for <i>Analysis in \mathbb{R}^n 3</i>	Winter 2019
	McGill University	
	Head Teaching Assistant for <i>Calculus 1</i> and <i>Calculus 2</i>	Fall 2017
	Instructor for <i>Calculus 1</i> (300 students)	Fall 2016
	Teaching Assistant for <i>Calculus 1</i> , <i>Calculus 2</i> and <i>Linear Algebra and Geometry</i>	2014 - 2017
	Grader for <i>Geometry and Topology 1</i>	Fall 2014
	MENTORING	Chloe Avery, PhD student at the University of Chicago (advisor: Benson Farb)
Faculty mentor in the College Fellow Program (teaching training program for graduate students) at the University of Chicago		2019 - 2020
INVITED TALKS (CONFERENCES)	<i>Beyond Hyperbolicity</i> , Ohio State University	Jul 2021
	<i>CMS Summer Meeting</i> , Ottawa, Canada <i>Special Session "Low-dimensional topology"</i>	Jun 2021
	<i>Joint Mathematics Meetings</i> (virtual) <i>Special Session "Geometry and Topology in Dimensions 3 and 4"</i>	Jan 2021
	<i>Introductory Workshop</i> , Random and Arithmetic Structure in Topology (virtual) MSRI, Berkeley	Sep 2020
	<i>Nearly Carbon Neutral Geometric Topology Conference</i> (virtual)	Jun 2020
	<i>Polyhedral Products in Geometric Group Theory</i> (virtual) Fields Institute, Toronto, Canada	May 2020
	<i>AMS Sectional Meeting</i> , University of Virginia, Charlottesville (cancelled) <i>Special Session "Combinatorial Methods in Geometric Group Theory"</i>	Mar 2020
	<i>Groups with Hyperbolic Features</i> , ETH Zurich, Switzerland	Aug 2019

<i>Young Geometric Group Theory VIII</i> , University of the Basque Country, Bilbao, Spain	Jun 2019
<i>Aspects of Non-Positive and Negative Curvature in Group Theory</i> , CIRM, Luminy	Jun 2019
<i>Non-Positive Curvature</i> , Simons Semester "Geometric and Analytic Group Theory" Institute of Mathematics of the Polish Academy of Sciences, Warsaw, Poland	May 2019
<i>Redbud Topology Conference</i> , University of Oklahoma	Apr 2019
<i>Topics around Groups at Tufts</i> , Tufts University	Apr 2019
<i>Spring Topology and Dynamical Systems</i> , University of Alabama at Birmingham <i>Special Session "Geometric Group Theory"</i>	Mar 2019
<i>Geometry, Groups and Dynamics</i> , Indiana University - Purdue University Indianapolis	Feb 2019
<i>Junior Geometry and Topology in the Midwest</i> , University of Wisconsin at Madison	Oct 2018
<i>Summer Conference on Topology and its Applications</i> , Western Kentucky University <i>Special Session "Topological Methods in Geometric Group Theory"</i>	Jul 2018
<i>Graphs, Surfaces and Cube Complexes</i> , University of Warwick, Coventry, England	Jul 2018
<i>AMS Sectional Meeting</i> , University of Buffalo, NY <i>Special Session "Geometric Group Theory"</i>	Sep 2017
<i>Wasatch Topology Conference</i> , Midway, UT	Aug 2017
<i>Algebraic and Geometric Combinatorics of Reflection Groups</i> , Montreal, Canada	Jun 2017
<i>CMS Winter Meeting</i> , Niagara Falls, Canada <i>Special Session "Geometric Group Theory and Topology in Low Dimensions"</i>	Dec 2016
<i>Groups acting on CAT(0) spaces</i> , MSRI, Berkeley, CA	Sep 2016
<i>Spring Topology and Dynamics Conference</i> , Baylor University <i>Special Session "Geometric Group Theory"</i>	Mar 2016
<i>CMS Winter Meeting</i> , Montreal, Canada <i>Special Session "Low Dimensional Topology and Geometric Group Theory"</i>	Dec 2015

INVITED TALKS
(SEMINARS)

<i>Geometric Group Theory and Topology</i> , Tufts University (virtual)	Dec 2020
<i>Topology Seminar</i> , University of Oxford, England (virtual)	Nov 2020
<i>Symmetry in Newcastle</i> , University of Newcastle, Australia (virtual)	Aug 2020
<i>Geometry and Topology Online</i> , Warwick Mathematics Institute, England (virtual)	Aug 2020
<i>Geometry and Topology Seminar</i> , Temple University	Mar 2020
<i>Topology Seminar</i> , University of Wisconsin at Milwaukee	Nov 2019
<i>Geometric Group Theory Seminar</i> , McGill University, Montreal, Canada	Oct 2019
<i>Geometric Group Theory and Topology Seminar</i> , Tufts University	Sep 2019
<i>Topology seminar</i> , University of California at Santa Barbara	May 2019
<i>AWM Invited Speaker Series</i> , University of Illinois at Chicago	Mar 2019
<i>Topology Seminar</i> , University of Wisconsin at Milwaukee	Dec 2018
<i>Geometric Group Theory Seminar</i> , Ohio State University	Nov 2018
<i>Geometry, Topology and Dynamics Seminar</i> , University of Illinois at Chicago	Nov 2018

	<i>Séminaire Groupes et Analyse</i> , Université de Neuchâtel, Switzerland	Mar 2018
	<i>Geometry & Topology Seminar</i> , McMaster University, Hamilton, Canada	Feb 2018
	<i>PostDoc Talks</i> , ETH Zurich, Switzerland	Jan 2018
	<i>Geometry/Topology seminar</i> , Yale University	Dec 2017
	<i>Geometry and Topology seminar</i> , Temple University	Nov 2017
	<i>Women and Mathematics</i> , Institute for Advanced Study	May 2017
	<i>Geometry and Topology seminar</i> , Technion, Haifa, Israel	Jan 2016
	<i>Differential Geometry and Topology seminar</i> , Wroclaw University, Poland	May 2014
	<i>Théorie Géométrique des Groupes seminar</i> , Université Paris Sud 11, Orsay, France	Nov 2013
	<i>Geometric Group Theory seminar</i> , Polish Academy of Sciences, Warsaw, Poland	Jun 2013
INVITED WORKSHOP PARTICIPATION	<i>Women in Groups, Geometry, and Dynamics Retreat</i> , Glacier National Park, MT	Aug 2021
	<i>Random walks beyond hyperbolic groups</i> , AIM, San Jose, CA	Jun 2021
	<i>Emerging Topics Working Group on Coherence and Quasi-Convex Subgroups</i> , IAS, Princeton, NJ	Mar 2019
REFEREEING	Referee for <i>Algebraic & Geometric Topology</i> , <i>Annales de l'Institut Fourier</i> , <i>Geometriae Dedicata</i> , <i>Groups Geometry and Dynamics</i> , <i>International Mathematics Research Notices</i> , <i>Topology and Its Applications</i> .	
	Reviewer for Mathematical Reviews (MathSciNet)	2017 - now
ORGANIZING	Co-organizer of the special session on “Geometric Group Theory” <i>Spring Topology and Dynamics Conference</i> (online)	May 2021
	Co-organizer of the <i>Geometry/Topology seminar</i> at the University of Chicago	2018 - now
	Co-organizer of the special session on “Geometric Group Theory” <i>Spring Topology and Dynamics Conference</i> , Murray State University (cancelled)	Mar 2020
	Co-organizer of the <i>McGill Geometric Group Theory Seminar</i>	2014 - 2018
	Co-organizer of the <i>19e Colloque Panquébécois des Étudiants de l'ISM</i>	May 2016
	Organizer or co-organizer of learning seminars on <i>Large Scale Geometry</i> , <i>Characteristic Classes</i> , <i>Teichmüller spaces and moduli spaces</i>	2015 - 2016
	Organizer and founder of the <i>McGill Graduate Student Seminar</i>	2014 - 2015
OTHER SERVICE AND OUTREACH	Teacher at the Math Circles of Chicago (9th-10th graders)	2020 - now
	Vice President of the AWM Montreal Student Chapter	2017 - 2018
	Teaching assistant at the <i>Women and Mathematics Program</i> , IAS, Princeton	May 2017
	Teaching assistant at the <i>Advanced School on Geometric Group Theory and Low-Dimensional Topology</i> , ICTP, Trieste, Italy	May 2016