

Piotr Przytycki, curriculum vitae

Date of birth: 26.04.81

Nationality: Polish

Academic positions

(2014–present) Assistant Professor at the Department of Mathematics and Statistics, McGill University, Burnside Hall, 805 Sherbrooke Street West, Montreal, QC, Canada H3A 0B9.

(2008–2015) Assistant Professor at the Institute of Mathematics of the Polish Academy of Sciences, Śniadeckich 8, 00–656 Warsaw, Poland.

Webpage: <http://www.math.mcgill.ca/node/6721>

Education

1999–2004 –undergraduate and advanced undergraduate courses in pure mathematics at the Faculty of Mathematics, Informatics and Mechanics, Warsaw University, Poland. Degree: Master of Sciences with honours.

2004–2008 –graduate (PhD) course in pure mathematics at the Faculty of Mathematics, Informatics and Mechanics, Warsaw University, Poland (up to 2006) and at the Institute of Mathematics of the Polish Academy of Sciences, Wrocław Department, Poland (from 2006). Degree: PhD with honours.

Visiting positions

2005 –Marie Curie Fellowship at the Control Training Site in SISSA, Trieste, Italy.

2008 –month stay at IHES, France.

2008 –2,5 month stay at MPI, Bonn.

2009 –2,5 month stay at Institut de Mathematiques de Toulouse.

2009 –3,5 month stay at HIM, Bonn.

2010 –2 month stay at ESI, Vienna.

2011 –year long stay at University of Illinois at Urbana-Champaign

2012 –month stay at Mittag-Leffler Institute in Sweden

2013–2014 year long stay at Universite Paris Sud Orsay

Grants

2007–2008 principal investigator in the Ministry of Science and Higher Education pre-doc grant N201 003 32/0070, *Properties of systolic complexes and groups*.

2007–2010 researcher in Jan Dymara's Ministry of Science and Higher Education grant N201 012 32/0718, *Geometric group theory and contact topology* (156720 CAD)

2010–2013 researcher in Jan Dymara's Ministry of Science and Higher Education grant N N201 541738, *Geometric group theory and compact topology II* (283156 CAD).

2012–2013 principal investigator in Homing Plus grant *Cubulating groups* from the Foundation for Polish Science (70028 CAD).

2012–2013 supporting grant from the Foundation for Polish Science (10252 CAD).

2013–2016 researcher in National Science Centre DEC-2012/06/A/ST1/00259 Maestro grant (506988 CAD).

2014–2017 Startup grant from McGill University (40000 CAD).

2014–2019 NSERC Discovery grant (158680 CAD).

2014–2017 NSERC Discovery Accelerator Supplement grant (120000 CAD).

2016–2019 researcher in (Polish) National Science Centre Harmonia grant (114993 CAD).

Awards and fellowships

1998 –Honorable Mention, XXXIX International Mathematical Olympiad in Taipei, Taiwan.

2000 –2002 Second Prize, Honorable Mention, and First Prize in 7th, 8th, 9th International Mathematical Competitions for University Students in London, Prague, and Warsaw.

2004 –First Prize (ex aequo with Wojciech Kryński), Marcinkiewicz Competition for the best undergraduate paper in Poland (for *Hamiltonowskie podejście do niezmienników i krzywizny*) organized by the Polish Mathematical Society.

2001 –2004 –Scholarship of the Ministry of Education.

2008 –2009 –*Start* fellowship (for young researchers) from the Foundation for Polish Science.

2008 –Wacławek Foundation award for PhD thesis.

2009 –Nominated to *The International Stefan Banach Prize for a Doctoral Dissertation in the Mathematical Sciences*.

2009 –Polish Mathematical Society award for young mathematicians.

2009 –Prime Minister award for PhD thesis.

2009 –*Kolumb* fellowship (for the stay at UI at Urbana–Champaign in 2011) from the Foundation for Polish Science.

2011 –*Kuratowski* award for mathematicians under 30 from Polish Mathematical Society and Polish Academy of Sciences.

2011 –*Mobilność* fellowship for a stay at the University of Orsay in 2013/2014 from Ministry of Science and Higher Education.

2013 –*Wojtek Pulikowski invited lecture* at Adam Mickiewicz University.

Invited talks

Conferences

2006 –International Congress of Mathematicians, Madrid, Spain. (poster)

2007 –First joint international meeting AMS–PTM, Warsaw, Poland.

2008 –Karlsruher Weihnachtsworkshop zur Geometrie und Zahlentheorie, Germany.

2009 –Geometric Group Theory Davis 60, Będlewo, Poland.

2010 –Non-positive Curvature and Geometric Structures in Group Theory, Oberwolfach, Germany.

2010 –Subgroups of mapping class groups, Bonn, Germany.

2010 –Group Actions in Topology and Geometric Group Theory, Poznań, Poland.

2011 –The Fifth Ahlfors-Bers Colloquium, Houston, Texas.

2011 –a series of conferences on geometric group theory, Columbus, Ohio.

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2011–3–manifolds, Artin groups and cubical geometry, New York City.

2012–Geometric Group Theory Summer School, Park City, Utah.

2013 –Surface subgroups and cube complexes, Berkeley, California.

2013 –Geometric Structures in Group Theory, Oberwolfach, Germany.

2013 –XXII Ind Rolf Nevanlinna Colloquium, Helsinki, Finland.

2013 –EPSRC Durham Symposium: Geometric and Cohomological Group Theory, Durham, UK.

2013 –Geometric and Analytic Group Theory, Ventotene, Italy.

2013 –Groupes agissant sur des espaces médians et apparentés, Orsay, France.

2014 –Hyperbolic geometry and geometric group theory, Tokyo, Japan.

2014 –Wasatch topology conference -Park City, Utah.

2015–Geometric topology, geometric group theory, and dynamical systems, Dubrovnik, Croatia.

2015–Geometric Group Theory, Wrocław, Poland.

2015–PIMS Symposium on the geometry and topology of manifolds, Vancouver, Canada.

2016–Redbud Topology Conference, Oklahoma, USA.

2016–Shanks Workshop on Geometric Methods in Group Theory, Nashville, USA.

2016–Groups acting on CAT(0) spaces, Berkeley, USA.

Talks at seminars

Bonn (MPI), Boston College, Bristol, Chicago (UofC, UIC), Cornell, Daejeon (KAIST), Gdańsk, Grenoble, Lille, London (Imperial College), Louvain la-Neuve, Lyon, Montpellier, Montreal (McGill, UQAM), Muenster, Orsay, Oxford, Paris (Diderot, Sud), Philadelphia, Poznań, Rennes, St. Johns (Memorial), Seoul, Stockholm (IML, KTH), Toronto, Toulouse (Paul Sabatier), Urbana-Champaign, Vienna, Warsaw, Wrocław, Yale, Zurich.

Former students:

Marcin Kotowski (MSc program at Warsaw University, graduated 2011),

Michał Kotowski (MSc program at Warsaw University, graduated 2011),

Katarzyna Jankiewicz (MSc program at Warsaw University, graduated 2013),

Tomasz Odrzygóźdź (MSc program at Warsaw University, graduated 2013),

Tomasz Prytuła (MSc program at Warsaw University, graduated 2013),

Damian Orlef (unofficial, bachelor's program at Warsaw University, graduated 2014).

Former visiting PhD students:

Kamil Duszenko (fall 2010),

Łukasz Garncarek (spring 2012),

Tomasz Prytuła (spring 2016),

Erika Kuno (fall 2016).

Current students:

Adam Wilks (MSc program at McGill, submitted his thesis 2016),

Christopher Smith (MSc program at McGill, submitted his thesis 2016),

Assaf Bar-Natan (MSc program at McGill, expected graduation 2017),

Junyu Lu (cosupervised, MSc program at McGill, expected graduation 2018),

Katarzyna Jankiewicz (cosupervised, PhD program at McGill, expected graduation 2018).

Tomasz Odrzygóźdź (cosupervised, PhD program at Polish Academy of Sciences, expected graduation 2017).

Postdocs:

Jingyin Huang (at McGill, 2015-2017)

Conference organizing

Main organizer of “Young Geometric Group Theory Meeting”, an international conference at Banach Center 2012.

Chair of the programme committee of “Young Geometric Group Theory II”, Haifa 2013.

Co-organizer of 2015 Winter CMS Meeting in Montreal.

Co-organizer of Probabilistic Methods in Topology, Montreal 2016.

Co-organizer of Graphs, Surface and Cube Complexes, Warwick 2018.

Co-organizer of Simons Semester in Geometric Group Theory, Warsaw 2019.

Committees

2015-2016 Jury of the Kamil Duszenko Award

Refereeing

Algebraic and Geometric Topology, Commentari Mathematici Helvetici, Communications in Algebra, Duke Mathematical Journal, Ergodic Theory and Dynamical Systems, Geometry and Topology, Geometry and Topology Monographs, Groups, Geometry, and Dynamics, Journal of Combinatorial Theory Series A, Journal of Pure and Applied Algebra, Journal AMS, Journal fur die Reine und Angewandte Mathematik, Journal of Topology, Math. Annalen, Mathematical Reviews, Michigan Mathematical Journal, New York Journal of Math., Publ. Math. IHES, Random Structures and Algorithms, Studia Mathematica, Topology and its Applications, Transactions AMS.

Teaching experience

Recitation classes

Differential geometry I, Warsaw University 2004;
Mathematics with statistics for geographers, Warsaw University 2004;
Dynamical systems, Warsaw University 2006;
Control theory, Warsaw University 2006;
Algebraic topology II, Wrocław University 2006;
Characteristic classes, Wrocław University 2007.

Seminars

Seminar for whom math is their passion, Warsaw University 2004–2005;
Complex dynamics, Wrocław University 2007;
On the complex of curves, IMPAN, Warsaw, 2007–2008;
Geometric group theory: the classics, IMPAN, Warsaw, 2007–2008;
Geometric group theory, IMPAN, Warsaw, 2010, 2012–2013;
Trees, IMPAN, Warsaw, 2013;
Coxeter groups and buildings, Warsaw University 2012–2013;
Geometric group theory seminar, McGill 2014–2016.

Lecture courses

Kleinian groups, Wrocław University 2007.
Geometric Group Theory, Warsaw University 2010.
3-manifolds, Polish Academy of Sciences 2012.
Geometric Group Theory, McGill 2014.
Honours Algebra 2, McGill 2015-2016.
Honours Applied Linear Algebra, McGill 2015.
Metric Nonpositive Curvature, McGill 2015.
Honours Differential Geometry, McGill 2016.
Topics in Geometry, McGill 2016.

Other

Conducting workshops at the interdisciplinary scientific camp in Serock, organized by the Polish Children's Fund 2003–2016.
Workshops for Polish Children's Fund in Warsaw 2015-2016
Presentation at McGill Soup and Science Fall 2014.
Presentation at Dawson College First Choice Science seminar 2015

List of published journal articles:

1. Jingyin Huang, Kasia Jankiewicz and Piotr Przytycki, Cocompactly cubulated 2-dimensional Artin groups, *Commentarii Mathematici Helvetici* 91 no.3 (2016) 519-542.
2. John Mackay and Piotr Przytycki, Balanced walls for random groups, *Mich Math J.* 64 (2015), 396-419.
3. Piotr Przytycki, Arcs intersecting at most once, *GAF* 25 (2015), 658-670.
4. Piotr Przytycki and Petra Schwer, Systolizing buildings (2013), *Groups, Geometry, and Dynamics* 10 no.1 (2016) 241-277.
5. Mark Hagen and Piotr Przytycki, Cocompactly cubulated graph manifolds, *Israel Journal of Mathematics* 207 no.1 (2015), 377-394.
6. Sebastian Hensel, Piotr Przytycki, and Richard C.H. Webb, 1-slim triangles and uniform hyperbolicity for arc graphs and curve graphs, *Journal of the EMS* 17 no.4 (2015), 755-762.
7. Piotr Przytycki and Daniel T. Wise, Separability of embedded surfaces in 3-manifolds, *Compositio Mathematica* 150 (2014), 1623-1630.
8. Sebastian Hensel, Damian Osajda, and Piotr Przytycki, Realisation and dismantlability, *Geometry & Topology* 18 (2014), 2079-2126.
9. Piotr Przytycki and Daniel T. Wise, Graph manifolds with boundary are virtually special, *Journal of Topology* 7 no.2 (2014), 419-435.
10. Tomasz Elsner and Piotr Przytycki, Square complexes and simplicial nonpositive curvature, *Proceedings of the AMS* 141 (2013), 2997-3004.
11. Piotr Przytycki and Jennifer Schultens, Contractibility of the Kakimizu complex and symmetric Seifert surfaces, *Transactions of the AMS* 364 no.3 (2012), 1489-1508.
12. Pierre-Emmanuel Caprace and Piotr Przytycki, Bipolar Coxeter groups, *Journal of Algebra* 338 no.1 (2011), 35-55.
13. Pierre-Emmanuel Caprace and Piotr Przytycki, Twist-rigid Coxeter groups, *Geometry & Topology* 14 (2010) 2243-2275.
14. Sebastian Hensel and Piotr Przytycki, The ending lamination space of the five-punctured sphere is the Noebeling curve, *Journal of the LMS* 84 no.1 (2011), 103-119.
15. Eryk Kopczyński, Igor Pak, and Piotr Przytycki, Acute triangulations of polyhedra and \mathbb{R}^n , *Combinatorica* 32 no.1 (2012) 85-110.
16. Piotr Przytycki, Gabriela Schmithuesen and Ferran Valdez, Veech groups of Loch Ness monsters, *Annales de l'Institut Fourier* 61 no.2 (2011), 673-687.
17. Francois Dahmani, Vincent Guirardel and Piotr Przytycki, Random groups do not split, *Mathematische Annalen* 349 no.3 (2011), 657-673.
18. Damian Osajda and Piotr Przytycki, Boundaries of systolic groups, *Geometry & Topology* 13 (2009), 2807-2880.
19. Piotr Przytycki, EG for systolic groups, *Commentarii Mathematici Helvetici* 84 no.1 (2009), 159-169.
20. Piotr Przytycki and Jacek Swiątkowski, Flag-no-square triangulations and Gromov boundaries in dimension 3, *Groups, Geometry, and Dynamics* 3 (2009), 453-468.
21. Piotr Przytycki, The fixed point theorem for simplicial nonpositive curvature, *Mathematical Proceedings of Cambridge Philosophical Society* 144 (2008), 683-695.
22. Piotr Przytycki and Maciej P. Wojtkowski, Gaussian thermostats as geodesic flows of nonsymmetric linear connections, *Communications in Mathematical Physics* 277 no.3 (2008), 759-769.
23. Piotr Przytycki, Systolic groups with no flats are hyperbolic, *Fundamenta Mathematicae* 193 (2007), 277-283.

Article in conference proceedings:

1. Piotr Przytycki and Alessandro Sisto, A note on acylindrical hyperbolicity of Mapping Class Groups (2015), accepted to *Proceedings of 7th MSJ-SI, Hyperbolic Geometry and Geometric Group Theory*.

Submitted journal articles:

1. Piotr Przytycki and Stephane Lamy, Acylindrical hyperbolicity of the 3-dimensional tame automorphism group (2016), submitted, 21 pages.
2. Christopher Smith and Piotr Przytycki, Arcs on spheres intersecting at most twice (2016), submitted, 21 pages.
3. Piotr Przytycki and Eduardo-Martinez Pedroza, Dismantlable classifying space for the family of parabolic subgroups of a relatively hyperbolic group (2016), submitted, 20 pages.
4. Piotr Przytycki and Daniel T. Wise, Mixed 3-manifolds are virtually special (2012), submitted, 29 pages.