

Curriculum vitae

Personal information

Name/Surname: Piotr Przytycki

Date of birth: 26.04.81

Nationality: Polish

Occupation: Assistant Professor (2008 – 2015) at the Institute of Mathematics of the Polish Academy of Sciences, Śniadeckich 8, 00–956 Warsaw, Poland

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Education

1999 – 2004 – undergraduate and advanced undergraduate courses in pure mathematics at the Faculty of Mathematics, Informatics and Mechanics, Warsaw University, Poland.

2004 – Master of Sciences (second cycle degree) in Mathematics at the Faculty of Mathematics, Informatics and Mechanics, Warsaw University, Poland; Diploma Honorificum.

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).

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

2008 – PhD in Mathematics (with honours) at the Institute of Mathematics of the Polish Academy of Sciences.

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.

Selected awards

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

2000 – Second Prize, 7th International Mathematical Competition for University Students in London, UK.

2001 – Honorable Mention, 8th International Mathematical Competition for University Students in Prague, Czech republic.

2002 – First Prize, 9th International Mathematical Competition for University Students in Warsaw, Poland.

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 – Waclawek 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 10 month stay at UI at Urbana–Champaign in 2011) from the Foundation for Polish Science.

Grants

2007 – 2008 MNiSW grant *promotorski* N201 003 32/0070, *Własności kompleksów i grup systolicznych*, executive.

2007 – 2010 MNiSW grant N201 012 32/0718, *Geometryczna teoria grup i topologia kontaktowa*, executive.

2010 – 2013 MNiSW grant N N201 541738, *Geometryczna teoria grup i topologia kontaktowa II*, executive.

International schools and workshops attended

2002 – Control Theory, Będlewo, Poland.

2003 – Navier Stokes Equations and Turbulence, Martina Franca, Italy.

2005 – Ricci Flow, Three-Manifolds and Geometry, Berkeley, USA.

2006 – Geometric Group Theory, Montreal, Canada.

2006 – International Congress of Mathematicians, Madrid, Spain.

2007 – Automorphisms of free groups, Outer Space, Teichmüller theory; Aspects of hyperbolicity, convergence groups, Marseille, France.

2007 – Homogeneous Flows, Moduli Spaces and Arithmetic, Pisa, Italy.

2007 – Low Dimensional Geometry and Topology, Warwick, UK.
2007 – First joint international meeting AMS–PTM, Warsaw, Poland.
2007 – Topics in Geometric Group Theory, Topics in Teichmüller Theory and Kleinian Groups, Berkeley, USA.
2008 – Congress in the memory of Adrien Douady, Paris, France.
2008 – Conference on Algebraic and Geometric Topology, Gdańsk, Poland.
2008 – Random Groups and Random Graphs, Będlewo, Poland.
2008 – 4th William Rowan Hamilton Geometry and Topology Workshop, Dublin, Ireland.
2008 – The Isoperimetric Inequality for $SL(n, \mathbb{Z})$, Palo Alto, USA.
2008 – Legendrian and transverse knots, Palo Alto, USA.
2008 – Karlsruher Weihnachtsworkshop zur Geometrie und Zahlentheorie, Germany.
2009 – Georgia International Topology Conference, Athens, USA.
2009 – Geometric Group Theory Davis 60, Będlewo, Poland.
2009 – Dynamics and geometry in Teichmüller space, Marseille, France.
2009 – Rigidity in cohomology, K-theory, geometry and ergodic theory, Bonn, Germany.
2009 – Workshop on fundamental group and hyperbolic geometry, Toulouse, France.
2010 – CAT(0) Spaces and Affine Buildings, Sde Boker, Israel.
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.
2010 – Geometric group theory, Marseille, France.
2010 – 6th William Rowan Hamilton Geometry and Topology Workshop, Dublin, Ireland.

Mathematical interests

Geometric group theory, topology and geometry of manifolds:

Simplicial nonpositive curvature;
Gromov boundaries of word-hyperbolic groups;
Coxeter groups;
Hyperbolic geometry.

Advisor

Jacek Świątkowski, Mathematical Institute of the University of Wrocław.

Languages

Polish – mother tongue;
English – proficient user, Certificate of Advanced English 2001;
German – basic user, Mittelstufe 2001;
French – beginner;
Russian – beginner.

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.

Lecture courses

Kleinian groups, Wrocław University 2007.
Geometric Group Theory, Warsaw University 2010.

Other

Workshops at the interdisciplinary scientific camp in Świder, organized by the Polish Children's Fund 2003 – 2010.

Additional skills, competences and experience

Driver's B license 2008;
Actor in amateur theater Kontrapunkt 2000 – 2010;
Certificate of competency of Yacht Coastal Skipper 2000;
Course for scout fellowship leaders 2001.

List of publications

1. Systolic groups with no flats are hyperbolic, *Fundamenta Mathematicae* 193 (2007), 277-283.
2. Gaussian thermostats as geodesic flows of nonsymmetric linear connections, joint with Maciej Wojtkowski, *Communications in Mathematical Physics* 277 no.3 (2008), 759-769.
3. The fixed point theorem for simplicial nonpositive curvature, *Mathematical Proceedings of the Cambridge Philosophical Society* 144 (2008), 683-695.
4. Flag–no–square triangulations and Gromov boundaries in dimension 3, joint with Jacek Świątkowski, *Groups, Geometry, and Dynamics* 3 (2009), 453-468.
5. \underline{EG} for systolic groups, *Commentarii Mathematici Helvetici* 84 no.1 (2009), 159-169.
6. Boundaries of systolic groups, joint with Damian Osajda, *Geometry & Topology* 13 (2009), 2807-2880.
7. Veech groups of Loch Ness monsters (2009), joint with Gabriela Schmihüsen and Ferran Valdez, to appear in *Annales de l'Institut Fourier*.
8. Acute triangulations of polyhedra and \mathbb{R}^n , joint with Eryk Kopczyński and Igor Pak, submitted (2009), extended abstract in *Proceedings of the 2010 annual symposium on computational geometry*.
9. Random groups do not split (2009), joint with Francois Dahmani and Vincent Guirardel, to appear in *Mathematische Annalen*.
10. Twist-rigid Coxeter groups, joint with Pierre-Emmanuel Caprace, *Geometry & Topology* 14 (2010), 2243–2275
11. Contractibility of the Kakimizu complex and symmetric Seifert surfaces (2010), joint with Jennifer Schultens, to appear in *Transactions AMS*.

Preprints

12. The ending lamination space of the five-punctured sphere is the Noebeling curve, joint with Sebastian Hensel, submitted (2009), available at [arXiv:0910.3554](https://arxiv.org/abs/0910.3554).
13. Bipolar Coxeter groups, joint with Pierre-Emmanuel Caprace, submitted (2010), available at [arXiv:1002.3991](https://arxiv.org/abs/1002.3991).