

CURRICULUM VITAE

Born: November 21st 1963.

Current employment: Instytut Matematyczny, Uniwersytet Wrocławski, Poland.

Current services at the place of employment:

- head of Laboratory of Geometry (Zakład Geometrii) at Mathematical Institute, University of Wrocław.

Education and promotions

1982-87 - studied mathematics at Mathematical Institute, University of Wrocław

1994 - defended PhD thesis at University of Wrocław. First part's title: On the asymptotic homological dimension of hyperbolic groups. Second part's title: 3-valent polygonal complexes of non-positive curvature with platonic symmetry. Supervisor: Tadeusz Januszkiewicz. Reviewers: W. Roter, H. Toruńczyk, P. Traczyk.

2001 - habilitation at University of Wrocław. Thesis title: Automorphism groups of polyhedral cell complexes and Kazhdan's property (T). Reviewers: A. Hulanicki, S. Jackowski, P. Pansu, H. Toruńczyk.

2009 - professor of mathematical sciences (title)

Visiting positions

1991 - Technische Universität Berlin, 2 months.

1991 - International Center for Theoretical Physics, Trieste, 3 weeks.

1992 - Université Paris Sud, Orsay, 3 months.

1993 - Université Paris Sud, Orsay, 1 month.

1995-1996 - Max Planck Institut für Mathematik, Bonn, 12 months.

1998-2000 special research position of assistant professor at Department of Mathematics of Polish Academy of Sciences, 24 months

2004 - Université Paris Sud, Orsay, 1 month.

Awards

2002 - Award of Polish Minister of National Education (for scientific achievement).

2012 - Stefan Banach Award of the Polish Mathematical Society.

Grants

1995-97, project leader in KBN (Polish Committee for Scientific Research) research project 1262/P02/95/08 titled "Geometric properties of groups and spaces related to curvature", performed by a team consisting of 4 researchers at University of Wrocław.

1998-2001, project leader in KBN research project 2 P03A 023 14 titled "Groups and spaces with various structures", performed by a team consisting of 7 researchers at University of Wrocław.

2001-2003, principal investigator in KBN research project 5 P03A 035 20 titled "Geometric properties of automorphism groups and representations", performed at University of Wrocław (project leader: T. Januszkiewicz).

2003-2006, project leader in KBN research project 2 P03A 017 25 titled "Geometric properties of groups, complexes, representations, and contact structures", performed by a team consisting of 5 researchers at University of Wrocław.

2007–2010, principal investigator in MNiSW (Polish Ministry of Science and Higher Education) research project N201 012 32/0718 titled "Geometric group theory and contact topology", performed at University of Wrocław (project leader: J. Dymara).

2007–2008, project leader in MNiSW research project N201 003 32/0070 for Piotr Przytycki, related to preparation of his PhD thesis, performed at Polish Academy of Sciences.

2007–2008, project leader in MNiSW research project N N201 1780 33 for Paweł Zawiślak, related to preparation of his PhD thesis, performed at University of Wrocław.

2007–2009, scientific coordinator in Marie Curie reintegration grant titled "NPC complexes" for Damian Osajda (related to previously obtained Marie Curie Fellowship) performed at University of Wrocław.

2010–2013, principal investigator in MNiSW research project N201 541738 titled "Geometric group theory and contact topology II", performed at University of Wrocław (project leader: J. Dymara).

2011–2012, project leader in NCN research project 6108/B/H03/2011/40 for Joanna Zubik, related to preparation of her PhD thesis, performed at University of Wrocław.

2013–2016, principal investigator in NCN project 2012/06/A/ST1/00259 (MAESTRO) titled "Geometric group theory", performed at IMPAN - Department of Mathematics of the Polish Academy of Sciences (project leader Tadeusz Januszkiewicz).

2018–2021, principal investigator in NCN project 2017/25/B/ST1/01335 (OPUS) titled "Groups of nonpositive combinatorial curvature", performed at University of Wrocław (project leader Damian Osajda).

2020–2023, investigator in NCN project nr 2018/31/G/ST1/02681 (BEETHOVEN CLASSIC 3) titled "Geometry and topology of Artin groups" performed at University of Wrocław (project leader Damian Osajda).

Invited talks at significant conferences during last 10 years

2009, Bures-sur-Yvette, Geometry and Analysis on Groups, Talk: Gromov boundaries with interesting topology.

2010, Oberwolfach, Nonpositive Curvature and Geometric Structures in Group Theory, Talk: Trees of manifolds as Gromov boundaries of hyperbolic groups.

2010, Poznań, The Third Group Action Forum, Talk: Nonpositively curved developments of polyhedral billiards.

2011, Haifa (Technion), Geometric Group Theory, Talk: Trees of polyhedra and boundaries of groups.

2011, Wien (Ernst Schroedinger Institut), Infinite Monster Groups Meeting, Talk: A degree of topological complexity for Gromov boundaries of hyperbolic groups.

2011, Bonn (Max Planck Institute), Bonner Geometrietage, Talk: Trees of polyhedra and boundaries of groups.

2011, Columbus (The Ohio State University), Special Year in Topology and Geometric Group Theory, Workshop: Systolic groups and $CAT(0)$ cubical complexes, Mini-course: Simplicial nonpositive curvature (four one hour talks).

2012, Bedlewo, Groups and their Actions, Satellite Conference of the European Congress of Mathematics in Krakow, Talk: Simplicial nonpositive curvature and some exotic infinite discrete groups.

2014, Bedlewo, Groups and Topology, Satellite Conference of the DMV-PTM Meeting in Poznań, Talk: Topological characterization of boundaries of free products of groups.

2015, Oberwolfach, Geometric Topology, Talk: Topological characterization of boundaries of free products of groups.

2015, Galway (Ireland), 30th Summer Conference on Topology and its Applications, Talk: On the topology of boundaries of hyperbolic groups.

2017, Montreal, Algebraic and Geometric Combinatorics of Reflection Groups, Talk: Coxeter groups with the n -dimensional Sierpinski compacta as boundaries.

2017, Regensburg, Non-Positively Curved Groups and Spaces, Talk: Simplicial nonpositive curvature and some exotic hyperbolic groups.

2018, Wrocław, Joint Meeting of UMI-SIMAI-PTM, Talk: New results in the topological classification of Gromov boundaries of hyperbolic groups.

2019, Warsaw, IMPAN, "Non-positive curvature" (part of Simons Semester in IMPAN), Talk: Trees of graphs as boundaries of groups.

Doctoral students (with year of PhD defence)

K. Selwat (2002), K. Dymara (2003), P. Przytycki (2008), P. Zawiałak (2009). J. Jakus (2014), D. Pawlik (2017).

Service

Reviewing for: Algebraic and Geometric Topology, Colloquium Mathematicum, Commentarii Mathematici Helvetici, Fundamenta Mathematicae, Geometriae Dedicata, Geometry and Topology, Groups Geometry and Dynamics, Inventiones Mathematicae, Journal of Differential Geometry, Mathematical Proceedings of Cambridge Philosophical Society, Mathematische Annalen, Proceedings of AMS, Journal of Algebra and Computation, Journal of the London Mathematical Society, Journal of Topology.

Editor of the 6th ECM proceedings: *European Congress of Mathematics. Kraków, 2–7 July, 2012*, EMS Publishing House, 2014.

Reviewing for NCN (Polish National Science Centre).

Reviewing PhD theses: Ś. Gal, R. Walczak, R. Zarzycki, T. Elsner, M. Stukow, K. Duszenko, T. Prytuła and T. Odrzygóźdź.

Important publications during last 10 years

- [1] G. Arzhantseva, M. Bridson, I. Leary, A. Minasyan, T. Januszkiewicz and J. Świątkowski, *Infinite groups with fixed point properties*, *Geometry and Topology* 13 (2009), 1229–1264.
- [2] U. Oertel, J. Świątkowski, *Contact structures, σ -confoliations, and contaminations in 3-manifolds*, *Communications in Contemporary Mathematics* 11 (2009), 201–264.
- [3] P. Przytycki, J. Świątkowski, *Flag-no-square triangulations and Gromov boundaries in dimension 3*, *Groups, Geometry & Dynamics* 3 (2009), 453–468.
- [4] J. Świątkowski, *Fundamental pro-groups and Gromov boundaries of 7-systolic groups*, *Journal of the London Mathematical Society* 80 (2009), 649–664.
- [5] T. Januszkiewicz, J. Świątkowski, *Nonpositively curved developments of billiards*, *Journal of Topology* 3 (2010), 63–80.
- [6] A. Martin, J. Świątkowski, *Infinitely-ended hyperbolic groups with homeomorphic Gromov boundaries*, *Journal of Group Theory* 18 (2015), 273–289.
- [7] S. Antoniuk, T. Łuczak, J. Świątkowski, *Random triangular groups at density 1/3*, *Compositio Mathematica* 151 (2015), 167–178.
- [8] D. Osajda, J. Świątkowski, *On asymptotically hereditarily aspherical groups*, *Proc. London Math. Soc.* 111 (2015), 93–126.
- [9] J. Świątkowski, *The dense amalgam of metric compacta and topological characterization of boundaries of free products of groups*, *Groups, Geometry and Dynamics* 10 (2016), 407–471.
- [10] J. Świątkowski, *Hyperbolic Coxeter groups with Sierpiński carpet boundary*, *Bull. London Math. Soc.* 48 (2016), 708–716.

- [11] J. Świątkowski, *Right-angled Coxeter groups with the n -dimensional Sierpiński compacta as boundaries*, Journal of Topology 10 (2017), 970–994.
- [12] J. Świątkowski, *Trees of metric compacta and trees of manifolds*, Geometry & Topology 24 (2020), 533–592.
- [13] J. Świątkowski, *Trees of manifolds as boundaries of spaces and groups*, Geometry & Topology 24 (2020), 593–622.