

Piotr W. Nowak

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Polish Academy of Sciences
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Positions

Associate Professor, Institute of Mathematics of the Polish Academy of Sciences, 2017–present
Deputy Director for Scientific Matters, 2018-2022, 2022-present

Joint appointment:

Assistant Professor, Institute of Mathematics of the Polish Academy of Sciences, 2011-2017
Assistant Professor, University of Warsaw, 2011–2017

Research Member, Mathematical Sciences Research Institute, Berkeley, Fall 2016

Visiting Scholar, Mathematical Institute, University of Oxford, 4 months, Summer 2014

Postdoctoral Fellow, Mathematical Sciences Research Institute, Berkeley, Fall 2011

Visiting Assistant Professor, Texas A&M University, College Station, 2008–2011

Degrees

Habilitation, with distinction, Institute of Mathematics of the Polish Academy of Sciences, October 2016

Ph.D. in Mathematics, Vanderbilt University, May 2008. Advisor: Guoliang Yu.

M.A. in Mathematics, Vanderbilt University, May 2006

Magister in Mathematics, University of Warsaw, June 2003. Advisor: Henryk Toruńczyk.

Licencjat in Mathematics, University of Warsaw, June 2001

Honors and awards

Frontiers of Science Award jointly with Marek Kaluba and Dawid Kielak, International Congress of Basic Science, Beijing, China 2023

Stefan Banach Prize of the Polish Mathematical Society, 2023

Award of the Minister of Education and Science for scientific achievements, 2023

Invited Plenary Address, 100th Anniversary Congress of the Polish Mathematical Society, Kraków, 09/2019

Kazimierz Bartel Medal 2017

Prime Minister's Award for the Habilitation 2017

XXIII Wojtek Pulikowski Lecture, Uniwersytet Adama Mickiewicza, Poznań, 2016

Plenary Address at the 6th Forum of Polish Mathematicians, 09/2015

Rector's Award for Scientific Achievements (2nd degree), University of Warsaw, 2013

Outstanding Young Scientist Fellowship, Ministry of Science and Higher Education, 2012-2015

Bjarni Jónsson Prize for Research, Vanderbilt University, 2008

Research interests

Geometric and analytic group theory, Topology of manifolds, Index theory.

Editorships

Editor at *Fundamenta Mathematicae*

Funding

National Science Center, Maestro 13, 2022-2027, Principal Investigator

European Research Council Starting Grant, 2016-2022, Principal Investigator

National Science Center, Sonata Bis, 2014-2016, Principal Investigator

Foundation for Polish Science, Homing Plus grant, 2012-2014, Principal Investigator

National Science Foundation grant DMS-1105664, Analysis/Topology, 2011-12, Principal Investigator

National Science Foundation grant DMS-0900874, Analysis, 2009-2012, Principal Investigator

Foundation for Polish Science, Conference Travel Grant, 2007

Publications

Books

Large Scale Geometry

Piotr W. Nowak & Guoliang Yu

EMS Textbooks in Mathematics. European Mathematical Society Publishing House, 2012.

Articles

1. (with D. Kielak) *Coboundary expansion and Gromov hyperbolicity*, preprint
2. (with A. Oliynik and V. Prokhorchuk) *On (bi)reversible automata generating lamplighter groups*, preprint
3. (with P. Mizerka) *On order units in the augmentation ideal*
Proceedings of the American Mathematical Society, to appear.
4. (with M. Kaluba and P. Mizerka) *Spectral gap for the cohomological Laplacian of $SL_3(\mathbb{Z})$* , preprint
5. (with K. Li and S. Pooya) *Higher Kazhdan projections, ℓ_2 -Betti numbers and Baum-Connes conjectures*
Journal of Noncommutative Geometry, to appear
6. (with U. Bader) *Group algebra criteria for vanishing of cohomology*
Journal of Functional Analysis, Vol. 279, Issue 11, 2020, 108730.
7. (with M. Kaluba and D. Kielak) *On property (T) for $\text{Aut}(F_n)$ and $SL_n(\mathbb{Z})$*
Annals of Mathematics 193 (2021), Issue 2, p. 539–562.
8. (with K. Li, J. Špakula, J. Zhang) *Quasi-local algebras and asymptotic expanders*
Groups, Geometry and Dynamics, accepted
9. (with Y. C. Chung) *Expanders are counterexamples to the p -coarse Baum-Connes conjecture*
Journal of Noncommutative Geometry, to appear
10. (with M. Kaluba and N. Ozawa) *$\text{Aut}(\mathbb{F}_5)$ has property (T)*
Mathematische Annalen 375 (2019), Issue 3–4, p 1169–1191
11. (with Y. Jiang) *Singular subgroups in \tilde{A}_2 -groups and their von Neumann algebras*
The Ron Douglas Memorial Volume (Proceedings of IWOTA 2018), to appear.
12. (with E. Reckwerdt) *Complements of Kazhdan projections in semisimple groups*
Studia Mathematica, 246 (2019), p. 63–69.
13. (with M. Kaluba) *Certifying numerical estimates of spectral gaps*
Groups Complexity Cryptology 10 (2018), Issue 1, p. 33–41.
14. (with C. Druţu) *Kazhdan projections, random walks and ergodic theorems*
Journal für die reine und angewandte Mathematik (Crelle's journal), vol. 2019, Issue 754, p. 49–86.
15. *Group 1-cohomology is complemented*
Bulletin of the London Mathematical Society 49 (2017), no. 2, 216–219.
16. (with F. Diana) *Eilenberg swindles and higher large scale homology of products of trees*
Groups, Geometry & Dynamics 11 (2017), no. 1, pp. 371–392.
17. (with D. Sawicki) *Warped cones and spectral gaps*
Proceedings of the American Mathematical Society 145 (2017), no. 2, 817–823.
18. *Poincaré inequalities and rigidity for actions on Banach spaces*,
Journal of the European Mathematical Society (JEMS) 17 (2015), no. 3, 689–709.
19. *Group Actions on Banach Spaces*,
In: Handbook of Group Actions, vol. II, 121–149. Edited by L. Ji, A. Papadopoulos, S.-T. Yau. Advanced Lectures in Mathematics (ALM) 32, International Press, Somerville; Higher Education Press, Beijing, 2015.

20. (with U. Bader) *Cohomology of deformations*,
Journal of Topology and Analysis **7** (2015), no. 1, 81–104.
21. (with K. Juschenko) *Uniformly bounded representations and exact groups*,
Journal of Functional Analysis **266** (2014), no. 3, 1667–1673
22. (with M. Marcinkowski) *Aperiodic tilings of manifolds of intermediate growth*,
Groups, Geometry & Dynamics **8** (2014), no. 2, 479–483.
23. (with J. Brodzki, G. A. Niblo and N. Wright) *Amenable actions, invariant means and bounded cohomology*,
Journal of Topology and Analysis **4** (2012), no. 3, 321–334.
24. (with J. Brodzki, G. A. Niblo and N. Wright) *A homological characterization of topological amenability*.
Algebraic & Geometric Topology **12** (2012), no. 3, 1767–1780.
25. (with R. G. Douglas) *Every finitely generated group is weakly exact*.
Journal of Functional Analysis **261** (2011), no. 12, 3723–3734.
26. (with R. I. Grigorchuk) *Diameters, distortion and eigenvalues*
European Journal of Combinatorics **33** (2012), 1574–1587.
27. (with D. Kerr) *Residually finite actions and crossed products*.
Ergodic Theory and Dynamical Systems **32** (2012), no. 5, 1585–1614.
28. (with R. G. Douglas) *Invariant expectations and vanishing of bounded cohomology for exact groups*.
Journal of Topology and Analysis **3** (2011), no. 1, 89–107.
29. (with R. G. Douglas) *Hilbert C^* -modules and amenable actions*.
Studia Mathematica **199** (2010), no. 2, 185–197.
30. (with J. Špakula) *Controlled coarse homology and isoperimetric inequalities*.
Journal of Topology **3** (2010), no. 2, 443–462.
31. *Zero-in-the-spectrum conjecture on regular covers of compact manifolds*.
Commentarii Mathematici Helvetici **84** (1) (2009), 213–222.
32. (with G. Yu) *What is... Property A?*
Notices of the American Mathematical Society **55** (2008), no. 4, 474–475.
33. *Isoperimetry of group actions*.
Advances in Mathematics **219** (1) (2008), 1–26.
34. *Coarsely embeddable metric spaces without Property A*.
Journal of Functional Analysis **252** (1) (2007), 126–136.
35. *On exactness and isoperimetric profiles of discrete groups*.
Journal of Functional Analysis **243** (1) (2007), 323–344.
36. *Group actions on Banach spaces and a geometric characterization of a -T-menability*.
Topology and its Applications **153** (2006), no. 18, 3409–3412.
37. *On coarse embeddability into ℓ_p -spaces and a conjecture of Dranishnikov*.
Fundamenta Mathematicae **189** (2006), no. 2, 111–116.
38. *Coarse embeddings of metric spaces into Banach spaces*.
Proceedings of the American Mathematical Society **133** (2005), no. 9, 2589–2596.

Talks

Over 150 invited talks at international conferences, schools, seminars and colloquia around the world.

Lecture series

Masterclass, University of Copenhagen, 11/2023 (scheduled)

Large scale geometry of group actions

3 lectures Conference Coarse Geometry and Dynamics, ENS Lyon, 08/2023

Invitation to property (T)

4 lectures at IIT Bombay, India, 02/2023

Property (T) for automorphism groups of free groups

2 lectures at *School on Groups and Dynamics*, University of Texas, Austin, 07/2022

Rigid groups and their algebras

4 lectures at *Recent Advances in Operator Theory and Operator Algebras*, Indian Statistical Institute, Bangalore, 12/2018

Property (T) and higher index theory

4 lectures at *Glances at Manifolds II*, Jagiellonian University, Kraków, 08/2016

Rigidity of groups and higher index theory

5 lectures at *Rigidity School*, University of Tokyo, 11/2015

Property (T) and large scale geometry

4 lectures at *Cohomology and Large Scale Geometry Summer School*, Universität Regensburg, 07/2015

Deformations, cohomology and fixed point properties

2 lectures at *Metric Geometry and Analysis*, Kyoto University, Japan, 12/2013

Large Scale Geometry

15 lectures, Adam Mickiewicz University, Poznań, Fall 2013

Amenable actions and bounded cohomology

2 lectures at the G^3 Conference, South Padre Island, Texas, 03/2013

Large Scale Geometry

10 lectures, Waseda University, Tokyo, 09/2012

Coarse Homology Theories

3 lectures, *Workshop on Geometric and Algebraic Topology*, Banach Center, Warsaw, 07/2012

Property A

2 lectures during the Semester on *Limits of Graphs in Group Theory and Computer Science*, Centre Interfacultaire Bernoulli at EPFL, Lausanne, Switzerland, 06/2007

Talks at conferences and seminars

Totally disconnected locally compact groups: local to global, Universität Münster, 10/2023

Geometric and Combinatorial Group Theory section, Spanish + Polish Mathematical Meeting, University of Łódź, 09/2023

Plenary address at the Spanish + Polish Mathematical Meeting, University of Łódź, 09/2023
Special Week on Operator Algebras, East China Normal University, Shanghai, 08/2023
South Atlantic Noncommutative Geometry Seminar, 07/2023
Noncommutative Geometry Festival, Washington University, St. Louis, 06/2023
Algebra Seminar, University of Oxford, 10/2022
Applied Topology, Bedlewo, 07/2022
Operator Theory 28, Timisoara, 06/2022
Operator Algebras and Dynamics of Groups, CIRM Marseille, 05/2022
 C^ -algebras and the geometry of groups and semigroups*, University of Oslo, 05/2022
Geometric structures in group theory, Mathematisches Forschungsinstitut Oberwolfach, 03/2022
Operator Algebras Mini-Symposium, 8 European Congress of Mathematics, 06/2021
Special Week on Operator Algebras, East China Normal University, Shanghai, 06/2021
Interactions between expanders, groups and operator algebras, Universität Münster, 06/2021
 C^ -algebras and geometry of groups and semigroups*, University of Oslo, 03/2021
Geometric Topology Seminar, Columbia University, 02/2021
CRM Camp in Nonlinear Analysis, Centre de Recherches Mathématiques, Montreal, 09/2020
New York Group Theory Seminar, 10/2019
Invited Plenary Address, 100th Anniversary Congress of the Polish Mathematical Society, Kraków, 09/2019
Workshop on Groups and Group Rings, Sankt Petersburg State University, Russia 06/2019
Operator Algebras Seminar, KU Leuven, 04/2019
Pure Maths Colloquium, Southampton University, 10/2018
14th Korea Operator Algebras Seminar, Pusan, South Korea, 06/2018
GPOTS 2018, 06/2018
Large Scale Geometry and Applications, Fields Institute, Toronto, 05/2018
Superexpanders and Their Coarse Geometry, Mathematisches Forschungsinstitut Oberwolfach, 04/2018
Large Scale Geometry of Polish Groups, Bernoulli Center, EPFL, 03/2018
Groups, Actions and von Neumann Algebras Seminar, Paris-Sud, Orsay, 03/2018
Midrasha seminar, Weizmann Institute of Science, 11/2017
Oberseminar C^* -Algebren, Universität Münster, 07/2017
Colloquium, University of Warsaw, 03/2017
Recent Advances in Operator Theory and Operator Algebras 2016, ISI Bangalore, India, 12/2016

Operator Algebras Seminar, University of Copenhagen, 09/2016
Wabash Conference, IUPUI, Indianapolis, 09/2016
Colloquium, Indiana University, Bloomington, 09/2016
Groups, Dynamics, and Operator Algebras, Queen Mary University of London, 07/2016
Geometry and Analysis on Groups seminar, University of Vienna, 06/2016
XXIII Wojtek Pulikowski lecture, Adam Mickiewicz University, Poznań, 06/2016
Geometry Seminar, Indiana University, Bloomington, 11/2015
Plenary Address, 6th Forum of Polish Mathematicians, 09/2015
Dubrovnik VIII - Geometric Topology, Geometric Group Theory & Dynamical Systems, Croatia, 06/2015
Colloquium, Université de Neuchâtel, 05/2015
Noncommutative Geometry Seminar, Fudan University, Shanghai, 05/2015
Research Center for Operator Algebras, East China Normal University, Shanghai, 05/2015
Geometry Seminar, Uniwersytet Wrocławski, 02/2015
Geometric Topology, Mathematisches Forschungsinstitut Oberwolfach, 01/2015
Groups, Dynamics and Related Topics Seminar, Technion - Israel Institute of Technology, Haifa, 11/2014
Quantum Groups, Operators and Non-commutative Probability meeting, Lancaster University, 09/2014
Groups and Topology 2014, DMV-PTM Meeting, Będlewo/Poznań, 09/2014
Topology Seminar, University of Oxford, 06/2014
Geometry and Analysis on Groups seminar, Universität Wien, 05/2014
Noncommutative Geometry Seminar, Fudan University, Shanghai, 04/2014
Research Center for Operator Algebras, East China Normal University, Shanghai, 04/2014
Séminaire Analyse et Géométrie, Université Denis Diderot - Paris 7, 02/2014
Groups Acting on Rooted Trees, Insitute Henri Poincaré, Paris, 02/2014
Metric Geometry, Geometric Topology and Groups, BIRS, Banff, 08/2013
Eilenberg Centenary Conference, University of Warsaw, 07/2013
International Conference on Operator Theory and Operator Algebras in Honor of the 75th Birthday of Ron Douglas, Fudan University, Shanghai, 07/2013
Groups, Dynamics and Related Topics Seminar, Technion - Israel Institute of Technology, Haifa, 06/2013
Graduiertenkolleg-Kolloquium, Universität Regensburg, 06/2013
Mini-conference following the Jankowski Lecture, University of Gdańsk, 05/2013
Oberseminar Topologie/Geometrie, Universität Göttingen, 05/2013
Oberseminar Topologie, Universität Münster, 05/2013

Operator Algebras seminar, Department of Physics, University of Warsaw, 11/2012

Workshop on *General and geometric topology today and their problems*, RIMS, Kyoto, 09/2012

Differential Topology Seminar, Kyoto University, 09/2012

Colloquium, Waseda University, Tokyo, 09/2012

Topology Seminar, Tokyo Institute of Technology, 09/2012

Topology Seminar, University of Tokyo, 09/2012

Group actions and applications in geometry, topology and analysis, Kunming University of Science and Technology, Kunming, China, 07/2012

Geometric Topology: Satellite Thematic Session, 6th European Congress of Mathematics, Krakow, 07/2012

Coarse Geometry of Infinite Groups, Université Lille 1, Lille, France, 06/2012

Graduate Colloquium, Polish Academy of Sciences, 02/2012

Young Geometric Group Theory Meeting, Będlewo, Poland 01/2012

Research Seminar, MSRI, Berkeley, 10/2011

Postdoc Seminar, MSRI, Berkeley, 09/2011

Dubrovnik Topology Conference, Dubrovnik, Croatia, 06/2011

Geometrical methods in high dimensional topology, The Ohio State University, 05/2011

Index theory and Hopf algebras – Noncommutative Geometry and Operator Algebras Spring Institute, Vanderbilt University, 05/2011

Colloquium, SUNY Buffalo, 03/2011

Colloquium, Case Western Reserve University, 03/2011

Presentation, University of Warwick, United Kingdom, 03/2011

AMS Southeastern Section meeting, Special Session on Geometric Group Theory, Statesboro, GA, 03/2011

Colloquium, Indiana University – Purdue University Indianapolis, 02/2011

Colloquium, University of Houston, 01/2011

MAA – AMS Joint Meetings, Special Session on Geometric Group Theory, New Orleans, LA, 01/2011

Analysis Seminar, SUNY Buffalo, 11/2010

Workshop in Analysis and Probability, Texas A&M University, 07/2010

Analysis Seminar, University of Houston, 03/2010

44th Spring Topology and Dynamics Conference, Geometric Group Theory and Geometric Topology session, 03/2010

Wabash Modern Analysis Seminar (joint seminar for UIUC, IU, Purdue and IUPUI), 11/2009

International Workshop and AMS Special Session on Concentration, Functional Inequalities and Isoperimetry, Boca Raton, 10/2009

Conference on Algebraic Topology, University of Warsaw, 07/2009
Affine Isometric Actions of Discrete Groups, ETHZ Centro Stefano Franscini, Ascona, Switzerland, 06/2009
 Noncommutative Geometry Seminar, Vanderbilt University, 04/2009
Workshop in Analysis and Probability, Texas A&M University, 06/2008
Analysis on Groups, University of Puerto Rico, San Juan, 03/2008
 Geometric Group Theory Seminar, The Ohio State University, 02/2008
International Conference on Geometric Topology, Dubrovnik, 10/2007
First Joint Meeting of the AMS and the Polish Mathematical Society, Special Session on Geometric Group Theory, Warsaw, 07/2007
Semester on Amenability, Erwin Schrödinger Institute, Vienna, 07/2007
 Colloquium, University of North Carolina at Greensboro, 03/2007
4th East Coast Operator Algebras Symposium, Georgia Institute of Technology, 09/2006
Workshop in Analysis and Probability, Texas A&M University, 07/2006
Metric Geometry and Geometric Embeddings of Discrete Metric Spaces, Texas A&M University, 07/2006
 Geometry and Differential Topology Seminar, University of Wrocław, 06/2006
Banach Spaces and Their Applications in Analysis, Miami University, 05/2006
40th Spring Topology and Dynamics Conference, Geometric Topology and Geometric Group Theory Session, 03/2006
 Algebraic Topology Seminar, University of Warsaw, 12/2005, 06/2006
 Geometric Functional Analysis Seminar, Pennsylvania State University, 02/2006
 Colloquium, Polish Academy of Sciences, Warsaw, 01/2006
 Geometric Topology Seminar, University of Warsaw, 12/2005, 12/2006, 12/2007
 AMS Sectional Meeting, Special Session on Geometry and Algorithms in Metric Spaces, Johnson City, 10/2005

Non-mathematical meetings and symposia

Speaker, *Granty dla najlepszych*, organized by the EU National Contact Point at the University of Warsaw, 09/2018
 Speaker, *Zdobądź grant European Research Council*, Politechnika Krakowska, 06/2018
 Panelist, Seminar *Jak wspierać granty ERC*, National Contact Point, 03/2017
 Speaker and panelist, *Symposium Krajowej Rady Koordynatorów Projektów Badawczych UE*, Politechnika Warszawska, 11/2016
 Panelist, *ERC od kuchni*, organized by the EU National Contact Point at the Nencki Institute, 09/2016

Organization

Seminars

Analytic and Geometric Group Theory Seminar, January 2012-present
 Institute of Mathematics of the Polish Academy of Sciences
 Co-organized with Tadeusz Januszkiewicz

Conferences and workshops

Maximal subgroups and (operator) subalgebras
 IMPAN Warszawa, September 2019
 With Yongle Jiang and Adam Skalski

Simons Semester: Geometric and Analytic Group Theory
 IMPAN Warszawa, Spring 2019
 With Uri Bader, Pierre-Emmanuel Caprace, Tadeusz Januszkiewicz, Damian Osajda, Piotr Przytycki

Workshop on Assembly Maps
 IMPAN Warszawa, December 2018
 Co-organized with Yeong Chyuan Chung and Kang Li

Workshop on Operator Algebras, Geometry, and Actions
 IMPAN Warszawa, September 2017
 Co-organized with David Kerr

Asymptotic decomposition methods in geometry, dynamics and operator algebras
 Satellite Workshop, Newton Institute program *Non-Positive Curvature, Group Actions and Cohomology*
 University of Southampton, 27–31 March 2017
 Co-organized with Erik Guentner and Graham Niblo

Amenability, coarse embeddability and fixed point properties
 Programmatic workshop during the Geometric Group Theory Program, MSRI, Berkeley, 6–9 Dec 2016
 Co-organized with Goulnara Arzhantseva, Cornelia Druțu and Graham A. Niblo

Glances at Manifolds II (conference). Group Actions, K-Theory, C^ -algebras and Topology of Manifolds*
 Jagellonian University, Kraków, Poland, August 2016.
 Member of the Scientific Committee

Geometric Function Theory meets Geometric Group Theory
 Banach Center, Warsaw, October 2015
 Co-organized with Tomasz Adamowicz

Topology Retreat, Banach Center, Będlewo, September 30 – October 2, 2015
 Co-organized with Roman Sauer

Conference on Geometric Group Theory
 University of Wrocław, June/July 2014
 Co-organized with Jan Dymara, Tomasz Elsner, Światosław Gal, Jacek Świątkowski

Concentration Week on Non-Linear Geometry of Banach Spaces, Differentiability and Geometric Group Theory,
 August 2011, Texas A&M University
 Co-organized with Florent Baudier, William B. Johnson and Bunyamin Sari

Geometric Group Theory Workshop, June 2011
Heilbronn Institute for Mathematical Research, University of Bristol
Co-organized with Talia Fernós and Graham A. Niblo

Student supervision

Graduated:

- Michał Marcinkowski, Ph.D. at University of Wrocław defended 10/2015
co-advised with Ś. R. Gal
First position: SFB postdoc at Universität Regensburg, Germany
- Karol Strzałkowski, Ph.D. at IMPAN Warsaw defended 06/2016
Recipient of the NCN Preludium grant
First position: Postdoctoral Fellow at MSRI, Geometric Group Theory program, Fall 2016
- Damian Sawicki, Ph.D. at IMPAN Warsaw defended 08/2018
Recipient of the NCN Preludium grant
First position: 2-year postdoc at Max Planck Institute, Bonn.
- Tomasz Odrzygóźdź, Ph.D. at IMPAN Warsaw, defended 06/2019;
Recipient of the NCN Preludium grant.

Current Ph.D. students:

Damian Orlef

External member of PhD committees:

Francesca Diana, Universität Regensburg, December 2014

Thibault Pillon, Université de Neuchâtel, May 2015

Markus Steenbock, Universität Wien, June 2016

Magister theses supervised: D. Sawicki (2014); B. Szymański (2017).

6 Licencjat theses

Supervision of visiting students:

M. Marcinkowski, visiting PhD student from University of Wrocław, Spring 2012; Spring 2014

F. Diana, visiting PhD student from Universität Regensburg, Fall 2013

Ł. Garncarek, visiting PhD student from University of Wrocław, Fall 2014, Spring 2015

Postdoc supervision:

Łukasz Garncarek, 2015 – 2016

Marek Kaluba, 2015 – 2017

Eric Reckwerdt, 2016 – 2018

Yeong Chyuan Chung, 2017 – 2019

Yongle Jiang, 2017 – 2019

Kang Li, 2018 – 2020

Ignacio Vergara, 2018 – 2020
Kajal Das, 02/2019–08/2019
Sanaz Pooya, 2019–2021
Loris Arnold 08/2021– 07/2022
Piotr Mizerka 08/2021–present
Karol Duda 10/2023–present
Antonio Lopez-Neumann, 10/2023–present

Teaching

Institute of Mathematics of the Polish Academy of Sciences

Atiyah-Singer Index Theorem, Spring 2016
K-theory, graduate course, Fall 2015
Analysis on metric spaces, graduate reading course, Fall 2014.
Volume and bounded cohomology, graduate reading course, Spring 2014.

University of Warsaw

Algebra II: recitations, Spring 2014
L₂-methods in topology, graduate course, Fall 2013
Topology I, honors course: recitations, Fall 2013
Asymptotic methods in group theory: proseminar, AY 2013/2014
Linear Algebra, honors course: recitations, Spring 2013
Large Scale Geometry: graduate course, Fall 2012
Large Scale Geometry: proseminar, AY 2012/2013

Texas A&M University

math 323: Linear Algebra, Spring 2011
math 308: Differential Equations (2 sections), Fall 2010
math 602 (graduate): Methods and Applications of Partial Differential Equations, Spring 2010
math 251: Engineering Mathematics III (2 sections), Fall 2009
math 308: Differential Equations, Spring 2009
math 302: Discrete Mathematics, Fall 2008

Vanderbilt University

math 150A: Calculus I, Spring 2008

math 205B: Multivariable Calculus and Linear Algebra (Teaching Assistant), Spring 2007

math 150A: Calculus I, Fall 2006

math 155B: Accelerated Calculus II (Teaching Assistant), Spring 2006

math 155B: Accelerated Calculus II (Teaching Assistant), Fall 2005

Professional Service

Editor at *Fundamenta Mathematicae*

Member of the Ministry of Science and Higher Education committee on evaluation of research journals

Member of the Advisory Board, *Simons Semesters* program at IMPAN

Member of the Jury of the European Union Competition for Young Scientist (EUCYS) organized in Poland by the Polish Children's Fund, 2019-2021

Member of the Jury of the Kuratowski Prize, 2017-2020

Panel member, National Science Center (NCN) ST1 Panel, Opus, Sonata and Preludium grant

Reviewed funding proposals for *National Science Foundation*, *Israel Science Foundation*, *United States - Israel Binational Science Foundation*, *Austrian Academy of Sciences*, *French National Research Agency - ANR*, *The Leverhulme Trust*, *Swiss National Science Foundation*, internal university grants (USA)

Referee for over 40 journals, including *Advances in Mathematics*, *Compositio Mathematica*, *Crelle's journal*, *Geometry & Topology*, *Journal of the American Mathematical Society*, *Journal of Functional Analysis*, *Journal of Noncommutative Geometry*, *Journal of Topology*, *Journal of Topology and Analysis*, *Mathematische Annalen*, *Proceedings of the LMS*.

Last updated: October 16, 2023

<http://pnowak.impan.pl/>