

Piotr Mizerka

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EXPERIENCE

2023.01 – 2023.06	Mathematical Institute, University of Oxford Visiting researcher under the supervision of prof. Dawid Kielak
2022.12 – now	Institute of Mathematics of the Polish Academy of Sciences Principal Investigator in the NCN SONATINA Grant entitled “Algebraic spectral gaps in group cohomology”
2022.08 – 2023.01	Institute of Mathematics of the Polish Academy of Sciences Post-doc in the NCN MAESTRO Grant entitled “Analysis on groups” whose Principal Investigator is prof. Piotr Nowak
2021.06 – 2022.07	Institute of Mathematics of the Polish Academy of Sciences Post-doc in the ERC Starting Grant entitled “Rigidity of groups and higher index theory” whose Principal Investigator was prof. Piotr Nowak

EDUCATION

2017 - 2021	Adam Mickiewicz University in Poznań, Mathematics, PhD
2015 - 2017	Adam Mickiewicz University in Poznań, Mathematics, Msc
2012 - 2016	Adam Mickiewicz University in Poznań, Computer Science, Eng
2012 - 2015	Adam Mickiewicz University in Poznań, Mathematics, Bsc

PUBLICATIONS AND PREPRINTS

2023	Exclusions of smooth actions on spheres of the non-split extension of C_2 by $SL(2, 5)$, Osaka Journal of Mathematics, vol. 60(1), pp. 1 – 14
2023	On order units in the augmentation ideal, joint with P. W. Nowak, preprint
2022	Spectral gap for the cohomological Laplacian of $SL_3(\mathbb{Z})$, joint with M. Kaluba and P. W. Nowak, preprint
2020	A new family of finite Oliver groups satisfying the Laitinen Conjecture, Topology and its Applications, vol. 283, 107336

2020	The Role of Bitcoin on Developed and Emerging Markets – on the Basis of a Bitcoin Users Graph Analysis , joint with J. Mizerka and A. Stróżyńska-Szajek, Finance Research Letters, vol. 35, 101489
2018	Nonexistence of smooth effective one fixed point actions of finite Oliver groups on low-dimensional spheres , joint with A. Borowiecka, Bulletin Polish Acad. Sci. Math., 2018, vol. 66, pp. 167-177

SELECTED TALKS

2023	Spectral gaps for cohomological Laplacians of $SL(n, \mathbb{Z})$, Two-Day Geometry Meeting, University of Bristol
2023	Vanishing of group cohomology, Kazhdan's Property (T), and computer proofs , Junior Topology and Group Theory Seminar, University of Oxford
2022	Spectral gaps for higher Laplacians and group cohomology , Noncommutative geometry: metric and spectral aspects, Jagiellonian University
2022	Fox derivatives, group cohomology, and higher property (T) , Applied Topology in Będlewo
2022	Fox derivatives, group cohomology, and higher property (T) , Groups & Algebras in Bicocca for Young algebraists (GABY 2022), Milan
2022	Vanishing of group cohomology and decompositions into sums of squares , Algebraic Topology seminar at University of Warsaw
2021	Vanishing of group cohomology and decompositions into sums of squares , Topology retreat 2.0, Będlewo
2021	New results on one and two fixed point actions on spheres , kpa70 online conference
2020	On exotic group actions on spheres , Geometry seminar at University of Gdańsk
2019	Finding suitable dimensions for the Smith problem , Group Action Forum Workshop, Adam Mickiewicz University in Poznań
2018	Excluding smooth effective one fixed point actions of finite Oliver groups on low-dimensional spheres , UMI/SIMAI-PTM Joint Meeting, Wrocław
2018	Excluding smooth effective one fixed point actions of finite Oliver groups on low-dimensional spheres , Glances@Manifolds III, Jagiellonian University

REVIEWING

2023 – now	MathSciNet Mathematical Reviews
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HONORS AND AWARDS

2017	Nicolai Copernici International Students Contest, Honorable Mention
2017	Medal for outstanding achievements and participation in the University life, Adam Mickiewicz University in Poznań
2016	Mirror of the William Lowell Putnam Mathematical Competition, 96 th place out of 241 contestants
2015 - 2016	International Mathematics Competition for University Students, Honorable Mention, 2015 and 2016
2014 - 2015	Mistrzostwa Wielkopolski w Programowaniu Zespołowym (a regional programming contest), 32 nd place out of 147 teams

CONFERENCE ORGANIZING

2021	kpa70 online conference
2017	Applied Topology in Będlewo
2014	Joint Meeting of Polish and German Mathematical Societies

SCHOLARSHIPS

2017 - 2021	scholarship for the best PhD students of Adam Mickiewicz University
2013 - 2017	scholarship for the best students of Adam Mickiewicz University
2015	scholarship of Minister of Science and Higher Education of Poland

PROGRAMMING SKILLS

Julia, GAP, Python, C++, .NET, C#, MVC, HTML, CSS, JavaScript

LANGUAGES

English	advanced
German	intermediate
Italian	intermediate

TEACHING

2022	Modern methods of data analysis
2020 - 2021	Basics of mathematics (elements of logic, set theory, calculus and probability theory)
2020 - 2021	Introduction to mathematics (elements of logic, set theory, calculus and probability theory)
2018 - 2021	Review of the elementary mathematics (a repetition of math course from school for the first year students)
2017 - 2019	Introduction to algebra and number theory
2017	Introduction to mathematics (elements of logic and set theory)

OTHER ACTIVITIES

2012 - now	Mathematics League of Greater Poland <ul style="list-style-type: none">- it is a regional mathematics competition for school students- inventing tasks for the competition- grading students' solutions
2019 - now	Polish Mathematical Olympiad <ul style="list-style-type: none">- grading solutions of students from regional schools- handling the second stage of the Olympiad
2012 - 2017	Scientific Circle of Mathematicians of Adam Mickiewicz University