MICHAŁ MARCINKOWSKI

Personal Information

Born in Wrocław, Poland. 17 November 1987.

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Research interests

Geometry and Topology

Academic appointments

* ⋆ Ass. Prof. at the University of Wrocław,   12.2020 -
* ⋆ Ass. Prof. at the Polish Academy of Science   12.2018 - 12.2020
* ⋆ Postdoc at the Ben Gurion University   02-05.2017
* ⋆ SFB Postdoc at the University of Regensburg   09.2015-12.2018
  (suspended for 02-05.2017)

Participation in grants

* ⋆ PI in NCN (Polish National Science Center) grant Sonatina,
  12.2018-12.2021

* ⋆ Investigator in NCN grant 2012/06/A/ST1/00259,
  PI: T. Januszkiewicz.   06.2013-12.2016

* ⋆ Investigator in FNP (Polish Science Foundation) grant "Mistrz",
  PI: T. Januszkiewicz.   01.2013-12.2015

Short term research positions

* ⋆ University of Warsaw.   spring semester 2014
* ⋆ Southampton University.   09-12.2012
* ⋆ University of Warsaw.   spring semester 2011

Research visits

* ⋆ Karlsruhe Univeristy.   1 week (28.03-02.04.2023)
* ⋆ Ben Gurion University.   1 week (16-22.02.2023)
* ⋆ Regensburg University.   1 week (15-21.08.2022)
* ⋆ University of Chicago.   6 months (1-6.2020)
* ⋆ Technical Univeristy in Dresden.   1 month (11.2019)
* ⋆ Ben Gurion University.   2 weeks (13-25.10.2019)
* ⋆ Technion.   1 week (18-25.12.2018)
* ⋆ Ben Gurion University.   1 week (8-12.04.2018)
* ⋆ University of Florida.   1 week (14-18.11.2016)

- ★ Texas A&M.   2 weeks (31.10-11.11.2016)
- ★ Oberwolfach RIP with M. Brandenbursky.   1 week (12-18.07.2015)
- ★ Aberdeen University.   1 week (17-24.06.2013)

Education

PhD studies at the Faculty of Mathematics, Wrocław.   2011-2015
Msc studies at the Faculty of Mathematics, Wrocław.   2006-2011

PhD thesis: Gromov positive scalar curvature conjecture
             and macroscopically small homologically large manifolds.
Advisor: Światosław R. Gal.
Co-advisor: Piotr W. Nowak.

Papers and preprints

- ★ Volume and Euler classes in bounded cohomology of transformation groups.
  with M. Brandenbursky, accepted to Glasgow Mathematical Journal

- ★ The Schwarz-Milnor lemma for braids and area-preserving diffeomorphisms.
  with M. Brandenbursky and E. Shelukhin, Selecta Mathematica 28 (2022).

- ★ A short proof that the L^p-diameter of $Diff_0(S, area)$ is infinite.
  Algebraic and Geometric Topology 23 (2023), issue 2.

- ★ Qualitative counting closed geodesics.
  with B. Karlhofer, J. Kędra, A. Trost, Geometriae Dedicata 213 (2021).

- ★ Bounded cohomology of transformation groups.
  with M. Brandenbursky, Mathematische Annalen 382 (2022).

- ★ Aut-invariant word norm on right angled Artin and Coxeter groups.
  Michigan Journal of Mathematics, 69 (2020), no. 2.

- ★ Entropy and quasimorphisms.
  with M. Brandenbursky, Journal of Modern Dynamics, 15 (2019).

- ★ Aut-invariant norms and quasimorphisms on surface and free groups.
  with M. Brandenbusky, Commentarii Mathematici Helvetici, 94 (2019), no. 4.

- ★ Bughelea conjecture and asymptotic dimension of groups.
  with A. Engel, Journal of Topology and Analysis, 12 (2020), no. 2.

- ★ The Gromov PSC conjecture and homologically small macroscopically large manifolds.
  Journal of Topology 9 (2016), no. 1.

- ★ Cancelation norm and the geometry of biinvariant word metrics.
  with M. Brandenbursky, Ś.R.Gal, J. Kędra. Glasgow Math. J. 1 (2016), no. 58.

- ★ Aperiodic tilings of manifolds of intermediate growth.
  with Piotr W. Nowak. Groups, Geometry and Dynamics 8 (2014), no. 2.

Talks in conferences

- ★ The L^1-metric on $Diff_0(M; area)$, braids and quasimorphisms.
  - The Spanish-Polish Mathematical Meeting, Łódź, 4-8.09.2023.
  - Recent Advances in Bounded Cohomology, Regensburg, 26-30.09.2022.

⋆ Bounded cohomology of transformation groups.
  - *Cohomological methods (part of the Simons semester), Warsaw, 8-12.04.2019,*
  - *Workshop on Bounded Cohomology, Heidelberg, 29.07-02.08.2019,*
  - *Virtual workshop: Simplicial Volumes and Bounded Cohomology, 21-25.09.2020.*

⋆ Entropy and quasimorphisms.
  - *UMI-SIMAI-PTM - Joint meeting, Wrocław, 17-20.09.2018,*
  - *GAGTA, Seoul, 15-20.07.2018,*
  - *Annual meeting of the Deutsche Mathematiker-Vereinigung, Paderborn, 05-09.03.2018,*
  - *Dynamics of (semi-)groups actions, Łódź, 9-12.07.2019,*
  - *Jubilee Congress for the 100th anniversary of the Polish Mathematical Society Kraków, 3-7.09.2019.*

⋆ Examples of topologically large but homologically small manifolds.
  Annual Meeting of the Israeli Mathematical Union, Dead see, 02-05.06.2016.

⋆ Macroscopically large rationally inessential manifolds.
  Conference of Geometric Group Theory, Wrocław 05-06.2015.

⋆ The Gromov PSC conjecture and homologically small macroscopically large manifolds.
  Analysis, Geometry and Topology of PSC Metrics workshop in Oberwolfach, 07.2014.

Talks in seminars

⋆ Mapping class groups and the cohomology of $Homeo(M, vol)$.
  International Young Seminar on Bounded Cohomology and Simplicial Volume, Online, 07.2024

⋆ Quasimorphisms, diffeomorphism groups of surfaces and L^p-metrics.
  Algebraic Geometry and Geometric Topology Seminar, Tulane, 10.2021

⋆ A short proof that the L^p-diameter of $Diff_0(S, area)$ is infinite.
  Group actions, UVa–EPFL–KIAS joint seminar, 11.2020

⋆ Third bounded cohomology of transformation groups.
  - *Geometry seminar, Ludwig Maximilian Univeristy in Munich, 11.2018,*
  - *Geometry seminar, Technion, 11.2018,*
  - *Colloquium at the Ben Gurion University, 11.2018,*
  - *Seminar Algebra-Geometrie-Kombinatorik, Dresden, 05.2019,*
  - *Geometry/Topology Seminar, U. of Chicago, 01.2020,*
  - *Seminar Geometric Group Theory, McGill, 02.2020.*

⋆ Entropy and quasimorphisms.
  Colloquium at the Ben Gurion University, 04.2018

⋆ Aut-invariant norms and quasimorphisms on free groups and surface groups.
  - *Noncommutative Geometry Seminar, College Station (Texas A&M) 12.2016,*
  - *Topology and Dynamics Seminar, Gainesville (University of Florida) 12.2016,*
  - *Geometry and Topology Seminar, Haifa (Technion) 03.2017,*
  - *2 talks at Geometry seminar at the Ben Gurion 05.2017.*

⋆ The Gromov PSC conjecture and rationally small macroscopically large manifolds.
  - *Topology seminar, Warszawa 05.2014,*
  - *Oberseminar Globale Analysis, Regensburg 11.2014,*
  - *Oberseminar Gruppen und Geometrie, Bielefeld 11.2015,*
  - *Oberseminar Geometrie, München Universität 04.2016,*
  - *Groups and Dynamics Seminar, College Station (Texas A&M) 11.2016.*

* Macroscopic dimension.
  GGT seminar, Warszawa 11.2013.

* Uniformly finite homology and applications.
  GGT workshop, Będlewo 05.2013.

* Uniformly finite homology, macroscopic dimension and aperiodic tilings.
  Geometry seminar, Southampton 10.2012.

* Aperiodic tilings of amenable manifolds.
  Geometric topology seminar, Warszawa 04.2012.

Awards

2022-2025: Scholarship of the Polish Ministry of Education and Science.
2016: Minister of Science and Higher Education of Poland Award.
2009/2010, 2010/2011: Scholarship of the Polish Ministry of Education.
2006: 2nd Prize, European Union Contest for Young Scientists, Stockholm.
2005: 1st Prize, International Mathematical Olympiad Baltic Way, Stockholm.
2004: Laureate of LVI Polish Mathematical Olympiad.

Organized conferences

* "Constructing Aspherical Manifolds and Compexes"
  with A. Engel, Frauenchiemsee 09.2018.

* "Groups and spaces of non-positive curvature"
  with A. Engel, Regensburg 08.2017.

* "Large Scale Dimensions"
  with A. Engel, Regensburg 07.2016.

Other activities

* I co-organised several summer and winter schools of mathematics for students.

* I am a mamber of the committee of the Polish AI Olympiad.

* I was a member of a Polish Mathematical Olympiad regional committee (Wrocław).

July 25, 2024