MICHAŁ SZACHNIEWICZ

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michalszachniewicz.github.io

SCIENTIFIC INTERESTS

Model theory	Continuous logic, model theory of fields.
Arithmetic geometry	Arakelov geometry, measures on Berkovich spaces, adelic curves, non-Archimedean Monge–Ampère problem.

EDUCATION

University of Oxford *2021-2025 (expected)*
PhD in Mathematics
Thesis topic: Globally Valued Fields
Supervised by Prof. Ehud Hrushovski

University of Warsaw *2019-2021*
Master's degree in Mathematics
Thesis: Non-reducedness of Hilbert schemes of few points
Supervised by Dr. Joachim Jelisiejew

University of Wrocław *2016-2019*
Bachelor's degree in Mathematics
Thesis: About some properties of logic topology
Supervised by Prof. Krzysztof Krupiński

PREPRINTS

1. Hyperbolicity and model-complete fields, with Jinhe Ye, arxiv:2403.15300

2. Existential closedness of $\overline{\mathbb{Q}}$ as a globally valued field via Arakelov geometry, arXiv:2306.06275

3. Non-reducedness of the Hilbert schemes of few points, arXiv:2109.11805

SELECTED TALKS

- Contributed talk, Students' and Young Researchers' Conference on Non-Archimedean, Arakelov and Tropical Geometry, Regensburg (July 2024)

- Invited talk, South and East of England Model Theory Network SEEMOD, Norwich, University of East Anglia (April 2024)

- Invited talk, Model theory of valued fields and applications, Lille (February 2024)

- Contributed talk, Global invariants of arithmetic varieties, Luminy, CIRM (October 2023)

- Invited talk, Model Theory Workshop, Wrocław (September 2023)

- Invited talk, Model theory of valued fields, Luminy, CIRM (June 2023)

- The Junior Seminar in Pure Mathematics, KU Lueven/on-line (May 2023)

- Algebraic Geometry seminar, University of Warsaw (March 2023)

- Invited talk, AGATES Workshop in Deformation Theory, Warsaw (December 2022)

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SELECTED PRIZES AND GRANTS

- St John's College Ioan and Rosemary James Scholarship, University of Oxford (October 2021 - September 2025)
- Winner of the mBank "A step into the future" competition for the best student mathematical thesis (April 2022)
- Winner of the Polish Mathematical Society competition for the best student mathematical thesis (March 2022)
- Participation in a research grant "Deformations and Degenerations of Algebraic Varieties" (October 2020 - March 2021)

CONFERENCES

- Flows and Variational Methods in Riemannian and Complex Geometry: Classical and Modern Methods, Montreal (June 2024)
- Model theory of valued fields and applications, Lille (February 2024)
- Research school Hodge theory and o-minimality, Luminy, CIRM (January 2024)
- Global invariants of arithmetic varieties, Luminy, CIRM (October 2023)
- Model Theory Workshop, Wrocław (September 2023)
- Masterclass: Arakelov geometry on Shimura varieties, Copenhagen (August 2023)
- Model theory of valued fields, Luminy, CIRM (June 2023)
- Spring School on non-archimedean geometry and eigenvarieties, Heidelberg (March 2023)
- British Postgraduate Model Theory Conference, Leeds (January 2023)
- Model Theory Conference in celebration of Ludomir Newelski's 60th birthday, Będlewo, IMPAN conference center (December 2022)
- AGATES Workshop, Deformation Theory, Warsaw (December 2022)
- Condensed mathematics and the liquid tensor experiment, Będlewo (September 2022)
- Workshop: Practical and Structural Model Theory, Leeds (July 2022)
- Model Theory and Applications, Cetraro (June 2022)
- Cohomology of Varieties, Warsaw, IMPAN (April 2022)
- K3 categories and Hyperkähler moduli spaces, Warsaw/hybrid (September 2021)

ORGANIZATION AND COMMUNITY SERVICE

- Refereed for the Model Theory journal
- Summer school Algebra vincit Omnia, Pisary (September 2019)
- Baby Horizons students' conference, Będlewo (July 2019)
- Summer school Per algebra ad astra, Pisary (September 2018)

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TEACHING

- Tutor for Model Theory (Oxford, Michaelmas term 2023)
- Teaching assistant for Algebraic Curves (Oxford, Hilary term 2023)
- Teaching assistant for Introduction to Schemes (Oxford, Hilary term 2022)
- Teaching assistant for Model Theory (Oxford, Michaelmas term 2021)