DARYA SUKHOREBSKA

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WORKING EXPERIENCE

Postdoctoral Researcher 2024 - Present

Institut für Algebra und Geometrie, Karlsruher Institut für Technologie (KIT)

Karlsruhe, Germany

Junior research fellow 2023 - Present

B. Verkin Institute for Low Temperature Physics and Engineering (B. Verkin ILTPE of NASU) remote

Postdoctoral Researcher 2023 - 2024

Universität Münster Münster, Germany

Research Stay

Universität Münster Münster, Germany

Researcher 2018-2019

B. Verkin ILTPE of NASU Kharkiv, Ukraine

EDUCATION

PhD in Mathematics 2019 - 2023

B. Verkin ILTPE of NASU Kharkiv, Ukraine

Thesis title: Simple closed geodesics on regular tetrahedra in spaces of constant curvature.

Supervisor: Prof. Dr. Alexander Borisenko.

Master degree in Mathematics 2017-2019

V.N. Karazin Kharkiv National University (with honors)

Kharkiv, Ukraine

Bachelor degree in Applied Mathematics 2013-2017

V.N. Karazin Kharkiv National University (with honors)

Kharkiv, Ukraine

SELECTED PUBLICATIONS

2025 (with B. Wilking) Positively curved 16-manifolds with T³ symmetry (in preparation)

2024 Simple closed geodesics on regular spherical polyhedra, arXiv, 2024. (to appear in JMPAG) http://arxiv.org/abs/2408.10782

2022 Simple closed geodesics on regular tetrahedra in spaces of constant curvature, *JMPAG*, 4, 562-610. https://doi.org/10.15407/mag18.04.562

2022 Multidimensional Submanifolds with metric of revolution in hyperbolic space, *JMPAG* 18, 269-285. https://doi.org/10.15407/mag18.02.269

2021 (with A. Borisenko) Simple closed geodesics on regular tetrahedra in spherical space, *Sb. Mathematic*, 212, 1040-1067. https://doi.org/10.1070/SM9433

2020 (with A. Borisenko) Simple closed geodesics on regular tetrahedra in Lobachevsky space, *Sb. Mathematic*, 211, 617-642. http://dx.doi.org/10.1070/SM9212

TEACHING EXPERIENCE

SS 2025 Seminar "Differential Forms on Smooth Manifolds"

WS 2024/25 Advanced Mathematics III

RESEARCH TALKS:

- November 2024 Research Seminar on Topology, Universitz of Fribourg, Switzerland
 - April 2024 Oberseminar of Geometry group in Karlsruhe Institute for Technology, Germany
 - Dec. 2023 Seminar of Copenhagen Centre for Geometry and Topology, Denmark
 - March 2023 Geometry Day 2023 in Leipzig, Germany
 - March 2023 Topology/Geometry Zoom Seminar, online
 - Feb. 2023 Seminar of Mathematical Division, B. Verkin ILTPE of NASU, Kharkiv, Ukraine online
 - April 2022 Oberseminar of Differential geometry group at Mathematical Institute in Universität Münster, Germany
 - June 2021 8th European Congress of Mathematics (8ECM), Portoroz, Slovenia, online
 - April 2021 Workshop "The Young Geometers Meeting on Geometric Analysis and Differential Geometry", Copenhagen, Denmark, *(presented a poster)*.
 - May 2020 International scientific conference "Algebraic and geometric methods of analysis", Odesa, Ukraine, online
 - Feb. 2020 Kharkiv State Geometric Seminar, Kharkiv, Ukraine
 - July 2019 Lake Como School of Advanced Studies "Geometric Analysis on Riemannian and Singular Metric Measure Spaces", Como, Italy
 - June 2019 International Conference "Geometry, Differential Equations and Analysis" in memory of A.V. Pogorelov, Kharkiv, Ukraine
 - April 2019 Seminar of the topology laboratory of the Institute of Mathematics of National Academy of Sciences of Ukraine, Kyiv, Ukraine
 - June 2018 VI International Conference "Analysis and Mathematical Physics" Kharkiv, 2018

GRANTS AND SCHOLARSHIPS

Math for Ukraine Scholarship

2022-2023

IMU Breakout Graduate Fellowship

2019-2023

Grant of N. I. Akhiezer Foundation

2018, 2021

SELECTED CONFERENCES, WORKSHOPS AND SUMMER SCHOOLS:

- June 2024 Oberwolfach Workshop, Geometry, Germany.
- Oct. 2023 Geometry beyond Riemann: Curvature and Rigidity, ESI, Vienna, Austria.
- August 2023 Workshop on Curvature and Global Shape, Münster, Germany.
 - Nov. 2022 Banach Center Oberwolfach Graduate Seminar: Geometry and Topology of Compact Homogeneous Spaces, Bedlewo, Poland.
 - June 2022 Oberwolfach Workshop, Geometry, Germany.
- August 2021 Workshop on Curvature and Global Shape, Münster, Germany.
 - July 2019 Lake Como School of Advanced Studies "Geometric Analysis on Riemannian and Singular Metric Measure Spaces", Como, Italy.
 - June 2019 International Conference "Geometry, Differential Equations and Analysis" in memory of A.V. Pogorelov, Kharkiv, Ukraine
 - Sep. 2018 Summer School "Generalized Curvatures and Related Topics", EPFL, Lausanne Switzerland.

ORGANIZATION OF EVENTS:

- Organizing a Women in Math Day: Get-Together Dinner for female researchers from Institute of Algebra and Geometry, KIT, Karlsruhe, Germany, May 2025.
- Co-organizing a Kharkiv Geometric Seminar (online), Fall 2024.
- Co-organizing a semester-long seminar for students "Geometry and applications", Fall 2021
- Co-organizing a semester-long seminar for students "Selected problems in geometry and applications", Spring 2021
- Co-organizing several Popular Science Lectures, 2019,2020,2021
- Co-organizing International Conference "Geometry, Differential Equations and Analysis" in memory of A.V. Pogorelov, Kharkiv, Ukraine, June 2019

LANGUAGES

Ukrainian native
English fluent, C1
German B1
French A2