CURRICULUM VITAE

Name: Alexandra Kuznetsova

Education: 2012 — 2016: B.S. Higher School of Economics, Moscow;
2016 — 2018: M.S. Higher School of Economics, Moscow;
2018 — 2022: Joint PhD program of École Polytechnique, Paris and Higher School of Economics, Moscow.

PhD thesis: I obtained my PhD in 2022 on the subject "Birational automorphisms of varieties" under supervision of Charles Favre and Constantin Shramov.

Current position: Scientific Researcher at Steklov Mathematical Institute.

Publications:

Endomorphisms of projective bundles over a certain class of varieties, joint work with E. Amerik, Bulletin of the Korean Mathematical Society, 54 (2017), No. 5, pp. 1743-1-755.

Finite 3-subgroups in Cremona group of rank 3, Math. Notes, 108:5 (2020), 697–715.

Geometry and automorphisms of non-Kähler holomorphic symplectic manifolds, joint work with F. Bogomolov, N. Kurnosov and E. Yasinsky, IMRN 2022, no. 16, 12302–12341.

Automorphisms of quasi-projective surfaces over fields of finite characteristic, Journal Algebra 595 (2022), 271–278.

Non-rational sextic double solids, Mathematische Zeitschrift 2022, 301(4), pp. 4015–4036.

Regularizations of positive algebraic entropy pseudo-automorphisms, Journal of Modern Dynamics 2023, 19, pp. 237-268.

Double covers of smooth quadric threefolds with Artin-Mumford obstructions to rationality, arXiv:2304.09955.

Talks on conferences:

3-subgroups in Cremona group, Workshop on birational geometry, HSE, November 23, 2017.

Non-rational double covers of $\mathbb{P}^3$, Summer School-Conference on Brauer groups, HSE, June 29, 2018.

Combinatorics of sextic double solids, Workshop on Algebraic Geometry and Incidence Combinatorics, Loughborough University, January 24, 2019.

Non-Kähler symplectic manifolds, Workshop on complex and algebraic geometry, HSE, March 18, 2020.

Bogomolov-Guan manifolds, Algebraic Geometry in Angers, Université d'Angers, June 16, 2021.

Positive entropy automorphisms of varieties, Primorie Mathematical Fair, FEFU, July 22, 2021.

Regularizations of birational automorphisms, Young researchers meeting of the GDR Platon, CIRM, November 17, 2021.

Regularizations of birational automorphisms, Connections Workshop: Complex Dynamics, MSRI, February 3, 2022.

Automorphisms of Bogomolov-Guan manifolds, Complex Geometry in Byurakan, Byurakan Observatory, June 7, 2022.

Criterion for non-regularizable birational automorphisms, 2nd Conference of Mathematical Centers of Russia, Steklov Mathematical Institute of RAS, November 10th, 2022.

Automorphisms of families of abelian varieties, SIMC Youth Race, Steklov Mathematical Institute of RAS, March 14th, 2023.

Teaching:

MAA206 - Algebra, École Polytechnique, 2018–2019, exercise sessions.

MAA201 - Algebra, École Polytechnique, 2019–2020, exercise sessions.

MAA201 - Euclidean and Hermitian Spaces, École Polytechnique, 2020–2021, exercise sessions.

MAA302 - Topology and Differential Calculus, École Polytechnique, 2020–2021, exercise sessions.

Introduction to Discrete Mathematics and Topology, HSE, 2022–2023, exercise sessions.

Talks on seminars:

Homotopy category of complexes, XII International School on theoretical and mathematical physics, Sevastopol, May 8, 2013.

Reider Theorem, Seminar on geometric structures, HSE, April 23, 2015.

Unirational nonrational varieties, Iskovskikh Seminar, Steklov Mathematical Institute (Moscow), November 16, 2017.

Examples of automorphisms of positive entropy, Iskovskikh Seminar, Steklov Mathematical Institute (Moscow), February 15, 2018.

Non-rational sextic double solids, Iskovskikh Seminar, Steklov Mathematical Institute (Moscow), December 13, 2018.

Regular automorphisms of smooth threefolds with positive entropy, Iskovskikh Seminar, Steklov Mathematical Institute (Moscow), February 6, 2020.

Gromov-Yomdin Theorem, Iskovskikh Seminar, Steklov Mathematical Institute (Moscow), September 24, 2020.

Semi-continuity of dynamical degrees, Iskovskikh Seminar, Steklov Mathematical Institute (Moscow), September 16, 2021.

Regularisations of pseudo-automorphisms, Seminar Algebra and Geometry, University of Basel, March 1, 2022.

Brauer group of nodal Fano threefolds, Seminar on geometric structures, HSE, October 20, 2022.

Regularizations of positive entropy automorphisms, Birational Geometry Seminar, UCLA, March 17, 2023.

Research interests: Birational geometry, Positive entropy automorphisms, Jordan property, Non-Kähler manifolds.