

Curriculum vitae

Konstantin Loginov

1 Education and work

2020– Steklov International Mathematical Center. Research fellow.

2019–2020 Steklov International Mathematical Center. Junior research fellow.

2019– Moscow Institute of Physics and Technology. Research fellow.

2017–2020 Laboratory of Algebraic Geometry and its Applications, Higher School of Economics. Research intern.

2015–2019 Higher School of Economics, Department of Mathematics. Graduate student under the supervision of Yu.G.Prokhorov. PhD thesis: Del Pezzo fibrations. Thesis defence: April 2020.

2015–2019 Independent University of Moscow. Graduate student.

2010–2015 Independent University of Moscow. Thesis: Hilbert-Samuel sequences of homogeneous finite type.

2010–2015 Moscow State University, Department of Mathematics. Specialization: Algebra. Degree with distinction.

2 Publications and preprints

1. A note on 3-subgroups in the space Cremona group.
arXiv 2102.04522
2. Maximal log Fano manifolds are generalized Bott towers (joint with J. Moraga).
Submitted. arXiv 2012.00266

3. Bounding non-rationality of divisors on 3-fold Fano fibrations (joint with C. Birkar).
Submitted. arXiv 2007.15754
4. On semistable degenerations of Fano varieties.
Accepted to European Journal of Mathematics. arXiv 1909.08319
5. On non-rational fibers of del Pezzo fibrations over curves.
Mathematical Notes, 106 (6), 881–893, 2019.
6. Standard model of degree 1 del Pezzo fibrations.
Moscow Mathematical Journal, 18 (4), 721–737, 2018.
7. Hilbert-Samuel sequences of homogeneous finite type.
Journal of Pure and Applied Algebra 221, 821–831, 2017.

3 Teaching

- Algebraic Geometry, Math in Moscow, lectures and problem sessions, spring 2021.
- Topology 1, Math in Moscow, lectures, spring 2021.
- Introduction to Algebraic Geometry, course at Moscow Institute of Physics and Technology, fall 2020 – spring 2021.
- Algebra, Higher School of Economics, Department of Mathematics, problem sessions, fall 2020 – spring 2021.
- Topology 2, Math in Moscow, lectures and problem sessions, fall 2020.
- Topology 1, Math in Moscow, lectures and problem sessions, spring 2020.
- Algebra, HSE, Department of Mathematics. Spring 2019. Teaching assistant.
- Topology 1 (Prof. A. B. Sossinsky), Math in Moscow, problem sessions, fall 2018.
- Topology 2 (Prof. A. B. Sossinsky), Math in Moscow, problem sessions, spring 2018.
- Topology 1 (Prof. A. B. Sossinsky), Math in Moscow, problem sessions, fall 2017.
- Calculus, HSE, Department of Mathematics. Fall 2016 – spring 2017. Teaching assistant.

- Topology 2 (Prof. A. B. Sossinsky), Math in Moscow, problem sessions, spring 2017.
- Algebra 1, Higher School of Economics, Department of Mathematics. Fall 2016. Teaching assistant.
- Olympiad mathematics for schoolchildren at the Pedagogical Skills Center, fall 2016 – fall 2018.
- Educational Center Sirius, Sochi, classes in combinatorics for schoolchildren, December 2016.
- Topology 2 (Prof. A. B. Sossinsky), Math in Moscow, problem sessions, fall 2016.
- Cyclotomic polynomials, mini-course for schoolchildren at the educational center “Komanda”, July 2016.
- Differential geometry (Prof. A. V. Penskoï), teaching assistant, spring 2016.
- Knot theory (Prof. D. V. Mironov), Math in Moscow, problem sessions, spring 2016.
- Calculus on manifolds (Prof. A. V. Penskoï), teaching assistant, fall 2015.

4 Internships and visits

- University of Cambridge, October 2019.
- Edinburgh University, October 2019.
- Korean Institute for Advanced Study, June 2019.
- University of the Basque Country, July 2015.

5 Grants and stipends

- Young Russian Mathematics award, 2020.
- Simons Foundation fellowship, spring 2020, spring 2021.
- Russian Foundation for Basic Research 18-11-00121, 2018–2020. Leader: Yu. Prokhorov.
- Simons Foundation fellowship, 2016, 2017, 2018.
- Grant of the Foundation for the Advancement of Theoretical Physics and Mathematics BASIS, 2018. Leader: C. Shramov.

- HSE Presidential stipend, 2017.
- Russian Foundation for Basic Research, grant MK-6019.2016.1, 2016. Leader: V. Przyjalkowski.
- Russian Foundation for Basic Research 15-01-02164, 2015–2017. Leader: Yu. Prokhorov.
- R. L. Dobrushin stipend, 2014.

6 Conferences

- Zoom Algebraic Geometry Marathon, September 1st. Online.
Talk: “On non-rationality of degenerations of del Pezzo surfaces”.
- Transguanabara School of Algebraic Geometry. February 2020. Niteroi, Brazil.
Talk: “Semistable degenerations of Fano varieties”.
- Siberian summer school: Current developments in Geometry. September 2019, Novosibirsk.
Talk: “Semistable degenerations of Fano varieties”.
- Lutsino Fest 2019, July 2019, Moscow region.
Talk: “Semistable degenerations of Fano threefolds”.
- Géométrie Algébrique en Liberté XXVII, June 2019, Bucharest.
Poster: “Semistable degenerations of Fano varieties”.
- Birational geometry, Kähler-Einstein metrics and degenerations, June 2019, Shanghai.
Talk: “Semistable degenerations of Fano varieties”.
- Algebraic Geometry International Conference, June 2019, Seoul.
- Algebraic Geometry and Complex Geometry, CIRM, Luminy, December 2018.
- Moscow–Saint-Petersburg scientific meeting of the Laboratory of Mirror Symmetry and Automorphic forms, December 2018, Moscow.
Talk: “Rationality of quartic del Pezzo fibrations”.
- Workshop on birational geometry, October 2018, Moscow.
Talk: “Non-rational fibers in del Pezzo fibrations”.
- Siberian summer school: Current developments in Geometry. September 2018, Novosibirsk.
Talk: “Non-rational fibers in del Pezzo fibrations”.

- Conference on Lie groups and Lie algebras. August 2018, Samara.
Talk: “Non-rational fibers in del Pezzo fibrations”.
- Lutsino Fest 2019, July 2018, Moscow region.
Talk: “Non-rational fibers in del Pezzo fibrations”.
- Workshop on birational geometry, November 2017, Moscow.
Talk: “Standard models of degree 1 del Pezzo fibrations”.
- VII Conference on algebraic geometry and complex analysis. August 2017, Koryazhma, Arkhangelsk region.
Talk: “Standard models of del Pezzo fibrations”.
- Inaugural conference for the Laboratory of Mirror Symmetry and Automorphic forms. July 2017, Saint Petersburg.
Talk: “Standard models of del Pezzo fibrations”.
- Cremona Conference 2016, Basel, Switzerland, September 2016.
- 2011, 2012, 2013, 2014 Summer School “Geometry and Mathematical Physics” organized by Bogoliubov Laboratory of Geometric Methods in Mathematical Physics, Moscow State University. Voskresenskoe, Moscow region.
- 2013, 2014, 2015, 2016 Summer School “Algebra and Geometry”, Yaroslavl, Russia, organized by Laboratory of Algebraic Geometry and its Applications, Faculty of Mathematics, Higher School of Economics.
- 2014 Conference “Lie Algebras, Algebraic Groups and Invariant Theory”, Moscow, organized by Chair of Higher Algebra, Dept. of Mathematics, MSU and Independent University of Moscow.

7 Selected talks

- “Bounding non-rationality of divisors on Fano fibrations”, Laboratory of Algebraic Geometry and Homological Algebra, Moscow Institute of Physics and Technology, Dolgoprudny, Moscow region, October 2020.
- “On dual complexes of log Fano and log Calabi-Yau pairs”, ZOOMer Fest, April 2020.
- “Geometry of del Pezzo fibrations”, Steklov Mathematical Institute, Shafarevich Seminar, December 2019.
- “Semistable degenerations of Fano varieties”, University of Loughborough, October 2019.

- “Semistable degenerations of Fano varieties”, University of Bristol, October 2019.
- “Semistable degenerations of Fano varieties”, Edinburgh Geometry seminar (EDGE), October 2019.
- “On semistable degenerations of Fano varieties”, Laboratory of Algebraic Geometry and Homological Algebra, Moscow Institute of Physics and Technology, Dolgoprudny, Moscow region, September 2019.
- “Upper bounds of Manin type”, Iskovskikh seminar (Steklov Mathematical Institute), September 2019.
- “On semistable degenerations of Fano varieties”, HSE Laboratory of Algebraic Geometry seminar, September 2019.
- “Snc degenerations of Fano varieties”, at Iskovskikh seminar (Steklov Mathematical Institute), April 2019.
- “On the classification of three-dimensional Fano varieties with Picard rank 1” Student Birational Geometry Seminar (Steklov Mathematical Institute), February 2019.
- “On the rationality problem for del Pezzo fibrations of degree 4” at Iskovskikh seminar (Steklov Mathematical Institute), January 2019.
- “On non-rational fibers of del Pezzo fibrations” at Iskovskikh seminar (Steklov Mathematical Institute), October 2018.
- “Singularity theory and Inversion of adjunction” Student Birational Geometry Seminar (Independent University of Moscow), January 2018.
- “Standard model of degree 1 del Pezzo fibrations” at Iskovskikh seminar (Steklov Mathematical Institute), November 2017.
- “Birational involutions of the projective plane” at “Geometric structures on varieties” seminar (Higher School of Economics), November 2017.
- “Polynomials with integral coefficients equivalent to a given polynomial” at Iskovskikh seminar (Steklov Mathematical Institute), September 2017.
- “Non-normal del Pezzo surfaces” at “Geometric structures on varieties” seminar (Higher School of Economics), June 2017.
- “Sarkisov program in arbitrary dimension” at Iskovskikh seminar (Steklov Mathematical Institute), May 2017.
- “On the correspondence with null trace on surfaces” at Iskovskikh seminar (Steklov Mathematical Institute), February 2017.
- “Irrationality of surfaces in three-dimensional projective space” at Iskovskikh seminar (Steklov Mathematical Institute), December 2016.

- “ p -elementary subgroups of the plane Cremona group” at “Geometric structures on varieties” seminar (Higher School of Economics), October 2016.
- “Noether-Lefschetz Theorem” at Iskovskikh seminar (Steklov Mathematical Institute), March 2016.
- “Noether-Lefschetz Theorem” at Variety Seminar (Independent University of Moscow), March 2016.
- “Algebraic codes on del Pezzo surfaces” at Algebraic Codes Seminar (Institute for Information Transmission Problems), November 2016.
- “Abelian varieties and theta functions” at Introduction to Algebraic Geometry Seminar (Steklov Mathematical Institute), March 2016.
- “Hasse-Weil bound” at Student Geometric Seminar (Independent University of Moscow).
- “Linearizability of finite subgroups in the automorphism group of the complex plane” at Iskovskikh seminar (Steklov Mathematical Institute), October 2015.
- “Flexibility of the affine cones” at Lie groups and invariant theory seminar (Moscow State University), March 2015.
- “On the problem of classification of finite-dimensional algebras” at Lie groups and invariant theory seminar (Moscow State University), April 2013.