

Personal data

Born: December 15, 1989, Moscow, USSR

Citizenship: Russia (Russian Federation)

Permanent Address: 1-4-6 Schvernika Str., Moscow, 117449, Russia

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Education

Department of mathematics, Higher School of Economics, Moscow

Ph.D. Student, 2013 - Present, advisor: Misha Verbitsky.

Topic: Cohomology of hyperkähler manifolds.

Independent University of Moscow, Moscow

Ph.D. Student, 2012 - Present,

M.S. Mathematics on 24 May 2012, 2007-2012

Thesis: “Connections on the nilmanifolds” (in Russian), supervisor: Misha Verbitsky.

Lomonosov Moscow State University, Moscow

M.S. Chemistry and materials science, 2011 - 2013, Faculty of Materials Sciences.

Thesis: “The structure of transition metal complexes with pyrazole-based ligands” (in Russian), supervisor: Vladimir Dolzhenko.

B.S. Materials science with Honours, 2007 - 2011, Faculty of Materials Sciences.

Thesis: “The structure of copper complex of pyrazole-based ligands” (in Russian), supervisor: Vladimir Dolzhenko.

keywords: Theoretical chemistry, N-donor ligands with pyrazole moiety (2,6-bis(pyrazolyl)pyridines, Chemistry of coordination compounds, Heterocyclic chemistry.

School 1534, Moscow

2000-2007 (with Silver Medal)

Position

- Student-researcher, Laboratory of Algebraic Geometry and its applications, Department of mathematics, National Research University Higher School of Economics, 01.2014 - Present

Website: <http://ag.hse.ru/>, <http://bogomolov-lab.ru/>

Research: hyperkahler geometry, birational geometry, differential geometry, complex algebraic geometry.

- State Educational Institution Moscow City Palace of children (youth) Creativity, 10.2013 - Present

Website: <http://www.dnttm.su/>

Teacher of additional education (mathematics).

Fellowships and Awards

The Simons Foundation grant, 2013.

R.L. Dobrushin Fellowship for students 2012 (spring)

R.L. Dobrushin Fellowship for students 2010 (spring)

The President grant for the young Ph.D.'s (collaborator with S.Galkin and A. Soldatenkov), 2014-2016

Research Interests

Mathematics: Algebraic topology, Complex manifolds, Kähler manifolds Hyperkähler manifolds, Rozansky-Witten invariants, Geometry of flat manifolds.

Publications and preprints

Papers and preprints:

Неравенства для чисел Бетти гиперкэлеровых многообразий в размерности шесть, Математические заметки, том 99, 1, 2016.

The second Betti number of hyperkähler manifolds, Arxiv, 1401.0510 [math.AG].

Absolutely trianalytic tori in the generalized Kummer variety, Arxiv, 1504.08010 [math.AG], submitted to Advances in Mathematics.

Абсолютно трианалитические торы в обобщённом многообразии Куммера, V Школа-конференция по алгебраической геометрии и комплексному анализу для молодых математиков России, Коряжма, сборник тезисов, стр. 57.

Books:

LXXV Moscow Mathematical Olympiad (as one of authors), M.: MCCME, 2012, 72 pages.

LXXVI Moscow Mathematical Olympiad (as one of authors), M.: MCCME, 2013, 78 pages.

Problems of Moscow Chemical Tournaments (as one of authors), M.: MCCME, 2015, 44 pages.

Teaching

Applications of the group theory in physics and chemistry, Summer School Contemporary Mathematics, 2013.

Dirichlet Theorem (joint with A. Avilov), Summer School Contemporary Mathematics, 2014.

At Independent University of Moscow

Algebra - III, Course Assistant, Fall 2011.

Hyperbolic groups by Gromov, Course Assistant, Fall 2012.

Lie groups and algebras, Course Assistant, Spring 2013.

Measure theory, Course Assistant, Spring 2015.

At HSE

Differential geometry, Course Assistant, Spring 2013. (Math in Moscow program)

Introduction to algebraic geometry, Course Assistant, Spring 2013.

Differential geometry and vector bundles, Course Assistant, Fall 2013.

Complex algebraic geometry, Course Assistant, Spring 2014,

Lie groups and algebras, Course Assistant, Spring 2014.

Elliptic modular forms, Course Assistant, Spring 2015.

Differential topology, Course Assistant, Fall 2015.

Organizing activity

Member of Moscow Mathematical Olympiad Jury, 2008-2015.

Member of International Olympiad "Tournament of Towns" Jury 2007-2008.

Member of Moscow Chemical Tournament Jury & Organizing Committee 2011-2015.

Participation in conferences and workshops

1. Talk "*Connections on nilmanifolds*", Geometric structures on manifolds and their applications, Marburg, Germany, 1-7.07.2012.

2. Talk "*On the dynamics of codimension one holomorphic foliations with ample normal bundle*", Workshop on complex geometry and foliations, dedicated to the memory of Marco Brunella, September 17-21, 2012.

3. Доклад "*Связности на нильмногообразиях*", Летняя школа-конференция по проблемам алгебраической геометрии и комплексного анализа, Ярославль, 20-25.05.2013.

4. Master class: Around Torrelli's theorem for K3 manifolds, Strasbourg, 2013.

5. 3rd Swiss-French workshop on algebraic geometry, Enney, 27-31.01.2014.

6. Talk "*The second Betti number of hyperkähler manifolds*", The School "Carnival Differential Geometry" (Torino), 24-27.02.2014.

7. Moduli spaces of irreducible symplectic varieties, cubics and Enriques surfaces, Lille, March 24-28, 2014

8. Доклад “The inequalities involving the Betti numbers of hyperkähler manifolds”, Геометрическая теория управления и анализ на метрических структурах, 3-8.08.2014
9. Постер “Inequalities with Betti and Hodge numbers for hyperkaehler manifolds”, British Algebraic Geometry meeting (BrAG) (Warwick), 19-21.09.2014.
10. Poster “Trianalytic subvarieties in hyperkahler manifolds”, Hyperbolicity-2015, Ilhabela, Brazil, 5-15.01.2015.
11. Wokshop, “Geometry and arithmetic of hyperkähler manifolds”, Hannover, 8-11.02.2015.
12. Workshop “Derived categories and birational geometry”, Warwick, 1-6.06.2015.
13. V Школа-конференция по алгебраической геометрии и комплексному анализу для молодых математиков России, Коряжма, 17-22.08.2015.
14. Conference “Geometry and Dynamics on Moduli Spaces”, Oxford, 28.09.-02.10.2015.

Seminar talks

Absolutely trianalytic tori in the generalized Kummer varieties, MAGIC seminar, Imperial College, 28.09.2015.

Betti numbers of hyperkahler manifolds, Algebra/Algebraic Geometry seminar, University of Sheffield, 29.09.2015.

Complex structures on manifolds seminar, Laboratory of algebraic geometry and its applications,

On Fundamental Groups of Complete Affinely Flat Manifolds (on Milnor’s work), Fall 2011,

On varieties whose universal cover is product of curves (After Catanese and Franchiosi), Spring 2012,

Contact Dehn surgery and P-property of knots (After Geiges), Spring 2012,

Proof of P-property: instanton Floer homology, Donaldson invariant, Chern-Simmons functional, Spring 2012.

Holomorphis dynamics on K3 surfaces, Spring 2013.

Futaki invariant, 27.06.2013.

Cohomology properties of kahler manifolds, 10.10.2013.

Hodge ring of kahler manifolds, 21.11.2013.

Volume preserving complex structures on tori, 13.02.2014.

Special Kahler Manifolds, 10.04.2014.

Monodromy group of the Hilbert scheme of K3, 25.09.2014.

On the Guan’s examples of non-kaehler manifolds, 20.11.2014.

Rozansky-Witten invariants, 26.02.2015.

On automorphisms of hyperkahler manifolds, 15.10.2015.

Dobrushin laboratory seminar, ИТП

Connections on nilmanifolds, 18.09.2012.

Chemistry

Papers:

Synthesis and Structure of New Copper(II) Nitrate Complexes with 2,6-Bis(pyrazolyl)pyridine, Z. Anorg. Allg. Chem. 2014 , 640, (2), 347-351.

Languages: Russian, English, Deutsch (beginner).

Hobbies: Football: player of department's team, captain of FC Forza (MSU Football Championship), numismatics.

References:

Misha Verbitsky, Higher School of Economics, Laboratory of Algebraic Geometry, verbit@mccme.ru