

Evgeny Smirnov

Contact details

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Current positions

2009–present

Associate professor, Department of Mathematics, Higher School of Economics, Moscow, Russia

2010–present

Research fellow, Laboratory of algebraic geometry and its applications, Higher School of Economics, Moscow, Russia

2009–present

Research fellow, Laboratoire J.-V. Poncelet (UMI 2615 du CNRS), Moscow, Russia

2015–present

Vice-president, Independent University of Moscow, Russia

Areas of specialization

Equivariant algebraic geometry, algebraic groups, algebraic combinatorics

Positions held previously

2010–2015

Instructor, Independent University of Moscow, Russia

2007–2009

Postdoctoral research fellow, Hausdorff Center for Mathematics, Universität Bonn, Germany

Education

2004–2007

PhD in Mathematics, Université Joseph Fourier (Grenoble I), France
Thèse en cotutelle (joint graduate program) with the Independent University of Moscow and Lomonossov Moscow State University;
Thesis: *Orbits of a Borel subgroup on the product of two Grassmannians*
Supervisors: Michel Brion, Ernest Vinberg
Official referees: Bernard Leclerc, Andrei Zelevinsky

1999–2004

Specialist (roughly MSc equivalent) in Mathematics
Independent University of Moscow
Moscow, Russian Federation

1999–2004

Specialist (roughly MSc equivalent) with distinction in Mathematics
Department of Mechanics and Mathematics, Lomonossov Moscow State University
Moscow, Russian Federation

Publications and preprints

2017

Singularities of divisors on flag varieties via Hwang's product theorem, to appear in Bulletin of the Korean Mathematical Society, 2017. Preprint arXiv:1609.07771, 6 pages.

Multiple flag varieties, submitted, 45 pages

2016

(with Grigory Merzon) *Determinantal identities for flagged Schur and Schubert polynomials*, European Journal of Mathematics, **2:1**, 227–245 (2016)

(with Victor Kleptsyn) *Ribbon graphs and bialgebra of Lagrangian subspaces*, Journal of Knot Theory and its Ramifications, **26** (2016), 1642006 (26 pages)

Grassmannians, flag varieties and Gelfand–Zetlin polytopes, in: Recent Developments in Representation Theory. Proceedings of Maurice Auslander Distinguished Lectures and International Conference, Contemporary Mathematics series, vol. 673, 179–226. American Mathematical Society, 2016.

2012

(with Valentina Kiritchenko and Vladlen Timorin) *Schubert calculus and Gelfand–Zetlin polytopes*, Uspekhi Mat. Nauk, **64**, No. 4 (406), 89–128 (2012) (in Russian). English translation: Russian Math. Surveys **64:4**, 685–719 (2012).

(with Nicolas Perrin) *Springer fiber components in the two columns case for types A and D are normal*, Bulletin de la Société Mathématique de France, **140:3**, 309–333 (2012).

2008

Desingularizations of Schubert varieties in double Grassmannians, Functional Analysis and its Applications, **42** (2008), no. 2, 126–134.

2007

Orbites d'un sous-groupe de Borel dans le produit de deux grassmanniennes, 70 pages, thèse de doctorat, Université de Grenoble I

Bruhat order for two subspaces and a flag, 30 pages, preprint arXiv:0704.3061.

2005

On generating sets of ideals defining S -varieties, Vestnik Moskov. Univ. Ser. I Mat. Mekh. 70 (2005), no. 3, pp. 3–6 (in Russian). English translation: Moscow Univ. Math. Bull. 60 (2005), no. 3, 1–4 (2006).

Expository publications

2015

(with Valentina Kiritchenko and Vladlen Timorin) *Ideas of Newton–Okounkov bodies*, Snapshots of Modern Mathematics from Oberwolfach, 12 pages. <http://www.mfo.de/math-in-public/snapshots>

Three glances on the Aztec diamond, 48 p., MCCME, Moscow, 2015 (in Russian). ISBN 978-5-4439-0279-1.

Young diagrams and q -combinatorics, Kvant, 1 (2015), 7–12 (in Russian).

2014

Young diagrams, plane partitions and alternating sign matrices, 64 p., MCCME, Moscow, 2014 (in Russian). ISBN 978-5-4439-0137-4.

2009

Reflection groups and regular polyhedra, 48 p., MCCME, Moscow, 2009 (in Russian). ISBN 978-5-94057-525-2.

Selected seminar and conference presentations

2017

Sixth school and conference in Lie algebras and invariant theory, Moscow, Russia

Colloquium talk, Steklov Mathematical Institute, Moscow, Russia

2015

Magadan Algebraic Geometry International Conference (MAGIC), Magadan, Russia

Geometry and Quantization — GeoQuant 2015, Madrid, Spain

Fifth summer school in Lie algebras and invariant theory, Samara, Russia

Torus Actions in Geometry, Topology, and Applications, Skolkovo, Russia

2014

Colloquium talk, Nizhny Novgorod Mathematical Society, Nizhny Novgorod, Russia

Singularity Day, University of Warwick, UK

Colloquium talk, Durham University, UK

Topology of torus actions and its applications to geometry and combinatorics (ICM 2014 satellite), KAIST, Daejeon, Republic of Korea

Convex bodies and representation theory, BIRS, Banff, Canada

Fourth school and conference on Lie algebras and representation theory, Moscow, Russia;

2013

Mini-course “Grassmannians and flag varieties”, University of Edinburgh, Scotland

Maurice Auslander Distinguished Lectures and International Conference, Woods Hole, MA, USA

2012

Mini-course “Flag varieties”, Third summer school in Lie algebras and invariant theory, Togliatti, Russia

“Algebra and Geometry”: conference in honour of A. Khovanskii’s 65-th birthday, Moscow, Russia

Third Workshop on Moduli Spaces, Cluster Algebras, Knots, and Topological Recursion, Moscow, Russia

Workshop “Cluster Algebras and Combinatorics”, Graz, Austria

2011

Mini-course “Reflection groups”, Summer school in algebra and algebraic geometry, Ekaterinburg, Russia

Second school and conference on Lie algebras and representation theory, Moscow, Russia;

2010

Colloquium talk, Université de Bourgogne, Dijon, France

International Algebraic Conference in honour of A. V. Yakovlev’s 70th birthday, St. Petersburg, Russia

2009

Summer school in Lie algebras and invariant theory, Samara, Russia

Mini-course “Geometry of Grassmannians”, Jacobs University, Bremen, Germany

Russian–Japanese School in Representation Theory, University of Kyoto, Japan

Winter solstice master class on enveloping algebras, Weizmann Institute of Science, Israel

2004–2017

Seminar talks in Moscow, St. Petersburg (Russia), Paris, Grenoble, Lyon, Montpellier, Dijon, Rennes (France), Bonn, Cologne, Bielefeld (Germany), Basel (Switzerland), Warwick, Edinburgh, Birmingham (UK), Cornell, Minneapolis (USA)

Organization of conferences

2017

Alexey Zykin memorial miniconference, Independent University of Moscow and Laboratoire J.-V. Poncelet, June 15, 2017

Transformation Groups 2017. Conference dedicated to Prof. Ernest Vinberg on the occasion of his 80th birthday. Independent University of Moscow and Skoltech, December 14–18, 2017

Honors and fellowships

2012, 2013, 2017

Best teacher award, Higher School of Economics

2012

Dynasty Foundation prize for young mathematicians holding a Ph.D. degree

2011–2017

Jim Simons Foundation – IUM fellowship

Research grants

Russian Science Foundation grants:

2015–present 14-11-00414 (PI Victor Buchstaber)

2014–2016 14-21-00053 (PI Misha Verbitsky)

Russian Foundation for Basic Research grants

2012–2013 12-01-33101-mol-a-ved

2012–2013 12-01-31429-mol-a

2012–2014 12-01-00944-a

2011–2013 11-01-00289-a

2010–2012 10-01-00540-a

Russian Foundation for Basic Research and Centre National de Recherches Scientifiques grants

2011–2013 11-01-93105

2010–2012 10-01-93111

2007–2009 07-01-92214

Language skills

Russian

Native

English

Fluent

French

Fluent

German

Fair knowledge

Refereeing and reviewing

Referee service

Transformation Groups, Journal of Algebraic Combinatorics, Journal of Lie Theory, IMRN, Advances in Applied Mathematics, Indagationes Mathematicae, Sbornik:Mathematics, Functional Analysis and its Applications

Reviewing

AMS Math Reviews, Zentralblatt MATH

Membership in professional organizations

2008–present

Société Mathématique de France

Personal details

Date and place of birth

November 9, 1982, Moscow, USSR

Citizenship

Russian

Marital status

Married, one child (born in 2016)

Last updated: August 15, 2017