# ANNA FELIKSON

## Curriculum Vitae

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### **EDUCATION**

1989–1993: Specialized mathematical high school 1543, Moscow.

1992–1997: Undergraduate study at the Independent University of Moscow.

M.S., 1997: Mathematics.

1993–1998: Undergraduate study at the Moscow State University;

M.S., 1998: Mathematics and applied mathematics.

**1997–2002:** Ph.D. study at the Moscow State University and at the Independent University of Moscow.

Ph.D., 2002: Mathematics. Title: Coxeter decompositions of polytopes.

Advisers: E. B. Vinberg, O. V. Shwarzman.

### RESEARCH INTERESTS

Cluster algebras, Coxeter groups, hyperbolic geometry, combinatorics of Coxeter polytopes, moduli spaces, low-dimensional topology, Kac-Moody algebras.

### **EMPLOYMENT**

2021-present: Professor in Pure Mathematics, Durham University.

2016–2021: Senior Lecturer in Pure Mathematics (Associate Professor), Durham University.

2013–2016: Lecturer in Pure Mathematics, Durham University.

2012: DFG research associate, Jacobs University Bremen.

2010–2011: Visiting researcher, Jacobs University Bremen.

2009–2010: Researcher, Max Planck Institute for Mathematics, Bonn.

2007–2008: INTAS Postdoctoral Fellow, University of Fribourg, Switzerland.

2002–2008: Researcher, Independent University of Moscow.

1997–2002: Assistant, Independent University of Moscow.

1996–2003: Teacher of mathematics, specialized mathematical high school 1543, Moscow.

## **SUPERVISION**

PhD Students: Oliver Daisey (joint supervision with Tom Ducat and Yue Ren), since October 2021

John Blackman (PhD 2020). Jon Wilson (PhD 2017).

3011 Wilson (1 11D 2011).

MSc Students 1 in 2013, 3 in 2017, 2 in 2023.

### **GRANTS**

**10.2015–1.2018.** EPSRC Standard Grant EP/N005457/1 (PI, £180K).

Research Associates: Ilke Canakci 10.2015–12.2016.;

Philipp Lampe (5.2017–4.2018).

**01.2012–12.2013.** DFG research position (grant FE 1421/2) at Jacobs University Bremen, PI, EUR 151K (interrupted after 1 year because of moving to Durham).

**01.2007**–**12.2009.** RFBR research grant 07-01-00390-a (co-PI).

01.2007-12.2008. INTAS postdoctoral fellowship YSF-1000014-5916 (PI).

01.2006-12.2007. Grant NSh-5666.2006.1 of President of Russia (co-PI).

# RESEARCH VISITS

November 2024 OIST, Okinawa (intended).

September 2024-December 2024 MPIM, Bonn.

**September 2021-December 2021** INI, Cambridge, programme "Cluster algebras and representation theory".

May 2018. HSE, Moscow.

September 2017. TU Berlin.

August-December 2012. MSRI, Berkely.

July 2010-December 2011. Jacobs University Bremen, Germany.

January-March 2009. Institut des Hautes Études Scientifiques, Bures-sur-Yvette.

November 2004-June 2005. Max Planck Institute for Mathematics, Bonn.

September 2004. University of Fribourg, Switzerland.

May, July-September 2002. University of Fribourg, Switzerland (post-doc SNF).

**April–May 1998.** University of Bielefeld, Germany (the program SFB 343 "Diskrete Strukturen in der Mathematik".)

### RECENT TALKS

- January, 2025, Workshop "Perspectives on Markov Numbers", Banff (intended).
- October, 2024, Conference "New trends in Geometry, Combinatorics, and Mathematical Physics", Oleron Island, France (intended).
- 8 October, 2024, Cologne Algebra and Representation Theory Seminar.
- 13 September, 2024, Conference "Journées de Géométrie hyperbolique", Fribourg, Switzerland.
- 21 May, 2024, King's College London's Geometry Seminar.
- 3 May, 2024, Pure Mathematics Colloquium, Southampton.
- 15 January, 2024, Conference "Cluster Algebras and Its Applications", Oberwolfach, 2403.
- 15 November, 2023, North British Geometric Group Theory meeting, Aberdeen.

- 5 June, 2023, Conference "Cluster algebras and Poisson geometry", Levico Terme, Italy.
- 15 March, 2023 Seminar "Graphs on surfaces and curves over number fields", (online).
- 6 February, 2023 Pure Maths Colloquium, Durham.
- 28 June, 2022, Workshop on Poisson structures and Noncommutative Integrability, U. of Kent.
- 22 June, 2022, Shabat-70 conference (online).
- 4 May, 2022, Geometry and Symmetry Seminar, Nottingham, (online).
- 4 April, 2022, Differential Geometry Seminar, TU Wien, (online).
- 30 March, 2022, Topology Seminar, Aberdeen.
- 21 March, 2022, Workshop "Supergeometry and Bracket Structures in Mathematics and Physics", Fields Institute, Toronto.
- 9 March, 2022, workshop "Arithmetic reflection groups and crystallographic packings", AIM, San Jose.
- 11 February, 2022, Algebra Seminar, York.
- 3 December, 2021, Seminar "Selected Topics in Mathematics. Online Edition", Liverpool, (online).
- 11 November, 2021, Workshop "Interdisciplinary applications of cluster algebras", INI, Cambridge, withing the programme "Cluster algebras and representation theory".
- 16 July, 2021 LMS Undergraduate Summer School 2021, colloquium talk (online).
- 2 February, 2021, Leeds algebra seminar, (online).
- 17 December, 2020, "Arithmetic reflection groups and crystallographic packings", AIM workshop, (online).
- 28 November, 2020 ICMS, Integrable Days, 65th birthday celebration for Alexander P. Veselov (online).
- 26 October, 2020, Pure seminar in Algebra/Geometry, Newcastle (online).
- May, 2020 "Geometry, Combinatorics and Markov Numbers" meeting in Liverpool, (cancelled due to COVID-19).
- March, 2020, Workshop "Cluster Algebras and the Geometry of Scattering Amplitudes", Higgs Centre for Theoretical Physics, Edinburgh.
- 10 December, 2019, Workshop "Discrete Subgroups of Lie Groups", Banff.
- 28 November, 2019, 56 ARTIN meeting, Edinburgh.
- 17 September, 2019, Colloquium at Open University.
- 21 June, 2019, Cluster algebras 2019, Kyoto.
- 24 May, 2019, LMS Women in Maths event, University of Kent.
- April 7-13, 2019, Mini-course (2 hours) at Mini-Workshop 1915b: Reflection Groups in Negative Curvature, Oberwolfach.
- March 22, 2019, Seminar on Algebra Representations, UNAM, Mexico-city.
- March 4, 2019 Invited LMS lecture in MathSoc, Lancaster.

- February 21, 2019 Geometry, Topology and Mathematical Physics Seminar, Manchester.
- February 8, 2019, Geometric Group Theory Seminar, Cambridge.
- January 25, 2019, Algebra, geometry and topology seminar, University of Kent.
- December 10, 2018, Workshop on Cluster structures in geometry, physics, combinatorics and representation theory, Jerusalem.
- July 11-14, 2018, Workshop on Cluster algebras and Algebraic Geometry, 3 lectures, Nottingham.
- June 29, 2018, LMS Postgraduate meeting, London.
- June 14, 2018, North British Geometric Group Theory meeting, St. Andrews.
- June 6, 2018, Workshop on Galois Covers, Grothendieck-Teichmüller Theory and Dessins d'Enfants, Leicester.
- May 18, 2018 Seminar on Lie Algebras, Riemann Surfaces and Mathematical Physics, Independent University of Moscow.
- May 17, 2018, Seminar on Characteristic classes and Intersection theory, HSE, Moscow.
- May, 2018, Cluster Algebras and Math Physics, East Lansing (Michigan State University), poster.
- April 21, 2018, conference for Early Career Mathematicians, Durham.
- March 19, 2018, conference "Cluster Algebras: Twenty years on", CIRM, Luminy (Marseille, France).
- January 29, 2018, Selected topics in Mathematics Seminar, Liverpool.
- December 19, 2017, G. B. Shabat's Seminar, MSU, Moscow.
- December 15, 2017, Conference "Transformation groups 2017" dedicated to Prof. Ernest Vinberg on the occasion of his 80th birthday, Moscow.
- October 25, 2017, Geometry and Math Physics seminar, Loughborough.
- October 4, 2017, Pure Maths Colloquium, Sheffield.
- September 18-20, 2017, Summer School "Discrete Models in Geometry and Mathematical Physics", 3 lectures, TU Berlin.
- June, 2017, Algebraic and Geometric Combinatorics of Reflection Groups, Montreal.
- May 22, 2017, Algebra Seminar, York.
- March 24, 2017, Journées de Géométrie hyperbolique, Fribourg.
- January 18, 2017, East Midlands Seminar in Geometry, Sheffield.
- October 20, 2016, Geometry and Topology Seminar, Durham.
- July 21, 2016, Representation theory Seminar, Bielefeld.
- July 13, 2016, Algebraic Combinatorics and Group Actions, Herstmonceux Castle, UK.
- May 6, 2016, Quivers and Bipartite Graphs: Physics and Mathematics, University of Notre Dame, London.
- March 11, 2016, Workshop on Cluster Algebras and Geometry, Münster.

- November 27, 2015, Integrable Day at Loughborough.
- November 20, 2015, Departamental Colloquium in Liverpool.
- November 18, 2015, Undergraduate Colloquium, Durham.
- July 23, 2015, Workshop on Lie Groups and Algebraic Groups, Bielefeld.
- June 5, 2015, Workshop on Cluster Algebras and Finite Dimensional Algebras, Leicester.
- May 7, 2015, Geometry Seminar, Manchester.
- **December 15, 2014**, Conference in Cluster Algebras in Combinatorics and Topology, KIAS, Seoul.
- October 29, 2014, Pure Maths Seminar, Lancaster.
- October 17, 2014, LMS workshop on Cluster Algebras and Preprojective Algebras at the School of Mathematics, Cardiff.
- May 29, 2014, 4th Workshop on Combinatorics of Moduli Spaces, Cluster Algebras, and Symplectic Invariants, Moscow.
- February 7, 2014, Pure Maths Seminar, Southampton.
- October 1, 2013, Pure Maths Seminar, Leicester.
- May 16, 2013, Algebra and Geometry Seminar, Newcastle.
- March 20, 2013, Workshop on Triangulations and Mutations, Newcastle.
- February 11 , 2013, Pure Maths Colloquium, Durham.
- February 7, 2013, Geometry and Topology Seminar, Durham.
- December 28, 2012, Seminar on Lie Algebras, Riemann Surfaces and Mathematical Physics, Independent University of Moscow.
- October 31, 2012, Workshop on Cluster Algebras in Combinatorics, Algebra, and Geometry, MSRI, Berkeley.
- June 23, 2012, Workshop on Geometry, Representation Theory and Clusters, Leicester.
- March 8, 2012, Geometry Seminar, Durham.
- March 5, 2012, Algebra, Geometry, and Intergable Systems Colloquium, Leeds.
- July 21, 2011, Workshop on Lie Groups and Algebraic Groups, Bielefeld.
- December 24, 2010, Seminar on Lie Algebras, Riemann Surfaces and Mathematical Physics, Independent University of Moscow.
- December 15, 2010, Seminar on Lie Groups and Invariant Theory, Moscow State University.
- October 5, 2010, Dynamics Seminar, Jacobs University Bremen.
- July 2, 2010, Teichmüller Theory and its Interactions in Mathematics and Physics, Centre de Recerca Matematica, Barcelona, Spain.
- June 16, 2010, Seminar on Groups and Geometry, Bielefeld.
- June 3, 2010, Computational Algebra and Number Theory seminar, Dusseldorf.

- May 27, 2010, 2nd Workshop on Combinatorics of Moduli Spaces, Cluster Algebras, and Symplectic Invariants, Moscow.
- April 20, 2010, Oberseminar on Algebra and Algebraic Combinatorics, Hannover.
- March 26, 2010 The second W.Killing and K.Weierstrass Colloquium, Braniewo, Poland.
- February 1, 2010, Topics in Topology seminar, MPI, Bonn.

### OTHER PROFESSIONAL ACTIVITIES

## • Refereeing/Reviewing/Evaluating:

Referee for (over 40 journals): Advances in Mathematics; Algebraic and Geometric Topology; Annales de l'Institut Fourier; Annals of Combinatorics; Bulletin of the LMS; Canadian Mathematical Bulletin; Communications in Mathematics; Compositio Mathematica; Discrete and Computational Geometry; Electronic Research Announcements in Mathematical Sciences; l'Enseignement Mathematique; European Journal of Combinatorics; Experimental Mathematics; FPSAC 2023; Geometriae Dedicata; Journal of Algebra; Journal of Combinatorial Theory, Series A; Journal of Differential Geometry; Journal of Geometry and Physics; Journal of Lie Theory; Journal of Modern Dynamics; Journal of Pure and Applied Algebra; International Mathematical Research Notices; Involve, a Journal of Mathematics; Izv. RAN, Seriya matem.; Mathematics of Computation; Mathematische Nachrichten; Matematicki Vesnik; Pacific Journal of Mathematics; Proceedings of the Edinburgh Mathematical Society; Proceedings of the Japan Academy, Series A; Proceedings of the LMS; Publications mathématiques de l'IHES; Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales. Serie A. Matemáticas; Science China Mathematics; Selecta Mathematica; SIGMA; Studia Scientiarum Mathematicarum Hungarica: Combinatorics, Geometry and Topology; The Mathematical Intelligencer; Transformation Groups; Transactions of AMS.

#### External Referee for

- peer review of grant applications to National Science Centre Poland (2024);
- peer review of grant applications to Independent Research Fund Denmark (2021);
- peer review of grant applications to EPSRC (2019);
- peer review of grant applications to BASIS fundation (2019);
- peer review of grant applications to The Israel Science Foundation (2018);
- peer review for application to "Russian Young Mathematics" contest (2017);
- peer review of grant applications to Austrian Science Fund (FWF) (2017);
- peer review of grant applications to NSA Mathematical Sciences Grant Program (2015);
- peer review of grant applications to French National Research Agency ANR (2015).
- Panel member in NT-1 panel for Swedish Vetenskapsrådet (Science Council) evaluating applications for research support in mathematics, in 2018-2019, 2019-2020 and 2020-2021.
- Mathematics Discipline Reviewer for Research Quality Review, University College Cork, Ireland (2015).
- External Referee on new book proposals to Cambridge University Press (two book drafts considered, 2018, 2022).
- External Referee on new book proposal to Springer Nature, Birkhäuser mathematics book program (1 book draft considered, 2023).
- Reviewer: member of the UKRI Talent Peer Review College (PRC).

### - PhD examiner (4 internal, 9 external):

- external reviewer: Azzurra Ciliberti, (2024, Rome)
- internal: Wanchalerm Promduang, (2022, Durham);
- external: Grigory Chelnokov, (2021, Moscow);
- external: Thomas Honey, (2020, Manchester);
- external: Joe Pallister, (2020, Kent);
- external: Diego Fernando Velasco Martínez, (2019, UNAM);
- internal: Irene Pasquinelli (2018, Durham);
- external: Thomas Booker-Price (2017, Lancaster);
- internal: John Lawson (2017, Durham);
- external: Rafael Guglielmetti (2017, Fribourg);
- external: Hannah Vogel (2016, Graz);
- external: Heather Riley (2015, Liverpool);
- internal: John Mcleod (2013, Durham).

## • Association for Mathematical Research (AMR):

- Member of AMR Reviews Scientific Committee selecting and refereeing papers for AMR Reviews (since 2022).
- Member of AMR-RMA Scientific Committee: Scientific Committee for AMR-RMA Association for Mathematical Research – Recent Andvances in Mathematics Lecture Series (since 2023).
- Member of Editorial Board for Journal of AMR (since 2023).
- Resources: Research-supporting webpages: collecting resources and maintaining webpage, (since 2023, in progress).

### • Organising:

- Co-Organiser of a School and a conference "Representation theory at the intersection of algebraic geometry, combinatorics and polytopes", 18th-30th of November 2024, OIST, Okinawa, Japan.
- Co-Organiser of LMS Northern Regional Meeting and Workshop "Continued Fractions and SL2-tilings", Durham, 25 - 28 March 2024.
- Co-Organiser of OCAS (Online Cluster Algebra Seminar), weekly seminar, 2020-2021.
- Organiser of North British Geometric Group Theory Seminar meetings in Durham:
  12 March 2014, 4 March 2015, 22 February 2016, 18 October 2017,
  6 February 2019, 27 April 2022, 19 February 2025.
- Organiser of Durham Pure Maths Colloquium (09.2013 03.2019).

### • Administrative duties:

- Member of Department Progression and Promotion Committee (DPPC) (since 10.2021)
- Chair of Board of Examiners for MSc in Math Sciences (11.2019-9.2024)
- Secretary of Board of Examiners for MSc in Math Sciences (06.2014 10.2019)
- **Member** of Research Committee (10.2015 12.2023)
- Secretary of Management Board of MSc in Mathematical Sciences (10.2014 10.2019)
- <u>Translation</u> into Russian of W. P. Thurston's book "Three-Dimensional Geometry and Topology" (parts 1, 2).

### TEACHING AT DURHAM

**Current:** • Course: Geometry III/V;

• Projects: "Geometric constructions" (2 students in Year III 2023/2024);

"Ptolemy Relation and Friends" (3 students in Year IV 2023/2024);

Previous: • Courses: Geometry III/IV, Riemannian Geometry IV, Differential Geometry III.

o Tutorials: Complex Analysis II, Analysis I, Linear Algebra I.

o Projects: "Non-crossing Partitions" (2 students in Year IV 2022/2023);

"Associahedron" (3 students in Year III 2020/2021);

"Billiards and Kaleidoscopes" (3 students in Year IV 2020/2021);

"Geometries" (3 students in Year III 2019/2020);

"Combinatorics of polytopes" (2 students in Year III 2018/2019);

"Continued Fractions" (2 students in Year IV, 2018/2019).
"Projective geometry" (2 students in Year III, 2017/2018);

"Cluster algebras" (2 students in Year IV, 2017/2018);

"Billiards" (2 students in Year III, 2016/2017);

"Markov Numbers" (2 students in Year IV, 2016/2017).

"Curves on Surfaces" (1 student in Year IV, 2015/2016). "Frieze patterns" (4 students in Year III, 2014/2015).

"Catalan numbers" (4 students in Year III, 2013/2014).

### PAST TEACHING

2007-2008. Math club for 12-16 years old students, Michigan State University.

2006 "Math in Moscow" program for American students at the Independent Univer-

sity of Moscow:

• Non-Euclidean Geometry, Topology.

1997–2007 Independent University of Moscow:

- o Algebra, Geometry, Hyperbolic Geometry, Topology, Möebius Geometry, Complex Analysis;
- o Advanced algebra, Riemannian Geometry, Differential Geometry.

1996–2003 Teacher of mathematics at the specialized mathematical high school 1543, Moscow:

- o various courses including set theory, combinatorics, basic number theory, algebra, calculus;
- o 1999–2000. "Vector fields, manifolds and non-Euclidean geometry" for last year students.
- 1998-1999. A course "Amusing Math" for 10-years old students.

### **OUTREACH ACTIVITIES**

## • Online courses for Ukrainian 10-13 years old children:

Developing and delivering original courses, aiming to bring participants to various topics in contemporary mathematics through creative problem solving.

- October 2023 June 2024 "Japanese Temple Geometry" (32 hours).
- October 2022 June 2023 Geometry courses:
  - "Geometry in Figures" (9 hours),
  - -"Geometries" (10 hours),
  - -"How to solve it" (10 hours).
- October 2022 June 2023 "Geometry around us" (29 hours).
- June September 2022. "Mathematics and Art" (11 hours).

### • In-person talks:

- March 2023 talk for Maths Unbounded day, for 270 high school students, Durham.
- October 12, 2019. Saturday Morning Science session at Durham University.
- December 21, 2018. Talk for high school students, School 1543, Moscow.
- May 16, 2018. Talk for high school students, School 1543, Moscow.
- May 3, 2017. Talk for high school students, Durham Johnston School, Durham.
- September 25, 2012. Advance Section of The Berkeley Math Circle, Berkeley.
- March, 1998 Talk for high school students, School 2, Moscow.

## PERSONAL INFORMATION

Born: June 11, 1976, Moscow, USSR.

Citizenship: citizen of UK, citizen of Russia.

Marital status: married, three children (born 2000, 2003 and 2011).

Languages: Russian (native), German (basic), English.

#### **PUBLICATIONS**

#### RECENT PREPRINTS

- [1] (with O. Karpenkov, K. Serhiyenko, P. Tumarkin) 3D Farey graph, lambda lengths and  $SL_2$ -tilings, arXiv:2306.17118.
- [2] Ptolemy relation and Friends, AMR review, arXiv:2302.06379.

### PUBLISHED PAPERS

- [3] (with P. Tumarkin, E. Yildirim), Polytopal realizations of non-crystallographic associahedra, accepted by Algebraic Combinatorics.
- [4] (with P. Tumarkin) Cluster algebras of finite mutation type with coefficients, accepted to Journal of Combinatorial Algebra.
- [5] (with P. Lampe) Exhange graphs for mutation-finite non-integer quivers, Journal of Geometry and Physics, (2023) 188, 29 pages.
- [6] (with P. Tumarkin) Mutation-finite quivers with real weights, Forum of Mathematics, Sigma (2023) 11: e9, 22 pages.
- [7] (with I. Canakci, A. Garcia Elsener, P. Tumarkin) Friezes for a pair of pants, Seminaire Lotharingien de Combinatoire (2022) 86B: 32, 12 pages.
- [8] (with J. W. Lawson, M. Shapiro and P. Tumarkin) Cluster algebras from surfaces and extended affine Weyl groups, Transform. Groups. 26 (2021), 501–535.
- [9] (with I. Canakci) *Infinite rank surface cluster algebras*, Advances in Mathematics 352 (2019): 862–942.
- [10] (with P. Tumarkin) Geometry of mutation classes of rank 3 quivers, Arnold Mathematical Journal, (2019) 5(1): 37–55.
- [11] (with P. Tumarkin) Acyclic cluster algebras, reflection groups and curves on a punctured disc, Advances in Mathematics 340 (2018) 855–882.
- [12] (with P. Tumarkin) Bases for cluster algebras from orbifolds, Advances in Mathematics, 318 (2017), 191–232.
- [13] (with S. Natanzon) Double pants decompositions revisited. Moscow Math. J., 17(1): 51–58.
- [14] (with P. Tumarkin) Coxeter groups, quiver mutations and geometric manifolds, J. London Math. Soc., 94 (2016), 38–60.
- [15] (with P. Tumarkin) Coxeter groups and their quotients arising from cluster algebras, Int. Math. Res. Notices (2016), 5135–5186.
- [16] (with J. Fintzen and P. Tumarkin) (2014). Reflection subgroups of odd-angled Coxeter groups. Journal of Combinatorial Theory, Series A 126 (2014), 92–127.
- [17] (with M. Shapiro, H. Thomas and P. Tumarkin) Growth rate of cluster algebras. Proc. London Math. Soc. 109 (2014), 653–675.
- [18] (with P. Tumarkin) Essential hyperbolic Coxeter polytopes. Israel Journal of Mathematics 199 (2014), 113–161.

- [19] (with M. Shapiro and P. Tumarkin) Cluster algebras and triangulated orbifolds. Advances in Mathematics 231 (2012), 2953–3002.
- [20] (with S. Natanzon) Moduli via double pants decompositions. Differential Geometry and its Applications 30 (2012), 490–508.
- [21] (with M. Shapiro and P. Tumarkin) Cluster algebras of finite mutation type via unfoldings. Int. Math. Res. Notices 8 (2012), 1768–1804.
- [22] (with M. Shapiro and P. Tumarkin) Skew-symmetric cluster algebras of finite mutation type. J. Eur. Math. Soc. 14 (2012), 1135–1180.
- [23] (with P. Tumarkin) Hyperbolic subalgebras of hyperbolic Kac-Moody algebras. Transform. Groups 17 (2012), 87–122.
- [24] (with S. Natanzon) Labeled double pants decompositions. Moscow Math. J. 11 (2011), 505–519.
- [25] (with S. Natanzon) Double pants decompositions of 2-surfaces. Moscow Math. J. 11 (2011), 231–258.
- [26] (with M. D. Sikiric and P. Tumarkin) Automorphism group of root systems matroids. Europ. J. Combin 32 (2011), 383–389.
- [27] (with P. Tumarkin) Reflection subgroups of Coxeter groups. Trans. Amer. Math. Soc. 362 (2010), 847–858.
- [28] (with P. Tumarkin) On Coxeter polytopes with a unique pair of disjoint facets. J. Combin. Theory A 116 (2009), 875–902.
- [29] (with A. Retakh and P. Tumarkin) Regular subalgebras of affine Kac-Moody algebras. J. Phys. A: Math. Theor. 41 (2008) 365204 (16pp).
- [30] (with P. Tumarkin) On Coxeter polytopes with mutually intersecting facets. J. Combin. Theory A 115 (2008), 121–146.
- [31] (with P. Tumarkin) On compact hyperbolic d-polytopes with d+4 facets. Trans. Moscow Math. Soc. 69 (2008), 105-151.
- [32] (with P. Tumarkin) On simple ideal Coxeter hyperbolic polytopes. Izv. Math. 72 (2008), 113–126.
- [33] (with P. Tumarkin) Euclidean simplices generating discrete reflection groups. Europ. J. Combin. 28 (2007), 1056–1067.
- [34] (with P. Tumarkin and T.Zehrt) On hyperbolic Coxeter n-polytopes with n+2 facets. Adv. Geom. 7 (2007), 177–189.
- [35] (with P. Tumarkin) Reflection subgroups of Euclidean reflection groups. Sb. Math. 196 (2005), 1349–1369.
- [36] Coxeter decompositions of hyperbolic tetrahedra. J. Math. Sci. 128 (2005), 3504–3514.
- [37] Coxeter decompositions of hyperbolic pyramids and triangular prisms. Math. Notes 75 (2004), 583–593.
- [38] Lambert cube generating a discrete reflection group. Math. Notes 75 (2004), 250–258.
- [39] Spherical simplices generating discrete reflection groups. Sb. Math. 195 (2004), 585–598.
- [40] (with P. Tumarkin) Reflection subgroups of reflection groups. Funct. Anal. Appl. 38 (2004), 313–314.

- [41] Coxeter decompositions of spherical simplices with fundamental dihedral angles. Russian Math. Surveys 57 (2002), 420–421.
- [42] Coxeter decompositions of hyperbolic simplices. Sb. Math. 193 (2002), 1867–1888.
- [43] Coxeter decompositions of hyperbolic polygons. Europ. J. Combin. 19 (1998), 801–817.
- [44] On Thurston signatures. Russian Math. Surveys 52 (1997), 826–827.

# OTHER PREPRINTS

- [45] (with P. Tumarkin) A series of word-hyperbolic Coxeter groups. arxiv:math.GR/0507389.
- [46] (with P. Tumarkin) Three symmetries groups. Bielefeld, no. 98-104.