CURRICULUM VITAE

Ivan Loseu[1].

Contents

1. Contact information.

E-mail: ivan.loseu@gmail.com

2. Personal information

Born: October, 18, 1981, Minsk, Republic of Belarus, USSR.
Marital status: Single.
Citizenship: Belarus, US.
Web-page: http://www.northeastern.edu/iloseu/

3. Education

1999-2004: M.SC., Belarusian State University, Department of Applied Mathematics and Computer Science, diploma cum laud.

2004-2007: graduate student, Moscow State University, Department of Mechanics and Mathematics, Chair of Higher Algebra.

2004-2007: graduate student, Independent University of Moscow.

I obtained my PhD degree in October, 2007, at the Moscow State University.

[1]"Loseu" is the transliteration of my family name from Belarusian to English. This variant appears in my passport and is the only version used officially. Usually I use the transliteration from Russian, which is "Losev". The reason is that people who do not know Russian or Belarusian spell the Belarusian variant incorrectly.

Thesis advisor: Prof. E.B. Vinberg.

Thesis title: Classification of some coisotropic actions of algebraic groups.

4. Employment

Starting July 2019: Full Professor, Yale University, Department of Mathematics.

July 2018-June 2019: Full Professor, University of Toronto, Department of Mathematical and Computational Sciences, Mississauga campus.

July 2015-June 2018: Full Professor, Northeastern University, Department of Mathematics.

Sep. 2011-June 2015: Associate Professor, Northeastern University, Department of Mathematics.

Jul.2008- Jun. 2011: CLE Moore instructor, Massachusetts Institute of Technology, Department of Mathematics.

Nov. 2007- May 2008: Engineer-programmer, Belarusian State University, Department of Applied Mathematics and Computer Science.

5. Visiting positions

Starting March 2017: Research fellow and (starting July 2017) Chief Research fellow, International laboratory of Representation theory and Mathematical Physics, NRU-HSE, Moscow, Russia.

March-May 2018: Research Professor, MSRI.

6. Research interests

Representation theory and its connections to Algebraic and Symplectic geometry and Combinatorics.

7. Publication list

Publications in refereed journals.

[1] I.V. Losev. *Coisotropic representations of reductive groups.* Trudy Mosc. Mat. Ob-va, 66(2005), p. 157-181 (in Russian). English translation in: Trans. Moscow Math. Soc. (2005), 143-168.

[2] I.V. Losev. *Symplectic slices for reductive groups.* Mat. Sbornik 197(2006), N2, p. 75-86 (in Russian). English translation in: Sbornik Math. 197(2006), N2, 213-224.

[3] I.V. Losev. *On complex weakly commutative homogeneous spaces.* Trudy Mosc. Mat. Ob-va, 67(2006), 228-255 (in Russian). English translation in: Trans. Moscow Math. Soc. (2006), 199-223.

[4] I.V. Losev. *Computation of the Cartan spaces of affine homogeneous spaces.* Mat. Sbornik, 198(2007), 83-108 (in Russian). English translation in: Sbornik Math. 198(2007), no 10, 31-56. arXiv:math.AG/0606101v2.

[5] I.V. Losev. *Classification of weakly commutative complex homogeneous spaces.* Usp. Mat. Nauk 62(2007) N2, 181-182 (in Russian).

[6] I.V. Losev. *Combinatorial invariants of algebraic Hamiltonian actions.* Moscow Math. J. 8(2008), 493-519. arXiv:math.AG/0701823.

[7] I.V. Losev. *Uniqueness property for spherical homogeneous spaces.* Duke Math J., 147(2009), n.2, 315-343. arXiv:math.AG/0703543.

[8] I.V. Losev. *Proof of the Knop conjecture.* Ann. Inst. Fourier, 59(2009), n.3, 1105-1134. arXiv:math.AG/0612561.

[9] I.V. Losev. *Demazure embeddings are smooth.* Int. Math. Res. Not, 14(2009), 2588-2596. arXiv:0704.3698.

[10] I.V. Losev. *Lifting central invariants for quantized Hamiltonian actions.* Moscow Math J. 9(2009), 359-369. arXiv:0708.0630.

[11] I.V. Losev. *Computation of weight lattices of G-varieties.* J. Math Sci 161(2009), N1, 70-96. arXiv:0709.0667v1.

[12] I. Losev. *Classification of multiplicity free Hamiltonian actions of complex tori on Stein manifolds.* J. Sympl. Geom 7(2009), N3, 295-310. arXiv:0706.0632

[13] I.V. Losev. *Algebraic Hamiltonian actions*, Math. Z. 263(2009), 685-723. arXiv:math.AG/0601023.

[14] I.V. Losev. *Embeddings of homogeneous spaces into irreducible modules.* J. Algebra 322 (2009), 2621-2630, arXiv:math.RT/0606387.

[15] I.V. Losev. *On fibers of algebraic invariant moment maps.* Transformation Groups, 14(2009), 887-930. arXiv:math. AG/0703296.

[16] I.V. Losev. *Quantized symplectic actions and W-algebras.* J. Amer. Math. Soc. 23(2010), 35-59. arXiv:0707.3108.

[17] I.V. Losev. *Computation of Weyl groups of G-varieties.* Representation Theory (electronic) 14(2010), 9-69. arXiv:0612559.

[18] I. Losev. *On invariants of a set of elements of a semisimple Lie algebra.* J. Lie Theory, 20(2010), 17-30. arXiv:math.RT/0512538.

[19] I. Losev. An appendix to: P. Etingof, T. Schedler, *Poisson traces and D-modules on Poisson varieties*, GAFA 20(2010), 958-987. arXiv:0908.3868.

[20] I. Losev. *1-dimensional representations and parabolic induction for W-algebras.* Adv. Math. 226(2011), 6, 4841-4883. arXiv:0906.0157.

[21] I.V. Losev. *Finite dimensional representations of W-algebras.* Duke Math J. 159(2011), n.1, 99-143. arXiv:0807.1023.

[22] I. Losev. *On the structure of the category $\mathcal{O}$ for W-algebras.* Séminaires et Congrès 24(2012), 351-368. arXiv:0812.1584.

[23] I. Losev, *Completions of symplectic reflection algebras.* Selecta Math., 18(2012), N1, 179-251. arXiv:1001.0239.

[24] I. Losev, *Primitive ideals in W-algebras of type A.* J. Algebra, 359 (2012), 80-88. arXiv:1108.4171.

[25] I. Losev, *Isomorphisms of quantizations via quantization of resolutions.* Adv. Math. 231(2012), 1216-1270. arXiv:1010.3182.

[26] I. Losev, *On isomorphisms of certain functors for Cherednik algebras.* Repres. Theory, 17 (2013), 247-262. arXiv:1011.0211.

[27] I. Losev, *Highest weight $\mathfrak{sl}_2$-categorifications I: crystals.* Math. Z. 274(2013), 1231-1247. arXiv:1201.4493.

[28] I. Losev, A. Tsymbaliuk, *Infinitesimal Cherednik algebras as W-algebras.* arXiv:1305.6873. Transform. Groups. 19 (2014), 495-526.

[29] I. Gordon, I. Losev, *On category $\mathcal{O}$ for cyclotomic rational Cherednik algebras.* J. Eur. Math. Soc. 16 (2014), 1017-1079.

[30] I. Losev, V. Ostrik, *Classification of finite dimensional irreducible modules over W-algebras.* arXiv:1202.6097. Compos. Math. 150(2014), N6, 1024-1076.

[31] I. Losev, *On Procesi bundles.* arXiv:1303.4617. Math. Ann. 359(2014), N3, 729-744.

[32] I. Losev. *Finite dimensional quotients of Hecke algebras.* arXiv:1407.6375. Algebra and Number theory, 9(2015), 493-502.

[33] I. Losev, B. Webster, *On uniqueness of tensor products of irreducible categorifications.* arXiv:1303.1336. Selecta Math. 21(2015), N2, 345-377.

[34] P. Etingof, E. Gorsky, I. Losev, *Representations of Cherednik algebras with minimal support and torus knots.* arXiv:1304.3412. Adv. Math. 277 (2015), 124-180.

[35] I. Losev, *Dimensions of irreducible modules over W-algebras and Goldie ranks.* arXiv:1209.1083. Invent. Math. 200 (2015), N3, 849-923.

[36] I. Losev. *Abelian localization for cyclotomic Cherednik algebras.* Int Math Res Notices (2015) vol. 2015, 8860-8873. arXiv:1402.0224.

[37] I. Losev, *Highest weight $\mathfrak{sl}_2$-categorifications II: structure theory.* Trans. Amer. Math. Soc. 367 (2015) 8383-8419. arXiv:1203.5545.

[38] I. Losev, *Proof of Varagnolo-Vasserot conjecture on cyclotomic categories $\mathcal{O}$.* arXiv:1305.4894. Selecta Math. 22(2016), 631-668.

[39] I. Losev. *Derived equivalences for Rational Cherednik algebras.* arXiv:1406.7502. Duke Math J. 166(2017), N1, 27-73.

[40] I. Losev. *Bernstein inequality and holonomic modules* (with a joint appendix by I. Losev and P. Etingof). arXiv:1501.01260. Adv. Math. 308 (2017), 941-963.

[41] I. Losev. An appendix to *Quantizations of conical symplectic resolutions II: category O and symplectic duality* by T. Braden, A. Licata, N. Proudfoot, B. Webster. arXiv:1407.0964. Astrisque 384 (2016), 75-179.

[42] I. Losev. *On categories $\mathcal{O}$ for quantized symplectic resolutions.* arXiv:1502.00595. Compos. Math. 153 (2017), N12, 2445-2481.

[43] J. Brundan, I. Losev, B. Webster, *Graded tensor product categorifications and the super Kazhdan-Lusztig conjecture.* arXiv:1310.0349. Int. Math. Res. Notices. (2017), vol. 2017 n. 20, 6329-6410.

[44] I. Losev. *Wall-crossing functors for quantized symplectic resolutions: perversity and partial Ringel dualities.* arXiv:1604.06678. PAMQ, 13 (2017), n.2, 247-289.

[45] I. Losev. *Quantizations of regular functions on nilpotent orbits.* arXiv:1505.08048. Bull. Inst. Math. Acad. Sin. 13 (2018), n.2, 199-225.

[46] I. Losev, S. Shelley-Abrahamson. *On Refined Filtration By Supports for Rational Cherednik Categories O.* arXiv:1612.08211. Selecta Math. 24 (2018), 1729-1804.

[47] I. Losev. *Representation theory of quantized Gieseker varieties, I.* arXiv:1611.08470. Lie groups, Geometry, and Representation theory, Progress in Mathematics, 326 (2018), 273-314.

[48] R. Bezrukavnikov, I. Losev, *On dimension growth of modular irreducible representations of semisimple Lie algebras.* arXiv:1708.01385. Lie groups, Geometry, and Representation theory, Progress in Mathematics, 326 (2018), 59-90.

Accepted.

[47] I. Losev. *Cacti and cells.* arXiv:1506.04400. Accepted by J. Eur. Math. Soc.

Preprints.

[50] I.V. Losev. *The Kempf-Ness theorem and Invariant theory.* Preprint (2006), arXiv:math. AG/0605756.

[51] I.V. Losev. *Computation of combinatorial invariants of G-varieties.* Preprint (2006), available at: www.moebiuscontest.ru/files/2006/losev.pdf (in Russian).[2]

[52] I. Losev, *Quantizations of nilpotent orbits vs 1-dimensional representations of W-algebras.* arXiv:1004.1669.

[53] I. Losev, *Towards multiplicities for cyclotomic rational Cherednik algebras.* arXiv:1207.1299.[3]

[54] R. Bezrukavnikov, I. Losev, *Etingof conjecture for quantized quiver varieties.* arXiv:1309.1716.

[55] I. Losev. *Etingof conjecture for quantized quiver varieties II: affine quivers.* arXiv:1405.4998.[4]

[56] I. Losev. *Totally aspherical parameters for Cherednik algebras.* arXiv:1409.3965.

[57] I. Losev. *Supports of simple modules in cyclotomic Cherednik categories O.* arXiv:1509.00526.

[58] I. Losev. *Deformations of symplectic singularities and Orbit method for semisimple Lie algebras.* arXiv:1605.00592.

[59] B. Elias, I. Losev, *Modular representation theory in type A via Soergel bimodules.* arXiv:1701.00560.

[60] I. Losev, *Derived equivalences for Symplectic reflection algebras.* arXiv:1704.05144.

[61] I. Losev, *On modular categories O for quantized symplectic resolutions.* arXiv:1712.07726.

[62] I. Losev, I. Panin, *Goldie ranks of primitive ideals and indexes of equivariant Azumaya algebras.* arXiv:1802.05651.

[63] I. Losev, *Harish-Chandra bimodules over quantized symplectic singularities.* arXiv:1810.07625.

[64] I. Losev, *On inductive construction of Procesi bundles.* arXiv:1901.05862.

Expository and review texts.

[65] I. Losev. *Quantized Hamiltonian actions of reductive groups and their applications.* In "Fundamental mathematics in the work of young scientists". Moscow, MCCME, 2009, p.64-80.

[66] I. Losev. *Uniqueness properties for spherical varieties.* [5] Les cours de CIRM, Annee 2010, http://ccirm.cedram.org/ccirm-bin/fget?id=CCIRM_2010, 113-120. arXiv:0904.2937.

[67] I. Losev, *Finite W-algebras.* Proceedings of the International Congress of Mathematicians Hyderabad, India, 2010, p. 1281-1307. arXiv:1003:5811.

[68] I. Losev, *Representations of general linear groups and categorical actions of Kac-Moody algebras.* arXiv:1209.1067.

[69] I. Losev, *Procesi bundles and Symplectic reflection algebras.* arXiv:1501.00643. Algebraic and Analytic Microlocal Analysis, Springer Proceedings in Mathematics and Statistics, 269 (2018), 3-62.

[70] I. Losev, *Rational Cherednik algebras and categorification.* arXiv:1509.08550. Contemp. Math. 683, "Categorification and Higher Representation theory", A. Beliakova, A. Lauda, eds, 1-41.

8. Grants, awards, and distinctions

1) *2004-2007*: RFBR grant 05-01-00988.

2) *The 10th Moebius contest, Moscow, 2006*: the first prize[6],
http://www.moebiuscontest.ru/history.php?l=0&part=11.

3) *2009-2013*: NSF grant DMS-0900907, $137,751.

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[2]Contains the results of [11],[15],[17] together with some additional results

[3]This preprint is replaced by arXiv:1305.4894

[4]This preprint is superseded by arXiv:1502.00595, arXiv:1604.06678, arXiv:1611.08470.

[5]Expanded lecture notes of a mini-course given at CIRM, Luminy, in April 2009

[6]awarded for the preprint [29]

4) *2010*: Invited sectional speaker for ICM 2010.
5) *2012-present*: NSF grant DMS-1161584, $129,999.
6) Fall 2014- Fall 2016: Sloan fellowship, $50,000.
7) 2015, NSF conference grant DMS-1507869, $40,000.
8) 2015-present, NSF grant DMS-1501558, $309,060.
9) 08/2017-onward: Co-PI on the NSF RTG grant, DMS-1645877, ≈$ 2,200,000.
10) AMS fellow, Class of 2018.

9. Teaching

1) Fall 2005, Independent University of Moscow: A course "Moment map", lecturer. The program and lecture notes (in Russian) are available at:
www.ium.mccme.ru/f05/momentum.html
2) Fall 2005, Spring 2006, Fall 2006: Independent University of Moscow: Algebra seminars for first year students, teaching assistant.
3) Fall 2006, Independent University of Moscow: A course "Lie groups and Lie algebras", lecturer. The program and exercise sheets (in Russian) are available at:
www.ium.mccme.ru/f06/lie.html
4) Fall 2007, Spring 2008, Belarusian State University, Minsk, Belarus: A course "Young tableaux", lecturer.
5) Spring 2008, Belarusian State University: A course "Advanced linear algebra", lecturer.
6) Spring 2008, Number theory and Geometry lectures for the Belarusian IMO team.
7) Fall 2008, MIT: section leader for single variable calculus course (18.01) with Prof. B. Brubaker.
8) Spring 2009, MIT: section leader for differential equations course (18.03) with Prof. D. Jerison.
9) August 2009, Belarusian State University: A crash-course "Hamiltonian mechanics and representations of quivers", lecturer.
10) Fall 2009, MIT: section leader for 18.01 with Prof. B. Brubaker.
11) Spring 2010, MIT: section leader for Project lab in math (18.821) with Prof. D. Jerison.
12) August 2010, Belarusian State University: A crash-course "Quadratic forms over $\mathbb{Q}$".
13) Fall 2010, MIT: section leader for 18.01 with Prof. P. Seidel.
14) Spring 2011, MIT: section leader for 18.03 with Prof. D. Jerison.
15) July 2011, summer school "Modern Mathematics", Dubna, Russia: A crash course "Representations of groups and the Burnside theorem", lecturer.
16) December 2011, Higher School of Economics, Moscow Russia: A crash course "Calogero-Moser systems and Rational Cherednik algebras", 4 hours.
17) Spring 2012, Northeastern University. MATH 4555, Complex variables. Lecturer.
18) July 2012, summer school "Modern Mathematics", Dubna, Russia: a 5 hour crash course "Quantum groups, knots, and Jones polynomial", lecturer.
19) Fall, 2012, Northeastern University. MATH 1242, Calculus II, Lecturer.
20) Fall, 2012, Northeastern University. MATH 7364, Topics in Representation Theory: Symplectic Reflection algebras.
21) Fall, 2013, Northeastern University. MATH 1341, Calculus I for Science and Engineering, lecturer and course coordinator.
22) May 2014, Higher School of Economics, Moscow, Russia. Crash course "Representations of quivers and deformed preprojective algebras".

23) Fall 2014, Northeastern University. MATH 1341, Calculus I for Science and Engineering, lecturer.

24) Fall 2014, Northeastern University. MATH 7322, Geometry 3 (Symplectic geometry).

25) July 2015, summer school "Modern Mathematics", Dubna, Russia: a 5 hour crash course "Representation theory of the symmetric groups as a first step towards categorical actions of Lie algebras".

26) Fall 2015, Northeastern University. MATH 7313, Representation theory (modern introduction).

27) December 2015, Higher School of Economics, Moscow. A crash-course "Representation theory of symmetric groups in positive characteristic and Kac-Moody algebra actions on categories". 4.5 hours, aimed at undergraduate and graduate students.

28) December 2015, Belarusian State University, Minsk. A talk "Equipartite polyhedra and tensor products" aimed at high school students, 1 hour.

29) July 2016, Summer school "Algebra and Geometry", Yaroslavl, Russia. Lecture series "Hilbert schemes and Combinatorics" aimed at undergraduate and graduate students, 4.5 hours.

30) August 2016, A crash-course "Quadratic forms over $\mathbb{Q}$" aimed at undergraduate students, Belarusian State University, Minsk, Belarus, 6 hours.

31) Fall 2016, MATH 1341, Calculus 1 for Science and Engineering, lecturer and course coordinator.

32) March 2017, A crash-course "Around representations of quivers" aimed at undergraduate and graduate students, Chebyshev laboratory, St. Petersburg, Russia, 8 hours.

33) April 2017, A crash-course "Representations of Rational Cherednik algebras", HSE, Moscow, Russia, around 17 hours.

34) July 2017, Lecture series "Representations of groups and the Burnside theorem" aimed at high school and undergraduate students, 3.5 hours, Dubna, Russia.

35) August 2017, Lecture "Around Young tableaux" aimed at high school and undergraduate students, 2 hours, Minsk, Belarus.

36) Fall 2017, Northeastern, MATH 7320, Modern Algebraic Geometry (Invariant theory).

37) July 2018, Lecture series "Catalan numbers: Combinatorics and Algebraic geometry" aimed at high school and undergraduate students, 3.5 hours, Dubna, Russia.

38) December 2018, Lecture series "Introduction to Invariant theory" for undergraduate and master students, HSE, Moscow, Russia. 12 hours.

39) Spring 2019, University of Toronto, MAT 224, Linear Algebra II, 2 sections.

10. Talks, 2012-present

Talks at seminars.

2018.

1) Colloquium, Ohio State University, February 2018. Talk "Orbit method via deformations of singular symplectic varieties", 60 min.

2) GRTA seminar, MSRI, March 2018. Talk "On dimension growth of irreducible representations of semisimple Lie algebras in characteristic p". 1 hour.

3) USC, FRG categorification seminar and Algebra seminar, April 2018. Talk "On dimension growth of irreducible representations of semisimple Lie algebras in characteristic p". 1 hour.

4) GRTA colloquium, MSRI, April 2018. "Deformations of singular symplectic varieties and the Orbit method". 1 hour.

5) GRTA young researchers seminar, MSRI, May 2018. Talk "Representations of rational Cherednik algebras in zero and positive characteristic". 1 hour.

6) HSE, Moscow, July 2018. Talk "On dimensions of irreducible representations of semisimple Lie algebras in characteristic p", 1 hour.

7) MIT, Lie groups seminar, September 2018. Talk "Goldie ranks of primitive ideals and indexes of equivariant Azumaya algebras", 1 hour.

8) Columbia, Informal Math Physics seminar, September 2018. Talk "Harish-Chandra bimodules over quantized symplectic singularities", 90 min.

9) University of Oregon, Algebra seminar, October 2018. Talk "Goldie ranks of primitive ideals and indexes of equivariant Azumaya algebras", 1 hour.

10) UCLA, Algebra seminar, October 2018. Talk "Goldie ranks of primitive ideals and indexes of equivariant Azumaya algebras", 1 hour.

11) UCSB, Quantum Algebra and Topology, November 2018. Talk "On dimensions of irreducible representations of semisimple Lie algebras in positive characteristic", 1 hour.

12) UCSB, Colloquium, November 2018. Talk "Orbit method via deformations of singular symplectic varieties", 1 hour.

13) University of Toronto, Geometric representation theory seminar, November 2018. Talk "Harish-Chandra bimodules over quantized symplectic singularities", 75 min.

14) MIT, Geometric representation theory seminar, November 2018. Talk "Derived equivalences for symplectic reflection algebras", 75 min.

2017.

1) Colloquium, UCLA, February 2017. Talk "Orbit method via deformations of singular symplectic varieties", 50 min.

2) GPRT seminar, Northeastern, February 2017. Talk "Characters", 1 hour.

3) Colloquium, U. Oregon, February 2017. Talk "Characters", 50 min.

4) Geometric Representation theory, MIT, February 2017. Talk "Moduli spaces of instantons in Representation theory", 1 hour.

5) Colloquium, Perimeter Institute, Waterloo, February 2017. Talk "Moduli spaces of instantons in Representation theory", 50 min.

6) Colloquium, University of Toronto, February 2017. Talk "Orbit method via deformations of singular symplectic varieties", 50 min.

7) Colloquium, Chebyshev laboratory, St. Petersburg, Russia, March 2017. Talk "Orbit method via deformations of singular symplectic varieties", 1 hour.

8) Algebraic geometry seminar, NYU, April 2017. Talk "Deformations of symplectic singularities and Orbit method", 1 hour.

9) Informal Math Physics seminar, Columbia, April 2017. Talk "Modular representation theory of rational Cherednik algebras", 1.5 hours.

10) "Globus" seminar, Independent University of Moscow, April 2017. Talk "Characters", 1.5 hours.

11) Algebra and Discrete Math seminar, UC Davis, May 2017. Talk "Supports for Rational Cherednik algebras, crystals and wall-crossing bijections", 50 min.

12) HSE, Moscow, July 2017. Talk "Quantized quiver varieties and their representations", 3 hours.

13) MIT, Infinite dimensional algebra seminar, September 2017. Talk "Modular categories O for rational Cherednik algebras", 2 hours.

14) MIT, Lie groups seminar, September 2017. Talk "On dimensions of irreducible representations of semisimple Lie algebras in characteristic p", 1 hour.

15) Yale, Colloquium, October 2017. Talk "Orbit method via deformations of singular symplectic singularities", 1 hour.

16) KSU, M-seminar, October 2017. Talk "Deformations of symplectic singularities and Orbit method". 1 hour.

17) UC Riverside, Lie theory seminar, November 2017. Talk "Deformations of symplectic singularities and Orbit method". 1 hour.

18) U. Toronto, Geometric representation theory seminar, November 2017. Talk "On dimensions of irreducible representations of semisimple Lie algebras in characteristic p", 80 min.

19) HSE, Moscow, December 2017. Talk "Bernstein inequality and holonomic modules", 60 min.

20) MSU, Moscow, Lie groups and Invariant theory seminar, December 2017. Talk "On the adjoint actions of semisimple algebraic groups", 90 min.

2016.

1) Seminar of Geometric Representation theory program, SCGP, Stony Brook, January 2016. Talk: On categories $\mathcal{O}$ for quantized symplectic resolutions, 1.5 hours.

2) Lie groups seminar, MIT, February, 2016. Talk: Cacti and cells, 1 hour.

3) Infinite dimensional algebra seminar, MIT, February, 2016. Talk: Modular representation theory in type A via Soergel bimodules. 2 hours.

4) Algebra and Discrete Math seminar, UC Davis, March 2016. Talk: Cacti and cells. 50 minutes.

5) Informal Math Physics seminar, Columbia, March 2016. Talk: Deformations of symplectic singularities and Orbit method. 80 min.

6) Informal Math Physics seminar, Columbia, March 2016. Talk: Combinatorial wall-crossing. 80 min.

7) Geometric methods in Representation theory seminar, UNC Chapel Hill, March 2016. Talk: Deformations of symplectic singularities and Orbit method. 60 min.

8) Algebraic Geometry seminar, U. Chicago, April 2016. Talk: Deformations of symplectic singularities and the Orbit method. 90 min.

9) Algebra seminar, Louisiana State University, April 2016. Talk: Deformations of symplectic singularities and the Orbit method. 60 min.

10) Geometry seminar, UT Austin, May 2016. Talk: Deformations of symplectic singularities and the Orbit method. 90 min.

11) Algebra and Geometry seminar, U. Rome La Sapienza, June 2016. Talk: Hecke algebras for complex reflection groups, 1 hour.

12) Higher school of Economics, Moscow, August 2016. Talk: Cacti and cells, 90 min.

13) Higher school of Economics, Moscow, August 2016. Talk: Deformations of symplectic singularities and Orbit method, 90 min.

14) Infinite dimensional algebra seminar, MIT, September 2016. Talk: Deformations of symplectic singularities and Orbit method, 2 hours.

15) Geometric Representation theory seminar, MIT, November 2016. Talk: Wall crossing for quantized quiver varieties, 1 hour.

16) University of Minnesota, Lie theory seminar, December 2016. Talk: Orbit method and deformations of singular symplectic varieties, 1 hour.

17) Stony Brook University, Colloquium, December 2016. Talk: Orbit method and deformations of singular symplectic varieties, 1 hour.

2015.

1) Temple University, Algebra seminar, January 2015. Talk: Representation theory of quantized quiver varieties. 1 hour.

2) Columbia University, Informal Math Physics seminar, February 2015. Talk: Categories $\mathcal{O}$ over quantized quiver varieties. 3 hours.

3) Yale University, Colloquium, April 2015. Talk: Representations of quantized symplectic resolutions. 1 hour.

4) Yale University, Algebraic geometry seminar, April 2015. Talk: Classification of Procesi bundles, 1 hour.

5) MIT, Lie groups seminar, April 2015. Talk: Bernstein inequality and holonomic modules, 1 hour.

6) UC Riverside, Lie theory seminar, May 2015. Talk: Representation theory of quantized quiver varieties. 1 hour.

7) University of Virginia, Colloquium, September 2015. Talk: Representation theory of symmertric groups in positive characteristic, 1 hour.

8) University of Virginia, Algebra seminar, September 2015. Talk: Cacti and cells, 1 hour.

9) University of Minnesota, Combinatorics seminar, October 2015. Talk: Cacti and cells, 50 minutes.

10) University of Oregon, Algebra seminar, October 2015. Talk: Cacti and cells, 1 hour.

11) Fields institute, Geometric representation theory seminar, October 2015. Talk: Bernstein inequality and holonomic modules. 1 hour.

12) MIT, Infinite dimensional algebras seminar, October 2015: Talk: Categories O over quantized symplectic resolutions and cross-walling. 2 hours.

13) U. Indiana, Bloomington, Algebra seminar, October 2015: Cacti and cells, 1 hour.

14) U. Indiana, Bloomington, Colloquium, October 2015: Representations of general linear groups in positive characteristic, 1 hour.

15) U. Talca, Chile, Colloquium, November 2015: Derived equivalences for Rational Cherednik algebras, 1 hour.

16) Cornell, Lie groups seminar. Talk: Derived equivalences for Rational Cherednik algebras, 1 hour.

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Talks at conferences and workshops, 2011-present

2018.

1) Kostant memorial conference, MIT, May 2018. Talk "On equivariantly irreducible modular representations of a semisimple Lie algebra". 1 hour.

2) International Conference of the thematic program on Geometric representation theory and Symplectic varieties, Notre Dame, June 2018. Talk "On equivariantly irreducible modular representations of a semisimple Lie algebra". 1 hour.

3) Oberwolfach workshop on enveloping algebras and geometric representation theory, November 2018. Talk "Harish-Chandra bimodules over quantized symplectic singularities", 60 min.

2017.

1) Sectional AMS meeting, Charleston SC, March 2017. Talk "Modular representation theory of type A and Soergel bimodules". 20 min.

2) Conference "Interactions between Representation theory and Algebraic geometry", U. Chicago, August, 2017. Talk "On dimensions of irreducible representations of semisimple Lie algebra in characteristic p". 1 hour.

3) Sectional AMS meeting, Riverside, November 2017. Talk "Modular categories $\mathcal{O}$ for type A rational Cherednik algebras", 40 min.

4) Sectional AMS meeting, Riverside, November 2017. Talk "Character formulas for modular representation theoretic categories of type A", 20 min.

5) 3rd US-Mexico conference on Representation theory, Categorification and Non-commutative algebra, UNAM, Mexico, November 2017. Talk "Bernstein inequality and holonomic modules", 50 min.

2016.

1) Taipei conference in Representation theory V, January 2016. Talk: Modular representation theory of type A and Soergel bimodules. 1 hour.

2) AMS Sectional meeting, Athens, GA, March 2016. Talk: Quantizations of nilpotent orbits, 20 min.

3) AMS Sectional meeting, Athens, GA, March 2016. Talk: Cacti and cells, 20 min.

4) Representation theory and symplectic singularities, Edinburgh, April 2016. Talk: Deformations of symplectic singularities and Orbit method, 1 hour.

5) Symplectic Duality and Gauge Theory, Perimeter Institute, April 2016. Talk: Derived equivalences for Rational Cherednik algebras, 1 hour.

6) Conference on Representation theory, Integrable systems and Quantum fields, Northwestern University, April 2016. Talk: Deformations of symplectic singularities and Orbit method, 1 hour.

7) BC-NEU Algebraic geometry mini-conference, Boston College, April 2016. Talk: Deformations of symplectic singularities and Orbit method, 1 hour.

8) Advances in Geometric Representation theory conference, U. Michigan, May 2016. Talk: Hecke algebras for complex reflection groups, 1 hour.

9) Wall-crossing and quiver varieites, EPFL, Lausanne, May 2016. Talk: Wall-crossing for quantized quiver varieties, 1 hour.

10) Nilpotent orbits and Representation theory, CRM, Pisa, June 2016. Talk: Deformations of nilpotent orbits, 75 min.

11) International conference on representation theory VII, Xiamen, China, July 2016. Talk: Deformations of symplectic singularities and orbit method, 50 min.

12) Geometric Representation theory, University of Kyoto, Japan, October 2016. Talk: Hecke algebras for complex reflection groups. 1 hour.

13) Workshop on symplectic varieties and geometric representation theory, UNC Chapel Hill, October 2016. Talk: Bersntein inequality and holonomic modules. 1 hour.

2015.

1) AMS meeting, Georgetown University, March 2015. Talk: Bernstein inequality and holonomic modules, 20 minutes.

2) Follow-up workshop on Representation theory and its interactions with Geometry and Combinatorics, University of Bonn, March 2015. Talk: Bernstein inequality and holonomic modules, 50 minutes.

3) Workshop on "Geometric representation theory and universal enveloping algebras", Oberwolfach, Germany, May 2015. Talk "Cacti and cells", 1 hour.

4) Workshop on Lie theory and Representation theory, ECNU, China, July 2015. Talk "Quantizations of nilpotent orbits", 1 hour.

2014.

1) Representation Theory days in Patagonia, Punta Arenas, Chile, January 2014. Talk "Representation theory of quantized quiver varieties".

2) Workshop on "Noncommutative algebra and Algebraic geometry", Oberwolfach, Germany, May 2014. Talk "Quantized quiver varieties", 1 hour.

3) Workshop on Geometric Representation theory and Categorification, CRM, Montreal, June 2014. Talk: Localization theorems, 1 hour.

4) Joseph Donin memorial conference, Bar Ilan, Israel, June 2014. Talk: Minimally supported representations of Rational Cherednik algebras and invariants of torus knots, 30 minutes.

5) AMS-IMU joint meeting, Tel Aviv, Israel, June 2014. Talk: Representation theory of quantized quiver varieties. 40 minutes.

6) "Geometric Representation Theory" conference, Cargese, Corsica, France, June 2014. Talk: Derived equivalences for Cherednik algebras. 1 hour.

7) Conference on Geometric Representation theory, RIMS, Kyoto, Japan, July 2014. Talk: "Representation theory of quantized Gieseker moduli spaces".

Mini-courses.

1. Instructional workshop of "Algebraic Lie theory" program. Isaac Newton Institute for Math Sciences, Cambridge UK, January 2009. 3 hour course "Finite W-algebras and their representations".

2. "Hamiltonian actions: invariants and classifications", C.I.R.M. Luminy France, April 2009. 3 hour course "Uniqueness properties for spherical varieties".

3. RIMS, Kyoto, November 2011. 5 hour course "Finite W-algebras".

4. Northwestern University, Evanston, IL, May 2012. 2 hour course "Symplectic reflection algebras and deformation quantization".

5. Summer school "Algebraic groups, Lie algebras and Invariant theory", Togliatti, Russia, June 2012. 3 hour course "Representations of the general linear group and categorical actions of Kac-Moody algebras".

6. Higher School of Economics, Moscow, Russia, December 2012: A crash course "Categorifications of tensor products", 3 hours.

7. December 2012, Higher School of Economics, Moscow, Russia: A crash course "Procesi bundles", 3 hours.

8. March 2013, Weizmann Institute, Rehovot, Israel. A course "Finite W-algebras", 8 hours.

9. April 2013, University of Chicago, Geometric Langlands seminar. A crash course "Introduction to categorical Kac-Moody actions", 5 hours.

10. July 2013, Informal summer school on Symplectic reflection algebras, Moscow region, Russia, jt. w. Pavel Etingof, about 30 hours.

11. November 2013, Simons Center for Geometery and Physics, Stony Brook. Lectures on "n! theorem and Procesi bundles", 2 hours.

12. December 2013, Taipei Winter School on Representation Theory. Series of lectures on categorical Kac-Moody actions, 8 hours.

13. July 2014, Kyoto, Japan, School on Geometric Representation theory. Series of lectures on quantized quiver varieties, 3 hours.

14. March 2015, Aarhus University, Master-class on Quantized quiver varieties, appr. 16 hours (w. assistance of Jose Simental Rodriguez).

15. June-July 2015, ECNU, China. Course on Rational Cherednik algebras, 8 hours.

16. November 2015, U. Talca, Chile. Mini-course on Representations of symmetric groups in positive characteristic and categorical actions of Kac-Moody algebras, 3 hours.

17. May-June 2016, MPI Bonn. Mini-course on Hilbert schemes and Combinatorics, 6 hours.

18. July 2016, ECNU, Shanghai. Mini-course on Finite W-algebras. 6 hours.

19. December 2016, HSE, Moscow. Mini-course on Procesi bundles and quantizations in positive characteristic. 9 hours.

20. March 2017, Zhejiang University, Hangzhou, China. Mini-course on Representations of Rational Cherednik algebras, 8 hours.

21. July 2017, University of Burgundy, Dijon, France. Mini-course on Deformations of symplectic singularities and Orbit method, 4 hours.

22. January 2018, IIAS, Hebrew University, Jerusalem. Mini-course on Quantizations of Nakajima varieties, 3 hours.

23. April 2018, HSE, Moscow. "Category O, Hecke algebras and Kazhdan-Lusztig theory", 6 hours.

24. June 2018, University of Georgia. "Representations of rational Cherednik algebras", 3 hours.

11. Students supervised

Graduate:

Dmytro Matvieievskyi, NEU, starting 2016.

Aleksei Pakharev, NEU, jointly with P. Etingof, starting 2015.

Seth Shelley-Abrahamson, MIT, jointly with P. Etingof, starting 2014.

Jose Simental Rodriguez, NEU, starting 2013 (Jose defended in May 2017, currently he's a postdoc at HIM, Bonn, moving to UC Davis starting January 2018).

Boris Tsvelikhovskiy, NEU, starting 2015.

Huijun Zhao, NEU, starting 2013.

Master (advised unofficially):

Vasily Krylov, HSE (Moscow), jointly with M. Finkelberg, 2016-present.

Dmitry Korb, HSE (Moscow), jointly with M. Finkelberg, 2013-2014.

Undergraduate (advised unofficially):

Daniil Klyuev, SPSU (Saint Petersburg), 2016-present.

Uladzislau Stazhinsky, BSU (Minsk), 2011-2013.

Aliaksandr Minets, BSU (Minsk), 2009-2011.

Ruslan Maksimau, BSU (Minsk), 2007-2008.

12. Languages

Russian, English.

13. Professional activities

Journals:

Referee for: Advances in Mathematics, Algebra and Number theory, Duke Math Journal, IMRN, Journal of Algebra, Journal of Lie theory, Selecta Math., Transformation groups, Invent. Math., J. Amer. Math. Soc., Representation theory, Math. Z, Asterisque, Math. Annalen.

A member of the editorial board for Transformation groups, Selecta Mathematica and Journal of Combinatorial Algebra.

Seminars: Presently I serve as a co-organizer of two regular seminars at Northeastern: the Brandeis-Harvard-MIT-Northeastern joint colloquium and the GPRT (Geometry, Physics and Representation theory) seminar. In Fall 2013-Spring 2017 I've coorganized six MIT-NEU graduate student representation theory seminars and currently I'm coorganizing another.

Lecture series: I've organized several lecture series (4-6 hours) at Northeastern. Speakers included Raphael Rouquier (UCLA), Andrei Okounkov (Columbia), Dmitry Kaledin (Steklov institute), Joel Kamnitzer (U. Toronto), Geordie Williamson (MPI Bonn), Eugene Gorsky (UC Davis), Jon Brundan (U. Oregon), Pramod Achar (LSU).

Conference organization: Coorganizer of "Representation theory and Geometry of symplectic resolutions" (May 2015). I'm also coorganizing a special session at the AMS sectional meeting at UC Riverside, Nov 4-5, and the conference "Transformation groups 2017" in December in Moscow.

University service: Hiring committees at Northeastern: research instructors (2011-2012, 2012-2013, 2014-2015 – chair), tenure track (2013-2014, 2015-2016). Chair of Full Professor committee (May 2016-December 2016) and Chair of Chair selection committee (AY2016-2017). Graduate committee (starting Sept 2017).

Grant reviews: In 2013-2016 I have reviewed grant applications for NSF, NSA, NSERC.