

*List of publications*  
**Eugene Gorsky**

## Publications

1. (with M. Gillespie and S. Griffin) A combinatorial skewing formula for the Rise Delta Theorem. To appear in *Combinatorial Theory*. arXiv:2408.12543
2. (with M. Mazin and A. Oblomkov) Generic curves and non-coprime Catalans. To appear in *Algebraic Geometry*. arXiv:2210.12569
3. (with O. Kivinen and A. Oblomkov) The affine Springer fiber - sheaf correspondence. *Advances in Mathematics* 464 (2025), article 110143.
4. (with A. Neguț) Hecke categories, idempotents, and commuting stacks. *Math. Z.* 309 (2025), article 44.
5. (with R. Casals, M. Gorsky, I. Le, L. Shen and J. Simental) Cluster structures on braid varieties. *Journal of American Mathematical Society* 38 (2025), no.2, 369-479.
6. (with N. Gonzalez and J. Simental) Calibrated representations of the double Dyck path algebra. *Mathematische Annalen* 391, 1505–1590 (2025).
7. (with A. Beliakova) Cyclotomic expansions for  $gl(N)$  knot invariants via interpolation Macdonald polynomials. *Sel. Math. New Ser.* 30 (2024), article 101.
8. (with R. Casals, M. Gorsky and J. Simental) Algebraic weaves and braid varieties. *American Journal of Mathematics* 146 (2024), no. 6, 1469–1576.
9. (with M. Hogancamp and A. Mellit) Tautological classes and symmetry in Khovanov-Rozansky homology. *Duke Math. Journal* 173(13), 2481-2561 (2024).
10. (with A. Chandler) Structures in HOMFLY-PT homology. *Experimental Mathematics* 33 (2024), no.4, 817–842
11. (with J. Simental, M. Vazirani) Parabolic Hilbert schemes via the Dunkl-Opdam subalgebra. *Transformation Groups* 29, 1-70 (2024).
12. (with A. Neguț) The Trace of the affine Hecke category. *Proc. Lond. Math. Soc.* (3) 126 (2023), no. 6, 2013-2056.
13. (with P. Wedrich) Evaluations of annular Khovanov-Rozansky homology. *Math. Z.* 303 (2023), no. 1, Paper No. 25, 57.
14. (with O. Kivinen and J. Simental) Algebra and geometry of link homology. *Bulletin of the London Mathematical Society* 55 (2023), no. 2, 537-591
15. (with T. Lidman, B. Liu, A. Moore) Triple linking numbers and Heegaard Floer homology. *Int. Math. Res. Not. IMRN* 2023, no. 6, 4501-4554.
16. (with M. Hogancamp) Hilbert schemes and  $y$ -ification of Khovanov-Rozansky homology. *Geometry & Topology* 26 (2022) 587–678.
17. (with M. Hogancamp, P. Wedrich) Derived traces of Soergel categories. *International Mathematics Research Notices* 2022 (2022), no.15, 11304–11400.
18. (with A. Neguț and J. Rasmussen) Flag Hilbert schemes, colored projectors and Khovanov-Rozansky homology. *Advances in Mathematics* 378 (2021) 107542.
19. (with G. Hawkes, A. Schilling, J. Rainbolt) Generalized  $q, t$ -Catalan numbers. *Algebraic Combinatorics* 3 (2020) no. 4, 855-886.
20. (with B. Liu and A. Moore) Surgery on links of linking number zero and the Heegaard Floer  $d$ -invariant. *Quantum Topology* 11 (2020), 323-378.

21. (with Y. Bai and O. Kivinen) Quadratic ideals and Rogers-Ramanujan recursions. *The Ramanujan Journal*, *The Ramanujan Journal* 52 (2020), 67-89.
22. (with E. Carlsson and A. Mellit) The  $\mathbb{A}_{q,t}$  algebra and parabolic flag Hilbert schemes. *Mathematische Annalen* 376 (2020), 1303-1336.
23. (with M. Mazin and M. Vazirani) Recursions for rational  $q, t$ -Catalan numbers. *Journal of Combinatorial Theory, Series A* 173 (2020), Article 105237.
24. (with M. Hogancamp, A. Mellit and K. Nakagane) Serre duality for Khovanov-Rozansky homology. *Selecta Mathematica*, 25 (2019), no. 5, Article 79.
25. Introduction to Heegaard Floer homology. *Russian Mathematical Surveys*, 74:1 (2019), 1-35.
26. (with M. Borodzik) Immersed concordances of links and Heegaard Floer homology. *Indiana Univ. Math. J.* 67 (2018), 1039-1083.
27. (with A. Némethi) On the set of L-space surgeries for links. *Advances in Mathematics* 333 (2018), 386-422.
28. (with S. M. Gusein-Zade) Homological indices of collections of 1-forms. *Bulletin of the London Mathematical Society* 50 (2018), no.2, 261-273.
29. (with S. Gukov and M. Stošić) Quadruply-graded colored homology of knots. *Fundamenta Mathematicae* 243 (2018), 209-299.
30. Combinatorics of HOMFLY homology. Appendix to "The Hilbert scheme of a plane curve singularity and the HOMFLY homology of its link" by A. Oblomkov, J. Rasmussen and V. Shende. *Geometry & Topology* 22 (2018) 645-691.
31. (with J. Hom) Cable links and L-space surgeries. *Quantum Topology* 8 (2017), no.4, 629-666.
32. (with M. Mazin and M. Vazirani) Rational Dyck Paths in the Non Relatively Prime Case. *Electronic Journal of Combinatorics*, 24 (2017), no. 3, paper #P3.61
33. (with A. Neguţ) Infinitesimal change of stable basis. *Selecta Mathematica, New Series*, 23 (2017), no. 3, 1909-1930.
34. (with M. Mazin) Rational Parking Functions and LLT Polynomials. *Journal of Combinatorial Theory, Series A*, 140 (2016), 123-140.
35. (with M. Mazin and M. Vazirani) Affine permutations and rational slope parking functions. *Trans. Amer. Math. Soc.* 368 (2016), 8403-8445.
36. (with A. Némethi) Links of plane curve singularities are L-space links. *Algebraic and Geometric Topology* 16 (2016) 1905-1912.
37. (with A. Némethi) Lattice and Heegaard-Floer homologies of algebraic links. *Int. Math. Res. Not. IMRN* 2015, no. 23, 12737-12780.
38. (with P. Etingof and I. Losev) Representations of Rational Cherednik algebras with minimal support and torus knots. *Advances in Mathematics* **277** (2015), 124-180.
39. (with A. Neguţ) Refined knot invariants and Hilbert schemes. *Journal de Mathématiques Pures et Appliquées* 104 (2015), 403-435.
40. (with L. Lewark) On stable  $sl_3$ -homology of torus knots. *Experimental Mathematics* **24** (2015), 162-174.
41. (with A. Oblomkov, J. Rasmussen and V. Shende) Torus knots and the rational DAHA. *Duke Math. J.* **163** (2014), no. 14, 2709-2794.
42. The equivariant Euler characteristic of moduli spaces of curves. *Advances in Mathematics* **250** (2014), 588-595.

43. (with M. Mazin) Compactified Jacobians and  $q, t$ -Catalan numbers, II.  
Journal of Algebraic Combinatorics, **39** (2014), no. 1, 153–186.
44. (with A. Oblomkov and J. Rasmussen) On stable Khovanov homology of torus knots.  
Experimental Mathematics, **22** (2013), 265–281.
45. Arc spaces and DAHA representations.  
Selecta Mathematica, New Series, **19** (2013), no. 1, 125–140.
46. (with M. Mazin) Compactified Jacobians and  $q, t$ -Catalan Numbers, I.  
Journal of Combinatorial Theory, Series A, **120** (2013) 49–63.
47.  $q, t$ -Catalan numbers and knot homology. Zeta Functions in Algebra and Geometry,  
213–232. Contemp. Math. **566**, Amer. Math. Soc., Providence, RI, 2012.
48. Combinatorial computation of the motivic Poincare series.  
Journal of Singularities, **3** (2011), 48–82
49. Adams Operations and Power Structures.  
Moscow Mathematical Journal, **9** (2009), no. 2, 305–323.
50. On the  $S_n$ -equivariant Euler characteristic of moduli spaces of hyperelliptic curves.  
Mathematical Research Letters, **16** (2009), no. 4, pp. 591–603.
51. Symmetries of some motivic integrals.  
Russian Mathematical Surveys, **63** (2008), no. 4 (382), 179–180.
52. On the motivic measure on the space of functions.  
Revista Matematica Complutense, **20** (2007), no. 2, 507–521.
53. Motivic integration and functional equations. Algebra and Analysis  
(Journal of the St. Petersburg Mathematical Society), **19** (2007), no. 4, 92–112.
54. On divisorial filtrations on sheaves.  
Mathematical notes, **79** (2006), no. 6, 825–837.
55. (with V. Gurovits, I. Mezhirov and E. Osmova). The Richman game.  
Matematicheskoe prosveshchenie, **3** (2001), no. 5, 78–191.

## Preprints

1. (with A. Alishahi and B. Liu) Colored knot Floer homology: structures and examples. arXiv:2508.21776
2. (with W. Ballinger, M. Hogancamp and J. Wang) Stable deformed  $gl(N)$  homology of torus knots. arXiv:2507.00175
3. (with S. Kim, T. Scroggin and J. Simental) Splicing braid varieties. arXiv:2505.08211
4. (with S. Kim, T. Scroggin and J. Simental) Splicing skew shaped positroids. arXiv:2503.04923
5. (with N. Gonzalez and J. Simental) The elliptic Hall algebra and the double Dyck path algebra. arXiv:2502.16113
6. (with M. Gillespie and S. Griffin) A geometric interpretation of the Delta Conjecture. arXiv:2501.00197
7. (with T. Scroggin) Splicing positroid varieties. arXiv:2405.15112
8. (with A. Alishahi and B. Liu) Splitting maps in link Floer homology and integer points in permutahedra. arXiv:2307.07741
9. (with R. Casals, M. Gorsky and J. Simental) Positroid Links and Braid varieties. arXiv:2105.13948
10. (with M. Gorsky) Distinguished bases for  $A_n$  root systems and parking functions.

arXiv: 1112.0381

11. Seifert cohomology of trees. arXiv: 0901.1298

12. On the  $S_n$ -equivariant Euler characteristic of  $\mathcal{M}_{2,n}$ . arXiv: 0707.2662