

Alexandr Polyanskii

List of publications

RESEARCH PAPERS

19. G. Ivanov, M. Naszodi, A. Polyanskii, “[Approximation of the average of some random matrices](#)”, *Journal of Functional Analysis* **279**(7) (2020), 108684, [arXiv.1909.08316](#).
18. Z. Jiang, A. Polyanskii, “[Forbidden subgraphs for graphs of bounded spectral radius, with applications to equiangular lines](#)”, *Israel Journal of Combinatorics* **256** (2020), 393–421, [arXiv.1708.02317](#).
17. R. Pinchasi, A. Polyanskii, “[A one-page solution of a problem of Erdős and Purdy](#)”, *Discrete and Computational Geometry* **64** (2020), 382–385.
16. A. Polyanskii, “[On almost-equidistant sets - II](#)”, *The Electronic Journal of Combinatorics* **26**(2) (2019), P.14, [arXiv.1708.02039](#).
15. A. Polyanskii, “[On simultaneous approximations of \$\ln 3\$ and \$\pi/\sqrt{3}\$ by rational numbers](#)”, *Sbornik: Mathematics* **210**(4) (2019), 589–605.
14. A. Polyanskii, “[On almost-equidistant sets](#)”, *Linear Algebra and its Applications* **563** (2019), 220–230, [arXiv.1707.00295](#).
13. B. G. Merino, T. Jahn, A. Polyanskii, G. Wachsmuth, “[Hunting for reduced polytopes](#)”, *Discrete and Computational Geometry* **60**(3) (2018), 801–808, [arXiv.1701.08629](#).
12. A. Polyanskii, “[On the irrationality measure of certain numbers-II](#)”, *Mathematical Notes* **103**(4) (2018), 582–591.
11. M. Naszódi, A. Polyanskii, “[Approximating set multi-covers](#)”, *European Journal of Combinatorics* **67** (2018), 174–180, [arXiv.1608.01292](#).
10. Z. Jiang, A. Polyanskii, “[Proof of László Fejes Tóth’s zone conjecture](#)”, *Geometric and Functional Analysis* **27**(6) (2017), 1367–1377, [arXiv.1703.10550](#).
9. A. Kupavskii, A. Polyanskii, “[On simplices in diameter graphs in \$\mathbb{R}^4\$](#) ”, *Mathematical Notes* **101**(2) (2017), 265–276.
8. A. Polyanskii, “[Pairwise intersecting homothets of a convex body](#)”, *Discrete Mathematics* **340**(8) (2017), 1950–1956, [arXiv.1610.04400](#).
7. A. Kupavskii, A. Polyanskii, “[Proof of Schur’s conjecture in \$\mathbb{R}^D\$](#) ”, *Combinatorica* **37**(6) (2017), 1181–1205, [arXiv.1402.3694](#).
6. V.V. Bulankina, A.B. Kupavskii, A.A. Polyanskii, “[On Schur’s conjecture in \$\mathbb{R}^4\$](#) ”, *Mathematical Notes* **97**(1) (2015), 21–29.
5. A. Polyanskii, “[On a question of Makai and Martini on bodies of constant width](#)”, *Contributions to Algebra and Geometry* **55**(2) (2014), 635–636.

4. V.V. Bulankina, A.B. Kupavskii, A.A. Polyanskii, “[Note on Schur’s conjecture in \$\mathbb{R}^4\$](#) ”, *Doklady Mathematics* **89(1)** (2014), 88–91.
3. A. Polyanskii, “[Quadratic irrationality exponents of certain numbers](#)”, *Moscow University Mathematics Bulletin* **68(5)** (2013), 237–240.
2. A. Polyanskii, “[Square exponent of irrationality of \$\ln 2\$](#) ”, *Moscow University Mathematics Bulletin* **67(1)** (2012), 23–28.
1. A. Polyanskii, “[On the irrationality measure of certain numbers](#)”, *Moscow Journal of Combinatorics and Number Theory* **1(4)** (2011), 80–90, [arXiv.1501.06752](#).

EXPOSITORY PAPERS and research projects for Summer Conference of Tournament of Towns

6. E. Bakaev, G. Chelnokov, A. Polyanskii, “[Discharging method](#)”, *Kvant* **12** (2019), 31–33 (in Russian).
5. A. Polyanskii, P. Tarasov, “[Selected examination problems in discrete analysis](#)”, *Matematicheskoe Prosvetshenie* **1** (2017), 205–209 (in Russian).
4. F. Nilov, A. Polyanskii, N. Polyanskii, “[Szemerédi–Trotter theorem](#)”, *Matematicheskoe Prosvetshenie* **1** (2017), 186–196 (in Russian).
3. A. Polyanskii, “[Solving problems without using Pick’s formula](#)”, *Kvant* **2** (2013), 40–42 (in Russian).
2. A. Zaslavskiy, F. Nilov, A. Polyanskii, M. Skopenkov, “[Webs from lines and circles](#)”, *Research project for Summer conference of Tournament of Towns in Teberda* (2012) (bilingual).
1. A. Polyanskii, “[To shoot a cannon with sparrows](#)”, *Kvant* **2** (2012), 49–50, 60–61 (in Russian).

IN PREPARATION

7. A. Kupavskii, A. Polyanskii, I. Tomon, D. Zakharov, “The extremal number of surfaces”, [arXiv:2010.07191](#).
6. S. Kiselev, R. Pinchasi, A. Polyanskii, “A Sylvester–Gallai type theorem for unit circles”
5. A. Polyanskii, “A cap covering problem”, [arXiv:2006.02192](#)., submitted to *Combinatorica*
4. M. Naszodi, A. Polyanskii, “Perron and Frobenius meet Carathéodory”, [arXiv:1901.00540](#)., submitted to *Electronic Journal of Combinatorics*
3. A. Polyanskii, “Helly-type theorem for eigenvectors”, [arXiv:1611.03251](#).
2. F. Nilov, A. Polyanskii, “On Sylvester–Gallai theorem for vectors” submitted to *Math. Notes* (In Russian)
1. N. Chernega, A. Polyanskii, R. Sadykov, “Non-crossings in geometric graphs”