LIST OF PUBLICATIONS:

Refereed publications

Articles

1. A. Khovanskii. Semigroups, Cartier divisors and convex bodies. 35 pp. Accepted for publication in a volume dedicated to the 80th birthday of Bernard Teissier, to be published by EMS Press. Volume is edited by Lorenzo Fantini, Anne Pichon and Patrick Popescu-Pampu.
2. A. Khovanskii, and A. Tronsgard. On solvability of linear differential equations in finite terms. Izvestiya RAN, Ser. Matematika, 2026 Volume 90:1, Pages 244-260; translation in Izvestiya: Mathematics, 2026 Volume 90:1, pp. 238-254.
3. T. Bakiev, A. I. Bufetov, V. A. Vassiliev, S. M. Voronin, A. A. Glutsyuk, A. S. Gorodetski, A. V. Dukov, V. Yu. Kaloshin, A. V. Klimenko, V. V. Kozlov, S. B. Kuksin, S. K. Lando, V. S. Oganesyan, G. I. Olshanski, S. Yu. Pilyugin, O. V. Pochinka, Ya. G. Sinai, A. S. Skripchenko, A. L. Skubachevskii, I. A. Taimanov, V. A. Timorin, V. M. Tikhomirov, D. V. Treschev, D. A. Filimonov, K. M. Khanin, H. Hedenmalm, A. G. Khovanskii, M. A. Tsfasman, A. I. Shafarevich, I. S. Shilin, S. Yu. Yakovenko, "On the 80th birthday of Yulii Sergeevich Ilyashenko",Uspekhi Matematicheskikh Nauk, 2025, Volume 80, Issue 2(482), Pages 171–183; translated in Russian Math. Surveys, 80:2 (2025), Pages 345–357.
4. A. Khovanskii. Lyapunov stability theory. St. Petersburg Mathematicians and their discoveries. MCCME (2024), pp. 168–170.
5. A. Khovanskii, and T. Belokrinitskaya. Alexander Mikhailovich Lyapunov. St. Petersburg Mathematicians and their discoveries. MCCME (2024), pp. 161–167.
6. A. Khovanskii, L. Monin. Fibered toric varieties. Moscow Mathematical Journal. Vol. 23, No 4, (2023) pp. 545–558.
7. A. Khovanskii, J. Hofscheier, L. Monin. Cohomology Rings of Toric Bundles and the Ring of Conditions. ArMJ. V. 10, (2024), pp. 171–221.
8. A. Khovanskii. Center of mass technique and affine geometry. Communication in Mathematics, Vol. 31, No 3 (2023), pp. 49–85.
9. A. Khovanskii. Geometry of generalized virtual polyhedra. Journal of Mathematical Sciences, New York, Vol. 269, No. 2, January 14 (2023), pp. 256–269.
10. A. Khovanskii, I. Limonchenko, L. Monin. Cohomology rings of quasitoric bundles. Filomat, Vol. 36, No 19 (2022), pp. 6513–6537.
11. A. Khovanskii, I. Limonchenko, L. Monin. Generalized virtual polytopes and quasitoric manifolds. Trudy Matematicheskogo Instituta imeni V.A. Steklova, 2022, Vol. 318, pp. 139–165; Proc. Steklov Inst. Math., 2022, Vol. 318, pp. 126–149. Pleiades Publishing, Ltd., 2022.
12. V. L. Arlazarov, A. Ya. Belov, V. O. Bugaenko, V. A. Vassiliev, A. L. Gorodentsev, S. A. Dorichenko, Yu. S. Ilyashenko, V. M. Imaykin, S. I. Komarov, A. G. Kushnirenko, Yu. P. Lysov, A. L. Semenov, V. M. Tikhomirov, A. K. Tolpygo, A. G. Khovanskii, P. A. Yakushkin, I. V. Yaschenko. Nikolay Nikolayevich Konstantinov (obituary), Uspekhi Mat. Nauk, 2022, Volume 77, Issue 3(465), 161–170; translated in Russian Mathematical Surveys, 2022, Volume 77, Issue 3, 531–541.

13. A. Khovanski, S. Singla, and A.Tronsgard. Interpolation polynomials and linear algebra. C. R. Math. Rep. Acad. Sci. Canada Vol. 44 (2) 2022, 33–49.

14. B. Ya. Kazarnovskii, A. G. Khovanskii, A. I. Esterov. Newton polytopes and tropical geometry. Uspekhi Mat. Nauk 76:1(457) (2021), 95–190; translation in Russian Math. Surveys 76:1, 91–175.

15. A. Khovanskii. Newton polyhedra and good compactification theorem. Arnold Mathematical Journal, volume 7, (2021) 135–157.

16. M. Braverman, V.M. Buchstaber, M. Gromov, V. Ivrii, Yu.A. Kordyukov, P. Kuchment, V. Maz'ya, S.P. Novikov, T. Sunada, L. Friedlander, and A.G. Khovanskii. Mikhail Aleksandrovich Shubin (obituary). Uspekhi Mat. Nauk, 75:6 162–170; translation in Russian Math. Surveys 75:6 1143–1152.

17. K. Kaveh, A. Khovanskii. Intersections of hypersurfaces and ring of conditions of a spherical homogeneous space. Symmetry, Integrability and Geometry: Methods and Applications. SIGMA. 16 (2020), 016, 12 pp.

18. A. Khovanskii. Integrability in finite terms and actions of Lie groups. Moscow Mathematical Journal. V. 19, No. 2, 329–341, 2019.

19. A. Khovanskii. Solvability of equations by quadratures and Newton's theorem. Arnold Mathematical Journal, V. 4, No 2, 193–211, 2018.

20. I.A. Aptekarev, V.M. Buchstaber, V.A. Vassiliev, V.L. Gromov, Yu.S. Ilyashenko, B.S. Kashin, V.M. Keselman, V.V. Kozlov, M.L. Konthevich, I.M. Krichever, N.G. Kruzhilin, S.K. Lando, Yu.I. Manin, G.A. Margulis, S.Yu. Nemirovskii, S.P. Novikov, Yu.G. Reshennyak, Ya.G. Sinai, S.P. Suetin, D.V. Treshchev, D.B. Fuks, A.G. Khovanskii, E.M. Chirka, A.N. Shiryaev. Mathematical life (on Vladimir Antonovich Zjrich 80th birthday), Uspekhi Mat. Nauk, 73:5(443) (2018), 193–196: translation in Russian Math. Surveys 73:5 935–939.

21. A. Khovanskii, L. Monin. The resultant of developed systems of laurent polynomials. Moscow Mathematical Journal. V. 17, No. 4, 717–740, 2017.

22. S. Chmutov, M. Karev, A. Khovanski, J. Krasilshchik, S. Lando, N. Mnev, G. Panina, Yu. Romanovski, I. Scherbak, A.Sossinski, A. Varchenko, N. Vasilyev, V. Vassiliev, A. Vershik. Remembrance: Sergei Duzhin (June 17, 1956 – February 1, 2015). J. Knot Theory Ramifications 25 (2016), no. 12, 1677001, 8 pp.

23. K. Kaveh, A. Khovanskii. Complete intersections in spherical varieties. Selecta Mathematica. V. 22, No 4, Special Issue: The Mathematics of Joseph Bernstein, 2016, 2099–2141.

24. V. M. Buchstaber, S. M. Gusein-Zade, M. E. Kazarian, V. V. Kozlov, S. K. Lando, S. P. Novikov, D. O. Orlov, A. G. Khovanskii, "Victor Anatol'evich Vasil'ev (on his 60th birthday)", Uspekhi Mat. Nauk, 71:6(432) (2016), 167–171; translation in Russian Math. Surveys 71:6 1153–1157.

25. A. Khovanskii. Newton polyhedra and irreducible components of complete intersections. Izvestiya RAN, Ser. Matematika,V. 80, No 1, 2016, 281–304; translation in Izvestiya: Mathematics, V. 80, No 1, 2016, 263–304.

26. Yu. Burda, A. Khovanskii. Polynomials invertible in k-radicals. Arnold Mathematical Journal, V. 2, No 1, 2016, 121–138.

27. S. Chmutov, M. Karev, A. Khovanski, J. Krasilshchik, S. Lando, N. Mnev, G. Panina,

Yu. Romanovski, I. Scherbak, A.Sossinski, A. Varchenko, N. Vasilyev, V. Vassiliev, A. Vershik. Sergei Duzhin (June 17, 1956 – February 1, 2015). Arnold Math. J. 1 (2015), no. 4, 473–479.

28. A. Khovanskii. On Algebraic Functions Integrable in Finite Terms, Funct. Anal. Appl. V. 49, No 1, 62–70, 2015; translation in Funct. Anal. Appl., V. 49, No 1, 50–56, 2015.
29. B. Kazarnovskii, A. Khovanskii. Tropical Notherian property and Gröbner bases, Algebra i Analiz, V. 26, No 5, 142–163, 2014; translated to St. Petersburg Math. J., V. 26, No 5, 797–811, 2014.
30. V.L. Arlazarov, O.A. Slavin, V.V. Farsobina, A. Khovanskii. The search for the optimal position during the comparison of digitized images. Scientific and Technical Information Processing. Springer-Verlag New York, Inc. Secaucus, NJ, USA. V 41, No 5, 293–301, December 2014.
31. A. Khovanskii, V.Timorin. On the theory of coconvex bodies. Discrete & Computational Geometry. V. 52, No 4, 806–823, 2014.
32. K. Kaveh, A. Khovanskii. Convex Bodies and Multiplicities of Ideals. In book: Algebraic topology, convex polytopes, and related topics. Tr. Mat. Inst. Steklova. V. 286, 2014, 291–307; translation in Proceedings of the Steklov Institute of Mathematics. Pleiades Publishing. V. 286, 268–284, 2014.
33. V. L. Arlazarov, E. A. Dinits, Yu. S. Ilyashenko, A. V. Karzanov, S. M. Karpenko, A. A. Kirillov, N. N. Konstantinov, M. A. Kronrod, O. P. Kuznetsov, L. B. Okun', P. A. Pevzner, A. L. Semenov, I. A. Faradzhev, A. G. Khovanskii, B. V. Cherkasskii. Georgii Maksimovich Adel'son-Vel'skii (obituary). Uspekhi Mat. Nauk. V. 69, No 4(418), 169–176, 2014.
34. A. I. Bufetov, A. A. Glutsyuk, S. M. Gusein-Zade, A. S. Gorodetski, V. Yu. Kaloshin, A. G. Khovanskii, V. A. Kleptsyn, S. Yu. Nemirovskii, A. B. Sossinsky, M. A. Tsfasman, V. A. Vassiliev, S. Yu. Yakovenko, "Yulij Sergeevich Ilyashenko", Mosc. Math. J., 14:2 (2014), 173–179.
35. Yu. Burda, A. Khovanskii. Signatures of Branched Coverings and Solvability in Quadratures. Moscow Mathematical Journal. V. 14, No. 2, 225–237, 2014.
36. K. Kaveh, A. Khovanskii. Note on the Grothendieck group of subspaces of rational functions and Shokurov's b-divisors. Canadian Mathematical Bulletin, V. 57, No 3, 562–572, 2014.
37. V.L. Arlazarov, O.A. Slavin, V.V. Farsobina, A. Khovanskii. Find the best position by comparing digitated images. Iskusstvennyi intelekt i prinyatie reshenii. No 3, 48–58, 2013.
38. A. Khovanskii. Chebyshev polynomials and their inverses. Matematicheskoe prosveshenie. Ser. 3, No 17, 93–106, 2013.
39. A. Khovanskii. Straightedge and Compass Constructions. Matematicheskoe prosveshenie. Ser. 3, No 17, 42–60, 2013.
40. K. Kaveh, A. Khovanskii. Newton–Okounkov bodies, semigroups of integral points, graded algebras and intersection theory. Annals of Mathematics, V. 176, No 2, 925–978, 2012.
41. K. Kaveh, A. Khovanskii. Convex bodies associated to actions of reductive groups.

Moscow Mathematical Journal, V. 12, No 2, 369–396, 2012.

42. A. Khovanskii, A. Varchenko. Arnold's Seminar, First Years. Notices of the AMS, V. 59, No 3, 393–396, 2012.
43. K. Kaveh, A. Khovanskii. Algebraic equations and convex bodies. Progress in Mathematics V. 296, Perspectives in Analysis, Geometry and Topology, Springer Science+Business Media, 263–282, 2012.
44. A. Khovanskii. Completion of convex families of convex bodies. Matematicheskie zametki. V. 91, No 3, 440–458, 2012; translation in Mathematical Notes, 2012, Vol. 91, No. 3, 415–429.
45. Yu. Burda, A. Khovanskii. Branching data for algebraic functions and representability in radicals. In book: Algebraic method in dinamical systems. Banach Center Publ. Vol. 94 (2011), 131–142, Warsaw, 2011.
46. A. Khovanskii. Intersection theory and Hilbert function. Funct. Anal. Appl. V. 45, No 4, 82–94, 2011; translation in Functional Anal. Appl. V. 45, No 4, 305–315, 2011.
47. B. Kazarnovskii, A. Khovanskii. Universal Groebner basis, Proceedings of the International Conference on Polynomial Computer Algebra, Saint Peterburg. 2011. 65–69.
48. K. Kaveh, A. Khovanskii. Newton polytopes for horospherical spaces. Moscow Mathematical Journal V. 11 (2011), No 2. 265–283.
49. V. Arlazarov and O. Slavin, A. Khovanskii. Estimation of the distance between images for translation. Doklady RAN, Computer science. 2011. V. 437, No 3, 313–315; translation in Doklady Mathematics, V 83, No 2, 1–3.
50. D. Anosov, V. Buchstaber, S. Gusein-Zade, Yu. Ilyashenko, A. Khovanskii, S. Lando, S. Novikov, A. Sossinsky, M. Tsfasman, V. Vassiliev. Vladimir Igorevich Arnold. Mosc. Math. J., V. 10, No 3, 2010, 481–483.
51. V.A.Timorin, A.G.Khovanskii. Polyhedra and equations. Matematicheskoe prosveshenie. Ser. 3, 2010. No 14, 30–57.
52. S. B. Artemov, A. A. Belavin, V. M. Buchstaber, A. I. Esterov, B. L. Feigin, V. A. Ginzburg, E. A. Gorsky, Yu. S. Ilyashenko, A. A. Kirillov, A. G. Khovanskii, S. K. Lando, G. A. Margulis, Yu. A. Neretin, S. P. Novikov, S. B. Shlosman, A. B. Sossinsky, M. A. Tsfasman, A. N. Varchenko, V. A. Vassiliev, S. G. Vladut. Sabir Medgidovich Gusein-Zade. Mosc. Math. J., V. 10, No 4, 2010, 831–832.
53. K. Kaveh, A. Khovanskii. Mixed Volume and an Extension of Intersection Theory of Divisors. Moscow Mathematical Journal. V. 10 (2010), No 2. 343–375.
54. K. Kaveh, A. Khovanskii. Moment polytopes, semigroup of representations and Kazarnovskii's theorem. Journal of Fixed Point Theory and Applications, V. 7, (2010) No 2, 401–417.
55. A. M. Abramov, V. I. Arnol'd, A. V. Bolsinov, A. N. Varchenko, L. Galgani, B. I. Zhilinskii, Yu. S. Il'yashenko, V. V. Kozlov, A. I. Neishtadt, V. I. Piterbarg, A. Khovanskii, V. V. Yashchenko. Nikolai Nikolaevich Nekhoroshev (obituary). Uspekhi Mat. Nauk, V 64, No 3(387), 2009, 174–178.
56. A. Khovanskii. Polyhedra and algebra, Trudy Instituta sistemnogo analiza RAN. V. 38, 2008, 23–35.
57. Yu. Burda, A. Khovanskii. Degree of rational mapping, and the theorems of Sturm and

Tarski. Journal of Fixed Point Theory and Applications. V. 3, No. 1, 2008, 79–93.

58. A. Khovanskii. Logarithmic functional and reciprocity laws. In book: Toric Topology. International Conference May 28–June 3, 2006. Osaka City University. Osaka, Japan. Contemporary Mathematics. V. 460, 221–229, Amer. Math. Soc., Providence, RI, 2008.

59. A. Esterov, A. Khovanskii. Elimination theory and Newton polyhedra. Functional Analysis and Other Mathematics, Springer Berlin/Heidelberg, Vol. 2, No 1 December, 2008 45–71.

60. S. Gusein-Zade, Yu. Ilyashenko, M. Kazarian, A. Kushnirenko, S. Lando, A. Khovanskii, V. Vassiliev, V. Zakalyukin. Vladimir Igorevich Arnold in point of view of his students. Proceedings of the Steklov Institute of Mathematics. V. 259, 1–5, (2007).

61. A. Khovanskii. Variations on the theme of solvability by radicals. Trudy Matematicheskogo instituta im. Steklova, Vol. 259, 86–105 (2007); translation in Proceedings of the Steklov Institute of Mathematics.V. 259. 82–100 (2007).

62. S. Gusein-Zade, Yu. Ilyashenko, M. Kazarian, S. Lando, A. Sossinsky, A. Khovanskii, M. Tsfasman, V. Vassiliev, V. Zakalyukin. Vladimir Igorevich Arnold. Moscow Mathematical Journal, V. 7, No 3, 571 (2007).

63. A. Khovanskii. Logarithmic Functional and the Weil Reciprocity Law. Proceedings of the Waterloo Workshop on Computer Algebra 2006, Ed: Kotsireas I, Zima E., World Scientific Press, 85–108, 2007.

64. A. Khovanskii. Arnold's problem on hyperbolic hypersurfaces in projective spaces, IUM seminar "Globus", No 3 , MCCME, Moscow, 2006, 28–46.

65. A. Khovanskii. Systems of algebraic equations with generic Newton polyhedra, IUM seminar "Globus", No 3, MCCME Moscow, 2006, 4–27.

66. A. Khovanskii, D. Novikov. On affine hypersurfaces with everywhere nondegenerate second quadratic form, Moscow Mathematical Journal, V. 6, No 1, 135–152 (2006).

67. A. Khovanskii. An analog of determinant related to Parshin–Kato theory and integral polyhedra, Funkts. analiz, Vol. 40, No 2, 2006, 55–64; translation in Funct. Anal. Appl. 40 (2006), no. 2, 126–133 (2006).

68. A. Khovanskii, S. Chulkov. Hilbert polynomial for systems of linear partial differential equations with analytical coefficients, Izvestiya RAN, Vol. 70(2006), no. 1, 2006; translation in Izvestiya: Mathematics 70 (2006), 153–169.

69. T. Fukui, A. Khovanskii. Mapping degree and Euler characteristic, Kodai Mathematical Journal, Vol. 29, 2006, 144–162.

70. V. I. Arnol'd, V. M. Buchstaber, Yu. S. Ilyashenko, M. E. Kazarian, S. K. Lando, S. P. Novikov, A. B. Sossinski, A. Khovanskii, M.A. Tsfasman. Victor A. Vassiliev. Mosc. Math. J., V. 6, No 1, 2006, 1–3.

71. A. Khovanskii. Combinatorics of sections of polytopes and Coxeter groups in Lobachevsky spaces, Proceedings of the International Conference "Coxeter Legacy: Reflections and Projections", Fields Institute Communications, American Mathematical Society, Providence, RI. Vol. 46, 2006, 129–157.

72. Anosov D., Arnold V., Glutsyuk A., Gorodetski A., Kaloshin V., Katok A., A. Khovanskii, Lando S., Sossinsky A., Tsfasman M., Yakovenko S. "Yulij S. Ilyashenko". Mosc. Math. J. 5, no. 1, front matter, 2005.

73. A. Khovanskii, S. Chulkov. Hilbert and Hilbert–Sammuel polynomials and partial differential equations, Matematicheskie zametki; translation in Mathematical Notes, Publisher: Consultants Bureau, An Imprint of Springer Verlag New York LLC, Vol. 77, No. 1–2, 2005, 130–139.

74. A. Khovanskii. On solvability and unsolvability of equations in explicit form, Uspehi Matem. Nauk, Vol. 59, No. 4(358), 2004, 69–146; translation in Russian Math. Surveys 59 no. 4 (2004), 661–736.

75. A. Khovanskii, D. Novikov. Comments to the Arnold problem 1987-4. In book: English translation "Arnold's Problems", Springer-Verlag, Berlin – PHASIS, Moscow, 2004, p. 457–458.

76. A. Khovanskii. On the nonrepresentability of functions of several variables by quadratures, Funkts. analiz, Vol. 37, No 4, 2003, 74–85; translation in Funct. Anal. Appl. 37 (2003), no. 4, 302–310 (2003).

77. A. Khovanskii, D. Novikov. L-convex-concave body in $\mathbf{R}P^3$ contains a line, Geometric and Functional Analysis (GAFA), V. 13 (2003) 1082–1118.

78. A. Khovanskii, D. Novikov. L-convex-concave sets in real projective space and L-duality, "Moscow Mathematical Journal", Vol. 3, No. 3, 2003, 1013–1037.

79. S. M. Gusein-Zade, Yu. S. Ilyashenko, A. Khovanskii, M. A. Tsfasman, V. A. Vassiliev. Vladimir Igorevich Arnold. Mosc. Math. J., V 3, No 2 (2003), 261.

80. A. Khovanskii. A topological version of Galois theory, Proceeding of International Conference "Kolmogorov and Cotemporary Mathematics", 777–780, 2003.

81. A. Khovanskii. Three lectures on Fewnomials and Noetherian intersections, Proceeding of workshop, November 5–8, 2002 in RIMS Kokyuroku, Series, Kyoto no 6, 42–72, 2003.

82. A. Khovanskii. On the monodromy of a multivalued function on it's ramification set, Funkts. analiz, Vol. 37, No 2, 2003, 65–74. translation in Funct. Anal. Appl. 37 (2003), no. 2, 134–141 (2003).

83. O. Gelfond, A. Khovanskii. Toric geometry and Grothendieck residues, Moscow Mathematical Journal, V. 2, no 1, 2002, 99–112.

84. A. Khovanskii. Three lectures on Newton polyhedra, "Newton polyhedrons and Singularities", proceeding of workshops, 28–31 May, 2001, RIMS, Kyoto. Kokyuroku no 10, 1–17, 2001.

85. A. Khovanskii. On the continuability of multivalued analytic functions to an analytic subset, "Funkts. analiz", V. 35, N.1, 62–73, 2001; translation in Funct. Anal. Appl. 35 (2001), no. 1, 51–59 (2001).

86. A. Khovanskii. Geometrical generalizations of a problem about transformation of the nomograms consisting of aligned points into nomograms consisting of equidistant points, Nomography collection, No. 17, RAN, Vychisl. Tsentr 73–88, 2000.

87. A. Khovanskii. Families of sections of quadrics and classical geometries, "Funkts. analiz", V. 34, N. 3, 91–95, 2000; translation in Funct. Anal. Appl. 34 (2000), no. 3, 235–238 (2000).

88. A. Khovanskii. Newton polyhedrons, a new formula for mixed volume, product of roots of a system of equations, The Arnoldfest, Proceedings of a Conference in Honor of V.I. Arnold for his Sixtieth Birthday, Fields Institute Communications, Vol. 24, Amer. Math.

Soc., Providence, RI, 1999, 325–364.

89. A. Gabrielov, A. Khovanskii. Multiplicity of a Noetherian Intersection, Geometry of Differential Equations, Amer. Math. Soc. Transl., Ser. 2, Vol. 186, Amer. Math. Soc., Providence, RI, 1998, 119–130.

90. A. Khovanskii. Boundary indexes of 1-forms with homogeneous polynomial coefficients, "Algebra and Analysis", V.10, N.3, 1998, 193–222; translation in St. Petersburg Math. J. 10 (1999), no. 3, 553–575.

91. A. Khovanskii. On a lemma of Kontsevich, "Funkts. analiz", V. 31, N.4, 89-91, 1997; translation in Funct. Anal. Appl. 31 (1997), no. 4, 296–298 (1998)

92. A. Khovanskii. Consistent partitions of polytopes and polynomial measures, Topics in Singularity Theory: V.I. Arnold's 60th Anniversary Collection, Amer. Math. Soc. Transl., Ser. 2, Vol. 180, Amer. Math. Soc., Providence, RI, 1997, 157–166.

93. D. V. Anosov, A. A. Bolibrukh, V. A. Vassiliev, A. M. Vershik, A. A. Gonchar, M. L. Gromov, S. M. Gusein-Zade, V. M. Zakalyukin, Yu. S. Ilyashenko, V. V. Kozlov, M. L. Kontsevich, Yu. I. Manin, A. I. Neishtadt, S. P. Novikov, Yu. S. Osipov, M. B. Sevryuk, Ya. G. Sinai, A. N. Tyurin, L. D. Faddeev, B. A. Khesin, A. G. Khovanskii. Vladimir Igorevich Arnol'd (on the occasion of his sixtieth birthday). "Uspekhi mat. nauk", V. 52, No 5(317), 1997, 235–255; translation in Russian Math. Surveys 52 (1997), no. 5, 1117–1139.

94. A. Khovanskii. Newton polygons, curves on torus surfaces, and the converse Weil theorem, "Uspekhi matematicheskikh nauk", V.52, N.6(318), 113–142, 1997; translation in Russian Math. Surveys 52 (1997), no. 6, 1251–1279.

95. A. Khovanskii, G.S. Khovanskii, E.G. Kozlova. On some questions of theoretical and applied Nomography, "Computer Center of the Russian Academy of Sciences" Computer Center RAN, 96 pp., 1996.

96. A. Khovanskii, S. Yakovenko. Generalized Rolle theorem in R^n and C, "Journal of dynamical and control systems", V.2, N.1, 103–123, 1996.

97. O. Gelfond, A. Khovanskii. Newton polyhedra and Grothendieck residues "Doklady RAN", V.3, N.350, 298–300, 1996; translation in Doklady Mathematics V. 54, no. 2, 1996, 700–702.

98. A. Khovanskii. S. Zdravkovska. Branched covers of S^2 and braid groups, "Journal of Knot Theory and its Ramifications", V. 5, N. 1, 55–75, 1996.

99. A. Khovanskii. Sums of finite sets, orbits of commutative semigroups and Hilbert function, "Funkts. analiz", V.29, N.2, 36–50, 1995; translation in Funct. Anal. Appl. 29 (1995), no. 2, 102–112.

100. A. Khovanskii. Topological obstructions for representability of functions by quadratures, "Journal of dynamical and control systems", V.1, N.1, 99–132, 1995.

101. A. Khovanskii, A. Pukhlikov. Integral transforms based on Euler characteristic and their application, "Integr.transform and special function", V. 1, N. 1, 19–26, 1993.

102. J.-M. Kantor, A. Khovanskii. Une application du Theoreme de Riemann–Roch combinatoire au polynome d'Ehrhart des polytopes entier de R, C. R. Acad. Sci. Paris. Ser.I, V. 317, 501–507, 1993.

103. A. Khovanskii. Newton polyhedron, Hilbert polynomial and sums of finite sets, "Func-

tional Analysis and its Applications", V.26, N4, 57-63, 1992; translation in Functional Anal. Appl. 26 (1992), no. 4, 276–281 (1993).

104. A. Pukhlikov, A. Khovanskii. A Riemann–Roch theorem for integrals and sums of quasipolynomials over virtual polytopes, "Algebra and Analysis", v.4, N4, 188-216, 1992; translation in St. Petersburg Math. J. 4 (1993), no. 4, 789–812.

105. A. Pukhlikov, A. Khovanskii. Finitely additive measures of virtual polytopes, "Algebra and Analysis", v. 4, no. 2, 161–185, 1992; translation in St. Petersburg Math. J. 4 (1993), no. 2, 337–356.

106. Yu. Ilyashenko, A. Khovanskii. Galois groups, Stocks operators and theorem of Ramise, "Functional Analysis and its applications", v. 24, no 4; 31–42, 1990; translation in Funct. Anal. Appl. 24 (1990), no. 4, 286–296 (1991).

107. A. Khovanskii, G. S. Khovanskiĭ. Investigation of methods for the representation of the equation $(f_{34} - f_{12})/(g_{34} - g_{12}) = (f_{56} - f_{12})/(g_{56} - g_{12})$ by nomograms with a directed transparent carrying a curvilinear index. Nomography collection, No. 16, 63–81, 194, Akad. Nauk SSSR, Vychisl. Tsentr, Moscow, 1990

108. A. Khovanskii. Newton Polyhedra (algebra and geometry), Proceedings of XIII All-Union School on the Operator Theory in Functional Spaces, Kujbishev, 202-221, 1989; translation in Amer. Math. Soc. Transl. (2) v. 153, 1992, 183–199.

109. A. Khovanskii. Comparing of different kinds of estimations for different small dimensional economical models, "Trudy VNIISI", 10–23, 1987.

110. V.I.Danilov, A. Khovanskii. Newton polyhedra and an algorithm for computing Hodge–Deligne numbers, "Izvestia AN SSSR", Ser. Mathematica, v.50, N5, 925-945, 1986; translation in Math. USSR – Izv. 29(1987), No. 2, 279–298.

111. A. Khovanskii. Hyperplane sections of polyhedra, toric varieties and discrete groups in Lobachevsky space, "Functional Analysis and its applications", V. 20, N 1, 50–61, 1986; translation in Funct. Anal. Appl. V. 20 (1986), no. 1, 41–50 (1986).

112. A. Khovanskii. Linear programming and generalization of Nikulin's theorem, "Trudi VNIISI", 81–86, 1985.

113. A. Khovanskii. Linear programming and geometry of convex polyhedra, "Trudi VNIISI", 73–80, 1985.

114. L. Kantorovich and L. Korkina, A. Khovanskii. Comparing of different models of economic growth, "Trudy VNIISI", 3–12, 1985.

115. A. Varchenko, A. Khovanskii. Asymptotics of integrals over vanishing cycles and the Newton polyhedron, "Doclady AN SSSR", v.283, N3, 521–525, 1985; translation in Soviet Math. Dokl. V. 32 (1985), no. 1, 122–127.

116. A. Khovanskii. On analogues of Alexandrov–Fenchel inequalities for hyperbolic forms, Doclady AN SSSR, V. 276, No 6, 1332-1334, 1984; translation in Soviet Math. Dokl. V. 29(1984), no. 3, 710–713.

117. A. Khovanskii. Mixed volumes, "Uspehi Matem. Nauk", V. 39, N5, 227–228, 1984 (Russian Math. Surveys).

118. A. Khovanskii. Real analytic varieties with the finiteness property, and complex abelian integrals, "Functional Analysis and its applications", V. 18, N2, 40–50, 1984; translation

in Funct. Anal. Appl. 18 (1984), no. 2, 119–127 (1984).

119. A. Khovanskii. Cycles of dynamic systems on a plane and Roll theorem, "Siberian Mathematical Journal", v. 25, N3, 198-203, 1984; translation in Siberian Math. J. V. 25 (1984), no. 3, 502–506 (1985).

120. A. Khovanskii. Fewnomials and Pfaff manifolds, Proceedings of the International Congress of Mathematicians, Vol. 1, 2 (Warsaw, 1983), 549–564, PWN, Warsaw, 1984.

121. L.Kantorovich, L.Korkina, A. Khovanskii. Optimization in continuous and discrete models of two-sectorial economics, "Trudy VNIISI", N9, 14–20, 1983.

122. L.Kantorovich, L.Korkina, A. Khovanskii. Asymptotic optimization of consumption in a model of two-sector economy, "Siberian Math. J.", V. 24, N5, 71–75, 1983; translation in Siberian Math. J. V. 24 (1983), no. 5, 704–708 (1984).

123. A. Khovanskii. Newton Polyhedra (resolutions of singularities), Current problems in mathematics, V. 22, 207–239, Itogi Nauki i Tekhniki, Akad. Nauk SSSR, Vsesoyuz. Inst. Nauchn. i Tekhn. Inform., Moscow, 1983; translation in Journal of Soviet Mathematics, 1984, 27:3, 2811–2830.

124. E. Korkina, A. Khovanskii. Principle of differential optimization and economic model, "Trudy VNIISI", N8, 3–10, 1982.

125. A. Khovanskii, G.S. Khovanskii. Methods of nomographing some relations, based on the use of two-parameter families of lines, circles and ellipses. "Nomograficheskii Sbornik", V. 14, 70–105, 1982.

126. A. Khovanskii, G.S. Khovanskii. Transformation of nomograms from aligned points and with a parallel index into nomograms from equidistant points, and investigation of their adaptability, "Nomograficheskii Sbornik", V. 14, 56–77, 1982.

127. A. Khovanskii. On estimation of real solutions number, "Uspehi Matem. Nauk", V. 37, N1, 165, 1982 (Russian Math. Surveys).

128. E. Korkina, A. Khovanskii. Golden rule for the two-sectorial models of economic growth, "Trudy Seminara Slozhnykh System", 11–18, 1981.

129. A. Khovanskii. Newton Polyhedra and the index of a vector field, "Uspehi Matem. Nauk", v.36, N4, 234, 1981 (Russian Math. Surveys).

130. A. Khovanskii, G.S. Khovanskii. Representation of classical canonical nomographic forms with oriented transporant and circular nomograms. "Trudy Seminara po nomografii", 50–52, 1981.

131. A. Khovanskii. Sur les racines complexes de systemes d'equations algebraiques avant un petit nombre de monomes, C.R.Acad. Sc. Paris, V. 292, 937–940, 1981.

132. A. Khovanskii. Straighting of parallel curves. "Doclady AN SSSR", V. 250, N1, 1074–1076, 1980; translation in Soviet Math. Dokl. V. 21 (1980), no. 1, 284–286.

133. A. Khovanskii. On numbers of solutions of real equations, "Uspehi Matem. Nauk", V.35, N5, 213, 1980 (Russian Math. Surveys).

134. A. Khovanskii. Rectification of circles, "Siberian Mathematical Journal", V. 21, N4, 221–226, 1980; translation in Siberian Math. J. V. 21 (1981), no. 4, 649–652.

135. O. Gelfond, A. Khovanskii. Real Liouville functions, "Functional Analysis and its applications", v. 14, N 2, 52-53, 1980; translation in Funct. Anal. Appl. 14 (1980), no. 2,

122–123 (1980).

136. A. Khovanskii. On a class of systems of transcendental equations, "Doclady AN SSSR", V. 255, N4, 804–807, 1980; translation in Soviet Math. Dokl. V. 22, (1980) no. 3, 762–765.

137. A. Khovanskii, G.S. Khovanskii. Transformation of the nomograms consisting of aligned points and with parallel index into nomograms of C of equidistant points, "Doklady AN SSSR", V. 248, N 3, 535–538, 1979; translation in Soviet Math. Dokl. Vol. 20 (1979) no. 5, 1041–1048.

138. A. Khovanskii. Geometry of convex polyhedra and algebraic geometry, "Uspehi Matem. Nauk", V. 34, N4, 160–161, 1979 (Russian Math. Surveys).

139. A. Khovanskii. The explicity of Petrovsky–Olejnik inequalities, "Uspehi Matem. Nauk", V. 34, N3, 223, 1979 (Russian Math. Surveys).

140. A. Khovanskii. Index of a polynomial vector field, "Functional Analysis and its applications", v.13, N1, 49–58, 1979; translation in Funct. Anal. Appl. 13 (1979), no. 1, 38–45 (1979).

141. L. Kantorovich, V. Zhiyanov, A. Khovanskii. Analysis of dynamics of economic parameters in the models with continuously distributed fonds, "Sbornik Trudov VNIISI", N9, 5–25, 1978.

142. V. Zhiyanov, A. Khovanskii. Exponential growth in the one-sectorial model of economics with continuously distributed fonds, "Sbornik Trudov VNIISI", N9, 25–36, 1978.

143. L. Kantorovich, V. Zhiyanov, A. Khovanskii. Principle of differential optimization applied to a single-product dynamical model of an economic structure. Siberian Math. J., V. 19, No 5, 1053–1064, 1978; translation in Siberian Math. J., V. 19, no. 5, 744–752 (1979).

144. A. Khovanskii. Newton Polyhedra and the Euler–Jacoby formula "Uspehi Matem. Nauk", V. 33, N6, 237–238, 1978; translation in Russian Math. Surveys 33 (1978), no. 6, 237–238.

145. A. Khovanskii. Newton Polyhedra and the genus of complete intersections, "Functional Analysis and its applications", V. 12, N1, 51–61, 1978; translation in Funct. Anal. Appl. 12 (1978), no. 1, 38–46 (1978).

146. A. Khovanskii. Newton polyhedra, and toroidal varieties, "Functional Analysis and its applications", V. 11, N4, 56-64, 1977, translation in Funct. Anal. Appl. 11 (1977), no. 4, 289–296 (1978).

147. D. Bernstein and A. Kushnirenko, A. Khovanskii. Mixed volumes of Newton Polyhedra, Milnor's numbers and numbers of solutions of algebraic equations, "Uspehi Matem. Nauk", V. 31, N3, 196, 1976 (Russian Math. Surveys).

148. D. Bernstein and A. Kushnirenko, A. Khovanskii. Newton polyhedra, "Uspehi Matem. Nauk", V. 31, N3, 201–202, 1976 (Russian Math. Surveys).

149. A. Khovanskii. Riemann surfaces of functions, representable in quadratures, Reports of VI All-Union Topological Conference, Tbilisi, 1972.

150. A. Khovanskii. On representability of functions in quadratures, "Uspehi Matem. Nauk", V. 26, N4, 251–252, 1971 (Russian Math. Surveys).

151. A. Khovanskii. Superpositions of holomorphic functions with radicals. "Uspehi Matem. Nauk", V. 26, N2, 213–214, 1971 (Russian Math. Surveys).

152. A. Khovanskii. The representability of algebroidal functions by superpositions of analytic functions and of algebroidal functions of one variable. "Functional Analysis and its applications", V. 4, N2, 74–79, 1970; translation in Funct. Anal. Appl. 4 (1970), no. 2, 152–156.

Books and/or Chapters

1. A. Khovanskii. Comments on J. F. Ritt's book "Integration in Finite Terms"; in book: Integration in Finite Terms: Fundamental Sources by Clemens Raab (Editor), Michael F. Singer (Editor). Springer. Series: Text & Monographs in Symbolic Computation. 2022, 137–201.
2. A. Khovanskii. Topological Galois theory. Solvability and unsolvability of equations in finite terms. Translated by Valentina Kiritchenko and Vladlen Timorin. Series: Springer Monographs in Mathematics. Springer Berlin Heidelberg. 2014, XVIII, 305 pp. 6 illus.
3. A. Khovanskii. Galois theory, coverings, and Riemann surfaces. Translated by Valentina Kiritchenko and Vladlen Timorin, Springer Berlin Heidelberg, 81 pp., 2013.
4. V.I. Arnold, A.N. Varchenko, A.B.Givental, A.G. Khovanskii. Singularities of functions, wave fronts, caustics and multidimensional integrals. (Reviews in Mathematics and Mathematical Physics) 14, No. 2, Cambridge Scientific Publishers 122 pp., 2012.
5. A. Khovanskii. Topological Galois theory. Solvability and non-solvability of equations in finite terms. Monograph. MCCME. 296 pp. 2008.
6. A. Khovanskii. Galois theory, coverings and Riemann surfaces, MCCME, Moscow, 2007, 90 pp.
7. S. Chulkov, A. Khovanskii. Geometry of semi-group $\mathbf{Z}^{\mathbf{n}}_{\geq \mathbf{0}}$ and its appearances in combinatorics, algebra and differential equations, MCCME, Moscow, 2006, 128 pp.
8. A. Khovanskii. Solvability of equations by explicit formulae. In book: V.B. Alekseev. Abel's Theorem in Problems and Solutions Based on the lectures of Professor V.I.Arnold, Kluwer Academic Publishers, 2004, 221–263.
9. A. Khovanskii. Résolubilité des équations par formules explicites (théorie de Liouville, théorie de Galois différentielle et obstructions topologiques). In book: Alekseev. Le theoreme d'Abel : un cours d'Arnold, Vuibert, Cassini, 2004 (French translation).
10. A. Khovanskii. Complex calculus. MCCME, Moscow, 2004, 48 pp.
11. A. Khovanskii. Fewnomials. PHASIS Publishing House, Moscow, xii+217 pp., 1997.
12. A. Khovanskii. Fewnomials. AMS translated monographs, USA, V. 88, viii+139, 1991.
13. A. Khovanskii. Algebra and mixed volumes. In book Y.D. Burago and V.A. Zalgaller, Geometric inequalities, Springer-Verlag, Berlin and New York. V. 285, 182–207, 1988.
14. V. Arnold, A. Varchenko, A. Givental, A. Khovanskii. Singularities of functions, wave fronts, caustics, and multidimensional integrals. In book: Soviet Scientific Reviews, Sect. C: Mathematical Physics Reviews, Mathematical physics reviews, Vol. 4, 1–92, Harwood Academic Publ., Chur, 1984 (translated from Russian).
15. A. Khovanskii. Local multiplicity of a holomorphic map (section 5). In book V.I.Arnold, S.M.Gusein-Zade, A.N.Varchenko, Singularities of differentiable maps, 66–89, 1982; translation in: V.I.Arnold, S.M.Gusein-Zade, A.N.Varchenko, Singularities of differentiable

maps, Monographs in Mathematics, Vol 82, Birkhauser Einheitssacht, 84–114, 1985.

Books edited

1. Journal of Complexity. Special Issue: Foundations of Computational Mathematics 2002 Workshops. Vol. 21, no. 1 (2005). Guest Editor.
2. The Arnoldfest, Proceedings of a Conference in Honor of V.I. Arnold for his Sixtieth Birthday, Fields Institute Communications, Vol. 24, Amer. Math. Soc., Providence, RI, 1999, Editor.
3. Geometry of Differential Equations, Amer. Math. Soc. Transl., Ser. 2, Vol. 186, Amer. Math. Soc., Providence, RI, 1998, Editor.
4. Topics in Singularity Theory: V.I. Arnold's 60th Anniversary Collection, Amer. Math. Soc. Transl., Ser. 2, Vol. 180, Amer. Math. Soc., Providence, RI, 1997, Editor.

Books in preparation

1. A. Khovanskii. Classical Geometries I. Text book, 227 pp., 143 illus.
2. A. Khovanskii. Classical Geometries II. Text book, 160 pp., 120 illu

Non-Refereed Publications

1. A. Khovanskii. Galois theory for finite fields. arXiv:2604.08640 [math.NT] 9 April 2026, 16 pp. Handout for MAT401H1 course.
2. A. Khovanskii. A necessary condition for solvability by radicals. arXiv:2604.08642 [math.RA] 9 April 2026, 10 pp. Handout for MAT401H1 course.
3. A. Khovanskii, V Kiritchenko, and V. Timorin. Valuations on polyhedra and topological arrangements. arXiv:2601.03176 [math.CO] 6 Jan 2026. 49 pp.
4. K. Kaveh, A. Khovanskii, H. Spink. Vector-valued Laurent polynomial equations, toric vector bundles and matroids. Submitted to Compos. Math. arXiv:2507.09793 [math.AG] 13 July 2025. 25 pp.
5. A. Khovanskii. Semigroups, Cartier divisors and convex bodies. arXiv2502.13099v2 [math.AG] 17 December 2025. 36 pp.
6. A. Khovanskii. Total order compatible with addition on commutative semigroups. arXiv:2210.12835 [math.AG] October 25, 2022, 18 pp.
7. A. Khovanskii. Generalized virtual polyhedra and cohomology of torus manifold. International School on Torus Topology and Combinatoric. Sirius Mathematics Center. November, 2021, p. 10.
8. A. Khovanskii, L. Monin. Gorenstein algebras and toric bundles. arXiv:2106.15562 [math.AC], 29 June 2021. 14 pp.
9. Askold Khovanskii. Differential equations and Newton polyhedra. Polynomial Computer Algebra 2021, SPb. 125–128.
10. A. Khovanskii. Newton polyhedron and hypersurfaces in toric varieties. 2019 CMS Winter Meeting, Toronto, page 113.
11. A. Khovanskii. Newton polygon method and solvability of equations by quadratures.

Algebraic topology, combinatorics and mathematical physics. Abstracts of Talks of the International Conference on Occasion of Victor Buchstaber's 75th Birthday. Moscow, May 24 – June 1, 2018; – M., Steklov Mathematical Institute of Russian Academy of Sciences, 2018. 19–21.

12. A. Khovanskii. Groups of automorphisms and integrability in finite terms. University of Kragujevac, XIV Serbian Mmathematical Congress. Book of abstracts. Kragujevac, Serbia. 2018. 30.
13. Kiumars Kaveh, A. Khovanskii. A short survey on Newton polytopes, tropical geometry and ring of conditions of algebraic torus. arXiv:1803.07001 [math.AG] 19 Mar 2018. 15 pp.
14. A. Vershik, V. Vasiliev, A. Khovansii and K^0. Alive science (on Vladimir Igorevich Arnold 80th birthday). Troitskii Variant. Nauka. 16.01.2018, No 245, 6–7.
15. A. Khovanskii, B. Kazarnovskii. Newton polyhedra, tropical geometry and the ring of condition for $(\mathbf{C}^*)^{\mathbf{n}}$. arXiv:1705.04248 [math.AG], 13 May 2017. 7 pp.
16. A. Khovanskii, B. Kazarnovskii. Newton polyhedra, tropical geometry and the ring $\mathcal{R}_n(\Lambda)$. Report No. 21/2017. In book: Oberwolfach Reports, EMS, Vol. 14, No. 2, –, 2017.
17. A. Khovanskii. Resultant of Laurant polynomials whose Newton polyhedra are developed. 2016 CMS Winter Meeting, Niagara Falls, page 46.
18. A. Khovanskii. Irreducible components of generic complete intersections, Proceedings of International Conference on Toric Topology, Number Theory and Applications, Khabarovsk. 2015. 27–31.
19. Megumi Harada and Kiumars Kaveh, A. Khovanskii. Okounkov Bodies and Applications. Report No. 27/2014 In book: Oberwolfach Reports, EMS, Vol. 11, No. 2, 1459–1513, 2014.
20. K. Kaveh, A. Khovanskii. On mixed multiplicities of ideals. arXiv:1310.7979v1 29 Oct 2013. 20 pp.
21. Megumi Harada, Kiumars Kaveh, A. Khovanskii. New Developments in Newton–Okounkov Bodies. Report No. 41/2011. In book: Oberwolfach Reports, EMS, Vol. 8, No. 3, 2011, 2327–2364.
22. K. Kaveh, A. Khovanskii. Convex bodies and algebraic equations on affine varieties. 44 pp. arXiv:0804.4095 (April 2008).
23. A. Khovanskii. Polynomial equations with generic Newton polyhedra, Mathematisches Forschungsinstitut Oberwolfach, Report No. 2/2001, "Combinatorial Convexity and Algebraic Geometry", January 14–20, 2001.
24. J.-M. Kantor, A. Khovanskii. Integral points in convex polyhedra, combinatorial Riemann–Roch theorem and generalized Euler–MacLaurin formula, Preprint IHES, France, 1992.
25. A. Khovanskii. Newton Polyhedra and fewnomials, Russian Doctoral thesis, Moscow, 332 p., 1988.
26. E. Korkina, A. Khovanskii. Two-sectorial economics with different amortization coefficient in different sectors, All-Union Conference on Systems Studies, 135–137, 1985.
27. A. Khovanskii. Theorem de Bezout pour les fonctions de Liouville, Preprint IHES, 81/85,

31 p., 1981.

28. V. Zhiyanov, A. Khovanskii. Explicit solutions in the one-sectorial model of economics with continuously distributed fonds, Proceedings of the Conference on Systems Analysis and Management of Scientific-Technical Progress, Obninsk, 235–239, 1978.
29. Yu. Ilyashenko, A. Khovanskii. Galois theory of systems of Fuchs-type differential equations with small coefficients, Preprint IPM N117, 1974.
30. A. Khovanskii. On representability of function by quadratures, PhD, Moscow, 76 p., 1973.