

List of publications by Alexander E. Guterman

1. G. Dolinar, A. Guterman, and J. Marovt, Monotone transformations on $B(H)$ with respect to the left-star and the right-star partial order, *Mathematical Inequalities and Applications*, accepted.
2. A. Guterman, R. Lemos, and G. Soares, Extremal case in Marcus-Oliveira conjecture and beyond, *Linear and Multilinear Algebra*, accepted, файл: MarcusOlivConj.pdf.
3. А.Э. Гутерман, М.А. Ефимов, Монотонные отображения матриц индекса 1, *Записки научных семинаров ПОМИ*, 2012, принято к опубликованию, файл: bijective.pdf.
4. M.V. Budrevich, A.E. Guterman, On the Gibson bounds over finite fields, *Serdica Math. J.* 38, 2012, 395–416
5. M.V. Budrevich, A.E. Guterman, Permanent has less zeros than determinant over finite fields, *American Mathematical Society, Contemporary Mathematics*, 579, 2012, 33-42, файл: Polya2.pdf.
6. Students Olympiads in Algebra at the Department of Mathematics and Mechanics, MSU (with I.V. Arzhantsev, V.V. Batyrev, E.I. Bunina, E.S. Golod, M.V. Zaicev, A.I. Zobnin, A.A. Klyachko, V.T. Markov, A.A. Nechaev, A.Yu. Olshanskii, E.A. Porshnev, Yu.G. Prokhorov), Moscow, МССМЕ, 2012, pp. 72.
7. G. Dolinar, A. Guterman, and J. Marovt, Automorphisms of $K(H)$ with respect to the star partial order, *Operators and Matrices*, 7 (1), 2013, 225-239, файл: star_order.pdf
8. Marianne Akian, Stephane Gaubert, Alexander Guterman, Tropical polyhedra are equivalent to mean payoff games, *International Journal on Algebra and Computations*, 22 (1), 2012, 1250001, 43 pp., файл: AGG.pdf
9. А. Гутерман, Г. Долинар, Б. Кузьма, Проблема Поля о конвертируемости для симметрических матриц, *Математические заметки*, 92 (5), 2012, 684-698.
10. A.E. Guterman, Ya. N. Shitov, Tropical patterns of matrices and Gondran-Minoux rank function, *Linear Algebra and its Applications*, 437 (7), 2012, 1793-1811, файл: patterns.pdf
11. Gregor Dolinar, Alexander E. Guterman, Bojan Kuzma, Marko Orel, On the Polya permanent problem over finite fields, *European J. of Combinatorics*, 32, 2011, 116-132, файл: Polya1.pdf.
12. А. Гутерман, Г. Долинар, Б. Кузьма, Барьеры Гибсона для проблемы Поля, *Фундаментальная и прикладная математика*, 16(8), 2010, 73-86
13. LeRoy B. Beasley, Alexander E. Guterman, Operators preserving primitivity for matrix pairs // *Matrix Methods: Theory, Algorithms, Applications*, Word Scientific, 2010, 2-20
14. Additive Frobenius endomorphisms for Sylvester and related bounds (with G.Soares), *Contributions to General Algebra*, 19, 2010, 1-13.
15. Marianne Akian, Stephane Gaubert, Alexander Guterman, The correspondence between tropical convexity and mean payoff games, *Mathematical Theory of Networks and Systems*, 2010, 1295—1302
16. О числах независимости графов расстояний с вершинами в $\{-1,0,1\}^n$: оценки, гипотезы и приложения к задачам Нелсона-Эрдеша-Хадвигера и Борсука (совместно с В. К. Любимовым, А. М. Райгородским, С. А. Усачевым), *Современная математика и ее приложения*, 65, 2009, 82-100, файл: independ.pdf.
17. Frobenius endomorphisms of matrix spaces and their applications, *Operator Theory and Operator Algebras*, 2009, 33-42.
18. А. Э. Гутерман, В. К. Любимов, А. М. Райгородский, С. А. Усачев, “О числах независимости графов расстояний с вершинами в $\{-1,0,1\}^n$ ”, *Матем. заметки*, **86**:5 (2009), 794–796
19. Фробениусовы эндоморфизмы пространств матриц (совместно с А.В. Михалевым), *Современные проблемы математики и механики*, 4(3), 2009, 71-105.

20. Matrix ranks and linear independence over tropical semirings (with M. Akian, S. Gaubert), American Mathematical Society, Contemporary Mathematics, 495, 2009, 1-38, <http://arxiv.org/abs/0812.3496>, файл: TropRanks.pdf.
21. Problem book in Algebra (with I.V. Arzhantsev, V.A. Artamonov, Yu.A. Bakhturin, E.B. Vinberg, E.S. Golod, A.I. Zobnin, V.A. Iskovskih, A.I. Kostrikin, V.N. Latyshev, A.V. Mikhalev, A.P. Mishina, Yu.A. Olshanskii, A.A. Pantchishkin, I.V. Proskuryakov, A.N. Rudakov, L.A. Skorniyakov, A.L. Shmelkin), MCCME, 2009, 403pp.
22. The characterization of operators preserving primitivity for matrix k -tuples (with L. B. Beasley), Linear Algebra and its Applications, 430, 2009, 1762-1777, файл: k_prim.pdf.
23. Preserving zeros of a polynomial (with B. Kuzma), Communications in Algebra, 37(11), 2009, 3801-3827, файл: zeropoly.pdf.
24. Matrix invariants over semirings, Handbook of Algebra, Elsevier, 6, 2009, 3-33, файл: handb_sem.pdf.
25. Commutative matrix subalgebras and length function (with O. V. Markova), Linear Algebra and its Applications, 430, 2009, 1790-1805, файл: length.pdf.
26. Maps preserving zeros of matrix polynomials (with B. Kuzma), Doklady of Russian Academy of Sciences, Mathematics, 427(3), 2009, 300-302, файл: zeropoly_sh.pdf.
27. Preserving regular tournaments and term rank-1 (with L.B. Beasley, D. Brown), Linear Algebra and its Applications, 431, 2009, 926-936, файл: tourn.pdf.
28. Operators preserving primitivity for matrix pairs (with L. B. Beasley), Matrix Methods: Theory, Algorithms, Applications, World Scientific Publishing, 2008, 2-20.
29. On linear operators preserving the set of positive polynomials (with B. Shapiro), Journal of Fixed Point Theory and Applications, 3 (2), 2008, 411-429, файл: positive_pres.pdf.
30. Characterization of transformations strongly preserving zeros of matrix polynomials (with B. Kuzma), Uspehi Mat. Nauk, 63(5), 2008, 184-185. [in Russian]
31. Rank and determinant functions for semirings, London Mathematical Society Lecture Notes, 347, 2007, 1-33.
32. Transformations preserving matrix invariants over semirings, Idempotent and tropical mathematics and problems of mathematical physics, Moscow, MCCME, 1, 2007, 84-90.
33. Monotone additive transformations on matrices, Mat. Zametki, 81(5), 2007, 681-692.
34. Monotone matrix mappings defined by the group inverse and simultaneous diagonalizability (with I. I. Bogdanov), Mat. Sbornik, 198(1), 2007, 3-20.
35. Idempotent matrices and majorisation (with L. B. Beasley, K.-T. Kang, S.-Z. Song), Fundamental and Applied Mathematics, 13(1), 2007, 11-29.
36. Frobenius and Dieudonne theorems over semirings (with L. B. Beasley, S.-G. Lee, S.-Z. Song), Linear and Multilinear Algebra, 55(1), 2007, 19-34, файл: SemDetsPrinted.pdf.
37. Linear preservers of extremes of rank inequalities over semirings: the row and column ranks (with L. B. Beasley, Y.-B. Jun, S.-Z. Song), Linear Algebra Appl., 413, 2006, 495-509.
38. Rank-permutable additive mappings (with A. A. Alieva, B. Kuzma), Linear Algebra Appl., 414, 2006, 607-616
39. Linear preservers for Sylvester and Frobenius bounds on matrix rank (with L. B. Beasley, C. L. Neal), Rocky Mountain Journal of Mathematics, 86(1), 2006, 67-80, файл: SylvFrob.pdf.
40. Linear preservers of zeros of matrix polynomials (with L. B. Beasley, S.-G. Lee, S.-Z. Song), Linear Algebra and its Applications, 2005, 401, 325-340, файл: SemZerosPoly.pdf
41. Monotone linear transformations on matrices are invertible (with A. A. Alieva), Communications in Algebra, 33, 2005, 3335-3352, файл: monot_are_invert.pdf
42. Rank inequalities over semirings (with L. B. Beasley), Journal of Korean Math. Soc., 42(2), 2005, 223-241
43. Factor rank for nonnegative matrices (with O. A. Vaysman), Chebyshevskii Sbornik, 6(4), 2005, 64-67 [in Russian]

44. Linear preservers of extremes of rank inequalities over semirings: term rank and zero-term rank (with L. B. Beasley and S.-C. Yi), *Fundamental and Applied Mathematics*, 10(2), 2004, 3-21 [in Russian]
45. Linear preservers of rank permutability (with A. A. Alieva), *Linear Algebra and its Applications*, 384, 2004, 97-108
46. Linear Transformations Preserving the Grassmannian over $M_n(\mathbb{Z}^+)$ (with L. B. Beasley, S.-G. Lee, S.-Z. Song), *Linear Algebra and its Applications*, 393, 2004, 39-46
47. LP-problems for rank inequalities over semirings: factorization rank (with L.B. Beasley), *Sovrem. Mat. Prilozh. Algebra*, 13, 2004, 53-70 [in Russian]
48. Rank permutability and additive operators preserving some rank product conditions (with A. A. Alieva), *Fundamental and Applied Mathematics*, 10(4), 2004, 3-14 [in Russian]
49. Linear transformations preserving rank-commutativity (with A. A. Alieva), *Bull. of the Moscow State University. Ser. 1. Mathematics. Mechanics*, 6, 2003, 11-17 [in Russian]
50. Transformations of non-negative integer matrices preserving the determinant, *Uspehi Mat. Nauk*, 58(6), 2003 147-148 [in Russian]
51. Monotone Matrix Maps Preserve Non-Maximal Rank, *Lecture Notes in Pure and Applied Mathematics*, Marcel Dekker, 2003, 311-328
52. General Algebra and Linear Transformations Preserving Matrix Invariants (with A.V. Mikhalev), *Fundamental and Applied Mathematics*, 9(1), 2003, 83-101 [in Russian]
53. Linear transformations that preserve the Dieudonne determinant over an arbitrary division ring, *Uspehi Mat. Nauk*, 57(4), 2002, 171-172 [in Russian]
54. Identities of near-triangular matrices, *Matem. Sbornik*, 192(6), 2001, 3-15
55. Linear preservers for matrix inequalities and partial orderings, *Linear Algebra and its Applications*, 331, 2001, 75-87
56. Frobenius type theorems in the noncommutative case, *Linear and Multilinear Algebra*, 48(4), 2001, 293-312
57. Linear preservers for Drazin star partial order, *Communications in Algebra*, 29(9), 2001, 3905-3917
58. Linear transformations, preserving super-rank, *Mathematical Methods and Applications*, MSSU, 8, 2001, 100-104 [in Russian]
59. Graded local rings, *Fundamental and Applied Mathematics*, 6(3), 2000, 753-756 [in Russian]
60. Some general techniques on Linear Preserver Problems (with C.-K. Li, P. Semrl), *Linear Algebra and Applications*, 315, 2000, 61-81
61. Singularity preservers over local domains, *Journal of Mathematical Sciences*, 102(6), 2000, 4591-4597.
62. On the Growth of Identities (with A.Regev), *Algebra*. Berlin, New York: Walter de Gruyter, 2000, 319-331
63. On determinant preservers over noncommutative Principal Ideal Domains (with A. V. Mikhalev), *Lie Algebras, Rings, and Related Topics*, Hong Kong: Springer-Verlag, 2000, 49-60
64. Ph. Hall type theorems for modules (with E. Kreines), *Universal Algebra and its Applications*, Volgograd, 2000, 60-72
65. A note on linear preservers of a certain matrix partial order, *Formal Power Series and Algebraic Combinatorics*, Berlin: Shpringer-Verlag, 2000, 441-446
66. On the applications of Model Theory for the classifications of linear transformations preserving matrix invariants, *Mathematical Methods and Applications*, MSSU, 7, 2000, 53-57 [in Russian]
67. P. Hall's theorem on transversals for modules (with E. Kreines), *Fundamental and Applied Mathematics*, 5(1), 1999, 119-130 [in Russian]
68. Identities and codimensions of a certain subalgebra of triangular matrix algebra, *Mathematical Methods and Applications*, MSSU, 6, 1999, 79-82 [in Russian]

69. Linear transformations preserving Adjamagbo determinant, *Mathematical Methods and Applications*, MSSU, 6, 1999, 67-72 [in Russian]
70. Frobenius type results for matrices over the skew-fields (with E. M. Kreines, A. V. Mikhalev), *Mathematical Methods and Applications*, MSSU, 5, 1998, 119-132 [in Russian]
71. Frobenius type theorems (with A. V. Mikhalev), *Proceedings of Workshop on General Algebra and Discrete Mathematics*, Germany, Potsdam, 1998, Shaker Verlag Aachen, 1999, 102-112