

List of publications by Alexander E. Guterman

1. On the Polya permanent problem over finite fields (with G. Dolinar, B. Kuzma, M. Orel), *European J. of Combinatorics*, accepted, <http://arxiv.org/abs/1003.1984>.
2. Additive Frobenius endomorphisms for Sylvester and related bounds (with G. Soares), *Contributions to General Algebra*, 19, 2010, 1-13.
3. 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](#).
4. Frobenius endomorphisms of matrix spaces and their applications, *Operator Theory and Operator Algebras*, 2009, 33-42.
5. 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
6. Фробениусовы эндоморфизмы пространств матриц (совместно с А.В. Михалевым), *Современные проблемы математики и механики*, 4(3), 2009, 71-105.
7. 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>.
8. 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. Skornyyakov, A.L. Shmelkin), *MCCME*, 2009, 403pp.
9. 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](#).
10. Preserving zeros of a polynomial (with B. Kuzma), *Communications in Algebra*, 37(11), 2009, 3801-3827, файл: [zeropoly.pdf](#).
11. Matrix invariants over semirings, *Handbook of Algebra*, Elsevier, 6, 2009, 3-33, файл: [handb_sem.pdf](#).
12. Commutative matrix subalgebras and length function (with O. V. Markova), *Linear Algebra and its Applications*, 430, 2009, 1790-1805, файл: [length.pdf](#).
13. 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](#).
14. 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](#).
15. Operators preserving primitivity for matrix pairs (with L. B. Beasley), *Matrix Methods: Theory, Algorithms, Applications*, World Scientific Publishing, 2008, 2-20.
16. 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](#).
17. Characterization of transformations strongly preserving zeros of matrix polynomials (with B. Kuzma), *Uspehi Mat. Nauk*, 63(5), 2008, 184-185. [in Russian]
18. Rank and determinant functions for semirings, *London Mathematical Society Lecture Notes*, 347, 2007, 1-33.
19. Transformations preserving matrix invariants over semirings, *Idempotent and tropical mathematics and problems of mathematical physics*, Moscow, MCCME, 1, 2007, 84-90.
20. Monotone additive transformations on matrices, *Mat. Zametki*, 81(5), 2007, 681–692.
21. Monotone matrix mappings defined by the group inverse and simultaneous diagonalizability (with I. I. Bogdanov), *Mat. Sbornik*, 198(1), 2007, 3-20.
22. Idempotent matrices and majorisation (with L. B. Beasley, K.-T. Kang, S.-Z. Song), *Fundamental and Applied Mathematics*, 13(1), 2007, 11-29.

23. 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.
24. 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.
25. Rank-permutable additive mappings (with A. A. Alieva, B. Kuzma), *Linear Algebra Appl.*, 414, 2006, 607-616
26. 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.
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34. LP-problems for rank inequalities over semirings: factorization rank (with L.B. Beasley), *Sovrem. Mat. Prilozh. Algebra*, 13, 2004, 53-70 [in Russian]
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36. 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]
37. Transformations of non-negative integer matrices preserving the determinant, *Uspehi Mat. Nauk*, 58(6), 2003 147-148 [in Russian]
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49. On the Growth of Identities (with A.Regev), *Algebra*. Berlin, New York: Walter de Gruyter, 2000, 319-331
50. 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
51. Ph. Hall type theorems for modules (with E. Kreines), *Universal Algebra and its Applications*, Volgograd, 2000, 60-72
52. A note on linear preservers of a certain matrix partial order, *Formal Power Series and Algebraic Combinatorics*, Berlin: Springer-Verlag, 2000, 441-446
53. 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]
54. P. Hall's theorem on transversals for modules (with E. Kreines), *Fundamental and Applied Mathematics*, 5(1), 1999, 119-130 [in Russian]
55. Identities and codimensions of a certain subalgebra of triangular matrix algebra, *Mathematical Methods and Applications*, MSSU, 6, 1999, 79-82 [in Russian]
56. Linear transformations preserving Adjamagbo determinant, *Mathematical Methods and Applications*, MSSU, 6, 1999, 67-72 [in Russian]
57. 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]
58. 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