

THE LIST OF SCIENTIFIC WORKS OF A. J. BELOV

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Monographs:

- [1] *Kanel–Belov, Alexei; Rowen, Louis Halle Combinatorial aspects in polynomial identities.* Research Notes in Mathematics, 9. A K Peters, Ltd., Wellesley, MA, 2005. xxii+378
- [2] *Belov A., Borisenko V., Latyshev V. Monomial algebras.* NY, Plenum. 1998, p. 5 – 190. J.Math.Sci., NY, 87, 1997, no 3, pp.3463–3575
- [3] *Belov A. J., Rowen L., Vishnu U. The Specht problem.* (in preparation).

Dissertations:

- [4] *Belov A. J. Algebras with polynomial identities: representations and combinatorial methods.* Dr.Sci. thesis.,— Moscow, 2002, pp. 389.
- [5] *Belov A. J. Statistical geometry and equilibrium of rock missives.* Ph.D. thesis.,— Moscow, 1991, pp. 190.

Review papers:

- [6] *Kanel–Belov A., Rowen Louis H. Perspectives on Shirshov’s Height Theorem.* in book: selected papers of A.I.Shirshov, Birkhäuser Verlag AG (2009), 3–20. Zelmanov, Latyshev, Bokut, Shestakov ed),
- [7] *Belov A. Ya. Burnside–type problems, theorems on height, and independence.* Fund. i prikl. Matem., 2007, Vol. 13, N 5, pp. 19–79.

- [8] Kanel–Belov A., Rowen Louis H.; Vishne, Uzi *Normal bases of PI-algebras*. Adv. in Appl. Math. 37 (2006), no. 3, 378–389.
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- [10] Belov A. J. *Algebras with polynomial identities: representations and combinatorial methods*. Abstract of Dr.Sci. thesis.,— Moscow, 2002, pp. 37.
- [11] Belov A. J. *Statistical geometry and equilibrium of rock massive*. Abstract of Ph.D. thesis.,— Moscow, 1991, pp. 27.

Research papers:

Pure mathematics:

- [12] A. Kanel-Belov, B. Kunyavskii, E. Plotkin. *Word equations in simple groups and polynomial equations in simple algebras*. Vestnik St. Petersburg University: Mathematics March 2013, Volume 46, Issue 1, pp 3–13, arXiv: 1304.5052.
- [13] A.Belov-Kanel, Jie-Tai Yu. *Stable tameness of automorphisms of $F \langle x, y, z \rangle$ fixing z* . Selecta Mathematica, December 2012, Volume 18, Issue 4, pp. 799–802.
- [14] Kanel–Belov A., Rowen Louis H.; Vishne, Uzi *PI-varieties associated to full quivers of representations of algebras*, Trans. Amer. Math. Soc., 365:5 (2013), 2681–2722.
- [15] Kanel–Belov A., M.Kharitonov. *Subexponential estimates in the height theorem and estimates on numbers of periodic parts of small periods*. Fundam. Prikl. Mat. (Fundamental and Applied Mathematics), 2011/2012, Vol. 17, No 5, p. 21–54 ;
- [16] Kanel–Belov A., Rowen Louis H.; Vishne, Uzi *Full exposition of Specht’s problem*. Serdica Math. J. 38 (2012), 313–370.
- [17] Kanel–Belov A., Rowen Louis H.; Vishne, Uzi *Full quivers of representations of algebras*. Trans. Amer. Math. Soc. 364 (2012), 5525–5569.
- [18] Kanel–Belov A., Eli Aljadeff. *Hilbert series of PI-relative free g -graded algebras are rational functions*. Bull. London Math. Soc., (2012), 44(3): 520–532, doi:10.1112/blms/bdr116
- [19] Kanel–Belov A., M.Kharitonov. *Subexponential estimations in Shirshov height theorem*. Mat. sb., 2012, vol. 203, N 4, p. 81–102.

- [20] Kanel–Belov A., Malev S., Rowen Louis H. *The images of non-commutative polynomials evaluated on 2×2 matrices*. Proc. Amer. Math. Soc. 140 (2012), 465–478 (posted in arxiv.:1005.0191v2).
- [21] Kanel–Belov A., Rowen Louis H.; Vishne, Uzi *Application of full quivers of representations of algebras, to polynomial identities*. Comm. in Algebra, vol. 39: 4536–4551, 2011.
- [22] A.Ya.Belov, G.V.Kondakov, I.Mitrofanov. *Inverse problems of symbolic dynamics*. Banach Center Publ. 94 (2011), 43–60.
- [23] A.Belov-Kanel, Jie-Tai Yu. *On the lifting of the Nagata automorphism*. Selecta Mathematica, Vol. 17, Issue 4 (2011), p. 935–945.
- [24] Belov, A., Lipyanskii R. *Automorphisms of Endomorphism group of free associative-commutative algebra over an arbitrary field*. Journal of Algebra, Volume 333, Issue 1, May 2011, pages 40–54.
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- [26] A.Ya. Kanel-Belov, A.L. Chernyat’ev. *Describing the set of words generated by interval exchange transformation*. Comm. in Algebra, Vol. 38, No 7, July 2010, pages 2588–2605.
- [27] A. J. Kanel–Belov, A. V. Dyskin, Y. Estrin, E. Pasternak, I. A. Ivanov. *Interlocking of convex polyhedra: towards a geometric theory of fragmented solids*. Moscow Mathematical Journal, vol 10, (2010) No 2, pp. 336–342.
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To appear:

- [64] *Belov A. On the Hilbert series of T -spaces.* Uspehi mat. nauk, to appear.
- [65] *Belov A., Chilikov A.A. Exponential-Diophantine Equations in rings of positive characteristic.* Uspehi mat. nauk, to appear.
- [66] *Kanel–Belov A., Rowen Louis H.; Vishne, Uzi Specht’s problem for associative affine algebras over commutative Noetherian rings.* accepted for publication in Transactions of the American Mathematical Society.
- [67] *Alexei Kanel-Belov, Sergey Malev, Louis Rowen, The images of multilinear polynomials evaluated on 3×3 matrices*, 2013, 11 pp., accepted to the Proc. of the Amer. Math. Soc., arXiv: 1306.4389
- [68] *Alexei Belov-Kanel, Antonio Giambruno, Louis Rowen, and Uzi Vishne Zariski closed algebras in varieties of universal algebra*, accepted to the J. of Algebras and Representation Theory.
- [69] *Alexei Belov, Leonid Bokut, Louis Rowen, Jie-Tai Yu, The Jacobian Conjecture, together with Specht and Burnside-type problems*, 2013, 44 pp., arXiv: 1308.0674 accepted to the Proc. of the Trento conference.

Submitted papers:

- [70] *A.Belov-Kanel, Jie-Tai Yu, On The Zariski Topology Of Automorphism Groups Of Affine Spaces And Algebras*, 2012, 36 pp., arXiv: 1207.2045
- [71] *Alexei Kanel-Belov, Sergey Malev, Louis Rowen, Power-central polynomials on matrices*, 2013, 10 pp., arXiv: 1310.1598
- [72] *Gal Dor; Alexei Kanel-Belov; Uzi Vishne The Grassmann algebra in arbitrary characteristic and Generalized sign.*

In preparation.

- [73] *Alexei Kanel Belov, Louis Rowen The Braun-Kemer-Razmyslov Theorem for affine PI-algebras,*
- [74] *Belov, A., Plotkin B.I. Geometric noetheriaty for representable algebras of arbitrary signature.*

Applied Science:

Patents:

- [75] Houlis, P., A.V Dyskin, E. Pasternak, Y. Estrin, A. Kanel-Belov. 2010. *Topological Interlocking Puzzle*. Australian Patent application 2010902951.

Journal papers:

- [76] Schaare, S.; Dyskin, A. V.; Estrin, Y.; Arndt, S.; Pasternak, E.; Kanel-Belov, A. *Point loading of assemblies of interlocked cube-shaped elements*. Internat. J. Eng. Sci. 46 (2008), no. 12, 1228–1238.
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Conference papers:

- [91] Dyskin, A.V., E. Pasternak, H.C. Khor, Y. Estrin and A.J. Kanel–Belov 2007. *Deployable interlocking structures for Martian bases*. In: Proc. 7th Australian Mars Exploration Conference, July 13–15, 2007, Trinity College Perth, Western Australia. CD.
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Preprints:

- [99] Belov A. Ja., Cherniatiev A. L. *Words with low complexity and Interval exchange transformations*. Dep. VINITI, No 1048-B2007 from 09.11.07, submitted 09.10.07., 18 pages, ref. 23 items (Russian).
- [100] Belov A. J. *An estimation of crack distributions by trace data.*, Dep.in VINITI. N275 – B91.
- [101] Belov A. J. *Geometrical properties of block massive.*, Dep.in VINITI. N272 – B91.
- [102] Belov A. J. *About stochastic divisions.*, Dep.in VINITI. N273 – B91.
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Abstracts of talks:

- [104] *A.Belov-Kanel, M.Kharitonov, Subexponential estimates in the height theorem and estimates on numbers of periodic parts of small periods*, Classical Aspects of Ring Theory and Module Theory, Abstracts (Bedlewo, July 14-20, 2013), Stefan Banach International Mathematical Center, 2013, 59–61
- [105] *Alexei Ya. Belov, Ilya A. Ivanov-Pogodaev, Construction of finitely presented infinite nil-semigroup*, Classical Aspects of Ring Theory and Module Theory, Abstracts (Bedlewo, July 14-20, 2013), Stefan Banach International Mathematical Center, 2013, 14
- [106] *A.Belov-Kanel, M.Kharitonov, Subexponential estimations in shirshov’s height theorem*, Georgian Science foundation., Georgian Technical University, Batumi State University, Ramzadze mathematical institute, Proceedings of the Int. conference “Modern algebra ad its applications”, Volume 1 Special Session dedicated to Professor Gigla Janashia, pages 29–33, 2011.
- [107] *A.Belov-Kanel, R.Lipyanski, Automorphisms of the semigroup $\text{End}(K[x_1, \dots, x_n])$* , Georgian Science foundation., Georgian Technical University, Batumi State University, Ramzadze mathematical institute, Proceedings of the Int. conference “Modern algebra ad its applications”, pages 17–22, 2010.
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- [112] *A.J.Belov Solution of one Maltzev problem, II international conference “Semigroups: theory and applications dedicated to prof. E.S.Liapin (Sanct-Peterburg, 2–9 July 1999)*, abstracts, Sanct-Peterburg, 1999, 9.

- [113] *A.J.Belov, I.A.Ivanov Constructing finitely presented semigroup satisfying some properties, II* international conference “Semigroups: theory and applications dedicated to prof. E.S.Liapin (Sanct-Peterburg, 2–9 July 1999), abstracts, Sanct-Peterburg, 1999, 69.
- [114] *Belov A. J. Local representability of relatively free associative algebras.* Kurosh Algebraic Conference-98. Abstracts of talks. Ed.by Y. A. Bachturin, A. I. Kostrikin, A. Yu. Olshansky — M.: 1998, p. 143–144 (Russian).
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- [119] *Belov A. J. About rationality of Hilbert series of relatively free algebras in varieties of PI-degree 1. VI* All-Union school by theory of varieties of algebraic systems. — Magnitogorsk, 1990, p. 7–8. (Russian).
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Mathematical Education:

Multimedia:

- [123] N.Andreev, R.Koshkarov, M.Kalinichenko, N.Panunin, N.Shavelson, N.Dolbilin, A.Kanel-Belov. *Harmony regular polyhedra*. Mathematical etudes, Moscow, 2013. <http://www.etudes.ru/ru/etudes/platonic/>
- [124] N.Andreev, R.Koshkarov, M.Kalinichenko, N.Panunin, N.Shavelson, A.Kanel-Belov. *Shadows*. Mathematical etudes, Moscow, 2010.
<http://www.etudes.ru/ru/etudes/teni/>
- [125] *Pantazis Houlis, Arcady Dyskin, Alexei Kanel-Belov, Elena Pasternak, Yuri Estrin, Tornado*, <http://www.puzzle-place.com/wiki/Tornado>, 2011
- [126] Kirill Grebnev, Alexei Kanel-Belov, *Diamond in the Frame*, <http://www.johnrausch.com/DesignCompetition/2011/>, 2011, <http://mechanical-puzzles.blogspot.co.il/2011/08/2011-puzzle-design-competition-part-2.html>

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