

Peer-reviewed articles.

- (1) (with Osipov, A. A.) The gauge fixing extension of the Krichever–Novikov algebra in the closed string theory. *Phys. Lett. B* 222 (1989), no. 3-4, 391–394.
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- (3) (with Mangazeev, V. V.) The four-state solution of the Yang–Baxter equation. *Phys. Lett. A* 150 (1990), no. 8-9, 375–379.
- (4) (with Bazhanov, V. V.) Cyclic L -operator related with a 3-state R -matrix. *Comm. Math. Phys.* 136 (1991), no. 3, 607–623.
- (5) (with Bazhanov, V. V.; Mangazeev, V. V.; Stroganov, Yu. G.) $(Z_N \times)^{n-1}$ generalization of the chiral Potts model. *Comm. Math. Phys.* 138 (1991), no. 2, 393–408.
- (6) (with Mangazeev, V. V.; Nakanishi, T.) Yang–Baxter equation for the $\mathfrak{sl}(n)$ chiral Potts model. *Nuclear Phys. B* 362 (1991), no. 3, 563–582.
- (7) (with Mangazeev, V. V.; Stroganov, Yu. G.) Cyclic eight-state R -matrix related to $U_q(\mathfrak{sl}(3))$ algebra at $q^2 = -1$. *Modern Phys. Lett. A* 6 (1991), no. 37, 3437–3443.
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- (11) (with Stroganov, Yu. G.) Generalized Yang–Baxter equation. *Modern Phys. Lett. A* 8 (1993), no. 24, 2299–2309.
- (12) (with Faddeev, L. D.) Quantum dilogarithm. *Modern Phys. Lett. A* 9 (1994), no. 5, 427–434.
- (13) Quantum dilogarithm as a $6j$ -symbol. *Modern Phys. Lett. A* 9 (1994), no. 40, 3757–3768.
- (14) (with Faddeev, L. D.) Generalized Bethe ansatz equations for Hofstadter problem. *Comm. Math. Phys.* 169 (1995), no. 1, 181–191.
- (15) A link invariant from quantum dilogarithm. *Modern Phys. Lett. A* 10 (1995), no. 19, 1409–1418.
- (16) An invariant of triangulated links from a quantum dilogarithm. (Russian) *Zap. Nauchn. Sem. S.-Peterburg. Otdel. Mat. Inst. Steklov. (POMI)* 224 (1995), Voprosy Kvant. Teor. Polya i Statist. Fiz. 13, 208–214, 339; *translation in J. Math. Sci. (New York)* 88 (1998), no. 2, 244–248.
- (17) On discrete three-dimensional equations associated with the local Yang–Baxter relation. *Lett. Math. Phys.* 38 (1996), no. 4, 389–397.
- (18) The Heisenberg double and the pentagon relation. *Algebra i Analiz* 8 (1996), no. 4, 63–74; *translation in St. Petersburg Math. J.* 8 (1997), no. 4, 585–592.
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- (20) (with Reshetikhin, N. Yu.) Affine Toda field theory as a 3-dimensional integrable system. *Comm. Math. Phys.* 188 (1997), no. 2, 251–266.
- (21) Quantization of Teichmüller spaces and the quantum dilogarithm. *Lett. Math. Phys.* 43 (1998), no. 2, 105–115.
- (22) (with Sergeev, S. M.) On pentagon, ten-term, and tetrahedron relations. *Comm. Math. Phys.* 195 (1998), no. 2, 309–319.
- (23) (with Korepanov, I. G.; Sergeev, S. M.) The functional tetrahedron equation. (Russian) *Teoret. Mat. Fiz.* 117 (1998), no. 3, 370–384; *translation in Theoret. and Math. Phys.* 117 (1998), no. 3, 1402–1413 (1999).
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- (25) The Liouville central charge in quantum Teichmüller theory. (Russian) *Tr. Mat. Inst. Steklova* 226 (1999), Mat. Fiz. Probl. Kvantovoi Teor. Polya, 72–81; *translation in Proc. Steklov Inst. Math.* 1999, no. 3 (226), 63–71.

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- (32) On selfadjoint extensions of a difference operator. (Russian) *Algebra i Analiz* 17 (2005), no. 1, 209–223; *translation in St. Petersburg Math. J.* 17 (2006), no. 1, 157–167.
- (33) (with Reshetikhin, Nicolai.) Braiding for quantum \mathfrak{gl}_2 at roots of unity. *Noncommutative geometry and representation theory in mathematical physics*, 183–197, Contemp. Math., 391, Amer. Math. Soc., Providence, RI, 2005.
- (34) (with Dubois, Jérôme.) On the asymptotic expansion of the colored Jones polynomial for torus knots. *Math. Ann.* 339 (2007), no. 4, 757–782.
- (35) (with Reshetikhin, N.) Symmetrically factorizable groups and self-theoretical solutions of the pentagon equation. *Quantum groups*, 267–279, Contemp. Math., 433, Amer. Math. Soc., Providence, RI, 2007.

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- (36) (with Mangazeev, V.V.; Stroganov, Yu. G.) N^3 -state R -matrix related with $U_q(\mathfrak{sl}(3))$ algebra at $q^{2N} = 1$. *Infinite analysis, Part A, B (Kyoto, 1991)*, 485–492, Adv. Ser. Math. Phys., 16, World Sci. Publ., River Edge, NJ, 1992.
- (37) (with Saveliev, M.V.; Savelieva, S.A.; Vershik, A.M.) On nonlinear equations associated with Lie algebras of diffeomorphism groups of two-dimensional manifolds. *Ideas and methods in mathematical analysis, stochastics, and applications (Oslo, 1988)*, 295–307, Cambridge Univ. Press, Cambridge, 1992.
- (38) The algebraic nature of quantum dilogarithm. *Geometry and integrable models (Dubna, 1994)*, 32–51, World Sci. Publ., River Edge, NJ, 1996.
- (39) Local Yang–Baxter relations associated with Hirota’s discrete equation. *Symmetries and integrability of difference equations (Canterbury, 1996)*, 402–409, London Math. Soc. Lecture Note Ser., 255, Cambridge Univ. Press, Cambridge, 1999.
- (40) (with Reshetikhin, Nikolai Yu.) Affine Toda field theory as a three-dimensional integrable system. *Discrete integrable geometry and physics (Vienna, 1996)*, 321–341, Oxford Lecture Ser. Math. Appl., 16, Oxford Univ. Press, New York, 1999.
- (41) Quantum hyperbolic invariants of knots. *Discrete integrable geometry and physics (Vienna, 1996)*, 343–359, Oxford Lecture Ser. Math. Appl., 16, Oxford Univ. Press, New York, 1999.
- (42) (with Volkov, A. Yu.) From the tetrahedron equation to universal R -matrices. *L. D. Faddeev’s Seminar on Mathematical Physics*, 79–89, Amer. Math. Soc. Transl. Ser. 2, 201, Amer. Math. Soc., Providence, RI, 2000.
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- (44) On the spectrum of Dehn twists in quantum Teichmüller theory. *Physics and combinatorics, 2000 (Nagoya)*, 63–81, World Sci. Publ., River Edge, NJ, 2001.
- (45) On quantum moduli space of flat $\mathrm{PSL}_2(\mathbb{R})$ -connections on a punctured surface. *Handbook of Teichmüller theory. Vol. I*, 761–782, IRMA Lect. Math. Theor. Phys., 11, Eur. Math. Soc., Zürich, 2007.
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- (47) (with Osipov, A.A.) Extension of the Krichever–Novikov algebra in the theory of a closed string. (Russian) *Current group analysis (Russian) (Baku, 1988)*, 106–113, “Èlm”, Baku, 1989.
- (48) (with Tirkkonen, O.) Recursive approach to MIMO-capacity. Finnish wireless communications workshop FWCW’01, October 2001, Tampere, Finland 2001: pp. 63–64.
- (49) (with Tirkkonen, O.) Combined information and performance optimization of linear MIMO modulations. *Proc. IEEE Int. Symp. Inform. Theory (ISIT 2002)*, Lausanne, Switzerland, June 2002, p. 76.
- (50) (with Tirkkonen, O.) On expansion of MIMO mutual information in SNR. *Proc. IEEE Int. Symp. Inform. Theory (ISIT)*, July 2002, p. 252.
- (51) (with Tirkkonen, O.) Performance optimal and information maximal MIMO modulations. *Proc. IEEE ISIT*, July 2002.
- (52) (with Tirkkonen, O.) Linear matrix modulators from group representation theory. *Proc. IEEE Information Theory Workshop*, 31 March–4 April 2003, pp. 42–45.
- (53) (with Reshetikhin, N.) Invariants of tangles with flat connections in their complements. *Graphs and patterns in mathematics and theoretical physics*, 151–172, Proc. Sympos. Pure Math., 73, Amer. Math. Soc., Providence, RI, 2005.
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- (58) On ring-valued invariants of topological pairs, arXiv:math/0701543 (2007).
- (59) (with Korepanov, I.; Martyushev, E.) A finite-dimensional TQFT for three-manifolds based on group $PSL(2, \mathbb{C})$ and cross-ratios, arXiv:0809.4239 (2008).
- (60) Delta-groupoids in knot theory, arXiv:0908.1261 (2009).

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- (61) (with Tirkkonen, O.; Wichman, R.) Communication on multiple beams between stations. US7310537, 18.12.2007.