

X. С. Ниров

список публикаций

- Kh. S. Nirov and A. V. Razumov, *BRST Formalism for Systems of Yang-Mills Type*, Preprint IHEP-**90-45**, 16 pp. (IHEP, Protvino, 1990).
- Kh. S. Nirov and A. V. Razumov, *Gauge Invariance and BRST Formalism: Equivalence of Lagrangian and Hamiltonian Approaches*, 25 pp., in: Procs. of International Workshop on Selected Problems of Theor. and Modern Math. Physics, (April 22-27, 1991, Borjomi, Georgia).
- Kh. S. Nirov, P. N. Pyatov and A. V. Razumov, *Gauge Invariance and Constraints: Open Gauge Algebras*, Int. J. Mod. Phys. **A7** (1992) 5549–5562.
- Kh. S. Nirov and A. V. Razumov, *Field-Antifield and BFV Formalisms for Quadratic Systems with Open Gauge Algebras*, Int. J. Mod. Phys. **A7** (1992) 5719–5738.
- Kh. S. Nirov and A. V. Razumov, *Equivalence between Lagrangian and Hamiltonian BRST Formalisms*, J. Math. Phys. **34** (1993) 3933–3953.
- Kh. S. Nirov and A. V. Razumov, *Generalized Schrödinger Representation in BRST-Quantization*, Nucl. Phys. **B429** (1994) 389–406; [[arXiv:hep-th/9404119](https://arxiv.org/abs/hep-th/9404119)].
- Kh. S. Nirov, *Gauge-Invariant Systems of a General Form: Count of the Physical Degrees of Freedom*, in: Procs. of 8th International Seminar “Quarks’94” pp. 486–491 (May 11–18, 1994, Vladimir, Russia), eds. D. Yu. Grigoriev, V. A. Matveev et. al. (World Scientific, 1995); [[arXiv:hep-th/9512167](https://arxiv.org/abs/hep-th/9512167)].
- Kh. S. Nirov, *Constraint Algebras in Gauge-Invariant Systems*, Int. J. Mod. Phys. **A10** (1995) 4087–4106; [[arXiv:hep-th/9407156](https://arxiv.org/abs/hep-th/9407156)].
- Kh. S. Nirov, *BRST Formalism for Systems with Higher Order Derivatives of Gauge Parameters*, Int. J. Mod. Phys. **A11** (1996) 5279–5302; [[arXiv:hep-th/9412134](https://arxiv.org/abs/hep-th/9412134)].
- Kh. S. Nirov and V. A. Rubakov, *Strings as a Model for Parent and Baby Universes: Total Splitting Rates*, Mod. Phys. Lett. **A10** (1995) 3059–3068; [[arXiv:hep-th/9510107](https://arxiv.org/abs/hep-th/9510107)].
- Kh. S. Nirov, *The Ostrogradsky Prescription for BFV Formalism*, Mod. Phys. Lett. **A12** (1997) 1991–2004; [[arXiv:hep-th/9704183](https://arxiv.org/abs/hep-th/9704183)].
- Kh. S. Nirov and M. S. Plyushchay, *Symmetries and Classical Quantization*, Phys. Lett. **B405** (1997) 114–120; [[arXiv:hep-th/9707070](https://arxiv.org/abs/hep-th/9707070)].
- Kh. S. Nirov and M. S. Plyushchay, *Pseudoclassical Model for Topologically Massive Gauge Fields*, J. High Energy Phys. **9802:015** (1998); [[arXiv:hep-th/9712097](https://arxiv.org/abs/hep-th/9712097)].

- Kh. S. Nirov and M. S. Plyushchay, *P, T-Invariant System of Chern-Simons Fields: Pseudoclassical Model and Hidden Symmetries*, Nucl. Phys. **B512** (1998) 295–319; [[arXiv:hep-th/9803221](https://arxiv.org/abs/hep-th/9803221)].
- Kh. S. Nirov and R. Poppe, *General Structure of Gauge Symmetry Transformations*, Preprint TUM-98-**15/3**, 18 pp. (Technische Universität München, 1998).
- Kh. S. Nirov, *Pseudoclassical Mechanics and Hidden Symmetries of 3D Particle Models*, Fortsch. Phys. **47** (1999) 239–246; [[arXiv:hep-th/9804044](https://arxiv.org/abs/hep-th/9804044)].
- Kh. S. Nirov, *Dynamical Symmetries of Planar Field Configurations*, Proceedings of the 11th International Seminar on High Energy Physics “Quarks’00”, F. L. Bezrukov, V. A. Matveev, V. A. Rubakov, A. N. Tavkhelidze, S. V. Troitsky (Eds.), (INR RAS Publishing Dept, Moscow, Sep 2001), v. II, pp. 131–142; [[arXiv:http://quarks.inr.ac.ru/procs/](http://quarks.inr.ac.ru/procs/)]
- Kh. S. Nirov and A. V. Razumov, *Higher Symmetries of Toda Equations*, Proceedings of the 12th International Seminar on High Energy Physics “Quarks’2002”, Novgorod, Russia, June 1–7, 2002; V. A. Matveev, V. A. Rubakov, S. V. Sibiryakov, A. N. Tavkhelidze (Eds.), (INR RAS Publishing Dept, Moscow, Mar 2004), pp. 262–271; [[arXiv:hep-th/0210136](https://arxiv.org/abs/hep-th/0210136)].
- Kh. S. Nirov and A. V. Razumov, *Toda-Type Integrable Systems and W-algebras*, SUPERSYMMETRY AND UNIFICATION OF FUNDAMENTAL INTERACTIONS, D. I. Kazakov and A. V. Gladyshev (Eds.), (World Scientific, Singapore, Apr 2002), pp. 434–438. (Based on a talk given at the 9th International Conference ‘SUSY-01’, Dubna, Russia, June 2001).
- Kh. S. Nirov and A. V. Razumov, *W-algebras for Non-Abelian Toda Systems*, J. Geom. Phys. **48** (2003) 505–545; [[arXiv:hep-th/0210267](https://arxiv.org/abs/hep-th/0210267)].
- Kh. S. Nirov and A. V. Razumov, *On Classification of Non-Abelian Toda Systems*, GEOMETRICAL AND TOPOLOGICAL IDEAS IN MODERN PHYSICS, V. A. Petrov (Ed.), (Protvino, May 2003), pp. 213–221; [[arXiv:nlin.si/0305023](https://arxiv.org/abs/nlin.si/0305023)]. (Based on a presentation at the XXV International Workshop on Fundamental Problems of High Energy Physics and Field Theory, Protvino, Russia, June 2002.)
- Kh. S. Nirov and A. V. Razumov, *On \mathbb{Z} -gradations of twisted loop Lie algebras of complex simple Lie algebras*, Commun. Math. Phys. **267** (2006) 587–610; [[arXiv:math-th/0504038](https://arxiv.org/abs/math-th/0504038)].
- Kh. S. Nirov and A. V. Razumov, *Toda equations associated with loop groups of complex classical Lie groups*, Nucl. Phys. **B 782** (2007) 241–275; [[arXiv:math-th/0612054](https://arxiv.org/abs/math-th/0612054)].
- Kh. S. Nirov and A. V. Razumov, *\mathbb{Z} -graded loop Lie algebras, loop groups, and Toda equations*, Theor. Math. Phys. **154** (2008) 385–404; [[arXiv:0705.2681](https://arxiv.org/abs/0705.2681)].
- X. C. Ниров, А. В. Разумов, *О \mathbb{Z} -градуированных алгебрах Ли петель, группах петель и уравнениях Тоды*, Теор. Мат. Физ. **154** (2008) 451–476.

- Kh. S. Nirov and A. V. Razumov, *Abelian Toda solitons revisited*, Rev. Math. Phys. **20** (2008) 1209–1248; [[arXiv:0802.0593](https://arxiv.org/abs/0802.0593)]
- Kh. S. Nirov and A. V. Razumov, *The rational dressing for abelian twisted loop Toda systems*, J. High Energy Phys. **12** (2008) 048; [[arXiv:0806.2597](https://arxiv.org/abs/0806.2597)]
- Kh. S. Nirov and A. V. Razumov, *Solving non-abelian loop Toda equations*, Nucl. Phys. **B815** [PM] (2009) 404–429; [[arXiv:0809.3944](https://arxiv.org/abs/0809.3944)]
- Kh. S. Nirov and A. V. Razumov, *More non-abelian loop Toda solitons*, J. Phys. A: Math. Theor. **42** (2009) 285201; [[arXiv:0810.1025](https://arxiv.org/abs/0810.1025)]
- Kh. S. Nirov, *Integrable systems and the universal R-matrix*, in: Proceedings of the 16th International Seminar on High Energy Physics “Quarks’10”, A. Panin, V. A. Matveev, V. A. Rubakov (Eds.), (INR RAS Publishing Dept, Moscow, 2011, to appear), [[arXiv:http://quarks.inr.ac.ru/](http://quarks.inr.ac.ru/)].
- H. Boos, F. Göhmann, A. Klümper, Kh. S. Nirov and A. V. Razumov, *Exercises with the universal R-matrix*, J. Phys. A: Math. Theor. **43** (2010) 415208; [[arXiv:1004.5342](https://arxiv.org/abs/1004.5342)]
- H. Boos, F. Göhmann, A. Klümper, Kh. S. Nirov and A. V. Razumov, *On the universal R-matrix for the Izergin-Korepin model*, J. Phys. A: Math. Theor. **44** (2011) 355202; [[arXiv:1104.5696](https://arxiv.org/abs/1104.5696)]
- H. Boos, F. Göhmann, A. Klümper, Kh. S. Nirov and A. V. Razumov, *Universal R-matrix and functional relations*, Rev. Math. Phys. **26** (2014), 1430005 (66pp); [arXiv:1205.1631](https://arxiv.org/abs/1205.1631) [math-ph]
- Г. Боос, Ф. Гёман, А. Клюмпер, Х. С. Ниров, А. В. Разумов, *Универсальные объекты интегрируемости*, Теор. Мат. Физ. **174**(1) (2013) 25–45; [arXiv:1205.4399](https://arxiv.org/abs/1205.4399)[math-ph]
- H. Boos, F. Göhmann, A. Klümper, Kh. S. Nirov and A. V. Razumov, *Quantum groups and functional relations for higher rank*, J. Phys. A: Math. Theor. **47** (2014), 275201 (47pp); [arXiv:1312.2484](https://arxiv.org/abs/1312.2484) [math-ph]
- Kh. S. Nirov and A. V. Razumov, *Quantum groups and functional relations for lower rank*, J. Geom. Phys. **112** (2017) 1–28; Based on talks given by the authors at the Wilhelm und Else Heraeus-Seminar "Integrable Lattice Models and Quantum Field Theories June 28 – July 2, 2014, Bad Honnef, Germany; [arXiv:1412.7342](https://arxiv.org/abs/1412.7342)[math-ph]
- Kh. S. Nirov and A. V. Razumov, *Quantum affine algebras and universal functional relations*, (17pp), Based on the talk given at the XXIII-th International Conference on Integrable Systems and Quantum symmetries (ISQS-23) in Prague, Czech Republic (June 23-27, 2015); J. Phys. Conf. Series. **670** (2016) 0120; [arXiv:1512.04308](https://arxiv.org/abs/1512.04308)[math-ph]

- H. Boos, F. Göhmann, A. Klümper, Kh. S. Nirov and A. V. Razumov, *Oscillator versus prefundamental representations*, J. Math. Phys. **57** (2016) 111702 (23pp); [arXiv:1512.04446\[math-ph\]](https://arxiv.org/abs/1512.04446)
- Kh. S. Nirov and A. V. Razumov, *Quantum groups, Verma modules and q -oscillators: General linear case*, J. Phys. A: Math. Theor. **50** (2017) 305201 (19pp); [arXiv:1610.02901\[math-ph\]](https://arxiv.org/abs/1610.02901)
- H. Boos, F. Göhmann, A. Klümper, Kh. S. Nirov and A. V. Razumov, *Oscillator versus prefundamental representations II. Arbitrary higher ranks*, J. Math. Phys. **58** (2017) 093504 (26pp); [arXiv:1701.022627\[math-ph\]](https://arxiv.org/abs/1701.022627)
- Kh. S. Nirov and A. V. Razumov, *Highest ℓ -weight representations and functional relations*, SIGMA **13** (2017) 043 (31pp); [arXiv:1702.08710\[math-ph\]](https://arxiv.org/abs/1702.08710)

Кроме того, я являюсь научным редактором Трудов Международных школ "Частицы и космология"(Приэльбрусье, Кабардино-Балкария, Россия): *Particles and Cosmology*, E. N. Alexeev, V. A. Matveev, Kh. S. Nirov, V. A. Rubakov (Eds.), (World Scientific, Singapore, 1994; 1996; Издательский отдел ИЯИ РАН, Москва, 2000; 2002; 2004).

С уважением,

Х. С. Ниров.

ИЯИ РАН, Москва.

Декабрь 2017 г.