

**LIST**  
**of publications by Vyacheslav A. Soroka**  
1969–2009

**Refereed journals:**

1. L.A. Lazarenko, V.A. Soroka,  
*Sum rules from the field algebra for  $\rho^0$ -meson photoproduction,*  
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2. L.A. Lazarenko, V.A. Soroka,  
*Sum rules and field algebras,*  
  
Yad. Fiz., **13** (1971) 845-850 (in Russian).
  
3. L.A. Lazarenko, V.A. Soroka,  
*Relation between formfactors of elastic and inelastic electron scattering,*  
  
Ukrain. Fiz. Zh., **17** (1972) 1353-1355 (in Russian).
  
4. L.A. Lazarenko, V.A. Soroka,  
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Ukrain. Fiz. Zh., **18** (1973) 529-532 (in Russian).
  
5. D.V. Volkov, V.A. Soroka,  
*Higgs effect for Goldstone particles with spin 1/2,*  
  
Pis'ma Zh. Eksp. Teor. Fiz., **18** (1973) 529-532 [JETP Lett., **18** (1973) 312-314].
  
6. D.V. Volkov, V.A. Soroka,  
*Gauge fields for symmetry group with spinor parameters,*  
  
Teor. Mat. Fiz., **20** (1974) 291-298 [Theor. Math. Phys., **20** (1974) 829-834].
  
7. V.P. Akulov, D.V. Volkov, V.A. Soroka,  
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9. A.S. Galperin, L.B. Litov, V.A. Soroka,  
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10. V.A. Soroka,  
  
*On some representations of  $SU(2)$ -extended supersymmetry with central charges,*  
  
Pis'ma Zh. Eksp. Teor. Fiz., **38** (1983) 35-38 (in Russian).
11. D.V. Volkov, A.I. Pashnev, V.A. Soroka, V.I. Tkach,  
  
*Hamiltonian systems with even and odd Poisson brackets; duality of their conservation laws,*  
  
Pis'ma Zh. Eksp. Teor. Fiz., **44** (1986) 55-57 [JETP Lett., **44** (1986) 70-72].
12. D.V. Volkov, V.A. Soroka, V.I. Tkach,  
  
*On classical and quantum Hamiltonian systems with an odd Poisson bracket,*  
  
Yad. Fiz., **44** (1986) 810-820 [Sov. J. Nucl. Phys., **44** (1986) 522-528].
13. D.V. Volkov, V.A. Soroka,  
*On quantization of dynamical systems with an odd Poisson bracket,*  
  
Yad. Fiz., **46** (1987) 110-121 [Sov. J. Nucl. Phys., **44** (1986) 69-75].
14. D.V. Volkov, V.A. Soroka, V.I. Tkach,  
*An odd Poisson bracket and spinor structure of space-time,*  
  
Ukrain. Fiz. Zh., **32** (1987) 1622-1625 (in Russian).

15. D.V. Volkov, A.I. Pashnev, V.A. Soroka, V.I. Tkach,  
*On the Hamilton dynamical systems with the even and odd Poisson brackets,*  
Teor. Mat. Fiz., **79** (1989) 117-126 [Theor. Math. Phys., **79** (1989) 424-430].
16. V.A. Soroka,  
*On Hamilton systems with even and odd Poisson brackets,*  
Lett. Math. Phys., **17** (1989) 201-208.
17. V.A. Soroka, D.P. Sorokin, V.I. Tkach, D.V. Volkov,  
*Twistor displacement in the equations of relativistic particles and strings,*  
Pis'ma Zh. Eksp. Teor. Fiz., **52** (1990) 1124-1126 [JETP Lett., **52** (1990) 526-529].
18. V.A. Soroka, D.P. Sorokin, V.I. Tkach, D.V. Volkov,  
*A generalized twistor dynamics of relativistic particles and strings,*  
Int. J. Mod. Phys., **A7** (1992) 5977-5993.
19. V.A. Soroka,  
*On quantization of systems based on the odd Poisson bracket,*  
Pis'ma Zh. Eksp. Teor. Fiz., **59** (1994) 205-210 [Errata: **60** (1994) 480] [JETP Lett., **59** (1994) 219-225].
20. V.A. Soroka,  
*Square roots of Hamilton's equations for supersymmetric systems,*  
Pis'ma Zh. Eksp. Teor. Fiz., **60** (1994) 377-381 [JETP Lett., **60** (1994) 387-391].
21. V.A. Soroka,  
*On action with Grassmann-odd Lagrangian,*  
**hep-th/9507030**; Yad. Fiz., **59** (1996) 1327-1330 [Phys. Atom. Nucl., **59** (1996) 1270-1274].
22. V.A. Soroka,  
*Linear odd Poisson bracket on Grassmann variables,*

- hep-th/9811252**; Phys. Lett., **B 451** (1999) 349-353.
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*Degenerate odd Poisson bracket on Grassmann variables*,  
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24. D.V. Soroka, V.A. Soroka, J. Wess,  
*Supersymmetric  $D = 1, N = 1$  model with Grassmann-odd Lagrangian*,  
Phys. Lett., **B 512** (2001) 197-202.
25. D.V. Soroka, V.A. Soroka,  
*Exterior differentials in superspace and Poisson brackets*,  
**hep-th/0211280**; JHEP, **0303** (2003) 001.
26. D.V. Soroka, V.A. Soroka,  
*Tensor extension of the Poincaré algebra*,  
**hep-th/0410012**; Phys. Lett., **B 607** (2005) 302-305.
27. S.A. Duplij, D.V. Soroka, V.A. Soroka,  
*Fermionic generalization of linear gravity in centrally extended formulation*,  
The Journal of Kharkov National University, **no. 664** (2005), Physical series Nuclei, Particles, Fields Issue 2 /27/, pp. 12-16.
28. S.A. Duplij, D.V. Soroka, V.A. Soroka,  
*A special fermionic generalization of linear gravity*,  
J. Zhejiang Univ. SCIENCE A, **7** (2006) 629-632.
29. D.V. Soroka, V.A. Soroka,  
*Multiplet with components of different masses*,  
Problems of Atomic Science and Technology, **3(1)** (2007) 76-78.
30. D.V. Soroka, V.A. Soroka,  
*Semi-simple extension of the (super) Poincare algebra*,  
**hep-th/0605251**; Advances in High Energy Physics, vol. 2009, Article ID 234147, 9 pages, 2009. doi:10.1155/2009/234147.

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1. L.A. Lazarenko, V.A. Soroka,  
*Sum rules from the algebra of fields for  $\rho^0$ -meson photoproduction,*  
  
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3. V.P. Akulov, D.V. Volkov, V.A. Soroka,  
*On general covariant theories of gauge fields on superspace,*  
  
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4. V.A. Soroka,  
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5. D.V. Volkov, V.A. Soroka, V.I. Tkach,  
  
*On superspinor structure of homogeneous superspaces for orthosymplectic groups,*  
  
Proc. of the 7 Seminar on Problems of High Energy Physics and Quantum Field Theory, v.1, pp. 48-56, Protvino, July 1984.
6. V.A. Soroka,  
*Odd Poisson bracket and spinor structure of space-time,*  
  
Talk given at the XX Winter School of LINR on Physics of Nuclear and Elementary Particles, Ust'-Narva, USSR, 1-12 April, 1985.

7. D.V. Volkov, V.A. Soroka, V.I. Tkach,

*Canonically conjugated variables of opposite Grassmann grading and spinor structure of space-time,*

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8. D.V. Volkov, V.A. Soroka, V.I. Tkach,

*On dynamic systems with graded Poisson brackets,*

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10. D.V. Volkov, V.A. Soroka, V.I. Tkach,

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11. D.V. Volkov, A.I. Pashnev, V.A. Soroka, V.I. Tkach,

*On Hamiltonians of dynamical systems with Poisson brackets of various Grassmann parity,*

Proc. of the 10 Workshop on Problems of High Energy Physics and Field Theory (Protvino, USSR, July 6-12, 1987), pp. 189-195, Moscow, "Nauka", 1988.

12. D.V. Soroka, V.A. Soroka,

*Equivalent Hamiltonians of various Grassmann parity,*

Report at the Seminar on the Theory of Representations and Group Methods in Physics, Tambov, USSR, 24-28 January, 1989.

13. D.V. Soroka, V.A. Soroka,  
*Supersymmetry and square root of Hamilton dynamics,*  
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14. V.A. Soroka,  
*On square root of supersymmetric Hamilton dynamics,*

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15. D.V. Soroka, V.A. Soroka,

*On square root of the Hamilton equations of motion for supersymmetric systems,*  
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16. V.A. Soroka,  
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17. D.V. Soroka, V.A. Soroka,  
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18. D.V. Soroka, V.A. Soroka,  
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19. V.A. Soroka, D.P. Sorokin, V.I. Tkach, D.V. Volkov,  
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20. D.V. Soroka, V.A. Soroka,  
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Dubna, Russia, 15-20 July, 1993 and at the 3 International Conference on Mathe-  
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21. D.V. Soroka, V.A. Soroka,  
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22. V.A. Soroka,  
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25. V.A. Soroka,  
*Remark concerning integrable Hamilton systems,*
- Proceedings of the International D. Volkov Memorial Seminar "Supersymmetry and Quantum Field Theory", held in Kharkov, Ukraine, 5-7 January, 1997. Julius Wess, Vladimir P. Akulov (eds.). Lecture Notes in Physics, Vol. 509, pp. 252-256, Springer, 1998.
26. V.A. Soroka,  
*Linear odd Poisson bracket on Grassmann algebra,*
- math-ph/0002031**; Proceedings of JINR Workshop "Supersymmetries and Quantum Symmetries" (SQS'99, 27-31 July, JINR, Dubna, Russia, 1999) pp. 424-430, Dubna, 2000.
27. D.V. Soroka, V.A. Soroka,  
*Supersymmetric  $D = 1, N = 1$  model with Lagrangian of diverse Grassmann parities,*
- Talk given at the International Workshop "30 Years of Supersymmetry", Theoretical Physics Institute at the University of Minnesota, Minneapolis, Minnesota, USA, 16-27 October, 2000.
28. D.V. Soroka, V.A. Soroka, J. Wess,  
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- hep-th/0103236**; Proceedings of the International Conference "Supersymmetries and Quantum Field Theory" (SSQFT'2000, 25-29 July, NSC KIPT, Kharkov, Ukraine, 2000), Nucl. Phys. (Proc. Suppl.), **B 102&103** (2001) 264-269.
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- hep-th/0204018**; Proceedings of the International Symposium "30 Years of Supersymmetry" (October 13-15, Theoretical Physics Institute at the University of Minnesota, Minneapolis, Minnesota, USA, 2000), Nucl. Phys. (Proc. Suppl.), **B 101** (2001) 26-42.
30. D.V. Soroka, V.A. Soroka,  
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*Exterior differentials in superspace and Poisson brackets of diverse Grassmann parities,*

**hep-th/0109203**; Proceedings of the 9th International Conference on Supersymmetry and Unification of Fundamental Interactions (SUSY'01, 11-17 June, Dubna, Russia, 2001) pp. 405-408, World Scientific Publishing Co. Pte. Ltd., Singapore, 2002.

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33. D.V. Soroka, V.A. Soroka,

*Generalization of Schouten-Nijenhuis bracket for superspace,* International Science Conference "Karazins'ki pryrodovnavchi studii", 14-16 June 2004, pp. 181-184, Kharkiv, KNU, 2004.

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*Poincaré algebra extension with tensor generator,*

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### Internal reports (preprints):

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*Deep inelastic electrons scattering on nucleons,*  
  
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2. V.P. Akulov, D.V. Volkov, V.A. Soroka,  
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4. V.A. Soroka,  
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8. D.V. Soroka, V.A. Soroka,

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9. V.A. Soroka,  
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**hep-th/0111271**; The report is submitted for the poster presentation at the Conference "Supergravity at 25" and for the publication in Proceedings of this Conference (1-2 December, C.N. Yang Institute for Theoretical Physics of SUNY in Stony Brook, New York, USA, 2001).

10. D.V. Soroka, V.A. Soroka,

*Generalizations for Schouten-Nijenhuis bracket and for differential analog of special Yang-Baxter equations,*

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11. V.A. Soroka,  
*Reply to Professor Peter Van Nieuwenhuizen in connection with hep-th/0408137,*

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12. D.V. Soroka, V.A. Soroka,  
*Multiplet containing components of different masses,*

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13. D.V. Soroka, V.A. Soroka,  
*Odd Nambu bracket on Grassmann algebra,*  
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14. D.V. Soroka, V.A. Soroka,  
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15. D.V. Soroka, V.A. Soroka,  
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16. D.V. Soroka, V.A. Soroka,  
*Multiplet containing components with different masses*,  
**arXiv:0909.3624 [hep-th]**; A contribution to the Proceedings of the International Workshop "Supersymmetries and Quantum Symmetries" (SQS'09) July 29 - August 3, 2009, Dubna, Russia.

**Others:**

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*Some problems of gauge fields in supersymmetric theories,*  
  
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5. V.A. Soroka,  
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