

## Vladimir Shtelen's journal publications

1. Equations of motion of a black hole in a quasistationary approximation. - *Izvest. VUZ (Fizika)*, 1980, 11, 21-26 (with V. I. Zhdanov).
2. Group analysis of nonlinear systems of differential equations related to the Schrödinger equation. - *Ukrainian Jour. Physics*, 1981, v 26, 2, 323-326.
3. Group analysis of a system of parabolic equations. In: *Theoretic-Algebraic Studies in Mathematical Physics*. - Institute of Mathematics of Ukrain. Acad. of Sciences, Kiev, 1981, 64-67.
4. On one system of nonlinear differential equations invariant under the Schrödinger group. - *Ibid.*, 100-104.
5. On some exact solutions of a system of differential equations of nonlinear wave mechanics. - *Mathematical Studies of Continuous Media and Heat Conductivity*. - Institute of Mathematics, Kiev, 1982, 104-107.
6. Tangent transformations of the relativistic Hamilton-Jacobi equation. - *Theoretic-Algebraic Methods in Problems of Mathematical Physics*. - Institute of Mathematics, Kiev, 1983, 62-65.
7. Formula of generating conformally invariant solutions for field equations of arbitrary spin.- *Group-Theoretical Studies of Equations of Mathematical Physics*. - Institute of Mathematics, Kiev, 1985, 60-66.
8. Non-Lie symmetry and non-local transformations. - Preprint, Institute of Mathematics, Kiev, 1987, 28p.

9. On a method of constructing exact solutions of multidimensional linear differential equations.- Symmetry and Exact Solutions of Nonlinear Equations of Mathematical Physics.- Institute of Mathematics, Kiev, 1987, 31-37.
10. On a nonlinear integro-differential equation for a scalar field.- Symmetry Analysis and Exact Solutions of Equations of Mathematical Physics. - Institute of Mathematics, Kiev, 1988, 22-26.
11. Exact solutions of some nonlinear equations for a vector field. - Dokl. AN Ukr. SSR, 1989, N1, 33-36.
12. On connection between solutions of Maxwell and Dirac equations.- Symmetry and Solutions of Equations of Mathematical Physics.- Institute of Mathematics, Kiev, 1989, 110-113.
13. On group linearization of Burgers' equation.- Mathematical Physics and Nonlinear Mechanics,- 1989, 11(45), 89-91.
14. On solutions of the Schrödinger equation invariant under the Lorentz algebra. - Theoretic-Algebraic Analysis of Equations of Mathematical Physics. - Institute of Mathematics, Kiev, 1990, 109-112.
15. The maximally extensive local group of invariance of Dirac-Lorentz's equation. - Lett. Nuovo Cim., 1980, 28, N5, 169-170 (with P.-A. Borroni).
16. The symmetry and some exact solutions of the relativistic eikonal equation. - Lett. Nuovo Cim., 1982, 34, N16, 498-502 (with W. I. Fushchich).
17. The symmetry and some exact solutions of the relativistic eikonal equation (Correction). - Lett. Nuovo Cim., 1983, 36, N1, 96-97 (with W. I. Fushchich).
18. On some exact solutions of the nonlinear Dirac equation. - J. Phys. A: Math. Gen., 1983, 16, N2, 271-277 (with W. I. Fushchich).
19. Conformal symmetry and new exact solutions of SU(2) Yang-Mills theory. - Lett. Nuovo Cim., 1983, 38, N2, 37-40 (with W. I. Fushchich).

20. On some exact solutions of nonlinear equations of quantum electrodynamics. - Phys. Lett.B, 1985, 159, N2-3, 189-191 (with W. I. Fushchich).
21. On invariant solutions of the nonlinear Dirac equation.- Dokl.AN USSR, 1983, 269, N1, 88-92 (with W. I. Fushchich).
22. On some exact solutions of multidimensional nonlinear d'Alembert, Liouville, eikonal and Dirac equations.- Group-Theoretical Methods in Physics. Proceedings of 2nd International Conference. - Moscow: Nauka, 1983 (with W. I. Fushchich and N. I. Serov).
23. On linear and nonlinear system of differential equations invariant under the Schrödinger group. - Teor. Mat. Fiz., 1983, 56, N3, 387-394 (with W. I. Fushchich).
24. Conformal symmetry and exact solutions of nonlinear field equations. - Ukr. J.Phys., 1985, 30, N5, 787-789 (with W. I. Fushchich).
25. On approximate symmetry and solutions of a nonlinear wave equation with a small parameter. - Dokl. AN Ukr. SSR, 1983, N8, 18-21 (with W. I. Fushchich).
26. Some exact solutions of multidimensional nonlinear d'Alembert, Liouville, eikonal and Dirac equations. - Group-Theoretical Methods in Physics, Harwood Acad. Publ., 1984, p.485-496 (with W. I. Fushchich and N. I. Serov).
27. On nonlocal transformations. - Lett. Nuovo Cim., 1985, 44, N1, 40-42 (with W. I. Fushchich).
28. On new conformally invariant equations for spinor fields and their exact solutions. - Phys. Lett.B, 1985, 159, N2-3, 189-191 (with W. I. Fushchich and R. Z. Zhdanov).
29. Conformally invariant generalizations of Dirac-Heisenberg equation and their exact solutions.- Proceedings of 3rd International Conference on Group-Theoretical Methods in Physics, Moscow: Nauka, 1986, V1, 497-501 (with W. I. Fushchich and R. Z. Zhdanov).

30. On reduction and solutions of nonlinear Dirac equation. - Teoret. Mat.Fizika 1987, 72, N1, 35-44 (with W. I. Fushchich).
31. Application of the method of differential forms for studying symmetry of the relativistic Hamilton-Jakobi equation.- Symmetry and Solutions of Nonlinear Equations of Mathematical Physics, Institute of Mathematics, Kiev, 1987, 58-62 (with V. I. Stogny).
32. On connection between solutions of Fokker-Planck equation and heat equation.- Symmetry Analysis and Solutions of Equations of Mathematical Physics, Institute of Mathematics, Kiev, 1988, 96-98 (with V. I. Stogny).
33. On approximate symmetry and approximate solutions of nonlinear wave equation with a small parameter. - J. Phys. A: Math. Gen., 1989, 22, N16, L887-L890 (with W. I. Fushchich).
34. On invariance of Dirac equation under different representations of the Poincare algebra. - Symmetry and Solutions of Equations of Mathematical Physics, Institute of Mathematics, Kiev, 1989, 110-113 (with V. S. Spichak).
35. Symmetry properties of one and two-dimensional Fokker-Planck equations.- J. Phys. A: Math. Gen., 1989, 22, N13, L539-L543 (with V. I. Stogny).
36. Symmetry and exact solutions of Fokker-Planck equation for the Releigh process. - Theoretic-Algebraic Analysis of Equations of Mathematical Physics, Institute of Mathematics, Kiev, 1990, 74-78 (with V. I. Stogny).
37. On connection between solutions of Dirac and Maxwell equations. Supersymmetry of Dirac equation. - Dokl. AN Ukr SSR, 1990, N3, 36-40 (with W. I. Fushchich and V. S. Spichak).
38. Merons and instantons as product of self-interaction of the Dirac-Gursey spinor field. - J.Phys. A: Math.Gen., 1990, 23, N10, L517-L520 (with W. I. Fushchich).

39. Are Maxwell's equations invariant under the Galilei transformations? - Dokl. AN Ukr SSR, 1991, N3, 23-27 (with W. I. Fushchich).
40. Symmetry and exact solutions of some Fokker-Planck equations. - Ukr. Mat. J., 1991, 43, N4, 456-460 (with V. I. Stogny).
41. Reduction and exact solutions of the Navier-Stokes equations. - J. Phys. A: Math. Gen., 1991, 24, N5, 971-986 (with W. I. Fushchich and S. L. Slavutsky).
42. 42 On the connection between solutions of Dirac and Maxwell equations, dual Poincare invariance and superalgebras of invariance, and solutions of nonlinear Dirac equation. - J.Phys. A: Math. Gen., 1991, 24, N8, 1683-1698 (with W. I. Fushchich and S. V. Spichak).
43. On reduction of the Navier-Stokes equations to the systems of linear heat equations. - Dokl. AN Ukr SSR, 1992, N4, 21-27 (with W. I. Fushchich and R. E. Popovich).
44. Symmetry, conditional symmetry and exact solutions of the Wilson renormalization group equation. - Symmetry Analysis of Nonlinear Equations of Mathematical Physics, Institute of Mathematics, Kiev, 1992, 95-101 (with S. V. Spichack).
45. Conditional symmetry of the linear heat equation. - Dokl. AN Ukr SSR, 1992, N12, 20-26 (with W. I. Fushchich, N. I. Serov and R. E. Popovich).
46. New classes of exact solutions of nonlinear wave equations. Preprint, 1997, Linköping University (with W. I. Fushchich and P. Bassarb-Horwath).
47. A new conformal-invariant nonlinear spinor equation, Preprint, LiTH-MAT-R-93-05, Linköping University, Sweden, 8p. (with W.I. Fushchych and P. Basarab-Horwath).
48. New classes of Schrodinger equations equivalent to the free particle equation through non-local transformations. - J. Phys. A: Math. Gen., 1996, 29, 4473-4480 (with G. Bluman).

49. Developments in similarity methods related to pioneering work of Julian Cole.-  
Mathematics is for Solving Problems (In honor of Julian D. Cole on his 70th  
birthday), SIAM, Philadelphia, 1996, 105-117 (with G. Bluman).
50. Lorentz transformations for the Schrodinger equation (In honor of Wilhelm Fushchich  
on his 60th birthday). - JNMP, 1997, N4, 480-482.
51. On asymptotic nonlocal symmetry of nonlinear Schrodinger equation. - JNMP,  
1998, v.4, 417-439 (with W. Zachary).
52. On Galilean invariance and nonlinearity in electrodynamics and quantum me-  
chanics. - Phys. Lett. A, 2001, v.279, 321-326 (with G. Goldin).
53. On gauge transformations of Bäcklund type and higher order nonlinear Schrödinger  
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54. Nonlocal transformations of Kolmogorov equations into the backward heat equa-  
tion. - J. Math. Anal. Appl., 2004, v. 291, 419-437 (with G. Bluman)
55. Generalization of Yang-Mills theory with nonlinear constitutive equations. -  
J. Phys. A: Math. Gen., 2004, v.37, 10711-10718 (with G. Goldin)