Sergey Meleshko

List of Publications by Year
in descending order

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93	752	687363 13	677142 22
papers	citations	h-index	g-index

94	94	94	208
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Reciprocal transformations of the one-dimensional magnetogasdynamics. International Journal of Non-Linear Mechanics, 2022, 138, 103840.	2.6	1
2	Plane one-dimensional MHD flows: Symmetries and conservation laws. International Journal of Non-Linear Mechanics, 2022, 140, 103899.	2.6	6
3	Conservation laws of the two-dimensional relativistic gas dynamics equations. International Journal of Non-Linear Mechanics, 2022, 144, 104059.	2.6	0
4	Strong point explosion in vibrationally exciting gas. International Journal of Non-Linear Mechanics, 2021, 128, 103615.	2.6	0
5	Second-order delay ordinary differential equations, their symmetries and application to a traffic problem. Journal of Physics A: Mathematical and Theoretical, 2021, 54, 105204.	2.1	11
6	UNSTEADY ONE-DIMENSIONAL FLOWS OF A VIBRATIONALLY EXCITED GAS. Journal of Applied Mechanics and Technical Physics, 2021, 62, 361-370.	0.5	1
7	APPLICATION OF THE METHOD OF DIFFERENTIAL CONSTRAINTS TO SYSTEMS OF EQUATIONS WRITTEN IN RIEMANN INVARIANTS. Journal of Applied Mechanics and Technical Physics, 2021, 62, 351-360.	0.5	3
8	Sedov type solution of the equations of hydraulic longitudinal waves. International Journal of Non-Linear Mechanics, 2021, 131, 103674.	2.6	1
9	Solutions of generalized simple wave type of magnetic fluid. Communications in Nonlinear Science and Numerical Simulation, 2021, 103, 105991.	3.3	6
10	Unsteady One-Dimensional Flows of a Vibrationally Excited Gas. PrikladnaÃ¢ Mehanika, TehniÄeskaÃ¢ Fizika, 2021, 62, 15-24.	0.0	0
11	Exact Solutions of Boundary Layer Equations in Polymer Solutions. Symmetry, 2021, 13, 2101.	2.2	2
12	One-Dimensional Flows of a Polytropic Gas: Lie Group Classification, Conservation Laws, Invariant and Conservative Difference Schemes. Nonlinear Physical Science, 2021, , 61-98.	0.2	1
13	Analysis of the one-dimensional Eulerâ€“Lagrange equation of continuum mechanics with a Lagrangian of a special form. Applied Mathematical Modelling, 2020, 77, 1497-1511.	4.2	12
14	Invariant solutions of oneâ€dimensional equations of twoâ€temperature relaxation gas dynamics. Mathematical Methods in the Applied Sciences, 2020, 43, 2444-2457.	2.3	3
15	Group Analysis of the Boundary Layer Equations in the Models of Polymer Solutions. Symmetry, 2020, 12, 1084.	2.2	3
16	Group Analysis of the One-Dimensional Gas Dynamics Equations in Lagrangian Coordinates and Conservation Laws. Journal of Applied Mechanics and Technical Physics, 2020, 61, 189-206.	0.5	1
17	The one-dimensional Greenâ€“Naghdi equations with a time dependent bottom topography and their conservation laws. Physics of Fluids, 2020, 32, .	4.0	5
18	Complete group classification of the two-Dimensional shallow water equations with constant coriolis parameter in Lagrangian coordinates. Communications in Nonlinear Science and Numerical Simulation, 2020, 89, 105293.	3.3	11

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19	Conservation laws of the one-dimensional equations of relativistic gas dynamics in Lagrangian coordinates. International Journal of Non-Linear Mechanics, 2020, 124, 103496.	2.6	2
20	Group classification of the two-dimensional shallow water equations with the beta-plane approximation of coriolis parameter in Lagrangian coordinates. Communications in Nonlinear Science and Numerical Simulation, 2020, 90, 105337.	3.3	9
21	Symmetries of the shallow water equations in the Boussinesq approximation. Communications in Nonlinear Science and Numerical Simulation, 2019, 67, 1-12.	3.3	8
22	On steady two-dimensional analytical solutions of the viscoelastic Maxwell equations. Journal of Non-Newtonian Fluid Mechanics, 2019, 270, 1-7.	2.4	2
23	One class of invariant solutions of the one-dimensional equations of two-temperature relaxation gas dynamics. AIP Conference Proceedings, 2019, , .	0.4	1
24	Invariant solutions of the two-dimensional shallow water equations with a particular class of bottoms. AIP Conference Proceedings, 2019, , .	0.4	4
25	Symmetries of one-dimensional fluid equations in Lagrangian coordinates. AIP Conference Proceedings, 2019, , .	0.4	0
26	Conservation laws of the one-dimensional isentropic gas dynamics equations in Lagrangian coordinates. AIP Conference Proceedings, 2019, , .	0.4	1
27	Group Properties of Equations of the Kinetic Theory of Coagulation. Journal of Applied Mechanics and Technical Physics, 2019, 60, 350-364.	0.5	1
28	Conservation laws of the two-dimensional gas dynamics equations. International Journal of Non-Linear Mechanics, 2019, 112, 126-132.	2.6	12
29	Comment on â€˜Symbolic computation of equivalence transformations and parameter reduction for nonlinear physical modelsâ€™. Computer Physics Communications, 2019, 239, 14-15.	7.5	0
30	One-dimensional gas dynamics equations of a polytropic gas in Lagrangian coordinates: Symmetry classification, conservation laws, difference schemes. Communications in Nonlinear Science and Numerical Simulation, 2019, 74, 201-218.	3.3	21
31	Group classification of systems of two linear second-order stochastic ordinary differential equations. AIP Conference Proceedings, 2019, , .	0.4	0
32	Equation of Rayleigh noise reduction model for medical ultrasound imaging: Symmetry classification and conservation laws in cylindrical coordinates. AIP Conference Proceedings, 2019, , .	0.4	0
33	Group analysis and exact solutions of the spatially homogeneous and isotropic Boltzmann equation with a source term. AIP Conference Proceedings, 2019, , .	0.4	0
34	Lie group classification of first-order delay ordinary differential equations. Journal of Physics A: Mathematical and Theoretical, 2018, 51, 205202.	2.1	19
35	Group properties of the extended Greenâ€“Naghdi equations. Applied Mathematics Letters, 2018, 81, 1-6.	2.7	1
36	Linear or linearizable first-order delay ordinary differential equations and their Lie point symmetries. Journal of Physics A: Mathematical and Theoretical, 2018, 51, 205203.	2.1	14

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37	Exact solutions of the population balance equation including particle transport, using group analysis. Communications in Nonlinear Science and Numerical Simulation, 2018, 59, 255-271.	3.3	13
38	Exact Solutions of the Boltzmann Equations with a Source. Journal of Applied Mechanics and Technical Physics, 2018, 59, 189-196.	0.5	5
39	Invariant solutions of delay differential equations. AIP Conference Proceedings, 2018, , .	0.4	0
40	On exact analytical solutions of equations of Maxwell incompressible viscoelastic medium. International Journal of Non-Linear Mechanics, 2018, 105, 152-157.	2.6	6
41	Symmetries of Equations with Nonlocal Terms. Springer Proceedings in Mathematics and Statistics, 2018, , 105-124.	0.2	0
42	Application of a Lie group admitted by a homogeneous equation for group classification of a corresponding inhomogeneous equation. Communications in Nonlinear Science and Numerical Simulation, 2017, 48, 350-360.	3.3	13
43	Symmetry analysis of the nonlinear two-dimensional Klein-Gordon equation with a time-varying delay. Mathematical Methods in the Applied Sciences, 2017, 40, 4658.	2.3	8
44	Invariant and partially invariant solutions of integro-differential equations for linear thermoviscoelastic aging materials with memory. Continuum Mechanics and Thermodynamics, 2017, 29, 207-224.	2.2	8
45	Symmetries of population balance equations for aggregation, breakage and growth processes. Applied Mathematics and Computation, 2017, 307, 193-203.	2.2	7
46	Linearization criteria for systems of two second-order stochastic ordinary differential equations. Applied Mathematics and Computation, 2017, 301, 25-35.	2.2	8
47	Symmetry groups of integro-differential equations for linear thermoviscoelastic materials with memory. Journal of Applied Mechanics and Technical Physics, 2017, 58, 587-609.	0.5	7
48	Complete group classification of systems of two nonlinear second-Order ordinary differential equations of the form yâ€²â€²=F(y). Communications in Nonlinear Science and Numerical Simulation, 2017, 44, 318-333.	3.3	1
49	Characteristic properties of the system of equations for an incompressible viscoelastic Maxwell medium. Journal of Applied Mechanics and Technical Physics, 2017, 58, 794-800.	0.5	5
50	Preliminary group classification of the full Boltzmann equation with a source term. AIP Conference Proceedings, 2017, , .	0.4	1
51	Invariant solutions in explicit form of the Boltzmann equation with a source term. Journal of Physics: Conference Series, 2017, 894, 012063.	0.4	1
52	On the complete group classification of the oneâ€dimensional nonlinear Kleinâ€“Gordon equation with a delay. Mathematical Methods in the Applied Sciences, 2016, 39, 3255-3270.	2.3	26
53	Symmetries of the hyperbolic shallow water equations and the Greenâ€“Naghdi model in Lagrangian coordinates. International Journal of Non-Linear Mechanics, 2016, 86, 185-195.	2.6	26
54	Exact solutions of population balance equation. Communications in Nonlinear Science and Numerical Simulation, 2016, 36, 378-390.	3.3	9

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55	Application of group analysis to classification of systems of three secondâ€order ordinary differential equations. Mathematical Methods in the Applied Sciences, 2015, 38, 5097-5113.	2.3	7
56	Complete group classification of systems of two linear secondâ€order ordinary differential equations: the algebraic approach. Mathematical Methods in the Applied Sciences, 2015, 38, 1824-1837.	2.3	14
57	Application of group analysis to the spatially homogeneous and isotropic Boltzmann equation with source using its Fourier image. Journal of Physics: Conference Series, 2015, 621, 012006.	0.4	1
58	Group analysis of kinetic equations in a non-linear thermal transport problem. International Journal of Non-Linear Mechanics, 2015, 71, 1-7.	2.6	9
59	Group classification of one-dimensional nonisentropic equations of fluids with internal inertia II. General case. Continuum Mechanics and Thermodynamics, 2015, 27, 447-460.	2.2	2
60	Group analysis of integro-differential equations describing stress relaxation behavior of one-dimensional viscoelastic materials. International Journal of Non-Linear Mechanics, 2015, 77, 223-231.	2.6	11
61	On group classification of normal systems of linear second-order ordinary differential equations. Communications in Nonlinear Science and Numerical Simulation, 2015, 22, 1002-1016.	3.3	5
62	Group analysis of the Fourier transform of the spatially homogeneous and isotropic Boltzmann equation with a source term. Communications in Nonlinear Science and Numerical Simulation, 2015, 20, 719-730.	3.3	12
63	A new approach to the group analysis of one-dimensional stochastic differential equations. Journal of Applied Mechanics and Technical Physics, 2014, 55, 191-198.	0.5	1
64	On the group classification of systems of two linear second-order ordinary differential equations with constant coefficients. Journal of Mathematical Analysis and Applications, 2014, 410, 341-347.	1.0	7
65	On group classification of the spatially homogeneous and isotropic Boltzmann equation with sources II. International Journal of Non-Linear Mechanics, 2014, 61, 15-18.	2.6	9
66	Group classification of one-dimensional equations of capillary fluids where the specific energy is a function of density, density gradient and entropy. International Journal of Non-Linear Mechanics, 2014, 62, 73-84.	2.6	3
67	Application of group analysis to stochastic equations of fluid dynamics. Journal of Applied Mechanics and Technical Physics, 2013, 54, 21-33.	0.5	4
68	Complete group classification of systems of two linear second-order ordinary differential equations. Communications in Nonlinear Science and Numerical Simulation, 2013, 18, 2972-2983.	3.3	15
69	On first integrals of second-order ordinary differential equations. Journal of Engineering Mathematics, 2013, 82, 17-30.	1.2	13
70	On group classification of the spatially homogeneous and isotropic Boltzmann equation with sources. International Journal of Non-Linear Mechanics, 2012, 47, 1014-1019.	2.6	3
71	Group analysis of the thin film dewetting equation. International Journal of Non-Linear Mechanics, 2012, 47, 9-13.	2.6	5
72	Group classification of one-dimensional nonisentropic equations of fluids with internal inertia. Continuum Mechanics and Thermodynamics, 2012, 24, 115-148.	2.2	2

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73	Linearization of a Second-Order Stochastic Ordinary Differential Equation. Journal of Nonlinear Mathematical Physics, 2011, 18, 427.	1.3	5
74	Comment on â€œSymmetry breaking of systems of linear second-order ordinary differential equations with constant coefficientsâ€• Communications in Nonlinear Science and Numerical Simulation, 2011, 16, 3447-3450.	3.3	12
75	Group classification of second-order delay ordinary differential equations. Communications in Nonlinear Science and Numerical Simulation, 2010, 15, 1444-1453.	3.3	14
76	Symmetries of Stochastic Differential Equations. Lecture Notes in Physics, 2010, , 209-250.	0.7	6
77	Symmetries of Integro-Differential Equations. Lecture Notes in Physics, 2010, , .	0.7	83
78	Group classification of one-dimensional equations of fluids with internal energy depending on the density and the gradient of the density. Continuum Mechanics and Thermodynamics, 2009, 20, 397-410.	2.2	3
79	Invariants and invariant description of second-order ODEs with three infinitesimal symmetries. II. Communications in Nonlinear Science and Numerical Simulation, 2008, 13, 1015-1020.	3.3	3
80	Invariants of linear parabolic differential equations. Communications in Nonlinear Science and Numerical Simulation, 2008, 13, 277-284.	3.3	10
81	On the complete group classification of the reactionâ€“diffusion equation with a delay. Journal of Mathematical Analysis and Applications, 2008, 338, 448-466.	1.0	50
82	Conditions for linearization of a projectable system of two second-order ordinary differential equations. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 402001.	2.1	11
83	Group classification of oneâ€dimensional equations of fluids with internal inertia. Mathematical Methods in the Applied Sciences, 2007, 30, 2101-2120.	2.3	9
84	On the definition of an admitted Lie group for stochastic differential equations. Communications in Nonlinear Science and Numerical Simulation, 2007, 12, 1379-1389.	3.3	19
85	On definition of an admitted Lie group for functional differential equations. Communications in Nonlinear Science and Numerical Simulation, 2004, 9, 117-125.	3.3	13
86	A Particular Class of Partially Invariant Solutions of the Navierâ€“Stokes Equations. Nonlinear Dynamics, 2004, 36, 47-68.	5.2	29
87	ON PARTIALLY INVARIANT SOLUTIONS OF THE NAVIER-STOKES EQUATIONS. , 2004, , .		0
88	A truncated PainlevÃ© expansion associated with the TzitzÃ©ica equation: consistency and general solution. Physics Letters, Section A: General, Atomic and Solid State Physics, 2002, 299, 349-352.	2.1	3
89	Title is missing!. Nonlinear Dynamics, 2002, 28, 105-124.	5.2	8
90	Reduction Procedure and Generalized Simple Waves for Systems Written in Riemann Variables. Nonlinear Dynamics, 2002, 30, 87-102.	5.2	20

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91	Bobylev-Krook-Wu Modes for Multicomponent Gas Mixtures. Physical Review Letters, 1998, 81, 93-95.	7.8	15
92	Group analysis of kinetic equations. Russian Journal of Numerical Analysis and Mathematical Modelling, 1995, 10, .	0.6	9
93	Group analysis of the twoâ€dimensional twoâ€temperature gas dynamics equations. Mathematical Methods in the Applied Sciences, 0, , .	2.3	0