Christodoulos Sophocleous

List of Publications by Year
in descending order

93	1,324	331670 21	414414 32
papers	citations	h-index	g-index

96	96	96	371
all docs	docs citations	times ranked	citing authors

#	ARTICLE	IF	CITATIONS
1	Lie symmetries and the constant elasticity of variance (CEV) model. Partial Differential Equations in Applied Mathematics, 2022, 5, 100290.	2.4	2
2	Special transformation properties for certain equations with applications in Plasma Physics. Mathematical Methods in the Applied Sciences, 2021, 44, 14776-14790.	2.3	2
3	Extended symmetry analysis of two-dimensional degenerate Burgers equation. Journal of Geometry and Physics, 2021, 169, 104336.	1.4	7
4	The Lie symmetry approach on (1+2)-dimensional financial models. SN Partial Differential Equations and Applications, 2021, 2, 1.	0.6	3
5	Lie Group Classification for a Class of Compound KdVâ€“Burgers Equations with Time-Dependent Coefficients. International Journal of Applied and Computational Mathematics, 2020, 6, 1.	1.6	1
6	An efficient and highly accurate spectral method for modeling the propagation of solitary magnetic spin waves in thin films. Computational and Applied Mathematics, 2020, 39, 1.	2.2	1
7	On a sequence of higher-order nonlinear diffusion-convection equations. Journal of Physics: Conference Series, 2019, 1194, 012047.	0.4	0
8	Classification of reduction operators and exact solutions of variable coefficient Newellâ€“Whiteheadâ€“Segel equations. Journal of Mathematical Analysis and Applications, 2019, 474, 264-275.	1.0	6
9	Enhanced Symmetry Analysis of Two-Dimensional Burgers System. Acta Applicandae Mathematicae, 2019, 163, 91-128.	1.0	13
10	Numerical similarity solution for a variable coefficient K(m,Ân) equation. Computational and Applied Mathematics, 2018, 37, 1098-1111.	1.3	2
11	Lie symmetry analysis of Burgersâ€type systems. Mathematical Methods in the Applied Sciences, 2018, 41, 1197-1213.	2.3	4
12	Lie symmetries of a system arising in plasma physics. Mathematical Methods in the Applied Sciences, 2018, 41, 1331-1343.	2.3	2
13	Lie symmetry analysis of a variable coefficient Calogeroâ€“Degasperis equation. Physica Scripta, 2018, 93, 105202.	2.5	6
14	Lie Symmetry Analysis of a Third-Order Equation Arising from a General Class of Lotkaâ€“Volterra Chains. Springer Proceedings in Mathematics and Statistics, 2018, , 311-318.	0.2	0
15	On the simplification of the form of Lie transformation groups admitted by systems of evolution differential equations. Journal of Mathematical Analysis and Applications, 2017, 449, 1619-1636.	1.0	3
16	Enhanced group classification of Benjaminâ€“Bonaâ€“Mahonyâ€“Burgers equations. Applied Mathematics Letters, 2017, 65, 19-25.	2.7	4
17	Group classification of systems of diffusion equations. Mathematical Methods in the Applied Sciences, 2017, 40, 1746-1756.	2.3	11
18	The Christov-Galerkin spectral method in complex arithmetics. AIP Conference Proceedings, 2017, , .	0.4	2

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19	Group Analysis of a Class of Nonlinear Kolmogorov Equations. Springer Proceedings in Mathematics and Statistics, 2016, , 349-360.	0.2	3
20	Seventh International Workshop: Group Analysis of Differential Equations and Integrable Systems (GADEISVII). Journal of Physics: Conference Series, 2015, 621, 011001.	0.4	0
21	Laplace type invariants for variable coefficient mKdV equations. Journal of Physics: Conference Series, 2015, 621, 012015.	0.4	0
22	Group analysis of Benjaminâ€"Bonaâ€"Mahony equations with time dependent coefficients. Journal of Physics: Conference Series, 2015, 621, 012016.	0.4	1
23	Lie symmetries of generalized Burgers equations: application to boundary-value problems. Journal of Engineering Mathematics, 2015, 91, 165-176.	1.2	15
24	A deductive approach to the solution of the problem of optimal pairs trading from the viewpoint of stochastic control with timeâ€dependent parameters. Mathematical Methods in the Applied Sciences, 2015, 38, 4448-4460.	2.3	1
25	Enhanced group classification of Gardner equations with time-dependent coefficients. Communications in Nonlinear Science and Numerical Simulation, 2015, 22, 1243-1251.	3.3	30
26	Differential invariants for third-order evolution equations. Communications in Nonlinear Science and Numerical Simulation, 2015, 20, 352-359.	3.3	6
27	Symmetry analysis for a class of nonlinear dispersive equations. Communications in Nonlinear Science and Numerical Simulation, 2015, 22, 1275-1287.	3.3	3
28	Equivalence transformations in the study of integrability. Physica Scripta, 2014, 89, 038003.	2.5	40
29	Numerical solutions of boundary value problems for variable coefficient generalized KdV equations using Lie symmetries. Communications in Nonlinear Science and Numerical Simulation, 2014, 19, 3074-3085.	3.3	26
30	Symmetry and singularity analyses of some equations of the fifth and sixth order in the spatial variable arising from the modelling of thin films. Communications in Nonlinear Science and Numerical Simulation, 2013, 18, 1949-1958.	3.3	1
31	Symmetry properties for a generalised thin film equation. Journal of Engineering Mathematics, 2013, 82, 109-124.	1.2	4
32	Application of Lie point symmetries to the resolution of certain problems in financial mathematics with a terminal condition. Journal of Engineering Mathematics, 2013, 82, 67-75.	1.2	11
33	Symmetry analysis of a model for the exercise of a barrier option. Communications in Nonlinear Science and Numerical Simulation, 2013, 18, 2367-2373.	3.3	8
34	THIN FILMS: INCREASING THE COMPLEXITY OF THE MODEL. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2012, 22, 1250212.	1.7	2
35	Extended group analysis of variable coefficient reactionâ€"diffusion equations with exponential nonlinearities. Journal of Mathematical Analysis and Applications, 2012, 396, 225-242.	1.0	61
36	On the invariants of two dimensional linear parabolic equations. Communications in Nonlinear Science and Numerical Simulation, 2012, 17, 3673-3681.	3.3	4

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37	Symmetry analysis of a model of stochastic volatility with time-dependent parameters. Journal of Computational and Applied Mathematics, 2011, 235, 4158-4164.	2.0	11
38	Algebraic solution of the Steinâ€“Stein model for stochastic volatility. Communications in Nonlinear Science and Numerical Simulation, 2011, 16, 1752-1759.	3.3	13
39	Numerical similarity reductions of the (1+3)-dimensional Burgers equation. Applied Mathematics and Computation, 2011, 217, 7455-7461.	2.2	0
40	Group analysis of variable coefficient diffusion-convection equations. I. Enhanced group classification. Lobachevskii Journal of Mathematics, 2010, 31, 100-122.	0.9	45
41	Lie group analysis of two-dimensional variable-coefficient Burgers equation. Zeitschrift Fur Angewandte Mathematik Und Physik, 2010, 61, 793-809.	1.4	13
42	Differential invariants for systems of linear hyperbolic equations. Journal of Mathematical Analysis and Applications, 2010, 363, 238-248.	1.0	12
43	Group classification of a class of equations arising in financial mathematics. Journal of Mathematical Analysis and Applications, 2010, 372, 273-286.	1.0	8
44	GROUP CLASSIFICATION OF THREE-DIMENSIONAL VARIABLE-COEFFICIENT BURGERS EQUATION. , 2010, , .		1
45	Enhanced Group Analysis and Exact Solutions ofÂVariable Coefficient Semilinear Diffusion Equations withÂaÂPower Source. Acta Applicandae Mathematicae, 2009, 106, 1-46.	1.0	77
46	Conservation laws and hierarchies of potential symmetries for certain diffusion equations. Physica A: Statistical Mechanics and Its Applications, 2009, 388, 343-356.	2.6	18
47	Invariants of two- and three-dimensional hyperbolic equations. Journal of Mathematical Analysis and Applications, 2009, 349, 516-525.	1.0	9
48	Similarity reductions of the (1+3)-dimensional Burgers equation. Applied Mathematics and Computation, 2009, 210, 87-99.	2.2	5
49	On linearization of hyperbolic equations using differential invariants. Journal of Mathematical Analysis and Applications, 2008, 339, 762-773.	1.0	10
50	Group analysis of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll"><mml:mo stretchy="false">(</mml:mo><mml:mn>2</mml:mn><mml:mo>+</mml:mo><mml:mn>1</mml:mn><mml:mo) Tj ETQq0 0 0 rgBT /Overl xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si2.gif" overflow="scroll"><mml:mo		

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55	Exact solutions of a remarkable fin equation. Applied Mathematics Letters, 2008, 21, 209-214.	2.7	21
56	Conservation laws and potential symmetries of systems of diffusion equations. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 235201.	2.1	10
57	EQUIVALENCE TRANSFORMATIONS AND DIFFERENTIAL INVARIANTS FOR GENERALIZED WAVE EQUATIONS. , 2008, , .		0
58	Differential invariants of the one-dimensional quasi-linear second-order evolution equation. Communications in Nonlinear Science and Numerical Simulation, 2007, 12, 1133-1145.	3.3	17
59	On the classification of similarity solutions of a two-dimensional diffusionâ€“advection equation. Applied Mathematics and Computation, 2007, 187, 1333-1350.	2.2	11
60	Enhanced group analysis and conservation laws of variable coefficient reactionâ€“diffusion equations with power nonlinearities. Journal of Mathematical Analysis and Applications, 2007, 330, 1363-1386.	1.0	86
61	On the group classification of variable-coefficient nonlinear diffusionâ€“convection equations. Journal of Computational and Applied Mathematics, 2006, 197, 322-344.	2.0	45
62	The Toda lattice is super-integrable. Physica A: Statistical Mechanics and Its Applications, 2006, 365, 235-243.	2.6	21
63	Linearisation and potential symmetries of certain systems of diffusion equations. Physica A: Statistical Mechanics and Its Applications, 2006, 370, 329-345.	2.6	14
64	On Linearizing Systems of Diffusion Equations. Symmetry, Integrability and Geometry: Methods and Applications (SIGMA), 2006, , .	0.5	1
65	Further transformation properties of generalised inhomogeneous nonlinear diffusion equations with variable coefficients. Physica A: Statistical Mechanics and Its Applications, 2005, 345, 457-471.	2.6	20
66	Noether and master symmetries for the Toda lattice. Applied Mathematics Letters, 2005, 18, 163-170.	2.7	5
67	Further transformation properties of generalised inhomogeneous nonlinear diffusion equations with variable coefficients. Physica A: Statistical Mechanics and Its Applications, 2005, 345, 457-471.	2.6	14
68	Classification of Noether Symmetries for Lagrangians with Three Degrees of Freedom. Nonlinear Dynamics, 2004, 36, 3-18.	5.2	21
69	Transformation properties of a variable-coefficient Burgers equation. Chaos, Solitons and Fractals, 2004, 20, 1047-1057.	5.1	28
70	Hodograph-type transformations. Nonlinear Analysis: Theory, Methods & Applications, 2003, 55, 441-466.	1.1	6
71	Symmetries and form-preserving transformations of generalised inhomogeneous nonlinear diffusion equations. Physica A: Statistical Mechanics and Its Applications, 2003, 324, 509-529.	2.6	24
72	Classification of potential symmetries of generalised inhomogeneous nonlinear diffusion equations. Physica A: Statistical Mechanics and Its Applications, 2003, 320, 169-183.	2.6	31

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73	Photorefractive accelerating pulses. Journal of Physics A, 2002, 35, 1283-1295.	1.6	5
74	ON SHEAR DEFORMABLE BEAM THEORIES: THE FREQUENCY AND NORMAL MODE EQUATIONS OF THE HOMOGENEOUS ORTHOTROPIC BICKFORD BEAM. Journal of Sound and Vibration, 2001, 242, 215-245.	3.9	23
75	Symmetries and form-preserving transformations of one-dimensional wave equations with dissipation. International Journal of Non-Linear Mechanics, 2001, 36, 987-997.	2.6	25
76	Potential symmetries of inhomogeneous nonlinear diffusion equations. Bulletin of the Australian Mathematical Society, 2000, 61, 507-521.	0.5	12
77	Symmetry group classification of three-dimensional Hamiltonian systems. Applied Mathematics Letters, 2000, 13, 63-70.	2.7	8
78	On cyclic symmetries ofn-dimensional nonlinear wave equations. Journal of Physics A, 2000, 33, 8319-8330.	1.6	3
79	Symmetries of Hamiltonian systems with two degrees of freedom. Journal of Mathematical Physics, 1999, 40, 210-235.	1.1	28
80	Cyclic symmetries of one-dimensional non-linear wave equations. International Journal of Non-Linear Mechanics, 1999, 34, 531-543.	2.6	11
81	Continuous and Discrete Transformations of a One-Dimensional Porous Medium Equation. Journal of Nonlinear Mathematical Physics, 1999, 6, 355.	1.3	4
82	On form-preserving point transformations of partial differential equations. Journal of Physics A, 1998, 31, 1597-1619.	1.6	111
83	Linearizing mappings for certain nonlinear diffusion equations. Journal of Physics A, 1998, 31, 6293-6307.	1.6	8
84	Potential symmetries of nonlinear diffusion - convection equations. Journal of Physics A, 1996, 29, 6951-6959.	1.6	34
85	A tri-Hamiltonian formulation of the full Kostant-Toda lattice. Letters in Mathematical Physics, 1995, 34, 17-24.	1.1	4
86	On point transformations of generalized nonlinear diffusion equations. Journal of Physics A, 1995, 28, 6459-6465.	1.6	13
87	Symmetries for certain coupled nonlinear Schrodinger equations. Journal of Physics A, 1994, 27, L515-L520.	1.6	3
88	Pulse collisions and polarisation conversion for optical fibres. Optics Communications, 1994, 112, 214-224.	2.1	16
89	Miura-type transformations. Journal of Physics A, 1992, 25, L89-L93.	1.6	2
90	On symmetries of radially symmetric nonlinear diffusion equations. Journal of Mathematical Physics, 1992, 33, 3687-3693.	1.1	11

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91	A class of BÃcklund transformations for equations of the typeuxy=f(u,ux). Journal of Mathematical Physics, 1991, 32, 3176-3183.	1.1	5
92	On point transformations of a generalised Burgers equation. Physics Letters, Section A: General, Atomic and Solid State Physics, 1991, 155, 15-19.	2.1	39
93	BÃcklund transformations for generalized nonlinear SchrÃ¶dinger equations. Journal of Mathematical Physics, 1990, 31, 2597-2602.	1.1	3