# Christodoulos Sophocleous

List of Publications by Year
in descending order



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|---|---|---|---|
| 93 papers | 1,324 citations | 331670 21 h-index | 414414 32 g-index |
| 96 all docs | 96 docs citations | 96 times ranked | 371 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | On form-preserving point transformations of partial differential equations. Journal of Physics A, 1998, 31, 1597-1619. | 1.6 | 111 |
| 2 | 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 |
| 3 | Enhanced Group Analysis and Exact Solutions ofÂVariable Coefficient Semilinear Diffusion Equations withÂaÂPower Source. Acta Applicandae Mathematicae, 2009, 106, 1-46. | 1.0 | 77 |
| 4 | 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 |
| 5 | On the group classification of variable-coefficient nonlinear diffusionâ€“convection equations. Journal of Computational and Applied Mathematics, 2006, 197, 322-344. | 2.0 | 45 |
| 6 | Group analysis of variable coefficient diffusion-convection equations. I. Enhanced group classification. Lobachevskii Journal of Mathematics, 2010, 31, 100-122. | 0.9 | 45 |
| 7 | Equivalence transformations in the study of integrability. Physica Scripta, 2014, 89, 038003. | 2.5 | 40 |
| 8 | 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 |
| 9 | Potential symmetries of nonlinear diffusion - convection equations. Journal of Physics A, 1996, 29, 6951-6959. | 1.6 | 34 |
| 10 | Classification of potential symmetries of generalised inhomogeneous nonlinear diffusion equations. Physica A: Statistical Mechanics and Its Applications, 2003, 320, 169-183. | 2.6 | 31 |
| 11 | Enhanced group classification of Gardner equations with time-dependent coefficients. Communications in Nonlinear Science and Numerical Simulation, 2015, 22, 1243-1251. | 3.3 | 30 |
| 12 | Symmetries of Hamiltonian systems with two degrees of freedom. Journal of Mathematical Physics, 1999, 40, 210-235. | 1.1 | 28 |
| 13 | Transformation properties of a variable-coefficient Burgers equation. Chaos, Solitons and Fractals, 2004, 20, 1047-1057. | 5.1 | 28 |
| 14 | 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 |
| 15 | 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 |
| 16 | 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 |
| 17 | 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 |
| 18 | Group analysis of nonlinear fin equations. Applied Mathematics Letters, 2008, 21, 248-253. | 2.7 | 22 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Classification of Noether Symmetries for Lagrangians with Three Degrees of Freedom. Nonlinear Dynamics, 2004, 36, 3-18. | 5.2 | 21 |
| 20 | The Toda lattice is super-integrable. Physica A: Statistical Mechanics and Its Applications, 2006, 365, 235-243. | 2.6 | 21 |
| 21 | Exact solutions of a remarkable fin equation. Applied Mathematics Letters, 2008, 21, 209-214. | 2.7 | 21 |
| 22 | 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 |
| 23 | 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 ETQq1 1 0.784314 rg xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si2.gif" overflow="scroll"><mml:mo | | |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Differential invariants for systems of linear hyperbolic equations. Journal of Mathematical Analysis and Applications, 2010, 363, 238-248. | 1.0 | 12 |
| 38 | On symmetries of radially symmetric nonlinear diffusion equations. Journal of Mathematical Physics, 1992, 33, 3687-3693. | 1.1 | 11 |
| 39 | Cyclic symmetries of one-dimensional non-linear wave equations. International Journal of Non-Linear Mechanics, 1999, 34, 531-543. | 2.6 | 11 |
| 40 | On the classification of similarity solutions of a two-dimensional diffusionâ€"advection equation. Applied Mathematics and Computation, 2007, 187, 1333-1350. | 2.2 | 11 |
| 41 | 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 |
| 42 | 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 |
| 43 | Group classification of systems of diffusion equations. Mathematical Methods in the Applied Sciences, 2017, 40, 1746-1756. | 2.3 | 11 |
| 44 | On linearization of hyperbolic equations using differential invariants. Journal of Mathematical Analysis and Applications, 2008, 339, 762-773. | 1.0 | 10 |
| 45 | Conservation laws and potential symmetries of systems of diffusion equations. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 235201. | 2.1 | 10 |
| 46 | Invariants of two- and three-dimensional hyperbolic equations. Journal of Mathematical Analysis and Applications, 2009, 349, 516-525. | 1.0 | 9 |
| 47 | Linearizing mappings for certain nonlinear diffusion equations. Journal of Physics A, 1998, 31, 6293-6307. | 1.6 | 8 |
| 48 | Symmetry group classification of three-dimensional Hamiltonian systems. Applied Mathematics Letters, 2000, 13, 63-70. | 2.7 | 8 |
| 49 | Group classification of a class of equations arising in financial mathematics. Journal of Mathematical Analysis and Applications, 2010, 372, 273-286. | 1.0 | 8 |
| 50 | 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 |
| 51 | Extended symmetry analysis of two-dimensional degenerate Burgers equation. Journal of Geometry and Physics, 2021, 169, 104336. | 1.4 | 7 |
| 52 | Hodograph-type transformations. Nonlinear Analysis: Theory, Methods & Applications, 2003, 55, 441-466. | 1.1 | 6 |
| 53 | Differential invariants for third-order evolution equations. Communications in Nonlinear Science and Numerical Simulation, 2015, 20, 352-359. | 3.3 | 6 |
| 54 | Lie symmetry analysis of a variable coefficient Calogeroâ€"Degasperis equation. Physica Scripta, 2018, 93, 105202. | 2.5 | 6 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | 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 |
| 56 | A class of BÃcklund transformations for equations of the typeuxy=f(u,ux). Journal of Mathematical Physics, 1991, 32, 3176-3183. | 1.1 | 5 |
| 57 | Photorefractive accelerating pulses. Journal of Physics A, 2002, 35, 1283-1295. | 1.6 | 5 |
| 58 | Noether and master symmetries for the Toda lattice. Applied Mathematics Letters, 2005, 18, 163-170. | 2.7 | 5 |
| 59 | Similarity reductions of the (1+3)-dimensional Burgers equation. Applied Mathematics and Computation, 2009, 210, 87-99. | 2.2 | 5 |
| 60 | A tri-Hamiltonian formulation of the full Kostant-Toda lattice. Letters in Mathematical Physics, 1995, 34, 17-24. | 1.1 | 4 |
| 61 | Continuous and Discrete Transformations of a One-Dimensional Porous Medium Equation. Journal of Nonlinear Mathematical Physics, 1999, 6, 355. | 1.3 | 4 |
| 62 | Numerical investigation of the nonlinear heat diffusion equation with high nonlinearity on the boundary. Applied Mathematics and Computation, 2008, 201, 729-738. | 2.2 | 4 |
| 63 | On the invariants of two dimensional linear parabolic equations. Communications in Nonlinear Science and Numerical Simulation, 2012, 17, 3673-3681. | 3.3 | 4 |
| 64 | Symmetry properties for a generalised thin film equation. Journal of Engineering Mathematics, 2013, 82, 109-124. | 1.2 | 4 |
| 65 | Enhanced group classification of Benjaminâ€“Bonaâ€“Mahonyâ€“Burgers equations. Applied Mathematics Letters, 2017, 65, 19-25. | 2.7 | 4 |
| 66 | Lie symmetry analysis of Burgersâ€type systems. Mathematical Methods in the Applied Sciences, 2018, 41, 1197-1213. | 2.3 | 4 |
| 67 | BÃcklund transformations for generalized nonlinear SchrÃ¶dinger equations. Journal of Mathematical Physics, 1990, 31, 2597-2602. | 1.1 | 3 |
| 68 | Symmetries for certain coupled nonlinear Schrodinger equations. Journal of Physics A, 1994, 27, L515-L520. | 1.6 | 3 |
| 69 | On cyclic symmetries ofn-dimensional nonlinear wave equations. Journal of Physics A, 2000, 33, 8319-8330. | 1.6 | 3 |
| 70 | Symmetry analysis for a class of nonlinear dispersive equations. Communications in Nonlinear Science and Numerical Simulation, 2015, 22, 1275-1287. | 3.3 | 3 |
| 71 | Group Analysis of a Class of Nonlinear Kolmogorov Equations. Springer Proceedings in Mathematics and Statistics, 2016, , 349-360. | 0.2 | 3 |
| 72 | 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 |

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|---|---|---|---|
| 73 | The Lie symmetry approach on (1+2)-dimensional financial models. SN Partial Differential Equations and Applications, 2021, 2, 1. | 0.6 | 3 |
| 74 | Miura-type transformations. Journal of Physics A, 1992, 25, L89-L93. | 1.6 | 2 |
| 75 | 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 |
| 76 | The Christov-Galerkin spectral method in complex arithmetics. AIP Conference Proceedings, 2017, , . | 0.4 | 2 |
| 77 | Numerical similarity solution for a variable coefficient K(m,Ân) equation. Computational and Applied Mathematics, 2018, 37, 1098-1111. | 1.3 | 2 |
| 78 | Lie symmetries of a system arising in plasma physics. Mathematical Methods in the Applied Sciences, 2018, 41, 1331-1343. | 2.3 | 2 |
| 79 | Special transformation properties for certain equations with applications in Plasma Physics. Mathematical Methods in the Applied Sciences, 2021, 44, 14776-14790. | 2.3 | 2 |
| 80 | Lie symmetries and the constant elasticity of variance (CEV) model. Partial Differential Equations in Applied Mathematics, 2022, 5, 100290. | 2.4 | 2 |
| 81 | GROUP CLASSIFICATION OF THREE-DIMENSIONAL VARIABLE-COEFFICIENT BURGERS EQUATION. , 2010, , . |  | 1 |
| 82 | 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 |
| 83 | Group analysis of Benjaminâ€"Bonaâ€"Mahony equations with time dependent coefficients. Journal of Physics: Conference Series, 2015, 621, 012016. | 0.4 | 1 |
| 84 | 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 |
| 85 | 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 |
| 86 | 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 |
| 87 | On Linearizing Systems of Diffusion Equations. Symmetry, Integrability and Geometry: Methods and Applications (SIGMA), 2006, , . | 0.5 | 1 |
| 88 | Numerical similarity reductions of the (1+3)-dimensional Burgers equation. Applied Mathematics and Computation, 2011, 217, 7455-7461. | 2.2 | 0 |
| 89 | Seventh International Workshop: Group Analysis of Differential Equations and Integrable Systems (GADEISVII). Journal of Physics: Conference Series, 2015, 621, 011001. | 0.4 | 0 |
| 90 | Laplace type invariants for variable coefficient mKdV equations. Journal of Physics: Conference Series, 2015, 621, 012015. | 0.4 | 0 |

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|---|---|---|---|
| 91 | On a sequence of higher-order nonlinear diffusion-convection equations. Journal of Physics: Conference Series, 2019, 1194, 012047. | 0.4 | 0 |
| 92 | EQUIVALENCE TRANSFORMATIONS AND DIFFERENTIAL INVARIANTS FOR GENERALIZED WAVE EQUATIONS. , 2008, , . | | 0 |
| 93 | 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 |