Peter A Clarkson

List of Publications by Year
in descending order

114 papers	8,512 citations	94415 37 h-index	95259 68 g-index
120 all docs	120 docs citations	120 times ranked	2037 citing authors

#	Article	IF	Citations
1	New similarity reductions of the Boussinesq equation. Journal of Mathematical Physics, 1989, 30, 2201-2213.	1.1	868
2	Symmetry reductions and exact solutions of a class of nonlinear heat equations. Physica D: Nonlinear Phenomena, 1994, 70, 250-288.	2.8	230
3	The nonclassical method is more general than the direct method for symmetry reductions. An example of the Fitzhugh-Nagumo equation. Physics Letters, Section A: General, Atomic and Solid State Physics, 1992, 164, 49-56.	2.1	195
4	Nonclassical symmetry reductions of the Boussinesq equation. Chaos, Solitons and Fractals, 1995, 5, 2261-2301.	5.1	162
5	Painleve analysis of the non-linear Schrodinger family of equations. Journal of Physics A, 1987, 20, 2003-2024.	1.6	148
6	Solitaryâ€Wave Interactions in Elastic Rods. Studies in Applied Mathematics, 1986, 75, 95-121.	2.4	131
7	On a shallow water wave equation. Nonlinearity, 1994, 7, 975-1000.	1.4	121
8	Rogue waves, rational solutions, the patterns of their zeros and integral relations. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 122002.	2.1	119
9	New similarity solutions for the modified Boussinesq equation. Journal of Physics A, 1989, 22, 2355-2367.	1.6	114
10	Algorithms for the Nonclassical Method of Symmetry Reductions. SIAM Journal on Applied Mathematics, 1994, 54, 1693-1719.	1.8	105
11	The PainlevÃ©â€Kowalevski and Polyâ€PainlevÃ© Tests for Integrability. Studies in Applied Mathematics, 1992, 86, 87-165.	2.4	103
12	Hodograph Transformations of Linearizable Partial Differential Equations. SIAM Journal on Applied Mathematics, 1989, 49, 1188-1209.	1.8	88
13	BÃcklund transformations for the second PainlevÃ© hierarchy: a modified truncation approach. Inverse Problems, 1999, 15, 175-187.	2.0	84
14	Symmetry and the Chazy Equation. Journal of Differential Equations, 1996, 124, 225-246.	2.2	83
15	Exact solutions of the multidimensional derivative nonlinear Schrodinger equation for many-body systems of criticality. Journal of Physics A, 1990, 23, 4269-4288.	1.6	79
16	PainlevÃ© equationsâ€”nonlinear special functions. Journal of Computational and Applied Mathematics, 2003, 153, 127-140.	2.0	77
17	Nonclassical symmetry reductions for the Kadomtsev-Petviashvili equation. Physica D: Nonlinear Phenomena, 1991, 49, 257-272.	2.8	76
18	Reductions of self-dual Yang-Mills fields and classical systems. Physical Review Letters, 1990, 65, 1085-1087.	7.8	75

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19	The second PainlevÂ equation, its hierarchy and associated special polynomials. Nonlinearity, 2003, 16, R1-R26.	1.4	74
20	BÃcklund Transformations and Solution Hierarchies for the Fourth PainlevÃ© Equation. Studies in Applied Mathematics, 1995, 95, 1-71.	2.4	69
21	Backlund Transformations and Solution Hierarchies for the Third Painleve Equation. Studies in Applied Mathematics, 1997, 98, 139-194.	2.4	68
22	New similarity reductions and Painleve analysis for the symmetric regularised long wave and modified Benjamin-Bona-Mahoney equations. Journal of Physics A, 1989, 22, 3821-3848.	1.6	65
23	PainlevÃ© analysis of the damped, driven nonlinear SchrÃ¶dinger equation. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 1988, 109, 109-126.	1.2	62
24	New exact solutions of the Boussinesq equation. European Journal of Applied Mathematics, 1990, 1, 279-300.	2.9	62
25	Dimensional reductions and exact solutions of a generalized nonlinear Schrodinger equation. Nonlinearity, 1992, 5, 453-472.	1.4	61
26	Rational solutions of a differential-difference KdV equation, the Toda equation and the discrete KdV equation. Journal of Physics A, 1995, 28, 5009-5016.	1.6	58
27	Multicomponent equations associated to non-isospectral scattering problems. Inverse Problems, 1997, 13, 1463-1476.	2.0	58
28	The fourth PainlevÃ© equation and associated special polynomials. Journal of Mathematical Physics, 2003, 44, 5350-5374.	1.1	58
29	New similarity solutions of the unsteady incompressible boundary-layer equations. Quarterly Journal of Mechanics and Applied Mathematics, 2000, 53, 175-206.	1.3	53
30	PainlevÃ© Analysis and the Complete Integrability of a Generalized Variable-Coefficient Kadomtsev-Petviashvili Equation. IMA Journal of Applied Mathematics, 1990, 44, 27-53.	1.6	52
31	Mutational screening of the Wilms's tumour gene, WT1, in males with genital abnormalities.. Journal of Medical Genetics, 1993, 30, 767-772.	3.2	48
32	The PainlevÃ© property and a partial differential equation with an essential singularity. Physics Letters, Section A: General, Atomic and Solid State Physics, 1985, 109, 205-208.	2.1	45
33	Vortices and Polynomials. Studies in Applied Mathematics, 2009, 123, 37-62.	2.4	45
34	Similarity Reductions and Exact Solutions for the Two-Dimensional Incompressible Navier-Stokes Equations. Studies in Applied Mathematics, 1999, 103, 183-240.	2.4	44
35	The Relationship Between Semiclassical Laguerre Polynomials and the Fourth PainlevÃ© Equation. Constructive Approximation, 2014, 39, 223-254.	3.0	44
36	Symmetry reductions and exact solutions of shallow water wave equations. Acta Applicandae Mathematicae, 1995, 39, 245-276.	1.0	42

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37	Symmetries of a class of nonlinear third-order partial differential equations. Mathematical and Computer Modelling, 1997, 25, 195-212.	2.0	40
38	A connection formula for the second PainlevÃ© transcendent. Archive for Rational Mechanics and Analysis, 1988, 103, 97-138.	2.4	38
39	Application of Uniform Asymptotics to the Second PainlevÃ© Transcendent. Archive for Rational Mechanics and Analysis, 1998, 143, 241-271.	2.4	38
40	Freud's equations for orthogonal polynomials as discrete PainlevÃ© equations. , 1999, , 228-244.		36
41	Rational solutions of the Boussinesq equation and applications to rogue waves. Transactions of Mathematics and Its Applications, 2017, 1, .	3.3	32
42	Nonclassical symmetry reductions and exact solutions of the Zabolotskayaâ€“Khokhlov equation. European Journal of Applied Mathematics, 1992, 3, 381-414.	2.9	31
43	Nonclassical symmetry reductions of the three-dimensional incompressible Navier-Stokes equations. Journal of Physics A, 1998, 31, 7965-7980.	1.6	31
44	The third PainlevÂ equation and associated special polynomials. Journal of Physics A, 2003, 36, 9507-9532.	1.6	31
45	A Generalized Freud Weight. Studies in Applied Mathematics, 2016, 136, 288-320.	2.4	29
46	Remarks on the Yablonskiiâ€“Vorob'ev polynomials. Physics Letters, Section A: General, Atomic and Solid State Physics, 2003, 319, 137-144.	2.1	28
47	Numerical studies of the fourth PainlevÃ© equation. IMA Journal of Applied Mathematics, 1993, 50, 167-193.	1.6	27
48	Nonclassical reductions of a 3+1-cubic nonlinear SchrÃ¶dinger system. Computer Physics Communications, 1998, 115, 460-488.	7.5	27
49	Integral equations and exact solutions for the fourth PainlevÃ© equation. Proceedings of the Royal Society A, 1992, 437, 1-24.	0.9	26
50	Symmetries and exact solutions for a 2 + 1-dimensional shallow water wave equation. Mathematics and Computers in Simulation, 1997, 43, 39-55.	4.4	26
51	Special Polynomials Associated with Rational Solutions of the PainlevÃ© Equations and Applications to Soliton Equations. Computational Methods and Function Theory, 2006, 6, 329-401.	1.5	26
52	Integrability of Kleinâ€“Gordon Equations. SIAM Journal on Mathematical Analysis, 1986, 17, 798-802.	1.9	25
53	Applications of the Differential Algebra Packagediffgrob2to Classical Symmetries of Differential Equations. Journal of Symbolic Computation, 1997, 23, 517-533.	0.8	25
54	The classical, direct, and nonclassical methods for symmetry reductions of nonlinear partial differential equations. Methods and Applications of Analysis, 1997, 4, 173-195.	0.5	25

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55	Special polynomials associated with rational solutions of the defocusing nonlinear SchrÃ¶dinger equation and the fourth PainlevÃ© equation. European Journal of Applied Mathematics, 2006, 17, 293-322.	2.9	24
56	Symmetry group analysis of the shallow water and semi-geostrophic equations. Quarterly Journal of Mechanics and Applied Mathematics, 2005, 59, 95-123.	1.3	23
57	Properties of generalized Freud polynomials. Journal of Approximation Theory, 2018, 225, 148-175.	0.8	23
58	Special polynomials associated with rational solutions of the fifth PainlevÃ© equation. Journal of Computational and Applied Mathematics, 2005, 178, 111-129.	2.0	22
59	RATIONAL SOLUTIONS OF THE BOUSSINESQ EQUATION. Analysis and Applications, 2008, 06, 349-369.	2.2	22
60	The PainlevÃ© property, a modified Boussinesq equation and a modified Kadomtsev-Petviashvili equation. Physica D: Nonlinear Phenomena, 1986, 19, 447-450.	2.8	21
61	New symmetry reductions and exact solutions of the Daveyâ€“Stewartson system. I. Reductions to ordinary differential equations. Journal of Mathematical Physics, 1994, 35, 255-283.	1.1	21
62	Nonclassical symmetry reductions of nonlinear partial differential equations. Mathematical and Computer Modelling, 1993, 18, 45-68.	2.0	19
63	New integrable differential-difference systems. Journal of Physics A, 1997, 30, L669-L676.	1.6	18
64	The Symmetric Fourth PainlevÃ© Hierarchy and Associated Special Polynomials. Studies in Applied Mathematics, 2008, 121, 157-188.	2.4	18
65	Recurrence coefficients for discrete orthonormal polynomials and the PainlevÃ© equations. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 185205.	2.1	18
66	Symmetry Reductions, Exact Solutions, and PainlevÃ© Analysis for a Generalized Boussinesq Equation. Journal of Mathematical Analysis and Applications, 1994, 186, 132-155.	1.0	16
67	Symmetry Reduction and Exact Solutions of Nonlinear Partial Differential Equations. , 1999, , 591-660.		16
68	The PainlevÃ© conjecture, the PainlevÃ© property for partial differential equations and complete integrability. Physica D: Nonlinear Phenomena, 1986, 18, 209-210.	2.8	15
69	On Airy Solutions of the Second PainlevÃ© Equation. Studies in Applied Mathematics, 2016, 137, 93-109.	2.4	14
70	Conservation Laws and Integral Relations for the Boussinesq Equation. Studies in Applied Mathematics, 2017, 139, 104-128.	2.4	14
71	New exact solutions of the discrete fourth PainleveÂ´equation. Physics Letters, Section A: General, Atomic and Solid State Physics, 1994, 194, 358-370.	2.1	13
72	Ermakov-PainlevÃ© II Reduction in Cold Plasma Physics. Application of a BÃcklund Transformation. Journal of Nonlinear Mathematical Physics, 2018, 25, 247.	1.3	13

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73	Cyclic Maya diagrams and rational solutions of higher order PainlevÃ© systems. Studies in Applied Mathematics, 2020, 144, 357-385.	2.4	13
74	Symmetry reductions of a generalized, cylindrical nonlinear Schrodinger equation. Journal of Physics A, 1993, 26, 133-150.	1.6	12
75	Darboux transformations and the symmetric fourth PainlevÃ© equation. Journal of Physics A, 2005, 38, 9751-9764.	1.6	12
76	Rational solutions of the classical BoussinesqÂsystem. Nonlinear Analysis: Real World Applications, 2009, 10, 3360-3371.	1.7	11
77	Unique positive solution for an alternative discrete PainlevÃ© I equation. Journal of Difference Equations and Applications, 2016, 22, 656-675.	1.1	11
78	Remarks on the two-dimensional sine-Gordon equation and the Painlevï¿½ tests. Letters in Mathematical Physics, 1985, 10, 297-299.	1.1	10
79	On the relation between the continuous and discrete PainlevÃ© equations. Theoretical and Mathematical Physics(Russian Federation), 2000, 122, 1-16.	0.9	10
80	Symmetry Methods for Differential Equations. , 2016, , 173-196.		10
81	Integral Equations and Connection Formulae for the PainlevÃ© Equations. NATO ASI Series Series B: Physics, 1992, , 1-31.	0.2	10
82	Shallow Water Wave Systems. Studies in Applied Mathematics, 1998, 101, 389-432.	2.4	9
83	Hierarchies of Difference Equations and BÃcklund Transformations. Journal of Nonlinear Mathematical Physics, 2003, 10, 13.	1.3	9
84	A connection between the maximum displacements of rogue waves and the dynamics of poles in the complex plane. Chaos, 2017, 27, 091103.	2.5	9
85	Application of the isomonodromy deformation method to the fourth PainlevÃ© equation. Inverse Problems, 1997, 13, 421-439.	2.0	8
86	Symmetries of a Class of Nonlinear Fourth Order Partial Differential Equations. Journal of Nonlinear Mathematical Physics, 1999, 6, 66.	1.3	8
87	Solitons and symmetries. Journal of Engineering Mathematics, 1999, 36, 1-91.	1.2	7
88	On the Lax Pairs of the Symmetric PainlevÃ© Equations. Studies in Applied Mathematics, 2006, 117, 299-319.	2.4	7
89	On integrable Ermakovâ€“PainlevÃ© IV systems. Journal of Mathematical Analysis and Applications, 2018, 462, 1225-1241.	1.0	7
90	Open Problems for PainlevÃ© Equations. Symmetry, Integrability and Geometry: Methods and Applications (SIGMA), 0, , .	0.5	7

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91	The symmetry reductions of a turbulence model. Journal of Physics A, 2001, 34, 3751-3760.	1.6	6
92	A generalized sextic Freud weight. Integral Transforms and Special Functions, 2021, 32, 458-482.	1.2	6
93	Nonclassical Symmetry Reductions and Exact Solutions of Nonlinear Reaction-Diffusion Equations. , 1993, , 375-389.		6
94	The discrete PainlevÃ© II equation and the classical special functions. , 1999, , 217-227.		5
95	Generalised Airy polynomials. Journal of Physics A: Mathematical and Theoretical, 2021, 54, 185202.	2.1	5
96	PainlevÃ© Analysis and Similarity Reductions for the Magma Equation. Symmetry, Integrability and Geometry: Methods and Applications (SIGMA), 2006, , .	0.5	5
97	BÃcklund transformations and nonlinear superposition formulae of a differential-difference KdV equation. Journal of Physics A, 1998, 31, 1405-1414.	1.6	4
98	Rational Solutions of an Extended Lotka-Volterra Equation. Journal of Nonlinear Mathematical Physics, 2002, 9, 75.	1.3	4
99	Rational solutions to dPIV. , 1999, , 206-216.		3
100	One hundred years of PVI, the Fuchsâ€“PainlevÃ© equation. Journal of Physics A, 2006, 39, .	1.6	3
101	Rational Solutions and BÃcklund Transformations for the Third PainlevÃ© Equation. , 1993, , 341-352.		3
102	Ermakov-PainlevÃ© II Symmetry Reduction of a Korteweg Capillarity System. Symmetry, Integrability and Geometry: Methods and Applications (SIGMA), 0, , .	0.5	3
103	Hierarchies of exact solutions for the discrete third PainlevÃ© equation. Chaos, Solitons and Fractals, 2000, 11, 53-71.	5.1	2
104	Reductions of Self-Dual Yang-Mills Fields and Classical Systems. Physical Review Letters, 1990, 65, 2086-2086.	7.8	1
105	PainlevÃ© Project on the web. Physics Today, 2010, 63, 10-11.	0.3	1
106	Symmetry Reductions and Exact Solutions for a Generalised Boussinesq Equation. , 1993, , 415-430.		1
107	Nonclassical Symmetry Reductions of a Generalized Nonlinear SchrÃ¶dinger Equation. Research Reports in Physics, 1991, , 246-254.	0.0	1
108	Symmetries of the Nonlinear Heat Equation. , 1993, , 155-171.		1

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109	A note on solutions of PainlevÃ© II. Physics Letters, Section A: General, Atomic and Solid State Physics, 1982, 92, 425-426.	2.1	0
110	New Similarity Reductions of Boussinesq-Type Equations. , 1990, , 575-576.		0
111	PainlevÃ© Equations and Associated Polynomials. , 2005, , 123-163.		0
112	Preface: Orthogonal polynomials, special functions, and applications. Studies in Applied Mathematics, 2018, 141, 421-423.	2.4	0
113	Examples of Nonclassical Similarity Reductions. Research Reports in Physics, 1990, , 42-45.	0.0	0
114	Symmetry Reductions and Exact Solutions of the Davey-Stewartson System. , 1993, , 395-404.		0