Ali Bhrawy

List of Publications by Year
in descending order

123 papers	6,415 citations	44069 48 h-index	69250 77 g-index
126 all docs	126 docs citations	126 times ranked	1917 citing authors

#	Article	IF	Citations
1	Direct numerical method for isoperimetric fractional variational problems based on operational matrix. JVC/Journal of Vibration and Control, 2018, 24, 3063-3076.	2.6	13
2	A new operational approach for solving fractional variational problems depending on indefinite integrals. Communications in Nonlinear Science and Numerical Simulation, 2018, 57, 246-263.	3.3	19
3	A numerical approach based on Legendre orthonormal polynomials for numerical solutions of fractional optimal control problems. JVC/Journal of Vibration and Control, 2017, 23, 16-30.	2.6	60
4	Numerical Solution of the Two-Sided Space–Time Fractional Telegraph Equation Via Chebyshev Tau Approximation. Journal of Optimization Theory and Applications, 2017, 174, 321-341.	1.5	46
5	New Numerical Approach for Fractional Variational Problems Using Shifted Legendre Orthonormal Polynomials. Journal of Optimization Theory and Applications, 2017, 174, 295-320.	1.5	34
6	Numerical simulation of multi-dimensional distributed-order generalized Schrödinger equations. Nonlinear Dynamics, 2017, 89, 1415-1432.	5.2	47
7	Numerical algorithm for solving multi-pantograph delay equations on the half-line using Jacobi rational functions with convergence analysis. Acta Mathematicae Applicatae Sinica, 2017, 33, 297-310.	0.7	12
8	Jacobi Collocation Approximation for Solving Multi-dimensional Volterra Integral Equations. International Journal of Nonlinear Sciences and Numerical Simulation, 2017, 18, 411-425.	1.0	30
9	Highly accurate numerical schemes for multi-dimensional space variable-order fractional Schrödinger equations. Computers and Mathematics With Applications, 2017, 73, 1100-1117.	2.7	99
10	An improved collocation method for multi-dimensional space–time variable-order fractional Schrödinger equations. Applied Numerical Mathematics, 2017, 111, 197-218.	2.1	140
11	A fractional–order Jacobi Tau method for a class of time–fractional PDEs with variable coefficients. Mathematical Methods in the Applied Sciences, 2016, 39, 1765-1779.	2.3	53
12	Optical solitons in nano-fibers with spatio-temporal dispersion by trial solution method. Optik, 2016, 127, 7250-7257.	2.9	121
13	Numerical algorithm for the variable-order Caputo fractional functional differential equation. Nonlinear Dynamics, 2016, 85, 1815-1823.	5.2	91
14	Two shifted Jacobi-Gauss collocation schemes for solving two-dimensional variable-order fractional Rayleigh-Stokes problem. Advances in Difference Equations, 2016, 2016, .	3.5	14
15	New spectral collocation algorithms for one- and two-dimensional Schrödinger equations with a Kerr law nonlinearity. Advances in Difference Equations, 2016, 2016, .	3.5	4
16	Efficient Legendre spectral tau algorithm for solving the two-sided space–time Caputo fractional advection–dispersion equation. JVC/Journal of Vibration and Control, 2016, 22, 2053-2068.	2.6	41
17	A numerical technique based on the shifted Legendre polynomials for solving the time-fractional coupled KdV equations. Calcolo, 2016, 53, 1-17.	1.1	78
18	Thirring combo-solitons with cubic nonlinearity and spatio-temporal dispersion. Waves in Random and Complex Media, 2016, 26, 204-210.	2.7	99

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19	A Jacobi spectral collocation method for solving multi-dimensional nonlinear fractional sub-diffusion equations. Numerical Algorithms, 2016, 73, 91-113.	1.9	84
20	A space-time collocation scheme for modified anomalous subdiffusion and nonlinear superdiffusion equations. European Physical Journal Plus, 2016, 131, 1.	2.6	13
21	Modified Jacobi–Bernstein basis transformation and its application to multi-degree reduction of Bézier curves. Journal of Computational and Applied Mathematics, 2016, 302, 369-384.	2.0	5
22	Jacobi spectral collocation approximation for multi-dimensional time-fractional Schrödinger equations. Nonlinear Dynamics, 2016, 84, 1553-1567.	5.2	71
23	Efficient Spectral Collocation Algorithm for a Two-Sided Space Fractional Boussinesq Equation with Non-local Conditions. Mediterranean Journal of Mathematics, 2016, 13, 2483-2506.	0.8	16
24	A new Legendre operational technique for delay fractional optimal control problems. Calcolo, 2016, 53, 521-543.	1.1	99
25	Jacobi–Gauss–Lobatto collocation method for solving nonlinear reaction–diffusion equations subject to Dirichlet boundary conditions. Applied Mathematical Modelling, 2016, 40, 1703-1716.	4.2	11
26	A highly accurate collocation algorithm for $1 \leq + \leq 1$ and $2 \leq + \leq 1$ fractional percolation equations. JVC/Journal of Vibration and Control, 2016, 22, 2288-2310.	2.6	23
27	Shifted fractional-order Jacobi orthogonal functions: Application to a system of fractional differential equations. Applied Mathematical Modelling, 2016, 40, 832-845.	4.2	90
28	A space-time Legendre spectral tau method for the two-sided space-time Caputo fractional diffusion-wave equation. Numerical Algorithms, 2016, 71, 151-180.	1.9	78
29	Dispersive Optical Solitons in Nanofibers with Schrödinger-Hirota Equation. Journal of Nanoelectronics and Optoelectronics, 2016, 11, 382-387.	0.5	32
30	Application of Tanh Method to Complex Coupled Nonlinear Evolution Equations. Acta Physica Polonica A, 2016, 129, 278-283.	0.5	34
31	An Efficient Numerical Scheme for Solving Multi–Dimensional Fractional Optimal Control Problems With a Quadratic Performance Index. Asian Journal of Control, 2015, 17, 2389-2402.	3.0	52
32	A highly accurate Jacobi collocation algorithm for systems of high–order linear differential–difference equations with mixed initial conditions. Mathematical Methods in the Applied Sciences, 2015, 38, 3022-3032.	2.3	15
33	Recent Theory and Applications on Numerical Algorithms and Special Functions. Abstract and Applied Analysis, 2015, 2015, 1-1.	0.7	0
34	New Trends on Fractional and Functional Differential Equations. Abstract and Applied Analysis, 2015, 2015, 1-2.	0.7	1
35	A new exponential Jacobi pseudospectral method for solving high-order ordinary differential equations. Advances in Difference Equations, 2015, 2015, .	3.5	6
36	New Operational Matrices for Solving Fractional Differential Equations on the Half-Line. PLoS ONE, 2015, 10, e0126620.	2.5	11

#	ARTICLE	IF	CITATIONS
37	Bright, dark and singular optical solitons in a cascaded system. Laser Physics, 2015, 25, 025402.	1.2	95
38	An efficient collocation algorithm for multidimensional wave type equations with nonlocal conservation conditions. Applied Mathematical Modelling, 2015, 39, 5616-5635.	4.2	8
39	Optical solitons in DWDM system with spatio-temporal dispersion. Journal of Nonlinear Optical Physics and Materials, 2015, 24, 1550006.	1.8	51
40	An accurate Chebyshev pseudospectral scheme for multi-dimensional parabolic problems with time delays. Boundary Value Problems, 2015, 2015, .	0.7	14
41	A Jacobi Gauss–Lobatto and Gauss–Radau collocation algorithm for solving fractional Fokker–Planck equations. Nonlinear Dynamics, 2015, 82, 1431-1440.	5.2	27
42	A review of operational matrices and spectral techniques for fractional calculus. Nonlinear Dynamics, 2015, 81, 1023-1052.	5.2	154
43	An efficient numerical scheme based on the shifted orthonormal Jacobi polynomials for solving fractional optimal control problems. Advances in Difference Equations, 2015, 2015, .	3.5	47
44	A fully spectral collocation approximation for multi-dimensional fractional Schrödinger equations. Journal of Computational Physics, 2015, 294, 462-483.	3.8	151
45	Numerical solution of initial-boundary system of nonlinear hyperbolic equations. Indian Journal of Pure and Applied Mathematics, 2015, 46, 647-668.	0.5	3
46	Numerical simulation for two-dimensional variable-order fractional nonlinear cable equation. Nonlinear Dynamics, 2015, 80, 101-116.	5.2	190
47	A spectral tau algorithm based on Jacobi operational matrix for numerical solution of time fractional diffusion-wave equations. Journal of Computational Physics, 2015, 293, 142-156.	3.8	176
48	A method based on the Jacobi tau approximation for solving multi-term time–space fractional partial differential equations. Journal of Computational Physics, 2015, 281, 876-895.	3.8	256
49	Optical Solitons for Quadratic Law Nonlinearity with Five Integration Schemes. Journal of Computational and Theoretical Nanoscience, 2015, 12, 4809-4821.	0.4	16
50	A new numerical technique for solving fractional sub-diffusion and reaction sub-diffusion equations with a non-linear source term. Thermal Science, 2015, 19, 25-34.	1.1	13
51	A Modified Generalized Laguerre-Gauss Collocation Method for Fractional Neutral Functional-Differential Equations on the Half-Line. Abstract and Applied Analysis, 2014, 2014, 1-7.	0.7	6
52	Fractional and Time-Scales Differential Equations. Abstract and Applied Analysis, 2014, 2014, 1-2.	0.7	2
53	A new Jacobi spectral collocation method for solving 1+1 fractional Schrödinger equations and fractional coupled Schrödinger systems. European Physical Journal Plus, 2014, 129, 1.	2.6	46
54	Soliton Solution and Conservation Law of Gear-Grimshaw Model for Shallow Water Waves. Acta Physica Polonica A, 2014, 125, 1099-1107.	0.5	40

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55	The operational matrix formulation of the Jacobi tau approximation for space fractional diffusion equation. Advances in Difference Equations, 2014, 2014, .	3.5	30
56	A Jacobi collocation approximation for nonlinear coupled viscous Burgers' equation. Open Physics, 2014, 12, .	1.7	7
57	A new Jacobi rational–Gauss collocation method for numerical solution of generalized pantograph equations. Applied Numerical Mathematics, 2014, 77, 43-54.	2.1	86
58	Optical solitons in (1 + 1) and (2 + 1) dimensions. Optik, 2014, 125, 1537-1549.	2.9	30
59	Jacobi–Gauss–Lobatto collocation method for the numerical solution of nonlinear Schrödinger equations. Journal of Computational Physics, 2014, 261, 244-255.	3.8	72
60	A Jacobi rational pseudospectral method for Lane–Emden initial value problems arising in astrophysics on a semi-infinite interval. Computational and Applied Mathematics, 2014, 33, 607-619.	1.3	19
61	Bright and dark solitons in a cascaded system. Optik, 2014, 125, 6162-6165.	2.9	32
62	Efficient generalized Laguerre-spectral methods for solving multi-term fractional differential equations on the half line. JVC/Journal of Vibration and Control, 2014, 20, 973-985.	2.6	40
63	An efficient Jacobi pseudospectral approximation for nonlinear complex generalized Zakharov system. Applied Mathematics and Computation, 2014, 247, 30-46.	2.2	112
64	Optical solitons in birefringent fibers with spatio-temporal dispersion. Optik, 2014, 125, 4935-4944.	2.9	98
65	Wavelet based spectral analysis of optical solitons. Optik, 2014, 125, 4589-4594.	2.9	3
66	Optical solitons in nonlinear directional couplers with spatio-temporal dispersion. Journal of Modern Optics, 2014, 61, 441-458.	1.3	87
67	Thirring optical solitons with Kerr law nonlinearity. Optik, 2014, 125, 4932-4934.	2.9	10
68	New spectral techniques for systems of fractional differential equations using fractional-order generalized Laguerre orthogonal functions. Fractional Calculus and Applied Analysis, 2014, 17, 1137-1157.	2.2	82
69	Optical soliton perturbation with spatio-temporal dispersion in parabolic and dual-power law media by semi-inverse variational principle. Optik, 2014, 125, 4945-4950.	2.9	27
70	A shifted Jacobi collocation algorithm for wave type equations with non-local conservation conditions. Open Physics, 2014, 12, .	1.7	2
71	Bright and singular solitons in quadratic nonlinear media. Journal of Electromagnetic Waves and Applications, 2014, 28, 275-280.	1.6	21
72	Jacobi rational–Gauss collocation method for Lane–Emden equations of astrophysical significance. Nonlinear Analysis: Modelling and Control, 2014, 19, 537-550.	1.6	7

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73	Approximation of eigenvalues of discontinuous Sturm-Liouville problems with eigenparameter in all boundary conditions. Boundary Value Problems, 2013, 2013, .	0.7	9
74	An efficient spectral collocation algorithm for nonlinear Phi-four equations. Boundary Value Problems, 2013, 2013, .	0.7	9
75	A Legendre-Gauss collocation method for neutral functional-differential equations with proportional delays. Advances in Difference Equations, 2013, 2013, .	3.5	20
76	(Gâ€²/G)-expansion method for two-dimensional force-free magnetic fields described by some nonlinear equations. Indian Journal of Physics, 2013, 87, 555-565.	1.8	7
77	A Jacobiâ€"Gaussâ€"Lobatto collocation method for solving generalized Fitzhughâ€"Nagumo equation with time-dependent coefficients. Applied Mathematics and Computation, 2013, 222, 255-264.	2.2	83
78	A Spectral Legendreâ€"Gaussâ€"Lobatto Collocation Method for a Space-Fractional Advection Diffusion Equations with Variable Coefficients. Reports on Mathematical Physics, 2013, 72, 219-233.	0.8	75
79	Numerical approximations for fractional diffusion equations via a Chebyshev spectral-tau method. Open Physics, 2013, 11, .	1.7	17
80	Efficient Jacobi-Gauss collocation method for solving initial value problems of Bratu type. Computational Mathematics and Mathematical Physics, 2013, 53, 1292-1302.	0.8	12
81	A new formula for fractional integrals of Chebyshev polynomials: Application for solving multi-term fractional differential equations. Applied Mathematical Modelling, 2013, 37, 4245-4252.	4.2	82
82	Solitons and other solutions to quantum Zakharovâ€"Kuznetsov equation in quantum magneto-plasmas. Indian Journal of Physics, 2013, 87, 455-463.	1.8	61
83	Numerical computation of eigenvalues of discontinuous Sturmâ€"Liouville problems with parameter dependent boundary conditions using sinc method. Numerical Algorithms, 2013, 63, 27-48.	1.9	17
84	A collocation method based on Bernoulli operational matrix for numerical solution of generalized pantograph equation. Applied Mathematical Modelling, 2013, 37, 4283-4294.	4.2	159
85	On shifted Jacobi spectral approximations for solving fractional differential equations. Applied Mathematics and Computation, 2013, 219, 8042-8056.	2.2	67
86	Computational study of some nonlinear shallow water equations. Open Physics, 2013, 11, 518-525.	1.7	3
87	New spectral-Galerkin algorithms for direct solution of high even-order differential equations using symmetric generalized Jacobi polynomials. Collectanea Mathematica, 2013, 64, 373-394.	0.9	27
88	The operational matrix of fractional integration for shifted Chebyshev polynomials. Applied Mathematics Letters, 2013, 26, 25-31.	2.7	145
89	Nonlinear periodic solutions for isothermal magnetostatic atmospheres. Journal of Computational and Applied Mathematics, 2013, 242, 28-40.	2.0	9
90	Cnoidal and snoidal wave solutions to coupled nonlinear wave equations by the extended Jacobiâ€™s elliptic function method. Communications in Nonlinear Science and Numerical Simulation, 2013, 18, 915-925.	3.3	104

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91	The operational matrix of Caputo fractional derivatives of modified generalized Laguerre polynomials and its applications. Advances in Difference Equations, 2013, 2013, .	3.5	9
92	A New Numerical Algorithm for Solving a Class of Fractional Advection-Dispersion Equation with Variable Coefficients Using Jacobi Polynomials. Abstract and Applied Analysis, 2013, 2013, 1-9.	0.7	5
93	A New Legendre Spectral Galerkin and Pseudo-Spectral Approximations for Fractional Initial Value Problems. Abstract and Applied Analysis, 2013, 2013, 1-10.	0.7	4
94	Fast Spectral Collocation Method for Solving Nonlinear Time-Delayed Burgers-Type Equations with Positive Power Terms. Abstract and Applied Analysis, 2013, 2013, 1-12.	0.7	3
95	Approximate Solutions of Fisher's Type Equations with Variable Coefficients. Abstract and Applied Analysis, 2013, 2013, 1-10.	0.7	4
96	A Jacobi Dual-Petrov Galerkin-Jacobi Collocation Method for Solving Korteweg-de Vries Equations. Abstract and Applied Analysis, 2012, 2012, 1-16.	0.7	8
97	A Jacobi elliptic function method for nonlinear arrays of vortices. Indian Journal of Physics, 2012, 86, 1107-1113.	1.8	11
98	Numerical computation of the eigenvalues of a discontinuous Dirac system using the sinc method with error analysis. International Journal of Computer Mathematics, 2012, 89, 2061-2080.	1.8	13
99	A new Jacobi operational matrix: An application for solving fractional differential equations. Applied Mathematical Modelling, 2012, 36, 4931-4943.	4.2	252
100	An efficient direct solver for multidimensional elliptic Robin boundary value problems using a Legendre spectral-Galerkin method. Computers and Mathematics With Applications, 2012, 64, 558-571.	2.7	50
101	A new modified generalized Laguerre operational matrix of fractional integration for solving fractional differential equations on the half line. Advances in Difference Equations, 2012, 2012, .	3.5	38
102	Computation of eigenvalues of discontinuous dirac system using Hermite interpolation technique. Advances in Difference Equations, 2012, 2012, .	3.5	6
103	A shifted Jacobi-Gauss-Lobatto collocation method for solving nonlinear fractional Langevin equation involving two fractional orders in different intervals. Boundary Value Problems, 2012, 2012, .	0.7	35
104	A new Bernoulli matrix method for solving high-order linear and nonlinear Fredholm integro-differential equations with piecewise intervals. Applied Mathematics and Computation, 2012, 219, 482-497.	2.2	84
105	An operational matrix of fractional integration of the Laguerre polynomials and its application on a semi-infinite interval. Mathematical Sciences, 2012, 6, 41.	1.7	12
106	A Jacobi–Gauss collocation method for solving nonlinear Lane–Emden type equations. Communications in Nonlinear Science and Numerical Simulation, 2012, 17, 62-70.	3.3	111
107	Jacobi Pseudo-Spectral Method JPSM and BPES for Solving Differential Equations. Differential Equations and Dynamical Systems, 2012, 20, 67-76.	1.0	1
108	Polytropic star structure analysis under Bonnor–Ebert gas sphere astrophysical configuration thorough investigating analytical solutions to the related Lane–Emden equation. Advances in Space Research, 2012, 49, 1062-1066.	2.6	1

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109	On shifted Jacobi spectral method for high-order multi-point boundary value problems. Communications in Nonlinear Science and Numerical Simulation, 2012, 17, 3802-3810.	3.3	56
110	A shifted Legendre spectral method for fractional-order multi-point boundary value problems. Advances in Difference Equations, 2012, 2012, .	3.5	67
111	Effects of Viscous Dissipation on the Thermal Boundary Layer of Pseudoplastic Power-Law Non-Newtonian Fluids Using Discretization Method and the Boubaker Polynomials Expansion Scheme. ISRN Thermodynamics, 2012, 2012, 1-6.	0.6	3
112	A Chebyshev spectral method based on operational matrix for initial and boundary value problems of fractional order. Computers and Mathematics With Applications, 2011, 62, 2364-2373.	2.7	261
113	A quadrature tau method for fractional differential equations with variable coefficients. Applied Mathematics Letters, 2011, 24, 2146-2152.	2.7	99
114	Integrals of Bernstein polynomials: An application for the solution of high even-order differential equations. Applied Mathematics Letters, 2011, 24, 559-565.	2.7	92
115	Efficient Chebyshev spectral methods for solving multi-term fractional orders differential equations. Applied Mathematical Modelling, 2011, 35, 5662-5672.	4.2	207
116	A Jacobiâ€"Jacobi dual-Petrovâ€"Galerkin method for third- and fifth-order differential equations. Mathematical and Computer Modelling, 2011, 53, 1820-1832.	2.0	55
117	New Algorithm for the Numerical Solutions of Nonlinear Third-Order Differential Equations Using Jacobi-Gauss Collocation Method. Mathematical Problems in Engineering, 2011, 2011, 1-14.	1.1	26
118	Jacobi spectral Galerkin method for the integrated forms of second-order differential equations. Applied Mathematics and Computation, 2010, 217, 2684-2697.	2.2	10
119	A Jacobi spectral Galerkin method for the integrated forms of fourthâ€order elliptic differential equations. Numerical Methods for Partial Differential Equations, 2009, 25, 712-739.	3.6	49
120	Efficient spectral ultraspherical-Galerkin algorithms for the direct solution of 2nth-order linear differential equations. Applied Mathematical Modelling, 2009, 33, 1982-1996.	4.2	38
121	Jacobi spectral Galerkin method for elliptic Neumann problems. Numerical Algorithms, 2009, 50, 67-91.	1.9	31
122	Efficient spectral-Galerkin algorithms for direct solution of fourth-order differential equations using Jacobi polynomials. Applied Numerical Mathematics, 2008, 58, 1224-1244.	2.1	95
123	Efficient spectral-Galerkin algorithms for direct solution for second-order differential equations using Jacobi polynomials. Numerical Algorithms, 2006, 42, 137-164.	1.9	45