Zhong-qing Wang

List of Publications by Year
in descending order

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		516710	526287
59	855	16	27
papers	citations	h-index	g-index

59	59	59	278
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A Rational Approximation and Its Applications to Differential Equations on the Half Line. Journal of Scientific Computing, 2000, 15, 117-147.	2.3	88
2	Chebyshev rational spectral and pseudospectral methods on a semi-infinite interval. International Journal for Numerical Methods in Engineering, 2002, 53, 65-84.	2.8	66
3	Legendreâ€“Gauss collocation methods for ordinary differential equations. Advances in Computational Mathematics, 2009, 30, 249-280.	1.6	58
4	A Multistep Legendre--Gauss Spectral Collocation Method for Nonlinear Volterra Integral Equations. SIAM Journal on Numerical Analysis, 2014, 52, 1953-1980.	2.3	51
5	Legendre-Gauss-Radau Collocation Method for Solving Initial Value Problems of First Order Ordinary Differential Equations. Journal of Scientific Computing, 2012, 52, 226-255.	2.3	50
6	Generalized Hermite Spectral Method and its Applications to Problems in Unbounded Domains. SIAM Journal on Numerical Analysis, 2010, 48, 1231-1253.	2.3	37
7	An hp-version Legendre-Jacobi spectral collocation method for Volterra integro-differential equations with smooth and weakly singular kernels. Mathematics of Computation, 2017, 86, 2285-2324.	2.1	37
8	A Spectral Collocation Method for Nonlinear Fractional Boundary Value Problems with a Caputo Derivative. Journal of Scientific Computing, 2018, 76, 166-188.	2.3	33
9	A Legendre-Gauss collocation method for nonlinear delay differential equations. Discrete and Continuous Dynamical Systems - Series B, 2010, 13, 685-708.	0.9	29
10	Integration processes of ordinary differential equations based on Laguerre-Radau interpolations. Mathematics of Computation, 2008, 77, 181-199.	2.1	27
11	A rational approximation and its applications to nonlinear partial differential equations on the whole line. Journal of Mathematical Analysis and Applications, 2002, 274, 374-403.	1.0	22
12	Jacobi rational approximation and spectral method for differential equations of degenerate type. Mathematics of Computation, 2007, 77, 883-908.	2.1	22
13	An hp-version Spectral Collocation Method for Nonlinear Volterra Integro-differential Equation with Weakly Singular Kernels. Journal of Scientific Computing, 2017, 72, 647-678.	2.3	19
14	Second order Jacobi approximation with applications to fourth-order differential equations. Applied Numerical Mathematics, 2005, 55, 480-502.	2.1	18
15	Numerical integration based on Laguerreâ€“Gauss interpolation. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 3726-3741.	6.6	18
16	Error Analysis of the Strang Time-Splitting Laguerreâ€“Hermite/Hermite Collocation Methods for the Grossâ€“Pitaevskii Equation. Foundations of Computational Mathematics, 2013, 13, 99-137.	2.5	18
17	A spectral collocation method for solving initial value problems of first order ordinary differential equations. Discrete and Continuous Dynamical Systems - Series B, 2010, 14, 1029-1054.	0.9	16
18	An hp -spectral collocation method for nonlinear Volterra functional integro-differential equations with delays. Applied Numerical Mathematics, 2016, 105, 1-24.	2.1	16

#	Article	IF	Citations
19	Pseudospectral method using generalized Laguerre functions for singular problems on unbounded domains. Discrete and Continuous Dynamical Systems - Series B, 2009, 11, 1019-1038.	0.9	15
20	A fully diagonalized spectral method using generalized Laguerre functions on the half line. Advances in Computational Mathematics, 2017, 43, 1227-1259.	1.6	14
21	A Legendreâ€“Gaussâ€“Radau spectral collocation method for first order nonlinear delay differential equations. Calcolo, 2016, 53, 691-721.	1.1	12
22	Error analysis of Legendre spectral method with essential imposition of Neumann boundary condition. Applied Numerical Mathematics, 2009, 59, 2444-2451.	2.1	11
23	A collocation method for generalized nonlinear Klein-Gordon equation. Advances in Computational Mathematics, 2014, 40, 377-398.	1.6	11
24	Legendreâ€“Gaussâ€“Lobatto spectral collocation method for nonlinear delay differential equations. Mathematical Methods in the Applied Sciences, 2013, 36, 2476-2491.	2.3	10
25	Spectral methods using generalized Laguerre functions for second and fourth order problems. Numerical Algorithms, 2017, 75, 1005-1040.	1.9	10
26	Diagonalized Legendre spectral methods using Sobolev orthogonal polynomials for elliptic boundary value problems. Applied Numerical Mathematics, 2018, 127, 196-210.	2.1	10
27	Generalized Hermite Approximations and Spectral Method for Partial Differential Equations in Multiple Dimensions. Journal of Scientific Computing, 2013, 57, 229-253.	2.3	9
28	Legendreâ€“Gauss-type spectral collocation algorithms for nonlinear ordinary/partial differential equations. International Journal of Computer Mathematics, 2014, 91, 1434-1460.	1.8	9
29	Generalized Laguerre approximations and spectral method for the Camassaâ€“Holm equation. IMA Journal of Numerical Analysis, 2015, 35, 1456-1482.	2.9	9
30	A Multiple Interval Chebyshev-Gauss-Lobatto Collocation Method for Ordinary Differential Equations. Numerical Mathematics, 2016, 9, 619-639.	1.3	9
31	Efficient Space-Time Spectral Methods for Second-Order Problems on Unbounded Domains. Journal of Scientific Computing, 2017, 72, 679-699.	2.3	9
32	An hp-version Chebyshev collocation method for nonlinear fractional differential equations. Applied Numerical Mathematics, 2020, 158, 194-211.	2.1	9
33	A Collocation Method with Exact Imposition of Mixed Boundary Conditions. Journal of Scientific Computing, 2010, 42, 291-317.	2.3	8
34	Jacobiâ€“Sobolev Orthogonal Polynomials and Spectral Methods for Elliptic Boundary Value Problems. Communications on Applied Mathematics and Computation, 2019, 1, 283-308.	1.7	8
35	Jacobi spectral method with essential imposition of Neumann boundary condition. Applied Numerical Mathematics, 2012, 62, 956-974.	2.1	7
36	Mixed spectral method for three-dimensional exterior problems using spherical harmonic and generalized Laguerre functions. Journal of Computational and Applied Mathematics, 2008, 217, 277-298.	2.0	6

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37	Legendre-Gauss Spectral Collocation Method for Second Order Nonlinear Delay Differential Equations. Numerical Mathematics, 2014, 7, 149-178.	1.3	6
38	A fast solver of Legendre-Laguerre spectral element method for the Camassa-Holm equation. Numerical Algorithms, 2021, 88, 1-23.	1.9	5
39	Orthogonal Jacobi Rational Functions and Spectral Methods on the Half Line. Journal of Scientific Computing, 2021, 88, 1.	2.3	5
40	Mixed Fourier-Laguerre Spectral and Pseudospectral Methods for Exterior Problems Using Generalized Laguerre Functions. Journal of Scientific Computing, 2008, 36, 263-283.	2.3	4
41	An hâ€“p version of the Chebyshev spectral collocation method for nonlinear delay differential equations. Numerical Methods for Partial Differential Equations, 2019, 35, 664-680.	3.6	4
42	Efficient space-time Legendre rational spectral method for parabolic problems in unbounded domains. Applied Numerical Mathematics, 2021, 170, 39-54.	2.1	4
43	The Laguerre spectral method for solving Neumann boundary value problems. Journal of Computational and Applied Mathematics, 2011, 235, 3229-3237.	2.0	3
44	A Chebyshev-Gauss Spectral Collocation Method for Odrinary Differential Equations. Journal of Computational Mathematics, 2015, 33, 59-85.	0.4	3
45	Hermiteâ€“Sobolev orthogonal functions and spectral methods for second- and fourth-order problems on unbounded domains. International Journal of Computer Mathematics, 2019, 96, 950-970.	1.8	3
46	An hp-Version Jacobi Spectral Collocation Method for the Third-Kind VIEs. Journal of Scientific Computing, 2021, 87, 1.	2.3	3
47	An hp-version Legendre spectral collocation method for multi-order fractional differential equations. Advances in Computational Mathematics, 2021, 47, 1.	1.6	3
48	Legendre spectral collocation method for second-order nonlinear ordinary/partial differential equations. Discrete and Continuous Dynamical Systems - Series B, 2014, 19, 299-322.	0.9	3
49	Mixed Fourier-Jacobi Spectral Method for Two-Dimensional Neumann Boundary Value Problems. East Asian Journal on Applied Mathematics, 2011, 1, 284-296.	0.9	2
50	Pseudospectral methods for computing the multiple solutions of the Laneâ€“Emden equation. Journal of Computational Physics, 2013, 255, 407-421.	3.8	2
51	Sobolev orthogonal Legendre rational spectral methods for problems on the half line. Mathematical Methods in the Applied Sciences, 2020, 43, 255-268.	2.3	2
52	Efficient space-time Jacobi rational spectral methods for second order time-dependent problems on unbounded domains. Applied Numerical Mathematics, 2022, 176, 159-181.	2.1	2
53	Spherical harmonic-generalized Laguerre pseudospectral method for three-dimensional exterior problems. International Journal of Computer Mathematics, 2010, 87, 2123-2142.	1.8	0
54	Mixed Spectral and Pseudospectral Methods for a Nonlinear Strongly Damped Wave Equation in an Exterior Domain. Numerical Mathematics, 2011, 4, 255-282.	1.3	0

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55	MIXED FOURIER-LEGENDRE SPECTRAL METHODS FOR THE MULTIPLE SOLUTIONS OF THE SCHRODINGER EQUATION ON THE UNIT DISK. Mathematical Modelling and Analysis, 2017, 22, 167-185.	1.5	0
56	Sobolev orthogonal Legendre rational spectral methods for exterior problems. International Journal of Computer Mathematics, 2022, 99, 370-390.	1.8	0
57	Generalized Jacobi rational spectral methods with essential imposition of Neumann boundary conditions in unbounded domains. Discrete and Continuous Dynamical Systems - Series B, 2012, 17, 325-346.	0.9	0
58	Pseudospectral Methods for Computing the Multiple Solutions of the Schrodinger Equation. Communications in Computational Physics, 2018, 23, .	1.7	0
59	A multi-domain Chebyshev collocation method for nonlinear fractional delay differential equations. Discrete and Continuous Dynamical Systems - Series B, 2022, .	0.9	0