Hai-wei Sun

List of Publications by Year
in descending order

74 papers	1,667 citations	361296 20 h-index	315616 38 g-index
74 all docs	74 docs citations	74 times ranked	537 citing authors

#	Article	IF	Citations
1	A Ï„-preconditioner for a non-symmetric linear system arising from multi-dimensional Riemann-Liouville fractional diffusion equation. Numerical Algorithms, 2023, 92, 795-813.	1.1	4
2	A circulant preconditioner for the Riesz distributed-order space-fractional diffusion equations. Linear and Multilinear Algebra, 2022, 70, 3081-3096.	0.5	5
3	Exponential-sum-approximation technique for variable-order time-fractional diffusion equations. Journal of Applied Mathematics and Computing, 2022, 68, 323-347.	1.2	17
4	Second-order maximum principle preserving Strangâ€™s splitting schemes for anisotropic fractional Allen-Cahn equations. Numerical Algorithms, 2022, 90, 749-771.	1.1	7
5	An unconditionally positivity-preserving implicitâ€“explicit scheme for evolutionary stable distribution model. Journal of Computational and Applied Mathematics, 2022, 403, 113883.	1.1	1
6	A transformed <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e5765" altimg="si3.svg"><mml:mrow><mml:mi>L</mml:mi><mml:mn>1</mml:mn></mml:mrow></mml:math> method for solving the multi-term time-fractional diffusion problem. Mathematics and Computers in Simulation, 2022, 193, 584-606.	2.4	15
7	Pointwise error estimate and stability analysis of fourth-order compact difference scheme for time-fractional Burgersâ€™ equation. Applied Mathematics and Computation, 2022, 418, 126824.	1.4	7
8	A fast finite volume method for spatial fractional diffusion equations on nonuniform meshes. Computers and Mathematics With Applications, 2022, 108, 175-184.	1.4	6
9	A Novel Discrete Fractional GrÃ¶nwall-Type Inequality and Its Application in Pointwise-in-Time Error Estimates. Journal of Scientific Computing, 2022, 91, 1.	1.1	4
10	A fast algorithm for two-dimensional distributed-order time-space fractional diffusion equations. Applied Mathematics and Computation, 2022, 425, 127095.	1.4	5
11	A stabilized fully-discrete scheme for phase field crystal equation. Applied Numerical Mathematics, 2022, 178, 337-355.	1.2	8
12	Robust fast method for variable-order time-fractional diffusion equationsÂwithout regularity assumptions of the true solutions. Applied Mathematics and Computation, 2022, 430, 127273.	1.4	1
13	Preconditioners with Symmetrized Techniques for Space Fractional Cahn-Hilliard Equations. Journal of Scientific Computing, 2022, 92, .	1.1	6
14	Sixth-order quasi-compact difference schemes for 2D and 3D Helmholtz equations. Applied Mathematics and Computation, 2022, 431, 127347.	1.4	4
15	Splitting preconditioning based on sine transform for time-dependent Riesz space fractional diffusion equations. Journal of Applied Mathematics and Computing, 2021, 66, 673-700.	1.2	16
16	A Fast Algorithm for the Variable-Order Spatial Fractional Advection-Diffusion Equation. Journal of Scientific Computing, 2021, 87, 1.	1.1	8
17	Preconditioning for symmetric positive definite systems in balanced fractional diffusion equations. Numerische Mathematik, 2021, 147, 651-677.	0.9	2
18	Circulant-based approximate inverse preconditioners for a class of fractional diffusion equations. Computers and Mathematics With Applications, 2021, 85, 18-29.	1.4	5

#	Article	IF	Citations
19	A Dimensional Splitting Exponential Time Differencing Scheme for Multidimensional Fractional Allen-Cahn Equations. Journal of Scientific Computing, 2021, 87, 1.	1.1	10
20	A three-level finite difference method with preconditioning technique for two-dimensional nonlinear fractional complex Ginzburgâ€“Landau equations. Journal of Computational and Applied Mathematics, 2021, 389, 113355.	1.1	20
21	An efficient multigrid solver for two-dimensional spatial fractional diffusion equations with variable coefficients. Applied Mathematics and Computation, 2021, 402, 126091.	1.4	8
22	An implicit difference scheme for time-fractional diffusion equations with a time-invariant type variable order. Applied Mathematics Letters, 2021, 120, 107270.	1.5	37
23	A preconditioner based on sine transform for two-dimensional semi-linear Riesz space fractional diffusion equations in convex domains. Applied Numerical Mathematics, 2021, 169, 289-302.	1.2	9
24	An approximate inverse preconditioner for spatial fractional diffusion equations with piecewise continuous coefficients. International Journal of Computer Mathematics, 2020, 97, 523-545.	1.0	5
25	Numerical solution for multi-dimensional Riesz fractional nonlinear reactionâ€“diffusion equation by exponential Rungeâ€“Kutta method. Journal of Applied Mathematics and Computing, 2020, 62, 449-472.	1.2	9
26	A two-step inexact Newton-Chebyshev-like method for inverse eigenvalue problems. Linear Algebra and Its Applications, 2020, 585, 241-262.	0.4	3
27	A fast method for variable-order Caputo fractional derivative with applications to time-fractional diffusion equations. Computers and Mathematics With Applications, 2020, 80, 1443-1458.	1.4	39
28	Exponential Rungeâ€“Kutta Method for Two-Dimensional Nonlinear Fractional Complex Ginzburgâ€“Landau Equations. Journal of Scientific Computing, 2020, 83, 1.	1.1	25
29	An Efficient Second-Order Convergent Scheme for One-Side Space Fractional Diffusion Equations with Variable Coefficients. Communications on Applied Mathematics and Computation, 2020, 2, 215-239.	0.7	5
30	A preconditioned fast finite difference scheme for space-fractional diffusion equations in convex domains. Computational and Applied Mathematics, 2019, 38, 1.	1.0	7
31	Crank–Nicolson Alternative Direction Implicit Method for Space-Fractional Diffusion Equations with Nonseparable Coefficients. SIAM Journal on Numerical Analysis, 2019, 57, 997-1019.	1.1	14
32	Circulant preconditioners for a kind of spatial fractional diffusion equations. Numerical Algorithms, 2019, 82, 729-747.	1.1	13
33	A primalâ€dual method for the Meyer model of cartoon and texture decomposition. Numerical Linear Algebra With Applications, 2019, 26, e2224.	0.9	9
34	On the unsolvability of inverse singular value problems almost everywhere. Linear and Multilinear Algebra, 2019, 67, 987-994.	0.5	2
35	Efficient preconditioner of one-sided space fractional diffusion equation. BIT Numerical Mathematics, 2018, 58, 729-748.	1.0	21
36	On variational properties of balanced central fractional derivatives. International Journal of Computer Mathematics, 2018, 95, 1195-1209.	1.0	8

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37	Twoâ€step Newtonâ€type methods for solving inverse eigenvalue problems. Numerical Linear Algebra With Applications, 2018, 25, e2185.	0.9	5
38	Fast Laplace Transform Methods for Free-Boundary Problems of Fractional Diffusion Equations. Journal of Scientific Computing, 2018, 74, 49-69.	1.1	16
39	Stability and Convergence Analysis of Finite Difference Schemes for Time-Dependent Space-Fractional Diffusion Equations with Variable Diffusion Coefficients. Journal of Scientific Computing, 2018, 75, 1102-1127.	1.1	17
40	Approximate inversion method for timeâ€fractional subdiffusion equations. Numerical Linear Algebra With Applications, 2018, 25, e2132.	0.9	16
41	A multigrid method for linear systems arising from time-dependent two-dimensional space-fractional diffusion equations. Journal of Computational Physics, 2017, 336, 69-86.	1.9	35
42	Partial semi-coarsening multigrid method based on the HOC scheme on nonuniform grids for the convectionâ€“diffusion problems. International Journal of Computer Mathematics, 2017, 94, 2356-2372.	1.0	7
43	A Splitting Preconditioner for Toeplitz-Like Linear Systems Arising from Fractional Diffusion Equations. SIAM Journal on Matrix Analysis and Applications, 2017, 38, 1580-1614.	0.7	45
44	A fast accurate approximation method with multigrid solver for two-dimensional fractional sub-diffusion equation. Journal of Computational Physics, 2016, 323, 204-218.	1.9	9
45	Fourth order finite difference schemes for timeâ€“space fractional sub-diffusion equations. Computers and Mathematics With Applications, 2016, 71, 1287-1302.	1.4	28
46	Fast Numerical Contour Integral Method for Fractional Diffusion Equations. Journal of Scientific Computing, 2016, 66, 41-66.	1.1	28
47	Fast approximate inversion of a block triangular Toeplitz matrix with applications to fractional subâ€diffusion equations. Numerical Linear Algebra With Applications, 2015, 22, 866-882.	0.9	50
48	Fast numerical solution for fractional diffusion equations by exponential quadrature rule. Journal of Computational Physics, 2015, 299, 130-143.	1.9	24
49	Three-point combined compact difference schemes for time-fractional advectionâ€“diffusion equations with smooth solutions. Journal of Computational Physics, 2015, 298, 520-538.	1.9	29
50	Three-Point Combined Compact Alternating Direction Implicit Difference Schemes for Two-Dimensional Time-Fractional Advection-Diffusion Equations. Communications in Computational Physics, 2015, 17, 487-509.	0.7	15
51	A fast direct method for block triangular Toeplitz-like with tri-diagonal block systems from time-fractional partial differential equations. Journal of Computational Physics, 2015, 303, 203-211.	1.9	67
52	A spatial sixth-order alternating direction implicit method for two-dimensional cubic nonlinear SchrÃ¶dinger equations. Computer Physics Communications, 2015, 187, 38-48.	3.0	20
53	Stability and convergence of finite difference schemes for a class of time-fractional sub-diffusion equations based on certain superconvergence. Journal of Computational Physics, 2015, 280, 510-528.	1.9	96
54	Preconditioning Techniques for Diagonal-times-Toeplitz Matrices in Fractional Diffusion Equations. SIAM Journal of Scientific Computing, 2014, 36, A2698-A2719.	1.3	115

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55	Combined compact difference scheme for linear second-order partial differential equations with mixed derivative. Journal of Computational and Applied Mathematics, 2014, 264, 23-37.	1.1	18
56	A CCDâ€“ADI method for unsteady convectionâ€“diffusion equations. Computer Physics Communications, 2014, 185, 790-797.	3.0	31
57	A fast high-order sinc-based algorithm for pricing options under jump-diffusion processes. International Journal of Computer Mathematics, 2014, 91, 2163-2184.	1.0	2
58	Fast Exponential Time Integration for Pricing Options in Stochastic Volatility Jump Diffusion Models. East Asian Journal on Applied Mathematics, 2014, 4, 52-68.	0.4	10
59	A circulant preconditioner for fractional diffusion equations. Journal of Computational Physics, 2013, 242, 715-725.	1.9	191
60	Boundary value methods for transient solutions of queueing networks with variant vacation policy. Journal of Computational and Applied Mathematics, 2012, 236, 3948-3955.	1.1	4
61	Multigrid method for fractional diffusion equations. Journal of Computational Physics, 2012, 231, 693-703.	1.9	172
62	Fast exponential time integration scheme for option pricing with jumps. Numerical Linear Algebra With Applications, 2012, 19, 87-101.	0.9	17
63	Fourthâ€order compact scheme with local mesh refinement for option pricing in jumpâ€diffusion model. Numerical Methods for Partial Differential Equations, 2012, 28, 1079-1098.	2.0	24
64	Asymptotic Stability of an Eikonal Transformation Based ADI Method for the Paraxial Helmholtz Equation at High Wave Numbers. Communications in Computational Physics, 2012, 12, 1275-1292.	0.7	11
65	Boundary value methods with the Crankâ€“Nicolson preconditioner for pricing options in the jump-diffusion model. International Journal of Computer Mathematics, 2011, 88, 1730-1748.	1.0	4
66	Multigrid algorithm from cyclic reduction for Markovian queueing networks. Applied Mathematics and Computation, 2011, 217, 6990-7000.	1.4	0
67	Shift-invert Lanczos method for the symmetric positive semidefinite Toeplitz matrix exponential. Numerical Linear Algebra With Applications, 2011, 18, 603-614.	0.9	20
68	Shift-Invert Arnoldi Approximation to the Toeplitz Matrix Exponential. SIAM Journal of Scientific Computing, 2010, 32, 774-792.	1.3	45
69	Recursive-Based PCG Methods for Toeplitz Systems with Nonnegative Generating Functions. SIAM Journal of Scientific Computing, 2003, 24, 1507-1529.	1.3	13
70	Convergence of the Multigrid Method of Ill-conditioned Block Toeplitz Systems. BIT Numerical Mathematics, 2001, 41, 179-190.	1.0	25
71	Title is missing!. BIT Numerical Mathematics, 2000, 40, 24-40.	1.0	2
72	Multigrid Method for Ill-Conditioned Symmetric Toeplitz Systems. SIAM Journal of Scientific Computing, 1998, 19, 516-529.	1.3	72

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73	A note on the convergence of the two-grid method for Toeplitz systems. Computers and Mathematics With Applications, 1997, 34, 11-18.	1.4	14
74	All-at-once method for variable-order time fractional diffusion equations. Numerical Algorithms, 0, , 1.	1.1	5