

# Weihua Deng

## List of Publications by Year in Descending Order

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**Version:** 2024-04-17

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

128  
papers

4,967  
citations

32  
h-index

69  
g-index

137  
ext. papers

5,661  
ext. citations

2.3  
avg, IF

6.52  
L-index

#	Paper	IF	Citations
128	Lévy Walk Dynamics in an External Constant Force Field in Non-Static Media.. <i>Journal of Statistical Physics</i> , <b>2022</b> , 187, 9	1.5	
127	Numerical Approximations for the Fractional Fokker-Planck Equation with Two-Scale Diffusion. <i>Journal of Scientific Computing</i> , <b>2022</b> , 91, 1	2.3	
126	Lévy walk dynamics in non-static media. <i>Journal of Physics A: Mathematical and Theoretical</i> , <b>2022</b> , 55, 025001	2	1
125	Gaussian process and Lévy walk under stochastic noninstantaneous resetting and stochastic rest.. <i>Physical Review E</i> , <b>2021</b> , 104, 054124	2.4	1
124	Local discontinuous Galerkin method for the fractional diffusion equation with integral fractional Laplacian. <i>Computers and Mathematics With Applications</i> , <b>2021</b> , 104, 44-49	2.7	0
123	Feynman-Kac Transform for Anomalous Processes. <i>SIAM Journal on Mathematical Analysis</i> , <b>2021</b> , 53, 6017-6047	1.7	1
122	Lévy walk dynamics in mixed potentials from the perspective of random walk theory. <i>Physical Review E</i> , <b>2021</b> , 103, 032151	2.4	4
121	A New Sixth-Order Finite Difference WENO Scheme for Fractional Differential Equations. <i>Journal of Scientific Computing</i> , <b>2021</b> , 87, 1	2.3	2
120	Algorithm implementation and numerical analysis for the two-dimensional tempered fractional Laplacian. <i>BIT Numerical Mathematics</i> , <b>2021</b> , 61, 1421	1.7	0
119	High-order BDF fully discrete scheme for backward fractional Feynman-Kac equation with nonsmooth data. <i>Applied Numerical Mathematics</i> , <b>2021</b> , 161, 82-100	2.5	
118	Lévy-walk-like Langevin dynamics affected by a time-dependent force. <i>Physical Review E</i> , <b>2021</b> , 103, 012136	2.3	2
117	Higher Order Approximation for Stochastic Space Fractional Wave Equation Forced by an Additive Space-Time Gaussian Noise. <i>Journal of Scientific Computing</i> , <b>2021</b> , 87, 1	2.3	1
116	Characterization of image spaces of Riemann-Liouville fractional integral operators on Sobolev spaces $W_{m,p}$ ( <i>J Science China Mathematics</i> , <b>2020</b> , 1	0.8	1
115	Numerical Scheme for the Fokker-Planck Equations Describing Anomalous Diffusions with Two Internal States. <i>Journal of Scientific Computing</i> , <b>2020</b> , 83, 1	2.3	1
114	Lévy walk dynamics in an external harmonic potential. <i>Physical Review E</i> , <b>2020</b> , 101, 062127	2.4	10
113	Error Estimates for Backward Fractional Feynman-Kac Equation with Non-Smooth Initial Data. <i>Journal of Scientific Computing</i> , <b>2020</b> , 84, 1	2.3	4
112	Lévy walk with parameter dependent velocity: Hermite polynomial approach and numerical simulation. <i>Journal of Physics A: Mathematical and Theoretical</i> , <b>2020</b> , 53, 115002	2	7

111	Anisotropic Nonlocal Diffusion Operators for Normal and Anomalous Dynamics. <i>Multiscale Modeling and Simulation</i> , <b>2020</b> , 18, 415-443	1.8	1
110	Theory of relaxation dynamics for anomalous diffusion processes in harmonic potential. <i>Physical Review E</i> , <b>2020</b> , 101, 042105	2.4	3
109	Strong anomalous diffusion in two-state process with Lévy walk and Brownian motion. <i>Physical Review Research</i> , <b>2020</b> , 2,	3.9	2
108	Continuous-time random walks and Lévy walks with stochastic resetting. <i>Physical Review Research</i> , <b>2020</b> , 2,	3.9	8
107	Modeling Anomalous Diffusion <b>2020</b> ,		9
106	Numerical algorithm for the model describing anomalous diffusion in expanding media. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , <b>2020</b> , 54, 2265-2294	1.8	0
105	Numerical Approximation for Fractional Diffusion Equation Forced by a Tempered Fractional Gaussian Noise. <i>Journal of Scientific Computing</i> , <b>2020</b> , 84, 1	2.3	0
104	Numerical algorithm for the space-time fractional Fokker-Planck system with two internal states. <i>Numerische Mathematik</i> , <b>2020</b> , 146, 481-511	2.2	3
103	Numerical methods for the two-dimensional Fokker-Planck equation governing the probability density function of the tempered fractional Brownian motion. <i>Numerical Algorithms</i> , <b>2020</b> , 85, 23-38	2.1	1
102	A Finite-Difference Approximation for the One- and Two-Dimensional Tempered Fractional Laplacian. <i>Communications on Applied Mathematics and Computation</i> , <b>2020</b> , 2, 129-145	0.9	3
101	Fast algorithms for convolution quadrature of Riemann-Liouville fractional derivative. <i>Applied Numerical Mathematics</i> , <b>2019</b> , 145, 384-410	2.5	6
100	Subdiffusion in an external force field. <i>Physical Review E</i> , <b>2019</b> , 99, 042125	2.4	12
99	Central local discontinuous Galerkin method for the space fractional diffusion equation. <i>Computers and Mathematics With Applications</i> , <b>2019</b> , 78, 1274-1287	2.7	2
98	Lévy-walk-like Langevin dynamics. <i>New Journal of Physics</i> , <b>2019</b> , 21, 013024	2.9	10
97	Ergodic properties of heterogeneous diffusion processes in a potential well. <i>Journal of Chemical Physics</i> , <b>2019</b> , 150, 164121	3.9	16
96	Numerical Algorithms of the Two-dimensional Feynman-Kac Equation for Reaction and Diffusion Processes. <i>Journal of Scientific Computing</i> , <b>2019</b> , 81, 537-568	2.3	1
95	Aging two-state process with Lévy walk and Brownian motion. <i>Physical Review E</i> , <b>2019</b> , 100, 012136	2.4	7
94	High Accuracy Algorithm for the Differential Equations Governing Anomalous Diffusion <b>2019</b> ,		11

93	Well-posedness and numerical algorithm for the tempered fractional differential equations. <i>Discrete and Continuous Dynamical Systems - Series B</i> , <b>2019</b> , 24, 1989-2015	1.3	22
92	Finite Difference Schemes for the Tempered Fractional Laplacian. <i>Numerical Mathematics</i> , <b>2019</b> , 12, 492-516	5	6
91	Langevin picture of Lévy walk in a constant force field. <i>Physical Review E</i> , <b>2019</b> , 100, 062141	2.4	5
90	Langevin dynamics for a Lévy walk with memory. <i>Physical Review E</i> , <b>2019</b> , 99, 012135	2.4	6
89	Variational formulation and efficient implementation for solving the tempered fractional problems. <i>Numerical Methods for Partial Differential Equations</i> , <b>2018</b> , 34, 1224-1257	2.5	12
88	High Order Algorithm for the Time-Tempered Fractional Feynman-Kac Equation. <i>Journal of Scientific Computing</i> , <b>2018</b> , 76, 867-887	2.3	12
87	Boundary Problems for the Fractional and Tempered Fractional Operators. <i>Multiscale Modeling and Simulation</i> , <b>2018</b> , 16, 125-149	1.8	46
86	Resonant behavior of the generalized Langevin system with tempered Mittag-Leffler memory kernel. <i>Journal of Physics A: Mathematical and Theoretical</i> , <b>2018</b> , 51, 185201	2	6
85	Feynman-Kac equations for reaction and diffusion processes. <i>Journal of Physics A: Mathematical and Theoretical</i> , <b>2018</b> , 51, 155001	2	3
84	Uniform Convergence of V-cycle Multigrid Algorithms for Two-Dimensional Fractional Feynman-Kac Equation. <i>Journal of Scientific Computing</i> , <b>2018</b> , 74, 1034-1059	2.3	5
83	Models for characterizing the transition among anomalous diffusions with different diffusion exponents. <i>Journal of Physics A: Mathematical and Theoretical</i> , <b>2018</b> , 51, 405002	2	21
82	Aging Feynman-Kac equation. <i>Journal of Physics A: Mathematical and Theoretical</i> , <b>2018</b> , 51, 015001	2	1
81	Time Discretization of a Tempered Fractional Feynman-Kac Equation with Measure Data. <i>SIAM Journal on Numerical Analysis</i> , <b>2018</b> , 56, 3249-3275	2.4	10
80	Feynman-Kac equation revisited. <i>Physical Review E</i> , <b>2018</b> , 98,	2.4	7
79	Phase transition dynamics and stochastic resonance in topologically confined nematic liquid crystals. <i>Physical Review E</i> , <b>2018</b> , 98,	2.4	1
78	Renewal theory with fat-tailed distributed sojourn times: Typical versus rare. <i>Physical Review E</i> , <b>2018</b> , 98,	2.4	20
77	Tempered fractional Langevin-Brownian motion with inverse stable subordinator. <i>Journal of Physics A: Mathematical and Theoretical</i> , <b>2018</b> , 51, 495001	2	12
76	A Riesz Basis Galerkin Method for the Tempered Fractional Laplacian. <i>SIAM Journal on Numerical Analysis</i> , <b>2018</b> , 56, 3010-3039	2.4	16

75	Lyly Walk with Multiple Internal States. <i>Journal of Statistical Physics</i> , <b>2018</b> , 173, 1598-1613	1.5	8
74	Fractional compound Poisson processes with multiple internal states. <i>Mathematical Modelling of Natural Phenomena</i> , <b>2018</b> , 13, 10	3	10
73	A second-order accurate numerical method for the space-time tempered fractional diffusion-wave equation. <i>Applied Mathematics Letters</i> , <b>2017</b> , 68, 87-93	3.5	26
72	Numerical schemes of the time tempered fractional Feynman-Kac equation. <i>Computers and Mathematics With Applications</i> , <b>2017</b> , 73, 1063-1076	2.7	8
71	A New Family of Difference Schemes for Space Fractional Advection Diffusion Equation. <i>Advances in Applied Mathematics and Mechanics</i> , <b>2017</b> , 9, 282-306	2.1	13
70	Mean exit time and escape probability for the anomalous processes with the tempered power-law waiting times. <i>Europhysics Letters</i> , <b>2017</b> , 117, 10009	1.6	14
69	Fourth-order numerical method for the space-time tempered fractional diffusion-wave equation. <i>Applied Mathematics Letters</i> , <b>2017</b> , 73, 120-127	3.5	52
68	Numerical approaches to the functional distribution of anomalous diffusion with both traps and flights. <i>Advances in Computational Mathematics</i> , <b>2017</b> , 43, 699-732	1.6	4
67	Characteristic Local Discontinuous Galerkin Methods for Incompressible Navier-Stokes Equations. <i>Communications in Computational Physics</i> , <b>2017</b> , 22, 202-227	2.4	1
66	Localization and Ballistic Diffusion for the Tempered Fractional Brownian-Langevin Motion. <i>Journal of Statistical Physics</i> , <b>2017</b> , 169, 18-37	1.5	24
65	Convergence Analysis of a Multigrid Method for a Nonlocal Model. <i>SIAM Journal on Matrix Analysis and Applications</i> , <b>2017</b> , 38, 869-890	1.5	6
64	Third order difference schemes (without using points outside of the domain) for one sided space tempered fractional partial differential equations. <i>Applied Numerical Mathematics</i> , <b>2017</b> , 112, 126-145	2.5	21
63	Galerkin Finite Element Approximations for Stochastic Space-Time Fractional Wave Equations. <i>SIAM Journal on Numerical Analysis</i> , <b>2017</b> , 55, 3173-3202	2.4	24
62	High-order quasi-compact difference schemes for fractional diffusion equations. <i>Communications in Mathematical Sciences</i> , <b>2017</b> , 15, 1183-1209	1	9
61	Tempered fractional Feynman-Kac equation: Theory and examples. <i>Physical Review E</i> , <b>2016</b> , 93, 032151	2.4	40
60	Effects of the Tempered Aging and the Corresponding Fokker-Planck Equation. <i>Journal of Statistical Physics</i> , <b>2016</b> , 164, 377-398	1.5	3
59	A Hybridized Discontinuous Galerkin Method for 2D Fractional Convection-Diffusion Equations. <i>Journal of Scientific Computing</i> , <b>2016</b> , 68, 826-847	2.3	11
58	High order finite difference methods on non-uniform meshes for space fractional operators. <i>Advances in Computational Mathematics</i> , <b>2016</b> , 42, 425-468	1.6	14

57	High order schemes for the tempered fractional diffusion equations. <i>Advances in Computational Mathematics</i> , <b>2016</b> , 42, 543-572	1.6	61
56	Local discontinuous Galerkin methods for fractional ordinary differential equations. <i>BIT Numerical Mathematics</i> , <b>2015</b> , 55, 967-985	1.7	34
55	High Order Algorithms for the Fractional Substantial Diffusion Equation with Truncated Lévy Flights. <i>SIAM Journal of Scientific Computing</i> , <b>2015</b> , 37, A890-A917	2.6	38
54	Nodal discontinuous Galerkin methods for fractional diffusion equations on 2D domain with triangular meshes. <i>Journal of Computational Physics</i> , <b>2015</b> , 298, 678-694	4.1	29
53	Positivity and boundedness preserving schemes for space-time fractional predator-prey reaction-diffusion model. <i>Computers and Mathematics With Applications</i> , <b>2015</b> , 69, 743-759	2.7	21
52	A series of high-order quasi-compact schemes for space fractional diffusion equations based on the superconvergent approximations for fractional derivatives. <i>Numerical Methods for Partial Differential Equations</i> , <b>2015</b> , 31, 1345-1381	2.5	32
51	Numerical Algorithms for the Forward and Backward Fractional Feynman-Kac Equations. <i>Journal of Scientific Computing</i> , <b>2015</b> , 62, 718-746	2.3	25
50	A class of second order difference approximations for solving space fractional diffusion equations. <i>Mathematics of Computation</i> , <b>2015</b> , 84, 1703-1727	1.6	367
49	Jacobian-predictor-corrector approach for fractional differential equations. <i>Advances in Computational Mathematics</i> , <b>2014</b> , 40, 137-165	1.6	31
48	Polynomial spectral collocation method for space fractional advection-diffusion equation. <i>Numerical Methods for Partial Differential Equations</i> , <b>2014</b> , 30, 514-535	2.5	39
47	A second-order numerical method for two-dimensional two-sided space fractional convection diffusion equation. <i>Applied Mathematical Modelling</i> , <b>2014</b> , 38, 3244-3259	4.5	47
46	Second-order LOD multigrid method for multidimensional Riesz fractional diffusion equation. <i>BIT Numerical Mathematics</i> , <b>2014</b> , 54, 623-647	1.7	23
45	Fourth Order Accurate Scheme for the Space Fractional Diffusion Equations. <i>SIAM Journal on Numerical Analysis</i> , <b>2014</b> , 52, 1418-1438	2.4	103
44	Orthogonal spline collocation methods for the subdiffusion equation. <i>Journal of Computational and Applied Mathematics</i> , <b>2014</b> , 255, 517-528	2.4	16
43	Fourth Order Difference Approximations for Space Riemann-Liouville Derivatives Based on Weighted and Shifted Lubich Difference Operators. <i>Communications in Computational Physics</i> , <b>2014</b> , 16, 516-540	2.4	42
42	Analytical Solutions, Moments, and Their Asymptotic Behaviors for the Time-Space Fractional Cable Equation. <i>Communications in Theoretical Physics</i> , <b>2014</b> , 62, 54-60	2.4	5
41	Efficient Numerical Algorithms for Three-Dimensional Fractional Partial Differential Equations. <i>Journal of Computational Mathematics</i> , <b>2014</b> , 32, 371-391	2.1	15
40	Discretized fractional substantial calculus. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , <b>2014</b> ,	1.8	4

39	Exact Solutions and Their Asymptotic Behaviors for the Averaged Generalized Fractional Elastic Models. <i>Communications in Theoretical Physics</i> , <b>2014</b> , 62, 443-450	2.4	9
38	Quasi-Compact Finite Difference Schemes for Space Fractional Diffusion Equations. <i>Journal of Scientific Computing</i> , <b>2013</b> , 56, 45-66	2.3	106
37	Positivity and boundedness preserving schemes for the fractional reaction-diffusion equation. <i>Science China Mathematics</i> , <b>2013</b> , 56, 2161-2178	0.8	3
36	Superlinearly convergent algorithms for the two-dimensional space-time Caputo-Biesz fractional diffusion equation. <i>Applied Numerical Mathematics</i> , <b>2013</b> , 70, 22-41	2.5	45
35	High order finite difference WENO schemes for fractional differential equations. <i>Applied Mathematics Letters</i> , <b>2013</b> , 26, 362-366	3.5	24
34	Local Discontinuous Galerkin methods for fractional diffusion equations. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , <b>2013</b> , 47, 1845-1864	1.8	114
33	Fractional step method for the nonlinear conservation laws with fractional dissipation. <i>Interdisciplinary Mathematical Sciences</i> , <b>2013</b> , 69-82	0.5	
32	Regularization methods for unknown source in space fractional diffusion equation. <i>Mathematics and Computers in Simulation</i> , <b>2012</b> , 85, 45-56	3.3	16
31	Finite difference/predictor-corrector approximations for the space and time fractional Fokker-Planck equation. <i>Applied Mathematics Letters</i> , <b>2012</b> , 25, 1815-1821	3.5	16
30	Numerical Schemes for Fractional Ordinary Differential Equations <b>2012</b> ,		5
29	Finite difference approximations and dynamics simulations for the L <sup>q</sup> -Fractional Klein-Kramers equation. <i>Numerical Methods for Partial Differential Equations</i> , <b>2012</b> , 28, 1944-1965	2.5	7
28	Finite Difference/Element Method for a Two-Dimensional Modified Fractional Diffusion Equation. <i>Advances in Applied Mathematics and Mechanics</i> , <b>2012</b> , 4, 496-518	2.1	90
27	Finite difference methods and their physical constraints for the fractional klein-kramers equation. <i>Numerical Methods for Partial Differential Equations</i> , <b>2011</b> , 27, 1561-1583	2.5	25
26	Numerical analysis and physical simulations for the time fractional radial diffusion equation. <i>Computers and Mathematics With Applications</i> , <b>2011</b> , 62, 1024-1037	2.7	19
25	Smoothness and stability of the solutions for nonlinear fractional differential equations. <i>Nonlinear Analysis: Theory, Methods &amp; Applications</i> , <b>2010</b> , 72, 1768-1777	1.3	92
24	Ergodic properties of fractional Brownian-Langevin motion. <i>Physical Review E</i> , <b>2009</b> , 79, 011112	2.4	254
23	Finite Element Method for the Space and Time Fractional Fokker-Planck Equation. <i>SIAM Journal on Numerical Analysis</i> , <b>2009</b> , 47, 204-226	2.4	346
22	The evolution of chaotic dynamics for fractional unified system. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , <b>2008</b> , 372, 401-407	2.3	57

21	Short memory principle and a predictor-corrector approach for fractional differential equations. <i>Journal of Computational and Applied Mathematics</i> , <b>2007</b> , 206, 174-188	2.4	164
20	Attractors for one kind of lattice dynamical system. <i>Computers and Mathematics With Applications</i> , <b>2007</b> , 54, 617-626	2.7	1
19	Remarks on fractional derivatives. <i>Applied Mathematics and Computation</i> , <b>2007</b> , 187, 777-784	2.7	407
18	Generating multi-directional multi-scroll chaotic attractors via a fractional differential hysteresis system. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , <b>2007</b> , 369, 438-443	2.3	53
17	Numerical algorithm for the time fractional Fokker-Planck equation. <i>Journal of Computational Physics</i> , <b>2007</b> , 227, 1510-1522	4.1	186
16	Stability analysis of linear fractional differential system with multiple time delays. <i>Nonlinear Dynamics</i> , <b>2007</b> , 48, 409-416	5	553
15	SYNCHRONIZATION OF LIMIT SETS. <i>Modern Physics Letters B</i> , <b>2007</b> , 21, 551-558	1.6	3
14	GENERATING 3-D SCROLL GRID ATTRACTORS OF FRACTIONAL DIFFERENTIAL SYSTEMS VIA STAIR FUNCTION. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , <b>2007</b> , 17, 3965-3983	2	16
13	Generalized synchronization in fractional order systems. <i>Physical Review E</i> , <b>2007</b> , 75, 056201	2.4	36
12	Design of Multi-Directional Multi-Scroll Chaotic Attractors Based on Fractional Differential Systems <b>2007</b> ,		1
11	ANALYSIS OF FRACTIONAL DIFFERENTIAL EQUATIONS WITH MULTI-ORDERS. <i>Fractals</i> , <b>2007</b> , 15, 173-183	3.2	38
10	Stability of N-Dimensional Linear Systems with Multiple Delays and Application to Synchronization. <i>Journal of Systems Science and Complexity</i> , <b>2006</b> , 19, 149-156	1	9
9	Design of multidirectional multiscroll chaotic attractors based on fractional differential systems via switching control. <i>Chaos</i> , <b>2006</b> , 16, 043120	3.3	61
8	STABILITY ANALYSIS OF DIFFERENTIAL EQUATIONS WITH TIME-DEPENDENT DELAY. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , <b>2006</b> , 16, 465-472	2	26
7	SCALING CHEN'S ATTRACTOR. <i>Modern Physics Letters B</i> , <b>2006</b> , 20, 633-639	1.6	3
6	SCALING ATTRACTORS OF FRACTIONAL DIFFERENTIAL SYSTEMS. <i>Fractals</i> , <b>2006</b> , 14, 303-313	3.2	10
5	CHAOS SYNCHRONIZATION OF FRACTIONAL-ORDER DIFFERENTIAL SYSTEMS. <i>International Journal of Modern Physics B</i> , <b>2006</b> , 20, 791-803	1.1	63
4	Chaos synchronization of the Chua system with a fractional order. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2006</b> , 360, 171-185	3.3	168



3	Chaos synchronization of the fractional Lorenz system. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2005</b> , 353, 61-72	3.3	302
2	Synchronization of Chaotic Fractional Chen System. <i>Journal of the Physical Society of Japan</i> , <b>2005</b> , 74, 1645-1648	1.5	74
1	Stochastic harmonic trapping of a Levy walk: transport and first-passage dynamics under soft resetting strategies. <i>New Journal of Physics</i> ,	2.9	1