## Mostafa Abbaszadeh

List of Publications by Year in descending order

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120 papers

3,864 citations

36 h-index 55 g-index

120 all docs

 $\begin{array}{c} 120 \\ \\ \text{docs citations} \end{array}$ 

times ranked

120

1463 citing authors

#	Article	IF	CITATIONS
1	The use of a meshless technique based on collocation and radial basis functions for solving the time fractional nonlinear Schrödinger equation arising in quantum mechanics. Engineering Analysis With Boundary Elements, 2013, 37, 475-485.	3.7	145
2	The numerical solution of nonlinear high dimensional generalized Benjamin–Bona–Mahony–Burgers equation via the meshless method of radial basis functions. Computers and Mathematics With Applications, 2014, 68, 212-237.	2.7	133
3	Two high-order numerical algorithms for solving the multi-term time fractional diffusion-wave equations. Journal of Computational and Applied Mathematics, 2015, 290, 174-195.	2.0	120
4	An implicit RBF meshless approach for solving the time fractional nonlinear sine-Gordon and Klein–Gordon equations. Engineering Analysis With Boundary Elements, 2015, 50, 412-434.	3.7	112
5	A high-order and unconditionally stable scheme for the modified anomalous fractional sub-diffusion equation with a nonlinear source term. Journal of Computational Physics, 2013, 240, 36-48.	3.8	99
6	Proper orthogonal decomposition variational multiscale element free Galerkin (POD-VMEFG) meshless method for solving incompressible Navier–Stokes equation. Computer Methods in Applied Mechanics and Engineering, 2016, 311, 856-888.	6.6	95
7	The use of interpolating element-free Galerkin technique for solving 2D generalized Benjamin–Bona–Mahony–Burgers and regularized long-wave equations on non-rectangular domains with error estimate. Journal of Computational and Applied Mathematics, 2015, 286, 211-231.	2.0	93
8	Error estimate for the numerical solution of fractional reaction–subdiffusion process based on a meshless method. Journal of Computational and Applied Mathematics, 2015, 280, 14-36.	2.0	84
9	An improved meshless method for solving two-dimensional distributed order time-fractional diffusion-wave equation with error estimate. Numerical Algorithms, 2017, 75, 173-211.	1.9	82
10	Evaluating a green supplier selection problem using a hybrid MODM algorithm. Journal of Intelligent Manufacturing, 2017, 28, 913-927.	<b>7.</b> 3	79
11	A finite element method for the numerical solution of Rayleigh–Stokes problem for a heated generalized second grade fluid with fractional derivatives. Engineering With Computers, 2017, 33, 587-605.	6.1	73
12	A Legendre spectral element method (SEM) based on the modified bases for solving neutral delay distributedâ€order fractional damped diffusionâ€wave equation. Mathematical Methods in the Applied Sciences, 2018, 41, 3476-3494.	2.3	73
13	Analysis of a meshless method for the time fractional diffusion-wave equation. Numerical Algorithms, 2016, 73, 445-476.	1.9	72
14	The meshless local collocation method for solving multi-dimensional Cahn-Hilliard, Swift-Hohenberg and phase field crystal equations. Engineering Analysis With Boundary Elements, 2017, 78, 49-64.	3.7	70
15	Legendre spectral element method for solving time fractional modified anomalous sub-diffusion equation. Applied Mathematical Modelling, 2016, 40, 3635-3654.	4.2	68
16	The use of proper orthogonal decomposition (POD) meshless RBF-FD technique to simulate the shallow water equations. Journal of Computational Physics, 2017, 351, 478-510.	3.8	66
17	A finite difference/finite element technique with error estimate for space fractional tempered diffusion-wave equation. Computers and Mathematics With Applications, 2018, 75, 2903-2914.	2.7	66
18	Fourth-order numerical method for the space–time tempered fractional diffusion-wave equation. Applied Mathematics Letters, 2017, 73, 120-127.	2.7	63

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19	An efficient technique based on finite difference/finite element method for solution of two-dimensional space/multi-time fractional Bloch–Torrey equations. Applied Numerical Mathematics, 2018, 131, 190-206.	2.1	62
20	Analysis of the element free Galerkin (EFG) method for solving fractional cable equation with Dirichlet boundary condition. Applied Numerical Mathematics, 2016, 109, 208-234.	2.1	57
21	Variational multiscale element free Galerkin (VMEFG) and local discontinuous Galerkin (LDG) methods for solving two-dimensional Brusselator reaction–diffusion system with and without cross-diffusion. Computer Methods in Applied Mechanics and Engineering, 2016, 300, 770-797.	6.6	57
22	Compact finite difference scheme and RBF meshless approach for solving 2D Rayleigh–Stokes problem for a heated generalized second grade fluid with fractional derivatives. Computer Methods in Applied Mechanics and Engineering, 2013, 264, 163-177.	6.6	55
23	Error estimate of second-order finite difference scheme for solving the Riesz space distributed-order diffusion equation. Applied Mathematics Letters, 2019, 88, 179-185.	2.7	54
24	A Bayesian estimation method for variational phase-field fracture problems. Computational Mechanics, 2020, 66, 827-849.	4.0	53
25	Spectral element technique for nonlinear fractional evolution equation, stability and convergence analysis. Applied Numerical Mathematics, 2017, 119, 51-66.	2.1	51
26	A direct meshless local collocation method for solving stochastic Cahn–Hilliard–Cook and stochastic Swift–Hohenberg equations. Engineering Analysis With Boundary Elements, 2019, 98, 253-264.	3.7	51
27	Error analysis and numerical simulation of magnetohydrodynamics (MHD) equation based on the interpolating element free Galerkin (IEFG) method. Applied Numerical Mathematics, 2019, 137, 252-273.	2.1	51
28	A fourth-order compact solution of the two-dimensional modified anomalous fractional sub-diffusion equation with a nonlinear source term. Computers and Mathematics With Applications, 2013, 66, 1345-1359.	2.7	50
29	Compact finite difference scheme for the solution of time fractional advection-dispersion equation. Numerical Algorithms, 2013, 63, 431-452.	1.9	47
30	Solution of two-dimensional modified anomalous fractional sub-diffusion equation via radial basis functions (RBF) meshless method. Engineering Analysis With Boundary Elements, 2014, 38, 72-82.	3.7	47
31	Nonlinear free and forced vibrations of fractional modeled viscoelastic FGM micro-beam. Applied Mathematical Modelling, 2021, 92, 297-314.	4.2	44
32	Element free Galerkin approach based on the reproducing kernel particle method for solving 2D fractional Tricomi-type equation with Robin boundary condition. Computers and Mathematics With Applications, 2017, 73, 1270-1285.	2.7	43
33	A meshless numerical procedure for solving fractional reaction subdiffusion model via a new combination of alternating direction implicit (ADI) approach and interpolating element free Galerkin (EFG) method. Computers and Mathematics With Applications, 2015, 70, 2493-2512.	2.7	42
34	A combination of proper orthogonal decomposition–discrete empirical interpolation method (POD–DEIM) and meshless local RBF-DQ approach for prevention of groundwater contamination. Computers and Mathematics With Applications, 2018, 75, 1390-1412.	2.7	42
35	Highâ€order difference scheme for the solution of linear time fractional klein–gordon equations. Numerical Methods for Partial Differential Equations, 2014, 30, 1234-1253.	3.6	41
36	An upwind local radial basis functions-differential quadrature (RBF-DQ) method with proper orthogonal decomposition (POD) approach for solving compressible Euler equation. Engineering Analysis With Boundary Elements, 2018, 92, 244-256.	3.7	41

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37	A meshless technique based on the local radial basis functions collocation method for solving parabolic–parabolic Patlak–Keller–Segel chemotaxis model. Engineering Analysis With Boundary Elements, 2015, 56, 129-144.	3.7	40
38	Analysis of two methods based on Galerkin weak form for fractional diffusion-wave: Meshless interpolating element free Galerkin (IEFG) and finite element methods. Engineering Analysis With Boundary Elements, 2016, 64, 205-221.	3.7	38
39	Direct meshless local Petrov–Galerkin (DMLPG) method for time-fractional fourth-order reaction–diffusion problem on complex domains. Computers and Mathematics With Applications, 2020, 79, 876-888.	2.7	37
40	Interpolating stabilized moving least squares (MLS) approximation for 2D elliptic interface problems. Computer Methods in Applied Mechanics and Engineering, 2018, 328, 775-803.	6.6	36
41	Investigation of the Oldroyd model as a generalized incompressible Navier–Stokes equation via the interpolating stabilized element free Galerkin technique. Applied Numerical Mathematics, 2020, 150, 274-294.	2.1	36
42	Meshless upwind local radial basis function-finite difference technique to simulate the time-fractional distributed-order advection–diffusion equation. Engineering With Computers, 2021, 37, 873-889.	6.1	36
43	The space-splitting idea combined with local radial basis function meshless approach to simulate conservation laws equations. AEJ - Alexandria Engineering Journal, 2018, 57, 1137-1156.	6.4	35
44	Solution of multi-dimensional Klein–Gordon–Zakharov and Schrödinger/Gross–Pitaevskii equations via local Radial Basis Functions–Differential Quadrature (RBF–DQ) technique on non-rectangular computational domains. Engineering Analysis With Boundary Elements, 2018, 92, 156-170.	3.7	35
45	The use of element free Galerkin method based on moving Kriging and radial point interpolation techniques for solving some types of Turing models. Engineering Analysis With Boundary Elements, 2016, 62, 93-111.	3.7	33
46	The reproducing kernel particle Petrov–Galerkin method for solving two-dimensional nonstationary incompressible Boussinesq equations. Engineering Analysis With Boundary Elements, 2019, 106, 300-308.	3.7	33
47	Numerical and analytical investigations for neutral delay fractional damped diffusion-wave equation based on the stabilized interpolating element free Galerkin (IEFG) method. Applied Numerical Mathematics, 2019, 145, 488-506.	2.1	33
48	Error estimate of finite element/finite difference technique for solution of two-dimensional weakly singular integro-partial differential equation with space and time fractional derivatives. Journal of Computational and Applied Mathematics, 2019, 356, 314-328.	2.0	33
49	A POD-based reduced-order Crank-Nicolson/fourth-order alternating direction implicit (ADI) finite difference scheme for solving the two-dimensional distributed-order Riesz space-fractional diffusion equation. Applied Numerical Mathematics, 2020, 158, 271-291.	2.1	32
50	The meshless method of radial basis functions for the numerical solution of time fractional telegraph equation. International Journal of Numerical Methods for Heat and Fluid Flow, 2014, 24, 1636-1659.	2.8	29
51	Numerical study of three-dimensional Turing patterns using a meshless method based on moving Kriging element free Galerkin (EFG) approach. Computers and Mathematics With Applications, 2016, 72, 427-454.	2.7	29
52	An upwind local radial basis functions-differential quadrature (RBFs-DQ) technique to simulate some models arising in water sciences. Ocean Engineering, 2020, 197, 106844.	4.3	29
53	The interpolating element-free Galerkin method for solving Korteweg–de Vries–Rosenau-regularized long-wave equation with error analysis. Nonlinear Dynamics, 2019, 96, 1345-1365.	5.2	28
54	A multilevel Monte Carlo finite element method for the stochastic Cahn–Hilliard–Cook equation. Computational Mechanics, 2019, 64, 937-949.	4.0	28

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55	Nonlinear vibration of fractional viscoelastic micro-beams. International Journal of Non-Linear Mechanics, 2021, 137, 103811.	2.6	28
56	A reduced proper orthogonal decomposition (POD) element free Galerkin (POD-EFG) method to simulate two-dimensional solute transport problems and error estimate. Applied Numerical Mathematics, 2018, 126, 92-112.	2.1	26
57	Reduced order modeling of time-dependent incompressible Navier–Stokes equation with variable density based on a local radial basis functions-finite difference (LRBF-FD) technique and the POD/DEIM method. Computer Methods in Applied Mechanics and Engineering, 2020, 364, 112914.	6.6	26
58	The numerical solution of the two–dimensional sinh-Gordon equation via three meshless methods. Engineering Analysis With Boundary Elements, 2015, 51, 220-235.	3.7	25
59	A local meshless method for solving multi-dimensional Vlasov–Poisson and Vlasov–Poisson–Fokker–Planck systems arising in plasma physics. Engineering With Computers, 2017, 33, 961-981.	6.1	25
60	Analysis of mixed finite element method (MFEM) for solving the generalized fractional reaction–diffusion equation on nonrectangular domains. Computers and Mathematics With Applications, 2019, 78, 1531-1547.	2.7	25
61	Analysis and application of the interpolating element free Galerkin (IEFG) method to simulate the prevention of groundwater contamination with application in fluid flow. Journal of Computational and Applied Mathematics, 2020, 368, 112453.	2.0	25
62	Crank–Nicolson/Galerkin spectral method for solving two-dimensional time-space distributed-order weakly singular integro-partial differential equation. Journal of Computational and Applied Mathematics, 2020, 374, 112739.	2.0	25
63	The two-grid interpolating element free Galerkin (TG-IEFG) method for solving Rosenau-regularized long wave (RRLW) equation with error analysis. Applicable Analysis, 2018, 97, 1129-1153.	1.3	24
64	Numerical solution of a time-fractional PDE in the electroanalytical chemistry by a local meshless method. Engineering With Computers, 2019, 35, 87-100.	6.1	23
65	Numerical and theoretical discussions for solving nonlinear generalized Benjamin–Bona–Mahony–Burgers equation based on the Legendre spectral element method. Numerical Methods for Partial Differential Equations, 2021, 37, 360-382.	3.6	23
66	A reduced-order variational multiscale interpolating element free Galerkin technique based on proper orthogonal decomposition for solving Navier–Stokes equations coupled with a heat transfer equation: Nonstationary incompressible Boussinesq equations. Journal of Computational Physics, 2021, 426, 109875.	3.8	23
67	Numerical investigation based on direct meshless local Petrov Galerkin (direct MLPG) method for solving generalized Zakharov system in one and two dimensions and generalized Gross–Pitaevskii equation. Engineering With Computers, 2017, 33, 983-996.	6.1	22
68	A reduced order finite difference method for solving space-fractional reaction-diffusion systems: The Gray-Scott model. European Physical Journal Plus, 2019, 134, 1.	2.6	20
69	Interior penalty discontinuous Galerkin technique for solving generalized Sobolev equation. Applied Numerical Mathematics, 2020, 154, 172-186.	2.1	20
70	Error analysis of interpolating element free Galerkin method to solve non-linear extended Fisher–Kolmogorov equation. Computers and Mathematics With Applications, 2020, 80, 247-262.	2.7	20
71	Two meshless procedures: moving Kriging interpolation and element-free Galerkin for fractional PDEs. Applicable Analysis, 2017, 96, 936-969.	1.3	19
72	Variational multiscale element-free Galerkin method combined with the moving Kriging interpolation for solving some partial differential equations with discontinuous solutions. Computational and Applied Mathematics, 2018, 37, 3869-3905.	1.3	19

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73	The solution of nonlinear Green–Naghdi equation arising in water sciences via a meshless method which combines moving kriging interpolation shape functions with the weighted essentially non–oscillatory method. Communications in Nonlinear Science and Numerical Simulation, 2019, 68, 220-239.	3.3	19
74	Application of spectral element method for solving Sobolev equations with error estimation. Applied Numerical Mathematics, 2020, 158, 439-462.	2.1	18
75	Alternating direction implicit-spectral element method (ADI-SEM) for solving multi-dimensional generalized modified anomalous sub-diffusion equation. Computers and Mathematics With Applications, 2019, 78, 1772-1792.	2.7	17
76	Simulation flows with multiple phases and components via the radial basis functions-finite difference (RBF-FD) procedure: Shan-Chen model. Engineering Analysis With Boundary Elements, 2020, 119, 151-161.	3.7	17
77	Galerkin proper orthogonal decomposition-reduced order method (POD-ROM) for solving generalized Swift-Hohenberg equation. International Journal of Numerical Methods for Heat and Fluid Flow, 2019, 29, 2642-2665.	2.8	16
78	A finite-difference procedure to solve weakly singular integro partial differential equation with space-time fractional derivatives. Engineering With Computers, 2021, 37, 2173.	6.1	16
79	Compact local integrated radial basis functions (Integrated RBF) method for solving system of non–linear advection-diffusion-reaction equations to prevent the groundwater contamination. Engineering Analysis With Boundary Elements, 2020, 121, 50-64.	3.7	15
80	Second-Order Finite Difference/Spectral Element Formulation for Solving the Fractional Advection-Diffusion Equation. Communications on Applied Mathematics and Computation, 2020, 2, 653-669.	1.7	14
81	The Crankâ€Nicolson/interpolating stabilized elementâ€free Galerkin method to investigate the fractional Galilei invariant advectionâ€diffusion equation. Mathematical Methods in the Applied Sciences, 2021, 44, 2752-2768.	2.3	14
82	A Galerkin meshless reproducing kernel particle method for numerical solution of neutral delay time-space distributed-order fractional damped diffusion-wave equation. Applied Numerical Mathematics, 2021, 169, 44-63.	2.1	14
83	Numerical investigation of reproducing kernel particle Galerkin method for solving fractional modified distributed-order anomalous sub-diffusion equation with error estimation. Applied Mathematics and Computation, 2021, 392, 125718.	2.2	12
84	The fourth-order time-discrete scheme and split-step direct meshless finite volume method for solving cubic–quintic complex Ginzburg–Landau equations on complicated geometries. Engineering With Computers, 2022, 38, 1543-1557.	6.1	11
85	Direct meshless local Petrov-Galerkin method to investigate anisotropic potential and plane elastostatic equations of anisotropic functionally graded materials problems. Engineering Analysis With Boundary Elements, 2020, 118, 188-201.	3.7	11
86	The meshless local Petrov–Galerkin method based on moving Taylor polynomial approximation to investigate unsteady diffusion–convection problems of anisotropic functionally graded materials related to incompressible flow. Engineering Analysis With Boundary Elements, 2021, 132, 469-480.	3.7	11
87	Simulation of plane elastostatic equations of anisotropic functionally graded materials by integrated radial basis function based on finite difference approach. Engineering Analysis With Boundary Elements, 2022, 134, 553-570.	3.7	9
88	A POD reduced-order model based on spectral Galerkin method for solving the space-fractional Gray–Scott model with error estimate. Engineering With Computers, 2022, 38, 2245-2268.	6.1	8
89	Numerical and analytical investigations for solving the inverse tempered fractional diffusion equation via interpolating element-free Galerkin (IEFG) method. Journal of Thermal Analysis and Calorimetry, 2021, 143, 1917-1933.	3.6	8
90	Long time behavior of Robin boundary sub-diffusion equation with fractional partial derivatives of Caputo type in differential and difference settings. Mathematics and Computers in Simulation, 2021, 190, 1370-1378.	4.4	8

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91	The simulation of some chemotactic bacteria patterns in liquid medium which arises in tumor growth with blow-up phenomena via a generalized smoothed particle hydrodynamics (GSPH) method. Engineering With Computers, 2019, 35, 875-892.	6.1	7
92	A proper orthogonal decomposition variational multiscale meshless interpolating elementâ€free Galerkin method for incompressible magnetohydrodynamics flow. International Journal for Numerical Methods in Fluids, 2020, 92, 1415-1436.	1.6	7
93	Nonlinear random vibrations of micro-beams with fractional viscoelastic core. Probabilistic Engineering Mechanics, 2022, 69, 103274.	2.7	7
94	The proper orthogonal decomposition modal spectral element method for two-dimensional viscoelastic equation. Thin-Walled Structures, 2021, 161, 107429.	5.3	6
95	An LT-BEM for an unsteady diffusion-convection problem of another class of anisotropic FGMs. International Journal of Computer Mathematics, 2022, 99, 575-590.	1.8	6
96	Numerical analysis of locally conservative weak Galerkin dual-mixed finite element method for the time-dependent Poisson–Nernst–Planck system. Computers and Mathematics With Applications, 2021, 92, 88-108.	2.7	6
97	Numerical simulation of shallow water waves based on generalized equal width (GEW) equation by compact local integrated radial basis function method combined with adaptive residual subsampling technique. Nonlinear Dynamics, 2021, 105, 3359-3391.	5.2	6
98	On the combined Shooting-Pseudo-Arclength method for finding frequency response of nonlinear fractional-order differential equations. Journal of Sound and Vibration, 2022, 516, 116521.	3.9	6
99	Simulation of the incompressible Navier–Stokes via integrated radial basis function based on finite difference scheme. Engineering With Computers, 2022, 38, 5069-5090.	6.1	6
100	Fourth-order alternating direction implicit difference scheme to simulate the space-time Riesz tempered fractional diffusion equation. International Journal of Computer Mathematics, 2021, 98, 2137-2155.	1.8	5
101	Integrated radial basis functions (IRBFs) to simulate nonlinear advection–diffusion equations with smooth and non-smooth initial data. Engineering With Computers, 2022, 38, 1071-1106.	6.1	5
102	A boundary-only integral equation method for parabolic problems of another class of anisotropic functionally graded materials. Materials Today Communications, 2021, 26, 101956.	1.9	5
103	Simulation of Maxwell equation based on an ADI approach and integrated radial basis function-generalized moving least squares (IRBF-GMLS) method with reduced order algorithm based on proper orthogonal decomposition. Engineering Analysis With Boundary Elements, 2022, 143, 397-417.	3.7	5
104	Meshless local numerical procedure based on interpolating moving least squares approximation and exponential time differencing fourth-order Runge–Kutta (ETDRK4) for solving stochastic parabolic interface problems. Engineering With Computers, 2020, , 1.	6.1	4
105	Legendre spectral element method (LSEM) to simulate the two-dimensional system of nonlinear stochastic advection–reaction–diffusion models. Applicable Analysis, 2020, , 1-16.	1.3	4
106	Simulation of activator–inhibitor dynamics based on cross-diffusion Brusselator reaction–diffusion system via a differential quadrature-radial point interpolation method (DQ-RPIM) technique. European Physical Journal Plus, 2021, 136, 1.	2.6	4
107	Numerical simulation based on a combination of finite-element method and proper orthogonal decomposition to prevent the groundwater contamination. Engineering With Computers, 2022, 38, 3445-3461.	6.1	4
108	The local meshless collocation method for solving 2D fractional Klein-Kramers dynamics equation on irregular domains. International Journal of Numerical Methods for Heat and Fluid Flow, 2022, 32, 41-61.	2.8	4

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109	Application of SPD-RBF method of lines for solving nonlinear advection–diffusion–reaction equation with variable coefficients. International Journal of Numerical Methods for Heat and Fluid Flow, 2022, 32, 850-886.	2.8	4
110	The local meshless collocation method for numerical simulation of shallow water waves based on generalized equal width (GEW) equation. Wave Motion, 2021, 107, 102805.	2.0	4
111	Proper orthogonal decomposition Pascal polynomial-based method for solving Sobolev equation. International Journal of Numerical Methods for Heat and Fluid Flow, 2022, 32, 2506-2542.	2.8	4
112	Interpolating Stabilized Element Free Galerkin Method for Neutral Delay Fractional Damped Diffusion-Wave Equation. Journal of Function Spaces, 2021, 2021, 1-11.	0.9	4
113	Application of direct meshless local Petrov–Galerkin method for numerical solution of stochastic elliptic interface problems. Numerical Methods for Partial Differential Equations, 0, , .	3.6	3
114	A local meshless procedure to determine the unknown control parameter in the multi-dimensional inverse problems. Inverse Problems in Science and Engineering, 2021, 29, 1369-1400.	1.2	2
115	Investigation of generalized Couette hydromagnetic flow of two-step exothermic chemical reaction in a channel via the direct meshless local Petrov–Galerkin method. Engineering Analysis With Boundary Elements, 2021, 125, 178-189.	3.7	2
116	A class of moving Kriging interpolation-based DQ methods to simulate multi-dimensional space Galilei invariant fractional advection-diffusion equation. Numerical Algorithms, 2022, 90, 271-299.	1.9	2
117	Numerical investigation of the magnetic properties and behavior of electrically conducting fluids via the local weak form method. Applied Mathematics and Computation, 2022, 433, 127293.	2.2	2
118	Investigation of heat transport equation at the microscale via interpolating element-free Galerkin method. Engineering With Computers, 2022, 38, 3317-3333.	6.1	1
119	Integrated radial basis functions to simulate modified anomalous subâ€diffusion equation. Numerical Methods for Partial Differential Equations, 2022, 38, 1015-1054.	3.6	1
120	Optimal error bound for immersed weak Galerkin finite element method for elliptic interface problems. Journal of Computational and Applied Mathematics, 2022, 416, 114567.	2.0	1