Zhengdong Luo

List of Publications by Year
in descending order

98	2,081	257450 24	276875 41
papers	citations	h-index	g-index

98	98	98	694
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A reduced-order approach to four-dimensional variational data assimilation using proper orthogonal decomposition. International Journal for Numerical Methods in Fluids, 2007, 53, 1571-1583.	1.6	177
2	An optimized Crankâ€“Nicolson finite difference extrapolating model for the fractional-order parabolic-type sine-Gordon equation. Advances in Difference Equations, 2019, 2019, .	3.5	148
3	Reduced-Order Modeling of the Upper Tropical Pacific Ocean Model using Proper Orthogonal Decomposition. Computers and Mathematics With Applications, 2006, 52, 1373-1386.	2.7	109
4	Mixed Finite Element Formulation and Error Estimates Based on Proper Orthogonal Decomposition for the Nonstationary Navierâ€“Stokes Equations. SIAM Journal on Numerical Analysis, 2009, 47, 1-19.	2.3	89
5	An optimizing reduced order FDS for the tropical Pacific Ocean reduced gravity model. International Journal for Numerical Methods in Fluids, 2007, 55, 143-161.	1.6	76
6	Proper orthogonal decomposition approach and error estimation of mixed finite element methods for the tropical Pacific Ocean reduced gravity model. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 4184-4195.	6.6	74
7	Some reduced finite difference schemes based on a proper orthogonal decomposition technique for parabolic equations. Applied Numerical Mathematics, 2010, 60, 154-164.	2.1	66
8	A reduced finite element formulation based on POD method for two-dimensional solute transport problems. Journal of Mathematical Analysis and Applications, 2012, 385, 371-383.	1.0	56
9	An optimizing reduced PLSMFE formulation for nonâ€stationary conductionâ€“convection problems. International Journal for Numerical Methods in Fluids, 2009, 60, 409-436.	1.6	53
10	A reduced finite volume element formulation and numerical simulations based on POD for parabolic problems. Journal of Computational and Applied Mathematics, 2011, 235, 2098-2111.	2.0	53
11	A reduced finite difference scheme based on singular value decomposition and proper orthogonal decomposition for Burgers equation. Journal of Computational and Applied Mathematics, 2009, 229, 97-107.	2.0	48
12	Numerical simulation based on POD for two-dimensional solute transport problems. Applied Mathematical Modelling, 2011, 35, 2489-2498.	4.2	41
13	A reduced stabilized mixed finite element formulation based on proper orthogonal decomposition for the nonâ€stationary Navierâ€“Stokes equations. International Journal for Numerical Methods in Engineering, 2011, 88, 31-46.	2.8	39
14	Finite element formulation based on proper orthogonal decomposition for parabolic equations. Science in China Series A: Mathematics, 2009, 52, 585-596.	0.5	38
15	A reduced finite element formulation based on proper orthogonal decomposition for Burgers equation. Applied Numerical Mathematics, 2009, 59, 1933-1946.	2.1	35
16	A reduced-order finite difference extrapolation algorithm based on POD technique for the non-stationary Navierâ€“Stokes equations. Applied Mathematical Modelling, 2013, 37, 5464-5473.	4.2	31
17	A reduced FVE formulation based on POD method and error analysis for two-dimensional viscoelastic problem. Journal of Mathematical Analysis and Applications, 2012, 385, 310-321.	1.0	30
18	An optimizing finite difference scheme based on proper orthogonal decomposition for CVD equations. International Journal for Numerical Methods in Biomedical Engineering, 2011, 27, 78-94.	2.1	29

#	Article	IF	Citations
19	A Quasi-Three-Dimensional Variably Saturated Groundwater Flow Model for Climate Modeling. Journal of Hydrometeorology, 2012, 13, 27-46.	1.9	28
20	A reduced-order finite volume element formulation based on POD method and numerical simulation for two-dimensional solute transport problems. Mathematics and Computers in Simulation, 2013, 89, 50-68.	4.4	28
21	Reduced-order extrapolation spectral-finite difference scheme based on POD method and error estimation for three-dimensional parabolic equation. Frontiers of Mathematics in China, 2015, 10, 1025-1040.	0.7	27
22	A highly efficient reduced-order extrapolated finite difference algorithm for timeâ€“space tempered fractional diffusion-wave equation. Applied Mathematics Letters, 2020, 102, 106090.	2.7	27
23	A POD reduced-order finite difference time-domain extrapolating scheme for the 2D Maxwell equations in a lossy medium. Journal of Mathematical Analysis and Applications, 2016, 444, 433-451.	1.0	25
24	A reduced-order extrapolated Crankâ€“Nicolson finite spectral element method based on POD for the 2D non-stationary Boussinesq equations. Journal of Mathematical Analysis and Applications, 2019, 471, 564-583.	1.0	25
25	A reducedâ€order extrapolated Crankâ€“Nicolson collocation spectral method based on proper orthogonal decomposition for the twoâ€dimensional viscoelastic wave equations. Numerical Methods for Partial Differential Equations, 2020, 36, 49-65.	3.6	25
26	A reduced-order extrapolation central difference scheme based on POD for two-dimensional fourth-order hyperbolic equations. Applied Mathematics and Computation, 2016, 289, 396-408.	2.2	24
27	A reduced-order extrapolated technique about the unknown coefficient vectors of solutions in the finite element method for hyperbolic type equation. Applied Numerical Mathematics, 2020, 158, 123-133.	2.1	24
28	A reduced-order Crankâ€“Nicolson finite volume element formulation based on POD method for parabolic equations. Applied Mathematics and Computation, 2013, 219, 5887-5900.	2.2	22
29	Reduced-order finite difference extrapolation model based on proper orthogonal decomposition for two-dimensional shallow water equations including sediment concentration. Journal of Mathematical Analysis and Applications, 2015, 429, 901-923.	1.0	21
30	A reduced-order extrapolation technique for solution coefficient vectors in the mixed finite element method for the 2D nonlinear Rosenau equation. Journal of Mathematical Analysis and Applications, 2020, 485, 123761.	1.0	21
31	A POD-based reduced-order Crankâ€“Nicolson finite volume element extrapolating algorithm for 2D Sobolev equations. Mathematics and Computers in Simulation, 2018, 146, 118-133.	4.4	20
32	Proper orthogonal decomposition reduced-order extrapolation continuous space-time finite element method for the two-dimensional unsteady Stokes equation. Journal of Mathematical Analysis and Applications, 2019, 475, 123-138.	1.0	20
33	A reduced-order extrapolated finite difference iterative method for the Riemann-Liouville tempered fractional derivative equation. Applied Numerical Mathematics, 2020, 157, 307-314.	2.1	20
34	A reduced-order extrapolated Crankâ€“Nicolson finite spectral element method for the 2D non-stationary Navier-Stokes equations about vorticity-stream functions. Applied Numerical Mathematics, 2020, 147, 161-173.	2.1	19
35	The Reduced-Order Extrapolating Method about the Crank-Nicolson Finite Element Solution Coefficient Vectors for Parabolic Type Equation. Mathematics, 2020, 8, 1261.	2.2	19
36	A fully discrete stabilized mixed finite volume element formulation for the non-stationary conductionâ€“convection problem. Journal of Mathematical Analysis and Applications, 2013, 404, 71-85.	1.0	17

#	Article	IF	Citations
37	A reducedâ€•order extrapolating spaceâ€“time continuous finite element method for the 2D Sobolev equation. Numerical Methods for Partial Differential Equations, 2020, 36, 1446-1459.	3.6	17
38	A space-time continuous finite element method for 2D viscoelastic wave equation. Boundary Value Problems, 2016, 2016, .	0.7	16
39	A reduced-order extrapolated finite difference iterative scheme based on POD method for 2D Sobolev equation. Applied Mathematics and Computation, 2018, 329, 374-383.	2.2	16
40	A POD-BASED REDUCED-ORDER STABILIZED CRANKâ€“NICOLSON MFE FORMULATION FOR THE NON-STATIONARY PARABOLIZED NAVIERâ€“STOKES EQUATIONS. Mathematical Modelling and Analysis, 2015, 20, 346-368.	1.5	15
41	A new spaceâ€“time continuous Galerkin method with mesh modification for Sobolev equations. Journal of Mathematical Analysis and Applications, 2016, 440, 86-105.	1.0	15
42	Numerical simulation based on two-directional freeze and thaw algorithm for thermal diffusion model. Applied Mathematics and Mechanics (English Edition), 2016, 37, 1467-1478.	3.6	15
43	A reducedâ€•order extrapolated natural boundary element method based on POD for the 2D hyperbolic equation in unbounded domain. Mathematical Methods in the Applied Sciences, 2019, 42, 4273-4291.	2.3	15
44	A reduced-order LSMFE formulation based on POD method and implementation of algorithm for parabolic equations. Finite Elements in Analysis and Design, 2012, 60, 1-12.	3.2	14
45	An optimizing implicit difference scheme based on proper orthogonal decomposition for the twoâ€•dimensional unsaturated soil water flow equation. International Journal for Numerical Methods in Fluids, 2012, 68, 1324-1340.	1.6	14
46	A reduced second-order time accurate finite element formulation based on POD for parabolic equations. Scientia Sinica Mathematica, 2011, 41, 447-460.	0.2	14
47	Proper orthogonal decomposition-based reduced-order stabilized mixed finite volume element extrapolating model for the nonstationary incompressible Boussinesq equations. Journal of Mathematical Analysis and Applications, 2015, 425, 259-280.	1.0	13
48	A REDUCED-ORDER EXTRAPOLATION SPECTRAL-FINITE DIFFERENCE SCHEME BASED ON THE POD METHOD FOR 2D SECOND-ORDER HYPERBOLIC EQUATIONS. Mathematical Modelling and Analysis, 2017, 22, 569-586.	1.5	13
49	Prediction of water table depths under soil water-groundwater interaction and stream water conveyance. Science China Earth Sciences, 2011, 54, 420-430.	5.2	12
50	The reduced-order method of continuous space-time finite element scheme for the non-stationary incompressible flows. Journal of Computational Physics, 2022, 456, 111044.	3.8	12
51	A POD-based reduced-order TSCFE extrapolation iterative format for two-dimensional heat equations. Boundary Value Problems, 2015, 2015, .	0.7	11
52	A finite volume element formulation and error analysis for the non-stationary conductionâ€“convection problem. Journal of Mathematical Analysis and Applications, 2012, 396, 864-879.	1.0	10
53	A POD-based reduced-order finite difference extrapolating model with fully second-order accuracy for non-stationary Stokes equations. International Journal of Computational Fluid Dynamics, 2014, 28, 428-436.	1.2	10
54	A pod reduced-order spdmfe extrapolating algorithm for hyperbolic equations. Acta Mathematica Scientia, 2014, 34, 872-890.	1.0	10

#	Article	IF	Citations
55	A reduced-order extrapolation algorithm based on SFVE method and POD technique for non-stationary Stokes equations. Applied Mathematics and Computation, 2014, 247, 976-995.	2.2	10
56	Reduced-order proper orthogonal decomposition extrapolating finite volume element format for two-dimensional hyperbolic equations. Applied Mathematics and Mechanics (English Edition), 2017, 38, 289-310.	3.6	10
57	The reduced-dimension technique for the unknown solution coefficient vectors in the Crankâ€“Nicolson finite element method for the Sobolev equation. Journal of Mathematical Analysis and Applications, 2022, 513, 126207.	1.0	10
58	A reduced-order FVE extrapolation algorithm based on proper orthogonal decomposition technique and its error analysis for Sobolev equation. Japan Journal of Industrial and Applied Mathematics, 2015, 32, 119-142.	0.9	9
59	Analysis of a spaceâ€“time continuous Galerkin method for convection-dominated Sobolev equations. Computers and Mathematics With Applications, 2017, 73, 1643-1656.	2.7	9
60	A reduced-order extrapolated model based on splitting implicit finite difference scheme and proper orthogonal decomposition for the fourth-order nonlinear Rosenau equation. Applied Numerical Mathematics, 2021, 162, 192-200.	2.1	9
61	A Reduced-Order MFE Formulation Based on POD Method for Parabolic Equations. Acta Mathematica Scientia, 2013, 33, 1471-1484.	1.0	8
62	A New Reduced-Order fve Algorithm Based on POD Method for Viscoelastic Equations. Acta Mathematica Scientia, 2013, 33, 1076-1098.	1.0	8
63	Optimized finite difference iterative scheme based on POD technique for 2D viscoelastic wave equation. Applied Mathematics and Mechanics (English Edition), 2017, 38, 1721-1732.	3.6	8
64	A reduced-order SMFVE extrapolation algorithm based on POD technique and CN method for the non-stationary Navier-Stokes equations. Discrete and Continuous Dynamical Systems - Series B, 2015, 20, 1189-1212.	0.9	8
65	The Dimensionality Reduction of Crankâ€“Nicolson Mixed Finite Element Solution Coefficient Vectors for the Unsteady Stokes Equation. Mathematics, 2022, 10, 2273.	2.2	8
66	A POD-based reduced-order finite difference extrapolating model for the non-stationary incompressible Boussinesq equations. Advances in Difference Equations, 2014, 2014, .	3.5	7
67	A stabilized mixed finite element formulation for the non-stationary incompressible boussinesq equations. Acta Mathematica Scientia, 2016, 36, 385-393.	1.0	7
68	A natural boundary element method for the Sobolev equation in the 2D unbounded domain. Boundary Value Problems, 2017, 2017, .	0.7	7
69	An optimized finite difference Crank-Nicolson iterative scheme for the 2D Sobolev equation. Advances in Difference Equations, 2017, 2017, .	3.5	7
70	A reduced-order extrapolating collocation spectral method based on POD for the 2D Sobolev equations. Boundary Value Problems, 2019, 2019, .	0.7	7
71	The numerical simulations based on the NND finite difference scheme for shallow water wave equations including sediment concentration. Computer Methods in Applied Mechanics and Engineering, 2015, 294, 245-258.	6.6	6
72	A highly efficient spectral-Galerkin method based on tensor product for fourth-order Steklov equation with boundary eigenvalue. Journal of Inequalities and Applications, 2016, 2016, .	1.1	6

#	Article	IF	Citations
73	An optimized SPDMFE extrapolation approach based on the POD technique for 2D viscoelastic wave equation. Boundary Value Problems, 2017, 2017, .	0.7	6
74	A spaceâ€time continuous Galerkin method with mesh modification for viscoelastic wave equations. Numerical Methods for Partial Differential Equations, 2017, 33, 1183-1207.	3.6	6
75	A PODâ€basedâ€“optimized finite difference CNâ€extrapolated implicit scheme for the 2D viscoelastic wave equation^{â€}. Mathematical Methods in the Applied Sciences, 2017, 40, 6880-6890.	2.3	6
76	A Crankâ€“Nicolson collocation spectral method for the two-dimensional telegraph equations. Journal of Inequalities and Applications, 2018, 2018, 137.	1.1	6
77	The Crankâ€“Nicolson finite spectral element method and numerical simulations for 2D nonâ€stationary Navierâ€“Stokes equations. Mathematical Methods in the Applied Sciences, 2020, 43, 2276-2288.	2.3	6
78	A reduced-order extrapolation algorithm of fully second-order finite difference scheme for non-stationary Burgers equation. Scientia Sinica Mathematica, 2012, 42, 1171-1183.	0.2	6
79	A reduced-order extrapolating Crank-Nicolson finite difference scheme for the Riesz space fractional order equations with a nonlinear source function and delay. Journal of Nonlinear Science and Applications, 2018, 11, 672-682.	1.0	6
80	A Crankâ€“Nicolson collocation spectral method for the twoâ€dimensional viscoelastic wave equation. Numerical Methods for Partial Differential Equations, 2019, 35, 1080-1092.	3.6	5
81	A New Finite Volume Element Formulation for the Non-Stationary Navier-Stokes Equations. Advances in Applied Mathematics and Mechanics, 2014, 6, 615-636.	1.2	4
82	A high accuracy spectral method based on min/max principle for biharmonic eigenvalue problems on a spherical domain. Journal of Mathematical Analysis and Applications, 2016, 439, 385-395.	1.0	4
83	A stabilized MFE reduced-order extrapolation model based on POD for the 2D unsteady conduction-convection problem. Journal of Inequalities and Applications, 2017, 2017, 124.	1.1	4
84	An optimized FD extrapolated scheme based on POD for the 2D integro-differential equation of parabolic type. Journal of Integral Equations and Applications, 2020, 32, .	0.6	4
85	A Crankâ€“Nicolson finite spectral element method for the 2D non-stationary Stokes equations about vorticityâ€“stream functions. Journal of Inequalities and Applications, 2018, 2018, 320.	1.1	3
86	A collocation spectral method for two-dimensional Sobolev equations. Boundary Value Problems, 2018, 2018, .	0.7	3
87	A 3D OpenFOAM based finite volume solver for incompressible Oldroyd-B model with infinity relaxation time. Communications in Nonlinear Science and Numerical Simulation, 2019, 78, 104876.	3.3	3
88	A reduced-order extrapolated approach to solution coefficient vectors in the Crank-Nicolson finite element method for the uniform transmission line equation. Journal of Mathematical Analysis and Applications, 2021, 493, 124511.	1.0	3
89	A reduced-order extrapolated finite difference iterative scheme for uniform transmission line equation. Applied Numerical Mathematics, 2022, 172, 514-524.	2.1	3
90	A POD-based reduced-order FD extrapolating algorithm for traffic flow. Advances in Difference Equations, 2014, 2014, .	3.5	2

#	Article	IF	Citations
91	An effective finite element Newton method for 2D p-Laplace equation with particular initial iterative function. Journal of Inequalities and Applications, 2016, 2016, .	1.1	2
92	Foreword and Introduction. , 2019, , xi-xvi.		2
93	A spectral element Crankâ€“Nicolson model to the 2D unsteady conductionâ€“convection problems about vorticity and stream functions. Journal of Inequalities and Applications, 2020, 2020, .	1.1	2
94	A stabilized Crank-Nicolson mixed finite volume element formulation for the non-stationary parabolized Navier-Stokes equations. Acta Mathematica Scientia, 2015, 35, 1055-1066.	1.0	1
95	A Crank-Nicolson finite volume element method for two-dimensional Sobolev equations. Journal of Inequalities and Applications, 2016, 2016, .	1.1	1
96	An optimized finite element extrapolating method for 2D viscoelastic wave equation. Journal of Inequalities and Applications, 2017, 2017, 218.	1.1	1
97	A reduced order extrapolating technique of solution coefficient vectors to collocation spectral method for telegraph equation. Advances in Difference Equations, 2020, 2020, .	3.5	1
98	The Crankâ€“Nicolson finite element method for the 2D uniform transmission line equation. Journal of Inequalities and Applications, 2020, 2020, .	1.1	1