Zhonghua Qiao

List of Publications by Year
in descending order

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58 papers	1,794 citations	279701 23 h-index	276775 41 g-index
58 all docs	58 docs citations	58 times ranked	505 citing authors

#	Article	IF	Citations
1	Stabilization parameter analysis of a second-order linear numerical scheme for the nonlocal Cahnâ€“Hilliard equation. IMA Journal of Numerical Analysis, 2023, 43, 1089-1114.	1.5	7
2	Two-Phase Segmentation for Intensity Inhomogeneous Images by the Allen–Cahn Local Binary Fitting Model. SIAM Journal of Scientific Computing, 2022, 44, B177-B196.	1.3	7
3	Stabilized Exponential-SAV Schemes Preserving Energy Dissipation Law and Maximum Bound Principle for The Allenâ€“Cahn Type Equations. Journal of Scientific Computing, 2022, 92, .	1.1	17
4	Strong approximation of monotone stochastic partial differential equations driven by multiplicative noise. Stochastics and Partial Differential Equations: Analysis and Computations, 2021, 9, 559-602.	0.5	5
5	A meshless collocation method with a global refinement strategy for reaction-diffusion systems on evolving domains. Discrete and Continuous Dynamical Systems - Series B, 2021, .	0.5	0
6	A Novel Lattice Boltzmann Model for Fourth Order Nonlinear Partial Differential Equations. Journal of Scientific Computing, 2021, 87, 1.	1.1	2
7	Maximum bound principle preserving integrating factor Rungeâ€“Kutta methods for semilinear parabolic equations. Journal of Computational Physics, 2021, 439, 110405.	1.9	37
8	Maximum Bound Principles for a Class of Semilinear Parabolic Equations and Exponential Time-Differencing Schemes. SIAM Review, 2021, 63, 317-359.	4.2	107
9	Convergence analysis for a stabilized linear semi-implicit numerical scheme for the nonlocal Cahnâ€“Hilliard equation. Mathematics of Computation, 2021, 90, 171-188.	1.1	35
10	Strong approximation of monotone stochastic partial differential equations driven by white noise. IMA Journal of Numerical Analysis, 2020, 40, 1074-1093.	1.5	26
11	Thermodynamic modeling of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.svg"><mml:mrow><mml:msub><mml:mtext>CO</mml:mtext><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:m solubility in saline water using NVT flash with the cubic-Plus-association equation of state. Fluid Phase Equilibria, 2020, 520, 112657.	1.4	16
12	Unconditionally stable, efficient and robust numerical simulation of isothermal compositional grading by gravity. Journal of Computational Science, 2020, 43, 101109.	1.5	2
13	Efficient numerical methods for phase-field equations. Scientia Sinica Mathematica, 2020, 50, 775.	0.1	14
14	A multiple-relaxation-time lattice Boltzmann method with Beam-Warming scheme for a coupled chemotaxis-fluid model. Electronic Research Archive, 2020, 28, 1207-1225.	0.4	3
15	A Third Order Exponential Time Differencing Numerical Scheme for No-Slope-Selection Epitaxial Thin Film Model with Energy Stability. Journal of Scientific Computing, 2019, 81, 154-185.	1.1	74
16	Thermodynamic-consistent multiple-relaxation-time lattice Boltzmann equation model for two-phase hydrocarbon fluids with Peng-Robinson equation of state. International Journal of Heat and Mass Transfer, 2019, 141, 1216-1226.	2.5	10
17	Maximum Principle Preserving Exponential Time Differencing Schemes for the Nonlocal Allen–Cahn Equation. SIAM Journal on Numerical Analysis, 2019, 57, 875-898.	1.1	141
18	Resolving Knudsen layer by high-order moment expansion. Continuum Mechanics and Thermodynamics, 2019, 31, 1313-1337.	1.4	5

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19	A New Multi-Component Diffuse Interface Model with Peng-Robinson Equation of State and its Scalar Auxiliary Variable (SAV) Approach. Communications in Computational Physics, 2019, 26, 1597-1616.	0.7	17
20	Energy stability and error estimates of exponential time differencing schemes for the epitaxial growth model without slope selection. Mathematics of Computation, 2018, 87, 1859-1885.	1.1	72
21	Stabilized linear semi-implicit schemes for the nonlocal Cahnâ€“Hilliard equation. Journal of Computational Physics, 2018, 363, 39-54.	1.9	73
22	Mass conservative lattice Boltzmann scheme for a three-dimensional diffuse interface model with Peng-Robinson equation of state. Physical Review E, 2018, 98, 023306.	0.8	6
23	A Componentwise Convex Splitting Scheme for Diffuse Interface Models with Van der Waals and Peng--Robinson Equations of State. SIAM Journal of Scientific Computing, 2017, 39, B1-B28.	1.3	36
24	Convergence of a Fast Explicit Operator Splitting Method for the Epitaxial Growth Model with Slope Selection. SIAM Journal on Numerical Analysis, 2017, 55, 265-285.	1.1	39
25	Gradient bounds for a thin film epitaxy equation. Journal of Differential Equations, 2017, 262, 1720-1746.	1.1	12
26	On Second Order Semi-implicit Fourier Spectral Methods for 2D Cahnâ€“Hilliard Equations. Journal of Scientific Computing, 2017, 70, 301-341.	1.1	100
27	Stability and Convergence Analysis of Second-Order Schemes for a Diffuse Interface Model with Peng-Robinson Equation of State. Journal of Computational Mathematics, 2017, 35, 737-765.	0.2	6
28	On the stabilization size of semi-implicit Fourier-spectral methods for 3D Cahnâ€“Hilliard equations. Communications in Mathematical Sciences, 2017, 15, 1489-1506.	0.5	26
29	Modeling Pore-scale Oil-gas Systems Using Gradient Theory with Peng-robinson Equation of State. Procedia Computer Science, 2016, 80, 1364-1373.	1.2	2
30	Acceleration for microflow simulations of high-order moment models by using lower-order model correction. Journal of Computational Physics, 2016, 327, 225-244.	1.9	2
31	Extended Hydrodynamic Models and Multigrid Solver of a Silicon Diode Simulation. Communications in Computational Physics, 2016, 20, 551-582.	0.7	3
32	An unconditionally energy stable finite difference scheme for a stochastic Cahn-Hilliard equation. Science China Mathematics, 2016, 59, 1815-1834.	0.8	20
33	Characterizing the Stabilization Size for Semi-Implicit Fourier-Spectral Method to Phase Field Equations. SIAM Journal on Numerical Analysis, 2016, 54, 1653-1681.	1.1	85
34	Error Analysis of a Mixed Finite Element Method for the Molecular Beam Epitaxy Model. SIAM Journal on Numerical Analysis, 2015, 53, 184-205.	1.1	16
35	Stability and convergence of second-order schemes for the nonlinear epitaxial growth model without slope selection. Mathematics of Computation, 2014, 84, 653-674.	1.1	39
36	Two-Phase Fluid Simulation Using a Diffuse Interface Model with Peng--Robinson Equation of State. SIAM Journal of Scientific Computing, 2014, 36, B708-B728.	1.3	69

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37	Adaptive moving grid methods for two-phase flow in porous media. Journal of Computational and Applied Mathematics, 2014, 265, 139-150.	1.1	14
38	Dimension-Reduced Hyperbolic Moment Method for the Boltzmann Equation with BGK-Type Collision. Communications in Computational Physics, 2014, 15, 1368-1406.	0.7	17
39	C 0-Nonconforming Triangular Prism Elements for the Three-Dimensional Fourth Order Elliptic Problem. Journal of Scientific Computing, 2013, 55, 645-658.	1.1	9
40	$$C^{0}$$ -nonconforming tetrahedral and cuboid elements for the three-dimensional fourth order elliptic problem. Numerische Mathematik, 2013, 124, 99-119.	0.9	23
41	Uniformly convergent H(div)-conforming rectangular elements for Darcy-Stokes problem. Science China Mathematics, 2013, 56, 2723-2736.	0.8	11
42	Globally hyperbolic regularized moment method with applications to microflow simulation. Computers and Fluids, 2013, 81, 95-109.	1.3	20
43	An adaptive time-stepping strategy for solving the phase field crystal model. Journal of Computational Physics, 2013, 249, 204-215.	1.9	83
44	The Sensitivity Analysis for the Flow Past Obstacles Problem with Respect to the Reynolds Number. Advances in Applied Mathematics and Mechanics, 2012, 4, 21-35.	0.7	4
45	An Adaptive Time-Stepping Strategy for the Cahn-Hilliard Equation. Communications in Computational Physics, 2012, 11, 1261-1278.	0.7	77
46	NRxx Simulation of Microflows with Shakhov Model. SIAM Journal of Scientific Computing, 2012, 34, A339-A369.	1.3	27
47	A Fast Preconditioned Iterative Algorithm for the Electromagnetic Scattering from a Large Cavity. Journal of Scientific Computing, 2012, 53, 435-450.	1.1	10
48	The stability and convergence of two linearized finite difference schemes for the nonlinear epitaxial growth model. Numerical Methods for Partial Differential Equations, 2012, 28, 1893-1915.	2.0	30
49	Moving Finite Element Simulations for Reaction-Diffusion Systems. Advances in Applied Mathematics and Mechanics, 2012, 4, 365-381.	0.7	16
50	An Adaptive Time-Stepping Strategy for the Molecular Beam Epitaxy Models. SIAM Journal of Scientific Computing, 2011, 33, 1395-1414.	1.3	143
51	Superconvergence and Extrapolation Analysis of a Nonconforming Mixed Finite Element Approximation for Time-Harmonic Maxwellâ€™s Equations. Journal of Scientific Computing, 2011, 46, 1-19.	1.1	41
52	Extrapolation of Mixed Finite Element Approximations for the Maxwell Eigenvalue Problem. Numerical Mathematics, 2011, 4, 379-395.	0.6	4
53	High Order Compact Finite Difference Schemes for the Helmholtz Equation with Discontinuous Coefficients. Journal of Computational Mathematics, 2011, 29, 324-340.	0.2	29
54	A Fast High Order Method for Electromagnetic Scattering by Large Open Cavities. Journal of Computational Mathematics, 2011, 29, 287-304.	0.2	25

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55	Multisymplectic Preissman scheme for the time-domain Maxwellâ€™s equations. Journal of Mathematical Physics, 2009, 50, 033510.	0.5	14
56	A high order compact MAC finite difference scheme for the Stokes equations: Augmented variable approach. Journal of Computational Physics, 2008, 227, 8177-8190.	1.9	34
57	A domain decomposition solver for acoustic scattering by elastic objects in layered media. Journal of Computational Physics, 2008, 227, 8685-8698.	1.9	21
58	A Finite Difference Method and Analysis for 2D Nonlinear Poissonâ€“Boltzmann Equations. Journal of Scientific Computing, 2007, 30, 61-81.	1.1	11