

Tao Tang

List of Publications by Year in descending order

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103
papers

5,987
citations

87723

38
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74018

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106
all docs

106
docs citations

106
times ranked

2429
citing authors

#	ARTICLE	IF	CITATIONS
1	Analysis of the second-order BDF scheme with variable steps for the molecular beam epitaxial model without slope selection. <i>Science China Mathematics</i> , 2021, 64, 887-902.	0.8	27
2	An Energy Stable and Maximum Bound Preserving Scheme with Variable Time Steps for Time Fractional Allen-Cahn Equation. <i>SIAM Journal of Scientific Computing</i> , 2021, 43, A3503-A3526.	1.3	39
3	On Energy Stable, Maximum-Principle Preserving, Second-Order BDF Scheme with Variable Steps for the Allen-Cahn Equation. <i>SIAM Journal on Numerical Analysis</i> , 2020, 58, 2294-2314.	1.1	54
4	Fast Fourier-like Mapped Chebyshev Spectral-Galerkin Methods for PDEs with Integral Fractional Laplacian in Unbounded Domains. <i>SIAM Journal on Numerical Analysis</i> , 2020, 58, 2435-2464.	1.1	30
5	A second-order and nonuniform time-stepping maximum-principle preserving scheme for time-fractional Allen-Cahn equations. <i>Journal of Computational Physics</i> , 2020, 414, 109473.	1.9	89
6	Rational Spectral Methods for PDEs Involving Fractional Laplacian in Unbounded Domains. <i>SIAM Journal of Scientific Computing</i> , 2020, 42, A585-A611.	1.3	35
7	Efficient Stochastic Galerkin Methods for Maxwell's Equations with Random Inputs. <i>Journal of Scientific Computing</i> , 2019, 80, 248-267.	1.1	6
8	On Energy Dissipation Theory and Numerical Stability for Time-Fractional Phase-Field Equations. <i>SIAM Journal of Scientific Computing</i> , 2019, 41, A3757-A3778.	1.3	90
9	ON EFFECTIVE NUMERICAL METHODS FOR PHASE-FIELD MODELS. , 2019, , .		0
10	On Robust and Adaptive Finite Volume Methods for Steady Euler Equations. <i>Springer Proceedings in Mathematics and Statistics</i> , 2018, , 21-40.	0.1	0
11	WebIntera-classroom: an interaction-aware virtual learning environment for augmenting learning interactions. <i>Interactive Learning Environments</i> , 2017, 25, 792-807.	4.4	7
12	Numerical Analysis of Fully Discretized Crank-Nicolson Scheme for Fractional-in-Space Allen-Cahn Equations. <i>Journal of Scientific Computing</i> , 2017, 72, 1214-1231.	1.1	101
13	Deferred Correction Methods for Forward Backward Stochastic Differential Equations. <i>Numerical Mathematics</i> , 2017, 10, 222-242.	0.6	15
14	Gradient bounds for a thin film epitaxy equation. <i>Journal of Differential Equations</i> , 2017, 262, 1720-1746.	1.1	12
15	Blowup of Volterra Integro-Differential Equations and Applications to Semi-Linear Volterra Diffusion Equations. <i>Numerical Mathematics</i> , 2017, 10, 737-759.	0.6	8
16	Parameter-Free Time Adaptivity Based on Energy Evolution for the Cahn-Hilliard Equation. <i>Communications in Computational Physics</i> , 2016, 19, 1542-1563.	0.7	18
17	Numerical Blow-Up of Nonlinear Parabolic Integro-Differential Equations on Unbounded Domain. <i>Journal of Scientific Computing</i> , 2016, 68, 1281-1298.	1.1	7
18	Characterizing the Stabilization Size for Semi-Implicit Fourier-Spectral Method to Phase Field Equations. <i>SIAM Journal on Numerical Analysis</i> , 2016, 54, 1653-1681.	1.1	85

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19	Numerical Solutions for Weakly Singular Volterra Integral Equations Using Chebyshev and Legendre Pseudo-Spectral Galerkin Methods. <i>Journal of Scientific Computing</i> , 2016, 67, 43-64.	1.1	31
20	On the maximum principle preserving schemes for the generalized Allen-Cahn equation. <i>Communications in Mathematical Sciences</i> , 2016, 14, 1517-1534.	0.5	110
21	Error Analysis of a Mixed Finite Element Method for the Molecular Beam Epitaxy Model. <i>SIAM Journal on Numerical Analysis</i> , 2015, 53, 184-205.	1.1	16
22	Long Time Numerical Simulations for Phase-Field Problems Using p -Adaptive Spectral Deferred Correction Methods. <i>SIAM Journal of Scientific Computing</i> , 2015, 37, A271-A294.	1.3	70
23	Fast and stable explicit operator splitting methods for phase-field models. <i>Journal of Computational Physics</i> , 2015, 303, 45-65.	1.9	32
24	On Discrete Least-Squares Projection in Unbounded Domain with Random Evaluations and its Application to Parametric Uncertainty Quantification. <i>SIAM Journal of Scientific Computing</i> , 2014, 36, A2272-A2295.	1.3	25
25	Adaptive moving grid methods for two-phase flow in porous media. <i>Journal of Computational and Applied Mathematics</i> , 2014, 265, 139-150.	1.1	14
26	High-Order Convergence of Spectral Deferred Correction Methods on General Quadrature Nodes. <i>Journal of Scientific Computing</i> , 2013, 56, 1-13.	1.1	26
27	An adaptive time stepping method with efficient error control for second-order evolution problems. <i>Science China Mathematics</i> , 2013, 56, 2753-2771.	0.8	4
28	Parallel in Time Algorithm with Spectral-Subdomain Enhancement for Volterra Integral Equations. <i>SIAM Journal on Numerical Analysis</i> , 2013, 51, 1735-1756.	1.1	33
29	Stabilized Crank-Nicolson/Adams-Bashforth Schemes for Phase Field Models. <i>East Asian Journal on Applied Mathematics</i> , 2013, 3, 59-80.	0.4	82
30	Nonlinear stability of the implicit-explicit methods for the Allen-Cahn equation. <i>Inverse Problems and Imaging</i> , 2013, 7, 679-695.	0.6	61
31	Convergence Analysis of Spectral Galerkin Methods for Volterra Type Integral Equations. <i>Journal of Scientific Computing</i> , 2012, 53, 414-434.	1.1	76
32	Galerkin Methods for Stochastic Hyperbolic Problems Using Bi-Orthogonal Polynomials. <i>Journal of Scientific Computing</i> , 2012, 51, 274-292.	1.1	16
33	Convergence analysis of Jacobi spectral collocation methods for Abel-Volterra integral equations of second kind. <i>Frontiers of Mathematics in China</i> , 2012, 7, 69-84.	0.4	54
34	Convergence analysis of Jacobi spectral collocation methods for Abel-Volterra integral equations of second kind. , 2012, 7, 69.		1
35	Moving Finite Element Simulations for Reaction-Diffusion Systems. <i>Advances in Applied Mathematics and Mechanics</i> , 2012, 4, 365-381.	0.7	16
36	Spectral Methods. <i>Springer Series in Computational Mathematics</i> , 2011, , .	0.1	865

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37	An Adaptive Time-Stepping Strategy for the Molecular Beam Epitaxy Models. <i>SIAM Journal of Scientific Computing</i> , 2011, 33, 1395-1414.	1.3	143
38	A Robust WENO Type Finite Volume Solver for Steady Euler Equations on Unstructured Grids. <i>Communications in Computational Physics</i> , 2011, 9, 627-648.	0.7	301
39	A Speed-Up Strategy for Finite Volume WENO Schemes for Hyperbolic Conservation Laws. <i>Journal of Scientific Computing</i> , 2011, 46, 359-378.	1.1	4
40	Note on coefficient matrices from stochastic Galerkin methods for random diffusion equations. <i>Journal of Computational Physics</i> , 2010, 229, 8225-8230.	1.9	1
41	Convergence analysis of the Jacobi spectral-collocation methods for Volterra integral equations with a weakly singular kernel. <i>Mathematics of Computation</i> , 2010, 79, 147-147.	1.1	207
42	A robust high-order residual distribution type scheme for steady Euler equations on unstructured grids. <i>Journal of Computational Physics</i> , 2010, 229, 1681-1697.	1.9	14
43	Convergence Analysis for Stochastic Collocation Methods to Scalar Hyperbolic Equations with a Random Wave Speed. <i>Communications in Computational Physics</i> , 2010, 8, 226-248.	0.7	31
44	Simulating Two-phase Viscoelastic Flows Using Moving Finite Element Methods. <i>Communications in Computational Physics</i> , 2010, 7, 333-349.	0.7	19
45	REGULARITY AND GLOBAL STRUCTURE OF SOLUTIONS TO HAMILTONIAN JACOBI EQUATIONS II: CONVEX INITIAL DATA. <i>Journal of Hyperbolic Differential Equations</i> , 2009, 06, 709-723.	0.3	1
46	Numerical analysis for functional differential and integral equations. <i>Frontiers of Mathematics in China</i> , 2009, 4, 1-2.	0.4	1
47	Spectral methods for pantograph-type differential and integral equations with multiple delays. <i>Frontiers of Mathematics in China</i> , 2009, 4, 49-61.	0.4	74
48	Spectral methods for weakly singular Volterra integral equations with smooth solutions. <i>Journal of Computational and Applied Mathematics</i> , 2009, 233, 938-950.	1.1	131
49	Efficient computation of dendritic growth with r-adaptive finite element methods. <i>Journal of Computational Physics</i> , 2008, 227, 5984-6000.	1.9	31
50	REGULARITY AND GLOBAL STRUCTURE OF SOLUTIONS TO HAMILTONIAN JACOBI EQUATIONS I: CONVEX HAMILTONIANS. <i>Journal of Hyperbolic Differential Equations</i> , 2008, 05, 663-680.	0.3	6
51	ON THE PIECEWISE SMOOTHNESS OF ENTROPY SOLUTIONS TO SCALAR CONSERVATION LAWS FOR A LARGER CLASS OF INITIAL DATA. <i>Journal of Hyperbolic Differential Equations</i> , 2007, 04, 369-389.	0.3	3
52	Level Set Calculations for Incompressible Two-Phase Flows on a Dynamically Adaptive Grid. <i>Journal of Scientific Computing</i> , 2007, 31, 75-98.	1.1	12
53	Resolving the shock-induced combustion by an adaptive mesh redistribution method. <i>Journal of Computational Physics</i> , 2007, 224, 587-600.	1.9	29
54	On large time-stepping methods for the Cahn-Hilliard equation. <i>Applied Numerical Mathematics</i> , 2007, 57, 616-628.	1.2	166

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55	Stability Analysis of Large Time-Stepping Methods for Epitaxial Growth Models. <i>SIAM Journal on Numerical Analysis</i> , 2006, 44, 1759-1779.	1.1	242
56	A simple moving mesh method for one- and two-dimensional phase-field equations. <i>Journal of Computational and Applied Mathematics</i> , 2006, 190, 252-269.	1.1	21
57	Resolving small-scale structures in Boussinesq convection by adaptive grid methods. <i>Journal of Computational and Applied Mathematics</i> , 2006, 195, 274-291.	1.1	1
58	Moving Mesh Discontinuous Galerkin Method for Hyperbolic Conservation Laws. <i>Journal of Scientific Computing</i> , 2006, 27, 347-363.	1.1	20
59	Moving Mesh Methods for Singular Problems on a Sphere Using Perturbed Harmonic Mappings. <i>SIAM Journal of Scientific Computing</i> , 2006, 28, 1490-1508.	1.3	6
60	Second-order Godunov-type scheme for reactive flow calculations on moving meshes. <i>Journal of Computational Physics</i> , 2005, 206, 48-80.	1.9	35
61	A new parallel strategy for two-dimensional incompressible flow simulations using pseudo-spectral methods. <i>Journal of Computational Physics</i> , 2005, 210, 325-341.	1.9	8
62	Moving Mesh Finite Element Methods for the Incompressible Navier-Stokes Equations. <i>SIAM Journal of Scientific Computing</i> , 2005, 26, 1036-1056.	1.3	63
63	Hermite Spectral Methods with a Time-Dependent Scaling for Parabolic Equations in Unbounded Domains. <i>SIAM Journal on Numerical Analysis</i> , 2005, 43, 58-75.	1.1	59
64	Moving mesh methods with locally varying time steps. <i>Journal of Computational Physics</i> , 2004, 200, 347-367.	1.9	55
65	A gas-kinetic scheme for shallow-water equations with source terms. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 2004, 55, 365-382.	0.7	39
66	A Posteriori Error Estimates for Discontinuous Galerkin Time-Stepping Method for Optimal Control Problems Governed by Parabolic Equations. <i>SIAM Journal on Numerical Analysis</i> , 2004, 42, 1032-1061.	1.1	61
67	An adaptive mesh redistribution method for nonlinear Hamilton-Jacobi equations in two- and three-dimensions. <i>Journal of Computational Physics</i> , 2003, 188, 543-572.	1.9	50
68	Numerical Challenges for Resolving Spike Dynamics for Two One-Dimensional Reaction-Diffusion Systems. <i>Studies in Applied Mathematics</i> , 2003, 111, 41-84.	1.1	14
69	Adaptive Mesh Methods for One- and Two-Dimensional Hyperbolic Conservation Laws. <i>SIAM Journal on Numerical Analysis</i> , 2003, 41, 487-515.	1.1	233
70	Fractional Rate of Convergence for Viscous Approximation to Nonconvex Conservation Laws. <i>SIAM Journal on Mathematical Analysis</i> , 2003, 35, 98-122.	0.9	8
71	A multilevel successive iteration method for nonlinear elliptic problems. <i>Mathematics of Computation</i> , 2003, 73, 525-540.	1.1	30
72	Adaptive Mesh Redistribution Method Based on Godunov's Scheme. <i>Communications in Mathematical Sciences</i> , 2003, 1, 152-179.	0.5	30

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73	An adaptive mesh redistribution algorithm for convection-dominated problems. <i>Communications on Pure and Applied Analysis</i> , 2002, 1, 341-357.	0.4	19
74	Adaptive Finite Element Approximation for Distributed Elliptic Optimal Control Problems. <i>SIAM Journal on Control and Optimization</i> , 2002, 41, 1321-1349.	1.1	216
75	A Moving Mesh Finite Element Algorithm for Singular Problems in Two and Three Space Dimensions. <i>Journal of Computational Physics</i> , 2002, 177, 365-393.	1.9	93
76	Error analysis for a Galerkin-spectral method with coordinate transformation for solving singularly perturbed problems. <i>Applied Numerical Mathematics</i> , 2001, 38, 315-345.	1.2	36
77	Moving Mesh Methods in Multiple Dimensions Based on Harmonic Maps. <i>Journal of Computational Physics</i> , 2001, 170, 562-588.	1.9	171
78	On the Piecewise Smooth Solutions to Non-homogeneous Scalar Conservation Laws. <i>Journal of Differential Equations</i> , 2001, 175, 27-50.	1.1	1
79	On Mixed Error Estimates for Elliptic Obstacle Problems. <i>Advances in Computational Mathematics</i> , 2001, 15, 261-283.	0.8	8
80	A Compact Fourth-Order Finite Difference Scheme for Unsteady Viscous Incompressible Flows. , 2001, 16, 29-45.		48
81	Combined Hermite spectral-finite difference method for the Fokker-Planck equation. <i>Mathematics of Computation</i> , 2001, 71, 1497-1529.	1.1	56
82	On numerical entropy inequalities for a class of relaxed schemes. <i>Quarterly of Applied Mathematics</i> , 2001, 59, 391-399.	0.5	5
83	Error Estimates of Approximate Solutions for Nonlinear Scalar Conservation Laws. , 2001, , 873-882.		0
84	Pseudospectral solutions for steady motion of a viscous fluid inside a circular boundary. <i>Applied Numerical Mathematics</i> , 2000, 33, 167-173.	1.2	5
85	Title is missing!. <i>Journal of Scientific Computing</i> , 2000, 15, 173-195.	1.1	7
86	Pointwise Error Estimates for Relaxation Approximations to Conservation Laws. <i>SIAM Journal on Mathematical Analysis</i> , 2000, 32, 870-886.	0.9	33
87	On the Regularity of Approximate Solutions to Conservation Laws with Piecewise Smooth Solutions. <i>SIAM Journal on Numerical Analysis</i> , 2000, 38, 1483-1495.	1.1	4
88	Pointwise Error Estimates for Scalar Conservation Laws with Piecewise Smooth Solutions. <i>SIAM Journal on Numerical Analysis</i> , 1999, 36, 1739-1758.	1.1	31
89	Convergence Analysis for Operator-Splitting Methods Applied to Conservation Laws with Stiff Source Terms. <i>SIAM Journal on Numerical Analysis</i> , 1998, 35, 1939-1968.	1.1	21
90	Viscosity methods for piecewise smooth solutions to scalar conservation laws. <i>Mathematics of Computation</i> , 1997, 66, 495-527.	1.1	35

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91	Boundary Layer Resolving Pseudospectral Methods for Singular Perturbation Problems. SIAM Journal of Scientific Computing, 1996, 17, 430-438.	1.3	95
92	A Volterra integral type method for solving a class of nonlinear initial-boundary value problems. Numerical Methods for Partial Differential Equations, 1996, 12, 265-281.	2.0	15
93	A spectral domain decomposition approach for steady Navier-Stokes problems in circular geometries. Computers and Fluids, 1996, 25, 541-549.	1.3	13
94	A compact fourth-order finite difference scheme for the steady incompressible Navier-Stokes equations. International Journal for Numerical Methods in Fluids, 1995, 20, 1137-1151.	0.9	191
95	The Sharpness of Kuznetsov's $O(\hat{\alpha}^{\tilde{\alpha}}x)L_1$ -Error Estimate for Monotone Difference Schemes. Mathematics of Computation, 1995, 64, 581.	1.1	49
96	Error Bounds for Fractional Step Methods for Conservation Laws with Source Terms. SIAM Journal on Numerical Analysis, 1995, 32, 110-127.	1.1	33
97	Collocation methods for second-kind Volterra integral equations with weakly singular kernels. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 1994, 124, 199-210.	0.8	54
98	The Numerical Computation of Connecting Orbits in Dynamical Systems: A Rational Spectral Approach. Journal of Computational Physics, 1994, 111, 373-380.	1.9	24
99	A note on collocation methods for Volterra integro-differential equations with weakly singular kernels. IMA Journal of Numerical Analysis, 1993, 13, 93-99.	1.5	82
100	The Hermite Spectral Method for Gaussian-Type Functions. SIAM Journal of Scientific Computing, 1993, 14, 594-606.	1.3	119
101	A spectral method for the numerical solutions of a kinetic equation describing the dispersion of small particles in a turbulent flow. Journal of Computational Physics, 1992, 103, 222-230.	1.9	13
102	Superconvergence of numerical solutions to weakly singular Volterra integro-differential equations. Numerische Mathematik, 1992, 61, 373-382.	0.9	67
103	A Hermite-Type Collocation Method for the Solution of an Integral Equation with a Certain Weakly Singular Kernel. IMA Journal of Numerical Analysis, 1991, 11, 595-605.	1.5	50