

# Shidong Jiang

## List of Publications by Year in descending order

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47  
papers

906  
citations

566801

15  
h-index

476904

29  
g-index

47  
all docs

47  
docs citations

47  
times ranked

605  
citing authors

#	ARTICLE	IF	CITATIONS
1	Fast Evaluation of the Caputo Fractional Derivative and its Applications to Fractional Diffusion Equations. <i>Communications in Computational Physics</i> , 2017, 21, 650-678.	0.7	308
2	Fast evaluation of nonreflecting boundary conditions for the Schrödinger equation in one dimension. <i>Computers and Mathematics With Applications</i> , 2004, 47, 955-966.	1.4	67
3	Efficient representation of nonreflecting boundary conditions for the time-dependent Schrödinger equation in two dimensions. <i>Communications on Pure and Applied Mathematics</i> , 2008, 61, 261-288.	1.2	49
4	Fast and Accurate Evaluation of Nonlocal Coulomb and Dipole-Dipole Interactions via the Nonuniform FFT. <i>SIAM Journal of Scientific Computing</i> , 2014, 36, B777-B794.	1.3	41
5	Second kind integral equations for the classical potential theory on open surfaces II. <i>Journal of Computational Physics</i> , 2004, 195, 1-16.	1.9	39
6	Numerical solution to a linearized time fractional KdV equation on unbounded domains. <i>Mathematics of Computation</i> , 2017, 87, 693-719.	1.1	35
7	A fast multipole method for the Rotne-Prager-Yamakawa tensor and its applications. <i>Journal of Computational Physics</i> , 2013, 234, 133-139.	1.9	34
8	Computing the ground state and dynamics of the nonlinear Schrödinger equation with nonlocal interactions via the nonuniform FFT. <i>Journal of Computational Physics</i> , 2015, 296, 72-89.	1.9	25
9	A Hybrid Method for Systems of Closely Spaced Dielectric Spheres and Ions. <i>SIAM Journal of Scientific Computing</i> , 2016, 38, B375-B395.	1.3	25
10	Analysis and accurate numerical solutions of the integral equation derived from the linearized BGKW equation for the steady Couette flow. <i>Journal of Computational Physics</i> , 2016, 316, 416-434.	1.9	24
11	A Bootstrap Method for Sum-of-Poles Approximations. <i>Journal of Scientific Computing</i> , 2013, 55, 16-39.	1.1	23
12	Quadruple and octuple layer potentials in two dimensions: Analytical apparatus. <i>Applied and Computational Harmonic Analysis</i> , 2003, 14, 47-74.	1.1	17
13	Integral Equation Methods for Unsteady Stokes Flow in Two Dimensions. <i>SIAM Journal of Scientific Computing</i> , 2012, 34, A2197-A2219.	1.3	17
14	Efficient sum-of-exponentials approximations for the heat kernel and their applications. <i>Advances in Computational Mathematics</i> , 2015, 41, 529-551.	0.8	17
15	Incorporating the Havriliak-Negami dielectric model in the FD-TD method. <i>Journal of Computational Physics</i> , 2011, 230, 3884-3899.	1.9	15
16	A fast algorithm for Brownian dynamics simulation with hydrodynamic interactions. <i>Mathematics of Computation</i> , 2013, 82, 1631-1645.	1.1	11
17	Second kind integral equation formulation for the modified biharmonic equation and its applications. <i>Journal of Computational Physics</i> , 2013, 249, 113-126.	1.9	10
18	The solution of the scalar wave equation in the exterior of a sphere. <i>Journal of Computational Physics</i> , 2014, 274, 191-207.	1.9	10

#	ARTICLE	IF	CITATIONS
19	The Anisotropic Truncated Kernel Method for Convolution with Free-Space Green's Functions. <i>SIAM Journal of Scientific Computing</i> , 2018, 40, A3733-A3754.	1.3	10
20	On Integral Equation Methods for the First Dirichlet Problem of the Biharmonic and Modified Biharmonic Equations in NonSmooth Domains. <i>SIAM Journal of Scientific Computing</i> , 2018, 40, A2609-A2630.	1.3	10
21	Second kind integral equations for the first kind Dirichlet problem of the biharmonic equation in three dimensions. <i>Journal of Computational Physics</i> , 2011, 230, 7488-7501.	1.9	9
22	An Efficient Boundary Integral Scheme for the MBO Threshold Dynamics Method via the NUFFT. <i>Journal of Scientific Computing</i> , 2018, 74, 474-490.	1.1	9
23	Second kind integral equations for the classical potential theory on open surfaces I: analytical apparatus. <i>Journal of Computational Physics</i> , 2003, 191, 40-74.	1.9	8
24	An Efficient High Order Method for Dislocation Climb in Two Dimensions. <i>Multiscale Modeling and Simulation</i> , 2017, 15, 235-253.	0.6	8
25	Generalized Poincaré-Bertrand formula on a hypersurface. <i>Applied and Computational Harmonic Analysis</i> , 2009, 27, 100-116.	1.1	7
26	One-Dimensional Finite Element Method Solution of a Class of Integro-Differential Equations: Application to Non-Fickian Transport in Disordered Media. <i>Transport in Porous Media</i> , 2016, 115, 239-263.	1.2	7
27	Efficient dynamic simulations of charged dielectric colloids through a novel hybrid method. <i>Journal of Chemical Physics</i> , 2019, 151, 024112.	1.2	7
28	An Efficient Boundary Integral Scheme for the Threshold Dynamics Method II: Applications to Wetting Dynamics. <i>Journal of Scientific Computing</i> , 2019, 81, 1860-1881.	1.1	7
29	Hyperpolarizabilities for the one-dimensional infinite single-electron periodic systems. I. Analytical solutions under dipole-dipole correlations. <i>Journal of Chemical Physics</i> , 2005, 123, 064901.	1.2	6
30	Extension of the Lorenz-Mie-Debye method for electromagnetic scattering to the time-domain. <i>Journal of Computational Physics</i> , 2015, 299, 98-105.	1.9	6
31	Second kind integral equation formulation for the mode calculation of optical waveguides. <i>Applied and Computational Harmonic Analysis</i> , 2018, 44, 645-664.	1.1	5
32	Finite Element Method Solution of Non-Fickian Transport in Porous Media: The CTRW-FEM Package. <i>Ground Water</i> , 2019, 57, 479-484.	0.7	5
33	Fast High-Order Integral Equation Methods for Solving Boundary Value Problems of Two Dimensional Heat Equation in Complex Geometry. <i>Journal of Scientific Computing</i> , 2019, 79, 787-808.	1.1	5
34	A New Mixed Potential Representation for Unsteady, Incompressible Flow. <i>SIAM Review</i> , 2019, 61, 733-755.	4.2	4
35	Simulation of Multiscale Hydrophobic Lipid Dynamics via Efficient Integral Equation Methods. <i>Multiscale Modeling and Simulation</i> , 2020, 18, 79-103.	0.6	4
36	Solving Fredholm second-kind integral equations with singular right-hand sides on non-smooth boundaries. <i>Journal of Computational Physics</i> , 2022, 448, 110714.	1.9	4

#	ARTICLE	IF	CITATIONS
37	Hyperpolarizabilities for the one-dimensional infinite single-electron periodic systems. II. Dipole-dipole versus current-current correlations. <i>Journal of Chemical Physics</i> , 2005, 123, 064902.	1.2	3
38	An integral equation method for the Cahn-Hilliard equation in the wetting problem. <i>Journal of Computational Physics</i> , 2020, 419, 109521.	1.9	3
39	Jump relations of the quadruple layer potential on a regular surface in three dimensions. <i>Applied and Computational Harmonic Analysis</i> , 2006, 21, 395-403.	1.1	2
40	Size dependence of second-order hyperpolarizability of finite periodic chains under Su-Schrieffer-Heeger model. <i>Europhysics Letters</i> , 2006, 76, 670-676.	0.7	2
41	Breaking of the overall permutation symmetry in nonlinear optical susceptibilities of one-dimensional periodic dimerized H <sub>2</sub> molecule model. <i>Journal of Physics Condensed Matter</i> , 2006, 18, 8987-8993.	0.7	2
42	Efficient Brownian dynamics simulation of DNA molecules with hydrodynamic interactions in linear flows. <i>Physical Review E</i> , 2015, 91, 063008.	0.8	2
43	Quantitative study of the effect of cladding thickness on modal confinement loss in photonic waveguides. <i>Optics Express</i> , 2016, 24, 24872.	1.7	2
44	Evaluation of Abramowitz functions in the right half of the complex plane. <i>Journal of Computational Physics</i> , 2020, 405, 109169.	1.9	1
45	On Time-Domain NRBC for Maxwell's Equations and Its Application in Accurate Simulation of Electromagnetic Invisibility Cloaks. <i>Journal of Scientific Computing</i> , 2021, 86, 1.	1.1	1
46	On the accurate evaluation of unsteady Stokes layer potentials in moving two-dimensional geometries. <i>Advances in Computational Mathematics</i> , 2020, 46, 1.	0.8	0
47	Overall permutation symmetry breakdown in nonlinear optical susceptibilities of one-dimensional periodic systems. , 2006, , .		0