

# Xiao-Ping Wang

## List of Publications by Year in descending order

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46  
papers

1,991  
citations

279798

23  
h-index

243625

44  
g-index

46  
all docs

46  
docs citations

46  
times ranked

1132  
citing authors

#	ARTICLE	IF	CITATIONS
1	Molecular scale contact line hydrodynamics of immiscible flows. <i>Physical Review E</i> , 2003, 68, 016306.	2.1	307
2	A variational approach to moving contact line hydrodynamics. <i>Journal of Fluid Mechanics</i> , 2006, 564, 333.	3.4	301
3	A Gauss-Seidel Projection Method for Micromagnetics Simulations. <i>Journal of Computational Physics</i> , 2001, 171, 357-372.	3.8	131
4	Moving contact line on chemically patterned surfaces. <i>Journal of Fluid Mechanics</i> , 2008, 605, 59-78.	3.4	110
5	An Iterative Grid Redistribution Method for Singular Problems in Multiple Dimensions. <i>Journal of Computational Physics</i> , 2000, 159, 246-273.	3.8	93
6	Power-Law Slip Profile of the Moving Contact Line in Two-Phase Immiscible Flows. <i>Physical Review Letters</i> , 2004, 93, 094501.	7.8	93
7	Numerical Methods for the Landau-Lifshitz Equation. <i>SIAM Journal on Numerical Analysis</i> , 2000, 38, 1647-1665.	2.3	91
8	A gradient stable scheme for a phase field model for the moving contact line problem. <i>Journal of Computational Physics</i> , 2012, 231, 1372-1386.	3.8	67
9	Stability of solitary waves for nonlinear Schrödinger equations with inhomogeneous nonlinearities. <i>Physica D: Nonlinear Phenomena</i> , 2003, 175, 96-108.	2.8	60
10	A finite element method for the numerical solution of the coupled Cahn-Hilliard and Navier-Stokes system for moving contact line problems. <i>Journal of Computational Physics</i> , 2012, 231, 8083-8099.	3.8	59
11	New singular solutions of the nonlinear Schrödinger equation. <i>Physica D: Nonlinear Phenomena</i> , 2005, 211, 193-220.	2.8	57
12	A numerical method for a model of two-phase flow in a coupled free flow and porous media system. <i>Journal of Computational Physics</i> , 2014, 268, 1-16.	3.8	52
13	Phase field simulation of a droplet impacting a solid surface. <i>Physics of Fluids</i> , 2016, 28, .	4.0	48
14	Nonlinear stability of solitary waves of a generalized Kadomtsev-Petviashvili equation. <i>Communications in Mathematical Physics</i> , 1997, 183, 253-266.	2.2	47
15	An efficient scheme for a phase field model for the moving contact line problem with variable density and viscosity. <i>Journal of Computational Physics</i> , 2014, 272, 704-718.	3.8	44
16	Singular ring solutions of critical and supercritical nonlinear Schrödinger equations. <i>Physica D: Nonlinear Phenomena</i> , 2007, 231, 55-86.	2.8	41
17	Instability of standing waves of the Schrödinger equation with inhomogeneous nonlinearity. <i>Transactions of the American Mathematical Society</i> , 2005, 358, 2105-2122.	0.9	39
18	A least-squares/finite element method for the numerical solution of the Navier-Stokes-Cahn-Hilliard system modeling the motion of the contact line. <i>Journal of Computational Physics</i> , 2011, 230, 4991-5009.	3.8	39

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19	Numerical simulations of self-focusing of ultrafast laser pulses. <i>Physical Review E</i> , 2003, 67, 056603.	2.1	29
20	Modeling and simulation of dynamics of three-component flows on solid surface. <i>Japan Journal of Industrial and Applied Mathematics</i> , 2014, 31, 611-631.	0.9	27
21	Phase field modeling and simulation of three-phase flow on solid surfaces. <i>Journal of Computational Physics</i> , 2016, 319, 79-107.	3.8	27
22	Moving contact line over undulating surfaces. <i>Solid State Communications</i> , 2006, 139, 623-629.	1.9	24
23	An efficient finite element method for simulation of droplet spreading on a topologically rough surface. <i>Journal of Computational Physics</i> , 2017, 349, 233-252.	3.8	23
24	A three-dimensional adaptive method based on the iterative grid redistribution. <i>Journal of Computational Physics</i> , 2004, 199, 423-436.	3.8	20
25	Spin-polarized currents in ferromagnetic multilayers. <i>Journal of Computational Physics</i> , 2007, 224, 699-711.	3.8	20
26	The iterative convolutionâ€“thresholding method (ICTM) for image segmentation. <i>Pattern Recognition</i> , 2022, 130, 108794.	8.1	19
27	An improved threshold dynamics method for wetting dynamics. <i>Journal of Computational Physics</i> , 2019, 392, 291-310.	3.8	15
28	Precursor simulations in spreading using a multi-mesh adaptive finite element method. <i>Journal of Computational Physics</i> , 2009, 228, 1380-1390.	3.8	13
29	Effective contact angle for rough boundary. <i>Physica D: Nonlinear Phenomena</i> , 2013, 242, 54-64.	2.8	13
30	The effect of the boundary slip on the stability of shear flow. <i>ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik</i> , 2008, 88, 729-734.	1.6	10
31	A lattice Boltzmann model for multiphase flows with moving contact line and variable density. <i>Journal of Computational Physics</i> , 2018, 353, 26-45.	3.8	10
32	An Efficient Boundary Integral Scheme for the MBO Threshold Dynamics Method via the NUFFT. <i>Journal of Scientific Computing</i> , 2018, 74, 474-490.	2.3	9
33	Interface Dynamics for an Allenâ€“Cahn-Type Equation Governing a Matrix-Valued Field. <i>Multiscale Modeling and Simulation</i> , 2019, 17, 1252-1273.	1.6	9
34	3D adaptive finite element method for a phase field model for the moving contact line problems. <i>Inverse Problems and Imaging</i> , 2013, 7, 947-959.	1.1	9
35	Modeling and simulations for molecular scale hydrodynamics of the moving contact line in immiscible two-phase flows. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 464119.	1.8	8
36	Two improved Gauss-Seidel projection methods for Landau-Lifshitz-Gilbert equation. <i>Journal of Computational Physics</i> , 2020, 401, 109046.	3.8	7

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37	A dynamic theory for contact angle hysteresis on chemically rough boundary. <i>Discrete and Continuous Dynamical Systems</i> , 2017, 37, 1061-1073.	0.9	5
38	The Dynamics of Three-Phase Triple Junction and Contact Points. <i>SIAM Journal on Applied Mathematics</i> , 2017, 77, 1805-1826.	1.8	3
39	An integral equation method for the Cahn-Hilliard equation in the wetting problem. <i>Journal of Computational Physics</i> , 2020, 419, 109521.	3.8	3
40	Hydrodynamic boundary conditions: An emergent behavior of fluid–solid interactions. <i>Solid State Communications</i> , 2010, 150, 976-989.	1.9	2
41	Phase-Field Modeling and Simulation of the Zone Melting Purification Process. <i>SIAM Journal on Applied Mathematics</i> , 2014, 74, 1115-1135.	1.8	2
42	A Parallel Finite Element Method for 3D Two-Phase Moving Contact Line Problems in Complex Domains. <i>Journal of Scientific Computing</i> , 2017, 72, 1119-1145.	2.3	2
43	A numerical study of three-dimensional droplets spreading on chemically patterned surfaces. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2016, 21, 2905-2926.	0.9	2
44	A reduced model for domain wall dynamics in soft ferromagnets. <i>Journal of Magnetism and Magnetic Materials</i> , 2019, 479, 199-203.	2.3	1
45	Energy Decaying Phase-Field Model for Fluid-Particle Interaction in Two-Phase Flow. <i>SIAM Journal on Applied Mathematics</i> , 2020, 80, 572-598.	1.8	0
46	A Parallel Two-Phase Flow Solver on Unstructured Mesh in 3D. <i>Lecture Notes in Computational Science and Engineering</i> , 2017, , 379-387.	0.3	0