

# Suchuan Dong

## List of Publications by Year in descending order

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53  
papers

2,228  
citations

218677

26  
h-index

214800

47  
g-index

53  
all docs

53  
docs citations

53  
times ranked

1585  
citing authors

#	ARTICLE	IF	CITATIONS
1	A combined direct numerical simulation and particle image velocimetry study of the turbulent near wake. <i>Journal of Fluid Mechanics</i> , 2006, 569, 185.	3.4	268
2	DNS of flow past a stationary and oscillating cylinder at. <i>Journal of Fluids and Structures</i> , 2005, 20, 519-531.	3.4	174
3	Direct numerical simulation of turbulent Taylor-Couette flow. <i>Journal of Fluid Mechanics</i> , 2007, 587, 373-393.	3.4	147
4	A robust and accurate outflow boundary condition for incompressible flow simulations on severely-truncated unbounded domains. <i>Journal of Computational Physics</i> , 2014, 261, 83-105.	3.8	139
5	A time-stepping scheme involving constant coefficient matrices for phase-field simulations of two-phase incompressible flows with large density ratios. <i>Journal of Computational Physics</i> , 2012, 231, 5788-5804.	3.8	135
6	Resonant Vibrations of Bluff Bodies Cause Multivortex Shedding and High Frequency Forces. <i>Physical Review Letters</i> , 2007, 99, 144503.	7.8	123
7	Elimination of Vortex Streets in Bluff-Body Flows. <i>Physical Review Letters</i> , 2008, 100, 204501.	7.8	116
8	Numerical approximation of incompressible Navier-Stokes equations based on an auxiliary energy variable. <i>Journal of Computational Physics</i> , 2019, 388, 1-22.	3.8	79
9	Modulation of homogeneous turbulence seeded with finite size bubbles or particles. <i>International Journal of Multiphase Flow</i> , 2010, 36, 221-233.	3.4	63
10	BDF-like methods for nonlinear dynamic analysis. <i>Journal of Computational Physics</i> , 2010, 229, 3019-3045.	3.8	57
11	Flow past a trapezoidal tab. <i>Journal of Fluid Mechanics</i> , 2004, 510, 219-242.	3.4	54
12	Local extreme learning machines and domain decomposition for solving linear and nonlinear partial differential equations. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2021, 387, 114129.	6.6	50
13	Turbulent flow between counter-rotating concentric cylinders: a direct numerical simulation study. <i>Journal of Fluid Mechanics</i> , 2008, 615, 371-399.	3.4	49
14	An efficient algorithm for incompressible N-phase flows. <i>Journal of Computational Physics</i> , 2014, 276, 691-728.	3.8	46
15	Laser streaming: Turning a laser beam into a flow of liquid. <i>Science Advances</i> , 2017, 3, e1700555.	10.3	45
16	A roadmap for discretely energy-stable schemes for dissipative systems based on a generalized auxiliary variable with guaranteed positivity. <i>Journal of Computational Physics</i> , 2020, 404, 109121.	3.8	42
17	A method for representing periodic functions and enforcing exactly periodic boundary conditions with deep neural networks. <i>Journal of Computational Physics</i> , 2021, 435, 110242.	3.8	40
18	Dual-level parallelism for high-order CFD methods. <i>Parallel Computing</i> , 2004, 30, 1-20.	2.1	37

#	ARTICLE	IF	CITATIONS
19	An eigen-based high-order expansion basis for structured spectral elements. <i>Journal of Computational Physics</i> , 2011, 230, 8573-8602.	3.8	36
20	An unconditionally energy-stable scheme based on an implicit auxiliary energy variable for incompressible two-phase flows with different densities involving only precomputable coefficient matrices. <i>Journal of Computational Physics</i> , 2019, 393, 229-257.	3.8	36
21	A family of second-order energy-stable schemes for Cahn–Hilliard type equations. <i>Journal of Computational Physics</i> , 2019, 383, 24-54.	3.8	35
22	A parallel spectral element method for dynamic three-dimensional nonlinear elasticity problems. <i>Computers and Structures</i> , 2009, 87, 59-72.	4.4	34
23	Spectral distributed Lagrange multiplier method: algorithm and benchmark tests. <i>Journal of Computational Physics</i> , 2004, 195, 695-717.	3.8	32
24	Turbulent drag reduction by constant near-wall forcing. <i>Journal of Fluid Mechanics</i> , 2007, 582, 79-101.	3.4	32
25	An outflow boundary condition and algorithm for incompressible two-phase flows with phase field approach. <i>Journal of Computational Physics</i> , 2014, 266, 47-73.	3.8	32
26	An unconditionally stable rotational velocity-correction scheme for incompressible flows. <i>Journal of Computational Physics</i> , 2010, 229, 7013-7029.	3.8	27
27	Gold-implanted plasmonic quartz plate as a launch pad for laser-driven photoacoustic microfluidic pumps. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 6580-6585.	7.1	27
28	Direct numerical simulation of spiral turbulence. <i>Journal of Fluid Mechanics</i> , 2011, 668, 150-173.	3.4	24
29	Cross-Site Computations on the TeraGrid. <i>Computing in Science and Engineering</i> , 2005, 7, 14-23.	1.2	23
30	Strong and Auxiliary Forms of the Semi-Lagrangian Method for Incompressible Flows. <i>Journal of Scientific Computing</i> , 2005, 25, 323-346.	2.3	22
31	NEKTAR, SPICE and Vortronics: using federated grids for large scale scientific applications. <i>Cluster Computing</i> , 2007, 10, 351-364.	5.0	22
32	A simple and efficient incompressible Navier–Stokes solver for unsteady complex geometry flows on truncated domains. <i>Computers and Fluids</i> , 2017, 150, 84-94.	2.5	21
33	Simulating and visualizing the human arterial system on the TeraGrid. <i>Future Generation Computer Systems</i> , 2006, 22, 1011-1017.	7.5	15
34	On computing the hyperparameter of extreme learning machines: Algorithm and application to computational PDEs, and comparison with classical and high-order finite elements. <i>Journal of Computational Physics</i> , 2022, 463, 111290.	3.8	15
35	gPAV-based unconditionally energy-stable schemes for the Cahn–Hilliard equation: Stability and error analysis. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 372, 113444.	6.6	13
36	On a simple and effective thermal open boundary condition for convective heat transfer problems. <i>International Journal of Heat and Mass Transfer</i> , 2020, 151, 119355.	4.8	12

#	ARTICLE	IF	CITATIONS
37	A gPAV-based unconditionally energy-stable scheme for incompressible flows with outflow/open boundaries. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 365, 112969.	6.6	12
38	A modified batch intrinsic plasticity method for pre-training the random coefficients of extreme learning machines. <i>Journal of Computational Physics</i> , 2021, 445, 110585.	3.8	12
39	Multiphase flows of N immiscible incompressible fluids: An outflow/open boundary condition and algorithm. <i>Journal of Computational Physics</i> , 2018, 366, 33-70.	3.8	11
40	A stabilized phase-field method for two-phase flow at high Reynolds number and large density/viscosity ratio. <i>Journal of Computational Physics</i> , 2019, 397, 108832.	3.8	11
41	P-refinement and P-threads. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2003, 192, 2191-2201.	6.6	10
42	Molding, patterning and driving liquids with light. <i>Materials Today</i> , 2021, 51, 48-55.	14.2	10
43	Energy-stable boundary conditions based on a quadratic form: Applications to outflow/open-boundary problems in incompressible flows. <i>Journal of Computational Physics</i> , 2019, 391, 179-215.	3.8	8
44	Chebyshev spectral method and Chebyshev noise processing procedure for vorticity calculation in PIV post-processing. <i>Experimental Thermal and Fluid Science</i> , 2001, 24, 47-59.	2.7	7
45	Runtime Visualization of the Human Arterial Tree. <i>IEEE Transactions on Visualization and Computer Graphics</i> , 2007, 13, 810-821.	4.4	6
46	Marangoni convection-driven laser fountains on free surfaces of liquids. <i>Materials Today Physics</i> , 2021, 21, 100558.	6.0	6
47	Multilevel Parallelization Models in CFD. <i>Journal of Aerospace Computing, Information, and Communication</i> , 2004, 1, 256-268.	0.8	5
48	APPLICATION OF A FRACTIONAL-STEP SCHEME AND FINITE-VOLUME METHOD FOR SIMULATING FLOW PAST A SURFACE-MOUNTED MIXING TAB. <i>Numerical Heat Transfer; Part A: Applications</i> , 2002, 41, 469-490.	2.1	3
49	An energy-stable scheme for incompressible Navier-Stokes equations with periodically updated coefficient matrix. <i>Journal of Computational Physics</i> , 2020, 418, 109624.	3.8	3
50	Simulation of Spiral Turbulence. , 2009, , .		1
51	New Advances in Force-Coupling Method: From Micro to Macro. , 2006, , 237-246.		1
52	A Numerical Study of Spiral Turbulence. , 2010, , .		0
53	Poster reception--Human arterial tree simulation on TeraGrid. , 2006, , .		0