

J Blair Perot

List of Publications by Year in descending order

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54
papers

3,212
citations

279798

23
h-index

223800

46
g-index

55
all docs

55
docs citations

55
times ranked

2338
citing authors

#	ARTICLE	IF	CITATIONS
1	A front-tracking method for two-phase flow simulation with no spurious currents. Journal of Computational Physics, 2022, 456, 111006.	3.8	3
2	A method for generating moving, orthogonal, area preserving polygonal meshes. Journal of Computational Physics, 2022, 454, 110940.	3.8	1
3	A mimetic method for polygons. Journal of Computational Physics, 2021, 424, 109853.	3.8	2
4	Fluid Dynamics of the Open Port Interface for High-Speed Nanoliter Volume Sampling Mass Spectrometry. Analytical Chemistry, 2021, 93, 8559-8567.	6.5	19
5	A fractional-step method for steady-state flow. Journal of Computational Physics, 2020, 403, 109057.	3.8	2
6	A stopping criterion for the iterative solution of partial differential equations. Journal of Computational Physics, 2018, 352, 265-284.	3.8	9
7	High-speed velocimetry in microfluidic protein mixers using confocal fluorescence decay microscopy. Experiments in Fluids, 2018, 59, 1.	2.4	2
8	Memristor-CMOS Analog Co-Processor for Acceleration of High Performance Computing Applications. , 2018, , .		0
9	Computer design of microfluidic mixers for protein/RNA folding studies. PLoS ONE, 2018, 13, e0198534.	2.5	7
10	Memristor-CMOS Analog Coprocessor for Acceleration of High-Performance Computing Applications. ACM Journal on Emerging Technologies in Computing Systems, 2018, 14, 1-30.	2.3	5
11	Improving the efficiency of wind farms via wake manipulation. Wind Energy, 2018, 21, 1239-1253.	4.2	6
12	How much does nasal cavity morphology matter? Patterns and rates of olfactory airflow in phyllostomid bats. Proceedings of the Royal Society B: Biological Sciences, 2015, 282, 20142161.	2.6	18
13	Simulation and modeling of turbulence subjected to a period of axisymmetric contraction or expansion. Physics of Fluids, 2014, 26, 115103.	4.0	7
14	The role of the olfactory recess in olfactory airflow. Journal of Experimental Biology, 2014, 217, 1799-803.	1.7	68
15	Differential forms for scientists and engineers. Journal of Computational Physics, 2014, 257, 1373-1393.	3.8	24
16	Direct numerical simulation of turbulence using GPU accelerated supercomputers. Journal of Computational Physics, 2013, 235, 241-257.	3.8	48
17	Simulation and modeling of turbulence subjected to a period of uniform plane strain. Physics of Fluids, 2013, 25, 110819.	4.0	8
18	Advances in turbulent mixing techniques to study microsecond protein folding reactions. Biopolymers, 2013, 99, 888-896.	2.4	22

#	ARTICLE	IF	CITATIONS
19	The Oriented-Eddy Collision Turbulence Model. <i>Flow, Turbulence and Combustion</i> , 2012, 89, 335-359.	2.6	3
20	Computational Fluid Dynamics Simulations Using Many Graphics Processors. <i>Computing in Science and Engineering</i> , 2012, 14, 10-19.	1.2	17
21	Discrete Conservation Properties of Unstructured Mesh Schemes. <i>Annual Review of Fluid Mechanics</i> , 2011, 43, 299-318.	25.0	85
22	Determination of the decay exponent in mechanically stirred isotropic turbulence. <i>AIP Advances</i> , 2011, 1, .	1.3	16
23	Acceleration of the Smithâ€“Waterman algorithm using single and multiple graphics processors. <i>Journal of Computational Physics</i> , 2010, 229, 4247-4258.	3.8	101
24	An analysis of superhydrophobic turbulent drag reduction mechanisms using direct numerical simulation. <i>Physics of Fluids</i> , 2010, 22, .	4.0	128
25	Modeling of the Internal Two-Phase Flow in a Gas-Centered Swirl Coaxial Fuel Injector. , 2010, , .		2
26	Direct numerical simulations of turbulent flows over superhydrophobic surfaces. <i>Journal of Fluid Mechanics</i> , 2009, 620, 31-41.	3.4	177
27	A stress transport equation model for simulating turbulence at any mesh resolution. <i>Theoretical and Computational Fluid Dynamics</i> , 2009, 23, 271-286.	2.2	16
28	A self-adapting turbulence model for flow simulation at any mesh resolution. <i>Physics of Fluids</i> , 2007, 19, .	4.0	27
29	A discrete calculus analysis of the Keller Box scheme and a generalization of the method to arbitrary meshes. <i>Journal of Computational Physics</i> , 2007, 226, 494-508.	3.8	11
30	Discrete calculus methods for diffusion. <i>Journal of Computational Physics</i> , 2007, 224, 59-81.	3.8	47
31	Higher-order mimetic methods for unstructured meshes. <i>Journal of Computational Physics</i> , 2006, 219, 68-85.	3.8	29
32	Modeling turbulent dissipation at low and moderate Reynolds numbers. <i>Journal of Turbulence</i> , 2006, 7, N69.	1.4	20
33	Mimetic Reconstruction of Vectors. , 2006, , 173-188.		14
34	Modeling return to isotropy using kinetic equations. <i>Physics of Fluids</i> , 2005, 17, 035101.	4.0	6
35	Eddy Collision Models for Turbulence. , 2005, , 107-116.		0
36	A model for the dissipation rate tensor in inhomogeneous and anisotropic turbulence. <i>Physics of Fluids</i> , 2004, 16, 4053-4065.	4.0	10

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37	Laminar drag reduction in microchannels using ultrahydrophobic surfaces. <i>Physics of Fluids</i> , 2004, 16, 4635-4643.	4.0	888
38	A moving unstructured staggered mesh method for the simulation of incompressible free-surface flows. <i>Journal of Computational Physics</i> , 2003, 184, 192-214.	3.8	87
39	A spectral element semi-Lagrangian (SESL) method for the spherical shallow water equations. <i>Journal of Computational Physics</i> , 2003, 190, 623-650.	3.8	46
40	Application of the Turbulent Potential Model to Unsteady Flows and Three-Dimensional Boundary Layers. <i>International Journal of Rotating Machinery</i> , 2003, 9, 375-384.	0.8	1
41	Prediction of turbulent transition in boundary layers using the turbulent potential model. <i>Journal of Turbulence</i> , 2002, 3, N22.	1.4	25
42	Accuracy and Conservation Properties of a Three-Dimensional Unstructured Staggered Mesh Scheme for Fluid Dynamics. <i>Journal of Computational Physics</i> , 2002, 175, 764-791.	3.8	61
43	Analysis of an Exact Fractional Step Method. <i>Journal of Computational Physics</i> , 2002, 180, 183-199.	3.8	94
44	APPLICATION OF THE TURBULENT POTENTIAL MODEL TO COMPLEX FLOWS. , 2002, , 117-126.		2
45	Heat Transfer Within Deforming Droplets. , 2002, , .		8
46	DIRECT INTERFACE TRACKING OF DROPLET DEFORMATION. , 2002, 12, 721-736.		16
47	Conservation Properties of Unstructured Staggered Mesh Schemes. <i>Journal of Computational Physics</i> , 2000, 159, 58-89.	3.8	232
48	Modeling three-dimensional boundary layers using the turbulent potential model. , 2000, , .		2
49	Turbulence modeling using body force potentials. <i>Physics of Fluids</i> , 1999, 11, 2645-2656.	4.0	32
50	Comments on the Fractional Step Method. <i>Journal of Computational Physics</i> , 1995, 121, 190-191.	3.8	30
51	Shear-free turbulent boundary layers. Part 1. Physical insights into near-wall turbulence. <i>Journal of Fluid Mechanics</i> , 1995, 295, 199.	3.4	201
52	Shear-free turbulent boundary layers. Part 2. New concepts for Reynolds stress transport equation modelling of inhomogeneous flows. <i>Journal of Fluid Mechanics</i> , 1995, 295, 229.	3.4	26
53	An Analysis of the Fractional Step Method. <i>Journal of Computational Physics</i> , 1993, 108, 51-58.	3.8	452
54	A note on turbulent energy dissipation in the viscous wall region. <i>Physics of Fluids A, Fluid Dynamics</i> , 1993, 5, 3305-3306.	1.6	37