

Biao Huang

List of Publications by Year in descending order

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109
papers

3,276
citations

147801

31
h-index

182427

51
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122
all docs

122
docs citations

122
times ranked

939
citing authors

#	ARTICLE	IF	CITATIONS
1	Large Eddy Simulation of turbulent vortex-cavitation interactions in transient sheet/cloud cavitating flows. <i>Computers and Fluids</i> , 2014, 92, 113-124.	2.5	222
2	Combined Experimental and Computational Investigation of Unsteady Structure of Sheet/Cloud Cavitation. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2013, 135, .	1.5	193
3	Experimental and numerical investigation of hydroelastic response of a flexible hydrofoil in cavitating flow. <i>International Journal of Multiphase Flow</i> , 2015, 74, 19-33.	3.4	108
4	Comparisons of spark-charge bubble dynamics near the elastic and rigid boundaries. <i>Ultrasonics Sonochemistry</i> , 2018, 43, 80-90.	8.2	108
5	Numerical study of cavitating flows in a wide range of water temperatures with special emphasis on two typical cavitation dynamics. <i>International Journal of Heat and Mass Transfer</i> , 2016, 101, 886-900.	4.8	91
6	Physical and numerical investigation of cavitating flows around a pitching hydrofoil. <i>Physics of Fluids</i> , 2013, 25, .	4.0	90
7	The transient characteristics of cloud cavitating flow over a flexible hydrofoil. <i>International Journal of Multiphase Flow</i> , 2018, 99, 162-173.	3.4	76
8	Experimental and numerical investigation of ventilated cavitating flow structures with special emphasis on vortex shedding dynamics. <i>International Journal of Multiphase Flow</i> , 2018, 98, 79-95.	3.4	76
9	Numerical modelling of unsteady cavitation and induced noise around a marine propeller. <i>Ocean Engineering</i> , 2018, 160, 143-155.	4.3	75
10	Unsteady pressure fluctuation characteristics in the process of breakup and shedding of sheet/cloud cavitation. <i>International Journal of Heat and Mass Transfer</i> , 2017, 114, 769-785.	4.8	71
11	Numerical simulation unsteady cloud cavitating flow with a filter-based density correction model. <i>Journal of Hydrodynamics</i> , 2014, 26, 26-36.	3.2	70
12	A review of transient flow structure and unsteady mechanism of cavitating flow. <i>Journal of Hydrodynamics</i> , 2019, 31, 429-444.	3.2	69
13	Partially Averaged Navier-Stokes Method for Time-Dependent Turbulent Cavitating Flows. <i>Journal of Hydrodynamics</i> , 2011, 23, 26-33.	3.2	61
14	Experimental and numerical investigation of ventilated cavitating flow with special emphasis on gas leakage behavior and re-entrant jet dynamics. <i>Ocean Engineering</i> , 2015, 108, 191-201.	4.3	61
15	Numerical investigation of cavitating flow in liquid hydrogen. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 1698-1709.	7.1	55
16	Combined experimental and computational investigation of cavitation evolution and excited pressure fluctuation in a convergent-divergent channel. <i>International Journal of Multiphase Flow</i> , 2015, 72, 133-140.	3.4	51
17	Experimental investigation of the flow pattern for ventilated partial cavitating flows with effect of Froude number and gas entrainment. <i>Ocean Engineering</i> , 2017, 129, 343-351.	4.3	49
18	Experimental investigation of liquid nitrogen cavitating flows in converging-diverging nozzle with special emphasis on thermal transition. <i>International Journal of Heat and Mass Transfer</i> , 2019, 132, 618-630.	4.8	49

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19	Data-driven modal decomposition of transient cavitating flow. <i>Physics of Fluids</i> , 2021, 33, .	4.0	49
20	Unsteady characteristics of liquid nitrogen cavitating flows in different thermal cavitation mode. <i>Applied Thermal Engineering</i> , 2019, 156, 63-76.	6.0	47
21	Dynamics of cavitation-structure interaction. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2017, 33, 685-708.	3.4	46
22	Numerical simulation of single bubble dynamics under acoustic travelling waves. <i>Ultrasonics Sonochemistry</i> , 2018, 42, 619-630.	8.2	46
23	Dynamic behavior of a single bubble between the free surface and rigid wall. <i>Ultrasonics Sonochemistry</i> , 2020, 67, 105147.	8.2	43
24	Numerical investigation of cavitation vortex dynamics in unsteady cavitating flow with shock wave propagation. <i>Ocean Engineering</i> , 2018, 156, 424-434.	4.3	42
25	Numerical investigation of cavitation-vortex interaction with special emphasis on the multistage shedding process. <i>Applied Mathematical Modelling</i> , 2021, 96, 111-130.	4.2	42
26	Decomposition of unsteady sheet/cloud cavitation dynamics in fluid-structure interaction via POD and DMD methods. <i>International Journal of Multiphase Flow</i> , 2021, 142, 103690.	3.4	39
27	Combined experimental and theoretical investigation of the gas bubble motion in an acoustic field. <i>Ultrasonics Sonochemistry</i> , 2018, 40, 480-487.	8.2	39
28	Experimental and numerical investigation of unsteady cavitating flows through a 2D hydrofoil. <i>Science China Technological Sciences</i> , 2011, 54, 1801-1812.	4.0	38
29	Experimental study on water entry of spheres with different surface wettability. <i>Ocean Engineering</i> , 2019, 187, 106123.	4.3	37
30	Cavitation vortex dynamics of unsteady sheet/cloud cavitating flows with shock wave using different vortex identification methods. <i>Journal of Hydrodynamics</i> , 2019, 31, 475-494.	3.2	35
31	Experimental investigation of conical bubble structure and acoustic flow structure in ultrasonic field. <i>Ultrasonics Sonochemistry</i> , 2017, 34, 164-172.	8.2	34
32	Numerical investigation of thermo-sensitive cavitating flows in a wide range of free-stream temperatures and velocities in fluoroketone. <i>International Journal of Heat and Mass Transfer</i> , 2017, 112, 125-136.	4.8	34
33	Numerical analysis of developed tip leakage cavitating flows using a new transport-based model. <i>International Communications in Heat and Mass Transfer</i> , 2016, 78, 39-47.	5.6	33
34	Characteristics and dynamics of compressible cavitating flows with special emphasis on compressibility effects. <i>International Journal of Multiphase Flow</i> , 2020, 130, 103357.	3.4	30
35	Detached-eddy simulation for time-dependent turbulent cavitating flows. <i>Chinese Journal of Mechanical Engineering (English Edition)</i> , 2012, 25, 484-490.	3.7	29
36	The flow regime and hydrodynamic performance for a pitching hydrofoil. <i>Renewable Energy</i> , 2020, 150, 412-427.	8.9	28

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37	Physical and numerical investigation on transient cavitating flows. <i>Science China Technological Sciences</i> , 2013, 56, 2207-2218.	4.0	27
38	Effects of air injection on the characteristics of unsteady sheet/cloud cavitation shedding in the convergent-divergent channel. <i>International Journal of Multiphase Flow</i> , 2018, 106, 1-20.	3.4	27
39	Experimental investigation of ventilated partial cavitating flows with special emphasis on flow pattern regime and unsteady shedding behavior around an axisymmetric body at different angles of attack. <i>Ocean Engineering</i> , 2018, 147, 289-303.	4.3	27
40	Thermal transition and its evaluation of liquid hydrogen cavitating flow in a wide range of free-stream conditions. <i>International Journal of Heat and Mass Transfer</i> , 2018, 127, 1277-1289.	4.8	27
41	Dynamics of unsteady compressible cavitating flows associated with the cavity shedding. <i>Ocean Engineering</i> , 2020, 209, 107025.	4.3	27
42	Investigation of unsteady liquid nitrogen cavitating flows with special emphasis on the vortex structures using mode decomposition methods. <i>International Journal of Heat and Mass Transfer</i> , 2020, 157, 119880.	4.8	27
43	Measurement and prediction of cavitating flow-induced vibrations. <i>Journal of Hydrodynamics</i> , 2018, 30, 1064-1071.	3.2	26
44	Numerical simulation of transient turbulent cavitating flows with special emphasis on shock wave dynamics considering the water/vapor compressibility. <i>Journal of Hydrodynamics</i> , 2018, 30, 573-591.	3.2	26
45	Effects of fluid thermophysical properties on cavitating flows. <i>Journal of Mechanical Science and Technology</i> , 2015, 29, 4239-4246.	1.5	25
46	Lagrangian-based investigation of the transient flow structures around a pitching hydrofoil. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2016, 32, 64-74.	3.4	25
47	The interaction between the transient cavitating flow and hydrodynamic performance around a pitching hydrofoil. <i>Renewable Energy</i> , 2020, 161, 1276-1291.	8.9	25
48	Numerical study of thermodynamic effects on liquid nitrogen cavitating flows. <i>Cryogenics</i> , 2015, 70, 21-27.	1.7	24
49	A cavitation model for computations of unsteady cavitating flows. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2016, 32, 273-283.	3.4	23
50	Numerical investigation on the influence of surface tension and viscous force on the bubble dynamics with a CLSVOF method. <i>Journal of Mechanical Science and Technology</i> , 2016, 30, 2547-2556.	1.5	22
51	Physical investigation of the counterjet dynamics during the bubble rebound. <i>Ultrasonics Sonochemistry</i> , 2019, 58, 104706.	8.2	22
52	A modified PANS model for computations of unsteady turbulence cavitating flows. <i>Science China: Physics, Mechanics and Astronomy</i> , 2014, 57, 1967-1976.	5.1	20
53	Lagrangian investigations of vortex dynamics in time-dependent cloud cavitating flows. <i>International Journal of Heat and Mass Transfer</i> , 2016, 93, 167-174.	4.8	20
54	Numerical simulations and surrogate-based optimization of cavitation performance for an aviation fuel pump. <i>Journal of Mechanical Science and Technology</i> , 2017, 31, 705-716.	1.5	20

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55	Numerical investigation of the water entry of a hydrophobic sphere with spin. <i>International Journal of Multiphase Flow</i> , 2020, 126, 103234.	3.4	20
56	Experimental investigation into fluid-structure interaction of cavitating flow. <i>Physics of Fluids</i> , 2021, 33, .	4.0	19
57	Evaluation of a Filter-Based Model for Computations of Cavitating Flows. <i>Chinese Physics Letters</i> , 2011, 28, 026401.	3.3	18
58	Thermodynamic analysis of unsteady cavitation dynamics in liquid hydrogen. <i>International Journal of Heat and Mass Transfer</i> , 2019, 142, 118470.	4.8	18
59	Physical and numerical study on unsteady shedding behaviors of ventilated partial cavitating flow around an axisymmetric body. <i>Ocean Engineering</i> , 2020, 197, 106884.	4.3	18
60	A modified density based cavitation model for time dependent turbulent cavitating flow computations. <i>Science Bulletin</i> , 2011, 56, 1985-1992.	1.7	17
61	Lagrangian-based numerical investigation of aerodynamic performance of an oscillating foil. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2018, 34, 839-854.	3.4	17
62	Numerical simulation of single bubble dynamics under acoustic standing waves. <i>Ultrasonics Sonochemistry</i> , 2018, 49, 196-205.	8.2	17
63	Application of two-branch deep neural network to predict bubble migration near elastic boundaries. <i>Physics of Fluids</i> , 2019, 31, .	4.0	17
64	Physical investigation of acoustic waves induced by the oscillation and collapse of the single bubble. <i>Ultrasonics Sonochemistry</i> , 2021, 72, 105440.	8.2	17
65	Dynamic instability analysis of cavitating flow with liquid nitrogen in a converging-diverging nozzle. <i>Applied Thermal Engineering</i> , 2021, 192, 116870.	6.0	17
66	Numerical analysis of interaction between turbulent structures and transient sheet/cloud cavitation. <i>Physics of Fluids</i> , 2022, 34, .	4.0	17
67	Numerical simulation of unsteady cavitating flows around a transient pitching hydrofoil. <i>Science China Technological Sciences</i> , 2014, 57, 101-116.	4.0	16
68	Three-dimensional unsteady cavitating flows around an axisymmetric body with a blunt headform. <i>Journal of Mechanical Science and Technology</i> , 2015, 29, 1093-1101.	1.5	16
69	Combined experimental and computational investigation of the cavitating flow in an orifice plate with special emphasis on surrogate-based optimization method. <i>Journal of Mechanical Science and Technology</i> , 2017, 31, 269-279.	1.5	16
70	Numerical investigation of ventilated cavitating vortex shedding over a bluff body. <i>Ocean Engineering</i> , 2018, 159, 129-138.	4.3	16
71	Numerical and theoretical investigation of the high-speed compressible supercavitating flows. <i>Ocean Engineering</i> , 2018, 156, 446-455.	4.3	16
72	On study of non-spherical bubble collapse near a rigid boundary. <i>Journal of Hydrodynamics</i> , 2020, 32, 523-535.	3.2	16

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73	The influence of ventilated cavitation on vortex shedding behind a bluff body. <i>Experimental Thermal and Fluid Science</i> , 2018, 98, 181-194.	2.7	15
74	Numerical investigation of flow structures around the DARPA SUBOFF model. <i>Ocean Engineering</i> , 2021, 239, 109866.	4.3	15
75	Numerical investigation of cavitation-vortex interaction around the NACA66(mod) hydrofoil with emphasis on multistage shedding process. <i>Ocean Engineering</i> , 2022, 259, 111661.	4.3	15
76	Numerical simulation of the red blood cell aggregation and deformation behaviors in ultrasonic field. <i>Ultrasonics Sonochemistry</i> , 2017, 38, 604-613.	8.2	14
77	Numerical and theoretical investigations of the cavitation performance and instability for the cryogenic inducer. <i>Renewable Energy</i> , 2022, 184, 291-305.	8.9	14
78	Numerical investigation of the deformation characteristics of a composite hydrofoil with different ply angles. <i>Ocean Engineering</i> , 2018, 163, 348-357.	4.3	13
79	Experimental and numerical analysis of tip leakage cavitating flow around a 3D NACA66 (mod) hydrofoil. <i>Ocean Engineering</i> , 2021, 241, 110005.	4.3	13
80	A curvature correction turbulent model for computations of cloud cavitating flows. <i>Engineering Computations</i> , 2016, 33, 202-216.	1.4	11
81	Numerical studies of the hydrodynamic damping of a vibrating hydrofoil in torsional mode. <i>Journal of Hydrodynamics</i> , 2021, 33, 347-360.	3.2	11
82	Physical and numerical study on the transition of gas leakage regime of ventilated cavitating flow. <i>Ocean Engineering</i> , 2021, 239, 109861.	4.3	11
83	Evaluation of Cavitation Models for Prediction of Transient Cavitating Flows around a Stationary and a Pitching Hydrofoil. , 2012, , .		11
84	Collapsing behavior of a spark-induced cavitation bubble near the air bubble attached to the tube nozzle. <i>Ocean Engineering</i> , 2022, 253, 111183.	4.3	10
85	Surrogate model-based optimization for the headform design of an axisymmetric body. <i>Ocean Engineering</i> , 2015, 107, 237-245.	4.3	9
86	A cavitation model for cavitating flow simulations. <i>Journal of Hydrodynamics</i> , 2010, 22, 756-762.	3.2	8
87	Numerical investigation of the cavitating flow structure with special emphasis on the vortex identification method. <i>Modern Physics Letters B</i> , 2020, 34, 2050058.	1.9	8
88	Experimental investigations on transient dynamics of cryogenic cavitating flows under different free-stream conditions. <i>International Journal of Heat and Mass Transfer</i> , 2021, 178, 121537.	4.8	8
89	The influence of micro vortex generator on inception cavitation. <i>Physics of Fluids</i> , 2021, 33, .	4.0	8
90	Free vibration analysis of composite foils with different ply angles based on beam theory. <i>Ocean Engineering</i> , 2021, 226, 108854.	4.3	7

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91	k-Îµ-BASED TURBULENCE MODELS FOR SIMULATION OF CLOUD CAVITATING FLOWS. Modern Physics Letters B, 2010, 24, 1357-1360.	1.9	6
92	Numerical Simulation of Transient Flows around a 3D Pitching Hydrofoil. Advances in Mechanical Engineering, 2015, 7, 808034.	1.6	6
93	Unsteady behavior of ventilated cavitating flows around an axisymmetric body. Ocean Engineering, 2021, 236, 109308.	4.3	6
94	Hydrodynamic characteristics and flow structures of pitching hydrofoil with special emphasis on the added force effect. Renewable Energy, 2020, 157, 560-573.	8.9	6
95	ç»•æŒ`è†Clark-Yæ°ç¿¼ç©°áŒ-è¿ÿæ»žç%o¹æ€§ç”ç©¶. Acta Mechanica Sinica/Lixue Xuebao, 2022, 38, .	3.4	5
96	Lagrangian coherent structures analysis of gas-liquid flow in a bubble column. Science China: Physics, Mechanics and Astronomy, 2014, 57, 1169-1177.	5.1	4
97	Numerical investigation of dynamics of unsteady sheet/cloud cavitating flow using a compressible fluid model. Modern Physics Letters B, 2015, 29, 1450269.	1.9	4
98	Numerical study on the influence of interphase interaction in sheet/cloud cavitating flows around a 2D hydrofoil. Journal of Mechanical Science and Technology, 2015, 29, 1075-1083.	1.5	4
99	Numerical investigation of transport mechanism in four-body problem using Lagrangian coherent structure. Astrophysics and Space Science, 2016, 361, 1.	1.4	4
100	NUMERICAL INVESTIGATION OF THE DYNAMIC RESPONSES OF COMPOSITE MATERIAL SUBJECTED TO BUBBLE COLLAPSE. WIT Transactions on Engineering Sciences, 2017, , .	0.0	4
101	Experimental investigation of unsteady attached cavitating flow induced pressure fluctuation. Journal of Hydrodynamics, 2022, 34, 31-42.	3.2	3
102	Numerical investigation of the round jet in crossflow at high velocity ratios with special emphasis on the evolution of vortex structures. Physics of Fluids, 2022, 34, .	4.0	3
103	Numerical investigation of cavitation-vortex structures around a sphere with boundary data immersion method. Ocean Engineering, 2022, 255, 111333.	4.3	3
104	Study of unsteady cavitating flow around Clark-Y hydrofoil using nonlinear PANS model with near-wall correction. Modern Physics Letters B, 2021, 35, .	1.9	2
105	Vortex structure analysis of unsteady cloud cavitating flows around a hydrofoil. Modern Physics Letters B, 2016, 30, 1550275.	1.9	1
106	Numerical Investigation of the Cavitation-Vortex Interaction Around a Twisted Hydrofoil with Emphasis on the Vortex Identification Method. , 2021, , 439-456.		0
107	10.1063/5.0067266.4. , 2021, , .		0
108	10.1063/5.0067266.14. , 2021, , .		0

#	ARTICLE	IF	CITATIONS
109	INVESTIGATION OF UNSTEADY SHEET/CLOUD CAVITATION IN THE DIVERGENT SECTION OF A NOZZLE WITH EMPHASIS ON THE MECHANISM OF SHOCK WAVE PROPAGATION. WIT Transactions on Engineering Sciences, 2017, , .	0.0	0