

Bin Ji

List of Publications by Year in descending order

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124
papers

5,005
citations

109321

35
h-index

102487

66
g-index

124
all docs

124
docs citations

124
times ranked

1316
citing authors

#	ARTICLE	IF	CITATIONS
1	LES Investigation of the noise characteristics of sheet and tip leakage vortex cavitating flow. International Journal of Multiphase Flow, 2022, 146, 103880.	3.4	19
2	LES investigation of the cavitating hydrofoils with various wavy leading edges. Ocean Engineering, 2022, 243, 110331.	4.3	16
3	Investigation on cavitation initiation in jet pump cavitation reactors with special emphasis on two mechanisms of cavitation initiation. Physics of Fluids, 2022, 34, .	4.0	9
4	Removal of field-collected Microcystis aeruginosa in pilot-scale by a jet pump cavitation reactor. Ultrasonics Sonochemistry, 2022, 83, 105924.	8.2	5
5	Flow dynamics in lateral vegetation cavities constructed by an array of emergent vegetation patches along the open-channel bank. Physics of Fluids, 2022, 34, .	4.0	10
6	Biochar effects on soil properties, water movement and irrigation water use efficiency of cultivated land in Qinghai-Tibet Plateau. Science of the Total Environment, 2022, 829, 154520.	8.0	19
7	LES investigation of cavitation harmonic tone around a Delft twist-11 hydrofoil. Ocean Engineering, 2022, 253, 111313.	4.3	16
8	LES investigation of different shedding cloud behaviors around the typical NACA66 hydrofoil. Journal of Physics: Conference Series, 2022, 2217, 012014.	0.4	0
9	Numerical prediction of cavitation erosion risk in an axisymmetric nozzle using a multi-scale approach. Physics of Fluids, 2022, 34, .	4.0	27
10	Numerical investigation of the influence of vortex generator on propeller cavitation and hull pressure fluctuation by DDES. Journal of Hydrodynamics, 2022, 34, 444-450.	3.2	5
11	The effect of flow speed on the bubble dynamics: A numerical study. Ocean Engineering, 2022, 259, 111888.	4.3	3
12	A new Euler-Lagrangian cavitation model for tip-vortex cavitation with the effect of non-condensable gas. International Journal of Multiphase Flow, 2021, 134, 103441.	3.4	111
13	On the Comparison of Liutex Method with Other Vortex Identification Methods in a Confined Tip-Leakage Cavitating Flow. , 2021, , 139-155.		0
14	A new method of LES verification and validation for attached turbulent cavitating flow. Journal of Hydrodynamics, 2021, 33, 170-174.	3.2	8
15	Numerical Investigation of Unsteady Cavitation Flow around E779A Propeller in a Nonuniform Wake with an Insight on How Cavitation Influences Vortex. Shock and Vibration, 2021, 2021, 1-10.	0.6	1
16	Characteristics of the flow structures through and around a submerged canopy patch. Physics of Fluids, 2021, 33, .	4.0	39
17	A review of cavitation in tip-leakage flow and its control. Journal of Hydrodynamics, 2021, 33, 226-242.	3.2	66
18	RANS simulation of unsteady cavitation around a Clark-Y hydrofoil with the assistance of machine learning. Ocean Engineering, 2021, 231, 109058.	4.3	11

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19	Large eddy simulation of turbulent cavitating flow in a Venturi-type section with special emphasis on LES errors and pressure fluctuation analyses. <i>Modern Physics Letters B</i> , 2021, 35, 2150440.	1.9	1
20	Numerical study on the drag characteristics of rigid submerged vegetation patches. <i>Physics of Fluids</i> , 2021, 33, .	4.0	18
21	Numerical assessment of the erosion risk for cavitating twisted hydrofoil by three methods. <i>Journal of Hydrodynamics</i> , 2021, 33, 698-711.	3.2	14
22	Temporal and spatial characteristics of monopole acoustic energy dominated by unsteady thermodynamic cavitating flow. <i>Journal of Hydrodynamics</i> , 2021, 33, 867-871.	3.2	3
23	Verification and validation of Delayed Detached Eddy Simulation for cavitating turbulent flow around a hydrofoil and a marine propeller behind the hull. <i>Applied Mathematical Modelling</i> , 2021, 96, 382-401.	4.2	17
24	Numerical investigation of condensation shock and re-entrant jet dynamics around a cavitating hydrofoil using a dynamic cubic nonlinear subgrid-scale model. <i>Applied Mathematical Modelling</i> , 2021, 100, 410-431.	4.2	24
25	Euler-Lagrange study of cavitating turbulent flow around a hydrofoil. <i>Physics of Fluids</i> , 2021, 33, .	4.0	73
26	Verification and Validation of Large Eddy Simulation for Tip Clearance Vortex Cavitating Flow in a Waterjet Pump. <i>Energies</i> , 2021, 14, 7635.	3.1	5
27	Large eddy simulation of the transient cavitating vortical flow in a jet pump with special emphasis on the unstable limited operation stage. <i>Journal of Hydrodynamics</i> , 2020, 32, 345-360.	3.2	9
28	Large eddy simulation of the tip-leakage cavitating flow with an insight on how cavitation influences vorticity and turbulence. <i>Applied Mathematical Modelling</i> , 2020, 77, 788-809.	4.2	233
29	One-dimensional/three-dimensional analysis of transient cavitating flow in a venturi tube with special emphasis on cavitation excited pressure fluctuation prediction. <i>Science China Technological Sciences</i> , 2020, 63, 223-233.	4.0	13
30	LES of tip-leakage cavitating flow with special emphasis on different tip clearance sizes by a new Euler-Lagrangian cavitation model. <i>Ocean Engineering</i> , 2020, 213, 107661.	4.3	36
31	LES investigation of cavitating flows around a sphere with special emphasis on the cavitation-vortex interactions. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2020, 36, 1238-1257.	3.4	16
32	Some notes on numerical simulation of the turbulent cavitating flow with a dynamic cubic nonlinear sub-grid scale model in OpenFOAM. <i>Journal of Hydrodynamics</i> , 2020, 32, 790-794.	3.2	10
33	LES method of the tip clearance vortex cavitation in a propelling pump with special emphasis on the cavitation-vortex interaction. <i>Journal of Hydrodynamics</i> , 2020, 32, 1212-1216.	3.2	36
34	Verification and validation of large eddy simulations of turbulent cavitating flow around two marine propellers with emphasis on the skew angle effects. <i>Applied Ocean Research</i> , 2020, 101, 102167.	4.1	22
35	Prediction of the precessing vortex core in the Francis-99 draft tube under off-design conditions by using Liutex/Rortex method. <i>Journal of Hydrodynamics</i> , 2020, 32, 623-628.	3.2	14
36	Experimental investigation of vortex generator influences on propeller cavitation and hull pressure fluctuations. <i>Journal of Hydrodynamics</i> , 2020, 32, 82-92.	3.2	19

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37	Spatial and spectral investigation of turbulent kinetic energy in cavitating flow generated by Clark-Y hydrofoil. <i>Journal of Hydrodynamics</i> , 2020, 32, 175-178.	3.2	11
38	Suppressing tip-leakage vortex cavitation by overhanging grooves. <i>Experiments in Fluids</i> , 2020, 61, 1.	2.4	33
39	Numerical investigation of unsteady cloud cavitating flow around the Clark-Y hydrofoil with adaptive mesh refinement using OpenFOAM. <i>Ocean Engineering</i> , 2020, 206, 107349.	4.3	38
40	Transient cavitating flow structure and acoustic analysis of a hydrofoil with whalelike wavy leading edge. <i>Applied Mathematical Modelling</i> , 2020, 85, 60-88.	4.2	44
41	Comparative Study of different vortex identification methods in a tip-leakage cavitating flow. <i>Ocean Engineering</i> , 2020, 207, 107373.	4.3	20
42	Experimental study of the cavitation noise and vibration induced by the choked flow in a Venturi reactor. <i>Ultrasonics Sonochemistry</i> , 2020, 67, 105183.	8.2	34
43	LES investigation on vortex dynamics of transient sheet/cloud cavitating flow using different vortex identification methods. <i>Modern Physics Letters B</i> , 2020, 34, 2150011.	1.9	5
44	Evaluating the hydrodynamics of a round jet in a vegetated crossflow through large eddy simulation. <i>Environmental Fluid Mechanics</i> , 2019, 19, 181-201.	1.6	6
45	Vortical structures in the cavitating flow in the Francis-99 draft tube cone under off-design conditions with the new omega vortex identification method. <i>Journal of Physics: Conference Series</i> , 2019, 1296, 012011.	0.4	4
46	Impact of fish locomotion on the internal flow in a jet fish pump. <i>Ocean Engineering</i> , 2019, 187, 106227.	4.3	6
47	LES investigation of the influence of cavitation on flow patterns in a confined tip-leakage flow. <i>Ocean Engineering</i> , 2019, 186, 106115.	4.3	42
48	Numerical simulations of cavitating turbulent flow around a marine propeller behind the hull with analyses of the vorticity distribution and particle tracks. <i>Ocean Engineering</i> , 2019, 189, 106310.	4.3	29
49	An experimental study of cavitation damage on tissue of <i>Carassius auratus</i> in a jet fish pump. <i>Ocean Engineering</i> , 2019, 174, 43-50.	4.3	11
50	Performance of cavitation flow and its induced noise of different jet pump cavitation reactors. <i>Ultrasonics Sonochemistry</i> , 2019, 55, 322-331.	8.2	24
51	Experimental investigation on the cavitation performance in a venturi reactor with special emphasis on the choking flow. <i>Experimental Thermal and Fluid Science</i> , 2019, 106, 215-225.	2.7	26
52	Verification and validation of Large Eddy Simulation of attached cavitating flow around a Clark-Y hydrofoil. <i>International Journal of Multiphase Flow</i> , 2019, 115, 93-107.	3.4	104
53	Numerical Analysis of Mechanical Energy Dissipation for an Axial-Flow Pump Based on Entropy Generation Theory. <i>Energies</i> , 2019, 12, 4162.	3.1	29
54	Vortex dynamic characteristics of unsteady tip clearance cavitation in a waterjet pump determined with different vortex identification methods. <i>Journal of Mechanical Science and Technology</i> , 2019, 33, 5901-5912.	1.5	23

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55	Numerical investigation of tip flow dynamics and main flow characteristics with varying tip clearance widths for an axial-flow pump. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2019, 233, 476-488.	1.4	27
56	Experimental and numerical analysis of the unsteady influence of the inlet guide vanes on cavitation performance of an axial pump. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2019, 233, 3816-3826.	2.1	5
57	Experimental investigation of the cavitation characteristics of jet pump cavitation reactors with special emphasis on negative flow ratios. Experimental Thermal and Fluid Science, 2018, 96, 33-42.	2.7	21
58	Large eddy simulation of a vertical buoyant jet in a vegetated channel. International Journal of Heat and Fluid Flow, 2018, 70, 114-124.	2.4	11
59	3-D Lagrangian-based investigations of the time-dependent cloud cavitating flows around a Clark-Y hydrofoil with special emphasis on shedding process analysis. Journal of Hydrodynamics, 2018, 30, 122-130.	3.2	20
60	Numerical investigation of ventilated cavitating vortex shedding over a bluff body. Ocean Engineering, 2018, 159, 129-138.	4.3	16
61	URANS simulations of the tip-leakage cavitating flow with verification and validation procedures. Journal of Hydrodynamics, 2018, 30, 531-534.	3.2	15
62	Numerical analyses of ventilated cavitation over a 2-D NACA0015 hydrofoil using two turbulence modeling methods. Journal of Hydrodynamics, 2018, 30, 345-356.	3.2	27
63	Some notes on numerical simulation and error analyses of the attached turbulent cavitating flow by LES. Journal of Hydrodynamics, 2018, 30, 369-372.	3.2	14
64	Numerical investigation of turbulent flow coherent structures in annular jet pumps using the LES method. Science China Technological Sciences, 2018, 61, 86-97.	4.0	15
65	Large eddy simulation and Euler-Lagrangian coupling investigation of the transient cavitating turbulent flow around a twisted hydrofoil. International Journal of Multiphase Flow, 2018, 100, 41-56.	3.4	161
66	Verification and Validation of URANS Simulations of the Round Buoyant Jet in Counterflow. Water (Switzerland), 2018, 10, 1509.	2.7	5
67	An integral calculation approach for numerical simulation of cavitating flow around a marine propeller behind the ship hull. Journal of Hydrodynamics, 2018, 30, 1186-1189.	3.2	9
68	Internal Flow Analysis in a Two-Channel Pump Used for Salt Transportation. , 2018, , .		0
69	Numerical simulation of transient turbulent cavitating flows with special emphasis on shock wave dynamics considering the water/vapor compressibility. Journal of Hydrodynamics, 2018, 30, 573-591.	3.2	26
70	Large eddy simulation of tip leakage cavitating flow focusing on cavitation-vortex interaction with Cartesian cut-cell mesh method. Journal of Hydrodynamics, 2018, 30, 750-753.	3.2	29
71	Experimental investigation of cavity length pulsation characteristics of jet pumps during limited operation stage. Energy, 2018, 163, 61-73.	8.8	19
72	Turbulent Flows Over a Backward Facing Step Simulated Using a Modified Partially Averaged Navier-Stokes Model. Journal of Fluids Engineering, Transactions of the ASME, 2017, 139, .	1.5	24

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73	Unsteady vortical flow simulation in a Francis turbine with special emphasis on vortex rope behavior and pressure fluctuation alleviation. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2017, 231, 215-226.	1.4	36
74	Large eddy simulation of turbulent attached cavitating flow with special emphasis on large scale structures of the hydrofoil wake and turbulence-cavitation interactions. Journal of Hydrodynamics, 2017, 29, 27-39.	3.2	105
75	Numerical investigation of two typical cavitation shedding dynamics flow in liquid hydrogen with thermodynamic effects. International Journal of Heat and Mass Transfer, 2017, 109, 879-893.	4.8	55
76	Numerical analysis of bubble dynamics in the diffuser of a jet pump under variable ambient pressure. Journal of Hydrodynamics, 2017, 29, 510-519.	3.2	7
77	Numerical investigation of attached cavitation shedding dynamics around the Clark-Y hydrofoil with the FBDCM and an integral method. Ocean Engineering, 2017, 137, 247-261.	4.3	60
78	Experimental investigation on the transport of different fish species in a jet fish pump. Aquacultural Engineering, 2017, 79, 42-48.	3.1	15
79	Verification and validation of Uras simulations of the turbulent cavitating flow around the hydrofoil. Journal of Hydrodynamics, 2017, 29, 610-620.	3.2	87
80	Numerical simulation of the transient cavitating turbulent flows around the Clark-Y hydrofoil using modified partially averaged Navier-Stokes method. Journal of Mechanical Science and Technology, 2017, 31, 2849-2859.	1.5	22
81	Experimental investigation of the global cavitation dynamic behavior in a venturi tube with special emphasis on the cavity length variation. International Journal of Multiphase Flow, 2017, 89, 290-298.	3.4	61
82	Two timescales for longitudinal dispersion in a laminar open-channel flow. Journal of Hydrodynamics, 2017, 29, 1081-1084.	3.2	4
83	Experimental Investigation of Mechanical Properties of Black Shales after CO ₂ -Water-Rock Interaction. Materials, 2016, 9, 663.	2.9	97
84	A review of cavitation in hydraulic machinery. Journal of Hydrodynamics, 2016, 28, 335-358.	3.2	324
85	Numerical investigation of unsteady cavitating turbulent flows around twisted hydrofoil from the Lagrangian viewpoint. Journal of Hydrodynamics, 2016, 28, 709-712.	3.2	32
86	Experimental investigation on the performance of jet pump cavitation reactor at different area ratios. Experimental Thermal and Fluid Science, 2016, 78, 309-321.	2.7	35
87	Numerical and experimental investigation of three-dimensional cavitating flow around the straight NACA2412 hydrofoil. Ocean Engineering, 2016, 123, 357-382.	4.3	37
88	Numerical simulation of cavitation surge and vortical flows in a diffuser with swirling flow. Journal of Mechanical Science and Technology, 2016, 30, 2507-2514.	1.5	38
89	Transient cavitating vortical flows around a hydrofoil using k- ϵ partially averaged Navier-Stokes model. Modern Physics Letters B, 2016, 30, 1550262.	1.9	16
90	Combined experimental observation and numerical simulation of the cloud cavitation with U-type flow structures on hydrofoils. International Journal of Multiphase Flow, 2016, 79, 10-22.	3.4	103

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91	A review of microscopic interactions between cavitation bubbles and particles in silt-laden flow. <i>Renewable and Sustainable Energy Reviews</i> , 2016, 56, 303-318.	16.4	125
92	Numerical simulation and analysis of the internal flow in a Francis turbine with air admission. <i>IOP Conference Series: Materials Science and Engineering</i> , 2015, 72, 042047.	0.6	11
93	Numerical evaluation of cavitation shedding structure around 3D Hydrofoil: Comparison of PANS, LES and RANS results with experiments. <i>Journal of Physics: Conference Series</i> , 2015, 656, 012127.	0.4	4
94	Implicit large eddy simulation of unsteady cloud cavitation around a plane-convex hydrofoil. <i>Journal of Hydrodynamics</i> , 2015, 27, 815-823.	3.2	26
95	Multi-objective optimization of a mixed-flow pump impeller using modified NSGA-II algorithm. <i>Science China Technological Sciences</i> , 2015, 58, 2122-2130.	4.0	59
96	Cavitation shedding dynamics around a hydrofoil simulated using a filter-based density corrected model. <i>Science China Technological Sciences</i> , 2015, 58, 864-869.	4.0	29
97	Numerical investigation of cavitation-vortex interaction in a mixed-flow waterjet pump. <i>Journal of Mechanical Science and Technology</i> , 2015, 29, 3707-3716.	1.5	53
98	Analysis of ventilated cavitation around a cylinder vehicle with nature cavitation using a new simulation method. <i>Science Bulletin</i> , 2015, 60, 1833-1839.	9.0	25
99	Large Eddy Simulation and theoretical investigations of the transient cavitating vortical flow structure around a NACA66 hydrofoil. <i>International Journal of Multiphase Flow</i> , 2015, 68, 121-134.	3.4	366
100	Cavitation Simulation with Consideration of the Viscous Effect at Large Liquid Temperature Variation. <i>Chinese Physics Letters</i> , 2014, 31, 086401.	3.3	14
101	Numerical study of unsteady cavitation on 2D NACA0015 hydrofoil using free/open source software. <i>Science Bulletin</i> , 2014, 59, 3276-3282.	1.7	6
102	Numerical simulation of three dimensional cavitation shedding dynamics with special emphasis on cavitation-vortex interaction. <i>Ocean Engineering</i> , 2014, 87, 64-77.	4.3	303
103	Numerical investigation of three-dimensional cavitation evolution and excited pressure fluctuations around a twisted hydrofoil. <i>Journal of Mechanical Science and Technology</i> , 2014, 28, 2659-2668.	1.5	17
104	Unsteady cavitation characteristics and alleviation of pressure fluctuations around marine propellers with different skew angles. <i>Journal of Mechanical Science and Technology</i> , 2014, 28, 1339-1348.	1.5	49
105	Numerical analysis of unsteady cavitating turbulent flow and shedding horse-shoe vortex structure around a twisted hydrofoil. <i>International Journal of Multiphase Flow</i> , 2013, 51, 33-43.	3.4	265
106	Comparison of cavitation prediction for a centrifugal pump with or without volute casing. <i>Journal of Mechanical Science and Technology</i> , 2013, 27, 1643-1648.	1.5	35
107	Three-dimensional large eddy simulation and vorticity analysis of unsteady cavitating flow around a twisted hydrofoil. <i>Journal of Hydrodynamics</i> , 2013, 25, 510-519.	3.2	108
108	Numerical analysis of unsteady cavitation shedding dynamics around NACA66 hydrofoil by large-eddy simulation. <i>IOP Conference Series: Materials Science and Engineering</i> , 2013, 52, 062016.	0.6	1

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109	Cavitation performance evaluation for a condensate pump. IOP Conference Series: Materials Science and Engineering, 2013, 52, 062014.	0.6	0
110	Unsteady Cavitating Flow around a Hydrofoil Simulated Using the Partially-Averaged Navier–Stokes Model. Chinese Physics Letters, 2012, 29, 076401.	3.3	28
111	Cavitating Flow over a Mini Hydrofoil. Chinese Physics Letters, 2012, 29, 016401.	3.3	12
112	Numerical Simulation of Cavity Shedding from a Three-Dimensional Twisted Hydrofoil and Induced Pressure Fluctuation by Large-Eddy Simulation. Journal of Fluids Engineering, Transactions of the ASME, 2012, 134, .	1.5	63
113	A miniature pump with a fluid dynamic bearing. Science China Technological Sciences, 2012, 55, 795-801.	4.0	6
114	Partially-Averaged Navier–Stokes method with modified $k\text{-}\mu$ model for cavitating flow around a marine propeller in a non-uniform wake. International Journal of Heat and Mass Transfer, 2012, 55, 6582-6588.	4.8	105
115	Numerical analysis of cavitation evolution and excited pressure fluctuation around a propeller in non-uniform wake. International Journal of Multiphase Flow, 2012, 43, 13-21.	3.4	141
116	Numerical Study of Cavitating Turbulent Flow Around Propellers: Relationship of Cavity Volume Evolution and Pressure Fluctuation. , 2011, , .		1
117	Scale Effects on the Cavitation Development in Fluid Machinery. , 2011, , .		0
118	Unsteady Numerical Simulation of Cavitating Turbulent Flow Around a Highly Skewed Model Marine Propeller. Journal of Fluids Engineering, Transactions of the ASME, 2011, 133, .	1.5	54
119	Numerical Investigation of the Ventilated Cavitating Flow Around an Under-Water Vehicle Based on a Three-Component Cavitation Model. Journal of Hydrodynamics, 2010, 22, 753-759.	3.2	51
120	Numerical investigation of unsteady cavitating turbulent flow around a full scale marine propeller. Journal of Hydrodynamics, 2010, 22, 705-710.	3.2	25
121	A Three-Component Model Suitable for Natural and Ventilated Cavitation. Chinese Physics Letters, 2010, 27, 096401.	3.3	7
122	NUMERICAL AND EXPERIMENTAL STUDY ON UNSTEADY SHEDDING OF PARTIAL CAVITATION. Modern Physics Letters B, 2010, 24, 1441-1444.	1.9	9
123	A Thermodynamic Cavitation Model for Cavitating Flow Simulation in a Wide Range of Water Temperatures. Chinese Physics Letters, 2010, 27, 016401.	3.3	12
124	Modeling Cavitating Flow in High Temperature Water. , 2009, , .		0