Desheng Zhang

List of Publications by Year
in descending order

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45	794	759233 12	526287 27
papers	citations	h-index	g-index

45	45	45	325
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Numerical and experimental investigation of tip leakage vortex trajectory and dynamics in an axial flow pump. Computers and Fluids, 2015, 112, 61-71.	2.5	151
2	Numerical analysis of unsteady tip leakage vortex cavitation cloud and unstable suction-side-perpendicular cavitating vortices in an axial flow pump. International Journal of Multiphase Flow, 2015, 77, 244-259.	3.4	136
3	Numerical and Experimental Investigation of Tip Leakage Vortex Cavitation Patterns and Mechanisms in an Axial Flow Pump. Journal of Fluids Engineering, Transactions of the ASME, 2015, 137, .	1.5	109
4	Numerical and experimental study of the selfâ€priming process of a multistage selfâ€priming centrifugal pump. International Journal of Energy Research, 2019, 43, 4074-4092.	4.5	36
5	Study on unsteady tip leakage vortex cavitation in an axial-flow pump using an improved filter-based model. Journal of Mechanical Science and Technology, 2017, 31, 659-667.	1.5	26
6	Effect of blade tip geometry on tip leakage vortex dynamics and cavitation pattern in axial-flow pump. Science China Technological Sciences, 2017, 60, 1480-1493.	4.0	25
7	Study on tip leakage vortex in an axial flow pump based on modified shear stress transport k-Ï‰ turbulence model. Thermal Science, 2013, 17, 1551-1555.	1.1	20
8	Experimental and Numerical Investigation on the Tip Leakage Vortex Cavitation in an Axial Flow Pump with Different Tip Clearances. Processes, 2019, 7, 935.	2.8	19
9	Numerical investigation of modified cavitation model with thermodynamic effect in water and liquid nitrogen. Cryogenics, 2020, 106, 103049.	1.7	19
10	Numerical and experimental investigations on inflow loss in the energy recovery turbines with back-curved and front-curved impeller based on the entropy generation theory. Energy, 2022, 239, 122426.	8.8	19
11	A study on tip leakage vortex dynamics and cavitation in axial-flow pump. Fluid Dynamics Research, 2017, 49, 035504.	1.3	17
12	A hybrid RANS/LES model for simulating time-dependent cloud cavitating flow around a NACA66 hydrofoil. Science China Technological Sciences, 2016, 59, 1252-1264.	4.0	13
13	Influence of blade inlet angle on the performance of a single blade centrifugal pump. Engineering Applications of Computational Fluid Mechanics, 2021, 15, 462-475.	3.1	12
14	Vortex suppression of the tip leakage flow over a NACA0009 hydrofoil via a passive jet induced by the double-control-hole. Ocean Engineering, 2021, 237, 109647.	4.3	12
15	Hydraulic componentsâ€™ matching optimization design and entropy production analysis in a large vertical centrifugal pump. Journal of Mechanical Science and Technology, 2021, 35, 5033-5048.	1.5	12
16	Numerical and experimental investigations on the hydrodynamic radial force of single-channel pumps. Journal of Mechanical Science and Technology, 2018, 32, 4571-4581.	1.5	11
17	Fish-friendly design of an axial flow pump impeller based on a blade strike model. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2020, 234, 173-186.	1.4	11
18	Numerical investigation of blade dynamic characteristics in an axial flow pump. Thermal Science, 2013, 17, 1511-1514.	1.1	9

#	Article	IF	Citations
19	Numerical investigations on effect of wear-ring clearance on performance of a submersible well pump. Advances in Mechanical Engineering, 2017, 9, 168781401770415.	1.6	9
20	Visualized observations of trajectory and dynamics of unsteady tip cloud cavitating vortices in axial flow pump. Journal of Fluid Science and Technology, 2017, 12, JFST0007-JFST0007.	0.6	9
21	Experimental and numerical investigation of tip leakage vortex cavitation in an axial flow pump under design and off-design conditions. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2021, 235, 70-80.	1.4	9
22	Numerical Analysis of the Effect of Cavitation on the Tip Leakage Vortex in an Axial-Flow Pump. Journal of Marine Science and Engineering, 2021, 9, 775.	2.6	9
23	Comparative study of tip leakage vortex trajectory and cavitation in an axial flow pump with various tip clearances. Journal of Mechanical Science and Technology, 2022, 36, 1289-1302.	1.5	9
24	Numerical study of the magnetohydrodynamic flow instability and its effect on energy conversion in the annular linear induction pump. Physics of Fluids, 2021, 33, .	4.0	8
25	Numerical study on energy conversion characteristics of molten salt pump based on energy transport theory. Energy, 2022, 244, 122674.	8.8	8
26	LES study of transient behaviour and turbulent characteristics of free-surface and floor-attached vortices in pump sump. Journal of Hydraulic Research/De Recherches Hydrauliques, 2019, 57, 733-743.	1.7	7
27	Analysis of the Formation Mechanism of Secondary Tip Leakage Vortex (S-TLV) in an Axial Flow Pump. Machines, 2022, 10, 41.	2.2	7
28	Numerical and experimental investigation of the pressure fluctuation in a mixed-flow pump under low flow conditions. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2020, 234, 46-57.	1.4	6
29	Numerical investigation of cavitation suppression in an inducer for water and liquid nitrogen with emphasis on thermodynamic effect. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2021, 43, 1.	1.6	6
30	The Dynamic Characteristic Analysis of the Water Lubricated Bearing-Rotor System in Seawater Desalination Pump. Advances in Mechanical Engineering, 2014, 6, 356578.	1.6	5
31	Assessment of an improved turbulence model in simulating the unsteady flows around a D-shaped cylinder and an open cavity. Applied Mathematical Modelling, 2020, 83, 552-575.	4.2	5
32	Analysis of the Formation Mechanism and Evolution of the Perpendicular Cavitation Vortex of Tip Leakage Flow in an Axial-Flow Pump for Off-Design Conditions. Journal of Marine Science and Engineering, 2021, 9, 1045.	2.6	5
33	Large-Eddy Simulation of Cavitating Tip Leakage Vortex Structures and Dynamics around a NACA0009 Hydrofoil. Journal of Marine Science and Engineering, 2021, 9, 1198.	2.6	5
34	Computational fluid dynamics and experimental study of inter-stage seal clearance on submersible well pump. Advances in Mechanical Engineering, 2016, 8, 168781401663268.	1.6	4
35	Numerical and experimental investigations of pressure fluctuations in single-channel pumps. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2018, 232, 397-415.	1.4	4
36	A comparative study of Gaussian process regression with other three machine learning approaches in the performance prediction of centrifugal pump. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2022, 236, 3938-3949.	2.1	4

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37	Numerical investigation of pump performance and internal characteristics in ALIP with different winding schemes. International Journal of Applied Electromagnetics and Mechanics, 2018, 57, 39-51.	0.6	3
38	Experimental and numerical investigation on a simple droplet coalescence design in microchannels. Heat and Mass Transfer, 2019, 55, 1553-1562.	2.1	3
39	A comparative study on the reducing flow rate design method for a desalination energy recovery pump as turbine. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2021, 43, 1.	1.6	3
40	Numerical analysis of the unsteady cavitation shedding flow around twisted hydrofoil based on hybrid filter model. Thermal Science, 2018, 22, 1629-1636.	1.1	3
41	Study on the flow pattern and pressure fluctuation in a vertical volute centrifugal pump with vaned diffuser under near stall conditions. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2022, 44, 1.	1.6	3
42	Mechanisms of energy conversion in induction magnetohydrodynamic pumps for transporting conducting liquids. Energy, 2022, 244, 123157.	8.8	2
43	Interference Torque of a Gas-Dynamic Bearing Gyroscope Subject to a Uniform Change of the Specific Force and the Carrier Angular Velocity. Sensors, 2020, 20, 6852.	3.8	1
44	Numerical Simulation on the Influence of Rotating Speed on the Hydraulic Loss Characteristics of Desalination Energy Recovery Turbine. Shock and Vibration, 2021, 2021, 1-14.	0.6	0
45	Amplification mechanism of perturbation energy in controlled backward-facing step flow. Applied Mathematics and Mechanics (English Edition), 2021, 42, 1479-1494.	3.6	0