Zhengwei Wang

List of Publications by Year
in descending order

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83 papers	1,642 citations	318942 23 h-index	371746 37 g-index
83 all docs	83 docs citations	83 times ranked	939 citing authors

#	Article	IF	Citations
1	Shutdown idling performance of the nuclear main coolant pump under station blackout accident: An optimization study. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2023, 237, 79-97.	0.8	0
2	Transient thermo-elasto-hydrodynamic analysis of a bidirectional thrust bearing in start-up and shutdown processes. Engineering Computations, 2022, 39, 1511-1533.	0.7	5
3	Fatigue analysis in rotor of a prototype bulb turbine based on fluid-structure interaction. Engineering Failure Analysis, 2022, 132, 105940.	1.8	5
4	Study on the Vortex in a Pump Sump and Its Influence on the Pump Unit. Journal of Marine Science and Engineering, 2022, 10, 103.	1.2	5
5	Influence of rotation on the modal characteristics of a bulb turbine unit rotor. Renewable Energy, 2022, 187, 887-895.	4.3	12
6	Numerical study of the natural frequency and mode shape of prototype Francis turbine runner. Journal of Hydrodynamics, 2022, 34, 125-134.	1.3	2
7	Numerical Analysis on the Hydraulic Thrust and Dynamic Response Characteristics of a Turbine Pump. Energies, 2022, 15, 1580.	1.6	6
8	The Influence of Different Operating Conditions on the Support Bracket Stress in Pumped Storage Units. Energies, 2022, 15, 2195.	1.6	0
9	Research on the Flow-Induced Stress Characteristics of Head-Cover Bolts of a Pump-Turbine during Turbine Start-Up. Energies, 2022, 15, 1832.	1.6	9
10	Numerical Investigation on the Effect of Asymmetry of Flow Velocity on the Wake Vortex of Hydrofoils. Journal of Marine Science and Engineering, 2022, 10, 546.	1.2	1
11	Influence of End Wall Clearance on Guide Vane Self-Excited Vibrations at Small Openings during Pump Modeâ€™s Starting Up Process of a Reversible Pump Turbine. Journal of Marine Science and Engineering, 2022, 10, 528.	1.2	2
12	Numerical prediction of the effect of free surface vortex air-entrainment on sediment erosion in a pump. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2022, 236, 1297-1308.	0.8	5
13	Effect of the pressure balance device on the flow characteristics of a pump-turbine. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2022, 236, 1533-1543.	0.8	3
14	Numerical prediction of the influence of free surface vortex air-entrainment on pump unit performance. Ocean Engineering, 2022, 256, 111503.	1.9	11
15	Effect of Operating Head on Dynamic Behavior of a Pumpâ€“Turbine Runner in Turbine Mode. Energies, 2022, 15, 4004.	1.6	3
16	Fluidâ€“Structure Coupling Analysis of the Stationary Structures of a Prototype Pump Turbine during Load Rejection. Energies, 2022, 15, 3764.	1.6	9
17	Design and optimization of a bidirectional rim-generator turbine runner: Hydraulic performance optimization and structure strength evaluation. Ocean Engineering, 2022, 257, 111639.	1.9	3
18	Dynamic behavior analysis of a cracked bulb turbine rotor based on acoustic fluid-structural coupling method. Engineering Failure Analysis, 2022, 140, 106555.	1.8	2

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19	Investigation of the Starting-Up Axial Hydraulic Force and Structure Characteristics of Pump Turbine in Pump Mode. Journal of Marine Science and Engineering, 2021, 9, 158.	1.2	20
20	Investigation on Dynamic Stresses of Pump-Turbine Runner during Start Up in Turbine Mode. Processes, 2021, 9, 499.	1.3	17
21	Backflow effects on mass flow gain factor in a centrifugal pump. Science Progress, 2021, 104, 003685042199886.	1.0	1
22	Effect of Boundary Conditions on Fluidâ€“Structure Coupled Modal Analysis of Runners. Journal of Marine Science and Engineering, 2021, 9, 434.	1.2	3
23	Effects of trailing-edge modification of guide vanes on the wake vortices under different inflow conditions. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2021, 235, 1892-1901.	0.8	3
24	Numerical study of hydraulic axial force of prototype pump-turbine pump modeâ€™s stop with power down. IOP Conference Series: Earth and Environmental Science, 2021, 774, 012094.	0.2	4
25	Effect of Seal Locations of Pump-Turbine on Axial Hydraulic Trust. Journal of Marine Science and Engineering, 2021, 9, 623.	1.2	3
26	Analysis of Dynamic Stresses of Pump-Turbine Runner during Load Rejection Process in Turbine Mode. IOP Conference Series: Earth and Environmental Science, 2021, 774, 012100.	0.2	1
27	Effect of the Diameter of Pressure-Balance Pipe on Axial Hydraulic Thrust. Journal of Marine Science and Engineering, 2021, 9, 724.	1.2	2
28	Analysis of flow characteristics in pumped storage unit during start-up in turbine mode. Journal of Physics: Conference Series, 2021, 1985, 012051.	0.3	1
29	Numerical Simulation Prediction of Erosion Characteristics in a Double-Suction Centrifugal Pump. Processes, 2021, 9, 1483.	1.3	4
30	Pressure Analysis in the Draft Tube of a Pump-Turbine under Steady and Transient Conditions. Energies, 2021, 14, 4732.	1.6	8
31	Transient structural load characteristics of reactor coolant pump rotor system in rotor seizure accident. Annals of Nuclear Energy, 2021, 164, 108631.	0.9	1
32	Analysis of Internal Flow Characteristics of a Startup Pump Turbine at the Lowest Head under No-Load Conditions. Journal of Marine Science and Engineering, 2021, 9, 1360.	1.2	6
33	Comparative modeling and analysis of the flow asymmetricity in a centrifugal pump impeller at partial load. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2020, 234, 237-247.	0.8	8
34	Tesla Bladed Pump (Disc Bladed Pump) Preliminary Experimental Performance Analysis. Energies, 2020, 13, 4873.	1.6	7
35	Stall Mode Transformation in the Wide Vaneless Diffuser of Centrifugal Compressors. Energies, 2020, 13, 6067.	1.6	1
36	Prediction and Analysis of the Axial Force of Pump-Turbine during Load-Rejection Process. IOP Conference Series: Earth and Environmental Science, 2020, 440, 052081.	0.2	5

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37	Energy conversion characteristics of multiphase pump impeller analyzed based on blade load spectra. Renewable Energy, 2020, 157, 9-23.	4.3	15
38	Numerical estimation of prototype hydraulic efficiency in a low head power station based on gross head conditions. Renewable Energy, 2020, 153, 175-181.	4.3	18
39	On the Unsteady Wake of a Rigid Plate Under Constant Acceleration and Deceleration. Journal of Fluids Engineering, Transactions of the ASME, 2020, 142, .	0.8	2
40	Unsteady Flow Numerical Simulations on Internal Energy Dissipation for a Low-Head Centrifugal Pump at Part-Load Operating Conditions. Energies, 2019, 12, 2013.	1.6	19
41	Thermodynamic analysis of energy dissipation and unsteady flow characteristic in a centrifugal dredge pump under over-load conditions. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2019, 233, 4742-4753.	1.1	17
42	Evaluation of gap influence on the dynamic response behavior of pump-turbine runner. Engineering Computations, 2019, 36, 491-508.	0.7	24
43	Analysis of the Guide Vane Jet-Vortex Flow and the Induced Noise in a Prototype Pump-Turbine. Applied Sciences (Switzerland), 2019, 9, 1971.	1.3	8
44	Numerical Investigation into the Effect of Sound Speed in Attached Cavitation on Hydrofoil Modes of Vibration. Energies, 2019, 12, 1758.	1.6	3
45	Numerical Investigation Into the Influence on Hydrofoil Vibrations of Water Tunnel Test Section Acoustic Modes. Journal of Vibration and Acoustics, Transactions of the ASME, 2019, 141, .	1.0	4
46	Slurry Flow and Erosion Prediction in a Centrifugal Pump after Long-Term Operation. Energies, 2019, 12, 1523.	1.6	17
47	Numerical investigation of the cavitation dynamic parameters in a Francis turbine draft tube with columnar vortex rope. Journal of Hydrodynamics, 2019, 31, 931-939.	1.3	13
48	Evaluating the Transient Energy Dissipation in a Centrifugal Impeller under Rotor-Stator Interaction. Entropy, 2019, 21, 271.	1.1	16
49	Numerical Analysis of the Influence of Design Parameters on the Efficiency of an OWC Axial Impulse Turbine for Wave Energy Conversion. Energies, 2019, 12, 939.	1.6	11
50	Numerical investigation of the flow regime and cavitation in the vanes of reversible pump-turbine during pump mode's starting up. Renewable Energy, 2019, 141, 9-19.	4.3	27
51	Fatigue life estimation of Francis turbines based on experimental strain measurements: Review of the actual data and future trends. Renewable and Sustainable Energy Reviews, 2019, 102, 96-110.	8.2	42
52	Numerical estimation of air core length in two-phase free surface vortex. Journal of Hydraulic Research/De Recherches Hydrauliques, 2019, 57, 475-487.	0.7	8
53	Numerical simulation for the tip leakage vortex cavitation. Ocean Engineering, 2018, 151, 71-81.	1.9	60
54	Unsteady Flow and Pressure Pulsation Characteristics Analysis of Rotating Stall in Centrifugal Pumps Under Off-Design Conditions. Journal of Fluids Engineering, Transactions of the ASME, 2018, 140, .	0.8	55

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55	Cavitation Effects on the Structural Resonance of Hydraulic Turbines: Failure Analysis in a Real Francis Turbine Runner. Energies, 2018, 11, 2320.	1.6	13
56	Influence of Blade Leading-Edge Shape on Cavitation in a Centrifugal Pump Impeller. Energies, 2018, 11, 2588.	1.6	24
57	A Review of PZT Patches Applications in Submerged Systems. Sensors, 2018, 18, 2251.	2.1	31
58	Numerical Investigations of Pressure Distribution Inside a Ventilated Supercavity. Journal of Fluids Engineering, Transactions of the ASME, 2017, 139, .	0.8	40
59	Three-dimensional transient simulation of a prototype pump-turbine during normal turbine shutdown. Journal of Hydraulic Research/De Recherches Hydrauliques, 2017, 55, 520-537.	0.7	65
60	Numerical simulations for the fluid-thermal-structural interaction lubrication in a tilting pad thrust bearing. Engineering Computations, 2017, 34, 1149-1165.	0.7	21
61	Conversion relation of centrifugal pumps as hydraulic turbines based on the amplification coefficient. Advances in Mechanical Engineering, 2017, 9, 168781401769620.	0.8	12
62	Numerical prediction on the effect of free surface vortex on intake flow characteristics for tidal power station. Renewable Energy, 2017, 101, 617-628.	4.3	65
63	Performance prediction of a prototype tidal power turbine by using a suitable numerical model. Renewable Energy, 2017, 113, 293-302.	4.3	31
64	Numerical evaluation of the clearance geometries effect on the flow field and performance of a hydrofoil. Renewable Energy, 2016, 99, 390-397.	4.3	70
65	Three-dimensional simulation of unsteady flows in a pump-turbine during start-up transient up to speed no-load condition in generating mode. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2016, 230, 570-585.	0.8	50
66	Flow Similarity in the Rotorâ€“Stator Interaction Affected Region in Prototype and Model Francis Pump-Turbines in Generating Mode. Journal of Fluids Engineering, Transactions of the ASME, 2016, 138, .	0.8	24
67	TEHD analysis of a bidirectional thrust bearing in a pumped storage unit. Industrial Lubrication and Tribology, 2016, 68, 315-324.	0.6	9
68	A review on fatigue damage mechanism in hydro turbines. Renewable and Sustainable Energy Reviews, 2016, 54, 1-14.	8.2	143
69	Numerical prediction of pressure pulsation for a low head bidirectional tidal bulb turbine. Energy, 2015, 89, 730-738.	4.5	37
70	Comparison of BEM-CFD and full rotor geometry simulations for the performance and flow field of a marine current turbine. Renewable Energy, 2015, 75, 640-648.	4.3	38
71	Failure Analysis and Optimization of the Rotor System in a Diesel Turbocharger for Rotor Speed-Up Test. Advances in Mechanical Engineering, 2014, 6, 476023.	0.8	7
72	Numerical predictions of pressure pulses in a Francis pump turbine with misaligned guide vanes. Journal of Hydrodynamics, 2014, 26, 250-256.	1.3	36

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73	Numerical simulation of a heave-only floating OWC (oscillating water column) device. Energy, 2014, 76, 799-806.	4.5	59
74	Vibration and fatigue caused by pressure pulsations originating in the vaneless space for a Kaplan turbine with high head. Engineering Computations, 2013, 30, 448-463.	0.7	22
75	Turbine efficiency test on a large hydraulic turbine unit. Science China Technological Sciences, 2012, 55, 2199-2205.	2.0	8
76	Numerical Simulation of Three-Dimensional Cavitation Around a Hydrofoil. Journal of Fluids Engineering, Transactions of the ASME, 2011, 133, .	0.8	21
77	Hydraulic performance of a large slanted axialâ€flow pump. Engineering Computations, 2010, 27, 243-256.	0.7	30
78	Hydroturbine operating region partitioning based on analyses of unsteady flow field and dynamic response. Science China Technological Sciences, 2010, 53, 519-528.	2.0	10
79	Fatigue of piston rod caused by unsteady, unbalanced, unsynchronized blade torques in a Kaplan turbine. Engineering Failure Analysis, 2010, 17, 192-199.	1.8	32
80	Dynamic stresses in a francis turbine runner based on fluid-structure interaction analysis. Tsinghua Science and Technology, 2008, 13, 587-592.	4.1	53
81	Numerical Simulation of Cavitation Around a Hydrofoil and Evaluation of a RNG Î°-Îµ Model. Journal of Fluids Engineering, Transactions of the ASME, 2008, 130, .	0.8	68
82	Analysis of dynamic stresses in Kaplan turbine blades. Engineering Computations, 2007, 24, 753-762.	0.7	34
83	Simulations and Measurements of Pressure Oscillations Caused by Vortex Ropes. Journal of Fluids Engineering, Transactions of the ASME, 2006, 128, 649-655.	0.8	52