

# Zhengwei Wang

## List of Publications by Year in descending order

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83  
papers

1,642  
citations

279798

23  
h-index

330143

37  
g-index

83  
all docs

83  
docs citations

83  
times ranked

852  
citing authors

#	ARTICLE	IF	CITATIONS
1	A review on fatigue damage mechanism in hydro turbines. <i>Renewable and Sustainable Energy Reviews</i> , 2016, 54, 1-14.	16.4	143
2	Numerical evaluation of the clearance geometries effect on the flow field and performance of a hydrofoil. <i>Renewable Energy</i> , 2016, 99, 390-397.	8.9	70
3	Numerical Simulation of Cavitation Around a Hydrofoil and Evaluation of a RNG $\hat{\mu}$ Model. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2008, 130, .	1.5	68
4	Three-dimensional transient simulation of a prototype pump-turbine during normal turbine shutdown. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 2017, 55, 520-537.	1.7	65
5	Numerical prediction on the effect of free surface vortex on intake flow characteristics for tidal power station. <i>Renewable Energy</i> , 2017, 101, 617-628.	8.9	65
6	Numerical simulation for the tip leakage vortex cavitation. <i>Ocean Engineering</i> , 2018, 151, 71-81.	4.3	60
7	Numerical simulation of a heave-only floating OWC (oscillating water column) device. <i>Energy</i> , 2014, 76, 799-806.	8.8	59
8	Unsteady Flow and Pressure Pulsation Characteristics Analysis of Rotating Stall in Centrifugal Pumps Under Off-Design Conditions. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2018, 140, .	1.5	55
9	Dynamic stresses in a francis turbine runner based on fluid-structure interaction analysis. <i>Tsinghua Science and Technology</i> , 2008, 13, 587-592.	6.1	53
10	Simulations and Measurements of Pressure Oscillations Caused by Vortex Ropes. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2006, 128, 649-655.	1.5	52
11	Three-dimensional simulation of unsteady flows in a pump-turbine during start-up transient up to speed no-load condition in generating mode. <i>Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy</i> , 2016, 230, 570-585.	1.4	50
12	Fatigue life estimation of Francis turbines based on experimental strain measurements: Review of the actual data and future trends. <i>Renewable and Sustainable Energy Reviews</i> , 2019, 102, 96-110.	16.4	42
13	Numerical Investigations of Pressure Distribution Inside a Ventilated Supercavity. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2017, 139, .	1.5	40
14	Comparison of BEM-CFD and full rotor geometry simulations for the performance and flow field of a marine current turbine. <i>Renewable Energy</i> , 2015, 75, 640-648.	8.9	38
15	Numerical prediction of pressure pulsation for a low head bidirectional tidal bulb turbine. <i>Energy</i> , 2015, 89, 730-738.	8.8	37
16	Numerical predictions of pressure pulses in a Francis pump turbine with misaligned guide vanes. <i>Journal of Hydrodynamics</i> , 2014, 26, 250-256.	3.2	36
17	Analysis of dynamic stresses in Kaplan turbine blades. <i>Engineering Computations</i> , 2007, 24, 753-762.	1.4	34
18	Fatigue of piston rod caused by unsteady, unbalanced, unsynchronized blade torques in a Kaplan turbine. <i>Engineering Failure Analysis</i> , 2010, 17, 192-199.	4.0	32

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19	A Review of PZT Patches Applications in Submerged Systems. <i>Sensors</i> , 2018, 18, 2251.	3.8	31
20	Performance prediction of a prototype tidal power turbine by using a suitable numerical model. <i>Renewable Energy</i> , 2017, 113, 293-302.	8.9	31
21	Hydraulic performance of a large slanted axial flow pump. <i>Engineering Computations</i> , 2010, 27, 243-256.	1.4	30
22	Numerical investigation of the flow regime and cavitation in the vanes of reversible pump-turbine during pump mode's starting up. <i>Renewable Energy</i> , 2019, 141, 9-19.	8.9	27
23	Flow Similarity in the Rotor-Stator Interaction Affected Region in Prototype and Model Francis Pump-Turbines in Generating Mode. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2016, 138, .	1.5	24
24	Influence of Blade Leading-Edge Shape on Cavitation in a Centrifugal Pump Impeller. <i>Energies</i> , 2018, 11, 2588.	3.1	24
25	Evaluation of gap influence on the dynamic response behavior of pump-turbine runner. <i>Engineering Computations</i> , 2019, 36, 491-508.	1.4	24
26	Vibration and fatigue caused by pressure pulsations originating in the vaneless space for a Kaplan turbine with high head. <i>Engineering Computations</i> , 2013, 30, 448-463.	1.4	22
27	Numerical Simulation of Three-Dimensional Cavitation Around a Hydrofoil. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2011, 133, .	1.5	21
28	Numerical simulations for the fluid-thermal-structural interaction lubrication in a tilting pad thrust bearing. <i>Engineering Computations</i> , 2017, 34, 1149-1165.	1.4	21
29	Investigation of the Starting-Up Axial Hydraulic Force and Structure Characteristics of Pump Turbine in Pump Mode. <i>Journal of Marine Science and Engineering</i> , 2021, 9, 158.	2.6	20
30	Unsteady Flow Numerical Simulations on Internal Energy Dissipation for a Low-Head Centrifugal Pump at Part-Load Operating Conditions. <i>Energies</i> , 2019, 12, 2013.	3.1	19
31	Numerical estimation of prototype hydraulic efficiency in a low head power station based on gross head conditions. <i>Renewable Energy</i> , 2020, 153, 175-181.	8.9	18
32	Thermodynamic analysis of energy dissipation and unsteady flow characteristic in a centrifugal dredge pump under over-load conditions. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2019, 233, 4742-4753.	2.1	17
33	Slurry Flow and Erosion Prediction in a Centrifugal Pump after Long-Term Operation. <i>Energies</i> , 2019, 12, 1523.	3.1	17
34	Investigation on Dynamic Stresses of Pump-Turbine Runner during Start Up in Turbine Mode. <i>Processes</i> , 2021, 9, 499.	2.8	17
35	Evaluating the Transient Energy Dissipation in a Centrifugal Impeller under Rotor-Stator Interaction. <i>Entropy</i> , 2019, 21, 271.	2.2	16
36	Energy conversion characteristics of multiphase pump impeller analyzed based on blade load spectra. <i>Renewable Energy</i> , 2020, 157, 9-23.	8.9	15

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37	Cavitation Effects on the Structural Resonance of Hydraulic Turbines: Failure Analysis in a Real Francis Turbine Runner. <i>Energies</i> , 2018, 11, 2320.	3.1	13
38	Numerical investigation of the cavitation dynamic parameters in a Francis turbine draft tube with columnar vortex rope. <i>Journal of Hydrodynamics</i> , 2019, 31, 931-939.	3.2	13
39	Conversion relation of centrifugal pumps as hydraulic turbines based on the amplification coefficient. <i>Advances in Mechanical Engineering</i> , 2017, 9, 168781401769620.	1.6	12
40	Influence of rotation on the modal characteristics of a bulb turbine unit rotor. <i>Renewable Energy</i> , 2022, 187, 887-895.	8.9	12
41	Numerical Analysis of the Influence of Design Parameters on the Efficiency of an OWC Axial Impulse Turbine for Wave Energy Conversion. <i>Energies</i> , 2019, 12, 939.	3.1	11
42	Numerical prediction of the influence of free surface vortex air-entrainment on pump unit performance. <i>Ocean Engineering</i> , 2022, 256, 111503.	4.3	11
43	Hydroturbine operating region partitioning based on analyses of unsteady flow field and dynamic response. <i>Science China Technological Sciences</i> , 2010, 53, 519-528.	4.0	10
44	TEHD analysis of a bidirectional thrust bearing in a pumped storage unit. <i>Industrial Lubrication and Tribology</i> , 2016, 68, 315-324.	1.3	9
45	Research on the Flow-Induced Stress Characteristics of Head-Cover Bolts of a Pump-Turbine during Turbine Start-Up. <i>Energies</i> , 2022, 15, 1832.	3.1	9
46	Fluid-Structure Coupling Analysis of the Stationary Structures of a Prototype Pump Turbine during Load Rejection. <i>Energies</i> , 2022, 15, 3764.	3.1	9
47	Turbine efficiency test on a large hydraulic turbine unit. <i>Science China Technological Sciences</i> , 2012, 55, 2199-2205.	4.0	8
48	Analysis of the Guide Vane Jet-Vortex Flow and the Induced Noise in a Prototype Pump-Turbine. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 1971.	2.5	8
49	Numerical estimation of air core length in two-phase free surface vortex. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 2019, 57, 475-487.	1.7	8
50	Comparative modeling and analysis of the flow asymmetry in a centrifugal pump impeller at partial load. <i>Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy</i> , 2020, 234, 237-247.	1.4	8
51	Pressure Analysis in the Draft Tube of a Pump-Turbine under Steady and Transient Conditions. <i>Energies</i> , 2021, 14, 4732.	3.1	8
52	Failure Analysis and Optimization of the Rotor System in a Diesel Turbocharger for Rotor Speed-Up Test. <i>Advances in Mechanical Engineering</i> , 2014, 6, 476023.	1.6	7
53	Tesla Bladed Pump (Disc Bladed Pump) Preliminary Experimental Performance Analysis. <i>Energies</i> , 2020, 13, 4873.	3.1	7
54	Analysis of Internal Flow Characteristics of a Startup Pump Turbine at the Lowest Head under No-Load Conditions. <i>Journal of Marine Science and Engineering</i> , 2021, 9, 1360.	2.6	6

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55	Numerical Analysis on the Hydraulic Thrust and Dynamic Response Characteristics of a Turbine Pump. <i>Energies</i> , 2022, 15, 1580.	3.1	6
56	Prediction and Analysis of the Axial Force of Pump-Turbine during Load-Rejection Process. IOP Conference Series: Earth and Environmental Science, 2020, 440, 052081.	0.3	5
57	Transient thermo-elasto-hydrodynamic analysis of a bidirectional thrust bearing in start-up and shutdown processes. <i>Engineering Computations</i> , 2022, 39, 1511-1533.	1.4	5
58	Fatigue analysis in rotor of a prototype bulb turbine based on fluid-structure interaction. <i>Engineering Failure Analysis</i> , 2022, 132, 105940.	4.0	5
59	Study on the Vortex in a Pump Sump and Its Influence on the Pump Unit. <i>Journal of Marine Science and Engineering</i> , 2022, 10, 103.	2.6	5
60	Numerical prediction of the effect of free surface vortex air-entrainment on sediment erosion in a pump. <i>Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy</i> , 2022, 236, 1297-1308.	1.4	5
61	Numerical Investigation Into the Influence on Hydrofoil Vibrations of Water Tunnel Test Section Acoustic Modes. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2019, 141, .	1.6	4
62	Numerical study of hydraulic axial force of prototype pump-turbine pump mode's stop with power down. IOP Conference Series: Earth and Environmental Science, 2021, 774, 012094.	0.3	4
63	Numerical Simulation Prediction of Erosion Characteristics in a Double-Suction Centrifugal Pump. <i>Processes</i> , 2021, 9, 1483.	2.8	4
64	Numerical Investigation into the Effect of Sound Speed in Attached Cavitation on Hydrofoil Modes of Vibration. <i>Energies</i> , 2019, 12, 1758.	3.1	3
65	Effect of Boundary Conditions on Fluid-Structure Coupled Modal Analysis of Runners. <i>Journal of Marine Science and Engineering</i> , 2021, 9, 434.	2.6	3
66	Effects of trailing-edge modification of guide vanes on the wake vortices under different inflow conditions. <i>Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy</i> , 2021, 235, 1892-1901.	1.4	3
67	Effect of Seal Locations of Pump-Turbine on Axial Hydraulic Thrust. <i>Journal of Marine Science and Engineering</i> , 2021, 9, 623.	2.6	3
68	Effect of the pressure balance device on the flow characteristics of a pump-turbine. <i>Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy</i> , 2022, 236, 1533-1543.	1.4	3
69	Effect of Operating Head on Dynamic Behavior of a Pump-Turbine Runner in Turbine Mode. <i>Energies</i> , 2022, 15, 4004.	3.1	3
70	Design and optimization of a bidirectional rim-generator turbine runner: Hydraulic performance optimization and structure strength evaluation. <i>Ocean Engineering</i> , 2022, 257, 111639.	4.3	3
71	Effect of the Diameter of Pressure-Balance Pipe on Axial Hydraulic Thrust. <i>Journal of Marine Science and Engineering</i> , 2021, 9, 724.	2.6	2
72	On the Unsteady Wake of a Rigid Plate Under Constant Acceleration and Deceleration. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2020, 142, .	1.5	2

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73	Numerical study of the natural frequency and mode shape of prototype Francis turbine runner. <i>Journal of Hydrodynamics</i> , 2022, 34, 125-134.	3.2	2
74	Influence of End Wall Clearance on Guide Vane Self-Excited Vibrations at Small Openings during Pump Mode's Starting Up Process of a Reversible Pump Turbine. <i>Journal of Marine Science and Engineering</i> , 2022, 10, 528.	2.6	2
75	Dynamic behavior analysis of a cracked bulb turbine rotor based on acoustic fluid-structural coupling method. <i>Engineering Failure Analysis</i> , 2022, 140, 106555.	4.0	2
76	Stall Mode Transformation in the Wide Vaneless Diffuser of Centrifugal Compressors. <i>Energies</i> , 2020, 13, 6067.	3.1	1
77	Backflow effects on mass flow gain factor in a centrifugal pump. <i>Science Progress</i> , 2021, 104, 003685042199886.	1.9	1
78	Analysis of Dynamic Stresses of Pump-Turbine Runner during Load Rejection Process in Turbine Mode. <i>IOP Conference Series: Earth and Environmental Science</i> , 2021, 774, 012100.	0.3	1
79	Analysis of flow characteristics in pumped storage unit during start-up in turbine mode. <i>Journal of Physics: Conference Series</i> , 2021, 1985, 012051.	0.4	1
80	Transient structural load characteristics of reactor coolant pump rotor system in rotor seizure accident. <i>Annals of Nuclear Energy</i> , 2021, 164, 108631.	1.8	1
81	Numerical Investigation on the Effect of Asymmetry of Flow Velocity on the Wake Vortex of Hydrofoils. <i>Journal of Marine Science and Engineering</i> , 2022, 10, 546.	2.6	1
82	The Influence of Different Operating Conditions on the Support Bracket Stress in Pumped Storage Units. <i>Energies</i> , 2022, 15, 2195.	3.1	0
83	Shutdown idling performance of the nuclear main coolant pump under station blackout accident: An optimization study. <i>Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy</i> , 2023, 237, 79-97.	1.4	0