Zhiqun Deng

List of Publications by Year in Descending Order

144 papers	3,906 citations	30 h-index	59 g-index
179 ext. papers	4,637 ext. citations	4.5 avg, IF	5.54 L-index

#	Paper	IF	Citations
144	Bio-inspired bistable piezoelectric energy harvester for powering animal telemetry tags: Conceptual design and preliminary experimental validation. *Renewable Energy*, **2022**, 187, 34-43	8.1	1
143	A real-time underwater acoustic telemetry receiver with edge computing for studying fish behavior and environmental sensing. *IEEE Internet of Things Journal*, **2022**, 1-1	10.7	0
142	An Implantable Biomechanical Energy Harvester for Animal Monitoring Devices. *Nano Energy*, **2022**, 107290	17.1	0
141	Underwater Noise Measurements around a Tidal Turbine in a Busy Port Setting. *Journal of Marine Science and Engineering*, **2022**, 10, 632	2.4	1
140	. *IEEE Internet of Things Journal*, **2021**, 1-1	10.7	0
139	An acoustic micro-transmitter enabling tracking of sensitive aquatic species in riverine and estuarine environments. *Cell Reports Physical Science*, **2021**, 2, 100411	6.1	0
138	Deep Learning for Automated Detection and Identification of Migrating American Eel Anguilla rostrata from Imaging Sonar Data. *Remote Sensing*, **2021**, 13, 2671	5	1
137	Investigating feasible light configurations for fish restoration: An ethological insight. *Fisheries Research*, **2021**, 234, 105807	2.3	1
136	From 95 to 59 millimetres: a new active acoustic tag size guideline for salmon. *Canadian Journal of Fisheries and Aquatic Sciences*, **2021**, 78, 943-957	2.4	2
135	A large dataset of detection and submeter-accurate 3-D trajectories of juvenile Chinook salmon. *Scientific Data*, **2021**, 8, 211	8.2	2
134	Gambusia holbrooki Survive Shear Stress, Pressurization and Avoid Blade Strike in a Simulated Pumped Hydroelectric Scheme. *Frontiers in Environmental Science*, **2020**, 8,	4.8	1
133	Renewable Ammonia as an Energy Fuel for Ocean Exploration and Transportation. *Marine Technology Society Journal*, **2020**, 54, 126-136	0.5	1
132	In situ characterization of the biological performance of a Francis turbine retrofitted with a modular guide vane. *Applied Energy*, **2020**, 276, 115492	10.7	2
131	Monitoring the State-of-Charge of a Vanadium Redox Flow Battery with the Acoustic Attenuation Coefficient: An In Operando Noninvasive Method. *Small Methods*, **2019**, 3, 1900494	12.8	8
130	Implantation of a New Micro Acoustic Tag in Juvenile Pacific Lamprey and American Eel. *Journal of Visualized Experiments*, **2019**,	1.6	2
129	In situ characterization of turbine hydraulic environment to support development of fish-friendly hydropower guidelines in the lower Mekong River region. *Ecological Engineering*, **2019**, 133, 88-97	3.9	4
128	Development of an ultra-low head siphon hydro turbine using computational fluid dynamics. *Energy* , **2019**, 181, 43-50	7.9	9

127	Stretchable sensors for environmental monitoring. *Applied Physics Reviews*, **2019**, 6, 011309	17.3	50
126	Over or under? Autonomous sensor fish reveals why overshot weirs may be safer than undershot weirs for fish passage. *Ecological Engineering*, **2019**, 132, 41-48	3.9	5
125	Hydraulic and biological characterization of a large Kaplan turbine. *Renewable Energy*, **2019**, 131, 240-249	8.1	17
124	The effect of fish bodies on the source level and beam pattern of acoustic transmitters in juvenile Chinook salmon. *Journal of the Acoustical Society of America*, **2019**, 145, EL554	2.2	1
123	How Small Can We Go? Evaluating Survival, Tag Retention, and Growth of Juvenile Chinook Salmon Implanted with a New Acoustic Microtag. *North American Journal of Fisheries Management*, **2019**, 39, 1329-1336	1.1	1
122	Tolerable ranges of fluid shear for early life-stage fishes: implications for safe fish passage at hydropower and irrigation infrastructure. *Marine and Freshwater Research*, **2019**, 70, 1503	2.2	6
121	Evaluation of a fish-friendly self-cleaning horizontal irrigation screen using autonomous sensors. *Marine and Freshwater Research*, **2019**, 70, 1274	2.2	1
120	On the variable effects of climate change on Pacific salmon. *Ecological Modelling*, **2019**, 397, 95-106	3	6
119	Integrating Hybrid-Clustering and Localized Regression for Time Synchronization of a Hierarchical Underwater Acoustic Sensor Array **2019**,		1
118	Irrigation, fisheries and Sustainable Development Goals: the importance of working collaboratively to end world hunger and malnutrition. *Marine and Freshwater Research*, **2019**, 70, i	2.2	3
117	Good Practices for Rechargeable Lithium Metal Batteries. *Journal of the Electrochemical Society*, **2019**, 166, A4141-A4149	3.9	26
116	Design and performance of composite runner blades for ultra low head turbines. *Renewable Energy* , **2019**, 132, 1280-1289	8.1	6
115	A Cloud-Based Decision Support System Framework for Hydropower Biological Evaluation. *Advances in Intelligent Systems and Computing*, **2019**, 517-529	0.4	1
114	An experimental study on fish attraction using a fish barge model. *Fisheries Research*, **2019**, 210, 181-188	2.3	6
113	Characterization of a siphon turbine to accelerate low-head hydropower deployment. *Journal of Cleaner Production*, **2019**, 210, 35-42	10.3	8
112	Three-dimensional migration behavior of juvenile salmonids in reservoirs and near dams. *Scientific Reports*, **2018**, 8, 956	4.9	5
111	Mechanism of Formation of Li7P3S11 Solid Electrolytes through Liquid Phase Synthesis. *Chemistry of Materials*, **2018**, 30, 990-997	9.6	90
110	Impacts of climate change, policy and Water-Energy-Food nexus on hydropower development. *Renewable Energy*, **2018**, 116, 827-834	8.1	71

109	A Hydropower Biological Evaluation Toolset (HBET) for Characterizing Hydraulic Conditions and Impacts of Hydro-Structures on Fish. *Energies*, **2018**, 11, 990	3.1	16
108	Improving underwater localization accuracy with machine learning. *Review of Scientific Instruments*, **2018**, 89, 074902	1.7	8
107	Juvenile Chinook Salmon Survival When Exposed to Simulated Dam Passage after Being Implanted with a New Microacoustic Transmitter. *North American Journal of Fisheries Management*, **2018**, 38, 940-952	1.1	4
106	Hydropower development and fish management: a food□water□energy nexus requiring international and multidisciplinary approach. *Marine and Freshwater Research*, **2018**, 69, i	2.2	1
105	Fundamental understanding and rational design of high energy structural microbatteries. *Nano Energy*, **2018**, 43, 310-316	17.1	6
104	Physical and ecological evaluation of a fish-friendly surface spillway. *Ecological Engineering*, **2018**, 110, 107-116	3.9	9
103	Injury and mortality of two Mekong River species exposed to turbulent shear forces. *Marine and Freshwater Research*, **2018**, 69, 1945	2.2	9
102	Surface bypass as a means of protecting downstream-migrating fish: lack of standardised evaluation criteria complicates evaluation of efficacy. *Marine and Freshwater Research*, **2018**, 69, 1882	2.2	10
101	Physical and hydraulic forces experienced by fish passing through three different low-head hydropower turbines. *Marine and Freshwater Research*, **2018**, 69, 1934	2.2	22
100	Comparing the survival rate of juvenile Chinook salmon migrating through hydropower systems using injectable and surgical acoustic transmitters. *Scientific Reports*, **2017**, 7, 42999	4.9	11
99	High fluid shear strain causes injury in silver shark: Preliminary implications for Mekong hydropower turbine design. *Fisheries Management and Ecology*, **2017**, 24, 193-198	1.8	8
98	Ultra-low-head hydroelectric technology: A review. *Renewable and Sustainable Energy Reviews*, **2017**, 78, 23-30	16.2	55
97	Research Progress towards Understanding the Unique Interfaces between Concentrated Electrolytes and Electrodes for Energy Storage Applications. *Advanced Science*, **2017**, 4, 1700032	13.6	245
96	A reliable sealing method for microbatteries. *Journal of Power Sources*, **2017**, 341, 443-447	8.9	1
95	Nonlinear Filtering Effects of Reservoirs on Flood Frequency Curves at the Regional Scale. *Water Resources Research*, **2017**, 53, 8277-8292	5.4	21
94	Retention and effects of miniature transmitters in juvenile American eels. *Fisheries Research*, **2017**, 195, 52-58	2.3	11
93	Evaluation of Boundary Dam spillway using an Autonomous Sensor Fish Device. *Journal of Hydro-Environment Research*, **2017**, 14, 85-92	2.3	7
92	A comparison of metrics to evaluate the effects of hydro-facility passage stressors on fish. *Environmental Reviews*, **2017**, 25, 1-11	4.5	16

91	Envisioning the Future of Aquatic Animal Tracking: Technology, Science, and Application. *BioScience* , **2017**, 67, 884-896	5.7	71
90	Hydrological Drought in the Anthropocene: Impacts of Local Water Extraction and Reservoir Regulation in the U.S.. *Journal of Geophysical Research D: Atmospheres*, **2017**, 122, 11,313-11,328	4.4	35
89	Autonomous Ocean Turbulence Measurements From a Moored Upwardly Rising Profiler Based on a Buoyancy-Driven Mechanism. *Marine Technology Society Journal*, **2017**, 51, 12-22	0.5	2
88	Interfacial behaviours between lithium ion conductors and electrode materials in various battery systems. *Journal of Materials Chemistry A*, **2016**, 4, 15266-15280	13	155
87	Environmental Issues Related to Conventional Hydropower **2016**, 404-409		2
86	Experimental and Numerical Modeling Tools for Conventional Hydropower Systems **2016**, 448-464		1
85	Mortality, Transmitter Retention, Growth, and Wound Healing in Juvenile Salmon Injected with Micro Acoustic Transmitters. *Transactions of the American Fisheries Society*, **2016**, 145, 1047-1058	1.7	9
84	Effects of a novel acoustic transmitter on swimming performance and predator avoidance of juvenile Chinook Salmon: Determination of a size threshold. *Fisheries Research*, **2016**, 176, 48-54	2.3	16
83	A piecewise regression approach for determining biologically relevant hydraulic thresholds for the protection of fishes at river infrastructure. *Journal of Fish Biology*, **2016**, 88, 1677-92	1.9	23
82	Coupled Modeling of Hydrodynamics and Sound in Coastal Ocean for Renewable Ocean Energy Development. *Marine Technology Society Journal*, **2016**, 50, 27-36	0.5	3
81	An Energy Harvesting Underwater Acoustic Transmitter for Aquatic Animals. *Scientific Reports*, **2016**, 6, 33804	4.9	27
80	A small long-life acoustic transmitter for studying the behavior of aquatic animals. *Review of Scientific Instruments*, **2016**, 87, 114902	1.7	14
79	Characterizing large river sounds: Providing context for understanding the environmental effects of noise produced by hydrokinetic turbines. *Journal of the Acoustical Society of America*, **2016**, 139, 85-92	2.2	8
78	Contributed Review: Source-localization algorithms and applications using time of arrival and time difference of arrival measurements. *Review of Scientific Instruments*, **2016**, 87, 041502	1.7	55
77	How low can they go when going with the flow? Tolerance of egg and larval fishes to rapid decompression. *Biology Open*, **2016**, 5, 786-93	2.2	21
76	Assessing hydraulic conditions through Francis turbines using an autonomous sensor device. *Renewable Energy*, **2016**, 99, 1244-1252	8.1	36
75	Migration depth and residence time of juvenile salmonids in the forebays of hydropower dams prior to passage through turbines or juvenile bypass systems: implications for turbine-passage survival **2015**, 3, cou064		13
74	Following the transient reactions in lithium-sulfur batteries using an in situ nuclear magnetic resonance technique. *Nano Letters*, **2015**, 15, 3309-16	11.5	88

73	Three-dimensional tracking of juvenile salmon at a mid-reach location between two dams. *Fisheries Research*, **2015**, 167, 216-224	2.3	8
72	Lithium and lithium ion batteries for applications in microelectronic devices: A review. *Journal of Power Sources*, **2015**, 286, 330-345	8.9	330
71	An injectable acoustic transmitter for juvenile salmon. *Scientific Reports*, **2015**, 5, 8111	4.9	30
70	Preface to Special Topic: Marine Renewable Energy. *Journal of Renewable and Sustainable Energy*, **2015**, 7, 061601	2.5	21
69	Performance of an acoustic telemetry system in a large fishway. *Animal Biotelemetry*, **2015**, 3,	2.8	5
68	Timed Communication Buoy System: A Subsurface Mooring System for Efficient Sensor Data Recovery. *Marine Technology Society Journal*, **2015**, 49, 117-126	0.5	3
67	Piezoelectric transducer design for a miniaturized injectable acoustic transmitter. *Smart Materials and Structures*, **2015**, 24, 115010	3.4	5
66	Direct Observation of Sulfur Radicals as Reaction Media in Lithium Sulfur Batteries. *Journal of the Electrochemical Society*, **2015**, 162, A474-A478	3.9	155
65	Feasibility of tracking fish with acoustic transmitters in the Ice Harbor Dam tailrace. *Scientific Reports*, **2014**, 4, 4090	4.9	5
64	Energy harvesting from low frequency applications using piezoelectric materials. *Applied Physics Reviews*, **2014**, 1, 041301	17.3	333
63	Understanding Barotrauma in Fish Passing Hydro Structures: A Global Strategy for Sustainable Development of Water Resources. *Fisheries*, **2014**, 39, 108-122	1.1	61
62	A comparison of implantation methods for large PIT tags or injectable acoustic transmitters in juvenile Chinook salmon. *Fisheries Research*, **2014**, 154, 213-223	2.3	19
61	Perspective: Towards environmentally acceptable criteria for downstream fish passage through mini hydro and irrigation infrastructure in the Lower Mekong River Basin. *Journal of Renewable and Sustainable Energy*, **2014**, 6, 012301	2.5	18
60	Evaluation of a Low-Cost and Accurate Ocean Temperature Logger on Subsurface Mooring Systems. *Marine Technology Society Journal*, **2014**, 48, 146-154	0.5	3
59	Micro-battery development for juvenile salmon acoustic telemetry system applications. *Scientific Reports*, **2014**, 4, 3790	4.9	17
58	A 3D approximate maximum likelihood solver for localization of fish implanted with acoustic transmitters. *Scientific Reports*, **2014**, 4, 7215	4.9	15
57	200 kHz commercial sonar systems generate lower frequency side lobes audible to some marine mammals. *PLoS ONE*, **2014**, 9, e95315	3.7	7
56	A fast and accurate decoder for underwater acoustic telemetry. *Review of Scientific Instruments*, **2014**, 85, 074903	1.7	5

55	Design and implementation of a new autonomous sensor fish to support advanced hydropower development. *Review of Scientific Instruments*, **2014**, 85, 115001	1.7	26
54	Energetics of defects on graphene through fluorination. *ChemSusChem*, **2014**, 7, 1295-300	8.3	9
53	Improving hydroturbine pressures to enhance salmon passage survival and recovery. *Reviews in Fish Biology and Fisheries*, **2014**, 24, 955-965	6	20
52	Comparison of 180-degree and 90-degree needle rotation to reduce wound size in PIT-injected juvenile Chinook salmon. *Fisheries Research*, **2013**, 143, 201-204	2.3	5
51	The Effects of Total Dissolved Gas on Chum Salmon Fry Survival, Growth, Gas Bubble Disease, and Seawater Tolerance. *North American Journal of Fisheries Management*, **2013**, 33, 200-215	1.1	28
50	Tunable electrochemical properties of fluorinated graphene. *Journal of Materials Chemistry A*, **2013**, 1, 7866	13	57
49	Design and Implementation of a Marine Animal Alert System to Support Marine Renewable Energy. *Marine Technology Society Journal*, **2013**, 47, 113-121	0.5	3
48	A field evaluation of an external and neutrally buoyant acoustic transmitter for juvenile salmon: implications for estimating hydroturbine passage survival. *PLoS ONE*, **2013**, 8, e77744	3.7	7
47	Broadband Acoustic Environment at a Tidal Energy Site in Puget Sound. *Marine Technology Society Journal*, **2012**, 46, 65-73	0.5	4
46	**2012**,		1
45	The Effects of Neutrally Buoyant, Externally Attached Transmitters on Swimming Performance and Predator Avoidance of Juvenile Chinook Salmon. *Transactions of the American Fisheries Society*, **2012**, 141, 1424-1432	1.7	16
44	Development of external and neutrally buoyant acoustic transmitters for juvenile salmon turbine passage evaluation. *Fisheries Research*, **2012**, 113, 94-105	2.3	16
43	Quantifying reception strength and omnidirectionality of underwater radio telemetry antennas: Advances and applications for fisheries research. *Fisheries Research*, **2012**, 121-122, 1-8	2.3	3
42	Pathways of barotrauma in juvenile salmonids exposed to simulated hydroturbine passage: Boyle℞ law vs. Henry℞ law. *Fisheries Research*, **2012**, 121-122, 43-50	2.3	51
41	The effect of rapid and sustained decompression on barotrauma in juvenile brook lamprey and Pacific lamprey: Implications for passage at hydroelectric facilities. *Fisheries Research*, **2012**, 129-130, 17-20	2.3	30
40	High-performance LiNi0.5Mn1.5O4 spinel controlled by Mn3+ concentration and site disorder. *Advanced Materials*, **2012**, 24, 2109-16	24	371
39	Design parameters of a miniaturized piezoelectric underwater acoustic transmitter. *Sensors*, **2012**, 12, 9098-109	3.8	16
38	The effect of an externally attached neutrally buoyant transmitter on mortal injury during simulated hydroturbine passage. *Journal of Renewable and Sustainable Energy*, **2012**, 4, 013107	2.5	5

37	Aquatic acoustic metrics interface utility for underwater sound monitoring and analysis. *Sensors*, **2012**, 12, 7438-50	3.8	4
36	Target Strength of Southern Resident Killer Whales (Orcinus orca): Measurement and Modeling. *Marine Technology Society Journal*, **2012**, 46, 74-84	0.5	3
35	Piezoelectric Materials Used in Underwater Acoustic Transducers. *Sensor Letters*, **2012**, 10, 679-697	0.9	35
34	Electrochemical performances of LiMnPO4 synthesized from non-stoichiometric Li/Mn ratio. *Physical Chemistry Chemical Physics*, **2011**, 13, 18099-106	3.6	27
33	Water Velocity Measurements on a Vertical Barrier Screen at the Bonneville Dam Second Powerhouse. *Energies*, **2011**, 4, 2038-2048	3.1	1
32	Hybrid CFx/Ag2V4O11 as a high-energy, power density cathode for application in an underwater acoustic microtransmitter. *Electrochemistry Communications*, **2011**, 13, 1344-1344	5.1	38
31	A cabled acoustic telemetry system for detecting and tracking juvenile salmon: part 2. Three-dimensional tracking and passage outcomes. *Sensors*, **2011**, 11, 5661-76	3.8	42
30	A cabled acoustic telemetry system for detecting and tracking juvenile salmon: part 1. Engineering design and instrumentation. *Sensors*, **2011**, 11, 5645-60	3.8	39
29	Design and implementation of an underwater sound recording device. *Sensors*, **2011**, 11, 8519-35	3.8	10
28	Fish Passage Assessment of an Advanced Hydropower Turbine and Conventional Turbine Using Blade-Strike Modeling. *Energies*, **2011**, 4, 57-67	3.1	28
27	Design and instrumentation of a measurement and calibration system for an acoustic telemetry system. *Sensors*, **2010**, 10, 3090-9	3.8	25
26	Use of an autonomous sensor to evaluate the biological performance of the advanced turbine at Wanapum Dam. *Journal of Renewable and Sustainable Energy*, **2010**, 2, 053104	2.5	41
25	The Juvenile Salmon Acoustic Telemetry System: A New Tool. *Fisheries*, **2010**, 35, 9-22	1.1	138
24	Assessing barotrauma in neutrally and negatively buoyant juvenile salmonids exposed to simulated hydro-turbine passage using a mobile aquatic barotrauma laboratory. *Fisheries Research*, **2010**, 106, 271-278	2.3	70
23	Survival and Growth of Juvenile Snake River Fall Chinook Salmon Exposed to Constant and Fluctuating Temperatures. *Transactions of the American Fisheries Society*, **2010**, 139, 92-107	1.7	17
22	Injury and Mortality of Juvenile Salmon Entrained in a Submerged Jet Entering Still Water. *North American Journal of Fisheries Management*, **2010**, 30, 623-628	1.1	19
21	Response relationships between juvenile salmon and an autonomous sensor in turbulent flow. *Fisheries Research*, **2009**, 97, 134-139	2.3	14
20	Six-Degree-of-Freedom Sensor Fish Design and Instrumentation. *Sensors*, **2007**, 7, 3399-3415	3.8	47

19	Mean flow and turbulence characteristics of a full-scale spiral corrugated culvert with implications for fish passage. *Ecological Engineering*, **2007**, 30, 333-340	3.9	23
18	Evaluation of blade-strike models for estimating the biological performance of Kaplan turbines. *Ecological Modelling*, **2007**, 208, 165-176	3	52
17	Prototype measurements of pressure fluctuations in The Dalles Dam stilling basin. *Journal of Hydraulic Research/De Recherches Hydrauliques*, **2007**, 45, 674-678	1.9	8
16	Evaluation of fish-injury mechanisms during exposure to turbulent shear flow. *Canadian Journal of Fisheries and Aquatic Sciences*, **2005**, 62, 1513-1522	2.4	74
15	Turbulence in the Core of a Transpired Channel **2005**,		1
14	Sensitivity of Turbulence in Transpired Channel to Injection Velocity Small-Scale Nonuniformity. *AIAA Journal*, **2002**, 40, 2241-2246	2.1	7
13	Structure of turbulence in channel flow with a fully transpired wall **2001**,		4
12	Compliance Monitoring of Subyearling Chinook Salmon Survival and Passage at The Dalles Dam, Summer 2012		2
11	Compliance Monitoring of Yearling and Subyearling Chinook Salmon and Juvenile Steelhead Survival and Passage at John Day Dam, 2012		5
10	Passage Distribution and Federal Columbia River Power System Survival for Steelhead Kelts Tagged Above and at Lower Granite Dam, Year 2		3
9	Factors affecting route selection and survival of steelhead kelts at Snake River dams in 2012 and 2013		4
8	Passage Distribution and Federal Columbia River Power System Survival for Steelhead Kelts Tagged Above and at Lower Granite Dam, Year 2		4
7	Six-Degree-of-Freedom Sensor Fish Design: Governing Equations and Motion Modeling		1
6	Study of Fish Response Using Particle Image Velocimetry and High-Speed, High-Resolution Imaging		3
5	Biological Assessment of the Advanced Turbine Design at Wanapum Dam, 2005		2
4	Data Overview for Sensor Fish Samples Acquired at Ice Harbor, John Day, and Bonneville II Dams in 2005, 2006, and 2007		7
3	Smolt Responses to Hydrodynamic Conditions in Forebay Flow Nets of Surface Flow Outlets, 2007		3
2	Acoustic Telemetry Evaluation of Juvenile Salmonid Passage and Survival at John Day Dam with Emphasis on the Prototype Surface Flow Outlet, 2008		3

1 Evaluation of a Behavioral Guidance Structure at Bonneville Dam Second Powerhouse including Passage Survival of Juvenile Salmon and Steelhead using Acoustic Telemetry, 2008 2