Weishan Chen

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

100 papers	1,606 citations	22 h-index	37 g-index
119 ext. papers	2,027 ext. citations	4.2 avg, IF	5.28 L-index

#	Paper	IF	Citations
100	Development of a Linear Piezoelectric Micro-Actuator inspired by the Hollowing Art. *IEEE Transactions on Industrial Electronics*, **2022**, 1-1	8.9	2
99	Designing and Modeling of Tightly Wrapped Twisted Artificial Muscles with Large Stroke and Low Hysteresis. *IEEE Transactions on Industrial Electronics*, **2022**, 1-1	8.9	1
98	Development of a cross-scale 2-DOF piezoelectric rotary platform based on active friction switching. *International Journal of Mechanical Sciences*, **2022**, 220, 107165	5.5	0
97	Development of a high-precision piezoelectric ultrasonic milling tool using longitudinal-bending hybrid transducer. *International Journal of Mechanical Sciences*, **2022**, 222, 107239	5.5	1
96	Radial disturbance compensation device of cylindrical cantilever beam using embedded piezoelectric ceramics with bending mode. *Mechanical Systems and Signal Processing*, **2022**, 172, 109009	7.8	
95	Restraining the Backward Motion of a Piezoelectric Stick-Slip Actuator with a Passive Damping Foot. *IEEE Transactions on Industrial Electronics*, **2021**, 1-1	8.9	1
94	Arthropod-Metamerism-Inspired Resonant Piezoelectric Millirobot. *Advanced Intelligent Systems*, **2021**, 3, 2100015	6	22
93	Study on the Performance of a Designed Annular Piezoelectric Microjet for Active Lubrication of Space Bearing. *IEEE Transactions on Industrial Electronics*, **2021**, 1-1	8.9	4
92	Development of a two-DOF piezoelectric posture alignment mechanism with low coupling based on a cross-orthogonal-axis structure. *Smart Materials and Structures*, **2021**, 30, 085042	3.4	3
91	Fast and Precise Control for the Vibration Amplitude of an Ultrasonic Transducer Based on Fuzzy PID Control. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2021**, 68, 2766-2774	3.2	3
90	A 3-DOF sandwich piezoelectric manipulator with low hysteresis effect: Design, modeling and experimental evaluation. *Mechanical Systems and Signal Processing*, **2021**, 158, 107768	7.8	4
89	Development of a novel two-DOF piezo-driven fast steering mirror with high stiffness and good decoupling characteristic. *Mechanical Systems and Signal Processing*, **2021**, 159, 107851	7.8	9
88	Design philosophy for ultrasonic motors using the bending hybrid modes. *Sensors and Actuators A: Physical*, **2021**, 331, 113029	3.9	0
87	Sensorless Unbalance Diagnosis of Affiliated Rotating Chamber Based on Driving Current of Permanent Magnet Synchronous Motor. *IEEE/ASME Transactions on Mechatronics*, **2021**, 1-1	5.5	0
86	A Compact Ultrasonic Burnishing System for High Precision Planar Burnishing: Design and Performance Evaluation. *IEEE Transactions on Industrial Electronics*, **2021**, 1-1	8.9	2
85	Step consistency active control method for inertial piezoelectric actuator using embedded strain gauges.. *Review of Scientific Instruments*, **2021**, 92, 125005	1.7	0
84	Effects of knurl tooth angle on mechanical and thermal behaviors of aluminum ultrasonic welding. *Ultrasonics*, **2020**, 108, 106207	3.5	2

83	Single-phase drive bending-bending piezoelectric actuator operated under 8-shaped trajectory vibration: Concept, computation and experiment evaluation. *Mechanical Systems and Signal Processing*, **2020**, 139, 106637	7.8	8
82	Development of a novel spherical stator multi-DOF ultrasonic motor using in-plane non-axisymmetric mode. *Mechanical Systems and Signal Processing*, **2020**, 140, 106658	7.8	19
81	A review on piezoelectric ultrasonic motors for the past decade: Classification, operating principle, performance, and future work perspectives. *Sensors and Actuators A: Physical*, **2020**, 306, 111971	3.9	37
80	Research on the spreading characteristics of biodegradable ethyl cyanoacrylate droplet of a piezoelectric inkjet. *Sensors and Actuators A: Physical*, **2020**, 302, 111810	3.9	0
79	An Easily Fabricated Linear Piezoelectric Actuator Using Sandwich Longitudinal Vibrators With Four Driving Feet. *IEEE Access*, **2019**, 7, 4506-4515	3.5	7
78	An experiment study on temperature characteristics of a linear ultrasonic motor using longitudinal transducers. *Ultrasonics*, **2019**, 95, 6-12	3.5	9
77	. *IEEE Access*, **2019**, 7, 43884-43894	3.5	9
76	A Two-DOF Ultrasonic Motor Using a Longitudinal–Bending Hybrid Sandwich Transducer. *IEEE Transactions on Industrial Electronics*, **2019**, 66, 3041-3050	8.9	118
75	Pseudo-Full-Bridge Inverter With Soft-Switching Capability for a Quarter-Phase Ultrasonic Motor. *IEEE Transactions on Industrial Electronics*, **2019**, 66, 4199-4208	8.9	2
74	A review of recent studies on non-resonant piezoelectric actuators. *Mechanical Systems and Signal Processing*, **2019**, 133, 106254	7.8	66
73	A sandwich piezoelectric actuator with long stroke and nanometer resolution by the hybrid of two actuation modes. *Sensors and Actuators A: Physical*, **2019**, 296, 121-131	3.9	11
72	Modeling and experimental evaluations of a four-legged stepper rotary precision piezoelectric stage. *Mechanical Systems and Signal Processing*, **2019**, 132, 153-167	7.8	14
71	Robust Deep Softmax Regression Against Label Noise for Unsupervised Domain Adaptation. *International Journal of Pattern Recognition and Artificial Intelligence*, **2019**, 33, 1940002	1.1	2
70	Temperature self-sensing and closed-loop position control of twisted and coiled actuator. *Sensors and Actuators A: Physical*, **2019**, 285, 319-328	3.9	17
69	A XY Transporting and Nanopositioning Piezoelectric Robot Operated by Leg Rowing Mechanism. *IEEE/ASME Transactions on Mechatronics*, **2019**, 24, 207-217	5.5	39
68	Developments of piezoelectric ultrasonic actuators operating under bending hybrid vibration modes. *Mechanics of Advanced Materials and Structures*, **2019**, 26, 416-423	1.8	1
67	Development of a Nonresonant Piezoelectric Motor With Nanometer Resolution Driving Ability. *IEEE/ASME Transactions on Mechatronics*, **2018**, 23, 444-451	5.5	95
66	Design and Experiments of a Single-Foot Linear Piezoelectric Actuator Operated in a Stepping Mode. *IEEE Transactions on Industrial Electronics*, **2018**, 65, 8063-8071	8.9	96

65	A Trace Redundant Lubrication Piezoelectric Microjet for Bearing System. *IEEE/ASME Transactions on Mechatronics*, **2018**, 23, 2263-2272	5.5	21
64	A Novel Well Drill Assisted with High-Frequency Vibration Using the Bending Mode. *Sensors*, **2018**, 18,	3.8	7
63	Development and experiment evaluation of an H-shape linear piezoelectric actuator operated in stepping mode. *Ceramics International*, **2018**, 44, S246-S249	5.1	7
62	Analytical Model of a Special Percussive Mechanism for Planetary Exploration and Feature Analysis. *Journal of Aerospace Engineering*, **2018**, 31, 04017101	1.4	
61	Finite element and analytical models for twisted and coiled actuator. *Materials Research Express*, **2018**, 5, 015701	1.7	14
60	Development of a bi-directional standing wave linear piezoelectric actuator with four driving feet. *Ultrasonics*, **2018**, 84, 81-86	3.5	20
59	Research on the Acoustic-Structure Coupling Characteristics of a Piezoelectric Micro-Jet Used for Lubricating. *IEEE Access*, **2018**, 6, 72691-72697	3.5	2
58	Design and Experimental Research on a Deep-Sea Resonant Linear Ultrasonic Motor. *IEEE Access*, **2018**, 6, 57249-57256	3.5	9
57	A ring-type multi-DOF ultrasonic motor with four feet driving consistently. *Ultrasonics*, **2017**, 76, 234-244	3.5	25
56	Study on the Hydrodynamic Performance of Typical Underwater Bionic Foils with Spanwise Flexibility. *Applied Sciences (Switzerland)*, **2017**, 7, 1120	2.6	9
55	Research on the thermal characteristics of bending hybrid piezoelectric actuators under different exciting methods. *Ceramics International*, **2017**, 43, S15-S20	5.1	13
54	Developments of a piezoelectric actuator with nano-positioning ability operated in bending modes. *Ceramics International*, **2017**, 43, S21-S26	5.1	23
53	A Frog-Shaped Linear Piezoelectric Actuator Using First-Order Longitudinal Vibration Mode. *IEEE Transactions on Industrial Electronics*, **2017**, 64, 2188-2195	8.9	51
52	Development of a Four-Feet Driving Type Linear Piezoelectric Actuator Using Bolt-Clamped Transducers. *IEEE Access*, **2017**, 5, 27162-27171	3.5	20
51	Research on a Novel Exciting Method for a Sandwich Transducer Operating in Longitudinal-Bending Hybrid Modes. *Sensors*, **2017**, 17,	3.8	3
50	Novel 2-DOF Planar Ultrasonic Motor With Characteristic of Variable Mode Excitation. *IEEE Transactions on Industrial Electronics*, **2016**, 63, 6941-6948	8.9	14
49	Motion Planning of a Stepping-Wriggle Type Piezoelectric Actuator Operating in Bending Modes. *IEEE Access*, **2016**, 4, 2371-2378	3.5	10
48	A cylindrical traveling wave ultrasonic motor using bonded-type composite beam. *Ultrasonics*, **2016**, 65, 277-81	3.5	29

47	An electromechanical coupling model of a bending vibration type piezoelectric ultrasonic transducer. *Ultrasonics*, **2016**, 66, 18-26	3.5	22
46	Sandwich-Type Multi-Degree-of-Freedom Ultrasonic Motor With Hybrid Excitation. *IEEE Access*, **2016**, 4, 905-913	3.5	32
45	. *IEEE Transactions on Industrial Electronics*, **2016**, 63, 1676-1683	8.9	82
44	Aerodynamic Drag Analysis of 3-DOF Flex-Gimbal GyroWheel System in the Sense of Ground Test. *Sensors*, **2016**, 16,	3.8	3
43	A Novel Bearing Lubricating Device Based on the Piezoelectric Micro-Jet. *Applied Sciences (Switzerland)*, **2016**, 6, 38	2.6	9
42	Research on a Linear Piezoelectric Actuator Using T-Shape Transducer to Realize High Mechanical Output. *Applied Sciences (Switzerland)*, **2016**, 6, 103	2.6	11
41	Numerical Study on Hydrodynamic Performance of Bionic Caudal Fin. *Applied Sciences (Switzerland)*, **2016**, 6, 15	2.6	14
40	A piezoelectric motor operated under the superposition of the second and third bending modes of a sandwich transducer. *Ferroelectrics*, **2016**, 504, 87-95	0.6	3
39	ADAMS-based vibration analysis of GyroWheel rotor with flex-gimbal suspension **2016**,		1
38	Vibration analysis of flex-gimbal system with high spinning velocity **2016**,		1
37	Numerical simulation of bionic foils in tandem arrangement. *Advances in Mechanical Engineering*, **2016**, 8, 168781401664929	1.2	3
36	. *IEEE Access*, **2016**, 4, 1109-1116	3.5	44
35	Improvement and miniaturization of a T-shaped linear piezoelectric actuator with single foot. *Ferroelectrics*, **2016**, 493, 1-11	0.6	4
34	The design and experiment of a novel ultrasonic motor based on the combination of bending modes. *Ultrasonics*, **2016**, 71, 205-210	3.5	41
33	A crossbeam linear ultrasonic motor using bending vibrations **2015**,		1
32	Numerical studies on hydrodynamics of flapping foils **2015**,		1
31	Hydrodynamic interactions between two tandem flexible plates in viscous flow **2015**,		1
30	A T-shape linear piezoelectric motor with single foot. *Ultrasonics*, **2015**, 56, 551-6	3.5	42

29	A new rotary ultrasonic motor using longitudinal vibration transducers. *Advances in Mechanical Engineering*, **2015**, 7, 168781401558742	1.2	3
28	Unbalance identification for mainshaft system of 2-DOF precision centrifuge: A displacement sensor-based approach **2015**,		1
27	Operating principle and vibration characteristic of an I-shaped ultrasonic motor **2015**,		1
26	An electromechanical coupling model of a longitudinal vibration type piezoelectric ultrasonic transducer. *Ceramics International*, **2015**, 41, S638-S644	5.1	22
25	A Bonded-Type Linear Piezoelectric Motor with Four Feet. *Ferroelectrics*, **2014**, 459, 91-98	0.6	10
24	A Square-type rotary ultrasonic motor using longitudinal modes. *Journal of Electroceramics*, **2014**, 33, 69-74	1.5	18
23	A novel traveling wave ultrasonic motor using sandwich-type ring stator **2014**,		1
22	A Rotary Piezoelectric Actuator Using the Third and Fourth Bending Vibration Modes. *IEEE Transactions on Industrial Electronics*, **2014**, 61, 4366-4373	8.9	76
21	A High Power Linear Ultrasonic Motor Using a Bending Bolt-Clamped Transducer. *Ferroelectrics*, **2013**, 445, 39-50	0.6	7
20	A rotary piezoelectric actuator using longitudinal and bending hybrid transducer. *AIP Advances*, **2012**, 2, 042136	1.5	11
19	A Cylindrical Traveling Wave Ultrasonic Motor Using Longitudinal Vibration Transducers. *Ferroelectrics*, **2010**, 409, 117-127	0.6	20
18	A Linear Ultrasonic Motor Using Bending Vibration Transducer with Double Driving Feet. *Ferroelectrics*, **2010**, 400, 221-230	0.6	22
17	A new traveling wave ultrasonic motor using thick ring stator with nested PZT excitation. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2010**, 57, 1160-8	3.2	3
16	A new traveling wave ultrasonic motor using thick ring stator with nested PZT excitation. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2010**, 57, 1160-1168	3.2	34
15	A high-power linear ultrasonic motor using longitudinal vibration transducers with single foot. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2010**, 57, 1860-7	3.2	48
14	A Novel L-B Hybrid Langevin Transducer Type Linear Ultrasonic Motor With Modal Coupling Reducing Configuration. *Ferroelectrics*, **2010**, 408, 71-77	0.6	9
13	Shape Selection on the Flow Drag Characteristic Passing a Streamline Fishlike Body **2009**,		1
12	The Effects of Parameters on the Stability of Passive Dynamic Walking **2009**,		3

List of Publications

11	Design and analysis of a double rings type ultrasonic motor using longitudinal transducers **2009**,		1
10	Modular design and realization of a torpedo-shape robot fish **2008**,		5
9	Design and fabrication of a linear ultrasonic motor using push-pull type L-B hybrid Langevin transducer with single foot **2008**,		3
8	Using biological spring to improve propulsive efficiency for fishlike robot **2008**,		1
7	Simulation Study on the Body Side-Sway Characteristic for Rigid Robot Fish **2008**,		2
6	Ultrasonic linear motor using the L-B mode Langevin transducer with an exponential horn. *Frontiers of Mechanical Engineering in China*, **2008**, 3, 212-217		4
5	System and Experimental Research on Biomimetic Robot Fish **2007**,		6
4	A High Speed Ultrasonic Linear Motor Using Longitudinal and Bending Multimode Bolt-Clamped Langevin Type Transducer **2006**,		3
3	Standing wave bi-directional linearly moving ultrasonic motor. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **1998**, 45, 1133-9	3.2	88
2	Bioinspired Multilegged Piezoelectric Robot: The Design Philosophy Aiming at High-Performance Micromanipulation. *Advanced Intelligent Systems*,2100142	6	4
1	Study on improving the resolution of an H-shaped piezoelectric ultrasonic actuator by stick-slip principle. *Smart Materials and Structures*,	3.4	1