

Shiwu Zhang

List of Publications by Year in descending order

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Version: 2024-02-01

47
papers

1,315
citations

361413

20
h-index

361022

35
g-index

47
all docs

47
docs citations

47
times ranked

1035
citing authors

#	ARTICLE	IF	CITATIONS
1	Gait study and pattern generation of a starfish-like soft robot with flexible rays actuated by SMAs. <i>Journal of Bionic Engineering</i> , 2014, 11, 400-411.	5.0	102
2	Design and Implementation of a Soft Robotic Arm Driven by SMA Coils. <i>IEEE Transactions on Industrial Electronics</i> , 2019, 66, 6108-6116.	7.9	95
3	Design and Control of an Agile Robotic Fish With Integrative Biomimetic Mechanisms. <i>IEEE/ASME Transactions on Mechatronics</i> , 2016, 21, 1846-1857.	5.8	92
4	A Liquid Metal Artificial Muscle. <i>Advanced Materials</i> , 2021, 33, e2103062.	21.0	82
5	On a CPG-Based Hexapod Robot: AmphiHex-II With Variable Stiffness Legs. <i>IEEE/ASME Transactions on Mechatronics</i> , 2018, 23, 542-551.	5.8	75
6	Magnetically and Electrically Controllable Functional Liquid Metal Droplets. <i>Advanced Materials Technologies</i> , 2019, 4, 1800694.	5.8	60
7	Liquid metal droplet robot. <i>Applied Materials Today</i> , 2020, 19, 100597.	4.3	57
8	AmphiHex-I: Locomotory Performance in Amphibious Environments With Specially Designed Transformable Flipper Legs. <i>IEEE/ASME Transactions on Mechatronics</i> , 2016, 21, 1720-1731.	5.8	55
9	Unconventional locomotion of liquid metal droplets driven by magnetic fields. <i>Soft Matter</i> , 2018, 14, 7113-7118.	2.7	54
10	A New Generation of Magnetorheological Vehicle Suspension System With Tunable Stiffness and Damping Characteristics. <i>IEEE Transactions on Industrial Informatics</i> , 2019, 15, 4696-4708.	11.3	47
11	Programmable Digital Liquid Metal Droplets in Reconfigurable Magnetic Fields. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 37670-37679.	8.0	44
12	A Novel Implementation of a Flexible Robotic Fin Actuated by Shape Memory Alloy. <i>Journal of Bionic Engineering</i> , 2012, 9, 156-165.	5.0	43
13	Design and Implementation of a Lightweight Bioinspired Pectoral Fin Driven by SMA. <i>IEEE/ASME Transactions on Mechatronics</i> , 2014, 19, 1773-1785.	5.8	43
14	Development of magnetorheological elastomers based tuned mass damper for building protection from seismic events. <i>Journal of Intelligent Material Systems and Structures</i> , 2018, 29, 1777-1789.	2.5	37
15	Dynamic characteristics of planar bending actuator embedded with shape memory alloy. <i>Mechatronics</i> , 2015, 25, 18-26.	3.3	30
16	Efficient Data Reduction at the Edge of Industrial Internet of Things for PMSM Bearing Fault Diagnosis. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2021, , 1-1.	4.7	27
17	Liquid metal motor. <i>IScience</i> , 2021, 24, 101911.	4.1	27
18	Light-controlled versatile manipulation of liquid metal droplets: a gateway to future liquid robots. <i>Materials Horizons</i> , 2021, 8, 3063-3071.	12.2	27

#	ARTICLE	IF	CITATIONS
19	Investigation of a seat suspension installed with compact variable stiffness and damping rotary magnetorheological dampers. <i>Mechanical Systems and Signal Processing</i> , 2022, 171, 108802.	8.0	24
20	Experimental testing and modelling of a rotary variable stiffness and damping shock absorber using magnetorheological technology. <i>Journal of Intelligent Material Systems and Structures</i> , 2019, 30, 1453-1465.	2.5	23
21	A Controllable Untethered Vehicle Driven by Electrically Actuated Liquid Metal Droplets. <i>IEEE Transactions on Industrial Informatics</i> , 2019, 15, 2535-2543.	11.3	22
22	A dual caudal-fin miniature robotic fish with an integrated oscillation and jet propulsive mechanism. <i>Bioinspiration and Biomimetics</i> , 2018, 13, 036007.	2.9	21
23	Aerial Grasping with a Lightweight Manipulator Based on Multi-Objective Optimization and Visual Compensation. <i>Sensors</i> , 2019, 19, 4253.	3.8	19
24	Modeling and Motion Control of a Liquid Metal Droplet in a Fluidic Channel. <i>IEEE/ASME Transactions on Mechatronics</i> , 2020, 25, 942-950.	5.8	18
25	Particle-Based Porous Materials for the Rapid and Spontaneous Diffusion of Liquid Metals. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 11163-11170.	8.0	17
26	Bearing Fault Diagnosis of Switched Reluctance Motor in Electric Vehicle Powertrain via Multisensor Data Fusion. <i>IEEE Transactions on Industrial Informatics</i> , 2022, 18, 2452-2464.	11.3	17
27	A magnetorheological elastomer rail damper for wideband attenuation of rail noise and vibration. <i>Journal of Intelligent Material Systems and Structures</i> , 2020, 31, 220-228.	2.5	16
28	A Robot Boat Powered by Liquid Metal Engines. <i>Advanced Materials Technologies</i> , 2021, 6, .	5.8	14
29	A highly adaptive magnetorheological fluid robotic leg for efficient terrestrial locomotion. <i>Smart Materials and Structures</i> , 2016, 25, 095019.	3.5	12
30	Development of a biomimetic scallop robot capable of jet propulsion. <i>Bioinspiration and Biomimetics</i> , 2020, 15, 036008.	2.9	11
31	Experimental Study of a Variable Stiffness Seat Suspension Installed With a Compact Rotary MR Damper. <i>Frontiers in Materials</i> , 2021, 8, .	2.4	11
32	Highly stretchable and sensitive strain sensor based on liquid metal composite for wearable sign language communication device. <i>Smart Materials and Structures</i> , 2021, 30, 115005.	3.5	11
33	Modeling and Motion Control of a Soft SMA Planar Actuator. <i>IEEE/ASME Transactions on Mechatronics</i> , 2022, 27, 916-927.	5.8	11
34	The variable resonance magnetorheological pendulum tuned mass damper: Mathematical modelling and seismic experimental studies. <i>Journal of Intelligent Material Systems and Structures</i> , 2020, 31, 263-276.	2.5	10
35	Reprogrammable Untethered Actuator for Soft Bio-Inspired Robots. <i>Advanced Intelligent Systems</i> , 2021, 3, 2000146.	6.1	9
36	A bionic soft tongue driven by shape memory alloy and pneumatics. <i>Bioinspiration and Biomimetics</i> , 2021, 16, .	2.9	9

#	ARTICLE	IF	CITATIONS
37	Stray Flux-Based Rotation Angle Measurement for Bearing Fault Diagnosis in Variable-Speed BLDC Motors. IEEE Transactions on Energy Conversion, 2021, 36, 3156-3166.	5.2	9
38	Innovative variable stiffness and variable damping magnetorheological actuation system for robotic arm positioning. Journal of Intelligent Material Systems and Structures, 2023, 34, 123-137.	2.5	8
39	Design and modeling analysis of a changeable stiffness robotic leg working with magnetorheological technology. Journal of Intelligent Material Systems and Structures, 2018, 29, 3725-3736.	2.5	7
40	Real-time adaptive leg-stiffness for roll compensation via magnetorheological control in a legged robot. Smart Materials and Structures, 2022, 31, 045003.	3.5	6
41	Rotation of Liquid Metal Droplets Solely Driven by the Action of Magnetic Fields. Applied Sciences (Switzerland), 2019, 9, 1421.	2.5	5
42	Design of a Bionic Scallop Robot Based on Jet Propulsion. , 2018, , .		4
43	Development of a magnetorheological elastomer rubber joint with fail-safe characteristics for high-speed trains. Smart Materials and Structures, 2022, 31, 045008.	3.5	2
44	Accurately Motion Control of a Liquid Metal Droplet in One-Dimensional Fluidic Channel. , 2018, , .		1
45	Producing and Manipulating Functional Liquid Metal Droplets using Magnetic and Electrical Fields. , 2019, , .		1
46	Development of a magnetorheological elastomer rubber joint with fail-safe characteristics for high-speed trains. Smart Materials and Structures, 0, , .	3.5	0
47	Shape and Force Sensing of A Soft SMA Planar Actuator for Soft Robots. , 2021, , .		0