Jie Zhao

List of Publications by Citations

158 papers	1,061 citations	14 h-index	25 g-index
216 ext. papers	1,462 ext. citations	3.1 avg, IF	4.8 L-index

#	Paper	IF	Citations
158	Bioinspired aquatic microrobot capable of walking on water surface like a water strider. *ACS Applied Materials & Interfaces*, **2011**, 3, 2630-6	9.5	106
157	Two Time-Scale Tracking Control of Nonholonomic Wheeled Mobile Robots. *IEEE Transactions on Control Systems Technology*, **2016**, 24, 2059-2069	4.8	99
156	Design and evaluation of a 7-DOF cable-driven upper limb exoskeleton. *Journal of Mechanical Science and Technology*, **2018**, 32, 855-864	1.6	44
155	Development of a Bionic Hexapod Robot for Walking on Unstructured Terrain. *Journal of Bionic Engineering*, **2014**, 11, 176-187	2.7	30
154	Biomimetic Design and Optimal Swing of a Hexapod Robot Leg. *Journal of Bionic Engineering*, **2014**, 11, 26-35	2.7	29
153	A New Spiral-Type Inflatable Pure Torsional Soft Actuator. *Soft Robotics*, **2018**, 5, 527-540	9.2	27
152	Arthropod-Metamerism-Inspired Resonant Piezoelectric Millirobot. *Advanced Intelligent Systems*, **2021**, 3, 2100015	6	22
151	Dynamic Parameter Identification for a Manipulator with Joint Torque Sensors Based on an Improved Experimental Design. *Sensors*, **2019**, 19,	3.8	19
150	Design of a 6-DOF upper limb rehabilitation exoskeleton with parallel actuated joints. *Bio-Medical Materials and Engineering*, **2014**, 24, 2527-35	1	19
149	Probing the Morphology and Evolving Dynamics of 3D Printed Nanostructures Using High-Speed Atomic Force Microscopy. *ACS Applied Materials & Interfaces*, **2017**, 9, 24456-24461	9.5	19
148	Design of a high-bandwidth tripod scanner for high speed atomic force microscopy. *Scanning*, **2016**, 38, 889-900	1.6	18
147	Development of a lower limb rehabilitation exoskeleton based on real-time gait detection and gait tracking. *Advances in Mechanical Engineering*, **2016**, 8, 168781401562798	1.2	17
146	Feature Sensing and Robotic Grasping of Objects with Uncertain Information: A Review. *Sensors*, **2020**, 20,	3.8	17
145	Human–machine force interaction design and control for the HIT load-carrying exoskeleton. *Advances in Mechanical Engineering*, **2016**, 8, 168781401664506	1.2	16
144	A Simplified Approach to Realize Cellular Automata for UBot Modular Self-Reconfigurable Robots. *Journal of Intelligent and Robotic Systems: Theory and Applications*, **2015**, 79, 37-54	2.9	14
143	Design of a wearable cable-driven upper limb exoskeleton based on epicyclic gear trains structure. *Technology and Health Care*, **2017**, 25, 3-11	1.1	13
142	Design and evaluation of a parallel-series elastic actuator for lower limb exoskeletons **2014**,		13

141	A Force-Sensing System on Legs for Biomimetic Hexapod Robots Interacting with Unstructured Terrain. *Sensors*, **2017**, 17,	3.8	12
140	Biomechanical modeling and load-carrying simulation of lower limb exoskeleton. *Bio-Medical Materials and Engineering*, **2015**, 26 Suppl 1, S729-38	1	12
139	Improved Artificial Moment Method for Decentralized Local Path Planning of Multirobots. *IEEE Transactions on Control Systems Technology*, **2015**, 23, 2383-2390	4.8	12
138	Serpenoid polygonal rolling for chain-type modular robots: A study of modeling, pattern switching and application. *Robotics and Computer-Integrated Manufacturing*, **2016**, 39, 56-67	9.2	11
137	Vertical force acting on partly submerged spindly cylinders. *AIP Advances*, **2014**, 4, 047118	1.5	11
136	Efficient Fully Convolution Neural Network for Generating Pixel Wise Robotic Grasps With High Resolution Images **2019**,		11
135	A distributed and parallel control mechanism for self-reconfiguration of modular robots using L-systems and cellular automata. *Journal of Parallel and Distributed Computing*, **2017**, 102, 80-90	4.4	10
134	Chaotic CPG based locomotion control for modular self-reconfigurable robot. *Journal of Bionic Engineering*, **2016**, 13, 30-38	2.7	10
133	Improving Kinematic Flexibility and Walking Performance of a Six-legged Robot by Rationally Designing Leg Morphology. *Journal of Bionic Engineering*, **2019**, 16, 608-620	2.7	10
132	Design of a quasi-passive 3 DOFs ankle-foot wearable rehabilitation orthosis. *Bio-Medical Materials and Engineering*, **2015**, 26 Suppl 1, S647-54	1	10
131	Automatic Generation of Locomotion Patterns for Soft Modular Reconfigurable Robots. *Applied Sciences (Switzerland)*, **2020**, 10, 294	2.6	10
130	A three-chambed soft actuator module with omnidirectional bending motion **2016**,		10
129	Aerodynamic characteristics of a novel catapult launched morphing tandem-wing unmanned aerial vehicle. *Advances in Mechanical Engineering*, **2017**, 9, 168781401769229	1.2	9
128	Position control of a single pneumatic artificial muscle with hysteresis compensation based on modified Prandtl-Ishlinskii model. *Bio-Medical Materials and Engineering*, **2017**, 28, 131-140	1	9
127	Inverse kinematic analysis and trajectory planning of a modular upper limb rehabilitation exoskeleton. *Technology and Health Care*, **2019**, 27, 123-132	1.1	9
126	. *IEEE Access*, **2020**, 8, 108018-108031	3.5	9
125	One Nonlinear PID Control to Improve the Control Performance of a Manipulator Actuated by a Pneumatic Muscle Actuator. *Advances in Mechanical Engineering*, **2014**, 6, 172782	1.2	9
124	Continuous Estimation of Elbow Joint Angle by Multiple Features of Surface Electromyographic Using Grey Features Weighted Support Vector Machine. *Journal of Medical Imaging and Health Informatics*, **2017**, 7, 574-583	1.2	9

123	A Bioinspired Soft Swallowing Gripper for Universal Adaptable Grasping. *Soft Robotics*, **2020**,	9.2	8
122	PALExo: A Parallel Actuated Lower Limb Exoskeleton for High-Load Carrying. *IEEE Access*, **2020**, 8, 67250-67262	3.5	8
121	Automatic Locomotion Generation for a UBot Modular Robot Towards Both High-Speed and Multiple Patterns. *International Journal of Advanced Robotic Systems*, **2015**, 12, 32	1.4	8
120	Flight Dynamics Modeling and Control of a Novel Catapult Launched Tandem-Wing Micro Aerial Vehicle With Variable Sweep. *IEEE Access*, **2018**, 6, 42294-42308	3.5	8
119	Human Intention Understanding From Multiple Demonstrations and Behavior Generalization in Dynamic Movement Primitives Framework. *IEEE Access*, **2019**, 7, 36186-36194	3.5	7
118	A Novel Weight-Bearing Lower Limb Exoskeleton Based on Motion Intention Prediction and Locomotion State Identification. *IEEE Access*, **2019**, 7, 37620-37638	3.5	7
117	A Mechatronics-Embedded Pneumatic Soft Modular Robot Powered via Single Air Tube. *Applied Sciences (Switzerland)*, **2019**, 9, 2260	2.6	7
116	Position Control of a Pneumatic Muscle Actuator Using RBF Neural Network Tuned PID Controller. *Mathematical Problems in Engineering*, **2015**, 2015, 1-16	1.1	7
115	Generation of closed-form inverse kinematics for reconfigurable robots. *Frontiers of Mechanical Engineering in China*, **2008**, 3, 91-96		7
114	Integrated Locomotion and Deformation of a Magnetic Soft Robot: Modeling, Control, and Experiments. *IEEE Transactions on Industrial Electronics*, **2021**, 68, 5078-5087	8.9	7
113	A miniature surface tension-driven robot mimicking the water-surface locomotion of water strider **2015**,		6
112	Static Modeling for Commercial Braided Pneumatic Muscle Actuators. *Advances in Mechanical Engineering*, **2014**, 6, 425217	1.2	6
111	Structural design and dynamic analysis of biologically inspired water-jumping robot **2014**,		6
110	A water walking robot inspired by water strider **2012**,		6
109	Physician-Friendly Tool Center Point Calibration Method for Robot-Assisted Puncture Surgery. *Sensors*, **2021**, 21,	3.8	6
108	Frog-inspired jumping robot actuated by pneumatic muscle actuators. *Advances in Mechanical Engineering*, **2018**, 10, 168781401878230	1.2	5
107	Ultrafast Growth of Uniform Multi-Layer Graphene Films Directly on Silicon Dioxide Substrates. *Nanomaterials*, **2019**, 9,	5.4	5
106	A Method for Mechanism Analysis of Frog Swimming Based on Motion Observation Experiments. *Advances in Mechanical Engineering*, **2014**, 6, 403057	1.2	5

105	Design of a prototype of an adaptive soft robot based on ferrofluid **2015**,		5
104	Optimal design of a Stewart platform using the global transmission index under determinate constraint of workspace. *Advances in Mechanical Engineering*, **2017**, 9, 168781401772088	1.2	5
103	Human-Like Walking with Heel Off and Toe Support for Biped Robot. *Applied Sciences (Switzerland)*, **2017**, 7, 499	2.6	5
102	Analysis of period doubling bifurcation and chaos mirror of biped passive dynamic robot gait. *Science Bulletin*, **2012**, 57, 1743-1750		5
101	Position control of a bio-inspired semi-active joint with direct inverse hysteresis modeling and compensation. *Advances in Mechanical Engineering*, **2016**, 8, 168781401667722	1.2	5
100	Nonlinear Modeling and Docking Tests of a Soft Modular Robot. *IEEE Access*, **2019**, 7, 11328-11337	3.5	5
99	Whole-Body Motion Planning for a Six-Legged Robot Walking on Rugged Terrain. *Applied Sciences (Switzerland)*, **2019**, 9, 5284	2.6	5
98	Towards the Exploitation of Physical Compliance in Segmented and Electrically Actuated Robotic Legs: A Review Focused on Elastic Mechanisms. *Sensors*, **2019**, 19,	3.8	5
97	A Synthetic Inverse Kinematic Algorithm for 7-DOF Redundant Manipulator **2018**,		5
96	Parametric Gait Online Generation of a Lower-limb Exoskeleton for Individuals with Paraplegia. *Journal of Bionic Engineering*, **2018**, 15, 941-949	2.7	5
95	Flexible Driving Mechanism Inspired Water Strider Robot Walking on Water Surface. *IEEE Access*, **2020**, 8, 89643-89654	3.5	4
94	A Novel Virtual Sensor for Estimating Robot Joint Total Friction Based on Total Momentum. *Applied Sciences (Switzerland)*, **2019**, 9, 3344	2.6	4
93	Design and implementation of UBot: A modular Self-Reconfigurable Robot **2013**,		4
92	Dynamics and a convenient control design approach for a unicycle robot **2010**,		4
91	Cooperative Multi-Robot Map-building based on Genetic Algorithms **2006**,		4
90	Bioinspired Multilegged Piezoelectric Robot: The Design Philosophy Aiming at High-Performance Micromanipulation. *Advanced Intelligent Systems*,2100142	6	4
89	A Task-Learning Strategy for Robotic Assembly Tasks from Human Demonstrations. *Sensors*, **2020**, 20,	3.8	4
88	A continuous jumping robot on water mimicking water striders **2016**,		4

87	Design and Implementation of Plastic Deformation Behavior by Cartesian Impedance Control Based on Maxwell Model. *Complexity*, **2018**, 2018, 1-9	1.6	4
86	Trajectory Planning of an Intermittent Jumping Quadruped Robot with Variable Redundant and Underactuated Joints. *Complexity*, **2018**, 2018, 1-14	1.6	4
85	A new robot collision detection method: A modified nonlinear disturbance observer based-on neural networks. *Journal of Intelligent and Fuzzy Systems*, **2020**, 38, 175-186	1.6	3
84	A new robot skating on water surface intimating water striders based on flexible driving mechanism* **2019**,		3
83	Analysis and Implementation of Multiple Bionic Motion Patterns for Caterpillar Robot Driven by Sinusoidal Oscillator. *Advances in Mechanical Engineering*, **2014**, 6, 259463	1.2	3
82	Biomimetic design and biomechanical simulation of a 15-DOF lower extremity exoskeleton **2013**,		3
81	SIFT algorithm-based 3D pose estimation of femur. *Bio-Medical Materials and Engineering*, **2014**, 24, 2847-55		3
80	Study of bifurcation and chaos in DC-DC boost converter using discrete-time map **2014**,		3
79	Design of a coordinated control strategy for multi-mobile-manipulator cooperative teleoperation system **2012**,		3
78	Artificial moment method using attractive points for the local path planning of a single robot in complicated dynamic environments. *Robotica*, **2013**, 31, 1263-1274	2.1	3
77	Teleoperation System of Internet-Based Multi-Operator Multi-Mobile-Manipulator **2010**,		3
76	Discrete sliding mode control with fuzzy adaptive reaching law on 6-PRRS parallel robot **2006**,		3
75	A Gas-Ribbon-Hybrid Actuated Soft Finger with Active Variable Stiffness. *Soft Robotics*, **2021**,	9.2	3
74	Parameter estimation and object gripping based on fingertip force/torque sensors. *Measurement: Journal of the International Measurement Confederation*, **2021**, 179, 109479	4.6	3
73	SWINGING LEG CONTROL OF A LOWER LIMB EXOSKELETON VIA A SHOE WITH IN-SOLE SENSING. *Transactions of the Canadian Society for Mechanical Engineering*, **2016**, 40, 657-666	1.1	3
72	Structural parameter study of dual transducers-type ultrasonic levitation-based transportation system. *Smart Materials and Structures*, **2021**, 30, 045009	3.4	3
71	ADAPTIVE MOTION PLANNING FOR HITCR-II HEXAPOD ROBOT. *Journal of Mechanics in Medicine and Biology*, **2017**, 17, 1740040	0.7	2
70	Application of cycle variable pitch propeller to morphing unmanned aerial vehicles **2015**,		2

69	Research on the Posture Control Method of Hexapod Robot for Rugged Terrain. *Applied Sciences (Switzerland)*, **2020**, 10, 6725	2.6	2
68	Maxwell Model-Based Null Space Compliance Control in the Task-Priority Framework for Redundant Manipulators. *IEEE Access*, **2020**, 8, 35892-35904	3.5	2
67	Research of the low impact space docking mechanism based on impedance control strategy **2016**,		2
66	AN ANGLE-EMG BIOMECHANICAL MODEL OF THE HUMAN ELBOW JOINT. *Journal of Mechanics in Medicine and Biology*, **2016**, 16, 1650078	0.7	2
65	A membrane computing framework for self-reconfigurable robots. *Natural Computing*, **2019**, 18, 635-646	1.3	2
64	Design of a wearable upper-limb exoskeleton for activities assistance of daily living **2017**,		2
63	Experiments and simulations of the standing wave acoustic field produced by two transducers mounted in contraposition **2017**,		2
62	Design and Experimental Development of a Pneumatic Stiffness Adjustable Foot System for Biped Robots Adaptable to Bumps on the Ground. *Applied Sciences (Switzerland)*, **2017**, 7, 1005	2.6	2
61	System overview and walking dynamics of a passive dynamic walking robot with flat feet. *Advances in Mechanical Engineering*, **2015**, 7, 168781401562096	1.2	2
60	Research on design and jumping performance of a new water-jumping robot imitating water striders **2015**,		2
59	On the design of lower extremity exoskeleton with single drive (LEESD) **2014**,		2
58	A PD control scheme for passive dynamic walking based on series elastic actuator **2012**,		2
57	A Decentralized Method Using Artificial Moments for Multi-Robot Path-Planning. *International Journal of Advanced Robotic Systems*, **2013**, 10, 24	1.4	2
56	A substructure based motion planning method for a modular self-reconfigurable robot **2004**,		2
55	A Variable Stiffness Actuator Based on Second-order Lever Mechanism and Its Manipulator Integration **2021**,		2
54	A Framework for Human-Robot-Human Physical Interaction Based on N-Player Game Theory. *Sensors*, **2020**, 20,	3.8	2
53	Robot Variable Impedance Skill Transfer and Learning Framework Based on a Simplified Human Arm Impedance Model. *IEEE Access*, **2020**, 8, 225627-225638	3.5	2
52	Maxwell-Model-Based Compliance Control for Human–Robot Friendly Interaction. *IEEE Transactions on Cognitive and Developmental Systems*, **2021**, 13, 118-131	3	2

51	Estimation of pathological tremor from recorded signals based on adaptive sliding fast Fourier transform. *Advances in Mechanical Engineering*, **2016**, 8, 168781401665487	1.2	2
50	Modeling of the supporting legs for a water-jumping robot mimicking water striders **2016**,		2
49	A bio-inspired knee joint for biped robots **2016**,		2
48	Research of positioning method for automatic spraying on large ship block surfaces **2016**,		2
47	Design and Kinematics of Cable-Driven Soft Module Coupled with Spring* **2019**,		2
46	A Single Driven Bionic Water Strider Sliding Robot Mimicking the Spatial Elliptical Trajectory **2019**,		2
45	On the Stability of Maxwell Model based Impedance Control and Cartesian Admittance Control Implementation **2019**,		2
44	A Simplified Inverse Dynamics Modelling Method for a Novel Rehabilitation Exoskeleton with Parallel Joints and Its Application to Trajectory Tracking. *Mathematical Problems in Engineering*, **2019**, 2019, 1-10	1.1	2
43	Multiphase Trajectory Generation for Planar Biped Robot Using Direct Collocation Method. *Mathematical Problems in Engineering*, **2021**, 2021, 1-14	1.1	2
42	A New Type Large-Scale Water-Jumping Robot Design and Simulation **2018**,		2
41	Continuous Joint Angle Estimation by Least Support Vector Machine from Time-Delayed sEMG Features **2018**,		2
40	Modular Robotic Limbs for Astronaut Activities Assistance. *Sensors*, **2021**, 21,	3.8	2
39	Status Identification and Object In-Hand Reorientation Using Force/Torque Sensors. *IEEE Sensors Journal*, **2021**, 21, 20694-20703	4	2
38	On the utility of leg distal compliance for buffering landing impact of legged robots. *Advances in Mechanical Engineering*, **2017**, 9, 168781401770005	1.2	1
37	Development of a parallel-structured upper limb exoskeleton for lifting assistance* **2019**,		1
36	Natural Growth-Inspired Distributed Self-Reconfiguration of UBot Robots. *Complexity*, **2019**, 2019, 1-12	1.6	1
35	Kinematics and singularity analysis of a novel 7-DOF humanoid arm based on parallel manipulating spherical joints **2015**,		1
34	Disturbance Elimination for the Modular Joint Torque Sensor of a Collaborative Robot. *Mathematical Problems in Engineering*, **2020**, 2020, 1-14	1.1	1

33	A dynamic simulation and virtual evolution platform for modular self-reconfigurable robots **2013**,		1
32	Modeling the fractal development of modular robots. *Advances in Mechanical Engineering*, **2017**, 9, 168781401769569	1.2	1
31	Concept and design of a lightweight biped robot for walking on rough terrain **2017**,		1
30	Research on the cable-pulley underactuated lower limb exoskeleton **2017**,		1
29	Prediction of joint angle by combining multiple linear regression with autoregressive (AR) model and Kalman filter **2015**,		1
28	Research on 3D reconstruction for robot based on SIFT feature **2014**,		1
27	An elbow biomechanical model and its coefficients adjustment **2014**,		1
26	Design and implementation of a finger haptic device for large-scale force-tactile hybrid haptic rendering **2012**,		1
25	Optical flow based plane detection for mobile robot navigation **2011**,		1
24	A Diagonal Recurrent CMAC Model Reference Adaptive Control for Parallel Manipulators Trajectory Tracking **2006**,		1
23	A Capacitive and Piezoresistive Hybrid Sensor for Long-Distance Proximity and Wide-Range Force Detection in HumanRobot Collaboration. *Advanced Intelligent Systems*,2100213	6	1
22	A DESIGNATION OF MODULAR MOBILE RECONFIGURABLE PLATFORM SYSTEM. *Journal of Mechanics in Medicine and Biology*, **2020**, 20, 2040006	0.7	1
21	An Enveloping Soft Gripper With High-Load Carrying Capacity: Design, Characterization and Application. *IEEE Robotics and Automation Letters*, **2022**, 7, 373-380	4.2	1
20	Learning to Identify Footholds from Geometric Characteristics for a Six-legged Robot over Rugged Terrain. *Journal of Bionic Engineering*, **2020**, 17, 512-522	2.7	1
19	Tripping Avoidance Lower Extremity Exoskeleton Based on Virtual Potential Field for Elderly People. *Sensors*, **2020**, 20,	3.8	1
18	Improved dynamic parameter identification method relying on proprioception for manipulators. *Nonlinear Dynamics*, **2021**, 105, 1373-1388	5	1
17	Influence of the swing ankle angle on walking stability for a passive dynamic walking robot with flat feet. *Advances in Mechanical Engineering*, **2016**, 8, 168781401664201	1.2	1
16	Picking Towels in Point Clouds. *Sensors*, **2019**, 19,	3.8	1

15	Design and Fabrication of a Variable Stiffness Soft Pneumatic Humanoid Finger Actuator **2018**,		1
14	Assistance Control of Human-Exoskeleton Integrated System for Balance Recovery Augmentation in Sagittal Plane. *IEEE Transactions on Industrial Electronics*, **2021**, 1-1	8.9	1
13	Medical Robotics: Opportunities in China. *Annual Review of Control, Robotics, and Autonomous Systems*, **2022**, 5, 361-383	11.8	1
12	An Online Stiffness Estimation Approach for Variable Stiffness Actuators Using Lever Mechanism. *IEEE Robotics and Automation Letters*, **2022**, 7, 6709-6717	4.2	1
11	DEVELOPMENT OF A COMPACT LOWER-LIMB EXOSKELETON FOR WALKING ASSISTANCE: A CASE STUDY. *Journal of Mechanics in Medicine and Biology*, **2019**, 19, 1940039	0.7	0
10	A Rapid Water Sliding Robot Optimized by Bionic Motion Trajectory. *IEEE Robotics and Automation Letters*, **2022**, 7, 2463-2470	4.2	0
9	Calibration Method Based on Models and Least-Squares Support Vector Regression Enhancing Robot Position Accuracy. *IEEE Access*, **2021**, 1-1	3.5	0
8	Task-oriented Hierarchical Control of Modular Soft Robots with External Vision Guidance. *Journal of Bionic Engineering*, **2022**, 19, 657	2.7	0
7	A Capacitive and Piezoresistive Hybrid Sensor for Long-Distance Proximity and Wide-Range Force Detection in Human–Robot Collaboration. *Advanced Intelligent Systems*, **2022**, 4, 2270011	6	0
6	Stereo Matching Algorithm Based on 2D Delaunay Triangulation. *Mathematical Problems in Engineering*, **2015**, 2015, 1-8	1.1	
5	A Rhythmic Motion Control Method Inspired by Board Shoe Racing for a Weight-Bearing Exoskeleton. *Journal of Bionic Engineering*, **2022**, 19, 403	2.7	
4	An Error Compensation Method for Surgical Robot Based on RCM Mechanism. *IEEE Access*, **2021**, 9, 140747-140758	3.5	
3	ONLINE ACTIVE ENSEMBLE LEARNING FOR ROBOT COLLISION DETECTION IN DYNAMIC ENVIRONMENTS. *Journal of Mechanics in Medicine and Biology*, **2021**, 21, 2150035	0.7	
2	Research on frog-inspired swimming robot driven by pneumatic muscles. *Robotica*,1-11	2.1	
1	Movement generalization of variable initial task state based on Euclidean transformation dynamical movement primitives. *International Journal of Advanced Robotic Systems*, **2021**, 18, 17298814211065	1.4	