Xian-min Zhang

List of Publications by Year
in descending order

284 papers	5,103 citations	101543 36 h-index	144013 57 g-index
291 all docs	291 docs citations	291 times ranked	2730 citing authors

#	Article	IF	Citations
1	Intelligent fault diagnosis of rolling bearings based on normalized CNN considering data imbalance and variable working conditions. Knowledge-Based Systems, 2020, 199, 105971.	7.1	220
2	Design of compliant mechanisms using continuum topology optimization: A review. Mechanism and Machine Theory, 2020, 143, 103622.	4.5	218
3	Input coupling analysis and optimal design of a 3-DOF compliant micro-positioning stage. Mechanism and Machine Theory, 2008, 43, 400-410.	4.5	157
4	Active vibration control of a flexible beam using a non-collocated acceleration sensor and piezoelectric patch actuator. Journal of Sound and Vibration, 2009, 326, 438-455.	3.9	121
5	Deep multi-scale convolutional transfer learning network: A novel method for intelligent fault diagnosis of rolling bearings under variable working conditions and domains. Neurocomputing, 2020, 407, 24-38.	5.9	105
6	Design and Myoelectric Control of an Anthropomorphic Prosthetic Hand. Journal of Bionic Engineering, 2017, 14, 47-59.	5.0	95
7	Dynamic analysis of a 3-RRR parallel mechanism with multiple clearance joints. Mechanism and Machine Theory, 2014, 78, 105-115.	4.5	90
8	The Development of a New Piezoresistive Pressure Sensor for Low Pressures. IEEE Transactions on Industrial Electronics, 2018, 65, 6487-6496.	7.9	86
9	Optimal design of a planar parallel 3-DOF nanopositioner with multi-objective. Mechanism and Machine Theory, 2017, 112, 61-83.	4.5	82
10	A robust weld seam recognition method under heavy noise based on structured-light vision. Robotics and Computer-Integrated Manufacturing, 2020, 61, 101821.	9.9	80
11	Error modelling and motion reliability analysis of a planar parallel manipulator with multiple uncertainties. Mechanism and Machine Theory, 2018, 124, 55-72.	4.5	77
12	A review of nonlinear hysteresis modeling and control of piezoelectric actuators. AIP Advances, 2019, 9, .	1.3	74
13	Parameters Optimization and Experiment of A Planar Parallel 3-DOF Nanopositioning System. IEEE Transactions on Industrial Electronics, 2018, 65, 2388-2397.	7.9	72
14	A planar 3-DOF nanopositioning platform with large magnification. Precision Engineering, 2016, 46, 221-231.	3.4	66
15	Design and analysis of a multi-notched flexure hinge for compliant mechanisms. Precision Engineering, 2017, 48, 292-304.	3.4	66
16	A 213-line topology optimization code for geometrically nonlinear structures. Structural and Multidisciplinary Optimization, 2019, 59, 1863-1879.	3.5	62
17	A new topology optimization method for planar compliant parallel mechanisms. Mechanism and Machine Theory, 2016, 95, 42-58.	4.5	60
18	Deep multi-scale adversarial network with attention: A novel domain adaptation method for intelligent fault diagnosis. Journal of Manufacturing Systems, 2021, 59, 565-576.	13.9	60

#	Article	IF	Citations
19	Classification of Solder Joint Using Feature Selection Based on Bayes and Support Vector Machine. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2013, 3, 516-522.	2.5	59
20	Topology optimization of hinge-free compliant mechanisms with multiple outputs using level set method. Structural and Multidisciplinary Optimization, 2013, 47, 659-672.	3.5	58
21	Optimization of a 2-DOF micro-positioning stage using corrugated flexure units. Mechanism and Machine Theory, 2018, 121, 683-696.	4.5	57
22	Nonlinear analysis and optimal design of a novel piezoelectric-driven compliant micrograpper. Mechanism and Machine Theory, 2017, 118, 32-52.	4.5	54
23	Hybrid flexure hinges. Review of Scientific Instruments, 2013, 84, 085004.	1.3	53
24	A new level set method for topology optimization of distributed compliant mechanisms. International Journal for Numerical Methods in Engineering, 2012, 91, 843-871.	2.8	51
25	Mechanical Structural Design of a Piezoresistive Pressure Sensor for Low-Pressure Measurement: A Computational Analysis by Increases in the Sensor Sensitivity. Sensors, 2018, 18, 2023.	3.8	51
26	Unified motion reliability analysis and comparison study of planar parallel manipulators with interval joint clearance variables. Mechanism and Machine Theory, 2019, 138, 58-75.	4.5	50
27	Design and analysis of a high-accuracy flexure hinge. Review of Scientific Instruments, 2016, 87, 055106.	1.3	49
28	A generalized Prandtl-Ishlinskii model for characterizing the rate-independent and rate-dependent hysteresis of piezoelectric actuators. Review of Scientific Instruments, 2016, 87, 035002.	1.3	47
29	Design of buckling-induced mechanical metamaterials for energy absorption using topology optimization. Structural and Multidisciplinary Optimization, 2018, 58, 1395-1410.	3.5	47
30	Structural topology and shape optimization using a level set method with distance-suppression scheme. Computer Methods in Applied Mechanics and Engineering, 2015, 283, 1214-1239.	6.6	45
31	Full closed-loop controls of micro/nano positioning system with nonlinear hysteresis using micro-vision system. Sensors and Actuators A: Physical, 2017, 257, 125-133.	4.1	44
32	Feature-Extraction-Based Inspection Algorithm for IC Solder Joints. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2011, 1, 689-694.	2.5	43
33	A comparative study of planar 3-RRR and 4-RRR mechanisms with joint clearances. Robotics and Computer-Integrated Manufacturing, 2016, 40, 24-33.	9.9	42
34	Precision Alignment of Optical Fibers Based on Telecentric Stereo Microvision. IEEE/ASME Transactions on Mechatronics, 2016, 21, 1924-1934.	5.8	42
35	Design of single-axis flexure hinges using continuum topology optimization method. Science China Technological Sciences, 2014, 57, 560-567.	4.0	41
36	Topology optimization of a cable-driven soft robotic gripper. Structural and Multidisciplinary Optimization, 2020, 62, 2749-2763.	3.5	41

#	Article	IF	Citations
37	Recent advances in non-contact force sensors used for micro/nano manipulation. Sensors and Actuators A: Physical, 2019, 296, 155-177.	4.1	38
38	Imposing minimum length scale in moving morphable component (MMC)-based topology optimization using an effective connection status (ECS) control method. Computer Methods in Applied Mechanics and Engineering, 2019, 351, 667-693.	6.6	37
39	Level Set-Based Topology Optimization of Hinge-Free Compliant Mechanisms Using a Two-Step Elastic Modeling Method. Journal of Mechanical Design, Transactions of the ASME, 2014, 136, .	2.9	36
40	The recognition of multi-finger prehensile postures using LDA. Biomedical Signal Processing and Control, 2013, 8, 706-712.	5.7	35
41	An enhanced Bouc-Wen model for characterizing rate-dependent hysteresis of piezoelectric actuators. Review of Scientific Instruments, 2018, 89, 115002.	1.3	35
42	Structural Topology Optimization Using a Moving Morphable Component-Based Method Considering Geometrical Nonlinearity. Journal of Mechanical Design, Transactions of the ASME, 2018, 140, .	2.9	35
43	Deep multi-scale separable convolutional network with triple attention mechanism: A novel multi-task domain adaptation method for intelligent fault diagnosis. Expert Systems With Applications, 2021, 182, 115087.	7.6	35
44	Realtime in-plane displacements tracking of the precision positioning stage based on computer micro-vision. Mechanical Systems and Signal Processing, 2019, 124, 111-123.	8.0	34
45	A multi-objective method of hinge-free compliant mechanism optimization. Structural and Multidisciplinary Optimization, 2014, 49, 431-440.	3.5	33
46	Pseudo-rigid-body model for corrugated cantilever beam used in compliant mechanisms. Chinese Journal of Mechanical Engineering (English Edition), 2014, 27, 122-129.	3.7	31
47	Minimizing the influence of revolute joint clearance using the planar redundantly actuated mechanism. Robotics and Computer-Integrated Manufacturing, 2017, 46, 104-113.	9.9	31
48	Vibration control of a pneumatic driven piezoelectric flexible manipulator using self-organizing map based multiple models. Mechanical Systems and Signal Processing, 2016, 70-71, 345-372.	8.0	30
49	Line-based calibration of a micro-vision motion measurement system. Optics and Lasers in Engineering, 2017, 93, 40-46.	3.8	30
50	Adaptive positioning control of an ultrasonic linear motor system. Robotics and Computer-Integrated Manufacturing, 2017, 44, 156-173.	9.9	30
51	A CPRBM-based method for large-deflection analysis of contact-aided compliant mechanisms considering beam-to-beam contacts. Mechanism and Machine Theory, 2020, 145, 103700.	4.5	30
52	A novel microgripper hybrid driven by a piezoelectric stack actuator and piezoelectric cantilever actuators. Review of Scientific Instruments, 2016, 87, 115003.	1.3	28
53	Design of a rotary dielectric elastomer actuator using a topology optimization method based on pairs of curves. Smart Materials and Structures, 2018, 27, 055011.	3.5	28
54	Design of fully decoupled compliant mechanisms with multiple degrees of freedom using topology optimization. Mechanism and Machine Theory, 2018, 126, 413-428.	4.5	28

#	Article	IF	Citations
55	Nonlinear Hysteresis Modeling of Piezoelectric Actuators Using a Generalized Boucâ€“Wen Model. Micromachines, 2019, 10, 183.	2.9	28
56	Compliant mechanisms design based on pairs of curves. Science China Technological Sciences, 2012, 55, 2099-2106.	4.0	27
57	Coupled dynamic modeling of piezo-actuated compliant mechanisms subjected to external loads. Mechanism and Machine Theory, 2021, 160, 104283.	4.5	27
58	Dynamic analysis of a 3-PRR parallel mechanism by considering joint clearances. Nonlinear Dynamics, 2017, 90, 405-423.	5.2	26
59	Design of flexure hinges based on stress-constrained topology optimization. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2017, 231, 4635-4645.	2.1	26
60	Topology Optimization of Compliant Mechanisms. , 2018, , .		26
61	The recognition of grasping force using LDA. Biomedical Signal Processing and Control, 2019, 47, 393-400.	5.7	26
62	TOPOLOGY OPTIMOZATION OF COMPLIANT MECHANISMS. Jixie Gongcheng Xuebao/Chinese Journal of Mechanical Engineering, 2003, 39, 47.	0.5	25
63	Peg-in-Hole Assembly Based on Two-phase Scheme and F/T Sensor for Dual-arm Robot. Sensors, 2017, 17, 2004.	3.8	24
64	Topology optimization of bistable mechanisms with maximized differences between switching forces in forward and backward direction. Mechanism and Machine Theory, 2019, 139, 131-143.	4.5	23
65	Effects of Temperature and Residual Stresses on the Output Characteristics of a Piezoresistive Pressure Sensor. IEEE Access, 2019, 7, 27668-27676.	4.2	23
66	An 89-line code for geometrically nonlinear topology optimization written in FreeFEM. Structural and Multidisciplinary Optimization, 2021, 63, 1015-1027.	3.5	23
67	A robust construction of normalized CNN for online intelligent condition monitoring of rolling bearings considering variable working conditions and sources. Measurement: Journal of the International Measurement Confederation, 2021, 174, 108973.	5.0	23
68	A monocular vision system for online pose measurement of a 3RRR planar parallel manipulator. Journal of Intelligent and Robotic Systems: Theory and Applications, 2018, 92, 3-17.	3.4	23
69	Displacement measurement system for inverters using computer micro-vision. Optics and Lasers in Engineering, 2016, 81, 113-118.	3.8	22
70	A vision-based vibration sensing and active control for a piezoelectric flexible cantilever plate. JVC/Journal of Vibration and Control, 2016, 22, 1320-1337.	2.6	22
71	A generalized pseudo-rigid-body PPRR model for both straight and circular beams in compliant mechanisms. Mechanism and Machine Theory, 2020, 154, 104054.	4.5	22
72	Pose Sensing and Servo Control of the Compliant Nanopositioners Based on Microscopic Vision. IEEE Transactions on Industrial Electronics, 2021, 68, 3324-3335.	7.9	22

#	Article	IF	Citations
73	Dynamic responses of flexible linkage mechanisms with viscoelastic constrained layer damping treatment. Computers and Structures, 2001, 79, 1265-1274.	4.4	21
74	Dynamic analysis of flexible linkage mechanisms under uniform temperature change. Journal of Sound and Vibration, 2009, 319, 570-592.	3.9	20
75	Design, modeling and test of a novel compliant orthogonal displacement amplification mechanism for the compact micro-grasping system. Microsystem Technologies, 2017, 23, 2485-2498.	2.0	20
76	Design of diaphragm structure for piezoresistive pressure sensor using topology optimization. Structural and Multidisciplinary Optimization, 2017, 55, 317-329.	3.5	20
77	Online Precise Motion Measurement of 3-DOF Nanopositioners Based on Image Correlation. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 782-790.	4.7	20
78	Nonlinear topology optimization of parallel-grasping microgripper. Precision Engineering, 2019, 60, 152-159.	3.4	20
79	Topology optimization of hinge-free compliant mechanisms using level set methods. Engineering Optimization, 2014, 46, 580-605.	2.6	19
80	Estimation of Handgrip Force from SEMG Based on Wavelet Scale Selection. Sensors, 2018, 18, 663.	3.8	19
81	Explicit structural topology optimization using moving wide Bezier components with constrained ends. Structural and Multidisciplinary Optimization, 2021, 64, 53-70.	3.5	19
82	Design of a compliant adjustable constant-force gripper based on circular beams. Mechanism and Machine Theory, 2022, 173, 104843.	4.5	19
83	A level set method for reliability-based topology optimization of compliant mechanisms. Science in China Series D: Earth Sciences, 2008, 51, 443-455.	0.9	18
84	Climbing gaits of a modular biped climbing robot. , 2009, , .		18
85	Realtime recognition of multi-finger prehensile gestures. Biomedical Signal Processing and Control, 2014, 13, 262-269.	5.7	18
86	Integrated Design of Actuation and Mechanism of Dielectric Elastomers Using Topology Optimization Based on Fat Bezier Curves. Soft Robotics, 2019, 6, 644-656.	8.0	18
87	Topology optimization of compliant mechanism considering actual output displacement using adaptive output spring stiffness. Mechanism and Machine Theory, 2020, 146, 103728.	4.5	18
88	Dynamic analysis of the precision compliant mechanisms considering thermal effect. Precision Engineering, 2010, 34, 592-606.	3.4	17
89	A novel flexural lamina emergent spatial joint. Mechanism and Machine Theory, 2019, 142, 103582.	4.5	17
90	Origami Kaleidocycle-Inspired Symmetric Multistable Compliant Mechanisms. Journal of Mechanisms and Robotics, 2019, 11, .	2.2	17

#	Article	IF	Citations
91	Vibration control of two-connected piezoelectric flexible plate using nonlinear algorithm and T-S fuzzy controller. Journal of Intelligent Material Systems and Structures, 2015, 26, 219-243.	2.5	16
92	Jacobian-Based Topology Optimization Method Using an Improved Stiffness Evaluation. Journal of Mechanical Design, Transactions of the ASME, 2018, 140, .	2.9	16
93	Design and experimental evaluation of a compliant mechanism-based stepping-motion actuator with multi-mode. Smart Materials and Structures, 2018, 27, 105014.	3.5	16
94	Eye-to-Hand Robotic Visual Tracking Based on Template Matching on FPGAs. IEEE Access, 2019, 7, 88870-88880.	4.2	16
95	Design of Planar Large-Deflection Compliant Mechanisms With Decoupled Multi-Input-Output Using Topology Optimization. Journal of Mechanisms and Robotics, 2019, 11, .	2.2	16
96	Joint torque estimation for the human arm from sEMG using backpropagation neural networks and autoencoders. Biomedical Signal Processing and Control, 2020, 62, 102051.	5.7	16
97	Integrated optimal design of flexible mechanism and vibration control. International Journal of Mechanical Sciences, 2004, 46, 1607-1620.	6.7	15
98	W-Climbot: A modular biped wall-climbing robot. , 2010, , .		15
99	Preload characteristics identification of the piezoelectric-actuated 1-DOF compliant nanopositioning platform. Frontiers of Mechanical Engineering, 2015, 10, 20-36.	4.3	15
100	Topology optimization of distributed flexure hinges with desired performance. Engineering Optimization, 2020, 52, 405-425.	2.6	15
101	Extended Dynamic Stiffness Model for Analyzing Flexure-Hinge Mechanisms With Lumped Compliance. Journal of Mechanical Design, Transactions of the ASME, 2022, 144, .	2.9	15
102	Micro-motion detection of the 3-DOF precision positioning stage based on iterative optimized template matching. Applied Optics, 2017, 56, 9435.	1.8	15
103	Calibration method for hand-eye system with rotation and translation couplings. Applied Optics, 2019, 58, 5375.	1.8	15
104	Optimal Placement of Piezoelectric Sensors and Actuators for Controlled Flexible Linkage Mechanisms. Journal of Vibration and Acoustics, Transactions of the ASME, 2006, 128, 256-260.	1.6	14
105	Stiffness analysis of corrugated flexure beam used in compliant mechanisms. Chinese Journal of Mechanical Engineering (English Edition), 2015, 28, 776-784.	3.7	14
106	Dynamic analysis of planar 3-<u>R</u>RR flexible parallel robots under uniform temperature change. JVC/Journal of Vibration and Control, 2015, 21, 81-104.	2.6	14
107	Bi-directional evolutionary level set method for topology optimization. Engineering Optimization, 2015, 47, 390-406.	2.6	14
108	Damped leaf flexure hinge. Review of Scientific Instruments, 2015, 86, 055002.	1.3	14

#	Article	IF	Citations
109	Displacement measurement of the compliant positioning stage based on a computer micro-vision method. AIP Advances, 2016, 6, .	1.3	14
110	High-precision displacement measurement method for three degrees of freedom-compliant mechanisms based on computer micro-vision. Applied Optics, 2016, 55, 2594.	2.1	14
111	Topological and Shape Optimization of Flexure Hinges for Designing Compliant Mechanisms Using the Level Set Method. Chinese Journal of Mechanical Engineering (English Edition), 2019, 32, .	3.7	14
112	Design of dielectric elastomer grippers using Bezier curves. Mechanism and Machine Theory, 2021, 158, 104216.	4.5	14
113	Multiscale Graph-Guided Convolutional Network With Node Attention for Intelligent Health State Diagnosis of a 3-PRR Planar Parallel Manipulator. IEEE Transactions on Industrial Electronics, 2022, 69, 11733-11743.	7.9	14
114	Active noise control of flexible linkage mechanism with piezoelectric actuators. Computers and Structures, 2003, 81, 2045-2051.	4.4	13
115	Fatigue reliability based optimal design of planar compliant micropositioning stages. Review of Scientific Instruments, 2015, 86, 105117.	1.3	13
116	Tracking control of piezoelectric actuators using a polynomial-based hysteresis model. AIP Advances, 2016, 6, .	1.3	13
117	Modular crawling robots using soft pneumatic actuators. Frontiers of Mechanical Engineering, 2021, 16, 163-175.	4.3	13
118	Title is missing!. Multibody System Dynamics, 2002, 8, 51-70.	2.7	12
119	Optimize heat conduction problem using level set method with a weighting based velocity constructing scheme. International Journal of Heat and Mass Transfer, 2016, 99, 441-451.	4.8	12
120	A high accuracy algorithm of displacement measurement for a micro-positioning stage. AIP Advances, 2017, 7, .	1.3	12
121	Vision-based adaptive control of a 3-RRR parallel positioning system. Science China Technological Sciences, 2018, 61, 1253-1264.	4.0	12
122	Dynamic modeling and comparative analysis of a 3-PRR parallel robot with multiple lubricated joints. International Journal of Mechanics and Materials in Design, 2020, 16, 541-555.	3.0	12
123	Analysis and design of spatial compliant mechanisms using a 3-D dynamic stiffness model. Mechanism and Machine Theory, 2022, 168, 104581.	4.5	12
124	Finite dynamic element analysis for high-speed flexible linkage mechanisms. Computers and Structures, 1996, 60, 787-796.	4.4	11
125	1-DoF robotic joint modules and their applications in new robotic systems. , 2009, , .		11
126	Workspace Generation for Multifingered Manipulation. Advanced Robotics, 2011, 25, 2293-2317.	1.8	11

#	Article	IF	Citations
127	Feature-Based Object Location of IC Pins by Using Fast Run Length Encoding BLOB Analysis. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2014, 4, 1887-1898.	2.5	11
128	A robust rotation-invariance displacement measurement method for a micro-/nano-positioning system. Measurement Science and Technology, 2018, 29, 055402.	2.6	11
129	A Level Set Method With a Bounded Diffusion for Structural Topology Optimization. Journal of Mechanical Design, Transactions of the ASME, 2018, 140, .	2.9	11
130	Design and analysis of corrugated flexure-based lamina emergent spatial joints for symmetrical compliant kaleidocycles. Mechanism and Machine Theory, 2022, 167, 104525.	4.5	11
131	Dynamic Analysis of Planar 3-RRR Flexible Parallel Robots with Dynamic Stiffening. Shock and Vibration, 2014, 2014, 1-13.	0.6	10
132	A New Calibration Method for a Directly Driven 3PRR Positioning System. Journal of Intelligent and Robotic Systems: Theory and Applications, 2017, 85, 613-631.	3.4	10
133	Generating ultra-small droplets based on a double-orifice technique. Sensors and Actuators B: Chemical, 2018, 255, 2011-2017.	7.8	10
134	A magnification-continuous calibration method for SEM-based nanorobotic manipulation systems. Review of Scientific Instruments, 2019, 90, 053706.	1.3	10
135	Design and analysis of translational joints using corrugated flexural beams with conic curve segments. Mechanism and Machine Theory, 2019, 132, 223-235.	4.5	10
136	An Improved Template-Matching-Based Pose Tracking Method for Planar Nanopositioning Stages Using Enhanced Correlation Coefficient. IEEE Sensors Journal, 2020, 20, 6378-6387.	4.7	10
137	An Approach for Geometrically Nonlinear Topology Optimization Using Moving Wide-BÃ©zier Components With Constrained Ends. Journal of Mechanical Design, Transactions of the ASME, 2022, 144, .	2.9	10
138	Enhancing Dynamic Bandwidth of Amplified Piezoelectric Actuators by a Hybrid Lever and Bridge-Type Compliant Mechanism. Actuators, 2022, 11, 134.	2.3	10
139	Topology optimization of compliant mechanisms with anisotropic composite materials. , 2010, , .		9
140	An intelligent environmental monitoring system based on autonomous mobile robot. , 2011, , .		9
141	A kind of soft pneumatic actuator based on multi-material 3D print technology. , 2017, , .		9
142	Peg-in-hole assembly based on hybrid vision/force guidance and dual-arm coordination. , 2017, , .		9
143	Natural Gesture Control of a Delta Robot Using Leap Motion. Journal of Physics: Conference Series, 2019, 1187, 032042.	0.4	9
144	A Simultaneous Optimization Method of Calibration and Measurement for a Typical Handâ€“Eye Positioning System. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-11.	4.7	9

#	Article	IF	Citations
145	Topology optimization of multiple inputs and multiple outputs compliant mechanisms. Chinese Journal of Mechanical Engineering (English Edition), 2007, 20, 82.	3.7	9
146	TOPOLOGY OPTIMIZATION OF MULTIPLE INPUTS AND OUTPUTS COMPLIANT MECHANISM WITH COUPLING TERMS CONTROL. Jixie Gongcheng Xuebao/Chinese Journal of Mechanical Engineering, 2006, 42, 162.	0.5	9
147	A high speed AOI algorithm for chip component based on image difference. , 2009, , .		8
148	Topology optimization of thermo-mechanical continuum structure. , 2010, , .		8
149	A Design Method for LEDs Arrays Structure Illumination. Journal of Display Technology, 2016, 12, 1177-1184.	1.2	8
150	Error modeling and calibration of a 4á¹žRR redundant positioning system. AIP Advances, 2017, 7, 095009.	1.3	8
151	Exploration of Translational Joint Design Using Corrugated Flexure Units With BÃ©zier Curve Segments. Journal of Mechanical Design, Transactions of the ASME, 2019, 141, .	2.9	8
152	Development of a 3-PRR Precision Tracking System with Full Closed-Loop Measurement and Control. Sensors, 2019, 19, 1756.	3.8	8
153	Dynamic analysis of open-loop mechanisms with multiple spatial revolute clearance joints. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2019, 233, 593-610.	2.1	8
154	Design of dielectric elastomer actuators using topology optimization on electrodes. Smart Materials and Structures, 2020, 29, 075029.	3.5	8
155	Single-step printing of high-resolution, high-aspect ratio silver lines through laser-induced forward transfer. Optics and Laser Technology, 2021, 133, 106514.	4.6	8
156	Topology optimization of flexure hinges with a prescribed compliance matrix based on the adaptive spring model and stress constraint. Precision Engineering, 2021, 72, 397-408.	3.4	8
157	Hybrid explicitâ€“implicit topology optimization method for the integrated layout design of compliant mechanisms and actuators. Mechanism and Machine Theory, 2022, 171, 104750.	4.5	8
158	A Velocity Predictorâ€“Corrector Scheme in Level Set-Based Topology Optimization to Improve Computational Efficiency. Journal of Mechanical Design, Transactions of the ASME, 2014, 136, .	2.9	7
159	Study on Residual Vibration Suppress of a 3-DOF Flexible Parallel Robot Mechanism. Sensors, 2018, 18, 4145.	3.8	7
160	Design of dielectric elastomer actuator using topology optimization method based on genetic algorithm. Smart Materials and Structures, 2019, 28, 065013.	3.5	7
161	Development of an SEMG-Handgrip Force Model Based on Cross Model Selection. IEEE Sensors Journal, 2019, 19, 1829-1838.	4.7	7
162	A projective transformation-based topology optimization using moving morphable components. Computer Methods in Applied Mechanics and Engineering, 2021, 376, 113646.	6.6	7

#	Article	IF	Citations
163	Spatial compliance modeling and optimization of a translational joint using corrugated flexure units. Mechanism and Machine Theory, 2022, 176, 104962.	4.5	7
164	An AOI algorithm for PCB based on feature extraction. , 2008, , .		6
165	Maximization of Values of Simple and Multiple Eigenfrequencies of Continuum Structures Using Topology Optimization. , 2009, , .		6
166	Experiments on resonant vibration suppression of a piezoelectric flexible clampedâ€“clamped plate using filtered-U least mean square algorithm. Journal of Intelligent Material Systems and Structures, 2016, 27, 166-194.	2.5	6
167	A simplified focusing and astigmatism correction method for a scanning electron microscope. AIP Advances, 2018, 8, .	1.3	6
168	A novel compression-based compliant orthogonal displacement amplification mechanism for the typical actuators used in micro-grasping. Sensors and Actuators A: Physical, 2019, 297, 111463.	4.1	6
169	Multi-target tracking for automated RF on-wafer probing based on template matching. , 2019, , .		6
170	Laser direct printing of solder paste. AIP Advances, 2019, 9, 125306.	1.3	6
171	Fuzzy-PI double-layer stability control of an online vision-based tracking system. Intelligent Service Robotics, 2021, 14, 187-197.	2.6	6
172	Design of compliant mechanisms: An explicit topology optimization method using end-constrained spline curves with variable width. Mechanism and Machine Theory, 2022, 171, 104713.	4.5	6
173	A Novel Semi-Supervised Graph-Guided Approach for Intelligent Health State Diagnosis of a 3-PRR Planar Parallel Manipulator. IEEE/ASME Transactions on Mechatronics, 2022, 27, 4786-4797.	5.8	6
174	A novel mobile robot capable of changing its wheel distance and body configuration. , 2009, , .		5
175	The superior mobility and function of W-Climbot — A bio-inspired modular biped wall-climbing robot. , 2011, , .		5
176	Adaptive differential correspondence imaging based on sorting technique. AIP Advances, 2017, 7, 045121.	1.3	5
177	Topology optimization of the flexure hinges for precision engineering. , 2017, , .		5
178	Self-excited Vibration Control of the Flexible Planar Parallel 3-<u>R</u>RR Robot. JVC/Journal of Vibration and Control, 2019, 25, 351-361.	2.6	5
179	A robust edge-based template matching algorithm for displacement measurement of compliant mechanisms under scanning electron microscope. Review of Scientific Instruments, 2021, 92, 033703.	1.3	5
180	Edge determination improvement of scanning electron microscope images by inpainting and anisotropic diffusion for measurement and analysis of microstructures. Measurement: Journal of the International Measurement Confederation, 2021, 176, 109217.	5.0	5

#	Article	IF	Citations
181	Multiresolution edge detection in noisy images using wavelet transform. , 2005, , .		4
182	Mechanical design and basic analysis of a modular robot with special climbing and manipulation functions. , 2007, , .		4
183	Workspace of 3-D multifingered manipulation. , 2008, , .		4
184	An optimization approach for black-and-white and hinge-removal topology designs. Journal of Mechanical Science and Technology, 2014, 28, 581-593.	1.5	4
185	Design and test of a novel planar 3-DOF precision positioning platform with a large magnification. , 2014, , .		4
186	Filter the shape sensitivity in level set-based topology optimization methods. Structural and Multidisciplinary Optimization, 2015, 51, 1035-1049.	3.5	4
187	Topology Optimization of Compliant Mechanisms Using Moving Morphable Components with Flexure Hinge Characteristic. , 2018, , .		4
188	Design Optimization and Analysis of a Damped Flexure-Guided Stage. , 2018, , .		4
189	Topology optimization of fusiform muscles with a maximum contraction. International Journal for Numerical Methods in Biomedical Engineering, 2018, 34, e3096.	2.1	4
190	Radial basis function neural network vibration control of a flexible planar parallel manipulator based on acceleration feedback. JVC/Journal of Vibration and Control, 2022, 28, 351-363.	2.6	4
191	A Damped Decoupled XY Nanopositioning Stage Embedding Graded Local Resonators. IEEE/ASME Transactions on Mechatronics, 2022, 27, 256-267.	5.8	4
192	Motion measurement system of compliant mechanisms using computer micro-vision. Optics Express, 2021, 29, 5006.	3.4	4
193	Position/Force Visual-Sensing-Based Robotic Sheet-Like Peg-in-Hole Assembly. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-11.	4.7	4
194	Automatic Design of Dielectric Elastomer-Based Crawling Robots Using Shape and Topology Optimization. Journal of Mechanisms and Robotics, 2023, 15, .	2.2	4
195	An Integrated Inspection Method based on Machine Vision for Solder Paste Depositing. , 2007, , .		3
196	A real-time machine vision system for solder paste inspection. , 2008, , .		3
197	Workspace generation of 2-D multifingered manipulation under consideration of all constraints in the grasp. , 2008, , .		3
198	Topology optimization of multiple inputs and multiple outputs compliant mechanisms using the ground structure approach. , 2010, , .		3

#	Article	IF	Citations
199	Dynamic Analysis of a 3-RRR Parallel Robot With Joint Clearances Using Natural Coordinates. , 2014, , .		3
200	High-Quality Computational Ghost Imaging Using an Optimum Distance Search Method. IEEE Photonics Journal, 2016, 8, 1-9.	2.0	3
201	Design of a rotary dielectric elastomer actuator using topology optimization method. , 2017, , .		3
202	Topology Optimization of Distributed Compliant Mechanisms. , 2018, , 81-119.		3
203	Strain-based multimode integrating sensing for a bridge-type compliant amplifier. Measurement Science and Technology, 2019, 30, 105106.	2.6	3
204	High-Accuracy Calibration of a Visual Motion Measurement System for Planar 3-DOF Robots Using Gaussian Process. IEEE Sensors Journal, 2019, 19, 7659-7667.	4.7	3
205	Optimization of Translational Flexure Joints Using Corrugated Units Under Stress Constraints. Journal of Mechanisms and Robotics, 2021, 13, .	2.2	3
206	Topological design of compliant orthogonal displacement amplification mechanism under the unidirectional input force. Zhongguo Kexue Jishu Kexue/Scientia Sinica Technologica, 2019, 49, 579-588.	0.5	3
207	A novel one-degree-of-freedom translational partly compliant mechanism with variable motion direction. Mechanism and Machine Theory, 2022, 171, 104695.	4.5	3
208	A Phase Diagram-Based Stability Design Method for a Symmetrical Origami Waterbomb Base. Journal of Mechanical Design, Transactions of the ASME, 2022, 144, .	2.9	3
209	Robust multiscale algorithms for gradientâ€based motion estimation. International Journal of Imaging Systems and Technology, 2007, 17, 333-340.	4.1	2
210	Multiscale MSE-minimizing filters for gradient-based motion estimation. Measurement: Journal of the International Measurement Confederation, 2007, 40, 841-848.	5.0	2
211	Reliability-based topology optimization of continuous structures. , 2008, , .		2
212	Closed-Form Equations of Mass Matrix of the Single-Axis Right Circular Flexure Hinge. , 2009, , .		2
213	A biologically inspired miniature biped climbing robot. , 2009, , .		2
214	Improvement of an aerodynamic model for biomimetic flapping-wing robots. , 2010, , .		2
215	Modeling and planning for stable walking of a novel 6-DOF biped robot. , 2010, , .		2
216	A novel 6-DoF biped active walking robot — Walking gaits, patterns and experiments. , 2011, , .		2

#	Article	IF	Citations
217	A Soft Gripper Based on Dielectric Elastomer Actuator. , 2017, , .		2
218	A three-step displacement measurement method for a 3-DOF macro-micro positioning stage. Review of Scientific Instruments, 2018, 89, 113701.	1.3	2
219	Design and Waveform Assessment of a Flexible-Structure-Based Inertia-Drive Motor. Micromachines, 2019, 10, 771.	2.9	2
220	Size optimization of the front electrode and solar cell using a combined finite-element-genetic algorithm method. Journal of Photonics for Energy, 2021, 11, .	1.3	2
221	Multi-material topology optimization of large-displacement compliant mechanisms considering material-dependent boundary condition. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2022, 236, 2847-2860.	2.1	2
222	Wavelet-based interpolation algorithm for topology extraction of compliant mechanisms. , 2005, , .		1
223	Kinematic Analysis of a Novel 4-DOFs Parallel Manipulator. , 2006, , .		1
224	Dynamic modeling and analysis of a rigid-flexible planar parallel manipulator. , 2009, , .		1
225	A multiscale optimal filter method for micro-motion measurement with high accuracy. Measurement: Journal of the International Measurement Confederation, 2011, 44, 96-101.	5.0	1
226	Multi-material topology optimization of complaint mechanism using ground structure approach. , 2014, , .		1
227	Leaf flexure hinge with damping layers: Theoretical model and experiments. , 2014, , .		1
228	Motion Reliability Analysis of a 3-RRR Parallel Manipulator With Random and Interval Variables. , 2016, , .		1
229	Strain-based output/input sensing cell integrated within a compliant bridge-type mechanism. , 2016, , .		1
230	Fatigue Study on the Right Circular Flexure Hinges for Designing Compliant Mechanisms. , 2017, , .		1
231	Estimation of human arm motion based on sEMG in human-robot cooperative manipulation. , 2018, , .		1
232	Dynamic Comparison of a 3-Degrees-of-Freedom Parallel Manipulator With Multiple Dry Clearance Joints and With Lubricated Joints. , 2018, , .		1
233	Pose Alignment for Electronic Component Insertion Using Rotational Stereo Vision. , 2018, , .		1
234	An approximate internal model-based neural control for serial robots with multiple clearance joints. Advances in Mechanical Engineering, 2018, 10, 168781401881232.	1.6	1

#	Article	IF	Citations
235	Topology Optimization of Flexure Hinges. , 2018, , 25-80.		1
236	Novel Method to Simultaneously Adjust the Size and pH Value of Individual Microdroplets in Silicone Oil. IEEE Access, 2019, 7, 114183-114190.	4.2	1
237	A Boundary Reconstruction Algorithm Used in Compliant Mechanism Topology Optimization Design. Lecture Notes in Electrical Engineering, 2017, , 657-666.	0.4	1
238	Kinetostatic Modeling of Piezoelectric Displacement Amplifiers Based on Matrix Displacement Method. Lecture Notes in Computer Science, 2021, , 404-414.	1.3	1
239	ROS-Based Control Implementation of an Soft Gripper with Force Feedback. Lecture Notes in Computer Science, 2021, , 528-538.	1.3	1
240	Design and Testing of a Damped Piezo-Driven Decoupled XYZ Stage. , 2021, , .		1
241	Accuracy Analysis of a 3-DOF Mechanism with Joint Clearances Under Different Working Modes. Lecture Notes in Electrical Engineering, 2017, , 1199-1209.	0.4	1
242	Static and dynamic stability analysis of an SEM-based nanomanipulation system using a fast sub-pixel template matching algorithm. , 2021, , .		1
243	Laser induced forward transfer of high viscosity silver paste on double groove structure. Optics and Laser Technology, 2022, 148, 107795.	4.6	1
244	Topology optimization of the front electrode patterns of solar cells based on moving wide Bezier curves with constrained end. Structural and Multidisciplinary Optimization, 2022, 65, 1.	3.5	1
245	Research on Trajectory Planning and Fuzzy Predictive Vibration Control for a Rotating Flexible Dual-Beam System. Journal of Vibration Engineering and Technologies, 0, , 1.	2.2	1
246	High-efficiency Transmission of Industrial Heterogeneous Data in a Typical Mobile Phone Assembly Production Line. , 2022, , .		1
247	A Path Correction Method Based on Global and Local Matching for Robotic Autonomous Systems. Journal of Intelligent and Robotic Systems: Theory and Applications, 2022, 104, 1.	3.4	1
248	Attitude Algorithm and Calculation of Limb Length Based on Motion Capture Data. , 2021, , .		1
249	Vibration control of three coupled flexible beams using reinforcement learning algorithm based on proximal policy optimization. Journal of Intelligent Material Systems and Structures, 2022, 33, 2578-2603.	2.5	1
250	Kinematic Analysis of a Novel 3-DOFs Parallel Manipulator. , 2006, , .		0
251	Multiscale MSE-Minimizing Filters for Gradient-based Motion Estimation. , 2006, , .		0
252	Research on Fast Initialization for the Level Set Method. , 2006, , .		0

#	Article	IF	Citations
253	Multi-image gradient-based algorithms for motion measurement using wavelet transform. Frontiers of Electrical and Electronic Engineering in China: Selected Publications From Chinese Universities, 2008, 3, 183-187.	0.6	0
254	Closed-loop control system of piezoceramic actuators with improved Preisach model. , 2008, , .		0
255	The superior mobility and function of W-Climbot illustrated by experiments. , 2011, , .		0
256	Micro-vision-based displacement measurement with high accuracy. , 2011, , .		0
257	Design of a topology optimal compliant microgripper using fat Bezier curves. , 2012, , .		0
258	Topology optimization of hinge-free compliant mechanisms using a two-step FEA method. , 2013, , .		0
259	Fatigue Life Prediction and Optimal Design of a Flexure Based Micro-Motion Stage. , 2013, , .		0
260	A novel compliant orthogonal displacement amplification mechanism and its application in micro-grasping. , 2016, , .		0
261	Topology Optimization of Compliant Parallel Mechanisms. , 2018, , 121-160.		0
262	Design of a Micro-Positioning Stage Using Corrugated Flexure Beam With Cubic BÃ©zier Curve Segments. , 2018, , .		0
263	Evaluation of Motion Reliability for Robot Manipulator. , 2018, , .		0
264	A High-Performance Moving Object Detection Method Based on Optical Flow. , 2018, , .		0
265	Topological Synthesis of Compliant Mechanisms Using a Level Set-Based Robust Formulation. Lecture Notes in Computer Science, 2019, , 319-332.	1.3	0
266	Design and Analysis of Translational Joint Using Corrugated Flexure Units with Variable thickness Segments. Mechanisms and Machine Science, 2019, , 2249-2259.	0.5	0
267	Design and Control of a Decoupled Micro-positioning Stage Using Corrugated Flexure Units. , 2019, , .		0
268	Micro-vibration Measurement: How Best for Piezo-driven Flexure-guided Stages. , 2019, , .		0
269	Multi-scale Calibration Board Based Accurate Calibration of a Scanning Electron Microscope. IOP Conference Series: Materials Science and Engineering, 2020, 790, 012177.	0.6	0
270	Multi-objective Ensemble of Regression Chains Prediction Algorithm for Pose Correction Errors of Precise Vision-based Printing Equipment. Journal of Physics: Conference Series, 2020, 1550, 032087.	0.4	0

#	Article	IF	Citations
271	Self-excited vibration of a 3-PRR planar parallel robot. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 0, , 095440622110095.	2.1	0
272	A robust block matching algorithm for motionestimation using an anti-interference similaritycriterion and the bilateral optimization scheme. Applied Optics, 2021, 60, 4746-4754.	1.8	0
273	Design of Flexure Hinges Using Geometrically Nonlinear Topology Optimization. Lecture Notes in Computer Science, 2021, , 179-189.	1.3	0
274	Theoretical Analysis of a Novel Force Sensor Based on Optical Fibers Used for Semicircular Flexure Beam Unit. Lecture Notes in Computer Science, 2021, , 253-262.	1.3	0
275	Analysis of Gravitational Effects on the Dynamic Behavior of Open Loop Mechanisms with Multiple Clearance Joints. Lecture Notes in Computer Science, 2021, , 390-400.	1.3	0
276	Optimal Design of a Novel Compliant Orthogonal Displacement Amplification Mechanism Considering Static and Dynamic Properties. Lecture Notes in Electrical Engineering, 2017, , 689-700.	0.4	0
277	Minimizing the Difference Between Two Output Performances to Avoid de Facto Hinges in Topology-Optimized Compliant Mechanisms. Lecture Notes in Electrical Engineering, 2017, , 633-643.	0.4	0
278	A New Position and Attitude Measurement Method for Planar Parallel Mechanism. Lecture Notes in Electrical Engineering, 2017, , 1461-1474.	0.4	0
279	Introduction to Compliant Mechanisms and Design Methods. , 2018, , 1-24.		0
280	Design and Analysis of a Series Elastic Component Based on Topology Optimization. Mechanisms and Machine Science, 2019, , 2129-2138.	0.5	0
281	Corrections to â€œHigh-Accuracy Calibration of a Visual Motion Measurement System for Planar 3-DOF Robots Using Gaussian Processâ€• IEEE Sensors Journal, 2019, 19, 12510-12510.	4.7	0
282	Design and Analysis of a 3-DOF Damped Flexure-Guided Nanopositioning Stage*. , 2020, , .		0
283	A method of seam recognization based on simulated laser stripe and ICP. , 2021, , .		0
284	Design and Analysis of Multi-DOF Adsorption Parallel Robot Based on Hybrid Mechanism. , 2021, , .		0