

# Dawei Zhang

## List of Publications by Citations

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98  
papers

1,603  
citations

20  
h-index

37  
g-index

126  
ext. papers

1,981  
ext. citations

3.1  
avg, IF

4.97  
L-index

#	Paper	IF	Citations
98	A Novel Direct Inverse Modeling Approach for Hysteresis Compensation of Piezoelectric Actuator in Feedforward Applications. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2013</b> , 18, 981-989	5.5	156
97	Design of a Piezoelectric-Actuated Microgripper With a Three-Stage Flexure-Based Amplification. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2015</b> , 20, 2205-2213	5.5	114
96	Design and Control of a Compliant Microgripper With a Large Amplification Ratio for High-Speed Micro Manipulation. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2016</b> , 21, 1262-1271	5.5	108
95	Design and Computational Optimization of a Decoupled 2-DOF Monolithic Mechanism. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2014</b> , 19, 872-881	5.5	93
94	Design issues in a decoupled XY stage: Static and dynamics modeling, hysteresis compensation, and tracking control. <i>Sensors and Actuators A: Physical</i> , <b>2013</b> , 194, 95-105	3.9	82
93	Multi-morphology transition hybridization CAD design of minimal surface porous structures for use in tissue engineering. <i>CAD Computer Aided Design</i> , <b>2014</b> , 56, 11-21	2.9	74
92	Design and control of a novel asymmetrical piezoelectric actuated microgripper for micromanipulation. <i>Sensors and Actuators A: Physical</i> , <b>2018</b> , 269, 227-237	3.9	60
91	Experimental Investigation of Robust Motion Tracking Control for a 2-DOF Flexure-Based Mechanism. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2014</b> , 19, 1737-1745	5.5	56
90	Modeling and controller design of a 6-DOF precision positioning system. <i>Mechanical Systems and Signal Processing</i> , <b>2018</b> , 104, 536-555	7.8	54
89	Novel real function based method to construct heterogeneous porous scaffolds and additive manufacturing for use in medical engineering. <i>Medical Engineering and Physics</i> , <b>2015</b> , 37, 1037-46	2.4	46
88	Design and control of a 6-degree-of-freedom precision positioning system. <i>Robotics and Computer-Integrated Manufacturing</i> , <b>2017</b> , 44, 77-96	9.2	45
87	A novel monolithic piezoelectric actuated flexure-mechanism based wire clamp for microelectronic device packaging. <i>Review of Scientific Instruments</i> , <b>2015</b> , 86, 045106	1.7	44
86	Experimental Analysis of Laser Interferometry-Based Robust Motion Tracking Control of a Flexure-Based Mechanism. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2013</b> , 10, 267-275	4.9	39
85	A Flexure-Based Kinematically Decoupled Micropositioning Stage With a Centimeter Range Dedicated to Micro/Nano Manufacturing. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2016</b> , 21, 1055-1062	5.5	38
84	Development of a high speed and precision wire clamp with both position and force regulations. <i>Robotics and Computer-Integrated Manufacturing</i> , <b>2017</b> , 44, 208-217	9.2	29
83	A 2-DOF Monolithic Compliant Rotation Platform Driven by Piezoelectric Actuators. <i>IEEE Transactions on Industrial Electronics</i> , <b>2020</b> , 67, 6963-6974	8.9	28
82	Fabrication of hierarchical freeform surfaces by 2D compliant vibration-assisted cutting. <i>International Journal of Mechanical Sciences</i> , <b>2019</b> , 152, 454-464	5.5	23

81	Development and control methodologies for 2-DOF micro/nano positioning stage with high out-of-plane payload capacity. <i>Robotics and Computer-Integrated Manufacturing</i> , <b>2019</b> , 56, 95-105	9.2	22
80	A novel multi-probe method for separating spindle radial error from artifact roundness error. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2017</b> , 93, 623-634	3.2	21
79	Grasping force hysteresis compensation of a piezoelectric-actuated wire clamp with a modified inverse Prandtl-Ishlinskii model. <i>Review of Scientific Instruments</i> , <b>2017</b> , 88, 115101	1.7	20
78	Hierarchical error model to estimate motion error of linear motion bearing table. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2017</b> , 93, 1915-1927	3.2	20
77	Conceptual Design and Dimensional Synthesis of a Reconfigurable Hybrid Robot. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , <b>2005</b> , 127, 647-653	3.3	18
76	A new top-down design method for the stiffness of precision machine tools. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2016</b> , 83, 1887-1904	3.2	17
75	Effects of geometrical errors of guideways on the repeatability of positioning of linear axes of machine tools. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2018</b> , 98, 2319-2333	3.2	17
74	Investigation of Effects of Acid, Alkali, and Salt Solutions on Fluorinated Superhydrophobic Surfaces. <i>Langmuir</i> , <b>2019</b> , 35, 17027-17036	4	17
73	Machining forces prediction for peripheral milling of low-rigidity component with curved geometry. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2013</b> , 64, 1599-1610	3.2	16
72	Modeling and analyses of helical milling process. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2017</b> , 90, 1003-1022	3.2	16
71	Dynamic modeling and control of a novel XY positioning stage for semiconductor packaging. <i>Transactions of the Institute of Measurement and Control</i> , <b>2015</b> , 37, 177-189	1.8	16
70	A CAD/CAE-integrated structural design framework for machine tools. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2017</b> , 91, 545-568	3.2	15
69	Surface roughness modeling in micro end-milling. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2018</b> , 95, 1655-1664	3.2	15
68	A Contrastive Investigation on the Anticorrosive Performance of Stearic Acid and Fluoroalkylsilane-Modified Superhydrophobic Surface in Salt, Alkali, and Acid Solution. <i>Langmuir</i> , <b>2020</b> , 36, 10279-10292	4	13
67	Design of a XYZ scanner for home-made high-speed atomic force microscopy. <i>Microsystem Technologies</i> , <b>2018</b> , 24, 3123-3132	1.7	11
66	Design, modelling and characterization of a 2-DOF precision positioning platform. <i>Transactions of the Institute of Measurement and Control</i> , <b>2015</b> , 37, 396-405	1.8	11
65	Chatter detection based on wavelet coherence functions in micro-end-milling processes. <i>Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture</i> , <b>2019</b> , 233, 1934-1945	2.4	11
64	A Two-Finger Soft-Robotic Gripper With Enveloping and Pinching Grasping Modes. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2020</b> , 1-1	5.5	10

63	Low-cost and fast fabrication of the ultrasonic embossing on polyethylene terephthalate (PET) films using laser processed molds. <i>Microsystem Technologies</i> , <b>2017</b> , 23, 5653-5668	1.7	10
62	Modeling and tracking control of a novel XY $\bar{z}$ stage. <i>Microsystem Technologies</i> , <b>2017</b> , 23, 3575-3588	1.7	9
61	Modeling and Analysis of Soft Pneumatic Network Bending Actuators. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2021</b> , 26, 2195-2203	5.5	9
60	Simulation and analysis for accuracy predication and adjustment for machine tool assembly process. <i>Advances in Mechanical Engineering</i> , <b>2017</b> , 9, 168781401773447	1.2	8
59	Thermal simulation modeling of a hydrostatic machine feed platform. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2015</b> , 79, 1581-1595	3.2	7
58	Influence of external heat sources on volumetric thermal errors of precision machine tools. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2018</b> , 99, 475-495	3.2	7
57	Design of a flexure-based mechanism possessing low stiffness and constant force. <i>Review of Scientific Instruments</i> , <b>2019</b> , 90, 105005	1.7	7
56	Research on battery to ride comfort of electric bicycle based on multi-body dynamics theory <b>2009</b> ,		7
55	Laser-induced changes in titanium by femtosecond, picosecond and millisecond laser ablation. <i>Radiation Effects and Defects in Solids</i> , <b>2015</b> , 170, 528-540	0.9	6
54	An XYZ micromanipulator for precise positioning applications. <i>Journal of Micro-Bio Robotics</i> , <b>2020</b> , 16, 53-63	1.4	6
53	An investigation of surface roughness in micro-end-milling of metals. <i>Australian Journal of Mechanical Engineering</i> , <b>2017</b> , 15, 166-174	1	6
52	Probe system design for three dimensional micro/nano scratching machine. <i>Microsystem Technologies</i> , <b>2017</b> , 23, 2285-2295	1.7	6
51	Thermal error compensation for telescopic spindle of CNC machine tool based on SIEMENS 840D system. <i>Transactions of Tianjin University</i> , <b>2011</b> , 17, 340-343	2.9	6
50	Design and characteristic analysis of an aerostatic decoupling table for microelectronic packaging. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , <b>2018</b> , 232, 1079-1090	1.3	5
49	Modeling and control methodology for an XYZ micro manipulator. <i>Review of Scientific Instruments</i> , <b>2019</b> , 90, 105007	1.7	5
48	Design of a novel parallel monolithic 3-DOF compliant micromanipulator <b>2019</b> ,		5
47	Rate-dependent hysteresis modeling and compensation of piezo-driven flexure-based mechanism. <i>Transactions of Tianjin University</i> , <b>2012</b> , 18, 157-167	2.9	5
46	An Improved Algorithm for Calculating Friction Force and Torque in Involute Helical Gears. <i>Mathematical Problems in Engineering</i> , <b>2013</b> , 2013, 1-13	1.1	5

45	Dynamic modelling and simulation of electric bicycle ride comfort <b>2009</b> ,		5
44	Conceptual Design and Kinematic Performance Evaluation of a New Asymmetrical Parallel Robot <b>2007</b> ,		5
43	Experimental System Identification, Feed-Forward Control, and Hysteresis Compensation of a 2-DOF Mechanism. <i>International Journal of Intelligent Mechatronics and Robotics</i> , <b>2013</b> , 3, 1-21		5
42	Development of a novel 3-DOF suspension mechanism for multi-function stylus profiling systems. <i>International Journal of Precision Engineering and Manufacturing</i> , <b>2016</b> , 17, 1415-1423	1.7	5
41	Structure design and experimental investigation of a multi-function stylus profiling system for characterization of engineering surfaces at micro/nano scales. <i>Microsystem Technologies</i> , <b>2018</b> , 24, 2177-2187	1.7	4
40	An experimental study on the rotational accuracy of variable preload spindle-bearing system. <i>Advances in Mechanical Engineering</i> , <b>2018</b> , 10, 168781401877617	1.2	4
39	Dynamic analysis of an XY positioning table <b>2013</b> ,		4
38	Antlion Optimized Robust Control Approach for Micropositioning Trajectory Tracking Tasks. <i>IEEE Access</i> , <b>2020</b> , 8, 220889-220907	3.5	4
37	Design and Modeling of a Decoupled 2-DOF Stick-slip Positioning Stage <b>2019</b> ,		4
36	Design and Characteristics of a Novel Compliant Symmetric Microgripper Mechanism <b>2018</b> ,		4
35	A unified element stiffness matrix model for variable cross-section flexure hinges in compliant mechanisms for micro/nano positioning. <i>Microsystem Technologies</i> , <b>2019</b> , 25, 4257-4268	1.7	3
34	Dynamic milling stability of thin-walled component considering time variation of coupling deflection and dynamic characteristics of tool-workpiece system. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2018</b> , 94, 3005-3016	3.2	3
33	Active and intelligent control onto thermal behaviors of a motorized spindle unit. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2018</b> , 98, 3133-3146	3.2	3
32	Inverse Kinematics of a 7R 6-DOF Robot with Nonspherical Wrist Based on Transformation into the 6R Robot. <i>Mathematical Problems in Engineering</i> , <b>2017</b> , 2017, 1-12	1.1	3
31	Laser-induced hydrophobicity on Ti-6Al-4V surface <b>2015</b> ,		3
30	Stiffness estimation of the flexure-based five-bar micro-manipulator <b>2008</b> ,		3
29	Stiffness estimation of a parallel kinematic machine. <i>Science in China Series D: Earth Sciences</i> , <b>2001</b> , 44, 473-485		3
28	Acoustic absorption performance of polyacrylic composite latex. <i>Journal of Applied Polymer Science</i> , <b>1995</b> , 58, 565-569	2.9	3

27	Stiffness matching method for the ball screw feed drive system of machine tools. <i>Journal of Mechanical Science and Technology</i> , <b>2020</b> , 34, 2985-2995	1.6	3
26	A new method for measuring the rotational accuracy of rolling element bearings. <i>Review of Scientific Instruments</i> , <b>2016</b> , 87, 125102	1.7	3
25	A novel method and system for calibrating the spring constant of atomic force microscope cantilever based on electromagnetic actuation. <i>Review of Scientific Instruments</i> , <b>2018</b> , 89, 125119	1.7	3
24	Body diagonal error measurement and evaluation of a multi-axis machine tool using a multibeam laser interferometer. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2020</b> , 107, 4545-4559 <sup>3,2</sup>		2
23	Fabrication of polymer optical diffusers by buffer-assisted ultrasonic embossing <b>2015</b> ,		2
22	The Structure Design and Control of Precision Positioning System Driven by Rotary VCA <b>2007</b> ,		2
21	A Dual-Driven High Precision Rotary Platform Based on Stick-Slip Principle. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2021</b> , 1-12	5.5	2
20	Prediction of Dynamic Milling Stability considering Time Variation of Deflection and Dynamic Characteristics in Thin-Walled Component Milling Process. <i>Shock and Vibration</i> , <b>2016</b> , 2016, 1-14	1.1	2
19	Influences of linear and angular compensation on volumetric accuracy of precision machine tools <b>2018</b> ,		2
18	Fabrication of polymer electronic boards by ultrasonic embossing and welding. <i>Microsystem Technologies</i> , <b>2015</b> , 21, 365-369	1.7	1
17	Temperature detection based transient load/boundary condition calculations for spindle thermal simulation. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2020</b> , 108, 35-46	3.2	1
16	ANTI-WEAR PERFORMANCE OF POLISHED MICROCRYSTALLINE DIAMOND FILMS SLIDING AGAINST Si <sub>3</sub> N <sub>4</sub> UNDER WATER LUBRICATION. <i>Surface Review and Letters</i> , <b>2020</b> , 27, 2050008	1.1	1
15	Transverse vibration analyses of cantilevered boron nitride nanocones. <i>Micro and Nano Letters</i> , <b>2013</b> , 8, 899-902	0.9	1
14	The Control System Design of Thermal Experimental Platform for High-Speed Spindle Based PLC <b>2010</b> ,		1
13	Design and kinematics analysis of a 3-DOF precision positioning stage <b>2009</b> ,		1
12	Model-based dynamic characteristics investigation of ultrasonic transducers for MEMS packaging <b>2008</b> ,		1
11	Dynamic Design of High Speed Precision Positioning System <b>2007</b> ,		1
10	Design and Kinematics Analysis of Oblique Axis Non-spherical 3R Wrist <b>2007</b> ,		1

9	Active coolant control onto thermal behaviors of precision ball screw unit. <i>International Journal of Advanced Manufacturing Technology</i> ,1	3.2	1
8	Design of a novel asymmetrical piezoelectric actuated microgripper for micromanipulation <b>2016</b> ,		1
7	A Novel Soft-Robotic Gripper with Vertically Plane Contact of the Object <b>2019</b> ,		1
6	A Novel XY Nano Positioning Stage with a Three Stage Motion Amplification Mechanism <b>2019</b> ,		1
5	Smooth Displacement/Force Switching Control of a Piezoelectric Actuated Microgripper for Micro Manipulation <b>2019</b> ,		1
4	Thermal simulation speculation-based active coolant control onto spindle bearings. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2021</b> , 113, 337-350	3.2	1
3	Adhesion performance study of a novel microstructured stamp for micro-transfer printing. <i>Soft Matter</i> , <b>2021</b> , 17, 4989-4997	3.6	1
2	Dodecyl Mercaptan Functionalized Copper Mesh for Water Repellence and Oil-water Separation. <i>Journal of Bionic Engineering</i> , <b>2021</b> , 18, 887-899	2.7	0
1	Development and Application of Molded Interconnect Devices. <i>International Journal of Robotics Applications and Technologies</i> , <b>2014</b> , 2, 1-18		