

Tao Sun

List of Publications by Year in descending order

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79
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docs citations

79
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721
citing authors

#	ARTICLE	IF	CITATIONS
1	Kinematic calibration of a 3-DoF rotational parallel manipulator using laser tracker. <i>Robotics and Computer-Integrated Manufacturing</i> , 2016, 41, 78-91.	9.9	110
2	Stiffness analysis and experiment of a novel 5-DoF parallel kinematic machine considering gravitational effects. <i>International Journal of Machine Tools and Manufacture</i> , 2015, 95, 82-96.	13.4	106
3	Singular-Perturbation-Based Nonlinear Hybrid Control of Redundant Parallel Robot. <i>IEEE Transactions on Industrial Electronics</i> , 2018, 65, 3326-3336.	7.9	80
4	Stiffness and mass optimization of parallel kinematic machine. <i>Mechanism and Machine Theory</i> , 2018, 120, 73-88.	4.5	78
5	Optimum design of a novel redundantly actuated parallel manipulator with multiple actuation modes for high kinematic and dynamic performance. <i>Nonlinear Dynamics</i> , 2016, 83, 631-658.	5.2	75
6	Type synthesis of parallel mechanisms having 3T1R motion with variable rotational axis. <i>Mechanism and Machine Theory</i> , 2017, 109, 220-230.	4.5	73
7	A finite screw approach to type synthesis of three-DOF translational parallel mechanisms. <i>Mechanism and Machine Theory</i> , 2016, 104, 405-419.	4.5	69
8	A transformable wheel-legged mobile robot: Design, analysis and experiment. <i>Robotics and Autonomous Systems</i> , 2017, 98, 30-41.	5.1	66
9	Rigid-flexible coupling dynamic modeling and investigation of a redundantly actuated parallel manipulator with multiple actuation modes. <i>Journal of Sound and Vibration</i> , 2017, 403, 129-151.	3.9	65
10	Kinematic Calibration of Serial and Parallel Robots Based on Finite and Instantaneous Screw Theory. <i>IEEE Transactions on Robotics</i> , 2020, 36, 816-834.	10.3	65
11	A way of relating instantaneous and finite screws based on the screw triangle product. <i>Mechanism and Machine Theory</i> , 2017, 108, 75-82.	4.5	63
12	Kinematic calibration of a 5-DoF parallel kinematic machine. <i>Precision Engineering</i> , 2016, 45, 242-261.	3.4	57
13	Kinematic analysis and optimal design of a novel 1T3R parallel manipulator with an articulated travelling plate. <i>Robotics and Computer-Integrated Manufacturing</i> , 2014, 30, 508-516.	9.9	55
14	Stiffness analysis of a 2-DoF over-constrained RPM with an articulated traveling platform. <i>Mechanism and Machine Theory</i> , 2016, 96, 165-178.	4.5	54
15	Type synthesis of 1T2R parallel mechanisms with parasitic motions. <i>Mechanism and Machine Theory</i> , 2018, 128, 412-428.	4.5	54
16	Workspace Decomposition Based Dimensional Synthesis of a Novel Hybrid Reconfigurable Robot. <i>Journal of Mechanisms and Robotics</i> , 2010, 2, .	2.2	52
17	Optimal design of a parallel mechanism with three rotational degrees of freedom. <i>Robotics and Computer-Integrated Manufacturing</i> , 2012, 28, 500-508.	9.9	49
18	A Comparison Study on Motion/Force Transmissibility of Two Typical 3-DOF Parallel Manipulators: The Sprint Z3 and A3 Tool Heads. <i>International Journal of Advanced Robotic Systems</i> , 2014, 11, 5.	2.1	49

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19	Elastodynamic Optimization of a 5-DoF Parallel Kinematic Machine Considering Parameter Uncertainty. IEEE/ASME Transactions on Mechatronics, 2019, 24, 315-325.	5.8	47
20	A Novel Five-Degree-of-Freedom Parallel Manipulator and Its Kinematic Optimization. Journal of Mechanisms and Robotics, 2014, 6, .	2.2	38
21	Passive and active gravity compensation of horizontally-mounted 3-R P S parallel kinematic machine. Mechanism and Machine Theory, 2016, 104, 190-201.	4.5	37
22	An Approach to Formulate the Hessian Matrix for Dynamic Control of Parallel Robots. IEEE/ASME Transactions on Mechatronics, 2019, 24, 271-281.	5.8	37
23	Parameter sensitivity analysis of a 5-DoF parallel manipulator. Robotics and Computer-Integrated Manufacturing, 2017, 46, 1-14.	9.9	36
24	A simple and visually orientated approach for type synthesis of overconstrained 1T2R parallel mechanisms. Robotica, 2019, 37, 1161-1173.	1.9	35
25	An Approach to Determining the Unknown Twist/Wrench Subspaces of Lower Mobility Serial Kinematic Chains. Journal of Mechanisms and Robotics, 2015, 7, .	2.2	33
26	A geometric algebra approach to determine motion/constraint, mobility and singularity of parallel mechanism. Mechanism and Machine Theory, 2017, 116, 273-293.	4.5	33
27	Dimensional synthesis of a 3-DOF parallel manipulator based on dimensionally homogeneous Jacobian matrix. Science China Technological Sciences, 2010, 53, 168-174.	4.0	32
28	Stiffness modeling, analysis and evaluation of a 5 degree of freedom hybrid manipulator for friction stir welding. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2017, 231, 4441-4456.	2.1	32
29	Dynamic modeling and hierarchical compound control of a novel 2-DOF flexible parallel manipulator with multiple actuation modes. Mechanical Systems and Signal Processing, 2018, 103, 413-439.	8.0	32
30	Calibration for Precision Kinematic Control of an Articulated Serial Robot. IEEE Transactions on Industrial Electronics, 2021, 68, 6000-6009.	7.9	32
31	Force/Motion Transmissibility Analysis of Six Degree of Freedom Parallel Mechanisms. Journal of Mechanisms and Robotics, 2014, 6, .	2.2	30
32	Nonlinear dynamic modeling and performance analysis of a redundantly actuated parallel manipulator with multiple actuation modes based on FMD theory. Nonlinear Dynamics, 2017, 89, 391-428.	5.2	30
33	Multi-Objective Optimization of Parallel Tracking Mechanism Considering Parameter Uncertainty. Journal of Mechanisms and Robotics, 2018, 10, .	2.2	29
34	Topology Synthesis of a 1-Translational and 3-Rotational Parallel Manipulator With an Articulated Traveling Plate. Journal of Mechanisms and Robotics, 2015, 7, 0310151-310159.	2.2	28
35	A Finite and Instantaneous Screw Based Approach for Topology Design and Kinematic Analysis of 5-Axis Parallel Kinematic Machines. Chinese Journal of Mechanical Engineering (English Edition), 2018, 31, .	3.7	28
36	Elasto-dynamic analysis of a novel 2-DoF rotational parallel mechanism with an articulated travelling platform. Meccanica, 2016, 51, 1547-1557.	2.0	26

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37	Separation of Comprehensive Geometrical Errors of a 3-DOF Parallel Manipulator Based on Jacobian Matrix and Its Sensitivity Analysis with Monte-Carlo Method. Chinese Journal of Mechanical Engineering (English Edition), 2011, 24, 406.	3.7	24
38	Type synthesis of 2-DoF rotational parallel mechanisms actuating the inter-satellite link antenna. Chinese Journal of Aeronautics, 2016, 29, 1795-1805.	5.3	23
39	Kinematic Calibration of a 2-DoF Over-Constrained Parallel Mechanism Using Real Inverse Kinematics. IEEE Access, 2018, 6, 67752-67761.	4.2	22
40	Finite and Instantaneous Screw Theory in Robotic Mechanism. Springer Tracts in Mechanical Engineering, 2020, , .	0.3	22
41	Topology synthesis of three-legged spherical parallel manipulators employing Lie group theory. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2015, 229, 1873-1886.	2.1	21
42	Type Synthesis of Parallel Tracking Mechanism With Varied Axes by Modeling Its Finite Motions Algebraically. Journal of Mechanisms and Robotics, 2017, 9, .	2.2	21
43	Geometric accuracy design and error compensation of a one-translational and three-rotational parallel mechanism with articulated traveling plate. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2018, 232, 2083-2097.	2.4	15
44	Mobility analysis and kinematic synthesis of a novel 4-DoF parallel manipulator. Robotica, 2016, 34, 1010-1025.	1.9	14
45	An analytical approach to determine motions/constraints of serial kinematic chains based on Clifford algebra. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2017, 231, 1324-1338.	2.1	13
46	Visual tactile object recognition of a soft gripper based on faster Region-based Convolutional Neural Network and machining learning algorithm. International Journal of Advanced Robotic Systems, 2020, 17, 172988142094872.	2.1	13
47	An Error Identification and Compensation Method of a 6-DoF Parallel Kinematic Machine. IEEE Access, 2020, 8, 119038-119047.	4.2	11
48	Dimensional parameters and structural topology integrated design method of a planar 5R parallel machining robot. Mechanism and Machine Theory, 2022, 175, 104964.	4.5	10
49	Kineto-static analysis of a novel high-speed parallel manipulator with rigid-flexible coupled links. Journal of Central South University, 2011, 18, 593-599.	3.0	8
50	Dynamic identification of a tracking parallel mechanism. Mechanism and Machine Theory, 2021, 155, 104091.	4.5	8
51	A Survey of Mathematical Tools in Topology and Performance Integrated Modeling and Design of Robotic Mechanism. Chinese Journal of Mechanical Engineering (English Edition), 2020, 33, .	3.7	5
52	Quantitative initial safety range of early passive rehabilitation after ankle fracture surgery. Injury, 2022, 53, 2281-2286.	1.7	3
53	Comparison between a 4-DOF hybrid module and Tricept module focusing on inverse kinematics and stiffness. , 2009, , .		2
54	Kinematic and Singularity Analysis of a Novel 4-DOF Parallel Manipulator. Applied Mechanics and Materials, 2011, 101-102, 685-688.	0.2	2

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55	QrPara: A New Reconfigurable Parallel Manipulator with 5-Axis Capability. Mechanisms and Machine Science, 2016, , 247-258.	0.5	2
56	Design, modeling and analysis of a novel self-crossing mechanism. Mechanism and Machine Theory, 2021, 162, 104358.	4.5	2
57	CGA Approach to Kinematic Analysis of a 2-DoF Parallel Positioning Mechanism. , 2016, , .		1
58	Effect of surface modification on the microstructure and sintering characteristics of tungsten nanopowders prepared by a wet chemical method. Philosophical Magazine Letters, 2021, 101, 253-263.	1.2	1
59	Kinematic Calibration of Robotic Mechanism. Springer Tracts in Mechanical Engineering, 2020, , 355-395.	0.3	1
60	Dimensional Synthesis of a Planar Parallel Manipulator for Pick-and-Place Operations Based on Rigid-Body Dynamics. Lecture Notes in Computer Science, 2012, , 261-270.	1.3	1
61	Accuracy Synthesis of a 3-PRS Parallel Manipulator Based on Genetic Algorithms. Advanced Materials Research, 2010, 97-101, 3432-3435.	0.3	0
62	Configuration Evolution Method of Stewart Platform Based on Finite Screw Theory. Mechanisms and Machine Science, 2019, , 2681-2690.	0.5	0
63	Synthesis, Analysis, and Design of Typical Robotic Mechanism. Springer Tracts in Mechanical Engineering, 2020, , 319-354.	0.3	0
64	Type Synthesis of Planar Parallel Mechanism Incorporating Actuated Limb with Zero/One Constraint with Set Conception. , 2012, , 177-188.		0
65	Stiffness Modeling of Parallel Manipulator with Articulated Traveling Plate. Lecture Notes in Electrical Engineering, 2017, , 1043-1055.	0.4	0
66	Parameterized Inverse Kinematics of Parallel Mechanism Based on CGA. Mechanisms and Machine Science, 2019, , 340-346.	0.5	0
67	Type Synthesis of Mechanisms with Invariable Rotation Axes. Springer Tracts in Mechanical Engineering, 2020, , 151-182.	0.3	0
68	Type Synthesis Method and Procedure of Robotic Mechanism. Springer Tracts in Mechanical Engineering, 2020, , 111-149.	0.3	0
69	Type Synthesis of Mechanism with Variable Rotation Axes. Springer Tracts in Mechanical Engineering, 2020, , 183-208.	0.3	0
70	Static Modeling and Analysis of Robotic Mechanism. Springer Tracts in Mechanical Engineering, 2020, , 243-262.	0.3	0
71	Finite and Instantaneous Screw Theory. Springer Tracts in Mechanical Engineering, 2020, , 25-65.	0.3	0
72	Dynamic Modeling and Analysis of Robotic Mechanism. Springer Tracts in Mechanical Engineering, 2020, , 263-287.	0.3	0

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73	Topology and Performance Modeling of Robotic Mechanism. Springer Tracts in Mechanical Engineering, 2020, , 67-110.	0.3	0
74	Reliability of Lower Limb Alignment Measures Based on Human Body Surface Points. Journal of Medical and Biological Engineering, 0, , 1.	1.8	0