Xilun Ding

List of Publications by Year
in descending order

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100	1,547	304368	395343
papers	citations	22 h-index	33 g-index

101	101	101	1127
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Dynamic Discrete Pigeon-Inspired Optimization for Multi-UAV Cooperative Search-Attack Mission Planning. IEEE Transactions on Aerospace and Electronic Systems, 2021, 57, 706-720.	2.6	84
2	Mobility and Geometric Analysis of the Hoberman Switch-Pitch Ball and Its Variant. Journal of Mechanisms and Robotics, 2010, 2, .	1.5	77
3	A Global Tracking Controller for Underactuated Aerial Vehicles: Design, Analysis, and Experimental Tests on Quadrotor. IEEE/ASME Transactions on Mechatronics, 2016, 21, 2499-2511.	3.7	76
4	A Novel Method of Motion Planning for an Anthropomorphic Arm Based on Movement Primitives. IEEE/ASME Transactions on Mechatronics, 2013, 18, 624-636.	3.7	60
5	Development of an EMG-Controlled Knee Exoskeleton to Assist Home Rehabilitation in a Game Context. Frontiers in Neurorobotics, 2019, 13, 67.	1.6	51
6	Motion Planning and Stabilization Control of a Multipropeller Multifunction Aerial Robot. IEEE/ASME Transactions on Mechatronics, 2013, 18, 645-656.	3.7	45
7	A Quadrotor Test Bench for Six Degree of Freedom Flight. Journal of Intelligent and Robotic Systems: Theory and Applications, 2012, 68, 323-338.	2.0	41
8	The progress of extraterrestrial regolith-sampling robots. Nature Astronomy, 2019, 3, 487-497.	4.2	39
9	Approximation of Cylindrical Surfaces With Deployable Bennett Networks. Journal of Mechanisms and Robotics, 2017, 9, .	1.5	37
10	A review of structures, verification, and calibration technologies of space robotic systems for on-orbit servicing. Science China Technological Sciences, 2021, 64, 462-480.	2.0	37
11	Tensegrity metamaterials for soft robotics. Science Robotics, 2020, 5, .	9.9	34
12	Design of a biologically inspired lower limb exoskeleton for human gait rehabilitation. Review of Scientific Instruments, 2016, 87, 104301.	0.6	32
13	Study on hexapod robot manipulation using legs. Robotica, 2016, 34, 468-481.	1.3	30
14	Drilling forces model for lunar regolith exploration and experimental validation. Acta Astronautica, 2017, 131, 190-203.	1.7	30
15	Design, Modeling, Control, and Experiments for a Fish-Robot-Based IoT Platform to Enable Smart Ocean. IEEE Internet of Things Journal, 2021, 8, 9317-9329.	5.5	30
16	Review on planetary regolith-sampling technology. Progress in Aerospace Sciences, 2021, 127, 100760.	6.3	30
17	Study on the Behavior of Solar Array Deployment with Root Hinge Drive Assembly. Chinese Journal of Aeronautics, 2012, 25, 276-284.	2.8	29
18	Design and analysis of a metamorphic mechanism cell for multistage orderly deployable/retractable mechanism. Mechanism and Machine Theory, 2017, 111, 85-98.	2.7	29

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19	Motion planning and implementation for the self-recovery of an overturned multi-legged robot. Robotica, 2017, 35, 1107-1120.	1.3	29
20	Drilling, sampling, and sample-handling system for China's asteroid exploration mission. Acta Astronautica, 2017, 137, 192-204.	1.7	29
21	A Screw Theory of Timoshenko Beams. Journal of Applied Mechanics, Transactions ASME, 2009, 76, .	1.1	25
22	Design and experimental performance verification of a thermal property test-bed for lunar drilling exploration. Chinese Journal of Aeronautics, 2016, 29, 1455-1468.	2.8	25
23	Chinaâ€™s ambitions and challenges for asteroidâ€“comet exploration. Nature Astronomy, 2021, 5, 730-731.	4.2	23
24	Design, Modeling, Control, and Experiments for Multiple AUVs Formation. IEEE Transactions on Automation Science and Engineering, 2022, 19, 2776-2787.	3.4	22
25	Wheel-legged hexapod robots: a multifunctional mobile manipulating platform. Chinese Journal of Mechanical Engineering (English Edition), 2017, 30, 3-6.	1.9	21
26	Design optimization and experimental study of a novel mechanism for a hover-able bionic flapping-wing micro air vehicle. Bioinspiration and Biomimetics, 2020, 16, 026005.	1.5	20
27	The technology of lunar regolith environment construction on Earth. Acta Astronautica, 2021, 178, 216-232.	1.7	19
28	Optimization of the Rotational Asymmetric Parallel Mechanism for Hip Rehabilitation With Force Transmission Factors. Journal of Mechanisms and Robotics, 2020, 12, .	1.5	19
29	Design of a type of deployable/retractable mechanism using friction self-locking joint units. Mechanism and Machine Theory, 2015, 92, 273-288.	2.7	18
30	Fast visionâ€based autonomous detection of moving cooperative target for unmanned aerial vehicle landing. Journal of Field Robotics, 2019, 36, 34-48.	3.2	18
31	Optimizing accuracy of a parabolic cylindrical deployable antenna mechanism based on stiffness analysis. Chinese Journal of Aeronautics, 2020, 33, 1562-1572.	2.8	18
32	A Review of Research on the Mechanical Design of Hoverable Flapping Wing Micro-Air Vehicles. Journal of Bionic Engineering, 2021, 18, 1235-1254.	2.7	18
33	Design and Testing of a Highly Reconfigurable Fixture With Lockable Robotic Arms. Journal of Mechanical Design, Transactions of the ASME, 2016, 138, .	1.7	17
34	Novel Deployable Mechanisms With Decoupled Degrees-of-Freedom. Journal of Mechanisms and Robotics, 2016, 8, .	1.5	17
35	Geometric Constraint of an Evolved Deployable Ball Mechanism. Journal of Advanced Mechanical Design, Systems and Manufacturing, 2011, 5, 302-314.	0.3	16
36	A Set of Basic Movement Primitives for Anthropomorphic Arms. , 2013, , .		16

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37	Dynamic modeling and control for aerial arm-operating of a multi-propeller multifunction aerial robot. Advanced Robotics, 2017, 31, 665-679.	1.1	15
38	Applications of bioinspired approaches and challenges in medical devices. Bio-Design and Manufacturing, 2021, 4, 146-148.	3.9	15
39	A thermal model for predicting the drilling temperature in deep lunar regolith exploration. Applied Thermal Engineering, 2018, 128, 911-925.	3.0	14
40	Trajectory linearization tracking control for dynamics of a multi-propeller and multifunction aerial robot - MMAR. , 2011, , .		13
41	Experimental technique for the measurement of temperature generated in deep lunar regolith drilling. International Journal of Heat and Mass Transfer, 2019, 129, 671-680.	2.5	12
42	Cantilever-based differential pressure sensor with a bio-inspired bristled configuration. Bioinspiration and Biomimetics, 2021, 16, 055011.	1.5	12
43	On hybrid modeling and control of a multi-propeller multifunction aerial robot with flying-walking locomotion. Autonomous Robots, 2015, 38, 225-242.	3.2	11
44	Dynamics Modeling and Trajectory Tracking Control of a Quadrotor Unmanned Aerial Vehicle. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2017, 139, .	0.9	11
45	Thermal vacuum regolith environment simulator for Chinaâ€™s deep lunar drilling exploration. Applied Thermal Engineering, 2018, 144, 779-787.	3.0	11
46	Robotic drilling tests in simulated lunar regolith environment. Journal of Field Robotics, 2021, 38, 1011-1035.	3.2	11
47	Review on Bioinspired Planetary Regolith-Burrowing Robots. Space Science Reviews, 2021, 217, 1.	3.7	11
48	A total torque index for dynamic performance evaluation of a radial symmetric six-legged robot. Frontiers of Mechanical Engineering, 2012, 7, 219-230.	2.5	10
49	Human-Like Motion Planning for a 4-DOF Anthropomorphic Arm Based on Armâ€™s Inherent Characteristics. International Journal of Humanoid Robotics, 2017, 14, 1750005.	0.6	10
50	Knee exoskeleton enhanced with artificial intelligence to provide assistance-as-needed. Review of Scientific Instruments, 2019, 90, 094101.	0.6	10
51	A Network of Type III Bricard Linkages. Journal of Mechanisms and Robotics, 2019, 11, .	1.5	10
52	Terrain Adaptability Mechanism of Large Ruminantsâ€™ Feet on the Kinematics View. Applied Bionics and Biomechanics, 2015, 2015, 1-9.	0.5	9
53	Investigation of feet functions of large ruminants with a decoupled model of equivalent mechanism. Biology Open, 2017, 6, 407-414.	0.6	9
54	Recent development on innovation design of reconfigurable mechanisms in China. Frontiers of Mechanical Engineering, 2019, 14, 15-20.	2.5	9

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55	Parametric generation of three-dimensional gait for robot-assisted rehabilitation. Biology Open, 2020, 9, .	0.6	9
56	Design and analysis of a cable-winding device driving large deployable mechanisms in astrophysics missions. Acta Astronautica, 2020, 169, 124-137.	1.7	9
57	Roller-Skating of Mammalian Quadrupedal Robot With Passive Wheels Inspired by Human. IEEE/ASME Transactions on Mechatronics, 2021, 26, 1624-1634.	3.7	9
58	Manned Aircraft and Unmanned Aerial Vehicle Heterogeneous Formation Flight Control via Heterogeneous Pigeon Flock Consistency. Unmanned Systems, 2021, 09, 227-236.	2.7	9
59	Dynamic Modeling and Locomotion Control for Quadruped Robots Based on Center of Inertia on SE(3). Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2016, 138, .	0.9	8
60	Modular design method for filament winding process equipment based on GGA and NSGA-II. International Journal of Advanced Manufacturing Technology, 2018, 94, 2057-2076.	1.5	8
61	3Dâ€Laminated Graphene with Combined Laser Irradiation and Resin Infiltration toward Designable Macrostructure and Multifunction. Advanced Science, 2022, 9, e2200362.	5.6	7
62	Safe Landing Analysis of a Quadrotor Aircraft With Two Legs. Journal of Intelligent and Robotic Systems: Theory and Applications, 2014, 76, 527-537.	2.0	6
63	Analysis of a mechanism with redundant drive for antenna pointing. Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 2017, 231, 229-239.	0.7	6
64	Modeling and control of a hexacopter with a passive manipulator for aerial manipulation. Complex & Intelligent Systems, 2021, 7, 3051-3065.	4.0	6
65	Dynamic analysis, optimal planning and composite control for aerial arm-operating with a multi-propeller multifunction aerial robot. , 2012, , .		5
66	A novel movement-based operation method for dual-arm rescue construction machinery. Robotica, 2016, 34, 1090-1112.	1.3	5
67	Fusing Hand Postures and Speech Recognition for Tasks Performed by an Integrated Legâ€“Arm Hexapod Robot. Applied Sciences (Switzerland), 2020, 10, 6995.	1.3	5
68	Design, Construction, and Control of Curves and Surfaces via Deployable Mechanisms. Journal of Mechanisms and Robotics, 2019, 11, .	1.5	5
69	A Reconfigurable Modular Fixture With Redundant Actuation. Journal of Mechanisms and Robotics, 2022, 14, .	1.5	5
70	Laser-Induced Graphene Papers with Tunable Microstructures as Antibacterial Agents. ACS Applied Nano Materials, 2022, 5, 6841-6851.	2.4	5
71	A fault tolerant control strategy for quadrotor UAVs based on trajectory linearization approach. , 2012, , .		4
72	A Global Obstacle-Avoidance Map for Anthropomorphic Arms. International Journal of Advanced Robotic Systems, 2014, 11, 117.	1.3	4

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73	Influence of lunar regolith compressibility on sampling performance of thick wall spiral drills. Chinese Journal of Aeronautics, 2023, 36, 350-362.	2.8	4
74	Anti-Disturbance Sliding Mode Control of a Novel Variable Stiffness Actuator for the Rehabilitation of Neurologically Disabled Patients. Frontiers in Robotics and AI, 2022, 9, 864684.	2.0	4
75	Kinematics of the center of mass for robotic mechanisms based on lie group theory. Mechanism and Machine Theory, 2022, 175, 104933.	2.7	4
76	Design and realization of ground control station for multi-propeller multifunction aerial robot. , 2014, , .		3
77	A Net-Launching Mechanism for UAV to Capture Aerial Moving Target. , 2018, , .		3
78	A Planar Mechanism with Variable Topology for Automated Fiber Placement. , 2018, , .		3
79	Design and Analysis of a Flying-crawling Spherical Robot for Multi-mode Movement. , 2019, , .		3
80	Approach to hand posture recognition based on hand shape features for humanâ€“robot interaction. Complex & Intelligent Systems, 2022, 8, 2825-2842.	4.0	3
81	Joint-Angle Adaptive Coordination Control of a Serial-Parallel Lower Limb Rehabilitation Exoskeleton. IEEE Transactions on Medical Robotics and Bionics, 2022, 4, 775-784.	2.1	3
82	A motion planning method for an anthropomorphic arm based on movement primitives of human arm triangle. , 2012, , .		2
83	A unified language for anthropomorphic arm motion. , 2013, , .		2
84	Consistent Point-to-Point Motion Planning of Anthropomorphic Arms. International Journal of Humanoid Robotics, 2021, 18, .	0.6	2
85	A Novel Analytical Inverse Kinematics Method for SSRMS-Type Space Manipulators Based on the POE Formula and the Paden-Kahan Subproblem. International Journal of Aerospace Engineering, 2021, 2021, 1-13.	0.5	2
86	Different manipulation mode analysis of a radial symmetrical hexapod robot with legâ€”arm integration. Frontiers of Mechanical Engineering, 2022, 17, 1.	2.5	2
87	Guest editorial on reconfigurable and deployable mechanisms. Advances in Mechanical Engineering, 2015, 7, 168781401559388.	0.8	1
88	Optimization Design of Flapping Mechanism of Micro Air Vehicle Based on Matlab and Adams. , 2018, , .		1
89	Design and Analysis of a Metamorphic Quadruped Robot. , 2018, , .		1
90	A Natural Language Processing Method of Chinese Instruction for Multi-legged Manipulating Robot. , 2018, , .		1

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91	Mechanism Design of a Multi-functional Drilling Robot to Sample Seafloor Sediments in Marine Investigation. , 2021, , .		1
92	Mechanism Design of an Extraterrestrial Regolith-boring Robot. , 2021, , .		1
93	Multi-Loop Rover: A Kind of Modular Rolling Robot Constructed by Multi-Loop Linkages. Journal of Mechanisms and Robotics, 2021, 13, .	1.5	1
94	Collaborative Robots Sim: A Simulation Environment Of Air-Ground Robots With Strong Physical Interactivity. , 2021, , .		1
95	Revealing the mechanism of high loading capacity of the horse in leg structure. Science Bulletin, 2014, 59, 2625-2637.	1.7	0
96	A new designed quadruped robot with elastic joints. , 2014, , .		0
97	Design of Small-Scale Filament Winding & Placement Machine. , 2018, , .		0
98	A Passive Connection Mechanism for On-orbit Assembly of Large-Scale Antenna Structure. , 2018, , .		0
99	Novel Motor-free Passive Walk-assisting Knee Exoskeleton. , 2019, , .		0
100	Virtual Multi-Interaction for Rehabilitation Robotics. , 2020, , .		0