Xilun Ding

List of Publications by Year
in descending order

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100 papers	1,547 citations	304368 22 h-index	395343 33 g-index
101 all docs	101 docs citations	101 times ranked	1127 citing authors

#	Article	IF	Citations
1	Influence of lunar regolith compressibility on sampling performance of thick wall spiral drills. Chinese Journal of Aeronautics, 2023, 36, 350-362.	2.8	4
2	Design, Modeling, Control, and Experiments for Multiple AUVs Formation. IEEE Transactions on Automation Science and Engineering, 2022, 19, 2776-2787.	3.4	22
3	Approach to hand posture recognition based on hand shape features for humanâ€“robot interaction. Complex & Intelligent Systems, 2022, 8, 2825-2842.	4.0	3
4	Different manipulation mode analysis of a radial symmetrical hexapod robot with legâ€”arm integration. Frontiers of Mechanical Engineering, 2022, 17, 1.	2.5	2
5	3Dâ€Laminated Graphene with Combined Laser Irradiation and Resin Infiltration toward Designable Macrostructure and Multifunction. Advanced Science, 2022, 9, e2200362.	5.6	7
6	A Reconfigurable Modular Fixture With Redundant Actuation. Journal of Mechanisms and Robotics, 2022, 14, .	1.5	5
7	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
8	Laser-Induced Graphene Papers with Tunable Microstructures as Antibacterial Agents. ACS Applied Nano Materials, 2022, 5, 6841-6851.	2.4	5
9	Kinematics of the center of mass for robotic mechanisms based on lie group theory. Mechanism and Machine Theory, 2022, 175, 104933.	2.7	4
10	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
11	Consistent Point-to-Point Motion Planning of Anthropomorphic Arms. International Journal of Humanoid Robotics, 2021, 18, .	0.6	2
12	The technology of lunar regolith environment construction on Earth. Acta Astronautica, 2021, 178, 216-232.	1.7	19
13	Applications of bioinspired approaches and challenges in medical devices. Bio-Design and Manufacturing, 2021, 4, 146-148.	3.9	15
14	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
15	Roller-Skating of Mammalian Quadrupedal Robot With Passive Wheels Inspired by Human. IEEE/ASME Transactions on Mechatronics, 2021, 26, 1624-1634.	3.7	9
16	Manned Aircraft and Unmanned Aerial Vehicle Heterogeneous Formation Flight Control via Heterogeneous Pigeon Flock Consistency. Unmanned Systems, 2021, 09, 227-236.	2.7	9
17	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
18	Robotic drilling tests in simulated lunar regolith environment. Journal of Field Robotics, 2021, 38, 1011-1035.	3.2	11

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19	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
20	Chinaâ€™s ambitions and challenges for asteroidâ€“comet exploration. Nature Astronomy, 2021, 5, 730-731.	4.2	23
21	Mechanism Design of a Multi-functional Drilling Robot to Sample Seafloor Sediments in Marine Investigation. , 2021, , .		1
22	Mechanism Design of an Extraterrestrial Regolith-boring Robot. , 2021, , .		1
23	Modeling and control of a hexacopter with a passive manipulator for aerial manipulation. Complex & Intelligent Systems, 2021, 7, 3051-3065.	4.0	6
24	Cantilever-based differential pressure sensor with a bio-inspired bristled configuration. Bioinspiration and Biomimetics, 2021, 16, 055011.	1.5	12
25	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
26	Review on planetary regolith-sampling technology. Progress in Aerospace Sciences, 2021, 127, 100760.	6.3	30
27	Multi-Loop Rover: A Kind of Modular Rolling Robot Constructed by Multi-Loop Linkages. Journal of Mechanisms and Robotics, 2021, 13, .	1.5	1
28	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
29	Review on Bioinspired Planetary Regolith-Burrowing Robots. Space Science Reviews, 2021, 217, 1.	3.7	11
30	Collaborative Robots Sim: A Simulation Environment Of Air-Ground Robots With Strong Physical Interactivity. , 2021, , .		1
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	Virtual Multi-Interaction for Rehabilitation Robotics. , 2020, , .		0
33	Tensegrity metamaterials for soft robotics. Science Robotics, 2020, 5, .	9.9	34
34	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
35	Parametric generation of three-dimensional gait for robot-assisted rehabilitation. Biology Open, 2020, 9, .	0.6	9
36	Design and analysis of a cable-winding device driving large deployable mechanisms in astrophysics missions. Acta Astronautica, 2020, 169, 124-137.	1.7	9

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37	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
38	Optimization of the Rotational Asymmetric Parallel Mechanism for Hip Rehabilitation With Force Transmission Factors. Journal of Mechanisms and Robotics, 2020, 12, .	1.5	19
39	Recent development on innovation design of reconfigurable mechanisms in China. Frontiers of Mechanical Engineering, 2019, 14, 15-20.	2.5	9
40	Knee exoskeleton enhanced with artificial intelligence to provide assistance-as-needed. Review of Scientific Instruments, 2019, 90, 094101.	0.6	10
41	Development of an EMG-Controlled Knee Exoskeleton to Assist Home Rehabilitation in a Game Context. Frontiers in Neurorobotics, 2019, 13, 67.	1.6	51
42	The progress of extraterrestrial regolith-sampling robots. Nature Astronomy, 2019, 3, 487-497.	4.2	39
43	Novel Motor-free Passive Walk-assisting Knee Exoskeleton. , 2019, , .		0
44	Design and Analysis of a Flying-crawling Spherical Robot for Multi-mode Movement. , 2019, , .		3
45	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
46	A Network of Type III Bricard Linkages. Journal of Mechanisms and Robotics, 2019, 11, .	1.5	10
47	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
48	Design, Construction, and Control of Curves and Surfaces via Deployable Mechanisms. Journal of Mechanisms and Robotics, 2019, 11, .	1.5	5
49	A thermal model for predicting the drilling temperature in deep lunar regolith exploration. Applied Thermal Engineering, 2018, 128, 911-925.	3.0	14
50	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
51	Design of Small-Scale Filament Winding & Placement Machine. , 2018, , .		0
52	A Passive Connection Mechanism for On-orbit Assembly of Large-Scale Antenna Structure. , 2018, , .		0
53	Optimization Design of Flapping Mechanism of Micro Air Vehicle Based on Matlab and Adams. , 2018, , .		1
54	A Net-Launching Mechanism for UAV to Capture Aerial Moving Target. , 2018, , .		3

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55	Design and Analysis of a Metamorphic Quadruped Robot. , 2018, , .		1
56	A Planar Mechanism with Variable Topology for Automated Fiber Placement. , 2018, , .		3
57	Thermal vacuum regolith environment simulator for Chinaâ€™s deep lunar drilling exploration. Applied Thermal Engineering, 2018, 144, 779-787.	3.0	11
58	A Natural Language Processing Method of Chinese Instruction for Multi-legged Manipulating Robot. , 2018, , .		1
59	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
60	Approximation of Cylindrical Surfaces With Deployable Bennett Networks. Journal of Mechanisms and Robotics, 2017, 9, .	1.5	37
61	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
62	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
63	Dynamic modeling and control for aerial arm-operating of a multi-propeller multifunction aerial robot. Advanced Robotics, 2017, 31, 665-679.	1.1	15
64	Motion planning and implementation for the self-recovery of an overturned multi-legged robot. Robotica, 2017, 35, 1107-1120.	1.3	29
65	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
66	Drilling, sampling, and sample-handling system for China's asteroid exploration mission. Acta Astronautica, 2017, 137, 192-204.	1.7	29
67	Drilling forces model for lunar regolith exploration and experimental validation. Acta Astronautica, 2017, 131, 190-203.	1.7	30
68	Wheel-legged hexapod robots: a multifunctional mobile manipulating platform. Chinese Journal of Mechanical Engineering (English Edition), 2017, 30, 3-6.	1.9	21
69	Investigation of feet functions of large ruminants with a decoupled model of equivalent mechanism. Biology Open, 2017, 6, 407-414.	0.6	9
70	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
71	Design of a biologically inspired lower limb exoskeleton for human gait rehabilitation. Review of Scientific Instruments, 2016, 87, 104301.	0.6	32
72	A novel movement-based operation method for dual-arm rescue construction machinery. Robotica, 2016, 34, 1090-1112.	1.3	5

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73	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
74	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
75	Study on hexapod robot manipulation using legs. Robotica, 2016, 34, 468-481.	1.3	30
76	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
77	Novel Deployable Mechanisms With Decoupled Degrees-of-Freedom. Journal of Mechanisms and Robotics, 2016, 8, .	1.5	17
78	Terrain Adaptability Mechanism of Large Ruminantsâ€™ Feet on the Kinematics View. Applied Bionics and Biomechanics, 2015, 2015, 1-9.	0.5	9
79	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
80	Guest editorial on reconfigurable and deployable mechanisms. Advances in Mechanical Engineering, 2015, 7, 168781401559388.	0.8	1
81	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
82	Design and realization of ground control station for multi-propeller multifunction aerial robot. , 2014, , .		3
83	Revealing the mechanism of high loading capacity of the horse in leg structure. Science Bulletin, 2014, 59, 2625-2637.	1.7	0
84	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
85	A Global Obstacle-Avoidance Map for Anthropomorphic Arms. International Journal of Advanced Robotic Systems, 2014, 11, 117.	1.3	4
86	A new designed quadruped robot with elastic joints. , 2014, , .		0
87	A unified language for anthropomorphic arm motion. , 2013, , .		2
88	A Set of Basic Movement Primitives for Anthropomorphic Arms. , 2013, , .		16
89	Motion Planning and Stabilization Control of a Multipropeller Multifunction Aerial Robot. IEEE/ASME Transactions on Mechatronics, 2013, 18, 645-656.	3.7	45
90	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

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91	A motion planning method for an anthropomorphic arm based on movement primitives of human arm triangle. , 2012, , .		2
92	A fault tolerant control strategy for quadrotor UAVs based on trajectory linearization approach. , 2012, , .		4
93	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
94	Dynamic analysis, optimal planning and composite control for aerial arm-operating with a multi-propeller multifunction aerial robot. , 2012, , .		5
95	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
96	Study on the Behavior of Solar Array Deployment with Root Hinge Drive Assembly. Chinese Journal of Aeronautics, 2012, 25, 276-284.	2.8	29
97	Trajectory linearization tracking control for dynamics of a multi-propeller and multifunction aerial robot - MMAR. , 2011, , .		13
98	Geometric Constraint of an Evolved Deployable Ball Mechanism. Journal of Advanced Mechanical Design, Systems and Manufacturing, 2011, 5, 302-314.	0.3	16
99	Mobility and Geometric Analysis of the Hoberman Switch-Pitch Ball and Its Variant. Journal of Mechanisms and Robotics, 2010, 2, .	1.5	77
100	A Screw Theory of Timoshenko Beams. Journal of Applied Mechanics, Transactions ASME, 2009, 76, .	1.1	25