Jin-Guo Liu

List of Publications by Year
in descending order

153	2,422	218381	264894
papers	citations	26 h-index	42 g-index

157	157	157	1529
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A Symplectic Instantaneous Optimal Control for Robot Trajectory Tracking With Differential-Algebraic Equation Models. IEEE Transactions on Industrial Electronics, 2020, 67, 3819-3829.	5.2	97
2	Geometric constraint-based modeling and analysis of a novel continuum robot with Shape Memory Alloy initiated variable stiffness. International Journal of Robotics Research, 2020, 39, 1620-1634.	5.8	95
3	Dual-Hand Detection for Humanâ€“Robot Interaction by a Parallel Network Based on Hand Detection and Body Pose Estimation. IEEE Transactions on Industrial Electronics, 2019, 66, 9663-9672.	5.2	91
4	Nonlinear vibrations of fiber-reinforced composite cylindrical shells with bolt loosening boundary conditions. Journal of Sound and Vibration, 2021, 496, 115935.	2.1	80
5	Nonlinear vibration characteristics of fibre reinforced composite cylindrical shells in thermal environment. Mechanical Systems and Signal Processing, 2021, 156, 107665.	4.4	77
6	Robust real-time hand detection and localization for space humanâ€“robot interaction based on deep learning. Neurocomputing, 2020, 390, 198-206.	3.5	73
7	Review of in-space assembly technologies. Chinese Journal of Aeronautics, 2021, 34, 21-47.	2.8	70
8	Effective Capture of Nongraspable Objects for Space Robots Using Geometric Cage Pairs. IEEE/ASME Transactions on Mechatronics, 2020, 25, 95-107.	3.7	69
9	Review of snake robots in constrained environments. Robotics and Autonomous Systems, 2021, 141, 103785.	3.0	68
10	Nonlinear vibration analysis of fiber reinforced composite cylindrical shells with partial constrained layer damping treatment. Thin-Walled Structures, 2020, 157, 107000.	2.7	56
11	Dynamics and control of a parallel mechanism for active vibration isolation in space station. Nonlinear Dynamics, 2014, 76, 1737-1751.	2.7	55
12	Survey on research and development of reconfigurable modular robots. Advances in Mechanical Engineering, 2016, 8, 168781401665959.	0.8	51
13	Physical Humanâ€“Robot Collaboration: Robotic Systems, Learning Methods, Collaborative Strategies, Sensors, and Actuators. IEEE Transactions on Cybernetics, 2021, 51, 1888-1901.	6.2	50
14	Survey on research and development of on-orbit active debris removal methods. Science China Technological Sciences, 2020, 63, 2188-2210.	2.0	48
15	Adaptive robust decoupling control of multi-arm space robots using time-delay estimation technique. Nonlinear Dynamics, 2020, 100, 2449-2467.	2.7	48
16	Current research, key performances and future development of search and rescue robots. Frontiers of Mechanical Engineering in China, 2007, 2, 404-416.	0.4	47
17	A review of soft manipulator research, applications, and opportunities. Journal of Field Robotics, 2022, 39, 281-311.	3.2	46
18	Design and analysis of spring parallel variable stiffness actuator based on antagonistic principle. Mechanism and Machine Theory, 2019, 140, 44-58.	2.7	45

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19	Analysis of stairs-climbing ability for a tracked reconfigurable modular robot. , 0, , .		43
20	Finite-time leader-following output consensus for multi-agent systems via extended state observer. Automatica, 2021, 124, 109133.	3.0	41
21	AMOEBA-I: A Shape-Shifting Modular Robot for Urban Search and Rescue. Advanced Robotics, 2009, 23, 1057-1083.	1.1	39
22	Static Hand Gesture Recognition with Parallel CNNs for Space Human-Robot Interaction. Lecture Notes in Computer Science, 2017, , 462-473.	1.0	37
23	Effective motion planning strategy for space robot capturing targets under consideration of the berth position. Acta Astronautica, 2018, 148, 403-416.	1.7	36
24	A nonlinear analytical model of composite plate structure with an MRE function layer considering internal magnetic and temperature fields. Composites Science and Technology, 2020, 200, 108445.	3.8	36
25	An Interactive Astronaut-Robot System with Gesture Control. Computational Intelligence and Neuroscience, 2016, 2016, 1-11.	1.1	34
26	Review of Research and Development of Supernumerary Robotic Limbs. IEEE/CAA Journal of Automatica Sinica, 2021, 8, 929-952.	8.5	33
27	Evaluation methods for the autonomy of unmanned systems. Science Bulletin, 2012, 57, 3409-3418.	1.7	31
28	Experiments on fuzzy sliding mode variable structure control for vibration suppression of a rotating flexible beam. JVC/Journal of Vibration and Control, 2015, 21, 343-358.	1.5	26
29	Free-flying dynamics and control of an astronaut assistant robot based on fuzzy sliding mode algorithm. Acta Astronautica, 2017, 138, 462-474.	1.7	25
30	A novel vibration measurement and active control method for a hinged flexible two-connected piezoelectric plate. Mechanical Systems and Signal Processing, 2018, 107, 357-395.	4.4	25
31	Identification of the state-space model and payload mass parameter of a flexible space manipulator using a recursive subspace tracking method. Chinese Journal of Aeronautics, 2019, 32, 513-530.	2.8	25
32	Hand gesture recognition using multimodal data fusion and multiscale parallel convolutional neural network for humanâ€“robot interaction. Expert Systems, 2021, 38, e12490.	2.9	25
33	A hybrid continuum robot based on pneumatic muscles with embedded elastic rods. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2020, 234, 318-328.	1.1	24
34	CURRENT RESEARCH, KEY PERFORMANCES AND FUTURE DEVELOPMENT OF SEARCH AND RESCUE ROBOT. Jixie Gongcheng Xuebao/Chinese Journal of Mechanical Engineering, 2006, 42, 1.	0.7	24
35	Attitude control for astronaut assisted robot in the space station. International Journal of Control, Automation and Systems, 2016, 14, 1082-1095.	1.6	22
36	Adaptive Path Following and Locomotion Optimization of Snake-Like Robot Controlled by the Central Pattern Generator. Complexity, 2019, 2019, 1-13.	0.9	22

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37	SIASAIL-I solar sail: From system design to on-orbit demonstration mission. Acta Astronautica, 2022, 192, 133-142.	1.7	22
38	Analytical inverse kinematic computation for 7-DOF redundant sliding manipulators. Mechanism and Machine Theory, 2021, 155, 104006.	2.7	21
39	A model reference adaptive PID control for electromagnetic actuated micro-positioning stage. , 2012, , .		19
40	Vibration suppression effect of porous graphene platelet coating on fiber reinforced polymer composite plate with viscoelastic damping boundary conditions resting on viscoelastic foundation. Engineering Structures, 2021, 237, 112167.	2.6	19
41	Attitude Decoupling Control of Semifloating Space Robots Using Time-Delay Estimation and Supertwisting Control. IEEE Transactions on Aerospace and Electronic Systems, 2021, 57, 4280-4295.	2.6	19
42	Fuzzy sliding mode variable structure control of a high-speed parallel PnP robot. Mechanism and Machine Theory, 2021, 162, 104349.	2.7	18
43	Center-configuration selection technique for the reconfigurable modular robot. Science in China Series F: Information Sciences, 2007, 50, 697-710.	1.1	17
44	Characteristics Analysis and Comparison of Conventional and Segmental Rotor Type 12/8 Switched Reluctance Motors. IEEE Transactions on Industry Applications, 2019, 55, 3129-3137.	3.3	17
45	Deep Temporal Model-Based Identity-Aware Hand Detection for Space Humanâ€“Robot Interaction. IEEE Transactions on Cybernetics, 2022, 52, 13738-13751.	6.2	17
46	Configuration analysis of a reconfigurable Rubik's snake robot. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2019, 233, 3137-3154.	1.1	16
47	Novel Method of Obstacle Avoidance Planning for Redundant Sliding Manipulators. IEEE Access, 2020, 8, 78608-78621.	2.6	16
48	An improved kinematic calibration method for serial manipulators based on POE formula. Robotica, 2018, 36, 1244-1262.	1.3	15
49	Rapid Prediction of Respiratory Motion Based on Bidirectional Gated Recurrent Unit Network. IEEE Access, 2020, 8, 49424-49435.	2.6	15
50	Static and dynamic performances of sandwich plates with magnetorheological elastomer core: Theoretical and experimental studies. Journal of Sandwich Structures and Materials, 2022, 24, 1556-1579.	2.0	15
51	Network-based reconfiguration routes for a self-reconfigurable robot. Science in China Series F: Information Sciences, 2008, 51, 1532-1546.	1.1	14
52	Fuzzy adaptive PD control for quadrotor helicopter. , 2015, , .		14
53	Time-varying state-space model identification of an on-orbit rigid-flexible coupling spacecraft using an improved predictor-based recursive subspace algorithm. Acta Astronautica, 2019, 163, 157-167.	1.7	14
54	Active Disturbance Rejection Control of Eulerâ€“Lagrange Systems Exploiting Internal Damping. IEEE Transactions on Cybernetics, 2022, 52, 4334-4345.	6.2	14

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55	Transformation Technique Research of the Improved Link-type Shape Shifting Modular Robot. , 2006, , .		13
56	Development of a Novel End-Effector for an On-Orbit Robotic Refueling Mission. IEEE Access, 2020, 8, 17762-17778.	2.6	13
57	Research on rat's pulmonary acute injury induced by lunar soil simulant. Journal of the Chinese Medical Association, 2018, 81, 133-140.	0.6	12
58	A spring-damping contact force model considering normal friction for impact analysis. Nonlinear Dynamics, 2021, 105, 1437-1457.	2.7	12
59	Distance measurement of zooming image for a mobile robot. International Journal of Control, Automation and Systems, 2013, 11, 782-789.	1.6	11
60	Deep Object Detector With Attentional Spatiotemporal LSTM for Space Humanâ€“Robot Interaction. IEEE Transactions on Human-Machine Systems, 2022, 52, 784-793.	2.5	11
61	Enumeration of the Non-Isomorphic Configurations for a Reconfigurable Modular Robot with Square-Cubic-Cell Modules. International Journal of Advanced Robotic Systems, 2010, 7, 31.	1.3	10
62	Autonomous trajectory planner for space telerobots capturing space debris under the teleprogramming framework. Advances in Mechanical Engineering, 2017, 9, 168781401772329.	0.8	10
63	Design optimization of the ram structure of friction stir welding robot. Mechanics of Advanced Materials and Structures, 2020, 27, 108-118.	1.5	10
64	Novel Surface Design of Deployable Reflector Antenna Based on Polar Scissor Structures. Chinese Journal of Mechanical Engineering (English Edition), 2020, 33, .	1.9	10
65	Iris Center Localization Using Energy Map With Image Inpaint Technology and Post-Processing Correction. IEEE Access, 2020, 8, 16965-16978.	2.6	10
66	Configuration analysis of a chain-type reconfigurable modular robot inspired by normal alkane. Science China Technological Sciences, 2021, 64, 1167-1176.	2.0	10
67	Binocular Feature Fusion and Spatial Attention Mechanism Based Gaze Tracking. IEEE Transactions on Human-Machine Systems, 2022, 52, 302-311.	2.5	10
68	China's robotics successes abound. Science, 2014, 345, 523-523.	6.0	9
69	Accuracy modeling and analysis for a lock-or-release mechanism of the Chinese Space Station Microgravity Platform. Mechanism and Machine Theory, 2018, 130, 552-566.	2.7	9
70	Nonlinear mechanics of flexible cables in space robotic arms subject to complex physical environment. Nonlinear Dynamics, 2018, 94, 649-667.	2.7	9
71	Effects of lunar dust simulant on cardiac function and fibrosis in rats. Toxicology Research, 2019, 8, 499-508.	0.9	9
72	Mechanisms involved in inflammatory pulmonary fibrosis induced by lunar dust simulant in rats. Environmental Toxicology, 2019, 34, 131-140.	2.1	9

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73	Attention-Mechanism-Based Real-Time Gaze Tracking in Natural Scenes With Residual Blocks. IEEE Transactions on Cognitive and Developmental Systems, 2022, 14, 696-707.	2.6	9
74	Development of a shape shifting robot for search and rescue. , 0, , .		8
75	Nonlinear DOB-based explicit NMPC for station-keeping of a multi-vectored propeller airship with thrust saturation. Aeronautical Journal, 2018, 122, 1753-1774.	1.1	8
76	Design and experimental study of a passive power-source-free stiffness-self-adjustable mechanism. Frontiers of Mechanical Engineering, 2021, 16, 32-45.	2.5	8
77	Event-triggered coordinated control for multiple solar sail formation flying around planetary displaced orbits. Acta Astronautica, 2021, 184, 286-298.	1.7	8
78	An Effective Method for Implementing Virtual Control and 3D Simulation of Robot Motion in VC Platform. Jiqiren/Robot, 2013, 35, 594.	0.4	8
79	Distributed Resilient Tracking of Multiagent Systems Under Actuator and Sensor Faults. IEEE Transactions on Cybernetics, 2023, 53, 4653-4664.	6.2	8
80	Head-Raising of Snake Robots Based on a Predefined Spiral Curve Method. Applied Sciences (Switzerland), 2018, 8, 2011.	1.3	7
81	A Cascaded Feature Pyramid Network With Non-Backward Propagation for Facial Expression Recognition. IEEE Sensors Journal, 2021, 21, 11382-11392.	2.4	7
82	Modeling and evaluation of dynamic degradation behaviours of carbon fibre-reinforced epoxy composite shells. Applied Mathematical Modelling, 2022, 104, 21-33.	2.2	7
83	Path planning of a snake-like robot based on serpenoid curve and genetic algorithms. , 0, , .		6
84	Smartphone-Controlled Robot Snake for Urban Search and Rescue. Lecture Notes in Computer Science, 2014, , 352-363.	1.0	6
85	Obstacle Avoidance of a Redundant Robot Using Virtual Force Field and Null Space Projection. Lecture Notes in Computer Science, 2019, , 728-739.	1.0	6
86	Obstacle Avoidance and Multitarget Tracking of a Super Redundant Modular Manipulator Based on Bezier Curve and Particle Swarm Optimization. Chinese Journal of Mechanical Engineering (English) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50		6
87	Cooperative Negotiation and Control Strategy of A Shape-shifting Robot. , 2008, , .		5
88	A novel autoâ€adapted pathâ€planning method for a shapeâ€shifting robot. International Journal of Intelligent Computing and Cybernetics, 2011, 4, 61-80.	1.6	5
89	Dual-layer fuzzy control architecture for the CAS rover arm. International Journal of Control, Automation and Systems, 2015, 13, 1262-1271.	1.6	5
90	A Kriging-Based Active Learning Algorithm for Mechanical Reliability Analysis with Time-Consuming and Nonlinear Response. Mathematical Problems in Engineering, 2019, 2019, 1-14.	0.6	5

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91	The Adaptive Path Planning Research for a Shape-Shifting Robot Using Particle Swarm Optimization. , 2009, , .		4
92	Modeling, design and analysis of a biomimetic eyeball-like robot with accommodation mechanism. , 2013, , .		4
93	Nonlinear Dynamics of Controlled Synchronizations of Manipulator System. Mathematical Problems in Engineering, 2014, 2014, 1-9.	0.6	4
94	Research on Static Vision-Based Target Localization for Astronaut Assistant Robots. IEEE Access, 2019, 7, 128394-128407.	2.6	4
95	A Physics-Guided Coordinated Distributed MPC Method for Shape Control of an Antenna Reflector. IEEE Transactions on Cybernetics, 2021, PP, 1-13.	6.2	4
96	Design and Experimental Study of Space Continuous Robots Applied to Space Non-Cooperative Target Capture. Micromachines, 2021, 12, 536.	1.4	4
97	An obstacle avoidance algorithm for space hyper-redundant manipulators using combination of RRT and shape control method. Robotica, 2022, 40, 1036-1069.	1.3	4
98	A Brief Survey on Inflatable Deployment Space Structuresâ€™ Research and Development. , 2012, , 773-782.		4
99	REPRESENTING AND ENUMERATING THE NON-ISOMORPHIC CONFIGURATIONS OF THE RECONFIGURATION MODULAR ROBOT. Jixie Gongcheng Xuebao/Chinese Journal of Mechanical Engineering, 2006, 42, 98.	0.7	4
100	Characteristics Analysis of a Novel 12/14 Conical Bearingless Switched Reluctance Motor. , 2018, , .		3
101	Robust Fuzzy MPC for Station-keeping of A Multi-vectored Propeller Airship Based on Path Following Method. , 2018, , .		3
102	Iris center localization using energy map synthesis based on gradient and isophote. Journal of Intelligent and Fuzzy Systems, 2020, 38, 4511-4523.	0.8	3
103	Hand Detection and Location Based on Improved SSD for Space Human-Robot Interaction. Lecture Notes in Computer Science, 2018, , 164-175.	1.0	3
104	Design of experiment-based tolerance synthesis for a lock-or-release mechanism of the Chinese Space Station Microgravity Platform. Mechanical Sciences, 2019, 10, 393-412.	0.5	3
105	Post-Buckling Spring Vibration Isolator Using Silicone Gel Column: A Theoretical and Experimental Study. Applied Sciences (Switzerland), 2021, 11, 10559.	1.3	3
106	CMOS APS imaging system application in star tracker. , 2005, 5633, 536.		2
107	RBF Neural Network Based Shape Control of Hyper-redundant Manipulator with Constrained End-Effector. Lecture Notes in Computer Science, 2006, , 1146-1152.	1.0	2
108	Kinematics analysis of a robotic rock grinder. Science Bulletin, 2007, 52, 3299-3304.	1.7	2

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109	Quaternion Method for the Kinematics Analysis of Parallel Metamorphic Mechanisms. Mechanisms and Machine Science, 2016, , 259-274.	0.3	2
110	Identification of the time-varying modal parameters of a spacecraft with flexible appendages using a recursive predictor-based subspace identification algorithm. Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 2019, 233, 2032-2050.	0.7	2
111	Performance Analysis for the Magnetically Coupled Resonant Wireless Energy Transmission System. Complexity, 2019, 2019, 1-13.	0.9	2
112	Novel power-exponent-type modified RNN for RMP scheme of redundant manipulators with noise and physical constraints. Neurocomputing, 2022, 467, 266-281.	3.5	2
113	BIONIC RESEARCH ON CONCERTINA MOTION OF A SNAKE-LIKE ROBOT. Jixie Gongcheng Xuebao/Chinese Journal of Mechanical Engineering, 2005, 41, 108.	0.7	2
114	Neural Network Based Kinematic Control of the Hyper-Redundant Snake-Like Manipulator. Lecture Notes in Computer Science, 2007, , 767-775.	1.0	2
115	A Two-Stream CNN Framework for American Sign Language Recognition Based on Multimodal Data Fusion. Advances in Intelligent Systems and Computing, 2020, , 107-118.	0.5	2
116	Mechatronics design of self-adaptive under-actuated climbing robot for pole climbing and ground moving. Robotica, 0, , 1-20.	1.3	2
117	Foldable Units and Wing Expansion of the Oakleaf Butterfly During Eclosion. Journal of Bionic Engineering, 2022, 19, 724-736.	2.7	2
118	Bio-inspired design of an inflatable deployable structure. , 2015, , .		1
119	Guest editorial on reconfigurable and deployable mechanisms. Advances in Mechanical Engineering, 2015, 7, 168781401559388.	0.8	1
120	Vision-based autonomous docking for self-reconfigurable CubeSats. , 2016, , .		1
121	Zooming image based false matches elimination algorithms for robot navigation. Advances in Mechanical Engineering, 2017, 9, 168781401773815.	0.8	1
122	Dynamics Research and Parameter Optimization of Planetary Penetrators. IEEE Access, 2019, 7, 82052-82065.	2.6	1
123	Degraded Planary Tracking Control of an Omnidirectional Vectored-Thruster Aerostat. Journal of Aerospace Engineering, 2019, 32, 04019026.	0.8	1
124	Measurement of Simulated Lunar Soil Information Using Rutting Images. IEEE Access, 2020, 8, 130281-130292.	2.6	1
125	Special issue on interpretation of deep learning: prediction, representation, quantification and visualization. Complex & Intelligent Systems, 0, , 1.	4.0	1
126	Acceleration Sensor-based First Resonance Vibration Suppression of a Double-clamped Piezoelectric Beam. International Journal of Acoustics and Vibrations, 2016, 21, .	0.3	1

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127	A Novel Low Velocity Robotic Penetrator Based on Ampere Force. Lecture Notes in Computer Science, 2017, , 613-623.	1.0	1
128	Enumerating the Non-isomorphic Configurations of a Modular Reconfigurable Robot. Journal of Mechanisms and Robotics, 0, , 1-24.	1.5	1
129	Shape control of hyper-redundant modularized manipulator using variable structure regular polygon. , 0, , .		0
130	Radiation calibration research on multichannel CCD camera. , 2005, , .		0
131	Study on a Novel Link-type Shape Shifting Robot. , 2006, , .		0
132	Autonomous Control of A Shape-shifting Robot in Urban Terrain. , 2007, , .		0
133	Development of novel roboticized rock abrasion tool. , 2008, , .		0
134	Configuration representation of a link-type self-reconfigurable mobile robot. , 2008, , .		0
135	A-B Autonomy of a Shape-shifting Robot 'AMOEBA-I' for USAR. , 0, , .		0
136	A path planning method for a shape-shifting robot. , 2010, , .		0
137	Dynamic simulation of the vibration isolation system for astronaut treadmill. , 2014, , .		0
138	Calibration of optical center displacement for Zooming image. , 2015, , .		0
139	Stereo reconstruction error analysis for spatial circle based on calibration parameters disturbance model. , 2016, , .		0
140	On-orbit identification of spacecraft time-varying moment of inertia using an improved recursive subspace method. , 2017, , .		0
141	Optimal coordinated planning strategy for space robots grasping targets. , 2017, , .		0
142	On-orbit identification of time-varying moment of inertia for spacecraft based on a recursive subspace method. , 2017, , .		0
143	Visual Tracking and Positioning for an Astronaut Assistant Robot. , 2018, , .		0
144	Analysis of the dynamic mechanical property of multiple direction impact protection structure inspired by C60 molecule. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2019, 233, 5919-5932.	1.1	0

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145	A transformed proportional-integral-derivative controller for a multi-vectored propeller aerostat with independent actuator magnitude and rate saturations. Science Progress, 2020, 103, 36850420950123.	1.0	0
146	Corrections to â€œIris Center Localization Using Energy Map With Image Inpaint Technology and Post-Processing Correctionâ€• IEEE Access, 2020, 8, 76595-76595.	2.6	0
147	Restoration of Epipolar Line Based on Multi-population Cooperative Particle Swarm Optimization. Lecture Notes in Computer Science, 2012, , 574-581.	1.0	0
148	Real-Time HALCON-Based Pose Measurement System for an Astronaut Assistant Robot. Lecture Notes in Computer Science, 2018, , 366-378.	1.0	0
149	Improved Neural Network 3D Space Obstacle Avoidance Algorithm for Mobile Robot. Lecture Notes in Computer Science, 2019, , 105-117.	1.0	0
150	Dynamic Precision Analysis of a Redundant Sliding Manipulator. Communications in Computer and Information Science, 2020, , 157-171.	0.4	0
151	Special Issue on Reconfigurable Robots. Chinese Journal of Mechanical Engineering (English Edition), 2020, 33, .	1.9	0
152	An efficient approach of centroid alignment for spaceflight vehicles considering parameter uncertainties. Mechanism and Machine Theory, 2022, 172, 104774.	2.7	0
153	Four-Criterion-Optimization Based Coordination Motion Control of Dual-arm Robots. IEEE Transactions on Cognitive and Developmental Systems, 2022, , 1-1.	2.6	0