Xu-Zhi Lai

List of Publications by Year
in descending order

69	1,175	394286 19	434063 31
papers	citations	h-index	g-index

69	69	69	502
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Comprehensive Unified Control Strategy for Underactuated Two-Link Manipulators. IEEE Transactions on Systems, Man, and Cybernetics, 2009, 39, 389-398.	5.5	93
2	Global stabilization of 2-DOF underactuated mechanical systemsâ€”an equivalent-input-disturbance approach. Nonlinear Dynamics, 2012, 69, 495-509.	2.7	84
3	Stable Control Strategy for Planar Three-Link Underactuated Mechanical System. IEEE/ASME Transactions on Mechatronics, 2016, 21, 1345-1356.	3.7	68
4	Motion Planning and Adaptive Neural Tracking Control of an Uncertain Two-Link Rigidâ€“Flexible Manipulator With Vibration Amplitude Constraint. IEEE Transactions on Neural Networks and Learning Systems, 2022, 33, 3814-3828.	7.2	61
5	Stabilization of underactuated planar acrobot based on motion-state constraints. International Journal of Non-Linear Mechanics, 2015, 77, 342-347.	1.4	52
6	Position-Posture Control of a Planar Four-Link Underactuated Manipulator Based on Genetic Algorithm. IEEE Transactions on Industrial Electronics, 2017, 64, 4781-4791.	5.2	43
7	Nonlinear stabilizing control for a class of underactuated mechanical systems with multi degree of freedoms. Nonlinear Dynamics, 2017, 89, 2241-2253.	2.7	43
8	Motion planning and tracking control for an acrobot based on a rewinding approach. Automatica, 2013, 49, 278-284.	3.0	38
9	A fast stable control strategy based on system energy for a planar single-link flexible manipulator. Nonlinear Dynamics, 2018, 94, 615-626.	2.7	34
10	Unified control of n-link underactuated manipulator with single passive joint: A reduced order approach. Mechanism and Machine Theory, 2012, 56, 170-185.	2.7	33
11	Stabilization of underactuated two-link gymnast robot by using trajectory tracking strategy. Applied Mathematics and Computation, 2015, 253, 193-204.	1.4	28
12	A Novel Robust Control Method for Motion Control of Uncertain Single-Link Flexible-Joint Manipulator. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2021, 51, 1671-1678.	5.9	28
13	Control of an Underactuated Three-Link Passiveâ€“Activeâ€“Active Manipulator Based on Three Stages and Stability Analysis. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2015, 137, .	0.9	25
14	A quick control strategy based on hybrid intelligent optimization algorithm for planar n -link underactuated manipulators. Information Sciences, 2017, 420, 148-158.	4.0	25
15	A general control strategy for planar 3-DoF underactuated manipulators with one passive joint. Information Sciences, 2020, 534, 139-153.	4.0	25
16	A stable control for second-order nonholonomic planar underactuated mechanical system: energy attenuation approach. International Journal of Control, 2018, 91, 1630-1639.	1.2	21
17	Continuous State Feedback Control Based on Intelligent Optimization for First-Order Nonholonomic Systems. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2020, 50, 2534-2540.	5.9	21
18	Fault diagnosis based on feature clustering of time series data for loss and kick of drilling process. Journal of Process Control, 2021, 102, 24-33.	1.7	21

#	Article	IF	Citations
19	Tip Position Control and Vibration Suppression of a Planar Two-Link Rigid-Flexible Underactuated Manipulator. IEEE Transactions on Cybernetics, 2022, 52, 6771-6783.	6.2	20
20	Singularityâ€avoiding swingâ€up control for underactuated threeâ€link gymnast robot using virtual coupling between control torques. International Journal of Robust and Nonlinear Control, 2015, 25, 207-221.	2.1	17
21	Global stabilization of underactuated spring-coupled three-link horizontal manipulator using position measurements only. Applied Mathematical Modelling, 2015, 39, 1917-1928.	2.2	17
22	A simple and quick control strategy for a class of first-order nonholonomic manipulator. Nonlinear Dynamics, 2016, 85, 2261-2276.	2.7	17
23	Position control for planar four-link underactuated manipulator with a passive third joint. ISA Transactions, 2019, 87, 46-54.	3.1	17
24	Disturbance estimator and smith predictor-based active rejection of stickâ€“slip vibrations in drill-string systems. International Journal of Systems Science, 2020, 51, 826-838.	3.7	17
25	A quick position control strategy based on optimization algorithm for a class of first-order nonholonomic system. Information Sciences, 2018, 460-461, 264-278.	4.0	16
26	Motion planning and adaptive neural sliding mode tracking control for positioning of uncertain planar underactuated manipulator. Neurocomputing, 2019, 334, 197-205.	3.5	16
27	Tracking control of singleâ€link flexibleâ€joint manipulator with unmodeled dynamics and dead zone. International Journal of Robust and Nonlinear Control, 2021, 31, 1270-1287.	2.1	16
28	A bioinspired neural dynamics-based approach to tracking control of autonomous surface vehicles subject to unknown ocean currents. Neural Computing and Applications, 2015, 26, 1929-1938.	3.2	15
29	Virtual Model Reduction-based Control Strategy of Planar Three-link Underactuated Manipulator with Middle Passive Joint. International Journal of Control, Automation and Systems, 2021, 19, 29-39.	1.6	15
30	Singularity avoidance for acrobots based on fuzzy-control strategy. Robotics and Autonomous Systems, 2009, 57, 202-211.	3.0	14
31	Effective positionâ€“posture control strategy based on switching control for planar three-link underactuated mechanical system. International Journal of Systems Science, 2017, 48, 2202-2211.	3.7	14
32	Control Strategy Based on Model Reduction and Online Intelligent Calculation for Planar n -Link Underactuated Manipulators. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2020, 50, 1046-1054.	5.9	14
33	A Control Strategy Based on Trajectory Planning and Optimization for Two-Link Underactuated Manipulators in Vertical Plane. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2022, 52, 3466-3475.	5.9	14
34	A novel position-posture control method using intelligent optimization for planar underactuated mechanical systems. Mechanism and Machine Theory, 2019, 140, 258-273.	2.7	13
35	Observerâ€based trajectory control for directional drilling process. Asian Journal of Control, 2022, 24, 259-272.	1.9	12
36	CNN-based Broad Learning with Efficient Incremental Reconstruction Model for Facial Emotion Recognition. IFAC-PapersOnLine, 2020, 53, 10236-10241.	0.5	12

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37	Adaptive robust control for planar n-link underactuated manipulator based on radial basis function neural network and online iterative correction method. Journal of the Franklin Institute, 2018, 355, 8373-8391.	1.9	11
38	A new control method for planar four-link underactuated manipulator based on intelligence optimization. Nonlinear Dynamics, 2019, 96, 573-583.	2.7	10
39	Position control with zero residual vibration for two degrees-of-freedom flexible systems based on motion trajectory optimization. Information Sciences, 2021, 575, 698-713.	4.0	10
40	Control of acrobot based on lyapunov function. Central South University, 2004, 11, 210-215.	0.5	9
41	Chaos-PSO-based Motion Planning and Accurate Tracking for Position-posture Control of a Planar Underactuated Manipulator with Disturbance. International Journal of Control, Automation and Systems, 2021, 19, 3511-3521.	1.6	9
42	Position control strategy based on energy attenuation for planar three-link underactuated manipulator. , 2016, , .		7
43	A Control Strategy with Zero Residual Vibration for a Planar Single-Link Flexible Manipulator. , 2018, , .		7
44	Stable control strategy for a second-order nonholonomic planar underactuated mechanical system. International Journal of Systems Science, 2019, 50, 2126-2141.	3.7	7
45	Two-Stage Decision-Making Method for Burden Distribution Based on Recognition of Conditions in Blast Furnace. IEEE Transactions on Industrial Electronics, 2021, 68, 4199-4208.	5.2	7
46	Equivalent-input-disturbance-based robust control of drilling trajectory with weight-on-bit uncertainty in directional drilling. ISA Transactions, 2022, 127, 370-382.	3.1	7
47	Effective Control Method Based on Trajectory Optimization for Three-Link Vertical Underactuated Manipulators With Only One Active Joint. IEEE Transactions on Cybernetics, 2023, 53, 3782-3793.	6.2	7
48	PSO-based nonlinear model predictive planning and discrete-time sliding tracking control for uncertain planar underactuated manipulators. International Journal of Systems Science, 2022, 53, 2075-2089.	3.7	7
49	Robust stabilization and disturbance attenuation for a class of underactuated mechanical systems. Journal of Central South University, 2012, 19, 2488-2495.	1.2	6
50	Distributed Monitoring With Integrated Probability PCA and mRMR for Drilling Processes. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-13.	2.4	6
51	New distributed positioning algorithm based on centroid of circular belt for wireless sensor networks. International Journal of Automation and Computing, 2007, 4, 315-324.	4.5	5
52	A rewinding approach to motion planning for acrobot based on virtual friction. , 2010, , .		5
53	A unified and simple control strategy for a class of n-link vertical underactuated manipulator. ISA Transactions, 2022, 128, 198-207.	3.1	4
54	Stability analysis and control law design for acrobots. , 0, , .		3

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55	Global Stabilization Control of Acrobot Based on Equivalent-Input-Disturbance Approach. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 14596-14601.	0.4	3
56	Stable Control of Single-Link Flexible-Joint Manipulator. , 2018, , .		3
57	Quick and Effective Position Control for Planar <tex>n</tex> -link Underactuated Manipulators Based on Optimization Algorithm. , 2018, , .		3
58	A Simple Control Strategy Based on Trajectory Planning for Vertical Acrobot. Actuators, 2021, 10, 308.	1.2	3
59	Motion Control Strategy Based on Integrated Trajectory for the Pendubot. , 2021, , .		3
60	Design for robust stabilization of nonlinear systems with uncertain parameters. Central South University, 2004, 11, 102-104.	0.5	2
61	Control design and comprehensive stability analysis of acrobots based on Lyapunov functions. Central South University, 2005, 12, 210-216.	0.5	2
62	Backstepping neurodynamics based position-tracking control of underactuated autonomous surface vehicles. , 2013, , .		2
63	Position and posture control for a class of second-order nonholonomic underactuated mechanical system. IMA Journal of Mathematical Control and Information, 0, , dnw056.	1.1	2
64	Single controller design based on integrated trajectory for three-link vertical underactuated manipulators with first active joint. International Journal of Control, 2023, 96, 424-434.	1.2	2
65	An efficient neural network based tracking controller for autonomous underwater vehicles subject to unknown dynamics. , 2014, , .		1
66	An Improved Control Strategy for Directional Drilling Attitude. , 2018, , .		1
67	Intelligent Control of Underactuated Mechanical System. Studies in Systems, Decision and Control, 2021, , 47-73.	0.8	1
68	Trajectory Azimuth Control Based on Equivalent Input Disturbance Approach for Directional Drilling Process. Journal of Advanced Computational Intelligence and Intelligent Informatics, 2021, 25, 31-39.	0.5	1
69	Incident early warning based on sparse autoencoder and decision fusion for drilling process. , 2021, , .		0