

Zongxia Jiao

List of Publications by Year in descending order

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155
papers

3,581
citations

257101

24
h-index

138251

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156
all docs

156
docs citations

156
times ranked

2800
citing authors

#	ARTICLE	IF	CITATIONS
1	Extended-State-Observer-Based Output Feedback Nonlinear Robust Control of Hydraulic Systems With Backstepping. IEEE Transactions on Industrial Electronics, 2014, 61, 6285-6293.	5.2	576
2	High-Accuracy Tracking Control of Hydraulic Rotary Actuators With Modeling Uncertainties. IEEE/ASME Transactions on Mechatronics, 2014, 19, 633-641.	3.7	442
3	Adaptive Robust Control of DC Motors With Extended State Observer. IEEE Transactions on Industrial Electronics, 2014, 61, 3630-3637.	5.2	371
4	Adaptive Control of Hydraulic Actuators With LuGre Model-Based Friction Compensation. IEEE Transactions on Industrial Electronics, 2015, 62, 6469-6477.	5.2	255
5	Adaptive Backstepping Control of Spacecraft Rendezvous and Proximity Operations With Input Saturation and Full-State Constraint. IEEE Transactions on Industrial Electronics, 2017, 64, 480-492.	5.2	163
6	RISE-Based Adaptive Control of Hydraulic Systems With Asymptotic Tracking. IEEE Transactions on Automation Science and Engineering, 2017, 14, 1524-1531.	3.4	144
7	A Practical Nonlinear Adaptive Control of Hydraulic Servomechanisms With Periodic-Like Disturbances. IEEE/ASME Transactions on Mechatronics, 2015, 20, 2752-2760.	3.7	137
8	A Streaming Potential/Current-Based Microfluidic Direct Current Generator for Self-Powered Nanosystems. Advanced Materials, 2015, 27, 6482-6487.	11.1	104
9	RISE-Based Precision Motion Control of DC Motors With Continuous Friction Compensation. IEEE Transactions on Industrial Electronics, 2014, 61, 7067-7075.	5.2	98
10	Development of a Direct-Drive Servo Valve With High-Frequency Voice Coil Motor and Advanced Digital Controller. IEEE/ASME Transactions on Mechatronics, 2014, 19, 932-942.	3.7	88
11	Armature Reaction Field and Inductance of Coreless Moving-Coil Tubular Linear Machine. IEEE Transactions on Industrial Electronics, 2014, 61, 6956-6965.	5.2	78
12	Nanogenerator as an active sensor for vortex capture and ambient wind-velocity detection. Energy and Environmental Science, 2012, 5, 8528.	15.6	77
13	An electromagnetic wearable 3-DoF resonance human body motion energy harvester using ferrofluid as a lubricant. Applied Energy, 2017, 197, 364-374.	5.1	69
14	Nonlinear Adaptive Control of Hydraulic System With Observing and Compensating Mismatching Uncertainties. IEEE Transactions on Control Systems Technology, 2018, 26, 927-938.	3.2	59
15	Multiobjective Optimization of a Hollow Plunger Type Solenoid for High Speed On/Off Valve. IEEE Transactions on Industrial Electronics, 2018, 65, 3115-3124.	5.2	53
16	Robust Nonlinear Adaptive Relative Pose Control for Cooperative Spacecraft During Rendezvous and Proximity Operations. IEEE Transactions on Control Systems Technology, 2017, 25, 1840-1847.	3.2	46
17	Capsule Robot for Obesity Treatment With Wireless Powering and Communication. IEEE Transactions on Industrial Electronics, 2015, 62, 1125-1133.	5.2	45
18	Design of a Tubular Linear Oscillating Motor With a Novel Compound Halbach Magnet Array. IEEE/ASME Transactions on Mechatronics, 2017, 22, 498-508.	3.7	45

#	ARTICLE	IF	CITATIONS
19	A Novel Electro Hydrostatic Actuator System With Energy Recovery Module for More Electric Aircraft. IEEE Transactions on Industrial Electronics, 2020, 67, 2991-2999.	5.2	41
20	Multi-Objective Optimal Design of a Toroidally Wound Radial-Flux Halbach Permanent Magnet Array Limited Angle Torque Motor. IEEE Transactions on Industrial Electronics, 2017, 64, 2962-2971.	5.2	35
21	Nonlinear robust dual-loop control for electro-hydraulic load simulator. ISA Transactions, 2015, 59, 280-289.	3.1	33
22	Enhanced Bandwidth Nonlinear Resonance Electromagnetic Human Motion Energy Harvester Using Magnetic Springs and Ferrofluid. IEEE/ASME Transactions on Mechatronics, 2019, 24, 710-717.	3.7	33
23	Compact Traveling Wave Micromotor Based on Shear Electromechanical Coupling. IEEE/ASME Transactions on Mechatronics, 2016, 21, 1572-1580.	3.7	32
24	Analysis of the dynamic performance of an electro-hydrostatic actuator and improvement methods. Chinese Journal of Aeronautics, 2018, 31, 2312-2320.	2.8	28
25	Compound Velocity Synchronizing Control Strategy for Electro-Hydraulic Load Simulator and Its Engineering Application. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2014, 136, 0510021-5100213.	0.9	23
26	Posture Control of Electromechanical-Actuator-Based Thrust Vector System for Aircraft Engine. IEEE Transactions on Industrial Electronics, 2012, 59, 3561-3571.	5.2	21
27	Review of fluid and control technology of hydraulic wind turbines. Frontiers of Mechanical Engineering, 2017, 12, 312-320.	2.5	20
28	Magnetic Field Modeling and Analysis of Spherical Actuator With Two-Dimensional Longitudinal Camber Halbach Array. IEEE Transactions on Industrial Electronics, 2019, 66, 9112-9121.	5.2	20
29	High Torque Density Torque Motor With Hybrid Magnetization Pole Arrays for Jet Pipe Servo Valve. IEEE Transactions on Industrial Electronics, 2020, 67, 2133-2142.	5.2	19
30	The Nonlinear Accuracy Model of Electro-Hydrostatic Actuator. , 2008, , .		18
31	Adaptive nonlinear robust relative pose control of spacecraft autonomous rendezvous and proximity operations. ISA Transactions, 2017, 67, 47-55.	3.1	17
32	Novel permanent magnet linear motor with isolated movers: Analytical, numerical and experimental study. Review of Scientific Instruments, 2014, 85, 105007.	0.6	16
33	Multi-Objective Optimization Design of an Electrohydrostatic Actuator Based on a Particle Swarm Optimization Algorithm and an Analytic Hierarchy Process. Energies, 2018, 11, 2426.	1.6	16
34	Robust adaptive relative position and attitude control for spacecraft autonomous proximity. ISA Transactions, 2016, 63, 11-19.	3.1	14
35	Active Load-Sensitive Electro-Hydrostatic Actuator for More Electric Aircraft. Applied Sciences (Switzerland), 2020, 10, 6978.	1.3	14
36	Load-Sensing Pump Design to Reduce Heat Generation of Electro-Hydrostatic Actuator Systems. Energies, 2018, 11, 2266.	1.6	13

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37	Magnetic field analysis of electromagnetic spherical actuators with multiple radial poles. , 2012, , .		12
38	Analysis for the power loss of electro hydrostatic actuator and hydraulic actuator. , 2015, , .		12
39	Single neural adaptive controller and neural network identifier based on PSO algorithm for spherical actuators with 3D magnet array. Review of Scientific Instruments, 2017, 88, 105001.	0.6	12
40	Compact piezoelectric micromotor with a single bulk lead zirconate titanate stator. Applied Physics Letters, 2013, 102, .	1.5	10
41	Design, Analysis, and Verification of an Electro- Hydrostatic Actuator for Distributed Actuation System. Sensors, 2020, 20, 634.	2.1	10
42	An Experimental Study on Outer Frame Position Control of Hydraulic Flight Motion Simulator With Model Compensation. IEEE/ASME Transactions on Mechatronics, 2022, 27, 3419-3428.	3.7	10
43	Design of a novel integrated position sensor based on Hall effects for linear oscillating actuator. Review of Scientific Instruments, 2015, 86, 075001.	0.6	9
44	Design and analysis of a direct load sensing electro-hydrostatic actuator. , 2015, , .		9
45	Magnetic field analysis of novel spherical actuators with three-dimensional pole arrays. Review of Scientific Instruments, 2016, 87, 065006.	0.6	8
46	Viscous Loss Analysis of the Flooded Electro-Hydrostatic Actuator Motor under Laminar and Turbulent Flow States. Processes, 2020, 8, 975.	1.3	8
47	Research on Power Matching and Energy Optimal Control of Active Load-Sensitive Electro-Hydrostatic Actuator. IEEE Access, 2021, 9, 51121-51133.	2.6	8
48	Active Load Sensitive Electro-Hydrostatic Actuator on More Electric Aircraft: Concept, Design, and Control. IEEE Transactions on Industrial Electronics, 2022, 69, 5030-5040.	5.2	8
49	Analysis of the characteristics by modeling and simulation of actuator in flight control system. , 2014, , .		7
50	Thermal optimization of a tubular linear oscillating motor for directly driven LEHA application. Numerical Heat Transfer; Part A: Applications, 2016, 69, 383-400.	1.2	7
51	Dynamic thermal coupling modeling and analysis of wet electro-hydrostatic actuator. Chinese Journal of Aeronautics, 2022, 35, 298-311.	2.8	7
52	Visual Location System for Placement Machine Based on Machine Vision. , 2008, , .		6
53	A compact design of pulsation attenuator for hydraulic pumps. , 2016, , .		6
54	Design and modeling of tubular flux-switching permanent magnet linear motor. , 2014, , .		5

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55	Design and analysis of an improved Halbach tubular linear motor with non-ferromagnetic mover tube for direct-driven EHA. , 2014, , .		5
56	Flux Field and Thrust Analysis of Permanent-Magnet Linear Machines With Isolated Movers. IEEE Transactions on Magnetics, 2015, 51, 1-8.	1.2	5
57	Motion Synchronous Composite Decoupling with Fewer Sensors on Multichannel Hydraulic Force Control for Aircraft Structural Loading Test System. Sensors, 2018, 18, 4050.	2.1	5
58	Design and numerical simulation of a continuable and bidirectional piezo-hydraulic servo pump. , 2011, , .		4
59	Analytical and Numerical Investigation on the Magnetic Field of Novel PM Spherical Actuator with Outer Rotor. , 2014, , .		4
60	Novel tubular switched reluctance motor with double excitation windings: Design, modeling, and experiments. Review of Scientific Instruments, 2015, 86, 125004.	0.6	4
61	Analysis of kinematics and dynamics of snake-like robot with joints of 4-DOF. , 2015, , .		4
62	Design and modeling of tubular double excitation windings linear switched reluctance motor. , 2015, , .		4
63	Efficiency analysis of moving-magnet linear oscillating motor with dual-resonance for linear electro-hydrostatic actuator. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Aerospace Engineering, 2017, 231, 2487-2501.	0.7	4
64	Modeling and analysis of servo valve torque motor based on FEM. , 2017, , .		4
65	A dynamic delay-based reliability evaluation model for communication networks. Communications in Statistics Part B: Simulation and Computation, 2020, 49, 1397-1414.	0.6	4
66	A novel hydraulic pulsation reduction component based on discharge and suction self-oscillation: Principle, design and experiment. Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering, 2020, 234, 433-445.	0.7	4
67	Design of a power amplifier with energy recovery strategy for piezoelectric actuators. , 2011, , .		3
68	Design and simulation of Voice Coil Motor for the micro-electric load simulator. , 2011, , .		3
69	Nonlinear control of aircraft on ground runway keeping. , 2011, , .		3
70	A novel two degree-of-freedom ultrasonic planar motor driven by single stator. , 2012, , .		3
71	Force formulation of a three-phase tubular linear machine with dual Halbach array. , 2012, , .		3
72	Analysis of magnet layout in circumferential and axial direction for halbach PM arrays. , 2014, , .		3

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73	Dynamics modeling and load analysis of linear motor for LEHA system. , 2015, , .		3
74	Design of novel double-layer compound stator for tubular linear oscillating motor. , 2015, , .		3
75	Structure optimization of permanent magnet spherical motor utilizing improved Particle Swarm algorithm. , 2016, , .		3
76	Aircraft anti-skid braking control based on pressure servo control using high-speed on/off valve. , 2016, , .		3
77	Advancing Motivation Feedforward Control of Permanent Magnetic Linear Oscillating Synchronous Motor for High Tracking Precision. Actuators, 2021, 10, 128.	1.2	3
78	Limit cycle oscillation suppression controller design and stability analysis of the periodically time-varying flapping flight dynamics in hover. Nonlinear Dynamics, 2022, 107, 3385-3405.	2.7	3
79	An Information Integration Framework Based on XML to Support Mechatronics Multi-disciplinary Design. , 2008, , .		2
80	Research and application of visual location technology for solder paste printing based on machine vision. Frontiers of Mechanical Engineering in China, 2009, 4, 184-191.	0.4	2
81	Adaptive path following control of car-like mobile robot using dynamic model. , 2011, , .		2
82	Design and study of digital power driver controller for a kind of voice coil motor. , 2012, , .		2
83	Development research of reflection-absorption compound type fluid pulsation attenuator. , 2012, , .		2
84	Back-iron effect of tubular linear motors with dual Halbach permanent magnet arrays. , 2012, , .		2
85	Reliability modeling analysis for hydraulic/electro-hydrostatic dual redundant actuation system. , 2014, , .		2
86	Position control research based on wire rope connected twin directdrive motor system. , 2015, , .		2
87	Modeling of torque output and magnetic force for novel spherical actuator with three-dimensional pole arrays. , 2015, , .		2
88	A new approach based on undulate propulsion theory for flapping wing analysis and design. , 2015, , .		2
89	Modeling, simulation and experiment study of electromagnetic performance for E-Type series linear oscillating motor. , 2015, , .		2
90	Pull-pull position control of dual motor wire rope transmission. Review of Scientific Instruments, 2016, 87, 085001.	0.6	2

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91	Preliminary design and simulation of electro-hydrostatic actuator with modelica. , 2016, , .		2
92	Design and analysis of linear oscillating motor for linear pump application-magnetic field, dynamics and thermotics. Frontiers of Mechanical Engineering, 2016, 11, 351-362.	2.5	2
93	A novel flat linear switched reluctance motor with doubly-excited windings. , 2017, , .		2
94	Design and modeling of double excitation windings linear switched reluctance motor. , 2017, , .		2
95	Linear motor tracking control based on adaptive robust control and extended state observer. , 2017, , .		2
96	LQR lateral-directional control law design for distributed propulsion layout flying wing. , 2017, , .		2
97	Investigation the load matching of direct pressure valve controlled variable mechanism of axial variable piston pump. , 2017, , .		2
98	Segmented lamination stator optimization of linear oscillating motor based on magnetic field and thermal network coupling analysis. , 2017, , .		2
99	Nonlinear Synchronous Control for H-Type Gantry Stage Used in Electric VehiclesManufacturing. Energies, 2019, 12, 2305.	1.6	2
100	Electromagnetic Modeling and Structure Optimization of a Spherical Force Sensing System. Sensors, 2019, 19, 552.	2.1	2
101	Driving Controller for the Digital On-off Valve Array. , 2019, , .		2
102	Adaptive Repetitive Control of A Linear Oscillating Motor under Periodic Hydraulic Step Load. Sensors, 2020, 20, 1140.	2.1	2
103	Dual redundancy fault diagnosis and reconstruction system of sensors based on BP neural network. , 2021, , .		2
104	Vibration Analysis on Six-wheel Landing Gear Induced by Anti-skid Brake. , 2021, , .		2
105	Parametric analysis of tubular linear machines. , 2011, , .		1
106	Leakage calculation and control of vane Swing Hydraulic Motor based on ANSYS. , 2011, , .		1
107	A new rotary voice coil motor suitable for short angular strokes-design, modeling and optimization. , 2013, , .		1
108	Equivalent Energized Coil Model for Magnetic Field of PM Spherical Actuator. , 2014, , .		1

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109	Hall-sensor-based orientation measurement method in three-dimensional space for electromagnetic actuators. , 2014, , .		1
110	Optimization of a spool valve to reduce pressure ripple in a collaborative rectification pump. , 2015, , .		1
111	Research on Aircraft Attack Angle Control Considering Servo-Loop Dynamics. International Journal of Aerospace Engineering, 2015, 2015, 1-7.	0.5	1
112	Aircraft anti-skid braking control with flow servo-valve. , 2015, , .		1
113	Modeling of magnetic field and design optimization for permanent-magnet spherical actuator in three dimensional space. , 2015, , .		1
114	Magnetic force model of spherical actuators with three-dimensional magnet array. , 2015, , .		1
115	A novel dynamic decoupling control algorithm for PMSA by utilizing single neural adaptive controllers. , 2015, , .		1
116	Design and Comparative Study of Dual Magnet Array for Linear Load Simulation System. , 2016, , .		1
117	Novel design and kinematics modeling for delta robot with improved end effector. , 2016, , .		1
118	Analysis of the controller with disturbance observer on two direct drive motor system. , 2016, , .		1
119	The optimization of aircraft bay door control method. , 2016, , .		1
120	Resonant frequency recognition and tracking for linear oscillating motor under hydraulic load. , 2016, , .		1
121	Design and validation of hydraulic pump system driven by the electromotor under the high-power and long-time working state in an airborne. , 2016, , .		1
122	Efficient active control of fluid borne pulsation in hydraulic piping systems. , 2016, , .		1
123	Research on a new direct drive electro-hydraulic proportional pressure valve for aircraft braking system. , 2016, , .		1
124	Magnetic flux field analysis of slotless PM linear machine with multiple tubular movers. International Journal of Applied Electromagnetics and Mechanics, 2017, 53, 685-695.	0.3	1
125	Comparative Study of the Dual Layer Magnet Array in a Moving-Coil Tubular Linear PM Motor. Sensors, 2018, 18, 1854.	2.1	1
126	Design and Simulation OF high-flow high-speed on-off valve driven by piezoelectric. , 2019, , .		1

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127	A Suppression Circuit for The Current Pulse During Digital Valve Drive. , 2021, , .		1
128	Design and experiments of a novel linear pump for fluid delivery applications requiring low flow pulsation driven by linear oscillating motor. , 2019, , .		1
129	Ontology-based information integration framework for mechatronics system multi-disciplinary design. , 2008, , .		0
130	Two layer optimal control for a class of “gray-box” system, theory and experiment. , 2012, , .		0
131	Magnetic field modeling of a linear permanent magnet motor with two isolated movers. , 2014, , .		0
132	A new design of the variable-pressure hydraulic pump. , 2015, , .		0
133	Augmented PD control method for permanent magnet spherical actuators with 3D magnet array. , 2015, , .		0
134	Analysis and optimization of thermal effect for electromagnetic reciprocating linear machine. , 2015, , .		0
135	Eliminate the surplus torque of electro-hydraulic load simulator using the actuator command dynamic compensation control. , 2016, , .		0
136	Uncertain parameters variable structure neural network identifier in spherical actuator control system. , 2016, , .		0
137	Analyses and simulations of propulsion mechanisms for flapping wings with the extension of Undulate Propulsion Theory. , 2016, , .		0
138	Fractional model reference adaptive control for electro-hydraulic servo system. , 2016, , .		0
139	Dual linear motors synchronous control for horizontal axis of far-field target motion simulators. , 2016, , .		0
140	Analysis on the flow requirement of an aircraft hydraulic energy system. , 2016, , .		0
141	Novel design and kinematics modeling for delta robot with improved end effector. , 2016, , .		0
142	Influence of stator parameters on output performance of linear switched reluctance motor. , 2016, , .		0
143	Magnetic field and force output analysis of tubular linear machines with two structure topologies. International Journal of Applied Electromagnetics and Mechanics, 2017, 54, 301-314.	0.3	0
144	Design, analysis and experiments of novel short-stroke linear loading system based on axial-magnetized voice-coil motor for linear oscillating actuator. , 2017, , .		0

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145	Propulsion efficiency of flapping flight robots. , 2017, , .		0
146	Analysis of linear oscillating motor position output dynamic performance with external force load. , 2017, , .		0
147	Modeling and synchronous control for target motion simulators driven by dual linear motors. , 2017, , .		0
148	Parameter analysis of a novel planar motor with dual-layer magnetic array. , 2017, , .		0
149	Integrated design of the electric test system for aircraft brake controller. , 2017, , .		0
150	Design and modeling of a novel self-powered brake system for MEA. , 2017, , .		0
151	Simulation and verification of pressure characteristics of aircraft hydraulic power system. , 2019, , .		0
152	Control of Twin Direct-Drive Motor System Using Wire Rope. , 2019, , .		0
153	An aircraft brake system matching design based on braking efficiency. , 2019, , .		0
154	Research on Voice Coil Motor Control Considering Interference. , 2021, , .		0
155	Study on Compound Control of Hydraulic Motor with Servo Valve and Secondary Regulation. , 2019, , .		0