Zongxia Jiao

List of Publications by Year
in descending order

155 papers	3,581 citations	257450 24 h-index	138484 58 g-index
156 all docs	156 docs citations	156 times ranked	2800 citing authors

#	Article	IF	Citations
1	Active Load Sensitive Electro-Hydrostatic Actuator on More Electric Aircraft: Concept, Design, and Control. IEEE Transactions on Industrial Electronics, 2022, 69, 5030-5040.	7.9	8
2	Dynamic thermal coupling modeling and analysis of wet electro-hydrostatic actuator. Chinese Journal of Aeronautics, 2022, 35, 298-311.	5.3	7
3	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.	5.2	3
4	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.	5.8	10
5	Research on Power Matching and Energy Optimal Control of Active Load-Sensitive Electro-Hydrostatic Actuator. IEEE Access, 2021, 9, 51121-51133.	4.2	8
6	Advancing Motivation Feedforward Control of Permanent Magnetic Linear Oscillating Synchronous Motor for High Tracking Precision. Actuators, 2021, 10, 128.	2.3	3
7	Dual redundancy fault diagnosis and reconstruction system of sensors based on BP neural network. , 2021, , .		2
8	Research on Voice Coil Motor Control Considering Interference. , 2021, , .		0
9	A Suppression Circuit for The Current Pulse During Digital Valve Drive. , 2021, , .		1
10	Vibration Analysis on Six-wheel Landing Gear Induced by Anti-skid Brake. , 2021, , .		2
11	A dynamic delay-based reliability evaluation model for communication networks. Communications in Statistics Part B: Simulation and Computation, 2020, 49, 1397-1414.	1.2	4
12	A Novel Electro Hydrostatic Actuator System With Energy Recovery Module for More Electric Aircraft. IEEE Transactions on Industrial Electronics, 2020, 67, 2991-2999.	7.9	41
13	High Torque Density Torque Motor With Hybrid Magnetization Pole Arrays for Jet Pipe Servo Valve. IEEE Transactions on Industrial Electronics, 2020, 67, 2133-2142.	7.9	19
14	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.	1.0	4
15	Active Load-Sensitive Electro-Hydrostatic Actuator for More Electric Aircraft. Applied Sciences (Switzerland), 2020, 10, 6978.	2.5	14
16	Viscous Loss Analysis of the Flooded Electro-Hydrostatic Actuator Motor under Laminar and Turbulent Flow States. Processes, 2020, 8, 975.	2.8	8
17	Adaptive Repetitive Control of A Linear Oscillating Motor under Periodic Hydraulic Step Load. Sensors, 2020, 20, 1140.	3.8	2
18	Design, Analysis, and Verification of an Electro- Hydrostatic Actuator for Distributed Actuation System. Sensors, 2020, 20, 634.	3.8	10

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19	Nonlinear Synchronous Control for H-Type Gantry Stage Used in Electric VehiclesManufacturing. Energies, 2019, 12, 2305.	3.1	2
20	Electromagnetic Modeling and Structure Optimization of a Spherical Force Sensing System. Sensors, 2019, 19, 552.	3.8	2
21	Enhanced Bandwidth Nonlinear Resonance Electromagnetic Human Motion Energy Harvester Using Magnetic Springs and Ferrofluid. IEEE/ASME Transactions on Mechatronics, 2019, 24, 710-717.	5.8	33
22	Design and Simulation OF high-flow high-speed on-off valve driven by piezoelectric. , 2019, , .		1
23	Simulation and verification of pressure characteristics of aircraft hydraulic power system. , 2019, , .		0
24	Driving Controller for the Digital On-off Valve Array. , 2019, , .		2
25	Control of Twin Direct-Drive Motor System Using Wire Rope. , 2019, , .		0
26	An aircraft brake system matching design based on braking efficiency. , 2019, , .		0
27	Magnetic Field Modeling and Analysis of Spherical Actuator With Two-Dimensional Longitudinal Camber Halbach Array. IEEE Transactions on Industrial Electronics, 2019, 66, 9112-9121.	7.9	20
28	Study on Compound Control of Hydraulic Motor with Servo Valve and Secondary Regulation. , 2019, , .		0
29	Design and experiments of a novel linear pump for fluid delivery applications requiring low flow pulsation driven by linear oscillating motor. , 2019, , .		1
30	Multiobjective Optimization of a Hollow Plunger Type Solenoid for High Speed On/Off Valve. IEEE Transactions on Industrial Electronics, 2018, 65, 3115-3124.	7.9	53
31	Analysis of the dynamic performance of an electro-hydrostatic actuator and improvement methods. Chinese Journal of Aeronautics, 2018, 31, 2312-2320.	5.3	28
32	Nonlinear Adaptive Control of Hydraulic System With Observing and Compensating Mismatching Uncertainties. IEEE Transactions on Control Systems Technology, 2018, 26, 927-938.	5.2	59
33	Motion Synchronous Composite Decoupling with Fewer Sensors on Multichannel Hydraulic Force Control for Aircraft Structural Loading Test System. Sensors, 2018, 18, 4050.	3.8	5
34	Load-Sensing Pump Design to Reduce Heat Generation of Electro-Hydrostatic Actuator Systems. Energies, 2018, 11, 2266.	3.1	13
35	Multi-Objective Optimization Design of an Electrohydrostatic Actuator Based on a Particle Swarm Optimization Algorithm and an Analytic Hierarchy Process. Energies, 2018, 11, 2426.	3.1	16
36	Comparative Study of the Dual Layer Magnet Array in a Moving-Coil Tubular Linear PM Motor. Sensors, 2018, 18, 1854.	3.8	1

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37	RISE-Based Adaptive Control of Hydraulic Systems With Asymptotic Tracking. IEEE Transactions on Automation Science and Engineering, 2017, 14, 1524-1531.	5.2	144
38	Magnetic flux field analysis of slotless PM linear machine with multiple tubular movers. International Journal of Applied Electromagnetics and Mechanics, 2017, 53, 685-695.	0.6	1
39	Review of fluid and control technology of hydraulic wind turbines. Frontiers of Mechanical Engineering, 2017, 12, 312-320.	4.3	20
40	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.	0.6	0
41	An electromagnetic wearable 3-DoF resonance human body motion energy harvester using ferrofluid as a lubricant. Applied Energy, 2017, 197, 364-374.	10.1	69
42	Efficiency analysis of moving-magnet linear oscillating motor with dual-resonance for linear electro-hydrostatic actuator. Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 2017, 231, 2487-2501.	1.3	4
43	Adaptive nonlinear robust relative pose control of spacecraft autonomous rendezvous and proximity operations. ISA Transactions, 2017, 67, 47-55.	5.7	17
44	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.	1.3	12
45	Robust Nonlinear Adaptive Relative Pose Control for Cooperative Spacecraft During Rendezvous and Proximity Operations. IEEE Transactions on Control Systems Technology, 2017, 25, 1840-1847.	5.2	46
46	Design of a Tubular Linear Oscillating Motor With a Novel Compound Halbach Magnet Array. IEEE/ASME Transactions on Mechatronics, 2017, 22, 498-508.	5.8	45
47	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.	7.9	35
48	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.	7.9	163
49	Design, analysis and experiments of novel short-stroke linear loading system based on axial-magnetized voice-coil motor for linear oscillating actuator. , 2017, , .		0
50	Propulsion efficiency of flapping flight robots. , 2017, , .		0
51	Modeling and analysis of servo valve torque motor based on FEM. , 2017, , .		4
52	A novel flat linear switched reluctance motor with doubly-excited windings. , 2017, , .		2
53	Design and modeling of double excitation windings linear switched reluctance motor. , 2017, , .		2
54	Analysis of linear oscillating motor position output dynamic performance with external force load. , 2017, , .		0

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55	Modeling and synchronous control for target motion simulators driven by dual linear motors. , 2017, , .		0
56	Parameter analysis of a novel planar motor with dual-layer magnetic array. , 2017, , .		0
57	Linear motor tracking control based on adaptive robust control and extended state observer. , 2017, , .		2
58	LQR lateral-directional control law design for distributed propulsion layout flying wing. , 2017, , .		2
59	Investigation the load matching of direct pressure valve controlled variable mechanism of axial variable piston pump. , 2017, , .		2
60	Segmented lamination stator optimization of linear oscillating motor based on magnetic field and thermal network coupling analysis. , 2017, , .		2
61	Integrated design of the electric test system for aircraft brake controller. , 2017, , .		0
62	Design and modeling of a novel self-powered brake system for MEA. , 2017, , .		0
63	Eliminate the surplus torque of electro-hydraulic load simulator using the actuator command dynamic compensation control. , 2016, , .		0
64	Design and Comparative Study of Dual Magnet Array for Linear Load Simulation System. , 2016, , .		1
65	Pull-pull position control of dual motor wire rope transmission. Review of Scientific Instruments, 2016, 87, 085001.	1.3	2
66	Uncertain parameters variable structure neural network identifier in spherical actuator control system. , 2016, , .		0
67	Magnetic field analysis of novel spherical actuators with three-dimensional pole arrays. Review of Scientific Instruments, 2016, 87, 065006.	1.3	8
68	Analyses and simulations of propulsion mechanisms for flapping wings with the extension of Undulate Propulsion Theory. , 2016, , .		0
69	Novel design and kinematics modeling for delta robot with improved end effector. , 2016, , .		1
70	Analysis of the controller with disturbance observer on two direct drive motor system. , 2016, , .		1
71	Structure optimization of permanent magnet spherical motor utilizing improved Particle Swarm algorithm. , 2016, , .		3
72	Aircraft anti-skid braking control based on pressure servo control using high-speed on/off valve. , 2016, , .		3

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73	The optimization of aircraft bay door control method. , 2016, , .		1
74	Fractional model reference adaptive control for electro-hydraulic servo system. , 2016, , .		0
75	Compact Traveling Wave Micromotor Based on Shear Electromechanical Coupling. IEEE/ASME Transactions on Mechatronics, 2016, 21, 1572-1580.	5.8	32
76	Dual linear motors synchronous control for horizontal axis of far-field target motion simulators. , 2016, , .		0
77	Analysis on the flow requirement of an aircraft hydraulic energy system. , 2016, , .		0
78	Resonant frequency recognition and tracking for linear oscillating motor under hydraulic load. , 2016, , .		1
79	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
80	Novel design and kinematics modeling for delta robot with improved end effector. , 2016, , .		0
81	Efficient active control of fluid borne pulsation in hydraulic piping systems. , 2016, , .		1
82	A compact design of pulsation attenuator for hydraulic pumps. , 2016, , .		6
83	Preliminary design and simulation of electro-hydrostatic actuator with modelica. , 2016, , .		2
84	Influence of stator parameters on output performance of linear switched reluctance motor. , 2016, , .		0
85	Research on a new direct drive electro-hydraulic proportional pressure valve for aircraft braking system. , 2016, , .		1
86	Design and analysis of linear oscillating motor for linear pump application-magnetic field, dynamics and thermotics. Frontiers of Mechanical Engineering, 2016, 11, 351-362.	4.3	2
87	Thermal optimization of a tubular linear oscillating motor for directly driven LEHA application. Numerical Heat Transfer; Part A: Applications, 2016, 69, 383-400.	2.1	7
88	Robust adaptive relative position and attitude control for spacecraft autonomous proximity. ISA Transactions, 2016, 63, 11-19.	5.7	14
89	Optimization of a spool valve to reduce pressure ripple in a collaborative rectification pump. , 2015, , .		1
90	Position control research based on wire rope connected twin directdrive motor system. , 2015, , .		2

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91	Dynamics modeling and load analysis of linear motor for LEHA system. , 2015, , .		3
92	Modeling of torque output and magnetic force for novel spherical actuator with three-dimensional pole arrays. , 2015, , .		2
93	Design of a novel integrated position sensor based on Hall effects for linear oscillating actuator. Review of Scientific Instruments, 2015, 86, 075001.	1.3	9
94	Novel tubular switched reluctance motor with double excitation windings: Design, modeling, and experiments. Review of Scientific Instruments, 2015, 86, 125004.	1.3	4
95	A Streaming Potential/Currentâ€Based Microfluidic Direct Current Generator for Selfâ€Powered Nanosystems. Advanced Materials, 2015, 27, 6482-6487.	21.0	104
96	Research on Aircraft Attack Angle Control Considering Servo-Loop Dynamics. International Journal of Aerospace Engineering, 2015, 2015, 1-7.	0.9	1
97	Aircraft anti-skid braking control with flow servo-valve. , 2015, , .		1
98	A new design of the variable-pressure hydraulic pump. , 2015, , .		0
99	Augmented PD control method for permanent magnet spherical actuators with 3D magnet array. , 2015, , .		0
100	Analysis for the power loss of electro hydrostatic actuator and hydraulic actuator. , 2015, , .		12
101	A new approach based on undulate propulsion theory for flapping wing analysis and design. , 2015, , .		2
102	Modeling of magnetic field and design optimization for permanent-magnet spherical actuator in three dimensional space. , 2015, , .		1
103	Magnetic force model of spherical actuators with three-dimensional magnet array. , 2015, , .		1
104	Modeling, simulation and experiment study of electromagnetic performance for E-Type series linear oscillating motor. , 2015, , .		2
105	Design and analysis of a direct load sensing electro-hydrostatic actuator. , 2015, , .		9
106	Analysis of kinematics and dynamics of snake-like robot with joints of 4-DOF. , 2015, , .		4
107	Analysis and optimization of thermal effect for electromagnetic reciprocating linear machine. , 2015, , .		0
108	Design and modeling of tubular double excitation windings linear switched reluctance motor. , 2015, , .		4

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109	Design of novel double-layer compound stator for tubular linear oscillating motor. , 2015, , .		3
110	Capsule Robot for Obesity Treatment With Wireless Powering and Communication. IEEE Transactions on Industrial Electronics, 2015, 62, 1125-1133.	7.9	45
111	Flux Field and Thrust Analysis of Permanent-Magnet Linear Machines With Isolated Movers. IEEE Transactions on Magnetics, 2015, 51, 1-8.	2.1	5
112	A Practical Nonlinear Adaptive Control of Hydraulic Servomechanisms With Periodic-Like Disturbances. IEEE/ASME Transactions on Mechatronics, 2015, 20, 2752-2760.	5.8	137
113	Adaptive Control of Hydraulic Actuators With LuGre Model-Based Friction Compensation. IEEE Transactions on Industrial Electronics, 2015, 62, 6469-6477.	7.9	255
114	Nonlinear robust dual-loop control for electro-hydraulic load simulator. ISA Transactions, 2015, 59, 280-289.	5.7	33
115	A novel dynamic decoupling control algorithm for PMSA by utilizing single neural adaptive controllers. , 2015, , .		1
116	Design and modeling of tubular flux-switching permanent magnet linear motor. , 2014, , .		5
117	RISE-Based Precision Motion Control of DC Motors With Continuous Friction Compensation. IEEE Transactions on Industrial Electronics, 2014, 61, 7067-7075.	7.9	98
118	Equivalent Energized Coil Model for Magnetic Field of PM Spherical Actuator. , 2014, , .		1
119	Design and analysis of an improved Halbach tubular linear motor with non-ferromagnetic mover tube for direct-driven EHA. , 2014, , .		5
120	Magnetic field modeling of a linear permanent magnet motor with two isolated movers. , 2014, , .		0
121	Novel permanent magnet linear motor with isolated movers: Analytical, numerical and experimental study. Review of Scientific Instruments, 2014, 85, 105007.	1.3	16
122	Reliability modeling analysis for hydraulic/electro-hydrostatic dual redundant actuation system. , 2014, , .		2
123	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.	1.6	23
124	Analysis of the characteristics by modeling and simulation of actuator in flight control system. , 2014, , .		7
125	Hall-sensor-based orientation measurement method in three-dimensional space for electromagnetic actuators. , 2014, , .		1
126	Analysis of magnet layout in circumferential and axial direction for halbach PM arrays. , 2014, , .		3

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127	Adaptive Robust Control of DC Motors With Extended State Observer. IEEE Transactions on Industrial Electronics, 2014, 61, 3630-3637.	7.9	371
128	Analytical and Numerical Investigation on the Magnetic Field of Novel PM Spherical Actuator with Outer Rotor. , 2014, , .		4
129	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.	5.8	88
130	Extended-State-Observer-Based Output Feedback Nonlinear Robust Control of Hydraulic Systems With Backstepping. IEEE Transactions on Industrial Electronics, 2014, 61, 6285-6293.	7.9	576
131	High-Accuracy Tracking Control of Hydraulic Rotary Actuators With Modeling Uncertainties. IEEE/ASME Transactions on Mechatronics, 2014, 19, 633-641.	5.8	442
132	Armature Reaction Field and Inductance of Coreless Moving-Coil Tubular Linear Machine. IEEE Transactions on Industrial Electronics, 2014, 61, 6956-6965.	7.9	78
133	Compact piezoelectric micromotor with a single bulk lead zirconate titanate stator. Applied Physics Letters, 2013, 102, .	3.3	10
134	A new rotary voice coil motor suitable for short angular strokes-design, modeling and optimization. , 2013, , .		1
135	Design and study of digital power driver controller for a kind of voice coil motor. , 2012, , .		2
136	A novel two degree-of-freedom ultrasonic planar motor driven by single stator. , 2012, , .		3
137	Magnetic field analysis of electromagnetic spherical actuators with multiple radial poles. , 2012, , .		12
138	Two layer optimal control for a class of “gray-box” system, theory and experiment. , 2012, , .		0
139	Development research of reflection-absorption compound type fluid pulsation attenuator. , 2012, , .		2
140	Nanogenerator as an active sensor for vortex capture and ambient wind-velocity detection. Energy and Environmental Science, 2012, 5, 8528.	30.8	77
141	Back-iron effect of tubular linear motors with dual Halbach permanent magnet arrays. , 2012, , .		2
142	Force formulation of a three-phase tubular linear machine with dual Halbach array. , 2012, , .		3
143	Posture Control of Electromechanical-Actuator-Based Thrust Vector System for Aircraft Engine. IEEE Transactions on Industrial Electronics, 2012, 59, 3561-3571.	7.9	21
144	Parametric analysis of tubular linear machines. , 2011, , .		1

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145	Design of a power amplifer with energy recovery strategy for piezoelectric actuators. , 2011, , .		3
146	Leakage calculation and control of vane Swing Hydraulic Motor based on ANSYS. , 2011, , .		1
147	Design and simulation of Voice Coil Motor for the micro-electric load simulator. , 2011, , .		3
148	Adaptive path following control of car-like mobile robot using dynamic model. , 2011, , .		2
149	Nonlinear control of aircraft on ground runway keeping. , 2011, , .		3
150	Design and numerical simulation of a continuable and bidirectional piezo-hydraulic servo pump. , 2011, , .		4
151	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
152	The Nonlinear Accuracy Model of Electro-Hydrostatic Actuator. , 2008, , .		18
153	An Information Integration Framework Based on XML to Support Mechatronics Multi-disciplinary Design. , 2008, , .		2
154	Ontology-based information integration framework for mechatronics system multi-disciplinary design. , 2008, , .		0
155	Visual Location System for Placement Machine Based on Machine Vision. , 2008, , .		6