Weiyu Zhang

List of Publications by Year
in descending order

87	1,182	566801 15	433756 31
papers	citations	h-index	g-index

87	87	87	686
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Speed-Sensorless Vector Control of a Bearingless Induction Motor With Artificial Neural Network Inverse Speed Observer. IEEE/ASME Transactions on Mechatronics, 2013, 18, 1357-1366.	3.7	222
2	High-Performance Control for a Bearingless Permanent-Magnet Synchronous Motor Using Neural Network Inverse Scheme Plus Internal Model Controllers. IEEE Transactions on Industrial Electronics, 2016, 63, 3479-3488.	5.2	200
3	Nonlinear Model Analysis and â€œSwitching Modelâ€•of ACâ€“DC Three-Degree-of-Freedom Hybrid Magnetic Bearing. IEEE/ASME Transactions on Mechatronics, 2016, 21, 1102-1115.	3.7	38
4	Multiobjective Optimization Design of Permanent Magnet Assisted Bearingless Synchronous Reluctance Motor Using NSGA-â…¡. IEEE Transactions on Industrial Electronics, 2021, 68, 10477-10487.	5.2	37
5	Active Disturbance Rejection Decoupling Control for Three-Degree-of- Freedom Six-Pole Active Magnetic Bearing Based on BP Neural Network. IEEE Transactions on Applied Superconductivity, 2020, 30, 1-5.	1.1	34
6	Active disturbance rejection control of 5-degree-of-freedom bearingless permanent magnet synchronous motor based on fuzzy neural network inverse system. ISA Transactions, 2020, 101, 295-308.	3.1	32
7	Nonlinear flux linkage modeling of a bearingless permanent magnet synchronous motor based on AW-LSSVM regression algorithm. International Journal of Applied Electromagnetics and Mechanics, 2016, 51, 151-159.	0.3	31
8	Control System Design for a Five-Degree-of-Freedom Electrospindle Supported With AC Hybrid Magnetic Bearings. IEEE/ASME Transactions on Mechatronics, 2015, 20, 2525-2537.	3.7	29
9	Design of Bearingless Flux-Switching Permanent-Magnet Motor. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-5.	1.1	29
10	Rotor Displacement Self-Sensing Modeling of Six-Pole Radial Hybrid Magnetic Bearing Using Improved Particle Swarm Optimization Support Vector Machine. IEEE Transactions on Power Electronics, 2020, 35, 12296-12306.	5.4	27
11	Torque Ripple Minimization for Bearingless Synchronous Reluctance Motor. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-5.	1.1	23
12	Optimization Design of Bearingless Synchronous Reluctance Motor. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-5.	1.1	20
13	Rotor radial displacement sensorless control of bearingless permanent magnet synchronous motor based on MRAS and suspension force compensation. ISA Transactions, 2020, 103, 306-318.	3.1	20
14	Improved Model and Experiment for AC-DC Three-Degree-of-Freedom Hybrid Magnetic Bearing. IEEE Transactions on Magnetics, 2013, 49, 5554-5565.	1.2	18
15	Precision Modeling Method Specifically for AC Magnetic Bearings. IEEE Transactions on Magnetics, 2013, 49, 5543-5553.	1.2	17
16	Suspension Force Error Source Analysis and Multidimensional Dynamic Model for a Centripetal Force Type-Magnetic Bearing. IEEE Transactions on Industrial Electronics, 2020, 67, 7617-7628.	5.2	16
17	Modeling and Decoupling Control for Rotor System in Magnetic Levitation Wind Turbine. IEEE Access, 2017, 5, 15516-15528.	2.6	15
18	Modeling for Three-Pole Radial Hybrid Magnetic Bearing Considering Edge Effect. Energies, 2016, 9, 345.	1.6	14

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19	Compensation control of suspension force for LSâ€BLPMSM. IET Electric Power Applications, 2017, 11, 622-630.	1.1	14
20	Modeling Based on Exact Segmentation of Magnetic Field for a Centripetal Force Type-Magnetic Bearing. IEEE Transactions on Industrial Electronics, 2019, , 1-1.	5.2	14
21	Modeling of bearingless permanent magnet synchronous motor based on mechanical to electrical coordinates transformation. Science in China Series D: Earth Sciences, 2009, 52, 3736-3744.	0.9	13
22	A Novel Vehicle-Mounted Magnetic Suspension Flywheel Battery With a Virtual Inertia Spindle. IEEE Transactions on Industrial Electronics, 2022, 69, 5973-5983.	5.2	13
23	Rotor Mass Eccentricity Vibration Compensation Control in Bearingless Induction Motor. Advances in Mechanical Engineering, 2015, 7, 168428.	0.8	11
24	Radial Force-Current Characteristics Analysis of Three-Pole Radial-Axial Hybrid Magnetic Bearings and Their Structure Improvement. Energies, 2016, 9, 706.	1.6	11
25	Soft Sensing Modeling of Magnetic Suspension Rotor Displacements Based on Continuous Hidden Markov Model. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-5.	1.1	11
26	Rotor Displacement Self-Sensing Method for Six-Pole Radial Hybrid Magnetic Bearing Using Mixed-Kernel Fuzzy Support Vector Machine. IEEE Transactions on Applied Superconductivity, 2020, 30, 1-4.	1.1	11
27	Multiobjective Optimization Design of Outer Rotor Coreless Bearingless Permanent Magnet Synchronous Motor. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 5489-5498.	3.7	11
28	Stability Control for a Centripetal Force Type-Magnetic Bearing-Rotor System Based on Golden Frequency Section Point. IEEE Transactions on Industrial Electronics, 2021, 68, 12482-12492.	5.2	11
29	Decoupling control based on linear/nonâ€linear active disturbance rejection switching for threeâ€degreeâ€ofâ€freedom sixâ€pole active magnetic bearing. IET Electric Power Applications, 2020, 14, 1818-1827.	1.1	11
30	Analysis of inductance characteristics for a bearingless permanent magnet synchronous motor. Electrical Engineering, 2013, 95, 277-286.	1.2	10
31	State Estimation of Permanent Magnet Synchronous Motor Using Improved Square Root UKF. Energies, 2016, 9, 489.	1.6	10
32	Magnetic Field Equivalent Current Analysis-Based Radial Force Control for Bearingless Permanent Magnet Synchronous Motors. Energies, 2015, 8, 4920-4942.	1.6	9
33	Design and simulation of control system for bearingless synchronous reluctance motor. , 2005, , .		8
34	Suspension force control of bearingless permanent magnet slice motor based on flux linkage identification. ISA Transactions, 2015, 57, 322-328.	3.1	8
35	Speed Control of Bearingless Permanent Magnet Synchronous Motor Based on Flux Strengthening and Voltage Regulation. IEEE Access, 2018, 6, 72392-72401.	2.6	8
36	Multi-Objective Parameter Optimization-Based Design of Six-Pole Radial Hybrid Magnetic Bearing. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 4526-4535.	3.7	8

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37	Basic Characteristics and Design of a Novel Hybrid Magnetic Bearing for Wind Turbines. Energies, 2016, 9, 905.	1.6	7
38	Radial Force-Current Characteristic Analysis of Three-Pole Radial-Axial HMB. , 2016, , .		7
39	Optimization Design of Bearingless Permanent-Magnet Slice Motor. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-4.	1.1	7
40	Design and analysis of a centripetal force type-magnetic bearing for a flywheel battery system. Review of Scientific Instruments, 2018, 89, 064708.	0.6	7
41	Improved Centripetal Force Type-Magnetic Bearing with Superior Stiffness and Anti-interference Characteristics for Flywheel Battery System. International Journal of Precision Engineering and Manufacturing - Green Technology, 2020, 7, 713-726.	2.7	7
42	Dynamic Correction Model Considering Influence of Foundation Motions for a Centripetal Force Type-Magnetic Bearing. IEEE Transactions on Industrial Electronics, 2021, 68, 9811-9821.	5.2	7
43	Research of a Six-Pole Active Magnetic Bearing System Based on a Fuzzy Active Controller. Electronics (Switzerland), 2022, 11, 1723.	1.8	7
44	Structure and performance analysis for AC-DC three degrees of freedom active magnetic bearings. , 2009, , .		6
45	Decoupling control of bearingless synchronous reluctance motor based on inverse system method. , 2010, , .		6
46	Direct torque and direct suspension force control of bearingless permanent magnet synchronous motor. , 2010, , .		6
47	Radial position control of a magnetically suspended rotor system in a direct-driven spindle using inverse system scheme. Transactions of the Institute of Measurement and Control, 2016, 38, 1073-1086.	1.1	6
48	Sensorless Control of Bearingless Permanent Magnet Synchronous Motor Based on LS-SVM Inverse System. Electronics (Switzerland), 2021, 10, 265.	1.8	6
49	Displacement Estimation of Six-Pole Hybrid Magnetic Bearing Using Modified Particle Swarm Optimization Support Vector Machine. Energies, 2022, 15, 1610.	1.6	6
50	Research on Operation Principle and Control of Novel Hybrid Excitation Bearingless Permanent Magnet Generator. Energies, 2016, 9, 673.	1.6	5
51	Backstepping control of threeâ€pole radial hybrid magnetic bearing. IET Electric Power Applications, 2020, 14, 1405-1411.	1.1	5
52	Vibration Compensation Control of BPMSM With Dead-Time Effect Based on Adaptive Neural Network Band-Pass Filter. IEEE Transactions on Power Electronics, 2022, 37, 7145-7155.	5.4	5
53	Analytical Model of a Dual Rotor Radial Flux Wind Generator Using Ferrite Magnets. Energies, 2016, 9, 672.	1.6	4
54	Direct Control of Bearingless Permanent Magnet Slice Motor Based on Stator Flux Observer. , 2018, , .		4

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55	Principle and Performance Analysis for Heterpolar Permanent Magnet Biased Radial Hybrid Magnetic Bearing. IEEE Transactions on Applied Superconductivity, 2020, 30, 1-4.	1.1	4
56	Self-Sensing Technology of Rotor Displacement for Six-Pole Radial Active Magnetic Bearing Using Improved Quantum Particle Swarm Optimized Cubature Kalman Filter. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 2881-2889.	3.7	4
57	Design and realization of a digital control system for a 4 kW bearingless permanent magnet slice motor. , 2005, , .		3
58	Nonlinear decoupling control for 5 degrees-of-freedom bearingless permanent magnet synchronous motor. , 2009, , .		3
59	Decoupling control of AC-DC-3DOF-HMB based on inverse system method. , 2010, , .		3
60	Fiber optic gyro signal random drift testing and noise error analysis. , 2010, , .		3
61	Design and Optimization of Bearingless Permanent Magnetic Synchronous Motors. IEEE Transactions on Applied Superconductivity, 2016, , 1-1.	1.1	3
62	Design and Analysis of Two Permanent-Magnet-Assisted Bearingless Synchronous Reluctance Motors with Different Rotor Structure. Energies, 2021, 14, 879.	1.6	3
63	Parameter Design of Six-Pole Hybrid Magnetic Bearing Considering Variable Stiffness. IEEE Transactions on Applied Superconductivity, 2020, 30, 1-5.	1.1	3
64	Structure and control of AC-DC three-degree-of-freedom hybrid magnetic bearing. , 2005, , .		2
65	Decoupling Control of Magnetically Levitated Induction Motor with Inverse System Theory. , 2006, , .		2
66	Bearingless motorâ€™s radial suspension force control based on flux equivalent with virtual winding current analysis method. Science Bulletin, 2009, 54, 1590-1598.	4.3	2
67	Mathematical model and control technology of bearingless PMSM. , 2010, , .		2
68	Decoupling control of AC Hybrid Magnetic Bearing based on active disturbance rejection. , 2011, , .		2
69	Direct suspension force control of bearingless permanent magnet synchronous motor. , 2012, , .		2
70	Direct control of rotor eccentric displacement for bearingless Permanent Magnet-type slice motor. , 2012, , .		2
71	Bearingless motor's radial suspension force control based on virtual winding current analysis. , 2014, , .		2
72	A Novel Bearingless Flux-Switching Permanent Magnet Motor. , 2016, , .		2

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73	Principle and performance analysis for sixâ€pole hybrid magnetic bearing with a secondary air gap. Electronics Letters, 2021, 57, 548.	0.5	2
74	Mathematical modelling and control of bearingless brushless direct current machine with motor and generator double modes for flywheel battery. IET Power Electronics, 2022, 15, 1249-1263.	1.5	2
75	Digital Control System on Bearingless Permanent Magnet-type Synchronous Motors. , 2006, , .		1
76	Rotor Suspension Principle and Decoupling Control for Self-bearing Induction Motors. , 2006, , .		1
77	Suspension Principle and Digital Control for Bearingless Permanent Magnet Slice Motors. , 2006, , .		1
78	Sliding mode variable structure control for radial suspension forces of bearingless permanent magnet synchronous motor based on inverse system method. , 2009, , .		1
79	State feedback decoupling control of AC 5 degrees of freedom hybrid magnetic bearings. , 2011, , .		1
80	A Novel Single Winding Structure and Closed Loop Control of the Suspension Force Vector of Bearingless Permanent Magnet Synchronous Motors. Energies, 2016, 9, 377.	1.6	1
81	Design and Analysis of Five-Phase Double-Stator Bearingless Brushless DC Motor. , 2016, , .		1
82	Decoupling analysis of a novel bearingless flux-switching permanent magnet motor. AIP Advances, 2017, 7, 056673.	0.6	1
83	Composite control of speed sensorless for bearingless permanent magnet synchronous motor. , 2018, , .		1
84	Controller of high-speed electro-spindle with AC HMBs based on optimal control theory. , 2009, , .		0
85	Dynamic decoupling control for radial position of bearingless induction motor based on neural networks inverse system. , 2009, , .		0
86	Human-computer interaction design of BPMSM control system with optimal communication protocol. , 2011, , .		0
87	Unity power factor control of dual permanent magnet synchronous motors fed by five-leg inverter system. , 2015, , .		0