Qunjing Wang

List of Publications by Year
in descending order

153 papers	1,488 citations	331670 21 h-index	414414 32 g-index
153 all docs	153 docs citations	153 times ranked	1236 citing authors

#	ARTICLE	IF	CITATIONS
1	Rotor Attitude Estimation for Spherical Motors Using Multiobject Kalman KCF Algorithm in Monocular Vision. IEEE Transactions on Industrial Electronics, 2023, 70, 265-275.	7.9	11
2	Estimate End-Winding Temperature for Water-Cooled Interior Permanent Magnet Motors Under Variable-Speed Driving Cycles: A Solution to the Exact Challenge. IEEE Transactions on Transportation Electrification, 2023, 9, 370-381.	7.8	1
3	Spherical Motor Position Detection Method Based on Accurate Modeling of Wireless Power Transmission. IEEE Transactions on Industrial Electronics, 2023, 70, 2855-2865.	7.9	2
4	Design and Starting Performance Study of a Soft-Start Brushless Doubly Fed Machine. IEEE Transactions on Energy Conversion, 2022, 37, 97-108.	5.2	4
5	Bearing Fault Diagnosis of Switched Reluctance Motor in Electric Vehicle Powertrain via Multisensor Data Fusion. IEEE Transactions on Industrial Informatics, 2022, 18, 2452-2464.	11.3	17
6	Optimal design of wireless power transmission system suitable for multi-degree-of-freedom motion devices. Journal of Electromagnetic Waves and Applications, 2022, 36, 457-478.	1.6	1
7	Analysis of winding MMF of PMSM with multi-phase and multi-layer layout using holospectrum method. International Journal of Applied Electromagnetics and Mechanics, 2022, 68, 387-403.	0.6	0
8	Time Delay Estimation Control of Permanent Magnet Spherical Actuator Based on Gradient Compensation. Electronics (Switzerland), 2022, 11, 66.	3.1	2
9	Multicoil torque modeling of reluctance spherical motor based on linear interpolation. International Journal of Applied Electromagnetics and Mechanics, 2022, , 1-19.	0.6	0
10	Attitude measurement of multi-DOF actuator based on multiple-inputs and single-output WPT system modeling. Measurement Science and Technology, 2022, 33, 085005.	2.6	1
11	Spherical actuator attitude measurement method based on multi-to-one WPT modeling. Measurement: Journal of the International Measurement Confederation, 2022, , 111346.	5.0	0
12	Adaptive backstepping sliding mode control of permanent magnet spherical motor based on disturbance observer. Review of Scientific Instruments, 2022, 93, 065002.	1.3	1
13	Toroidal expansion based modeling and analysis of spherical motor with stepped cylindrical permanent magnets. International Journal of Applied Electromagnetics and Mechanics, 2022, , 1-19.	0.6	0
14	Analysis of vibration characteristics of spherical bearing of three-degree-of-freedom motor with liquid suspension. Journal of Low Frequency Noise Vibration and Active Control, 2021, 40, 154-168.	2.9	1
15	Modeling and Analysis of Permanent Magnet Spherical Motors by a Multitask Gaussian Process Method and Finite Element Method for Output Torque. IEEE Transactions on Industrial Electronics, 2021, 68, 8540-8549.	7.9	18
16	A Closed-Form Analytical Method for Reliable Estimation of Equivalent Thermal Conductivity of Windings With Round-Profile Conductors. IEEE Transactions on Energy Conversion, 2021, 36, 1143-1155.	5.2	9
17	IoT-Based Signal Enhancement and Compression Method for Efficient Motor Bearing Fault Diagnosis. IEEE Sensors Journal, 2021, 21, 1820-1828.	4.7	32
18	Efficient Data Reduction at the Edge of Industrial Internet of Things for PMSM Bearing Fault Diagnosis. IEEE Transactions on Instrumentation and Measurement, 2021, , 1-1.	4.7	27

#	ARTICLE	IF	CITATIONS
19	Sensorless Posture Detection of Reluctance Spherical Motor Based on Mutual Inductance Voltage. Applied Sciences (Switzerland), 2021, 11, 3515.	2.5	9
20	Analytical Modeling of PM Electrical Machines With Eccentric Surface-Inset Halbach Magnets. IEEE Transactions on Magnetics, 2021, 57, 1-9.	2.1	8
21	Friction torque field distribution of a permanentâ€magnet spherical motor based on multiâ€physical field coupling analysis. IET Electric Power Applications, 2021, 15, 1045-1055.	1.8	8
22	Adaptive friction compensation robust control for permanent magnet spherical actuator under compound disturbance. Review of Scientific Instruments, 2021, 92, 075006.	1.3	2
23	Improved Active Disturbance Rejection Control of Dual-Axis Servo Tracking Turntable with Friction Observer. Electronics (Switzerland), 2021, 10, 2012.	3.1	5
24	General Analytical Optimization Model of Surface-Inset Electrical Machines With Even-/Odd-Segment Halbach. IEEE Transactions on Magnetics, 2021, 57, 1-9.	2.1	11
25	Multi-objective optimization design of spherical induction motor. , 2021, , .		0
26	Integration of Interturn Fault Diagnosis and Torque Ripple Minimization Control for Direct-Torque-Controlled SPMSM Drive System. IEEE Transactions on Power Electronics, 2021, 36, 11124-11134.	7.9	38
27	Geometrical Equivalence Principle Based Modeling and Analysis for Monolayer Halbach Array Spherical Motor With Cubic Permanent Magnets. IEEE Transactions on Energy Conversion, 2021, 36, 3241-3250.	5.2	8
28	Effect of different <scp>SVPWM</scp> modulation carrier forms on performance and loss of permanent magnet synchronous motor. International Transactions on Electrical Energy Systems, 2021, 31, e12642.	1.9	1
29	Development of a Fast Thermal Model for Calculating the Temperature of the Interior PMSM. Energies, 2021, 14, 7455.	3.1	2
30	A Nine-Level Inverter for Low-Voltage Applications. IEEE Transactions on Power Electronics, 2020, 35, 1659-1671.	7.9	32
31	A DC-Flux-Injection Method for Fault Diagnosis of High-Resistance Connection in Direct-Torque-Controlled PMSM Drive System. IEEE Transactions on Power Electronics, 2020, 35, 3029-3042.	7.9	42
32	The Optimal Speed-Torque Control of Asynchronous Motors for Electric Cars in the Field-Weakening Region Based on the RFR. IEEE Transactions on Industrial Electronics, 2020, 67, 9601-9612.	7.9	8
33	Robust Adaptive Sliding-Mode Control of a Permanent Magnetic Spherical Actuator With Delay Compensation. IEEE Access, 2020, 8, 128096-128105.	4.2	9
34	Torque Modelling and Validation for a Spherical Motor with Stepped Permanent Magnets. Journal of Electrical Engineering and Technology, 2020, 15, 2661-2673.	2.0	3
35	Investigation on the Measurement Method for Output Torque of a Spherical Motor. Applied Sciences (Switzerland), 2020, 10, 2510.	2.5	9
36	Optimum Split Ratio in Surface-Mounted Permanent Magnet Machines With Pieced Halbach Magnet Array. IEEE Transactions on Energy Conversion, 2020, 35, 1877-1885.	5.2	7

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37	Design and Analysis of Electromagnetic-Piezoelectric Hybrid Driven Three-Degree-of-Freedom Motor. Sensors, 2020, 20, 1621.	3.8	4
38	Torque Calculation of Permanent-Magnet Spherical Motor Based on Permanent-Magnet Surface Current and Lorentz Force. IEEE Transactions on Magnetics, 2020, 56, 1-9.	2.1	22
39	A Model-Based Strategy With Robust Parameter Mismatch for Online HRC Diagnosis and Location in PMSM Drive System. IEEE Transactions on Power Electronics, 2020, 35, 10917-10929.	7.9	13
40	Analytical Modeling and Optimization of Dual-Layer Segmented Halbach Permanent-Magnet Machines. IEEE Transactions on Magnetics, 2020, 56, 1-11.	2.1	22
41	Attitude estimation of a permanent magnet spherical motor based on an improved fast discriminative scale space tracking algorithm. Measurement Science and Technology, 2020, 31, 055005.	2.6	6
42	Drive Current Calculation and Analysis of Permanent Magnet Spherical Motor Based on Torque Analytical Model and Particle Swarm Optimization. IEEE Access, 2020, 8, 54722-54729.	4.2	7
43	Identification and control of the motor–drive servo turntable with the switched friction model. IET Electric Power Applications, 2020, 14, 843-849.	1.8	9
44	Optimization of Permanent-Magnet Spherical Motor Based on Taguchi Method. IEEE Transactions on Magnetics, 2020, 56, 1-7.	2.1	19
45	Performance Analysis and Comparison of two kinds of Double-layer Permanent Magnet Synchronous Motors. , 2020, , .		1
46	Adaptively Estimating Rotation Speed From DC Motor Current Ripple for Order Tracking and Fault Diagnosis. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 741-753.	4.7	25
47	Magnetic Field Analysis and Iron Loss Calculation of a Special Switched Reluctance Generator. Journal of Electrical Engineering and Technology, 2019, 14, 1991-2003.	2.0	4
48	Robust Adaptive Sliding-Mode Control for Permanent Magnet Spherical Actuator with Uncertainty Using Dynamic Surface Approach. Journal of Electrical Engineering and Technology, 2019, 14, 2341-2353.	2.0	16
49	A Study on Neutral-Point Potential in Three-Level NPC Converters. Energies, 2019, 12, 3367.	3.1	7
50	Optimization of Model Prediction Control for Permanent Magnet Synchronous Motor. , 2019, , .		0
51	Research on Vector Control Strategy of Surface-mounted Permanent Magnet Synchronous Machine Drive System with High-Resistance Connection. IEEE Transactions on Power Electronics, 2019, , 1-1.	7.9	29
52	Dynamic analysis and current calculation of a permanent magnet spherical motor for point–to–point motion. IET Electric Power Applications, 2019, 13, 426-434.	1.8	11
53	Analysis of Multi-Physics Coupling Field of Multi-Degree-of-Freedom Permanent Magnet Spherical Motor. IEEE Transactions on Magnetics, 2019, 55, 1-5.	2.1	15
54	Hierarchical Optimization Method for Energy Scheduling of Multiple Microgrids. Applied Sciences (Switzerland), 2019, 9, 624.	2.5	12

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55	Magnetic Field Calculation and Dynamics Simulation of a Permanent Magnetic Hybrid Driven 3-DOF Motor. Journal of Electrical Engineering and Technology, 2019, 14, 711-718.	2.0	2
56	Quantitative Fault Severity Estimation for High-Resistance Connection in PMSM Drive System. IEEE Access, 2019, 7, 26855-26866.	4.2	10
57	Tacholess Speed Estimation in Order Tracking: A Review With Application to Rotating Machine Fault Diagnosis. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 2315-2332.	4.7	132
58	Edge Computing: A Promising Framework for Real-Time Fault Diagnosis and Dynamic Control of Rotating Machines Using Multi-Sensor Data. IEEE Sensors Journal, 2019, 19, 4211-4220.	4.7	52
59	Magnetic field analysis and optimisation of permanent magnet machineswith novel two‐segment Halbach array. IET Electric Power Applications, 2019, 13, 1355-1364.	1.8	13
60	The Optimal "Speed-Torque" Control of Asynchronous Motors in the Field-Weakening Region Based on ADRC and ELM. , 2019, , .		1
61	Droop Control Method of Inverter Based on Variable Virtual Impedance. , 2019, , .		4
62	Neutral-Point Potential Balancing Control Strategy for Three-Level ANPC Converter Using SHEPWM Scheme. Energies, 2019, 12, 4328.	3.1	7
63	Bearing fault diagnosis of BLDC motor using Vold-Kalman order tracking filter under variable speed condition. , 2019, , .		2
64	A Simplified Virtual Space Vector Modulation Strategy for Four-level T-Type NNPC Converter. , 2019, , .		3
65	Model Predictive Control Of Permanent Magnet Synchronous Motor Based On Vector Synthesis. , 2019, , .		0
66	Intelligent Bearing Fault Diagnosis Based on Tacholess Order Tracking for a Variable-Speed AC Electric Machine. IEEE Sensors Journal, 2019, 19, 1850-1861.	4.7	24
67	Improving attitude detection performance for spherical motors using a MEMS inertial measurement sensor. IET Electric Power Applications, 2019, 13, 198-205.	1.8	31
68	Research on image segmentation method using a structure-preserving region model-based MRF. Cluster Computing, 2019, 22, 15329-15334.	5.0	3
69	Thrust Ripple Reduction in Permanent Magnet Synchronous Linear Motor Based on Tuned Viscoelastic Damper. IEEE Transactions on Industrial Electronics, 2019, 66, 977-987.	7.9	32
70	Electromagnetic performance analysis and thermal research of an outer‐rotor I‐shaped flux‐switching permanent‐magnet motor with considering driving cycles. IET Electric Power Applications, 2019, 13, 2052-2057.	1.8	2
71	Open-Phase Fault Detection in Delta-Connected PMSM Drive Systems. IEEE Transactions on Power Electronics, 2018, 33, 6456-6460.	7.9	19
72	Modelling of supercapacitors based on SVM and PSO algorithms. IET Electric Power Applications, 2018, 12, 502-507.	1.8	22

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73	Study On Neutral-point Potential Control for the APF Based on NPC Three-level Inverter. , 2018, , .		2
74	Study on the Electro-Thermal Characteristics of Three-Level NPC Inverter Based on 60Â°Discontinuous Space Vector PWM Strategy. , 2018, , .		1
75	Electromagnetic Modeling and Analysis of 3-DOF Permanent Magnet Spherical Motor Using Magnetic Equivalent Circuit Method. , 2018, , .		3
76	Clusters partition and zonal voltage regulation for distribution networks with high penetration of PVs. IET Generation, Transmission and Distribution, 2018, 12, 6041-6051.	2.5	27
77	A New Rotor Position Measurement Method for Permanent Magnet Spherical Motors. Applied Sciences (Switzerland), 2018, 8, 2415.	2.5	9
78	Direct Torque Control for Complementary Magnetic-Geared Double-Rotor Motor Using Space Vector Pulse Width Modulation. , 2018, , .		1
79	Loss reduction of permanent magnet synchronous machines based on three-level structure. , 2018, , .		0
80	Comparison of dynamic characteristics of field oriented control and model predictive control for permanent magnet synchronous motor. , 2018, , .		10
81	Inter-turn fault diagnosis of permanent magnet synchronous machine based on variational mode decomposition. , 2018, , .		2
82	Power loss analysis for five phase PMSM drive system with high-resistance connection fault. , 2018, , .		0
83	Demagnetisation fault detection in PMSM using zero sequence current components. Electronics Letters, 2017, 53, 148-150.	1.0	4
84	An Improved Virtual Space Vector Modulation Scheme for Three-Level Active Neutral-Point-Clamped Inverter. IEEE Transactions on Power Electronics, 2017, 32, 7419-7434.	7.9	88
85	Neutralâ€point potential balancing control strategy of threeâ€level active NPC inverter based on SHEPWM. IET Power Electronics, 2017, 10, 1943-1950.	2.1	35
86	A new control strategy of seamless transfer between grid-connected and islanding operation for micro-grid. , 2017, , .		12
87	Simulation and optimization of electric machine based on SIMULINK and genetic algorithm. , 2017, , .		1
88	A torque-injection-based method for stator temperature estimation of direct-torque-controlled permanent magnet synchronous motors. , 2017, , .		2
89	Temperature compensation strategy of output torque for permanent magnet synchronous motor based on BP neural network. , 2017, , .		0
90	A novel generalized multilevel converter with the application in D-STATCOM. , 2017, , .		2

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91	High-resistance connection fault severity detection in a permanent magnet synchronous machine drive system. , 2017, , .		5
92	Loss reduction of permanent magnet synchronous machines based on decoupling control strategy. , 2017, , .		1
93	Detection and estimation of high-resistance connection for inverter-fed permanent magnet synchronous machine drives. , 2017, , .		2
94	Sliding-mode control of permanent magnetic spherical motor based on co-simulation platform. , 2016, , .		3
95	A smooth changeover method of the hybrid control strategy for five-level active NPC converter. , 2016, , .		1
96	Effect on harmonic performance for three-level ANPC converter with small change in SHEPWM switch angles. , 2016, , .		10
97	Study on neutral-point potential control for the NPC three-level converter. , 2016, , .		2
98	Levitation Mechanism and Improvements of 3-DOF Deflection Type PM Actuator. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-5.	1.7	9
99	Switched system identification based on the constrained multi-objective optimization problem with application to the servo turntable. International Journal of Control, Automation and Systems, 2016, 14, 1153-1159.	2.7	24
100	Detection of Interturn Short-Circuit Fault for PMSM With Simple Fault Indicator. IEEE Transactions on Energy Conversion, 2016, 31, 1697-1699.	5.2	63
101	Study of predictive direct power control for three-level NPC converter. , 2016, , .		4
102	Sensorless vector control system of induction motor by nonlinear full-order observer. , 2016, , .		2
103	Design of Bi-directional DC-DC converter. , 2016, , .		5
104	Synchronization of stochastic complex networks using nonlinear optimal control. , 2016, , .		0
105	Research on asynchronous motor rotor flux model based on PR controller. , 2015, , .		2
106	Research on position detection of spherical motor based on magnetic field measurement. , 2015, , .		0
107	Analysis on electromagnetic calculation method of bilateral closed-slot submersible motor. , 2015, , .		1
108	Switched system modeling for the radar antenna servo turntable. , 2015, , .		4

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109	Parameters estimation of IM with the Extended Kalman filter and least-squares. , 2015, , .		1
110	Modeling and simulation of a permanent magnetic spherical motor based on solidworks and ADAMS. , 2015, , .		0
111	Application of fuzzy PID with loss balancing control in three-level active NPC inverter. , 2015, , .		2
112	Voltage differential feedback control for three-phase PV inverter based on repetitive control. , 2014, , .		0
113	Adaptive fuzzy tracking control based on backstepping for permanent magnet spherical motor. , 2014, , .		2
114	A SVPWM based on fluctuate capacitor voltage in 3L-NPC back-to-back converter applied to wind energy. , 2014, , .		5
115	Analyze and improve lifetime in 3L-NPC inverter from power cycle and thermal balance. , 2014, , .		2
116	Rotor orientation detection method of spherical motor based on single 2-DOF optical sensor. , 2014, , .		3
117	Adaptive fuzzy decoupling control for permanent magnet spherical motor dynamic system. , 2014, , .		0
118	Research of orientation detection method for spherical motor and effect on PD control system based on machine vision. , 2014, , .		3
119	Implementation of a cascade D-STATCOM under unbalanced conditions. , 2014, , .		4
120	Analyze and compare the efficiency of two-level and three-level inverter in SVPWM. , 2014, , .		8
121	Design and analysis of permanent magnetic spherical motor with cylindrical poles. , 2013, , .		4
122	Adaptive output feedback control for permanent magnet spherical motor by fuzzy approximation approach. , 2013, , .		0
123	Nonlinear optimal control of stochastic recurrent neural networks with multiple time delays. , 2012, , .		0
124	Optimal Design of Low-Speed Permanent Magnet Generator for Wind Turbine Application. , 2012, , .		8
125	Design techniques for reducing cogging torque in low-speed permanent magnet wind power generator. , 2011, , .		2
126	Optimization design of three-phase asynchronous motor based on Multi-objective Ant Colony Algorithm. , 2011, , .		3

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127	Vision based orientation detection method and control of a spherical motor. , 2010, , .		3
128	Inverse optimal noiseâ€toâ€state stabilization of stochastic recurrent neural networks driven by noise of unknown covariance. Optimal Control Applications and Methods, 2009, 30, 163-178.	2.1	13
129	Torque modeling and control algorithm of a permanent magnetic spherical motor. , 2009, , .		21
130	Modeling and optimization of spherical motor based on support vector machine and chaos. , 2009, , .		1
131	Studies on vision based absolute orientation detection method of spherical motor. , 2009, , .		7
132	Research on an improved hybrid current control method for APF based on four-leg voltage-source inverters. , 2009, , .		0
133	Global Robust Stabilizing Control for a Dynamic Neural Network System. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2009, 39, 426-436.	2.9	21
134	Further Development of Input-to-State Stabilizing Control for Dynamic Neural Network Systems. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2008, 38, 1425-1433.	2.9	23
135	Research on modeling and robust adaptive control of a novel permanent magnet spherical stepper motor. , 2008, , .		0
136	Robust neural network controller design for permanent magnet spherical stepper motor. , 2008, , .		1
137	Optimization and heat analysis of PM spherical stepper motor. , 2008, , .		0
138	Simulation of current control for a permanent magnet spherical stepper motor. , 2007, , .		6
139	Pole-shape optimization and thermal analysis of PM spherical stepper motor. , 2007, , .		0
140	Modeling and control of a permanent magnet spherical stepper motor. , 2007, , .		4
141	Analysis and comparison of conduction losses in neutral-point-clamped three-level inverter with PWM control. , 2007, , .		8
142	A theoretical study of neutral point voltage balancing problem in three-level neutral- point-clamped PWM VSI. , 2007, , .		5
143	Magnetic field computation of a PM spherical stepper motor using integral equation method. IEEE Transactions on Magnetics, 2006, 42, 731-734.	2.1	48
144	Simulation of Fuzzy Optimal Control Strategy on a Parallel Hybrid Electrical Vehicle. , 2006, , .		1

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145	System design and development of parallel-hybrid electric vehicle based on CAN bus. , 2005, , .		1
146	Motion Control Algorithm and Kinematic Analysis of a Spherical Stepper Motor. , 2005, , .		2
147	Application of MATLAB/SIMULINK and PSPICE simulation in teaching power electronics and electric drive system. , 2005, , .		12
148	Research on the mathematics model and parameter optimization of the claw-pole alternator. , 2005, , .		3
149	3D magnetic field analysis and torque calculation of a PM spherical motor. , 2005, , .		9
150	The simulation and analysis of DC motor driver system for the hybrid electric vehicle. , 0, , .		2
151	The motion control algorithm and orientation detection methodology of a spherical stepper motor. , 0, , .		1
152	A Deflectable Switched Reluctance Motor/Generator for Wave Energy Conversion and Underwater Propulsion Systems. Journal of Electrical Engineering and Technology, 0, , 1.	2.0	1
153	Continuous non‐singular terminal sliding‐mode control of permanent magnet spherical actuator for trajectory tracking based on a modified nonlinear disturbance observer. IET Electric Power Applications, 0, , .	1.8	1