

Kaiyuan Lu

List of Publications by Year in descending order

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84
docs citations

84
times ranked

1354
citing authors

#	ARTICLE	IF	CITATIONS
1	A Simple Startup Strategy Based on Current Regulation for Back-EMF-Based Sensorless Control of PMSM. IEEE Transactions on Power Electronics, 2012, 27, 3817-3825.	7.9	181
2	Square-Wave Voltage Injection Algorithm for PMSM Position Sensorless Control With High Robustness to Voltage Errors. IEEE Transactions on Power Electronics, 2017, 32, 5425-5437.	7.9	125
3	Minimum-Voltage Vector Injection Method for Sensorless Control of PMSM for Low-Speed Operations. IEEE Transactions on Power Electronics, 2016, 31, 1785-1794.	7.9	112
4	An Active Damping Technique for Small DC-Link Capacitor Based Drive System. IEEE Transactions on Industrial Informatics, 2013, 9, 848-858.	11.3	85
5	Artificial Inductance Concept to Compensate Nonlinear Inductance Effects in the Back EMF-Based Sensorless Control Method for PMSM. IEEE Transactions on Energy Conversion, 2013, 28, 593-600.	5.2	66
6	Cogging Torque Reduction by Slot-Opening Shift for Permanent Magnet Machines. IEEE Transactions on Magnetics, 2013, 49, 4028-4031.	2.1	61
7	A New Low-Cost Hybrid Switched Reluctance Motor for Adjustable-Speed Pump Applications. IEEE Transactions on Industry Applications, 2011, 47, 314-321.	4.9	60
8	Enhanced Position Sensorless Control Using Bilinear Recursive Least Squares Adaptive Filter for Interior Permanent Magnet Synchronous Motor. IEEE Transactions on Power Electronics, 2020, 35, 681-698.	7.9	52
9	Load Adaptive PMSM Drive System Based on an Improved ADRC for Manipulator Joint. IEEE Access, 2021, 9, 33369-33384.	4.2	48
10	Investigation of Flux-Linkage Profile Measurement Methods for Switched-Reluctance Motors and Permanent-Magnet Motors. IEEE Transactions on Instrumentation and Measurement, 2009, 58, 3191-3198.	4.7	44
11	Analysis and Design of Double-Sided Air Core Linear Servo Motor With Trapezoidal Permanent Magnets. IEEE Transactions on Magnetics, 2011, 47, 3236-3239.	2.1	39
12	DC-bus voltage control of grid-connected voltage source converter by using space vector modulated direct power control under unbalanced network conditions. IET Power Electronics, 2013, 6, 925-934.	2.1	38
13	Sensorless Control of Low-Cost Single-Phase Hybrid Switched Reluctance Motor Drive. IEEE Transactions on Industry Applications, 2015, 51, 2381-2387.	4.9	35
14	A New Load Torque Identification Sliding Mode Observer for Permanent Magnet Synchronous Machine Drive System. IEEE Transactions on Power Electronics, 2019, 34, 7852-7862.	7.9	35
15	A New Load Adaptive Identification Method Based on an Improved Sliding Mode Observer for PMSM Position Servo System. IEEE Transactions on Power Electronics, 2021, 36, 3211-3223.	7.9	35
16	Electromagnetic Lead Screw for Potential Wave Energy Application. IEEE Transactions on Magnetics, 2014, 50, 1-4.	2.1	32
17	Single-Phase Hybrid Switched Reluctance Motor for Low-Power Low-Cost Applications. IEEE Transactions on Magnetics, 2011, 47, 3288-3291.	2.1	30
18	Predictive Control of Low-Cost Three-Phase Four-Switch Inverter-Fed Drives for Brushless DC Motor Applications. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 1308-1318.	5.4	29

#	ARTICLE	IF	CITATIONS
19	Voltage Modulation Using Virtual Positive Impedance Concept for Active Damping of Small DC-Link Drive System. IEEE Transactions on Power Electronics, 2018, 33, 10611-10621.	7.9	28
20	Frequency splitting suppression method for four-coil wireless power transfer system. IET Power Electronics, 2016, 9, 2859-2864.	2.1	26
21	Improved Closed-Loop Flux Observer Based Sensorless Control Against System Oscillation for Synchronous Reluctance Machine Drives. IEEE Transactions on Power Electronics, 2019, 34, 4593-4602.	7.9	24
22	A Fast Estimation of Initial Rotor Position for Low-Speed Free-Running IPMSM. IEEE Transactions on Power Electronics, 2020, 35, 7664-7673.	7.9	24
23	Current measurement method for characterization of fast switching power semiconductors with Silicon Steel Current Transformer. , 2015, , .		22
24	Permanent Magnet Flux Online Estimation Based on Zero-Voltage Vector Injection Method. IEEE Transactions on Power Electronics, 2015, 30, 6506-6509.	7.9	20
25	Magnetic Field and Thrust Analysis of the U-Channel Air-Core Permanent Magnet Linear Synchronous Motor. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	19
26	Analysis of voltage modulation based active damping techniques for small DC-link drive system. , 2015, , .		18
27	Simple and Effective Online Position Error Compensation Method for Sensorless SPMSM Drives. IEEE Transactions on Industry Applications, 2020, 56, 1475-1484.	4.9	17
28	Robust plug-in repetitive control for speed smoothness of cascaded-PI PMSM drive. Mechanical Systems and Signal Processing, 2022, 163, 108090.	8.0	16
29	An Improved Anisotropic Vector Preisach Hysteresis Model Taking Account of Rotating Magnetic Fields. IEEE Transactions on Magnetics, 2019, 55, 1-4.	2.1	15
30	Robust Sensorless Control Against Thermally Degraded Speed Performance in an IM Drive Based Electric Vehicle. IEEE Transactions on Energy Conversion, 2020, 35, 896-907.	5.2	15
31	Real-time open-switch fault diagnosis in automotive permanent magnet synchronous motor drives based on Kalman filter. IET Power Electronics, 2020, 13, 2450-2460.	2.1	15
32	Permanent Magnet Eddy Current Loss Analysis of a Novel Motor Integrated Permanent Magnet Gear. IEEE Transactions on Magnetics, 2012, 48, 3005-3008.	2.1	12
33	New Helical-Shape Magnetic Pole Design for Magnetic Lead Screw Enabling Structure Simplification. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	12
34	A Flower Pollination Method Based Global Maximum Power Point Tracking Strategy for Point-Absorbing Type Wave Energy Converters. Energies, 2019, 12, 1343.	3.1	12
35	New Sensorless Vector Control System With High Load Capacity Based on Improved SMO and Improved FOO. IEEE Access, 2021, 9, 40716-40727.	4.2	12
36	A Novel Position Speed Integrated Sliding Mode Variable Structure Controller for Position Control of PMSM. IEEE Transactions on Industrial Electronics, 2022, 69, 12621-12631.	7.9	12

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37	Motor-Driven Giant Magnetostrictive Actuator. IEEE Transactions on Magnetics, 2015, 51, 1-7.	2.1	10
38	Design of Position Estimation Strategy of Sensorless Interior PMSM at Standstill Using Minimum Voltage Vector Injection Method. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	10
39	A new application and experimental validation of moulding technology for ferrite magnet assisted synchronous reluctance machine. , 2016, , .		9
40	A comparative study on pulse sinusoidal high frequency voltage injection and INFORM methods for PMSM position sensorless control. , 2016, , .		9
41	Comparative study of low-pass filter and phase-locked loop type speed filters for sensorless control of AC drives. CES Transactions on Electrical Machines and Systems, 2017, 1, 207-215.	3.5	9
42	Preliminary comparison study of drive motor for electric vehicle application. , 0, , .		8
43	Analysis of influence on back-EMF based sensorless control of PMSM due to parameter variations and measurement errors. , 2011, , .		8
44	Reduction Methods Using Canceling Effect for Cogging Torque in Dual-Stator PM Synchronous Machines. , 2019, , .		8
45	A New Low-Cost Hybrid Switched Reluctance Motor for Adjustable-Speed Pump Applications. Conference Record - IAS Annual Meeting (IEEE Industry Applications Society), 2006, , .	0.0	7
46	Improved INFORM method by minimizing the inverter nonlinear voltage error effects. , 2015, , .		7
47	High Torque Density Transverse Flux Machine Without the Need to Use SMC Material for 3-D Flux Paths. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	7
48	Stress-Based Variable Inductor for Electronic Ballasts. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	5
49	High-Frequency Signal Injection Method Based on Duty Cycle Shifting Without Maximum Fundamental Voltage Magnitude Loss. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2017, 5, 1225-1236.	5.4	5
50	Active DaMPing control methods for three-phase slim DC-link drive system. , 2017, , .		5
51	A New Position Detection and Status Monitoring System for Joint of SCARA. IEEE/ASME Transactions on Mechatronics, 2021, 26, 1613-1623.	5.8	5
52	Torque Analysis With Saturation Effects for Non-Salient Single-Phase Permanent-Magnet Machines. IEEE Transactions on Magnetics, 2011, 47, 1732-1738.	2.1	4
53	Design and Optimization of the New H-Module Linear Actuator. IEEE Transactions on Magnetics, 2012, 48, 4188-4191.	2.1	4
54	Transfer efficiency analysis of wireless power transfer system under frequency drift. Journal of Applied Physics, 2015, 117, 17E706.	2.5	4

#	ARTICLE	IF	CITATIONS
55	Extremum-seeking Control of Wave Energy Converters using Two-objective Flower Pollination Algorithm. , 2018, , .		4
56	Investigation of Various Position Estimation Accuracy Issues in Pulse-Injection-based Sensorless Drives. , 2018, , .		3
57	Online Identification of Intrinsic Load Current Dependent Position Estimation Error for Sensorless PMSM Drives. IEEE Access, 2020, 8, 163186-163196.	4.2	3
58	Design and development of a magnetic lead screw propulsion device for general transport system. IET Electric Power Applications, 2020, 14, 492-499.	1.8	3
59	Design and experiment of a magnetic lead screw for the pointâ€absorbing wave energy conversion system. IET Electric Power Applications, 2020, 14, 2146-2153.	1.8	3
60	Flux concentration and pole shaping in a single phase hybrid switched reluctance motor drive. , 2010, , .		2
61	A simple and general approach to determination of self and mutual inductances for AC machines. , 2011, , .		2
62	A New Energy-Based Method for 3-D Finite-Element Nonlinear Flux Linkage Computation of Electrical Machines. IEEE Transactions on Magnetics, 2011, 47, 3276-3279.	2.1	2
63	A new type of axial-flux magnetic lead screw with inherent spring characteristic. , 2016, , .		2
64	Micro Electromagnetic Vibration Energy Harvester with Mechanical Spring and Iron Frame for Low Frequency Operation. , 2018, , .		2
65	An H-module linear actuator for medical equipment applications. Journal of Applied Physics, 2012, 111, 07E714.	2.5	1
66	Force Characteristics of the H-Module Linear Actuator With Varying Tooth-Shift-Distance. IEEE Transactions on Magnetics, 2013, 49, 3842-3845.	2.1	1
67	A general and intuitive approach to understand and compare the torque production capability of AC machines. , 2014, , .		1
68	A new high frequency injection method based on duty cycle shifting without maximum voltage magnitude loss. , 2015, , .		1
69	Synchronous switching of non-line-start permanent magnet synchronous machines between inverter and grid drives. , 2016, , .		1
70	3D magnetic-resonance-coupling (MRC) localization of wireless capsule endoscopy. , 2016, , .		1
71	Modeling and analysis of current transformer for fast switching power module current measurement. , 2016, , .		1
72	Unified equivalent MMF concept for torque analysis of AC machines. , 2017, , .		1

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73	A New Micro Non-Resonant Electromagnetic Energy Harvester for Low-Frequency Vibration Applications. , 2018, , .		1
74	Simple and Effective Position Estimation Error Compensation Method for Sensorless SPMSM Drives. , 2018, , .		1
75	Pulse-Injection-Based Sensorless Control Method with Improved Dynamic Current Response for PMSM. , 2018, , .		1
76	Initial position detection for Selective Compliance Assembly Robot Arm manipulator joint based on an improved high-frequency injection method. Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering, 2020, 234, 912-921.	1.0	1
77	An Improved Anisotropic Vector Preisach Model for Nonoriented Electrical Steel Sheet Based on Iron Loss Separation Theory. Mathematical Problems in Engineering, 2020, 2020, 1-8.	1.1	1
78	Self-Balancing Control of Yarn Number Based on a Novel Sensorless PMSM Speed Drive System. IEEE/ASME Transactions on Mechatronics, 2022, 27, 4293-4303.	5.8	1
79	A new fault-tolerant switched reluctance motor with reliable fault detection capability. , 2014, , .		0
80	Mutual Inductance Calculation of Two Coaxial Solenoid Coils with Iron Core. , 2018, , .		0
81	Ring Magnets Used for Improving the Vibration Response of a Micro Electromagnetic Energy Harvester. , 2018, , .		0
82	Experimental Study of An Active Actuator Applied for Wireless Capsule Robot. , 2019, , .		0
83	Design Optimization of a Reluctance Lead Screw for Wave Energy Conversion. Energies, 2020, 13, 5388.	3.1	0
84	Corrections to "A New Load Torque Identification Sliding Mode Observer for Permanent Magnet Synchronous Machine Drive System"[Aug 19 7852-7862]. IEEE Transactions on Power Electronics, 2020, 35, 1156-1156.	7.9	0