

Kaiyuan Lu

List of Publications by Year in descending order

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84
papers

1,590
citations

304743

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84
all docs

84
docs citations

84
times ranked

1354
citing authors

#	ARTICLE	IF	CITATIONS
1	Robust plug-in repetitive control for speed smoothness of cascaded-PI PMSM drive. Mechanical Systems and Signal Processing, 2022, 163, 108090.	8.0	16
2	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
3	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
4	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
5	A New Position Detection and Status Monitoring System for Joint of SCARA. IEEE/ASME Transactions on Mechatronics, 2021, 26, 1613-1623.	5.8	5
6	Load Adaptive PMSM Drive System Based on an Improved ADRC for Manipulator Joint. IEEE Access, 2021, 9, 33369-33384.	4.2	48
7	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
8	New Sensorless Vector Control System With High Load Capacity Based on Improved SMO and Improved FOC. IEEE Access, 2021, 9, 40716-40727.	4.2	12
9	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
10	Simple and Effective Online Position Error Compensation Method for Sensorless SPMSM Drives. IEEE Transactions on Industry Applications, 2020, 56, 1475-1484.	4.9	17
11	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
12	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
13	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
14	Online Identification of Intrinsic Load Current Dependent Position Estimation Error for Sensorless PMSM Drives. IEEE Access, 2020, 8, 163186-163196.	4.2	3
15	Design Optimization of a Reluctance Lead Screw for Wave Energy Conversion. Energies, 2020, 13, 5388.	3.1	0
16	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
17	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
18	Design and experiment of a magnetic lead screw for the point-absorbing wave energy conversion system. IET Electric Power Applications, 2020, 14, 2146-2153.	1.8	3

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19	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
20	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
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	Reduction Methods Using Canceling Effect for Cogging Torque in Dual-Stator PM Synchronous Machines. , 2019, , .		8
23	Experimental Study of An Active Actuator Applied for Wireless Capsule Robot. , 2019, , .		0
24	An Improved Anisotropic Vector Preisach Hysteresis Model Taking Account of Rotating Magnetic Fields. IEEE Transactions on Magnetics, 2019, 55, 1-4.	2.1	15
25	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
26	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
27	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
28	Mutual Inductance Calculation of Two Coaxial Solenoid Coils with Iron Core. , 2018, , .		0
29	A New Micro Non-Resonant Electromagnetic Energy Harvester for Low-Frequency Vibration Applications. , 2018, , .		1
30	Simple and Effective Position Estimation Error Compensation Method for Sensorless SPMSM Drives. , 2018, , .		1
31	Pulse-Injection-Based Sensorless Control Method with Improved Dynamic Current Response for PMSM. , 2018, , .		1
32	Micro Electromagnetic Vibration Energy Harvester with Mechanical Spring and Iron Frame for Low Frequency Operation. , 2018, , .		2
33	Extremum-seeking Control of Wave Energy Converters using Two-objective Flower Pollination Algorithm. , 2018, , .		4
34	Investigation of Various Position Estimation Accuracy Issues in Pulse-Injection-based Sensorless Drives. , 2018, , .		3
35	Ring Magnets Used for Improving the Vibration Response of a Micro Electromagnetic Energy Harvester. , 2018, , .		0
36	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

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37	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
38	Unified equivalent MMF concept for torque analysis of AC machines. , 2017, , .		1
39	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
40	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
41	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
42	Active DaMPing control methods for three-phase slim DC-link drive system. , 2017, , .		5
43	A new application and experimental validation of moulding technology for ferrite magnet assisted synchronous reluctance machine. , 2016, , .		9
44	A new type of axial-flux magnetic lead screw with inherent spring characteristic. , 2016, , .		2
45	Synchronous switching of non-line-start permanent magnet synchronous machines between inverter and grid drives. , 2016, , .		1
46	3D magnetic-resonance-coupling (MRC) localization of wireless capsule endoscopy. , 2016, , .		1
47	A comparative study on pulse sinusoidal high frequency voltage injection and INFORM methods for PMSM position sensorless control. , 2016, , .		9
48	Modeling and analysis of current transformer for fast switching power module current measurement. , 2016, , .		1
49	Frequency splitting suppression method for four-coil wireless power transfer system. IET Power Electronics, 2016, 9, 2859-2864.	2.1	26
50	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
51	Analysis of voltage modulation based active damping techniques for small DC-link drive system. , 2015, , .		18
52	Current measurement method for characterization of fast switching power semiconductors with Silicon Steel Current Transformer. , 2015, , .		22
53	Transfer efficiency analysis of wireless power transfer system under frequency drift. Journal of Applied Physics, 2015, 117, 17E706.	2.5	4
54	A new high frequency injection method based on duty cycle shifting without maximum voltage magnitude loss. , 2015, , .		1

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55	New Helical-Shape Magnetic Pole Design for Magnetic Lead Screw Enabling Structure Simplification. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	12
56	Improved INFORM method by minimizing the inverter nonlinear voltage error effects. , 2015, , .		7
57	Sensorless Control of Low-Cost Single-Phase Hybrid Switched Reluctance Motor Drive. IEEE Transactions on Industry Applications, 2015, 51, 2381-2387.	4.9	35
58	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
59	Motor-Driven Giant Magnetostrictive Actuator. IEEE Transactions on Magnetics, 2015, 51, 1-7.	2.1	10
60	Stress-Based Variable Inductor for Electronic Ballasts. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	5
61	Permanent Magnet Flux Online Estimation Based on Zero-Voltage Vector Injection Method. IEEE Transactions on Power Electronics, 2015, 30, 6506-6509.	7.9	20
62	A general and intuitive approach to understand and compare the torque production capability of AC machines. , 2014, , .		1
63	Electromagnetic Lead Screw for Potential Wave Energy Application. IEEE Transactions on Magnetics, 2014, 50, 1-4.	2.1	32
64	A new fault-tolerant switched reluctance motor with reliable fault detection capability. , 2014, , .		0
65	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
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	Cogging Torque Reduction by Slot-Opening Shift for Permanent Magnet Machines. IEEE Transactions on Magnetics, 2013, 49, 4028-4031.	2.1	61
68	An Active Damping Technique for Small DC-Link Capacitor Based Drive System. IEEE Transactions on Industrial Informatics, 2013, 9, 848-858.	11.3	85
69	DCâ€bus voltage control of gridâ€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
70	An H-module linear actuator for medical equipment applications. Journal of Applied Physics, 2012, 111, 07E714.	2.5	1
71	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
72	Design and Optimization of the New H-Module Linear Actuator. IEEE Transactions on Magnetics, 2012, 48, 4188-4191.	2.1	4

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73	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
74	Torque Analysis With Saturation Effects for Non-Salient Single-Phase Permanent-Magnet Machines. IEEE Transactions on Magnetics, 2011, 47, 1732-1738.	2.1	4
75	A simple and general approach to determination of self and mutual inductances for AC machines. , 2011, , .		2
76	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
77	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
78	Single-Phase Hybrid Switched Reluctance Motor for Low-Power Low-Cost Applications. IEEE Transactions on Magnetics, 2011, 47, 3288-3291.	2.1	30
79	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
80	Analysis of influence on back-EMF based sensorless control of PMSM due to parameter variations and measurement errors. , 2011, , .		8
81	Flux concentration and pole shaping in a single phase hybrid switched reluctance motor drive. , 2010, , .		2
82	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
83	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
84	Preliminary comparison study of drive motor for electric vehicle application. , 0, , .		8