

# Jun-Young Song

## List of Publications by Year in descending order

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107  
papers

1,414  
citations

331670

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107  
docs citations

107  
times ranked

1276  
citing authors

#	ARTICLE	IF	CITATIONS
1	Parameter Optimization for Reducing Torque Ripple and Harmonic Losses of Multi-Layered Interior Permanent-Magnet Synchronous Motors. IEEE Access, 2022, 10, 10536-10552.	4.2	1
2	A Novel Method for Establishing an Efficiency Map of IPMSMs for EV Propulsion Based on the Finite-Element Method and a Neural Network. Electronics (Switzerland), 2021, 10, 1049.	3.1	6
3	Noise Reduction Design with Trapezoidal Back-EMF and Asymmetric Air-Gap for Single-Phase BLDC Refrigerator Cooling Fan Motor. Energies, 2021, 14, 5467.	3.1	2
4	Analysis and Verification of Traction Motor Iron Loss for Hybrid Electric Vehicles Based on Current Source Analysis Considering Inverter Switching Carrier Frequency. Electronics (Switzerland), 2021, 10, 2714.	3.1	2
5	Robust Explorative Particle Swarm Optimization for Optimal Design of EV Traction Motor. Processes, 2021, 9, 2000.	2.8	0
6	Optimization Method to Maximize Efficiency Map of a Drive Motor With Electrical Winding Changeover Technique for Hybrid EV. IEEE Transactions on Applied Superconductivity, 2020, 30, 1-5.	1.7	9
7	Adaptive Particle Swarm Optimization Based on Kernel Support Vector Machine for Optimal Design of Synchronous Reluctance Motor. IEEE Transactions on Magnetics, 2019, 55, 1-5.	2.1	12
8	Genetic Algorithm With Species Differentiation Based on Kernel Support Vector Machine for Optimal Design of Wind Generator. IEEE Transactions on Magnetics, 2019, 55, 1-4.	2.1	5
9	Particle Swarm Optimization with Multiple Regression for Optimal Design of Interior Permanent Magnet Synchronous Motor. , 2019, , .		2
10	Optimization of IPMSM Barrier Shape Based on Neural Network. , 2019, , .		0
11	Optimal Design of PMA-synRM for an Electric Propulsion System Considering Wide Operation Range and Demagnetization. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-4.	1.7	19
12	A Robust Multimodal Optimization Algorithm Based on a Sub-Division Surrogate Model and an Improved Sampling Method. IEEE Transactions on Magnetics, 2018, 54, 1-4.	2.1	18
13	Electromagnetic Performances Analysis of IPMSM According to the Current Control Method Under Flux-Weakening Control Region. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-6.	1.7	5
14	A Novel Sequential-Stage Optimization Strategy for an Interior Permanent Magnet Synchronous Generator Design. IEEE Transactions on Industrial Electronics, 2018, 65, 1781-1790.	7.9	22
15	Particle Swarm Optimization Algorithm With Intelligent Particle Number Control for Optimal Design of Electric Machines. IEEE Transactions on Industrial Electronics, 2018, 65, 1791-1798.	7.9	104
16	Irreversible Demagnetization Analysis with Respect to Winding Connection and Current Ripple in Brushless DC Motor. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-4.	1.7	9
17	Analysis and Design of SPM Type Variable Flux Memory Motor Considering Demagnetization Characteristic of Permanent Magnet. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-5.	1.7	4
18	Structural Design Methodology of BLDC Motor Considering Response Time of Phase Current. , 2018, , .		1

#	ARTICLE	IF	CITATIONS
19	Study on the Method for Reducing AC Copper Loss of Interior Permanent Magnet Synchronous Motor. , 2018, , .		11
20	Flux Path Design of Synchronous Reluctance Motor to Analyze Torque Characteristic and Operating Region. , 2018, , .		1
21	Design of Vernier Motor with Modular Winding Using Rotor Pole Pair Determination Method. , 2018, , .		2
22	Development of Differing Extent Mesh Adaptive Direct Search Applied for Optimal Design of Spoke-Type PMSM. IEEE Transactions on Magnetics, 2018, 54, 1-5.	2.1	2
23	Analytical Method for Overhang Effect of Surface-Mounted Permanent-Magnet Motor Using Conformal Mapping. IEEE Transactions on Magnetics, 2018, 54, 1-5.	2.1	10
24	Loss Reduction Optimization for Heat Capacity Improvement in Interior Permanent Magnet Synchronous Machine. IEEE Transactions on Magnetics, 2018, 54, 1-5.	2.1	12
25	Compensation Strategy of the Numerical Analysis in Frequency Domain on Induction Motor Considering Magnetic Flux Saturation. IEEE Transactions on Magnetics, 2018, 54, 1-4.	2.1	5
26	Field Reconstruction Method in Axial Flux Permanent Magnet Motor With Overhang Structure. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	23
27	Distance-Based Intelligent Particle Swarm Optimization for Optimal Design of Permanent Magnet Synchronous Machine. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	27
28	Analysis and Modeling of Concentrated Winding Variable Flux Memory Motor Using Magnetic Equivalent Circuit Method. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	15
29	Electromagnetic and Thermal Analysis of a Surface-Mounted Permanent-Magnet Motor with Overhang Structure. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	41
30	Hybridization Algorithm of Fireworks Optimization and Generating Set Search for Optimal Design of IPMSM. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	8
31	Principal Component Optimization With Mesh Adaptive Direct Search for Optimal Design of IPMSM. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	5
32	Novel Design Method to Reduce Input Current for Multi-Operating Point IPMSM. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	2
33	Design Characteristics of IPMSM With Wide Constant Power Speed Range for EV Traction. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	49
34	Characteristics Analysis Method of Axial Flux Permanent Magnet Motor Based on 2-D Finite Element Analysis. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	20
35	Analysis and Modeling of Permanent Magnet Variable Flux Memory Motors Using Magnetic Equivalent Circuit Method. IEEE Transactions on Magnetics, 2017, 53, 1-5.	2.1	14
36	Optimum design of end edge in discontinuous armature permanent magnet linear motors for automation transportation systems. International Journal of Precision Engineering and Manufacturing, 2017, 18, 317-323.	2.2	4

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37	Optimal Design and Validation of IPMSM for Maximum Efficiency Distribution Compatible to Energy Consumption Areas of HD-EV. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	28
38	Analytical prediction of cogging torque for interior permanent magnet synchronous motors. International Journal of Applied Electromagnetics and Mechanics, 2017, 55, 625-635.	0.6	3
39	Optimization of the pole piece in coaxial magnetic gears for transfer torque ripple improvement. International Journal of Applied Electromagnetics and Mechanics, 2017, 55, 223-234.	0.6	2
40	Study on topology of magnetic gear considering shape of pole piece. , 2017, , .		3
41	A study on the estimation of bearing life of electric motor using ISO 281 and accelerated life test. , 2017, , .		2
42	Sizing Optimization of the Synchronous Generator and the Measurement Uncertainty Analysis. IEEE Transactions on Magnetics, 2017, 53, 1-8.	2.1	5
43	Field reconstruction method in axial flux permanent magnet motor with overhang structure. , 2016, , .		1
44	Analysis and modeling of variable flux memory motor using a lumped magnetic circuit method. , 2016, , .		0
45	Novel design method to reduce input current for multi-operating point IPMSM. , 2016, , .		0
46	Principal component optimization with mesh adaptive direct search for optimal design of permanent magnet synchronous machine. , 2016, , .		0
47	Characteristics analysis method of axial flux permanent magnet motor based on 2-D finite element analysis. , 2016, , .		0
48	A new robust surrogate-assisted multi-objective optimization algorithm for an IPMSM design. , 2016, , .		1
49	Design and analysis of high speed permanent magnet motor considering thermal influence from impeller load characteristic of turbo blower system. , 2016, , .		0
50	Cogging torque of surface-mounted permanent magnet synchronous motor according to segmented-stator core effect. , 2016, , .		8
51	Reducing computational time strategy for estimating core loss with spatial and temporal periodicity. , 2016, , .		1
52	Transfer torque performance comparison in coaxial magnetic gears with different flux-modulator shapes. , 2016, , .		1
53	Performance evaluation and design of low cost and high power density single phase flux switching reluctance machine for ventilation based on 3D inductance function. , 2016, , .		0
54	Distance based intelligent particle swarm optimization for optimal design of permanent magnet synchronous machine. , 2016, , .		1

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55	Motor Design and Characteristics Comparison of Outer-Rotor-Type BLDC Motor and BLAC Motor Based on Numerical Analysis. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-6.	1.7	44
56	Torque transfer efficiency estimation of the magnetic gear considering eddy current loss. , 2016, , .		0
57	Design of 100kW propulsion motor for electric conversion vehicle based on vehicle driving performance simulation. , 2016, , .		1
58	Genetic algorithm adopting building block identification applied to optimal design of IPMSM. , 2016, , .		2
59	Hybridization algorithm of fireworks optimization and generating set search for optimal design of IPMSM. , 2016, , .		0
60	Design characteristics of IPMSM with wide constant power speed range for EV traction. , 2016, , .		0
61	A Novel Memetic Algorithm Using Modified Particle Swarm Optimization and Mesh Adaptive Direct Search for PMSM Design. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	47
62	Optimal Design of an Axial Flux Permanent Magnet Synchronous Motor for the Electric Bicycle. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	38
63	Search Region Management Method for Local Search Algorithm Employing Design Optimization of Brushless DC Motor. IEEE Transactions on Magnetics, 2016, 52, 1-6.	2.1	9
64	Interstellar Search Method With Mesh Adaptive Direct Search for Optimal Design of Brushless DC Motor. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	8
65	Optimal design of outer-rotor SPMSG for permanent magnet reduction using optimization method. , 2015, , .		1
66	A Novel Surrogate-Assisted Multi-Objective Optimization Algorithm for an Electromagnetic Machine Design. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	24
67	Optimal Design of an Interior Permanent Magnet Synchronous Motor by Using a New Surrogate-Assisted Multi-Objective Optimization. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	57
68	Estimation for operation region of interior permanent magnet synchronous motor considering harmonics. , 2015, , .		0
69	Reduction of permanent magnet eddy current loss in interior permanent magnet synchronous motor according to rotor design optimization. , 2015, , .		3
70	Comparison of loss and thermal analysis according to square conductor division considering skin effect. , 2014, , .		0
71	Survey of a contact model and characteristic analysis method for a travelling wave ultrasonic motor. International Journal of Applied Electromagnetics and Mechanics, 2014, 46, 437-453.	0.6	9
72	Stator teeth shape design for torque ripple reduction in surface-mounted permanent magnet synchronous motor. , 2014, , .		4

#	ARTICLE	IF	CITATIONS
73	Multi-domain co-simulation with numerically identified PMSM interworking at HILS for electric propulsion. , 2014, , .		5
74	Numerical and Experimental Design Validation for Adaptive Efficiency Distribution Compatible to Frequent Operating Range of IPMSM. IEEE Transactions on Magnetics, 2014, 50, 881-884.	2.1	10
75	Numerical Design Compatibility of Induction Motor With Respect to Voltage and Current Sources. IEEE Transactions on Magnetics, 2014, 50, 773-776.	2.1	11
76	Minimization of a Cogging Torque for an Interior Permanent Magnet Synchronous Machine using a Novel Hybrid Optimization Algorithm. Journal of Electrical Engineering and Technology, 2014, 9, 859-865.	2.0	11
77	Cogging Torque Minimization and Torque Ripple Suppression in Surface-Mounted Permanent Magnet Synchronous Machines Using Different Magnet Widths. IEEE Transactions on Magnetics, 2013, 49, 2295-2298.	2.1	111
78	Intelligent MADS With Clustering and Elastic Net and Its Application to Optimal Design of Interior PM Synchronous Machines. IEEE Transactions on Magnetics, 2013, 49, 2209-2212.	2.1	7
79	Min-Max Univariate Dynamic Encoding Algorithm for Searches (uDEAS) and Its Application to Optimal Design of Electric Machines. IEEE Transactions on Magnetics, 2013, 49, 2201-2204.	2.1	1
80	Design and control methodology analysis of BLDC motor for torque ripple minimization considering winding connection. , 2013, , .		2
81	Decisive influence on torque ripples of permanent Magnet assisted Synchronous Motor by the carrier harmonics. , 2012, , .		0
82	Torque harmonic analysis of induction motor for electric vehicle propulsion. , 2012, , .		1
83	Optimal Design of Interior PM Synchronous Machines Using Randomly Guided Mesh Adaptive Direct Search Algorithm. , 2012, , .		1
84	Reduction on Cogging Torque in Flux-Switching Permanent Magnet Machine by Teeth Notching Schemes. IEEE Transactions on Magnetics, 2012, 48, 4228-4231.	2.1	95
85	Integrated Optimization of Two Design Techniques for Cogging Torque Reduction Combined With Analytical Method by a Simple Gradient Descent Method. IEEE Transactions on Magnetics, 2012, 48, 2265-2276.	2.1	54
86	Finite-Element Analysis of Short-Circuit Electromagnetic Force in Power Transformer. IEEE Transactions on Industry Applications, 2011, 47, 1267-1272.	4.9	102
87	Novel Analysis and Design Methodology of Interior Permanent-Magnet Synchronous Motor Using Newly Adopted Synthetic Flux Linkage. IEEE Transactions on Industrial Electronics, 2011, 58, 3806-3814.	7.9	41
88	Intelligent Memetic Algorithm Using GA and Guided MADS for the Optimal Design of Interior PM Synchronous Machine. IEEE Transactions on Magnetics, 2011, 47, 1230-1233.	2.1	34
89	Torque harmonic characteristic of Permanent Magnet Synchronous Motor according to ratio numbers of slots and poles. , 2011, , .		1
90	Analysis and design of flux switching machine driver with APC control based on PIC18F2331. , 2011, , .		0

#	ARTICLE	IF	CITATIONS
91	Optimal design of direct-driven wind generator using Genetic Algorithm combined with Expert System. , 2010, , .		0
92	Design methodology using the newly proposed synthetic flux linkages considering cross-Magnetization for Interior PM Synchronous Machine. , 2010, , .		0
93	Design methodology of IPMSM using synthetic flux linkage. , 2010, , .		2
94	Optimal design of interior-permanent magnet synchronous machine for vehicle using improved niching genetic algorithm. International Journal of Applied Electromagnetics and Mechanics, 2009, 29, 37-45.	0.6	4
95	A Research on Iron Loss of IPMSM With a Fractional Number of Slot Per Pole. IEEE Transactions on Magnetics, 2009, 45, 1824-1827.	2.1	36
96	Harmonic Iron Loss Analysis of Electrical Machines for High-Speed Operation Considering Driving Condition. IEEE Transactions on Magnetics, 2009, 45, 4656-4659.	2.1	35
97	Numerical investigation on iron loss in the high powered Interior buried PM Synchronous machine considering harmonic EMF waveform. , 2009, , .		0
98	Optimal design of direct-driven PM wind generator using memetic algorithm coupled with FEM. , 2009, , .		3
99	Optimal Design of Direct-Driven PM Wind Generator for Maximum Annual Energy Production. IEEE Transactions on Magnetics, 2008, 44, 1062-1065.	2.1	49
100	Numerical identification of synthetic flux linkages considering cross-magnetization for Interior PM Synchronous Motor and its effective availability on design and control. , 2008, , .		1
101	Optimal design of direct-driven PM wind generator aimed for maximum AEP using parallel computing CA based on internet web service. , 2008, , .		1
102	Optimal design of direct-driven PM wind generator applying parallel computing genetic algorithm. , 2007, , .		2
103	Numerical identification of D and Q axis parameters for multi-layer buried PM synchronous motor considering cross-magnetization. , 2007, , .		3
104	Optimization of multilayer buried magnet synchronous machine combined with stress and thermal analysis. IEEE Transactions on Magnetics, 2006, 42, 1023-1026.	2.1	14
105	Analysis of Inductance Characteristics in Interior Permanent Magnet Synchronous Motor Considering Inductance Variation. , 0, , .		2
106	Design of Permanent Magnet DC Motor Using FEA-Based Optimization and Parallel Computing Method. , 0, , .		0
107	Investigation on EMF Waveform in the Interior Permanent Magnet Synchronous Machine Considering Load Condition. , 0, , .		0