Jung-Pyo Hong

List of Publications by Year
in descending order

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137 papers	3,013 citations	147801 31 h-index	182427 51 g-index
137 all docs	137 docs citations	137 times ranked	1839 citing authors

#	Article	IF	Citations
1	Optimization for reduction of torque ripple in interior permanent magnet motor by using the Taguchi method. IEEE Transactions on Magnetics, 2005, 41, 1796-1799.	2.1	132
2	Analysis of irreversible magnet demagnetization in line-start motors based on the finite-element method. IEEE Transactions on Magnetics, 2003, 39, 1488-1491.	2.1	113
3	Improved parameter modeling of interior permanent magnet synchronous motor based on finite element analysis. IEEE Transactions on Magnetics, 2000, 36, 1867-1870.	2.1	102
4	Torque Ripple Reduction of Interior Permanent Magnet Synchronous Motor Using Harmonic Injected Current. IEEE Transactions on Magnetics, 2008, 44, 1582-1585.	2.1	100
5	Determination of parameters considering magnetic nonlinearity in an interior permanent magnet synchronous motor. IEEE Transactions on Magnetics, 2006, 42, 1303-1306.	2.1	97
6	Study on High-Efficiency Performance in Interior Permanent-Magnet Synchronous Motor With Double-Layer PM Design. IEEE Transactions on Magnetics, 2008, 44, 4393-4396.	2.1	97
7	Reduction Design of Vibration and Noise in IPMSM Type Integrated Starter and Generator for HEV. IEEE Transactions on Magnetics, 2010, 46, 2454-2457.	2.1	86
8	A Novel Rotor Configuration and Experimental Verification of Interior PM Synchronous Motor for High-Speed Applications. IEEE Transactions on Magnetics, 2012, 48, 843-846.	2.1	85
9	A Study on the Optimal Design of SynRM for the High Torque and Power Factor. IEEE Transactions on Magnetics, 2007, 43, 2543-2545.	2.1	84
10	Mechanical Stress Reduction of Rotor Core of Interior Permanent Magnet Synchronous Motor. IEEE Transactions on Magnetics, 2012, 48, 911-914.	2.1	84
11	Optimal Stator Design of Interior Permanent Magnet Motor to Reduce Torque Ripple Using the Level Set Method. IEEE Transactions on Magnetics, 2010, 46, 2108-2111.	2.1	76
12	Temperature Estimation of IPMSM Using Thermal Equivalent Circuit. IEEE Transactions on Magnetics, 2012, 48, 2949-2952.	2.1	71
13	A Study on the Characteristics Due to Pole-Arc to Pole-Pitch Ratio and Saliency to Improve Torque Performance of IPMSM. IEEE Transactions on Magnetics, 2007, 43, 2516-2518.	2.1	65
14	Modeling of Core Loss Resistance for $dhbox{-}q$ Equivalent Circuit Analysis of IPMSM considering Harmonic Linkage Flux. IEEE Transactions on Magnetics, 2011, 47, 1066-1069.	2.1	65
15	Optimal Shape Design of Rotor Slot in Squirrel-Cage Induction Motor Considering Torque Characteristics. IEEE Transactions on Magnetics, 2013, 49, 2197-2200.	2.1	64
16	A study on iron loss analysis method considering the harmonics of the flux density waveform using iron loss curves tested on epstein samples. IEEE Transactions on Magnetics, 2003, 39, 1472-1475.	2.1	63
17	Design of an Ultra-High-Speed Permanent-Magnet Motor for an Electric Turbocharger Considering Speed Response Characteristics. IEEE/ASME Transactions on Mechatronics, 2017, 22, 774-784.	5.8	59
18	Optimal Design for Noise Reduction in Interior Permanent-Magnet Motor. IEEE Transactions on Industry Applications, 2009, 45, 1954-1960.	4.9	58

#	Article	IF	Citations
19	Torque Ripple Reduction of IPMSM Applying Asymmetric Rotor Shape Under Certain Load Condition. IEEE Transactions on Energy Conversion, 2018, 33, 333-340.	5.2	55
20	Optimum Design Criteria for Maximum Torque and Efficiency of a Line-Start Permanent-Magnet Motor Using Response Surface Methodology and Finite Element Method. IEEE Transactions on Magnetics, 2012, 48, 863-866.	2.1	54
21	Estimation of Acoustic Noise and Vibration in an Induction Machine Considering Rotor Eccentricity. IEEE Transactions on Magnetics, 2014, 50, 857-860.	2.1	54
22	Design and Verification of 150-krpm PMSM Based on Experiment Results of Prototype. IEEE Transactions on Industrial Electronics, 2015, 62, 7827-7836.	7.9	54
23	Tooth Shape Optimization for Cogging Torque Reduction of Transverse Flux Rotary Motor Using Design of Experiment and Response Surface Methodology. IEEE Transactions on Magnetics, 2007, 43, 1817-1820.	2.1	52
24	Novel Double-Barrier Rotor Designs in Interior-PM Motor for Reducing Torque Pulsation. IEEE Transactions on Magnetics, 2010, 46, 2183-2186.	2.1	49
25	Characteristic Analysis of Claw-Pole Machine Using Improved Equivalent Magnetic Circuit. IEEE Transactions on Magnetics, 2009, 45, 4570-4573.	2.1	41
26	A Study on the Design Process of Noise Reduction in Induction Motors. IEEE Transactions on Magnetics, 2012, 48, 4638-4641.	2.1	41
27	Structure of Concentrated-Flux-Type Interior Permanent-Magnet Synchronous Motors Using Ferrite Permanent Magnets. IEEE Transactions on Magnetics, 2014, 50, 1-4.	2.1	41
28	Design of High-Speed Multilayer IPMSM Using Ferrite PM for EV Traction Considering Mechanical and Electrical Characteristics. IEEE Transactions on Industry Applications, 2021, 57, 327-339.	4.9	41
29	Torque Improvement of Wound Field Synchronous Motor for Electric Vehicle by PM-Assist. IEEE Transactions on Industry Applications, 2018, 54, 3252-3259.	4.9	36
30	Study on Homopolar Superconductivity Synchronous Motors for Ship Propulsion Applications. IEEE Transactions on Applied Superconductivity, 2008, 18, 717-720.	1.7	34
31	Design Process of Interior PM Synchronous Motor for 42-V Electric Air-Conditioner System in Hybrid Electric Vehicle. IEEE Transactions on Magnetics, 2008, 44, 1590-1593.	2.1	31
32	Low Torque Ripple Rotor Design of the Interior Permanent Magnet Motor Using the Multi-Phase Level-Set and Phase-Field Concept. IEEE Transactions on Magnetics, 2012, 48, 907-910.	2.1	30
33	Air Gap Flux Density Waveform Design of Surface-Mounted Permanent Magnet Motor Considering Magnet Shape and Magnetization Direction. IEEE Transactions on Magnetics, 2013, 49, 2393-2396.	2.1	30
34	Experimental Estimation of Inductance for Interior Permanent Magnet Synchronous Machine Considering Temperature Distribution. IEEE Transactions on Magnetics, 2013, 49, 2990-2996.	2.1	30
35	Analysis of cogging torque caused by manufacturing tolerances of surfaceâ€mounted permanent magnet synchronous motor for electric power steering. IET Electric Power Applications, 2016, 10, 691-696.	1.8	30
36	Hysteresis Torque Analysis of Permanent Magnet Motors Using Preisach Model. IEEE Transactions on Magnetics, 2012, 48, 935-938.	2.1	28

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37	Three-Dimensional Equivalent Magnetic Circuit Network Method for Precise and Fast Analysis of PM-Assisted Claw-Pole Synchronous Motor. IEEE Transactions on Industry Applications, 2018, 54, 160-171.	4.9	28
38	Taguchi robust optimum design for reducing the cogging torque of EPS motors considering magnetic unbalance caused by manufacturing tolerances of PM. IET Electric Power Applications, 2016, 10, 909-915.	1.8	27
39	Design of a 10-MW-Class HTS Homopolar Generator for Wind Turbines. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-4.	1.7	27
40	Determination of Parameters Considering Magnetic Nonlinearity in Solid Core Transverse Flux Linear Motor for Dynamic Simulation. IEEE Transactions on Magnetics, 2008, 44, 1566-1569.	2.1	26
41	Simple Size Determination of Permanent-Magnet Synchronous Machines. IEEE Transactions on Industrial Electronics, 2017, 64, 7972-7983.	7.9	26
42	Framework Development of Series Hybrid Powertrain Design for Heavy-Duty Vehicle Considering Driving Conditions. IEEE Transactions on Vehicular Technology, 2019, 68, 6468-6480.	6.3	25
43	Characteristic Analysis for Concentrated Multiple-Layer Winding Machine With Optimum Turn Ratio. IEEE Transactions on Magnetics, 2014, 50, 789-792.	2.1	24
44	Design of High Efficiency Wound Field Synchronous Machine With Winding Connection Change Method. IEEE Transactions on Energy Conversion, 2018, 33, 1978-1987.	5.2	24
45	Reliability-Based Robust Design Optimization With Kernel Density Estimation for Electric Power Steering Motor Considering Manufacturing Uncertainties. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	23
46	Design and iron loss analysis of sensorlessâ€controlled interior permanent magnet synchronous motors with concentrated winding. IET Electric Power Applications, 2014, 8, 349-356.	1.8	22
47	Optimal Rotor Design of IPM Motor for Improving Torque Performance Considering Thermal Demagnetization of Magnet. IEEE Transactions on Magnetics, 2015, 51, 1-5.	2.1	22
48	Hysteresis Torque Estimation Method Based on Iron-Loss Analysis for Permanent Magnet Synchronous Motor. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	22
49	Characteristics of IPMSM According to Rotor Design Considering Nonlinearity of Permanent Magnet. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	22
50	Level-Set-Based Optimal Stator Design of Interior Permanent-Magnet Motor for Torque Ripple Reduction Using Phase-Field Model. IEEE Transactions on Magnetics, 2011, 47, 3020-3023.	2.1	21
51	Equivalent Circuit Considering the Harmonics of Core Loss in the Squirrel-Cage Induction Motor for Electrical Power Steering Application. IEEE Transactions on Magnetics, 2014, 50, 1-4.	2.1	20
52	Design of High Torque Density Multi-Core Concentrated Flux-Type Synchronous Motors Considering Vibration Characteristics. IEEE Transactions on Industry Applications, 2019, 55, 1351-1359.	4.9	20
53	Design of Saliency-Based Sensorless-Controlled IPMSM With Concentrated Winding for EV Traction. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	18
54	Parametric Design for Superconducting Synchronous Motor With 3D Equivalent Magnetic Circuit Network Model. IEEE Transactions on Applied Superconductivity, 2007, 17, 1541-1544.	1.7	15

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55	A Novel Approach for 2-D Electromagnetic Field Analysis of Surface Mounted Permanent Magnet Synchronous Motor Taking Into Account Axial End Leakage Flux. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	13
56	An Improved Analysis Method of Irreversible Demagnetization for a Single-Phase Line-Start Permanent Magnet Motor. IEEE Transactions on Magnetics, 2018, 54, 1-5.	2.1	13
57	Effects of rotor pole angle on torque characteristics of a limited-angle torque motor. , 2017, , .		12
58	2G HTS Magnet With Smart Insulation Method. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-4.	1.7	11
59	Design and Verification for the Torque Improvement of a Concentrated Flux-Type Synchronous Motor for Automotive Applications. IEEE Transactions on Industry Applications, 2019, 55, 3534-3543.	4.9	11
60	Investigation of AC Resistance on Winding Conductors in Slot According to Strands Configuration. IEEE Transactions on Industry Applications, 2021, 57, 316-326.	4.9	11
61	Performance improvement by making holes of Interior permanent magnet synchronous motor. , 2009, , .		10
62	Space-Time Kriging Surrogate Model to Consider Uncertainty of Time Interval of Torque Curve for Electric Power Steering Motor. IEEE Transactions on Magnetics, 2018, 54, 1-4.	2.1	10
63	Thermal Analysis and Verification of PMSM Using LPTN Considering Mechanical Components and Losses. , 2018, , .		10
64	Design and Analysis of Ferrite Magnet Flux Concentrated PMSM With Cross-Laminated Rotor Core Using Equivalent 2-D FEA. IEEE Transactions on Energy Conversion, 2019, 34, 1623-1631.	5.2	10
65	Plastic Injection Molded Rotor of Concentrated Flux-Type Ferrite Magnet Motor for Dual-Clutch Transmission. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	9
66	Proposition of Structures for Brushless Hybrid-Excitation Synchronous Motors With Improved Rotor. IEEE Transactions on Magnetics, 2016, 52, 1-15.	2.1	9
67	Estimation of Rotor Type Using Ferrite Magnet Considering the Magnetization Process. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	9
68	Performance prediction of surfaceâ€mounted permanent magnet synchronous motor based on ring specimen test result. IET Electric Power Applications, 2019, 13, 1280-1286.	1.8	9
69	Determination of Parameters of Motor Simulation Module Employed in ADVISOR. IEEE Transactions on Magnetics, 2008, 44, 1578-1581.	2.1	8
70	A study on the irreversible magnet demagnetization in single-phase line-start permanent magnet motor. Journal of Applied Physics, 2009, 105, 07F108.	2.5	8
71	Dynamic Characteristic Analysis Considering Core Losses in Transverse Flux Linear Machine With Solid Cores. IEEE Transactions on Magnetics, 2009, 45, 1776-1779.	2.1	8
72	Determining the Operating Current of No-Insulation Field Coils in HTS Generators. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	8

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73	Modeling, Design and Control of Wound-Field Synchronous Motor for High Energy Efficiency of Electric Vehicle. , 2019, , .		8
74	Faults analysis and simulation for interior permanent magnet synchronous motor using Simulink@MATLAB. , 2007, , .		8
75	Characteristic Analysis and Comparison of IPMSM for HEV According to Pole and Slot Combination. , 2007, , .		7
76	Flux-barrier design technique for improving torque performance of interior permanent magnet synchronous motor for driving compressor in HEV. , 2009, , .		7
77	Optimum design of SPMSM with concentrated windings and unequal tooth widths for EPS. , 2012, , .		7
78	Torque improvement of wound field synchronous motor for electric vehicle by PM-assist. , 2016, , .		7
79	Investigation and comparison of system efficiency on the PMSM considering Nd-Fe-B magnet and Ferrite magnet. , 2009, , .		6
80	Characteristic Comparison Between the Spiral and the Lamination Stator in Axial Field Slotless Machines. IEEE Transactions on Magnetics, 2009, 45, 4547-4549.	2.1	6
81	Characteristics comparison of BLDC motor according to the lead angles. , 2012, , .		6
82	Experimental Characterization of the Slinky-Laminated Core and Iron Loss Analysis of Electrical Machine. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	6
83	Rare-Earth-Free Electric Motor Design for EV Traction Comparing Overall Vehicle Efficiency Considering Driving Cycle. , 2016, , .		6
84	Electrical Characteristic Analysis According to Contact Resistance Between Turns of HTS Coil. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-4.	1.7	6
85	A method to estimate hysteresis torque using core loss. , 2010, , .		5
86	Design of IPMSM having high power density for position sensorless operation with high-frequency signal injection and the method of calculating inductance profile. , 2011, , .		5
87	Improvement of Thermal Equivalent Circuit Network and Prediction on Heat Characteristic of Motor by Calculation of Convection Heat Transfer Coefficient. , 2012, , .		5
88	A study on brushless PM slotless motor with toroidal winding. , 2017, , .		5
89	Design of PMSM for EV Traction Using MSO Coil Considering AC Resistance According to Current Density and Parallel Circuit. , 2019, , .		5
90	AC Resistance Reduction Design of Traction Motor for High Energy Efficiency of Electric Vehicle. , 2019, , .		5

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91	Optimum design for eddy current reduction in permanent magnet to prevent irreversible demagnetization. , 2007, , .		5
92	3-D equivalent magnetic circuit network for precise and fast analysis of PM-assisted claw-pole synchronous motor. , 2016, , .		4
93	Multipolar High-Speed IPMSM Design for EV Traction Considering Mechanical Stress. , 2016, , .		4
94	The Development of Hybrid Electric Compressor Motor Drive System for HEV. , 2007, , .		3
95	Investigation on the Characteristics of a Novel Segmental Switched Reluctance Motor Driven by Asymmetric Converter and Full-Bridge Inverter. , 2007, , .		3
96	Design and Analysis of 1 MW Synchronous Machine via 3D Magnetic Field Calculation. IEEE Transactions on Applied Superconductivity, 2007, 17, 1549-1552.	1.7	3
97	Core loss distribution of three-phase induction motor using numerical method. , 2009, , .		3
98	Multi-response Taguchi robust design of back electromotive force and cogging torque considering the manufacturing tolerance for electric machine. , 2012, , .		3
99	Development of a Large Diameter Motor for Turret Application. IEEE Transactions on Magnetics, 2013, 49, 2327-2330.	2.1	3
100	Design of sensorless controlled IPMSM with concentrated winding for EV drive at low speed. , 2013, , .		3
101	Analytical Electromagnetic Modeling and Experimental Validation of Vehicle Horn Considering Skin Effect in Its Solid Cores. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	3
102	Design of IPMSM for reduction of eddy current loss in permanent magnets to prevent irreversible demagnetization. , 2017, , .		3
103	Design of high torque density multi-core concentrated flux-type synchronous motors considering vibration characteristic. , 2017, , .		3
104	Characteristics Analysis of SPMSM Using 2-D Finite-Element Analysis Considering Axial Leakage Flux. IEEE Transactions on Magnetics, 2018, 54, 1-4.	2.1	3
105	Finite-Element Analysis of Local Flux Density Variation Considering PWM Current Harmonics. IEEE Transactions on Magnetics, 2018, 54, 1-4.	2.1	3
106	Magnetising fixture design for optimal magnetisation orientation of ringâ€type magnet in surfaceâ€mounted permanent magnet motor. IET Electric Power Applications, 2018, 12, 1344-1349.	1.8	3
107	Design of Multi-layer IPMSM using Ferrite PM Considering Mechanical and Electrical Characteristics. , 2019, , .		3
108	Study on AC Resistance of Winding According to Configuration of Strands. , 2019, , .		3

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109	Development of an IPMSM for in-wheel type electric vehicles. , 2009, , .		2
110	Magnetic field analysis of polar anisotropic ferrite bonded magnet to outer rotor type brushless dc motor considering magnetizing process. , 2010, , .		2
111	Detent Torque Estimation of Permanent Magnet Motors Using Stress Dependent Hysteresis Model. , 2012, , .		2
112	Optimum design of IPMSM for in-wheel direct-drive by response surface methodology and FEA. , 2013, , .		2
113	A concentrated flux type ferrite magnet motor with improved torque density. , 2015, , .		2
114	Torque density improvement of concentrated flux-type synchronous motor for automotive application. , 2017, , .		2
115	Electromagnetic and Thermal Multi-Physics Design of SPMSM for Wearable Robot. , 2018, , .		2
116	Multiphysics Design of Triple 3-Phase PMSM for Ultra-High Speed Elevator Applications. , 2018, , .		2
117	Hysteresis modeling using multi-Preisach model in electromagnetic computation. , 2010, , .		1
118	Taguchi Robust Design of Back Electromotive Force Considering the Manufacturing Tolerances in IPMSM. , 2012, , .		1
119	Advanced 3-Dimensional Magnetic Field Analysis of Superconducting Machines Using Analytical Method. IEEE Transactions on Applied Superconductivity, 2013, 23, 4900704-4900704.	1.7	1
120	Temperature prediction of oil-cooled IPMSM for in-wheel direct-drive through lumped parameter thermal model. , 2013, , .		1
121	Influence of manufacturing tolerances on cogging torque of IPMSM for EPS application. , 2014, , .		1
122	Design of the High Efficiency IPMSM Considering the Operating Point with Different Characteristic. , 2019, , .		1
123	Optimization of magnetic suspension using response surface methodology. , 2009, , .		0
124	Initial design using space harmonic analysis methods in permanent magnet synchronous machines. , 2010, , .		0
125	Magnetic circuit design of IPMSM to improve maximum power in the field weakening region. , 2010, , .		0
126	Thermal analysis of direct drive transverse flux rotary machine with two types of stators. , 2010, , .		0

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127	Effect of pole and slot combination on noise and vibration in permanent magnet synchronous motor. , 2010, , .		0
128	Optimal design of tooth and yoke for maximizing motor output power. , 2010, , .		0
129	Characteristic analysis of tubular linear induction motor using axisymmetric model. , 2010, , .		0
130	Parameter modeling for interior permanent magnet synchronous motors for parametric design. , 2010, , .		0
131	Modeling of coreloss resistance for d-q equivalent circuit analysis of IPMSM considering harmonic linkage flux. , 2010, , .		0
132	One-ampare conductor method for tubular linear induction motor for size reduction of primary iron core. , 2010, , .		0
133	Optimal design of stator and rotor of interior permanent magnet motor with reduced torque ripple for wide speed range operation. , 2010, , .		0
134	Effect of step skewed rotor type IPMSM on noise and vibration. , 2010, , .		0
135	The Simulink Model of Motor System for HEV Using HILS (Hardware-In-the-Loop). , 2012, , .		0
136	Rotor sizing effect on maximum torque in initial design of PMSM. , 2012, , .		0
137	Analytical modeling and experimental verification of vehicle horn considering skin effect using coupled electric and magnetic circuits. , 2016, , .		0