Heekwang Lee

List of Publications by Year
in descending order

104 papers	4,427 citations	159585 30 h-index	161849 54 g-index
104 all docs	104 docs citations	104 times ranked	3252 citing authors

#	ARTICLE	IF	CITATIONS
1	Dual current control scheme for PWM converter under unbalanced input voltage conditions. IEEE Transactions on Industrial Electronics, 1999, 46, 953-959.	7.9	632
2	Mode Adaptive Droop Control With Virtual Output Impedances for an Inverter-Based Flexible AC Microgrid. IEEE Transactions on Power Electronics, 2011, 26, 689-701.	7.9	458
3	Current Minimizing Torque Control of the IPMSM Using Ferrari's Method. IEEE Transactions on Power Electronics, 2013, 28, 5603-5617.	7.9	253
4	Sensorless Control of Surface-Mount Permanent-Magnet Synchronous Motors Based on a Nonlinear Observer. IEEE Transactions on Power Electronics, 2010, 25, 290-297.	7.9	191
5	A DC-link capacitor minimization method through direct capacitor current control. IEEE Transactions on Industry Applications, 2006, 42, 573-581.	4.9	188
6	Dual-Inverter Control Strategy for High-Speed Operation of EV Induction Motors. IEEE Transactions on Industrial Electronics, 2004, 51, 312-320.	7.9	155
7	A dynamic decoupling control scheme for high-speed operation of induction motors. IEEE Transactions on Industrial Electronics, 1999, 46, 100-110.	7.9	151
8	Idling Port Isolation Control of Three-Port Bidirectional Converter for EVs. IEEE Transactions on Power Electronics, 2012, 27, 2495-2506.	7.9	148
9	A fast dynamic DC-link power-balancing scheme for a PWM converter-inverter system. IEEE Transactions on Industrial Electronics, 2001, 48, 794-803.	7.9	139
10	A feedback linearizing control scheme for a PWM converter-inverter having a very small DC-link capacitor. IEEE Transactions on Industry Applications, 1999, 35, 1124-1131.	4.9	125
11	Loss-Minimizing Control of PMSM With the Use of Polynomial Approximations. IEEE Transactions on Power Electronics, 2009, 24, 1071-1082.	7.9	110
12	PMSM Control Based on Edge-Field Hall Sensor Signals Through ANF-PLL Processing. IEEE Transactions on Industrial Electronics, 2011, 58, 5121-5129.	7.9	101
13	Dynamic Modeling and Control for SPMSMs With Internal Turn Short Fault. IEEE Transactions on Power Electronics, 2013, 28, 3495-3508.	7.9	101
14	A Current Distortion Compensation Scheme for Four-Switch Inverters. IEEE Transactions on Power Electronics, 2009, 24, 1032-1040.	7.9	93
15	Sensorless Control of PMSM in a High-Speed Region Considering Iron Loss. IEEE Transactions on Industrial Electronics, 2015, 62, 6151-6159.	7.9	82
16	Inductance Estimation of Electrically Excited Synchronous Motor via Polynomial Approximations by Least Square Method. IEEE Transactions on Industry Applications, 2015, 51, 1526-1537.	4.9	78
17	Dual inverter control strategy for high speed operation of EV induction motors. , 0, , .		77
18	A vector control scheme for EV induction motors with a series iron loss model. IEEE Transactions on Industrial Electronics, 1998, 45, 617-624.	7.9	76

#	Article	IF	Citations
19	A new approach to vector control for a linear induction motor considering end effects. , 0, , .		74
20	Fault Diagnosis of a ZVS DC–DC Converter Based on DC-Link Current Pulse Shapes. IEEE Transactions on Industrial Electronics, 2008, 55, 1491-1494.	7.9	71
21	Charging Method for the Secondary Battery in Dual-Inverter Drive Systems for Electric Vehicles. IEEE Transactions on Power Electronics, 2015, 30, 909-921.	7.9	71
22	An instantaneous phase angle detection algorithm under unbalanced line voltage condition. , 0, , .		61
23	An overvoltage suppression scheme for AC motor drives using a half DC-link voltage level at each PWM transition. IEEE Transactions on Industrial Electronics, 2002, 49, 549-557.	7.9	58
24	A load torque compensation scheme under the speed measurement delay. IEEE Transactions on Industrial Electronics, 1998, 45, 283-290.	7.9	57
25	A robust load-sharing control scheme for parallel-connected multisystems. IEEE Transactions on Industrial Electronics, 2000, 47, 871-879.	7.9	54
26	Asymmetric Duty Control of a Dual-Half-Bridge DC/DC Converter for Single-Phase Distributed Generators. IEEE Transactions on Power Electronics, 2011, 26, 973-982.	7.9	46
27	A DC-link voltage balancing algorithm for 3-level converter using the zero sequence current. , 0, , .		45
28	Overvoltage Suppression Filter Design Methods Based on Voltage Reflection Theory. IEEE Transactions on Power Electronics, 2004, 19, 264-271.	7.9	42
29	Sensorless Control of IPMSM Based on Regression Model. IEEE Transactions on Power Electronics, 2019, 34, 9191-9201.	7.9	38
30	Torque Control of IPMSM in the Field Weakening Region with Improved DC-Link Voltage Utilization. IEEE Transactions on Industrial Electronics, 2014, , 1-1.	7.9	37
31	Parameter estimation scheme for low-speed linear induction motors having different leakage inductances. IEEE Transactions on Industrial Electronics, 2003, 50, 708-716.	7.9	33
32	A two-degrees-of-freedom current control scheme for deadtime compensation. IEEE Transactions on Industrial Electronics, 2000, 47, 557-564.	7.9	32
33	Dual Inverter Strategy for High Speed Operation of HEV Permanent Magnet Synchronous Motor. Conference Record - IAS Annual Meeting (IEEE Industry Applications Society), 2006, , .	0.0	32
34	Copper-Loss-Minimizing Field Current Control Scheme for Wound Synchronous Machines. IEEE Transactions on Power Electronics, 2017, 32, 1335-1345.	7.9	32
35	Inverter-Based Local AC Bus Voltage Control Utilizing Two DOF Control. IEEE Transactions on Power Electronics, 2008, 23, 1288-1298.	7.9	30
36	PI type decoupling control scheme for high speed operation of induction motors. , 0, , .		25

#	Article	IF	Citations
37	Stabilization of feedback linearizable systems using a radial basis function network. IEEE Transactions on Automatic Control, 1999, 44, 1026-1031.	5.7	25
38	A new parallel hybrid filter configuration minimizing active filter size. , 0, , .		23
39	A single-phase bidirectional dual active half-bridge converter. , 2012, , .		21
40	Fluctuating Current Control Method for a PMSM Along Constant Torque Contours. IEEE Transactions on Power Electronics, 2014, 29, 6064-6073.	7.9	21
41	Some numerical aspects of approximate linearization of single input non-linear systems. International Journal of Control, 1993, 57, 463-472.	1.9	18
42	Sector-Based Analytic Overmodulation Method. IEEE Transactions on Industrial Electronics, 2019, 66, 7624-7632.	7.9	17
43	PMSM control based on edge field measurements by Hall sensors. , 2010, , .		15
44	Analytic Expressions of Torque and Inductances via Polynomial Approximations of Flux Linkages. IEEE Transactions on Magnetics, 2015, 51, 1-9.	2.1	15
45	An Optimal Selection of Induction-Heater Capacitance Considering Dissipation Loss Caused by ESR. IEEE Transactions on Industry Applications, 2007, 43, 1117-1125.	4.9	14
46	Torque control for IPMSM in the high speed range based on voltage angle. , 2014, , .		14
47	Modeling and Verification of Six-Phase Interior Permanent Magnet Synchronous Motor. IEEE Transactions on Power Electronics, 2017, , 1-1.	7.9	14
48	Halbach Array PM Machine Design for High Speed Dynamo Motor. IEEE Transactions on Magnetics, 2021, 57, 1-5.	2.1	13
49	Sensorless vector control scheme for induction motors based on a stator flux estimator with quadrant error compensation rule. IEEE Transactions on Industry Applications, 2003, 39, 492-503.	4.9	12
50	On Compensation of Wave Reflections in Transmission Lines and Applications to the Overvoltage Problem AC Motor Drives. IEEE Transactions on Automatic Control, 2004, 49, 1757-1762.	5.7	12
51	Zero Torque Control for EV Coasting Considering Cross-Coupling Inductance. IEEE Transactions on Industrial Electronics, 2017, 64, 6096-6104.	7.9	12
52	Fast dynamic DC-link power balancing scheme for a PWM converter-inverter system. , 0, , .		11
53	An incorporation method of sensorless algorithms: Signal injection and back EMF based methods. , 2010, , .		11
54	A vector control scheme for a PM linear synchronous motor in extended region. IEEE Transactions on Industry Applications, 2003, 39, 1280-1286.	4.9	9

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55	A new topology and control scheme for 4WD HEV using a DFIM with a reduced size converter-inverter. , 0, , .		9
56	Sensorless control for electrically energized synchronous motor based on signal injection to field winding. , 2013, , .		9
57	Analytic Optimization of the Halbach Array Slotless Motor Considering Stator Yoke Saturation. IEEE Transactions on Magnetics, 2021, 57, 1-6.	2.1	9
58	On-Line MTPA Control Method for Synchronous Reluctance Motor. IEEE Transactions on Industry Applications, 2022, 58, 356-364.	4.9	9
59	Speed ripple reduction of PMSM with eccentric load using sinusoidal compensation method. , 2011, , .		8
60	A PI-type dead-time compensation method for vector-controlled GTO inverters. IEEE Transactions on Industry Applications, 1998, 34, 452-457.	4.9	7
61	A simple DC-rail soft switched voltage source inverter. , 0, , .		7
62	A real-time parameter identification scheme for the sensorless control of induction motors using a reduced order model. , 0, , .		6
63	A second-order stochastic filter involving coordinate transformation. IEEE Transactions on Automatic Control, 1999, 44, 603-608.	5.7	6
64	Attractive force reducing strategy of LIM for PRT systems. , 0, , .		6
65	On-line Overshoot Suppression Method for EV Propulsion Motor Considering Cross Coupled Inductance. IEEE Transactions on Industrial Electronics, 2018, , 1-1.	7.9	6
66	A PI type dead-time compensation method for vector controlled GTO inverters. , 0, , .		5
67	A simple snubber configuration for three-level GTO inverters. IEEE Transactions on Power Electronics, 1999, 14, 246-257.	7.9	5
68	Copper loss minimizing torque control of IPMSM based on flux variables. , 2013, , .		5
69	A feedback linearizing control scheme for a PWM converter-inverter having a very small DC-link capacitor. , 0, , .		4
70	A DC link capacitor minimization method through direct capacitor current control. , 0, , .		4
71	An output feedback stabilization scheme using the filtered coordinate transformation. IEEE Transactions on Automatic Control, 1995, 40, 2089-2093.	5.7	3
72	Sensorless vector control in the presence of voltage and current measurement errors by dead-time [induction motors]. , 0, , .		3

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73	Dynamic modelling and passivity-based control of an induction motor powered by doubly fed induction generator. , 0, , .		3
74	Two DOF controller for parallel operation of fuel cell power generator with power grid. , 0, , .		3
75	Hybridization fuel cell with supercapacitor for FCEV. IEEE Applied Power Electronics Conference and Exposition, 2008, , .	0.0	3
76	Optimization of PM volume in a PM-assisted claw-pole motor for ISG applications. , 2016, , .		3
77	Analytical Torque Ripple Prediction Using Air-Gap Permeance and MMF Functions in PM Synchronous Motors. , 2018, , .		3
78	Analytic MTPA Solution for Synchronous Reluctance Machine. , 2019, , .		3
79	Overmodulation Strategy for Voltage Source Inverter With a Single DC-Link Current Sensor. IEEE Transactions on Industry Applications, 2022, 58, 531-540.	4.9	3
80	A simple snubber configuration for three level voltage source GTO inverters. , 0, , .		2
81	A new vector control scheme considering iron loss for electric vehicle induction motors. , 0, , .		2
82	Simple on-line dead-time compensation scheme based on disturbance voltage observer. , 2012, , .		2
83	Sensorless control of PMSM in a ultra high speed region taking iron loss into account. , 2014, , .		2
84	Groove depth determination based on extended leakage factor in a 12-slot 10-pole machine. , 2015, , .		2
85	Loss minimizing gear shifting algorithm based on optimal current sets for IPMSM. , 2017, , .		2
86	Overmodulation Strategy for Inverters with a Single DC-Link Current Sensor. , 2020, , .		2
87	A disturbance torque compensation scheme considering the speed measurement delay [in PM synchronous motors]. , 0, , .		1
88	Concentric Winding BLDC Motor Design. , 2005, , .		1
89	A programmable motor inertia changing scheme by utilizing virtual inertia. Power Electronics Specialist Conference (PESC), IEEE, 2008, , .	0.0	1
90	Dynamic overmodulation in the synchronous reference frame for IPMSMs. , 2012, , .		1

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91	Analytic Overmodulation Method and Application to IPMSM Current Control. , 2018, , .		1
92	Synchronized Gear Shift Control Using RLS Estimator for Two Speed Gear System. , 2020, , .		1
93	A Power Circulation Method Using Two Frequencies in Motor Emulator System. IEEE Transactions on Energy Conversion, 2020, 35, 1868-1876.	5.2	1
94	An Overmodulation Method for Torque Balance in In-Wheel Motor Systems with a Dual-PMSM Coupled to a Single Shaft. , 2021, , .		1
95	Sensorless vector control of induction motor based on a flux compensation with application to hoist crane. , 0, , .		0
96	A vector control scheme for a PMLSM considering a nonuniform flux distribution. , 0, , .		0
97	Reference frame coinciding control scheme for a double winding LIM of a PRT system. , 0, , .		0
98	Overvoltage suppression filter design methods based on voltage reflection theory. , 0, , .		0
99	Design and analysis of a DC-DC converter for EVs battery charger. , 2012, , .		0
100	Fluctuating current control for a PMSM under reduced DC link capacitance. , 2013, , .		0
101	Copper loss minimizing field current control for wound synchronous machines. , 2015, , .		0
102	Coasting control of EV motor considering cross coupling inductance. , 2016, , .		0
103	Output impedance control of inverter-based distributed generator for minimum circulating current in single-phase AC microgrid. , 2016, , .		0
104	Intermittent Inductance Estimation for High-Speed PMSM Sensorless Control. , 2020, , .		0