Rae-Young Kim

List of Publications by Year in Descending Order

83 papers	1,113 citations	16 h-index	31 g-index
107 ext. papers	1,442 ext. citations	4.7 avg, IF	4.96 L-index

#	Paper	IF	Citations
83	Novel Variable Switching Frequency PWM Strategy for a SiC-MOSFET-Based Electric Vehicle Inverter to Increase Battery Usage Time. *IEEE Access*, **2022**, 10, 21929-21940	3.5	0
82	Design and Control of Ultra-High-Speed Sensorless Drive with Two-Input Power Source for Portable Consumer Electronics. *Electronics (Switzerland)*, **2022**, 11, 1024	2.6	
81	Hierarchical Single-Objective Model Predictive Control with Reduced Computational Burden in Cascaded H-Bridge Converter based on 3-level Flying Capacitor Unit Cell. *IEEE Access*, **2022**, 1-1	3.5	1
80	Nonlinear Optimal Position Control with Observer for Position Tracking of Surfaced Mounded Permanent Magnet Synchronous Motors. *Applied Sciences (Switzerland)*, **2021**, 11, 10992	2.6	2
79	Gate Driver for Wide-Bandgap Power Semiconductors With Small Negative Spike and Switching Ringing in Zero-Voltage Switching Circuit. *IEEE Access*, **2021**, 9, 145774-145784	3.5	
78	Lumped Parameter Modeling Based Power Loop Analysis Technique of Power Circuit Board with Wide Conduction Area for WBG Semiconductors. *Electronics (Switzerland)*, **2021**, 10, 1722	2.6	
77	High Power Density, High-Voltage Parallel Resonant Converter Using Parasitic Capacitance on the Secondary Side of a Transformer. *Electronics (Switzerland)*, **2021**, 10, 1736	2.6	1
76	Design of Magnetic Structure for Omnidirectional Wireless Power Transfer. *IEEE Transactions on Power Electronics*, **2021**, 1-1	7.2	6
75	An Active Cascaded Battery Voltage Balancing Circuit Based on Multi-Winding Transformer with Small Magnetizing Inductance. *Energies*, **2021**, 14, 1302	3.1	1
74	Robust L Approximation of an LCL Filter Type Grid-Connected Inverter Using Active Disturbance Rejection Control under Grid Impedance Uncertainty. *Energies*, **2021**, 14, 5276	3.1	0
73	Efficiency evaluation of the microgrid for selection of common bus using copula function-based efficiency curves of the converters. *Sustainable Energy Technologies and Assessments*, **2021**, 48, 101621	4.7	1
72	Resonant Network Design Method to Reduce Influence of Mutual Inductance between Receivers in Multi-Output Omnidirectional Wireless Power Transfer Systems. *Energies*, **2020**, 13, 5556	3.1	1
71	Analysis of Various Pickup Coil Designs in Nonmodule-Type GaN Power Semiconductors. *Sensors*, **2020**, 20,	3.8	2
70	Analysis and Evaluation of WBG Power Device in High Frequency Induction Heating Application. *Energies*, **2020**, 13, 5351	3.1	7
69	Flexible Control Structure for Enhancement of Scalability in DC Microgrids. *IEEE Systems Journal*, **2020**, 14, 4591-4601	4.3	2
68	An off-line design methodology of droop control for multiple bi-directional distributed energy resources based on voltage sensitivity analysis in DC microgrids. *International Journal of Electrical Power and Energy Systems*, **2020**, 118, 105754	5.1	2
67	PCB-Based Current Sensor Design for Sensing Switch Current of a Nonmodular GaN Power Semiconductor. *Energies*, **2020**, 13, 5161	3.1	6

66	PCB-Embedded Spiral Pattern Pick-Up Coil Current Sensor for WBG Devices. *Energies*, **2020**, 13, 5747	3.1	2
65	Impedance-Based Modeling and Common Bus Stability Enhancement Control Algorithm in DC Microgrid. *IEEE Access*, **2020**, 8, 211224-211234	3.5	3
64	Symmetrical Three-Vector-Based Model Predictive Control With Deadbeat Solution for IPMSM in Rotating Reference Frame. *IEEE Transactions on Industrial Electronics*, **2020**, 67, 159-168	8.9	47
63	. *IEEE Transactions on Industry Applications*, **2019**, 55, 7505-7514	4.3	6
62	Online sensorless position estimation for switched reluctance motors using characteristics of overlap position based on inductance profile. *IET Electric Power Applications*, **2019**, 13, 456-462	1.8	8
61	Selective frequency synchronization technique for fast grid connection of islanded microgrid using prediction method. *International Journal of Electrical Power and Energy Systems*, **2019**, 111, 114-124	5.1	3
60	A Distributed Control Method Based on a Voltage Sensitivity Matrix in DC Microgrids With Low-Speed Communication. *IEEE Transactions on Smart Grid*, **2019**, 10, 3809-3817	10.7	15
59	Conduction Loss Analysis According to Variation of Resonant Parameters in a Zero-Current Switching Boost Converter. *Journal of Electrical Engineering and Technology*, **2019**, 14, 2027-2037	1.4	2
58	LCpL Filter Design and Control for Stability Improvement in a Stand-Alone Microgrid with Sub Inverter Structure. *Energies*, **2019**, 12, 2318	3.1	2
57	Double-Sided LCC Compensation Topology with Semi-Bridgeless Rectifier for Wireless Power Transfer System **2019**,		5
56	Resonance damping for an LCL filter type grid-connected inverter with active disturbance rejection control under grid impedance uncertainty. *International Journal of Electrical Power and Energy Systems*, **2019**, 109, 444-454	5.1	25
55	Control strategy for suppression of circulating current using high-frequency voltage compensation in asynchronous carriers for modular and scalable inverter systems. *IET Power Electronics*, **2019**, 12, 3668-3674	2.2	4
54	Voltage Balance Switching Scheme for Series-Connected SiC MOSFET LLC Resonant Converter. *Energies*, **2019**, 12, 4003	3.1	2
53	Modeling and Control of Double-Sided LCC Compensation Topology with Semi-Bridgeless Active Rectifier for Inductive Power Transfer System. *Energies*, **2019**, 12, 3921	3.1	1
52	Active Disturbance Rejection Control Scheme for Reducing Mutual Current and Harmonics in Multi-Parallel Grid-Connected Inverters. *Energies*, **2019**, 12, 4363	3.1	5
51	Robust predictive current control for IPMSM without rotor flux information based on a discrete-time disturbance observer. *IET Electric Power Applications*, **2019**, 13, 2079-2089	1.8	12
50	A Coordinated Droop Control Method Using a Virtual Voltage Axis for Power Management and Voltage Restoration of DC Microgrids. *IEEE Transactions on Industrial Electronics*, **2019**, 66, 9076-9085	8.9	11
49	Modeling and Hierarchical Structure Based Model Predictive Control of Cascaded Flying Capacitor Bridge Multilevel Converter for Active Front-End Rectifier in Solid-State Transformer. *IEEE Transactions on Industrial Electronics*, **2019**, 66, 6560-6569	8.9	8

48	Generalized Switching Modification Method Using Carrier Shift for DC-link Capacitor RMS Current Reduction in Real-Time Implementation. *IEEE Transactions on Industrial Electronics*, **2019**, 66, 5992-6001	8.9	9
47	An Active Partial Switching Method in Tertiary Loop for a High-Efficiency Predictive Current-Mode Control PFC Converter. *IEEE Transactions on Industrial Electronics*, **2018**, 65, 7818-7828	8.9	8
46	. *IEEE Transactions on Industrial Electronics*, **2018**, 65, 9336-9345	8.9	40
45	Improved Saliency-Based Position Sensorless Control of Interior Permanent-Magnet Synchronous Machines With Single DC-Link Current Sensor Using Current Prediction Method. *IEEE Transactions on Industrial Electronics*, **2018**, 65, 5335-5343	8.9	34
44	An Integrated Current-Voltage Compensator Design Method for Stable Constant Voltage and Current Source Operation of LLC Resonant Converters. *Energies*, **2018**, 11, 1325	3.1	3
43	A Verification of Improved Distributed Control in DC Microgrid based on Hardware-in-the-loop Simulation **2018**,		1
42	A novel charge equalizer with auxiliary circuit to control the allowable charging and discharging current of the Lithium-ion battery **2017**,		4
41	A robust resonance damping of LCL-filter based grid-connected converter with linear active disturbance rejection control **2017**,		2
40	An integrated voltage-current compensator of LLC resonant converter for Li-ion battery charger applications **2016**,		1
39	A New Rotor Position Estimation Method of IPMSM Using All-Pass Filter on High-Frequency Rotating Voltage Signal Injection. *IEEE Transactions on Industrial Electronics*, **2016**, 63, 6499-6509	8.9	78
38	Internal-model-principle-based robust optimal nonlinear control for position tracking of permanent-magnet synchronous motor servo system. *Transactions of the Institute of Measurement and Control*, **2015**, 37, 372-381	1.8	7
37	A novel switching loss minimization method for single-phase flying-capacitor multilevel inverter **2015**,		1
36	Design consideration of CC-CV controller of LLC resonant converter for Li-ion battery charger **2015**,		2
35	Suppression of Common-Mode Voltage Using a Multicentral Photovoltaic Inverter Topology With Synchronized PWM. *IEEE Transactions on Industrial Electronics*, **2014**, 61, 4722-4733	8.9	47
34	A Modularized Equalization Method Based on Magnetizing Energy for a Series-Connected Lithium-Ion Battery String. *IEEE Transactions on Power Electronics*, **2014**, 29, 1791-1799	7.2	141
33	Non-isolated bidirectional ZVT converter with a single resonant inductor for energy storage system **2013**,		1
32	A high efficiency non-isolated bidirectional DC-DC converter with zero-voltage-transition **2013**,		1
31	Modeling and Control of Two-Stage Inverter for Battery Energy Storage System **2013**,		3

30	Averaged modeling and control of a single-phase grid-connected two-stage inverter for battery application **2013**,		2
29	A Novel Soft-Switched Auxiliary Resonant Circuit of a PFC ZVT-PWM Boost Converter for an Integrated Multichip Power Module Fabrication. *IEEE Transactions on Industry Applications*, **2013**, 49, 2802-2809	4.3	17
28	Modularized battery cell voltage equalization circuit using extended multi-winding transformer **2012**,		5
27	Low cost multiple zero voltage/zero current switching battery equalization circuit with single soft-switching resonant cell **2012**,		2
26	A sensorless control using Extended Kalman Filter for an IPM synchronous motor based on an extended rotor flux **2012**,		2
25	An Adaptive Maximum Power Point Tracking Scheme Based on a Variable Scaling Factor for Photovoltaic Systems. *IEEE Transactions on Energy Conversion*, **2012**, 27, 1002-1008	5.4	21
24	Fuzzy adaptive speed control of a permanent magnet synchronous motor. *International Journal of Electronics*, **2012**, 99, 657-672	1.2	11
23	A high efficiency Zero Voltage-Zero Current Transition converter for battery cell equalization **2012**,		7
22	Nonisolated ZVT Two-Inductor Boost Converter With a Single Resonant Inductor for High Step-Up Applications. *IEEE Transactions on Power Electronics*, **2012**, 27, 1966-1973	7.2	41
21	A novel switching loss minimized PWM method for a high switching frequency three-level inverter with a SiC clamp diode **2011**,		4
20	Nonisolated ZVT two-inductor boost converter with a single resonant inductor for high step-up applications **2011**,		1
19	A novel fault detection circuit for short-circuit faults of IGBT **2011**,		10
18	Simple Fault Diagnosis Based on Operating Characteristic of Brushless Direct-Current Motor Drives. *IEEE Transactions on Industrial Electronics*, **2011**, 58, 1586-1593	8.9	55
17	Position Estimation in Switched Reluctance Motor Drives Using the First Switching Harmonics Through Fourier Series. *IEEE Transactions on Industrial Electronics*, **2011**, 58, 5352-5360	8.9	31
16	Analytical approach of circulating currents mitigation effect using coupled inductor in the parallel three-phase boost converters **2011**,		2
15	A predictive current control associated to EKF for high performance IPMSM drives **2011**,		8
14	Fault diagnosis using recursive least square algorithm for permanent magnet synchronous motor drives **2011**,		5
13	Low frequency current reduction using a quasi-notch filter operated in two-stage DC-DC-AC grid-connected systems **2011**,		14

12	Fault diagnosis for open-phase faults of permanent magnet synchronous motor drives using Extended Kalman Filter **2010**,		5
11	Design of a Photovoltaic Simulator With a Novel Reference Signal Generator and Two-Stage LC Output Filter. *IEEE Transactions on Power Electronics*, **2010**, 25, 1331-1338	7.2	56
10	Magnetic-Field Analysis on Winding Disposition of Transformer for Distributed High-Speed Train Applications. *IEEE Transactions on Magnetics*, **2010**, 46, 1766-1769	2	5
9	Detection Method for Open-Circuit Fault in Neutral-Point-Clamped Inverter Systems. *IEEE Transactions on Industrial Electronics*, **2009**, 56, 2754-2763	8.9	88
8	Study of neutral point potential variation for three-level NPC inverter under fault condition **2008**,		5
7	A Novel Fault Detection of an Open-Switch Fault in the NPC Inverter System **2007**,		4
6	A symmetric carrier technique of CRPWM for voltage balance method of flying-capacitor multilevel inverter. *IEEE Transactions on Industrial Electronics*, **2005**, 52, 879-888	8.9	84
5	A novel SVPWM strategy considering DC-link balancing for a multi-level voltage source inverter **1999**,		9
4	Control method of NPC inverter for continuous operation under one phase fault condition		16
3	Fault diagnosis and neutral point voltage control when the 3-level inverter faults occur		15
2	Line-interactive DVR using multi-level H-bridge inverter		3
1	The analysis of conduction and switching losses in multi-level inverter system		7