

Martin

List of Publications by Year in descending order

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162
papers

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162
docs citations

162
times ranked

2795
citing authors

#	ARTICLE	IF	CITATIONS
1	Current-Sharing Worst-Case Analysis of Three-Phase <i>CLLC</i> Resonant Converters. IEEE Transactions on Power Electronics, 2022, 37, 3099-3110.	5.4	3
2	Enhanced DC-Link Voltage Dynamics for Grid-Connected Converters. IEEE Transactions on Industrial Electronics, 2022, 69, 10787-10796.	5.2	3
3	Unified Bidirectional Resonant Frequency Tracking for <i>CLLC</i> Converters. IEEE Transactions on Power Electronics, 2022, 37, 5637-5649.	5.4	15
4	Noise-Tolerant LLC Synchronous Rectification Using Volt-Second Product. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 5944-5955.	3.7	1
5	DC/DC Stage Contribution to Bus Voltage in 1000- and 1500-V Grid-Connected Solar Inverters. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 6252-6265.	3.7	2
6	Bidirectional Parallel Low-Voltage Series High-Voltage DAB-based Converter Analysis and Design. , 2022, , .		3
7	Time-Effective Component Selection Automation in Electric Vehicles using Openly-Available Data. , 2022, , .		0
8	Near-Time-Optimal Dynamics in PWM DC-DC Converters: Dual-Loop Geometric Control. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 167-182.	3.7	6
9	Extended Range Bridgeless PFC Converter With High-Voltage DC Bus and Small Inductor. IEEE Transactions on Power Electronics, 2021, 36, 157-173.	5.4	10
10	A Self-Compensated Planar Coil for Resonant Wireless Power Transfer Systems. IEEE Transactions on Power Electronics, 2021, 36, 674-682.	5.4	11
11	Three-Phase <i>LLC</i> Battery Charger: Wide Regulation and Improved Light-Load Operation. IEEE Transactions on Power Electronics, 2021, 36, 1519-1531.	5.4	41
12	Power Loss Prediction for Distributed Energy Resources: Rapid Loss Estimation Equation. IEEE Transactions on Industrial Electronics, 2021, 68, 2289-2299.	5.2	6
13	Enhanced Small-Signal Modeling for Charge-Controlled Resonant Converters. IEEE Transactions on Power Electronics, 2021, , 1-1.	5.4	4
14	Digital Regulation of Wireless Power Transfer Systems using an Embedded Lock-in Amplifier. IEEE Journal of Emerging and Selected Topics in Industrial Electronics, 2021, , 1-1.	3.0	1
15	Characterization of the Minimum Recovery Time Transients for Three-Phase PWM Rectifiers. , 2021, , .		1
16	Low Inductance PCB Layout for GaN Devices: Interleaving Scheme. , 2021, , .		6
17	Bidirectional Resonant <i>CLLC</i> Charger for Wide Battery Voltage Range: Asymmetric Parameters Methodology. IEEE Transactions on Power Electronics, 2021, 36, 6662-6673.	5.4	66
18	High-Performance Isolated Gate-Driver Power Supply With Integrated Planar Transformer. IEEE Transactions on Power Electronics, 2021, 36, 11409-11420.	5.4	14

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19	Minimum Recovery Time Transients for Three-Phase Converters in the Synchronous Reference Frame. IEEE Transactions on Power Electronics, 2021, , 1-1.	5.4	0
20	Flexible AC Phase Configurable NPC-based Converter Topology. , 2021, , .		0
21	Resonant Bridgeless AC/DC Rectifier With High Switching Frequency and Inherent PFC Capability. IEEE Transactions on Power Electronics, 2020, 35, 232-246.	5.4	17
22	Intelligent Agent-Based Energy Management System for Islanded ACâ€“DC Microgrids. IEEE Transactions on Industrial Informatics, 2020, 16, 4603-4614.	7.2	37
23	Small-Signal Modeling of <i>LLC</i> Converters Using Homopolarity Cycle. IEEE Transactions on Power Electronics, 2020, 35, 4076-4093.	5.4	8
24	Power Loss Estimation in <i>LLC</i> Synchronous Rectification Using Rectifier Current Equations. IEEE Transactions on Industrial Electronics, 2020, 67, 3696-3704.	5.2	22
25	Robust Digital Algorithm for Rapid Phase Angle Tracking in Wireless Power Transfer. , 2020, , .		2
26	Fast and Reliable Geometric-Based Controller for Three-Phase PWM Rectifiers. , 2020, , .		5
27	Planar Transformers in LLC Resonant Converters: High-Frequency Fringing Losses Modeling. IEEE Transactions on Power Electronics, 2020, 35, 9632-9649.	5.4	31
28	Optimization-Based Design of Power Architecture for 5G Small Cell Base Stations. , 2020, , .		2
29	Asymmetric Parameters Design for Bidirectional Resonant CLLC Battery Charger. , 2020, , .		13
30	High Performance Gate-Driver Power Supply for Multilevel-based 1500 V Converters. , 2020, , .		9
31	Unbalanced Three-Phase $\frac{1}{2}$ LLC Resonant Converters: Analysis and Trigonometric Current Balancing. IEEE Transactions on Power Electronics, 2019, 34, 2025-2038.	5.4	44
32	Synchronous Rectification of LLC Resonant Converters Using Homopolarity Cycle Modulation. IEEE Transactions on Industrial Electronics, 2019, 66, 1781-1790.	5.2	45
33	Three-Dimensional Frequency-Dependent Thermal Model for Planar Transformers in <i>LLC</i> Resonant Converters. IEEE Transactions on Power Electronics, 2019, 34, 4641-4655.	5.4	37
34	PV Energy Harvesting Under Extremely Fast Changing Irradiance: State-Plane Direct MPPT. IEEE Transactions on Industrial Electronics, 2019, 66, 1852-1861.	5.2	45
35	A Novel Dual Slot Permanent Magnet Machine with Complementary Rotors for Electric Vehicle Propulsion. , 2019, , .		1
36	Optimal Sizing of a PV and Battery Storage System Using a Detailed Model of the Microgrid for Stand-Alone Applications. , 2019, , .		1

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37	A Wide Input Voltage Range PFC Converter with High-Efficiency. , 2019, , .		5
38	Universal Controllers for PWM Converters: a Normalized Approach. , 2019, , .		6
39	MPPT for Small Wind Turbines: Zero-Oscillation Sensorless Strategy. , 2019, , .		6
40	High-Impedance Fault Detection Method for DC Microgrids. , 2019, , .		6
41	Partial Shading Mitigation in Photovoltaic Arrays using Shade Dispenser Technique. , 2019, , .		4
42	Modeling the Effects of Printed-Circuit-Board Parasitics on the Switching Performance of Wide-Bandgap Applications. , 2019, , .		3
43	MOSFET Power Loss Estimation in <i>LLC</i> Resonant Converters: Time Interval Analysis. IEEE Transactions on Power Electronics, 2019, 34, 11964-11980.	5.4	51
44	Improving Planar Transformers for <i>LLC</i> Resonant Converters: Paired Layers Interleaving. IEEE Transactions on Power Electronics, 2019, 34, 11813-11832.	5.4	45
45	High-Efficiency Interleaved LC Resonant Boost Topology: Analysis and Design. IEEE Transactions on Power Electronics, 2019, 34, 10759-10775.	5.4	14
46	<i>LLC</i> Synchronous Rectification Using Resonant Capacitor Voltage. IEEE Transactions on Power Electronics, 2019, 34, 10970-10987.	5.4	42
47	Voltage and Power Balancing in Solar and Energy Storage Converters. , 2019, , .		5
48	Reconfigurable Universal Buck-Boost PFC with Ultra Wide Input Voltage Range. , 2019, , .		4
49	Modulation Effects on Power-Loss and Leakage Current in Three-Phase Solar Inverters. IEEE Transactions on Energy Conversion, 2019, 34, 339-350.	3.7	30
50	Harmonic Compensation Optimization for Multiple Parallel Distributed Generators. IEEE Transactions on Power Electronics, 2019, 34, 7103-7112.	5.4	3
51	Improving DC Microgrid Dynamic Performance Using a Fast State-Plane-Based Source-End Controller. IEEE Transactions on Power Electronics, 2019, 34, 8062-8078.	5.4	17
52	AMI-Based Energy Management for Islanded AC/DC Microgrids Utilizing Energy Conservation and Optimization. IEEE Transactions on Smart Grid, 2019, 10, 293-304.	6.2	42
53	PV Battery Charger Using an LC Resonant Converter for Electric Vehicle Applications. IEEE Transactions on Transportation Electrification, 2018, 4, 108-121.	5.3	31
54	Dual-Loop Controller for <i>LLC</i> Resonant Converters Using an Average Equivalent Model. IEEE Transactions on Power Electronics, 2018, 33, 9875-9889.	5.4	37

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55	LLC converters: Beyond datasheets for MOSFET power loss estimation. , 2018, , .		10
56	Voltage and Current Controllability in Multi-Microgrid Smart Distribution Systems. IEEE Transactions on Smart Grid, 2018, 9, 817-826.	6.2	40
57	Planar Transformers With Near-Zero Common-Mode Noise for Flyback and Forward Converters. IEEE Transactions on Power Electronics, 2018, 33, 1554-1571.	5.4	61
58	Inrush Current Limit or Extreme Startup Response for LLC Converters Using Average Geometric Control. IEEE Transactions on Power Electronics, 2018, 33, 777-792.	5.4	15
59	GaN Power Switches: A Comprehensive Approach to Power Loss Estimation. , 2018, , .		4
60	Common-Mode Noise Elimination in Planar Transformers for LLC Resonant Converters. , 2018, , .		7
61	Thermal Comparison of Planar Versus Conventional Transformers Used in LLC Resonant Converters. , 2018, , .		8
62	Power Losses Estimation on a Semi-Bridgeless PFC Using Response Surface Methodology. , 2018, , .		2
63	Voltage and Frequency Grid Support Strategies Beyond Standards. IEEE Transactions on Power Electronics, 2017, 32, 298-309.	5.4	70
64	Improving Solar Power PV Plants Using Multivariate Design Optimization. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2017, 5, 638-650.	3.7	41
65	High-Accuracy Impedance Detection to Improve Transient Stability in Microgrids. IEEE Transactions on Industrial Electronics, 2017, 64, 8167-8176.	5.2	16
66	Planar transformers with no common mode noise generation for flyback and forward converters. , 2017, , .		4
67	Fast Selective Harmonic Mitigation in Multifunctional Inverters Using Internal Model Controllers and Synchronous Reference Frames. IEEE Transactions on Industrial Electronics, 2017, 64, 6338-6349.	5.2	31
68	Improved PV Inverter Operating Range Using a Miniboost. IEEE Transactions on Power Electronics, 2017, 32, 8470-8485.	5.4	51
69	Guest Editorial Special Issue on Distributed Generation. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2017, 5, 597-599.	3.7	2
70	DC-Link Control Filtering Options for Torque Ripple Reduction in Low-Power Wind Turbines. IEEE Transactions on Power Electronics, 2017, 32, 4812-4826.	5.4	43
71	LLC Converters With Planar Transformers: Issues and Mitigation. IEEE Transactions on Power Electronics, 2017, 32, 4524-4542.	5.4	147
72	Efficiency improvement of three-phase LLC resonant converter using phase shedding. , 2017, , .		12

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73	Energy management in multi-microgrid systems " development and assessment. , 2017, , .		9
74	High efficiency LC resonant boost topology: Analysis and design. , 2017, , .		4
75	Resonant LLC bus conversion using homopolarity width control. , 2017, , .		0
76	Dual-loop controller for LLC resonant converters using an average equivalent circuit. , 2017, , .		8
77	LLC synchronous rectification using homopolarity cycle modulation. , 2017, , .		4
78	Time domain analysis of LLC resonant converters in the boost mode for battery charger applications. , 2017, , .		23
79	Low-capacitance planar spiral windings employing inverse track-width-ratio. , 2016, , .		3
80	Extreme start-up response of LLC converters using average geometric control. , 2016, , .		6
81	Planar transformer winding technique for reduced capacitance in LLC power converters. , 2016, , .		18
82	Energy Management in Multi-Microgrid Systems " Development and Assessment. IEEE Transactions on Power Systems, 2016, , 1-1.	4.6	98
83	Direct MPPT control of PWM converters for extreme transient PV applications. , 2016, , .		5
84	Comprehensive power MOSFET model for LLC resonant converter in renewable energy applications. , 2016, , .		0
85	An embedded impedance measurement for DC microgrids based on a Lock-In Amplifier. , 2016, , .		7
86	An optimization approach for designing multilevel converters. , 2016, , .		1
87	Power management control strategy in photovoltaic and energy storage for off-grid power systems. , 2016, , .		9
88	MPPT and control design of a Vienna rectifier-based low power wind turbine with reduced number of sensors. , 2016, , .		5
89	Fast-transient, low-THD geometric control of boost-derived active rectifiers. , 2016, , .		1
90	Dynamic performance improvement of DC microgrids during Constant-Power Load transients. , 2016, , .		4

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91	Dual-loop geometric-based control of full-bridge inverters for stand-alone distributed generation systems. , 2016, , .		3
92	LLC synchronous rectification using Coordinate Modulation. , 2016, , .		8
93	Low parasitics planar transformer for LLC resonant battery chargers. , 2016, , .		34
94	High efficiency LLC converter design for universal battery chargers. , 2016, , .		9
95	Fast Transient Response of Series Resonant Converters Using Average Geometric Control. IEEE Transactions on Power Electronics, 2016, 31, 6738-6755.	5.4	13
96	Benchmarking the Performance of Boost-Derived Converters Under Start-Up and Load Transients. IEEE Transactions on Industrial Electronics, 2016, 63, 3125-3136.	5.2	16
97	High-Performance Solar MPPT Using Switching Ripple Identification Based on a Lock-In Amplifier. IEEE Transactions on Industrial Electronics, 2016, 63, 3595-3604.	5.2	63
98	Improving Wireless Power Transfer Efficiency Using Hollow Windings With Track-Width-Ratio. IEEE Transactions on Power Electronics, 2016, 31, 6524-6533.	5.4	36
99	Control Design of a PFC With Harmonic Mitigation Function for Small Hybrid AC/DC Buildings. IEEE Transactions on Power Electronics, 2016, 31, 6607-6620.	5.4	38
100	High-Efficiency DAB Converter Using Switching Sequences and Burst Mode. IEEE Transactions on Power Electronics, 2016, 31, 2069-2082.	5.4	103
101	Dual-loop geometric-based control of buck converters. , 2015, , .		5
102	Introducing state-trajectory control for the synchronous interleaved boost converter. , 2015, , .		4
103	Fast transient response of series resonant converter using an average large signal model. , 2015, , .		4
104	Dual-loop geometric-based control of boost converters. , 2015, , .		5
105	Accurate modeling and design of LLC resonant converter with planar transformers. , 2015, , .		10
106	Flyback lossless passive snubber. , 2015, , .		11
107	DC-Bus Voltage Range Extension in 1500 V Photovoltaic Inverters. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2015, 3, 901-917.	3.7	102
108	Wireless-Power-Transfer Planar Spiral Winding Design Applying Track Width Ratio. IEEE Transactions on Industry Applications, 2015, 51, 2423-2433.	3.3	20

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109	PWM-Geometric Modeling and Centric Control of Basic DC-DC Topologies for Sleek and Reliable Large-Signal Response. IEEE Transactions on Industrial Electronics, 2015, 62, 2297-2308.	5.2	23
110	Improving the Regulation Range of EV Battery Chargers With <i>L3C2</i> Resonant Converters. IEEE Transactions on Power Electronics, 2015, 30, 3166-3184.	5.4	31
111	Fast and efficient solar incremental conductance MPPT using lock-in amplifier. , 2015, , .		4
112	Control of flywheel energy storage systems as virtual synchronous machines for microgrids. , 2015, , .		10
113	DC distribution systems for homes. , 2015, , .		6
114	Circular Switching Surface Technique: High-Performance Constant Power Load Stabilization for Electric Vehicle Systems. IEEE Transactions on Power Electronics, 2015, 30, 4560-4572.	5.4	65
115	Swinging Bus Operation of Inverters for Fuel Cell Applications With Small DC-Link Capacitance. IEEE Transactions on Power Electronics, 2015, 30, 1064-1075.	5.4	41
116	Islanding Detection Search Sequence for Distributed Power Generators Under AC Grid Faults. IEEE Transactions on Power Electronics, 2015, 30, 3106-3121.	5.4	25
117	Reverse control of solar power converters for modular telecommunications UPS. , 2014, , .		0
118	Dynamic physical limits of boost converters: A benchmarking tool for transient performance. , 2014, , .		8
119	High power LLC battery charger: Wide regulation using phase-shift for recovery mode. , 2014, , .		8
120	8-Shaped trajectory control for rugged rural PV inverters. , 2014, , .		1
121	Fast Transient Boundary Control and Steady-State Operation of the Dual Active Bridge Converter Using the Natural Switching Surface. IEEE Transactions on Power Electronics, 2014, 29, 946-957.	5.4	104
122	Boundary Control of Full-Bridge ZVS: Natural Switching Surface for Transient and Steady-State Operation. IEEE Transactions on Industrial Electronics, 2014, 61, 969-979.	5.2	19
123	Average natural trajectories (ANTs) for boost converters: Centric-based control. , 2014, , .		7
124	Bidirectional power flow with constant power load in electric vehicles: A non-linear strategy for Buck+Boost cascade converters. , 2014, , .		10
125	Output rectifier analysis in parallel and series-parallel resonant converters with pure capacitive output filter. , 2014, , .		3
126	A Self-commissioning Notch Filter for Active Damping in a Three-Phase LCL -Filter-Based Grid-Tie Converter. IEEE Transactions on Power Electronics, 2014, 29, 6754-6761.	5.4	166

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127	<i>LCL-Filter Design for Robust Active Damping in Grid-Connected Converters. IEEE Transactions on Industrial Informatics, 2014, 10, 2192-2203.</i>	7.2	215
128	Swinging Bus Technique for Ripple Current Elimination in Fuel Cell Power Conversion. IEEE Transactions on Power Electronics, 2014, 29, 170-178.	5.4	80
129	High efficiency switching sequence and enhanced dynamic regulation for DAB converters in solid-state transformers. , 2014, , .		7
130	Average Natural Trajectories (ANTs) for buck converters: Centric-based control. , 2013, , .		5
131	Dynamic physical limits of buck converters: The $T_{\text{inf}}/4$ transient benchmark rule. , 2013, , .		8
132	Zero-oscillation adaptive-step solar maximum power point tracking for rapid irradiance tracking and steady-state losses minimization. , 2013, , .		5
133	Topology Zero: A generalized averaging equivalent circuit model for basic DC-DC converters. , 2013, , .		1
134	Open-loop maximum power point tracking strategy for Marine Current Turbines based on resource prediction. , 2013, , .		0
135	Applying Response Surface Methodology to Small Planar Transformer Winding Design. IEEE Transactions on Industrial Electronics, 2013, 60, 483-493.	5.2	61
136	Increased frequency resolution of active rectifiers using fractional digital PWM. , 2013, , .		0
137	Normalized geometrical analysis: unified theory and derivation of natural trajectories for basic dc-dc topologies. , 2013, , .		3
138	Practical inductance calculation for planar magnetics with track-width-ratio. , 2013, , .		2
139	Introducing the Natural Switching Surface for reference frame systems: Three-phase boost PFCs. , 2012, , .		3
140	DSP-based marine current turbine emulator using a 3-phase inverter. , 2012, , .		3
141	Boundary control for isolated topologies: The Natural Switching Surface for Full-Bridge ZVS. , 2012, , .		0
142	High Performance Boundary Control of Boost-Derived PFCs: Natural Switching Surface Derivation and Properties. IEEE Transactions on Power Electronics, 2012, 27, 3807-3816.	5.4	21
143	Fast transient boundary control of the Dual Active Bridge Converter using the Natural Switching Surface. , 2012, , .		0
144	Boundary control of buck-boost converters: normalized trajectories and the Natural Switching Surface. , 2012, , .		11

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145	Blades optimization for an ocean current horizontal axis turbine using response surface methodology. , 2011, , .		0
146	MOSFET power loss characterization: Evolving into multivariate response surface. , 2011, , .		2
147	Swinging bus inverters: New requirements in renewable power and the Natural Switching Surface. , 2011, , .		0
148	Improvements in Boundary Control of Boost Converters Using the Natural Switching Surface. IEEE Transactions on Power Electronics, 2011, 26, 3367-3376.	5.4	66
149	Integrated magnetic design of small planar transformers for LLC resonant converters. , 2011, , .		7
150	Swinging bus technique for ripple current elimination in Fuel Cell power conversion. , 2011, , .		19
151	Soft-Switching Techniques for Efficiency Gains in Full-Bridge Fuel Cell Power Conversion. IEEE Transactions on Power Electronics, 2011, 26, 482-492.	5.4	39
152	Improvements in boundary control of boost converters using the natural switching surface. , 2011, , .		1
153	Introducing the elliptical carrier for PWM inverters: Derivation and properties for phase-shift compensation. , 2011, , .		0
154	Boundary control of boost-derived PFCs using the Natural Switching Surface: Derivation and enhanced properties. , 2011, , .		1
155	Wind turbine rotor modelling using response surface methodology. , 2010, , .		3
156	Applying Response Surface Methodology to planar transformer winding design. , 2010, , .		4
157	Modeling of planar transformer parasitics using design of experiment methodology. , 2010, , .		14
158	An Embedded Frequency Response Analyzer for Fuel Cell Monitoring and Characterization. IEEE Transactions on Industrial Electronics, 2010, 57, 1925-1934.	5.2	42
159	Techniques for efficiency gains in soft switching full-bridge Fuel Cell power conversion. , 2010, , .		0
160	Advanced Boundary Control of Inverters Using the Natural Switching Surface: Normalized Geometrical Derivation. IEEE Transactions on Power Electronics, 2008, 23, 2915-2930.	5.4	54
161	Selection of a curved switching surface for buck converters. IEEE Transactions on Power Electronics, 2006, 21, 1148-1153.	5.4	104
162	Modeling and Optimization of Direct Methanol Fuel Cells using Statistical Design of Experiment Methodology. , 2006, , .		6