

Martin Ordonez

List of Publications by Year in descending order

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79
papers

2,186
citations

236833

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79
docs citations

79
times ranked

1754
citing authors

#	ARTICLE	IF	CITATIONS
1	<i>LCL</i> -Filter Design for Robust Active Damping in Grid-Connected Converters. IEEE Transactions on Industrial Informatics, 2014, 10, 2192-2203.	7.2	215
2	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
3	LLC Converters With Planar Transformers: Issues and Mitigation. IEEE Transactions on Power Electronics, 2017, 32, 4524-4542.	5.4	147
4	Burst Mode Elimination in High-Power LLC Resonant Battery Charger for Electric Vehicles. IEEE Transactions on Power Electronics, 2016, 31, 1173-1188.	5.4	106
5	Selection of a curved switching surface for buck converters. IEEE Transactions on Power Electronics, 2006, 21, 1148-1153.	5.4	104
6	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
7	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
8	Improvements in Boundary Control of Boost Converters Using the Natural Switching Surface. IEEE Transactions on Power Electronics, 2011, 26, 3367-3376.	5.4	66
9	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
10	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
11	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
12	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
13	Improved PV Inverter Operating Range Using a Miniboost. IEEE Transactions on Power Electronics, 2017, 32, 8470-8485.	5.4	51
14	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
15	Improving Planar Transformers for <i>LLC</i> Resonant Converters: Paired Layers Interleaving. IEEE Transactions on Power Electronics, 2019, 34, 11813-11832.	5.4	45
16	Unbalanced Three-Phase LLC Resonant Converters: Analysis and Trigonometric Current Balancing. IEEE Transactions on Power Electronics, 2019, 34, 2025-2038.	5.4	44
17	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
18	<i>LLC</i> Synchronous Rectification Using Resonant Capacitor Voltage. IEEE Transactions on Power Electronics, 2019, 34, 10970-10987.	5.4	42

#	ARTICLE	IF	CITATIONS
19	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
20	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
21	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
22	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
23	Low parasitics planar transformer for LLC resonant battery chargers. , 2016, , .		34
24	PV Battery Charger Using an <i>LLC</i> Resonant Converter for Electric Vehicle Applications. IEEE Transactions on Transportation Electrification, 2018, 4, 108-121.	5.3	31
25	Planar Transformers in LLC Resonant Converters: High-Frequency Fringing Losses Modeling. IEEE Transactions on Power Electronics, 2020, 35, 9632-9649.	5.4	31
26	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
27	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
28	Time domain analysis of LLC resonant converters in the boost mode for battery charger applications. , 2017, , .		23
29	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
30	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
31	Planar transformer winding technique for reduced capacitance in LLC power converters. , 2016, , .		18
32	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
33	High-Accuracy Impedance Detection to Improve Transient Stability in Microgrids. IEEE Transactions on Industrial Electronics, 2017, 64, 8167-8176.	5.2	16
34	High-Efficiency Interleaved <i>LLC</i> Resonant Boost Topology: Analysis and Design. IEEE Transactions on Power Electronics, 2019, 34, 10759-10775.	5.4	14
35	High-Performance Isolated Gate-Driver Power Supply With Integrated Planar Transformer. IEEE Transactions on Power Electronics, 2021, 36, 11409-11420.	5.4	14
36	Fast Transient Response of Series Resonant Converters Using Average Geometric Control. IEEE Transactions on Power Electronics, 2016, 31, 6738-6755.	5.4	13

#	ARTICLE	IF	CITATIONS
37	Boundary control of buck-boost converters: normalized trajectories and the Natural Switching Surface. , 2012, , .		11
38	Bidirectional power flow with constant power load in electric vehicles: A non-linear strategy for Buck+Boost cascade converters. , 2014, , .		10
39	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
40	Power management control strategy in photovoltaic and energy storage for off-grid power systems. , 2016, , .		9
41	High efficiency LLC converter design for universal battery chargers. , 2016, , .		9
42	High Performance Gate-Driver Power Supply for Multilevel-based 1500 V Converters. , 2020, , .		9
43	Dynamic physical limits of buck converters: The $T_{\text{sw}}/4$ transient benchmark rule. , 2013, , .		8
44	Dynamic physical limits of boost converters: A benchmarking tool for transient performance. , 2014, , .		8
45	Thermal Comparison of Planar Versus Conventional Transformers Used in LLC Resonant Converters. , 2018, , .		8
46	Average natural trajectories (ANTs) for boost converters: Centric-based control. , 2014, , .		7
47	PV array voltage range extension for photovoltaic inverters using a mini-boost. , 2016, , .		6
48	Extreme start-up response of LLC converters using average geometric control. , 2016, , .		6
49	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
50	Power Loss Prediction for Distributed Energy Resources: Rapid Loss Estimation Equation. IEEE Transactions on Industrial Electronics, 2021, 68, 2289-2299.	5.2	6
51	Low Inductance PCB Layout for GaN Devices: Interleaving Scheme. , 2021, , .		6
52	Average Natural Trajectories (ANTs) for buck converters: Centric-based control. , 2013, , .		5
53	Dual-loop geometric-based control of buck converters. , 2015, , .		5
54	Dual-loop geometric-based control of boost converters. , 2015, , .		5

#	ARTICLE	IF	CITATIONS
55	Voltage and Power Balancing in Solar and Energy Storage Converters. , 2019, , .		5
56	Fast and Reliable Geometric-Based Controller for Three-Phase PWM Rectifiers. , 2020, , .		5
57	Energy Harvesting Comparison and Analysis in 1000V and 1500V Grid-Connected PV Systems. , 2020, , .		5
58	Introducing state-trajectory control for the synchronous interleaved boost converter. , 2015, , .		4
59	Fast transient response of series resonant converter using an average large signal model. , 2015, , .		4
60	Planar transformers with no common mode noise generation for flyback and forward converters. , 2017, , .		4
61	High efficiency LC resonant boost topology: Analysis and design. , 2017, , .		4
62	Power-loss analysis in 3-level TNPC inverters: Modulation effects. , 2017, , .		4
63	Reconfigurable Universal Buck-Boost PFC with Ultra Wide Input Voltage Range. , 2019, , .		4
64	Introducing the Natural Switching Surface for reference frame systems: Three-phase boost PFCs. , 2012, , .		3
65	Normalized geometrical analysis: unified theory and derivation of natural trajectories for basic dc-dc topologies. , 2013, , .		3
66	Dual-loop geometric-based control of full-bridge inverters for stand-alone distributed generation systems. , 2016, , .		3
67	Bidirectional Parallel Low-Voltage Series High-Voltage DAB-based Converter Analysis and Design. , 2022, , .		3
68	Optimization-Based Design of Power Architecture for 5G Small Cell Base Stations. , 2020, , .		2
69	Improvements in boundary control of boost converters using the natural switching surface. , 2011, , .		1
70	Boundary control of boost-derived PFCs using the Natural Switching Surface: Derivation and enhanced properties. , 2011, , .		1
71	8-Shaped trajectory control for rugged rural PV inverters. , 2014, , .		1
72	Fast-transient, low-THD geometric control of boost-derived active rectifiers. , 2016, , .		1

#	ARTICLE	IF	CITATIONS
73	Optimal Sizing of a PV and Battery Storage System Using a Detailed Model of the Microgrid for Stand-Alone Applications. , 2019, , .		1
74	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
75	Swinging bus inverters: New requirements in renewable power and the Natural Switching Surface. , 2011, , .		0
76	Boundary control for isolated topologies: The Natural Switching Surface for Full-Bridge ZVS. , 2012, , .		0
77	Fast transient boundary control of the Dual Active Bridge Converter using the Natural Switching Surface. , 2012, , .		0
78	Time-optimal switching surface for photovoltaic MPPT. , 2014, , .		0
79	Flexible AC Phase Configurable NPC-based Converter Topology. , 2021, , .		0