

Jose I Leon

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Capacitor Lifetime Extension of Interleaved DC-DC Converters for Multistring PV Systems. IEEE Transactions on Industrial Electronics, 2023, 70, 4854-4864.	5.2	6
2	Sliding Mode Control of Grid-Connected Neutral-Point-Clamped Converters Via High-Gain Observer. IEEE Transactions on Industrial Electronics, 2022, 69, 4010-4021.	5.2	59
3	Applications and Modulation Methods for Modular Converters Enabling Unequal Cell Power Sharing: Carrier Variable-Angle Phase-Displacement Modulation Methods. IEEE Industrial Electronics Magazine, 2022, 16, 19-30.	2.3	28
4	Observer-Based Sliding-Mode Control for Grid-Connected Power Converters Under Unbalanced Grid Conditions. IEEE Transactions on Industrial Electronics, 2022, 69, 517-527.	5.2	33
5	Prediction Model With Harmonic Load Current Components for FCS-MPC of an Uninterruptible Power Supply. IEEE Transactions on Power Electronics, 2022, 37, 322-331.	5.4	37
6	Adaptive Second-Order Sliding Mode Control for Grid-Connected NPC Converters With Enhanced Disturbance Rejection. IEEE Transactions on Power Electronics, 2022, 37, 206-220.	5.4	29
7	K-Best Sphere Decoding Algorithm for Long Prediction Horizon FCS-MPC. IEEE Transactions on Industrial Electronics, 2022, 69, 7571-7581.	5.2	17
8	Fuzzy Logic System-Based Sliding-Mode Control for Three-Level NPC Converters. IEEE Transactions on Transportation Electrification, 2022, 8, 3307-3319.	5.3	8
9	Parallel Sphere Decoding Algorithm for Long-Prediction-Horizon FCS-MPC. IEEE Transactions on Power Electronics, 2022, 37, 7896-7906.	5.4	10
10	The Influence of MPPT Algorithms in the Lifespan of the Capacitor Across the PV Array. IEEE Access, 2022, 10, 40945-40952.	2.6	1
11	Fuzzy Sliding-Mode Control for Three-Level NPC AFE Rectifiers: A Chattering Alleviation Approach. IEEE Transactions on Power Electronics, 2022, 37, 11704-11715.	5.4	18
12	Adaptive Control for Three-Phase Power Converters With Disturbance Rejection Performance. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2021, 51, 674-685.	5.9	18
13	DC Solid State Transformer Based on Three-Level Power Module for Interconnecting MV and LV DC Distribution Systems. IEEE Transactions on Power Electronics, 2021, 36, 1563-1577.	5.4	32
14	Variable Rounding Level Control Method for Modular Multilevel Converters. IEEE Transactions on Power Electronics, 2021, 36, 4791-4801.	5.4	17
15	Discontinuous-PWM Method for Multilevel N -Cell Cascaded H-Bridge Converters. IEEE Transactions on Industrial Electronics, 2021, 68, 7996-8005.	5.2	14
16	Common-Mode Voltage Mitigation of Dual Three-Phase Voltage Source Inverters in a Motor Drive Application. IEEE Access, 2021, 9, 67477-67487.	2.6	16
17	Common-Mode Voltage Mitigation Technique in Motor Drive Applications by Applying a Sampling-Time Adaptive Multi-Carrier PWM Method. IEEE Access, 2021, 9, 56115-56126.	2.6	10
18	Hybrid Energy Storage Systems: Concepts, Advantages, and Applications. IEEE Industrial Electronics Magazine, 2021, 15, 74-88.	2.3	28

#	ARTICLE	IF	CITATIONS
19	Common-Mode Voltage Harmonic Reduction in Variable Speed Drives Applying a Variable-Angle Carrier Phase-Displacement PWM Method. Energies, 2021, 14, 2929.	1.6	0
20	Model Predictive Control of Modular Multilevel Converters Using Quadratic Programming. IEEE Transactions on Power Electronics, 2021, 36, 7012-7025.	5.4	24
21	Binary Search Based Flexible Power Point Tracking Algorithm for Photovoltaic Systems. IEEE Transactions on Industrial Electronics, 2021, 68, 5909-5920.	5.2	39
22	Variable-Angle PS-PWM Technique for Multilevel Cascaded H-Bridge Converters With Large Number of Power Cells. IEEE Transactions on Industrial Electronics, 2021, 68, 6773-6783.	5.2	28
23	Parallel Interleaved Three-level Inverters Operation with Continuous and Discontinuous PWM Methods. , 2021, , .		1
24	Event-Triggered Continuous Control Set-Model Predictive Control for Three-Phase Power Converters. , 2021, , .		3
25	Optimized Phase-Shift Control for dc-link Current Minimization in Automotive Multi Converter Applications. , 2021, , .		3
26	Sampling-Time Harmonic Control for Cascaded H-Bridge Converters With Thermal Control. IEEE Transactions on Industrial Electronics, 2020, 67, 2776-2785.	5.2	19
27	DC-Link Voltage-Balancing Strategy Based on Optimal Switching Sequence Model Predictive Control for Single-Phase H-NPC Converters. IEEE Transactions on Industrial Electronics, 2020, 67, 7410-7420.	5.2	82
28	High-Performance Second-Order Sliding Mode Control for NPC Converters. IEEE Transactions on Industrial Informatics, 2020, 16, 5345-5356.	7.2	31
29	Generalized Harmonic Control for CHB Converters With Unbalanced Cells Operation. IEEE Transactions on Industrial Electronics, 2020, 67, 9039-9047.	5.2	29
30	Advanced Control Strategies for DC-DC Buck Converters With Parametric Uncertainties via Experimental Evaluation. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 5257-5267.	3.5	38
31	FCS-MPC and Observer Design in the dq Synchronous Frame: An Experimental Validation. , 2020, , .		3
32	Power Routing: A New Paradigm for Maintenance Scheduling. IEEE Industrial Electronics Magazine, 2020, 14, 33-45.	2.3	41
33	Power Devices Aging Equalization of Interleaved DC-DC Boost Converters via Power Routing. IEEE Journal of Emerging and Selected Topics in Industrial Electronics, 2020, 1, 91-101.	3.0	10
34	Efficient FPSoC Prototyping of FCS-MPC for Three-Phase Voltage Source Inverters. Energies, 2020, 13, 1074.	1.6	13
35	Integral Sliding-Mode Control-Based Direct Power Control for Three-Level NPC Converters. Energies, 2020, 13, 227.	1.6	12
36	Real-Time Selective Harmonic Mitigation Technique for Power Converters Based on the Exchange Market Algorithm. Energies, 2020, 13, 1659.	1.6	8

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37	A High-Gain Observer-Based Adaptive Super-Twisting Algorithm for DC-Link Voltage Control of NPC Converters. <i>Energies</i> , 2020, 13, 1110.	1.6	5
38	FS-MPC Method for MMCs with Large Number of Submodules with Reduced Computational Cost. , 2020, , .		4
39	Observer-Based Adaptive Sliding Mode Control of NPC Converters: An RBF Neural Network Approach. <i>IEEE Transactions on Power Electronics</i> , 2019, 34, 3831-3841.	5.4	122
40	Cost-effective Design of Modular Multilevel Converter Employing Full-bridge Submodules. , 2019, , .		1
41	Finite Control Set Model Predictive Control with an Output Current Observer in the dq-Synchronous Reference Frame for an Uninterruptible Power Supply System. , 2019, , .		4
42	Improved Harmonic Performance of Cascaded H-Bridge Converters With Thermal Control. <i>IEEE Transactions on Industrial Electronics</i> , 2019, 66, 4982-4991.	5.2	26
43	Switching Frequency Regulation for FCS-MPC Based on a Period Control Approach. <i>IEEE Transactions on Industrial Electronics</i> , 2018, 65, 5764-5773.	5.2	92
44	Loss Evaluation of Cascaded H-bridge and Modular Multilevel Converter for Motor Drive Applications. , 2018, , .		2
45	Generating the Arm Voltage References of Modular Multilevel Converters Employing Predictive Technique. , 2018, , .		1
46	Flexible Harmonic Control for Three-Level Selective Harmonic Modulation Using the Exchange Market Algorithm. , 2018, , .		5
47	Power Device Lifetime Extension of Dc-Dc Interleaved Converters via Power Routing. , 2018, , .		7
48	Basic Control Principles in Power Electronics. , 2018, , 31-68.		15
49	Improving the operation of the modular multilevel converters with model predictive control. , 2018, , .		1
50	Closed-loop active thermal control via power routing of parallel DC-DC converters. , 2018, , .		7
51	Variable-Angle Phase-Shifted PWM for Multilevel Three-Cell Cascaded H-Bridge Converters. <i>IEEE Transactions on Industrial Electronics</i> , 2017, 64, 3619-3628.	5.2	84
52	FCS-MPC and observer design for a VSI with output LC filter and sinusoidal output currents. , 2017, , .		24
53	Adaptive phase-shifted PWM for multilevel cascaded H-bridge converters with large number of power cells. , 2017, , .		14
54	Solar Photovoltaic and Thermal Energy Systems: Current Technology and Future Trends. <i>Proceedings of the IEEE</i> , 2017, 105, 2132-2146.	16.4	136

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55	Multilevel Converters: Control and Modulation Techniques for Their Operation and Industrial Applications. Proceedings of the IEEE, 2017, 105, 2066-2081.	16.4	328
56	Selective harmonic mitigation technique based on the exchange market algorithm for high-power applications. , 2017, , .		6
57	Power electronic converters and control techniques in AC microgrids. , 2017, , .		16
58	A simple model predictive control strategy aiming at enhancing the performance of modular multilevel converters. , 2017, , .		1
59	Variable-angle interleaved DC-DC converters. , 2016, , .		4
60	Model Predictive Control for Single-Phase NPC Converters Based on Optimal Switching Sequences. IEEE Transactions on Industrial Electronics, 2016, 63, 7533-7541.	5.2	130
61	A new three phase multilevel inverter with reduced number of switching power devices with Common Mode Voltage elimination. , 2016, , .		5
62	The Essential Role and the Continuous Evolution of Modulation Techniques for Voltage-Source Inverters in the Past, Present, and Future Power Electronics. IEEE Transactions on Industrial Electronics, 2016, 63, 2688-2701.	5.2	343
63	Reduced common-mode voltage operation of a new seven-level hybrid multilevel inverter topology with a single DC voltage source. IET Power Electronics, 2016, 9, 519-528.	1.5	34
64	A Predictive Capacitor Voltage Control of a Hybrid Cascaded Multilevel Inverter With a Single DC-Link and Reduced Common-Mode Voltage Operation. IEEE Transactions on Industrial Electronics, 2016, 63, 5285-5292.	5.2	11
65	Adaptive phase-shifted PWM for multilevel cascaded H-bridge converters for balanced or unbalanced operation. , 2015, , .		4
66	A Generalized Predictive control for T-type power inverters with output LC filter. , 2015, , .		6
67	Predictive direct power control for grid connected power converters with dc-link voltage dynamic reference design. , 2015, , .		9
68	A hybrid multilevel inverter scheme for induction motor drives and grid-tied applications using a single DC-link. , 2015, , .		8
69	Grid-Connected Photovoltaic Systems: An Overview of Recent Research and Emerging PV Converter Technology. IEEE Industrial Electronics Magazine, 2015, 9, 47-61.	2.3	926
70	A hybrid seven level inverter topology with a single DC supply and reduced switch count. , 2015, , .		8
71	Seventeen-Level Inverter Formed by Cascading Flying Capacitor and Floating Capacitor H-Bridges. IEEE Transactions on Power Electronics, 2015, 30, 3471-3478.	5.4	140
72	Predictive Optimal Switching Sequence Direct Power Control for Grid-Connected Power Converters. IEEE Transactions on Industrial Electronics, 2015, 62, 2010-2020.	5.2	302

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73	A Three-Level Common-Mode Voltage Eliminated Inverter With Single DC Supply Using Flying Capacitor Inverter and Cascaded H-Bridge. IEEE Transactions on Power Electronics, 2014, 29, 1402-1409.	5.4	36
74	Adaptive Vectorial Filter for Grid Synchronization of Power Converters Under Unbalanced and/or Distorted Grid Conditions. IEEE Transactions on Industrial Electronics, 2014, 61, 1355-1367.	5.2	130
75	Model Predictive Control: A Review of Its Applications in Power Electronics. IEEE Industrial Electronics Magazine, 2014, 8, 16-31.	2.3	894
76	Selective Harmonic Mitigation Technique for Cascaded H-Bridge Converters With Nonequal DC Link Voltages. IEEE Transactions on Industrial Electronics, 2013, 60, 1963-1971.	5.2	152
77	Model Based Adaptive Direct Power Control for Three-Level NPC Converters. IEEE Transactions on Industrial Informatics, 2013, 9, 1148-1157.	7.2	85
78	How power electronics contribute to the current energy arena. , 2013, , .		2
79	Introduction to the Special Section on Modulation Techniques for DC-to-AC Power Converters. IEEE Transactions on Industrial Electronics, 2013, 60, 1859-1860.	5.2	4
80	A seventeen-level inverter with a single DC-link for motor drives. , 2013, , .		3
81	Educational hardware/software interface for power electronic applications. , 2012, , .		0
82	Common-mode voltage eliminated three-level inverter using a three-level flying-capacitor inverter and cascaded H-Bridge. , 2012, , .		4
83	A Five-Level Inverter Topology with Single-DC Supply by Cascading a Flying Capacitor Inverter and an H-Bridge. IEEE Transactions on Power Electronics, 2012, 27, 3505-3512.	5.4	166
84	Novel modulator for the hybrid two-cell flying-capacitor based ANPC converter. , 2011, , .		4
85	Recent advances on Energy Storage Systems. , 2011, , .		27
86	Cascaded H-bridge multilevel converter multistring topology for large scale photovoltaic systems. , 2011, , .		181
87	Model predictive control based selective harmonic mitigation technique for multilevel cascaded H-bridge converters. , 2011, , .		28
88	Simple modulator with voltage balancing control for the hybrid five-level flying-capacitor based ANPC converter. , 2011, , .		17
89	Multidimensional Modulation Technique for Cascaded Multilevel Converters. IEEE Transactions on Industrial Electronics, 2011, 58, 412-420.	5.2	110
90	High-Performance Motor Drives. IEEE Industrial Electronics Magazine, 2011, 5, 6-26.	2.3	179

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91	Recent advances in high-power industrial applications. , 2010, , .		15
92	Two-dimensional modulation technique with dc voltage control for single-phase two-cell cascaded converters. , 2010, , .		13
93	Recent Advances and Industrial Applications of Multilevel Converters. IEEE Transactions on Industrial Electronics, 2010, 57, 2553-2580.	5.2	3,160
94	Multilevel Multiphase Feedforward Space-Vector Modulation Technique. IEEE Transactions on Industrial Electronics, 2010, 57, 2066-2075.	5.2	31
95	Conventional Space-Vector Modulation Techniques Versus the Single-Phase Modulator for Multilevel Converters. IEEE Transactions on Industrial Electronics, 2010, 57, 2473-2482.	5.2	95
96	Selective Harmonic Mitigation Technique for High-Power Converters. IEEE Transactions on Industrial Electronics, 2010, 57, 2315-2323.	5.2	201
97	Analysis of the Power Balance in the Cells of a Multilevel Cascaded H-Bridge Converter. IEEE Transactions on Industrial Electronics, 2010, 57, 2287-2296.	5.2	115
98	Comparison between FS-MPC control strategy for an UPS inverter application in α-β and abc frames. , 2010, , .		11
99	Educational software interface for power electronic applications. , 2010, , .		0
100	Two-dimensional modulation technique for multilevel cascaded H-bridge converters. , 2009, , .		4
101	Multilevel Converters: An Enabling Technology for High-Power Applications. Proceedings of the IEEE, 2009, 97, 1786-1817.	16.4	970
102	DC-Voltage-Ratio Control Strategy for Multilevel Cascaded Converters Fed With a Single DC Source. IEEE Transactions on Industrial Electronics, 2009, 56, 2513-2521.	5.2	125
103	Model Predictive Control with constant switching frequency using a Discrete Space Vector Modulation with virtual state vectors. , 2009, , .		137
104	Feed-Forward Space Vector Modulation for Single-Phase Multilevel Cascaded Converters With Any DC Voltage Ratio. IEEE Transactions on Industrial Electronics, 2009, 56, 315-325.	5.2	122
105	New trends and topologies for high power industrial applications: The multilevel converters solution. , 2009, , .		12
106	Selective harmonic mitigation technique for multilevel cascaded H-bridge converters. , 2009, , .		14
107	Guidelines for weighting factors design in Model Predictive Control of power converters and drives. , 2009, , .		490
108	Three-Dimensional Feedforward Space Vector Modulation Applied to Multilevel Diode-Clamped Converters. IEEE Transactions on Industrial Electronics, 2009, 56, 101-109.	5.2	76

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109	Unidimensional Modulation Technique for Cascaded Multilevel Converters. IEEE Transactions on Industrial Electronics, 2009, 56, 2981-2986.	5.2	54
110	A simple and low cost modulation technique for single-phase multilevel cascade converters based on geometrical considerations. , 2008, , .		3
111	The age of multilevel converters arrives. IEEE Industrial Electronics Magazine, 2008, 2, 28-39.	2.3	1,630
112	A Model-Based Direct Power Control for Three-Phase Power Converters. IEEE Transactions on Industrial Electronics, 2008, 55, 1647-1657.	5.2	168
113	Simple Unified Approach to Develop a Time-Domain Modulation Strategy for Single-Phase Multilevel Converters. IEEE Transactions on Industrial Electronics, 2008, 55, 3239-3248.	5.2	89
114	Implementation of a closed loop SHMPWM technique for three level converters. , 2008, , .		17
115	Controller design for a single-phase two-cell multilevel cascade H-bridge converter. , 2008, , .		18
116	Space vector modulation for multilevel single-phase cascade converters avoiding the negative effects of the DC voltage unbalance. , 2008, , .		2
117	A Flexible Selective Harmonic Mitigation Technique to Meet Grid Codes in Three-Level PWM Converters. IEEE Transactions on Industrial Electronics, 2007, 54, 3022-3029.	5.2	207
118	New Space Vector Modulation Technique for Single-Phase Multilevel Converters. , 2007, , .		21
119	Optimized Direct Power Control Strategy using Output Regulation Subspaces and Pulse Width Modulation. Industrial Electronics Society (IECON), Annual Conference of IEEE, 2006, , .	0.0	12
120	Simple Control Algorithm to Balance the DC-Link Voltage in Multilevel Four-Leg Four-Wire Diode Clamped Converters. , 2006, , .		3
121	Power-Electronic Systems for the Grid Integration of Renewable Energy Sources: A Survey. IEEE Transactions on Industrial Electronics, 2006, 53, 1002-1016.	5.2	3,182
122	Modeling Strategy for Back-to-Back Three-Level Converters Applied to High-Power Wind Turbines. IEEE Transactions on Industrial Electronics, 2006, 53, 1483-1491.	5.2	191
123	New State Vectors Selection Using Space Vector Modulation in Three Dimensional Control Regions for Multilevel Converters. , 2006, , .		4
124	DC-link capacitors voltage balancing in multilevel four-leg diode-clamped converters. , 2005, , .		20
125	Three-dimensional space vector modulation in abc coordinates for four-leg voltage source converters. IEEE Power Electronics Letters, 2003, 1, 104-109.	1.1	125
126	A 3-D space vector modulation generalized algorithm for multilevel converters. IEEE Power Electronics Letters, 2003, 1, 110-114.	1.1	87

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127	A SVM-3D generalized algorithm for multilevel converters. , 0, , .		30
128	Simple and advanced three dimensional spacevector modulation algorithm for four-leg multilevel converters topology. , 0, , .		4