

Leopoldo G Franquelo

List of Publications by Year in descending order

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240
papers

22,381
citations

50276

46
h-index

15266

126
g-index

249
all docs

249
docs citations

249
times ranked

10575
citing authors

| # | ARTICLE | IF | CITATIONS |
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| 1 | Power-Electronic Systems for the Grid Integration of Renewable Energy Sources: A Survey. IEEE Transactions on Industrial Electronics, 2006, 53, 1002-1016. | 7.9 | 3,182 |
| 2 | Recent Advances and Industrial Applications of Multilevel Converters. IEEE Transactions on Industrial Electronics, 2010, 57, 2553-2580. | 7.9 | 3,160 |
| 3 | The age of multilevel converters arrives. IEEE Industrial Electronics Magazine, 2008, 2, 28-39. | 2.6 | 1,630 |
| 4 | Model Predictive Control for Power Converters and Drives: Advances and Trends. IEEE Transactions on Industrial Electronics, 2017, 64, 935-947. | 7.9 | 1,305 |
| 5 | Energy Storage Systems for Transport and Grid Applications. IEEE Transactions on Industrial Electronics, 2010, 57, 3881-3895. | 7.9 | 1,054 |
| 6 | Multilevel Converters: An Enabling Technology for High-Power Applications. Proceedings of the IEEE, 2009, 97, 1786-1817. | 21.3 | 970 |
| 7 | Grid-Connected Photovoltaic Systems: An Overview of Recent Research and Emerging PV Converter Technology. IEEE Industrial Electronics Magazine, 2015, 9, 47-61. | 2.6 | 926 |
| 8 | Model Predictive Control: A Review of Its Applications in Power Electronics. IEEE Industrial Electronics Magazine, 2014, 8, 16-31. | 2.6 | 894 |
| 9 | Model Predictive Control of an Inverter With Output LCL Filter for UPS Applications. IEEE Transactions on Industrial Electronics, 2009, 56, 1875-1883. | 7.9 | 552 |
| 10 | Guidelines for weighting factors design in Model Predictive Control of power converters and drives. , 2009, , . | | 490 |
| 11 | Extended State Observer-Based Sliding-Mode Control for Three-Phase Power Converters. IEEE Transactions on Industrial Electronics, 2017, 64, 22-31. | 7.9 | 426 |
| 12 | Grid-Connected Photovoltaic Generation Plants: Components and Operation. IEEE Industrial Electronics Magazine, 2013, 7, 6-20. | 2.6 | 380 |
| 13 | 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. | 7.9 | 343 |
| 14 | Multilevel Converters: Control and Modulation Techniques for Their Operation and Industrial Applications. Proceedings of the IEEE, 2017, 105, 2066-2081. | 21.3 | 328 |
| 15 | Predictive Optimal Switching Sequence Direct Power Control for Grid-Connected Power Converters. IEEE Transactions on Industrial Electronics, 2015, 62, 2010-2020. | 7.9 | 302 |
| 16 | A Flexible Selective Harmonic Mitigation Technique to Meet Grid Codes in Three-Level PWM Converters. IEEE Transactions on Industrial Electronics, 2007, 54, 3022-3029. | 7.9 | 207 |
| 17 | Selective Harmonic Mitigation Technique for High-Power Converters. IEEE Transactions on Industrial Electronics, 2010, 57, 2315-2323. | 7.9 | 201 |
| 18 | Modeling Strategy for Back-to-Back Three-Level Converters Applied to High-Power Wind Turbines. IEEE Transactions on Industrial Electronics, 2006, 53, 1483-1491. | 7.9 | 191 |

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| 19 | Cascaded H-bridge multilevel converter multistring topology for large scale photovoltaic systems. , 2011, , . | | 181 |
| 20 | High-Performance Motor Drives. IEEE Industrial Electronics Magazine, 2011, 5, 6-26. | 2.6 | 179 |
| 21 | 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. | 7.9 | 166 |
| 22 | Event-triggering dissipative control of switched stochastic systems via sliding mode. Automatica, 2019, 103, 261-273. | 5.0 | 154 |
| 23 | Selective Harmonic Mitigation Technique for Cascaded H-Bridge Converters With Nonequal DC Link Voltages. IEEE Transactions on Industrial Electronics, 2013, 60, 1963-1971. | 7.9 | 152 |
| 24 | Seventeen-Level Inverter Formed by Cascading Flying Capacitor and Floating Capacitor H-Bridges. IEEE Transactions on Power Electronics, 2015, 30, 3471-3478. | 7.9 | 140 |
| 25 | Model Predictive Control with constant switching frequency using a Discrete Space Vector Modulation with virtual state vectors. , 2009, , . | | 137 |
| 26 | Model Predictive Control for Single-Phase NPC Converters Based on Optimal Switching Sequences. IEEE Transactions on Industrial Electronics, 2016, 63, 7533-7541. | 7.9 | 130 |
| 27 | Three-dimensional space vector modulation in abc coordinates for four-leg voltage source converters. IEEE Power Electronics Letters, 2003, 1, 104-109. | 0.7 | 125 |
| 28 | DC-Voltage-Ratio Control Strategy for Multilevel Cascaded Converters Fed With a Single DC Source. IEEE Transactions on Industrial Electronics, 2009, 56, 2513-2521. | 7.9 | 125 |
| 29 | 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. | 7.9 | 122 |
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| 31 | Analysis of the Power Balance in the Cells of a Multilevel Cascaded H-Bridge Converter. IEEE Transactions on Industrial Electronics, 2010, 57, 2287-2296. | 7.9 | 115 |
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| 34 | Speed control of induction motors using a novel fuzzy sliding-mode structure. IEEE Transactions on Fuzzy Systems, 2002, 10, 375-383. | 9.8 | 102 |
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| 37 | Predictive control of a three-phase UPS inverter using two steps prediction horizon. , 2010, , . | | 90 |
| 38 | Simple Unified Approach to Develop a Time-Domain Modulation Strategy for Single-Phase Multilevel Converters. IEEE Transactions on Industrial Electronics, 2008, 55, 3239-3248. | 7.9 | 89 |
| 39 | A 3-D space vector modulation generalized algorithm for multilevel converters. IEEE Power Electronics Letters, 2003, 1, 110-114. | 0.7 | 87 |
| 40 | Model Based Adaptive Direct Power Control for Three-Level NPC Converters. IEEE Transactions on Industrial Informatics, 2013, 9, 1148-1157. | 11.3 | 85 |
| 41 | Variable-Angle Phase-Shifted PWM for Multilevel Three-Cell Cascaded H-Bridge Converters. IEEE Transactions on Industrial Electronics, 2017, 64, 3619-3628. | 7.9 | 84 |
| 42 | 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. | 7.9 | 82 |
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| 44 | Selective Harmonic Mitigation Based Self-Elimination of Triplen Harmonics for Single-Phase Five-Level Inverters. IEEE Transactions on Power Electronics, 2019, 34, 86-96. | 7.9 | 72 |
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| 49 | Fully parallel stochastic computation architecture. IEEE Transactions on Signal Processing, 1996, 44, 2110-2117. | 5.3 | 54 |
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| 54 | Control Design Strategy for Flying Capacitor Multilevel Converters Based on Petri Nets. IEEE Transactions on Industrial Electronics, 2016, 63, 1728-1736. | 7.9 | 40 |

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| 65 | Neural network for constrained predictive control. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1993, 40, 621-626. | 0.1 | 33 |
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| 79 | 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. | 2.6 | 28 |
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| 89 | Model Predictive Control of Modular Multilevel Converters Using Quadratic Programming. IEEE Transactions on Power Electronics, 2021, 36, 7012-7025. | 7.9 | 24 |
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| 94 | New Space Vector Modulation Technique for Single-Phase Multilevel Converters. , 2007, , . | | 21 |
| 95 | Fully parallel summation in a new stochastic neural network architecture. , 0, , . | | 20 |
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| 104 | Adaptive Control for Three-Phase Power Converters With Disturbance Rejection Performance. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2021, 51, 674-685. | 9.3 | 18 |
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| 117 | Control of a three level converter used as a synchronous rectifier. , 0, , . | | 15 |
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| 122 | Adaptive phase-shifted PWM for multilevel cascaded H-bridge converters with large number of power cells. , 2017, , . | | 14 |
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| 125 | A new power stabilization control system based on making use of mechanical inertia of a variable-speed wind-turbine for stand-alone wind-diesel applications. , 0, , . | | 13 |
| 126 | DSP-based doubly fed induction generator test bench using a back-to-back PWM converter. , 0, , . | | 13 |

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| 129 | Efficient FPSoC Prototyping of FCS-MPC for Three-Phase Voltage Source Inverters. Energies, 2020, 13, 1074. | 3.1 | 13 |
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| 132 | Tracking system for solar power plants. Industrial Electronics Society (IECON), Annual Conference of IEEE, 2006, , . | 0.0 | 12 |
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| 135 | Integral Sliding-Mode Control-Based Direct Power Control for Three-Level NPC Converters. Energies, 2020, 13, 227. | 3.1 | 12 |
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| 145 | 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. | 4.2 | 10 |
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| 154 | A NOVEL SPACE-VECTOR ALGORITHM FOR MULTILEVEL CONVERTERS BASED ON GEOMETRICAL CONSIDERATIONS USING A NEW SEQUENCE CONTROL TECHNIQUE. Journal of Circuits, Systems and Computers, 2004, 13, 845-861. | 1.5 | 8 |
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