

# Vitor Monteiro

## List of Publications by Year in descending order

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146  
papers

1,932  
citations

430874

18  
h-index

361022

35  
g-index

154  
all docs

154  
docs citations

154  
times ranked

1429  
citing authors

#	ARTICLE	IF	CITATIONS
1	Power electronics technologies for renewable energy sources. , 2022, , 403-455.		0
2	A Unified Topology for the Integration of Electric Vehicle, Renewable Energy Source, and Active Filtering for the Power Quality Improvement of the Electrical Power Grid: An Experimental Validation. Electronics (Switzerland), 2022, 11, 429.	3.1	5
3	Power Electronics Technologies and Applicationsfor EV Battery Charging Systems. Energies, 2022, 15, 1049.	3.1	0
4	A Three-Phase Multilevel AC-DC Converter Operating as a Shunt Active Power Filter: Validation Considering an Industrial Environment. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2022, , 141-153.	0.3	0
5	A Review on Integrated Battery Chargers for Electric Vehicles. Energies, 2022, 15, 2756.	3.1	4
6	Experimental Validation of a Reduced-Scale Rail Power Conditioner Based on Modular Multilevel Converter for AC Railway Power Grids. Energies, 2021, 14, 484.	3.1	13
7	Comparative Analysis and Validation of Different Modulation Strategies for an Isolated DC-DC Dual Active Bridge Converter. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2021, , 30-49.	0.3	1
8	A Single-Phase Current-Source Converter Combined with a Hybrid Converter for Interfacing an Electric Vehicle and a Renewable Energy Source. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2021, , 175-186.	0.3	1
9	Smart home power management system for electric vehicle battery charger and electrical appliance control. International Transactions on Electrical Energy Systems, 2021, 31, e12812.	1.9	3
10	Power losses reduction in a variable linear power supply using the LM317 voltage regulator. ISA Transactions, 2021, 112, 402-408.	5.7	3
11	Unified Power Converter Based on a Dual-Stator Permanent Magnet Synchronous Machine for Motor Drive and Battery Charging of Electric Vehicles. Energies, 2021, 14, 3344.	3.1	2
12	Development and Evaluation of Smart Home IoT Systems applied to HVAC Monitoring and Control. EAI Endorsed Transactions on Energy Web, 2021, 8, 167205.	0.4	0
13	Experimental Validation of a Current-Source Converter with Reduced Dc-link Operating as Shunt Active Power Filter. EAI Endorsed Transactions on Energy Web, 2021, 8, 168135.	0.4	0
14	Experimental Validation of a Three-Phase Induction Motor Operating with a Three-Phase Bidirectional Variable Speed Drive. EAI Endorsed Transactions on Energy Web, 2021, 8, 168137.	0.4	0
15	A Multilevel Bidirectional Four-Port DC-DC Converter to Create a DC-Grid in Solid-State Transformers with Hybrid AC/DC Grids. , 2021, , .		3
16	A Bidirectional Multilevel DC-DC Converter Applied to a Bipolar DC Grid: Analysis of Operation under Fault Conditions. , 2021, , .		2
17	Unified Systems for Traction and Battery Charging of Electric Vehicles: A Sustainability Perspective. EAI Endorsed Transactions on Energy Web, 2021, 8, 170557.	0.4	1
18	Design and Experimental Validation of a Compact Low-Cost Weather Station for Solar Photovoltaic Applications. EAI Endorsed Transactions on Energy Web, 2021, 8, 167290.	0.4	0

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19	The Role of the Electric Vehicle in Smart Homes: Assessment and Future Perspectives. EAI Endorsed Transactions on Energy Web, 2021, 8, 168223.	0.4	0
20	Review of a Disruptive Vision of Future Power Grids: A New Path Based on Hybrid AC/DC Grids and Solid-State Transformers. Sustainability, 2021, 13, 9423.	3.2	13
21	Model Predictive Control of a Single-Phase Five-Level VIENNA Rectifier. , 2021, , .		1
22	The Role of Front-End AC/DC Converters in Hybrid AC/DC Smart Homes: Analysis and Experimental Validation. Electronics (Switzerland), 2021, 10, 2601.	3.1	12
23	Electric Vehicles Charging Management System for Optimal Exploitation of Photovoltaic Energy Sources Considering Vehicle-to-Vehicle Mode. Frontiers in Energy Research, 2021, 9, .	2.3	10
24	Interfacing Power Electronics Systems for Smart Grids: Innovative Perspectives of Unified Systems and Operation Modes. , 2021, , .		1
25	Continuous Control Set Model Predictive Control of a Bridgeless-Boost Three-Level Active Rectifier. , 2021, , .		0
26	Enhanced Three-Phase Shunt Active Power Filter Interfacing a Renewable and an Energy Storage System. , 2021, , .		0
27	A Novel Multilevel Interleaved-Based PFC Rectifier with Modular DC Interfaces. , 2021, , .		1
28	Blockchain and Internet of Things for Electrical Energy Decentralization: A Review and System Architecture. Energies, 2021, 14, 8043.	3.1	11
29	A Review on Power Electronics Technologies for Power Quality Improvement. Energies, 2021, 14, 8585.	3.1	23
30	Design of an Intrinsically Safe Series-Series Compensation WPT System for Automotive LiDAR. Electronics (Switzerland), 2020, 9, 86.	3.1	2
31	The future of power systems: Challenges, trends, and upcoming paradigms. Wiley Interdisciplinary Reviews: Energy and Environment, 2020, 9, e368.	4.1	35
32	A Novel Topology of Modular Multilevel Bidirectional Non-Isolated dc-dc Converter. , 2020, , .		3
33	Wireless Communication and Management System for E-Bike Dynamic Inductive Power Transfer Lanes. Electronics (Switzerland), 2020, 9, 1485.	3.1	7
34	A Novel Topology of Multilevel Bidirectional and Symmetrical Split-Pi Converter. , 2020, , .		3
35	Comparative Analysis of Vehicle-to-Vehicle (V2V) Power Transfer Configurations without Additional Power Converters. , 2020, , .		4
36	Efficiency Comparison of a dc-dc Interleaved Converter Based on SiC-MOSFET and Si-IGBT Devices for EV Chargers. , 2020, , .		7

#	ARTICLE	IF	CITATIONS
37	Unified Three-Port Topology Integrating a Renewable and an Energy Storage System with the Grid-Interface Operating as Active Power Filter. , 2020, , .		3
38	A Review on Power Electronics Technologies for Electric Mobility. Energies, 2020, 13, 6343.	3.1	26
39	Review of Five-Level Front-End Converters for Renewable-Energy Applications. Frontiers in Energy Research, 2020, 8, .	2.3	5
40	Deadbeat Predictive Current Control for Circulating Currents Reduction in a Modular Multilevel Converter Based Rail Power Conditioner. Applied Sciences (Switzerland), 2020, 10, 1849.	2.5	9
41	An Off-Board Multi-Functional Electric Vehicle Charging Station for Smart Homes: Analysis and Experimental Validation. Energies, 2020, 13, 1864.	3.1	9
42	The Role of Off-Board EV Battery Chargers in Smart Homes and Smart Grids: Operation with Renewables and Energy Storage Systems. , 2020, , 47-72.		2
43	Development of an Internet of Things System for Smart Home HVAC Monitoring and Control. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2020, , 197-208.	0.3	3
44	A Novel Single-Phase Shunt Active Power Filter Based on a Current-Source Converter with Reduced Dc-Link. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2020, , 269-280.	0.3	1
45	Topologies and Operation Modes of Rail Power Conditioners in AC Traction Grids: Review and Comprehensive Comparison. Energies, 2020, 13, 2151.	3.1	26
46	Improved Voltage Control for the Electric Vehicle Operation in V2H Mode as an Off-Line UPS in the Context of Smart Homes. EAI Endorsed Transactions on Energy Web, 2020, 7, 160980.	0.4	4
47	Power Electronics Converters for an Electric Vehicle Fast Charging Station with Energy Storage System and Renewable Energy Sources. EAI Endorsed Transactions on Energy Web, 2020, 7, 161749.	0.4	3
48	Performance Comparison of a Typical Nonlinear Load Supplied by ac and dc Voltages. EAI Endorsed Transactions on Energy Web, 2020, 7, 161748.	0.4	2
49	The Electric Vehicle in Smart Homes: A Review and Future Perspectives. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2020, , 3-17.	0.3	0
50	Advanced Load-Shift System: An Experimental Validation of the ac-dc Converter as Shunt Active Power Filter. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2020, , 257-268.	0.3	0
51	Unified Traction and Battery Charging Systems for Electric Vehicles: A Sustainability Perspective. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2020, , 58-69.	0.3	0
52	Smart Auditorium: Development and Analysis of a Power and Environment Monitoring Platform. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2020, , 73-87.	0.3	0
53	Three-Phase Smart Energy Meter for Grid-Connected PV Installations. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2020, , 281-290.	0.3	0
54	A Three-Phase Bidirectional Variable Speed Drive: An Experimental Validation for a Three-Phase Induction Motor. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2020, , 47-57.	0.3	0

#	ARTICLE	IF	CITATIONS
55	A Three-Level dc-dc Converter for Bipolar dc Power Grids: Analysis and Experimental Validation. , 2020, , .		6
56	Comprehensive Analysis and Experimental Validation of Five-Level Converters for EV Battery Chargers Framed in Smart Grids. , 2019, , .		5
57	Sliding Mode Control of an Innovative Single-Switch Three-Level Active Rectifier. , 2019, , .		2
58	A Novel Multilevel Converter for On-Grid Interface of Renewable Energy Sources in Smart Grids. , 2019, , .		6
59	Comparative Analysis of Power Electronics Topologies to Interface dc Homes with the Electrical ac Power Grid. , 2019, , .		7
60	An Improved Modular Charge Equalization Structure for Series Cascaded Battery. , 2019, , .		2
61	Parallel Association of Power Semiconductors: An Experimental Evaluation with IGBTs and MOSFETs. , 2019, , .		1
62	IoT and Blockchain Paradigms for EV Charging System. Energies, 2019, 12, 2987.	3.1	19
63	A Proposed Bidirectional Three-Level dc-dc Power Converter for Applications in Smart Grids: An Experimental Validation. , 2019, , .		6
64	Integrated System for Traction and Battery Charging of Electric Vehicles with Universal Interface to the Power Grid. IFIP Advances in Information and Communication Technology, 2019, , 355-366.	0.7	1
65	Experimental Evaluation of a Control System Based on a Dual-DSP Architecture for a Unified Power Quality Conditioner. Energies, 2019, 12, 1694.	3.1	4
66	Improved vehicle-for-grid (iV4G) mode: Novel operation mode for EVs battery chargers in smart grids. International Journal of Electrical Power and Energy Systems, 2019, 110, 579-587.	5.5	29
67	A Novel Hardware Protection Scheme for a Modular Multilevel Converter Half-Bridge Submodule. , 2019, , .		4
68	Experimental Validation of a Bidirectional Three-Level dc-dc Converter for On-Board or Off-Board EV Battery Chargers. , 2019, , .		10
69	A Proposed Single-Phase Five-Level PFC Rectifier for Smart Grid Applications: An Experimental Evaluation. , 2019, , .		1
70	Vehicle Electrification: New Challenges and Opportunities for Smart Grids. Energies, 2019, 12, 118.	3.1	36
71	Power Electronics Converters for an Electric Vehicle Fast Charging Station with Storage Capability. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2019, , 119-130.	0.3	4
72	Performance Comparison of a Typical Nonlinear Load Connected to Ac and Dc Power Grids. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2019, , 54-63.	0.3	2

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73	Improved Voltage Control of the Electric Vehicle Operating as UPS in Smart Homes. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2019, , 1-12.	0.3	0
74	Experimental Validation of a Novel Architecture Based on a Dual-Stage Converter for Off-Board Fast Battery Chargers of Electric Vehicles. IEEE Transactions on Vehicular Technology, 2018, 67, 1000-1011.	6.3	115
75	Experimental Validation of a Three-Port Integrated Topology to Interface Electric Vehicles and Renewables With the Electrical Grid. IEEE Transactions on Industrial Informatics, 2018, 14, 2364-2374.	11.3	106
76	A Novel Five-Level Semi-Bridgeless Power Factor Correction Topology. , 2018, , .		1
77	An Energy Management Platform for Public Buildings. Electronics (Switzerland), 2018, 7, 294.	3.1	22
78	Performance Evaluation of a Proportional-Integral with Proportional-Derivative Feedforward Voltage Control for UPSs. , 2018, , .		0
79	A Novel Control Strategy Based on Predictive Control for a Bidirectional Interleaved Three-Phase Converter. , 2018, , .		1
80	A Novel Multilevel Bidirectional Topology for On-Board EV Battery Chargers in Smart Grids. Energies, 2018, 11, 3453.	3.1	19
81	New Perspectives for Vehicle-to-Vehicle (V2V) Power Transfer. , 2018, , .		41
82	A Novel Multi-Objective Off-Board EV Charging Station for Smart Homes. , 2018, , .		5
83	Development of an IoT System with Smart Charging Current Control for Electric Vehicles. , 2018, , .		7
84	A Novel Fixed Switching Frequency Control Strategy Applied to an Improved Five-Level Active Rectifier. , 2018, , .		0
85	A Novel Single-Phase Bidirectional Nine-Level Converter Employing Four Quadrant Switches. , 2018, , .		1
86	Selective Harmonic Measurement and Compensation Using Smart Inverters in a Microgrid with Distributed Generation. , 2018, , .		2
87	Innovative Off-Board EV Home Charging Station as a Smart Home Enabler: Present and Proposed Perspectives. , 2018, , .		5
88	Single-Phase Shunt Active Power Filter Based on a 5-Level Converter Topology. Energies, 2018, 11, 1019.	3.1	12
89	Power quality phenomena in electrified railways: Conventional and new trends in power quality improvement toward public power systems. , 2018, , .		15
90	A novel two-switch three-level active rectifier for grid-connected electrical appliances in smart grids. , 2018, , .		1

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91	Improved Vehicle-to-Home (iV2H) Operation Mode: Experimental Analysis of the Electric Vehicle as Off-Line UPS. IEEE Transactions on Smart Grid, 2017, 8, 2702-2711.	9.0	71
92	Decision Process to Manage Renewable Energy Production in Smart Grid Environment. Communications in Computer and Information Science, 2017, , 299-306.	0.5	0
93	A novel single-phase five-level active rectifier for on-board EV battery chargers. , 2017, , .		13
94	Model Predictive Current Control of a Slow Battery Charger for Electric Mobility Applications. Lecture Notes in Electrical Engineering, 2017, , 643-653.	0.4	1
95	OpenADRâ€™Intelligent Electrical Energy Consumption Towards Internet-of-Things. Lecture Notes in Electrical Engineering, 2017, , 725-736.	0.4	3
96	Renewable Energy System for an Isolated Sustainable Social Centre. Lecture Notes in Electrical Engineering, 2017, , 701-711.	0.4	0
97	Model Predictive Control of an On-Board Fast Battery Charger for Electric Mobility Applications. Lecture Notes in Electrical Engineering, 2017, , 679-689.	0.4	2
98	IoT system for anytime/anywhere monitoring and control of vehicles' parameters. , 2017, , .		9
99	Mobile device sensing system for urban goods distribution logistics. , 2017, , .		1
100	Single-phase shunt active power filter with UPS operation using a bidirectional Dc-Dc converter for energy storage interface. , 2017, , .		3
101	Novel single-phase five-level VIENNA-type rectifier with model predictive current control. , 2017, , .		12
102	Simplified rail power conditioner based on a half-bridge indirect AC/DC/AC Modular Multilevel Converter and a V/V power transformer. , 2017, , .		6
103	New multifunctional push-pull converter operating with MPPT and integrated energy storage system for PV micro-inverter applications. , 2017, , .		1
104	Experimental Comparison of Single-Phase Active Rectifiers for EV Battery Chargers. , 2017, , .		4
105	Evaluation of the Introduction of Electric Vehicles in the Power Gridâ€™A Study for the Island of Maio in Cape Verde. Lecture Notes in Electrical Engineering, 2017, , 713-724.	0.4	2
106	Comprehensive Analysis and Comparison of Digital Current Control Techniques for Active Rectifiers. Lecture Notes in Electrical Engineering, 2017, , 655-666.	0.4	2
107	Digital Control of a Novel Single-Phase Three-Port Bidirectional Converter to Interface Renewables and Electric Vehicles with the Power Grid. Lecture Notes in Electrical Engineering, 2017, , 667-677.	0.4	0
108	New Opportunities and Perspectives for the Electric Vehicle Operation in Smart Grids and Smart Homes Scenarios. , 2017, , .		0

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109	Model predictive current control of a proposed single-switch three-level active rectifier applied to EV battery chargers. , 2016, , .		17
110	Assessment of the use of vanadium redox flow batteries for energy storage and fast charging of electric vehicles in gas stations. Energy, 2016, 115, 1478-1494.	8.8	42
111	Model Predictive Control Applied to an Improved Five-Level Bidirectional Converter. IEEE Transactions on Industrial Electronics, 2016, 63, 5879-5890.	7.9	51
112	A novel modular voltage balancing topology for active battery management system. , 2016, , .		4
113	Operation Modes for the Electric Vehicle in Smart Grids and Smart Homes: Present and Proposed Modes. IEEE Transactions on Vehicular Technology, 2016, 65, 1007-1020.	6.3	207
114	A Flexible Infrastructure for Dynamic Power Control of Electric Vehicle Battery Chargers. IEEE Transactions on Vehicular Technology, 2016, 65, 4535-4547.	6.3	32
115	Tracking Users Mobility Patterns Towards CO2 Footprint. Advances in Intelligent Systems and Computing, 2016, , 87-96.	0.6	3
116	Experimental validation of a proposed single-phase five-level active rectifier operating with model predictive current control. , 2015, , .		17
117	Three-phase current-source shunt active power filter with solar photovoltaic grid interface. , 2015, , .		10
118	A novel concept of unidirectional bridgeless combined boost-buck converter for EV battery chargers. , 2015, , .		5
119	Three-phase three-level current-source converter for EVs fast battery charging systems. , 2015, , .		6
120	A novel architecture of a bidirectional bridgeless interleaved converter for EV battery chargers. , 2015, , .		3
121	Mobile Cockpit System for Enhanced Electric Bicycle Use. IEEE Transactions on Industrial Informatics, 2015, 11, 1017-1027.	11.3	16
122	Predictive control of a current-source inverter for solar photovoltaic grid interface. , 2015, , .		9
123	Comprehensive comparison of a current-source and a voltage-source converter for three-phase EV fast battery chargers. , 2015, , .		22
124	Smart Platform towards Batteries Analysis Based on Internet-of-Things. Procedia Technology, 2014, 17, 520-527.	1.1	5
125	Smart Charging Management for Electric Vehicle Battery Chargers. , 2014, , .		9
126	Field oriented control of an axial flux permanent magnet synchronous motor for traction solutions. , 2014, , .		3



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127	On-board electric vehicle battery charger with enhanced V2H operation mode. , 2014, , .		13
128	A Case Study on the Conversion of an Internal Combustion Engine Vehicle into an Electric Vehicle. , 2014, , .		18
129	Various strategies comparison of NPC inverter current control connected to the grid for photovoltaic system. , 2014, , .		0
130	Renewable energy system for an isolated micro grid. , 2014, , .		0
131	Onboard Reconfigurable Battery Charger for Electric Vehicles With Traction-to-Auxiliary Mode. IEEE Transactions on Vehicular Technology, 2014, 63, 1104-1116.	6.3	134
132	Vehicle-to-Anything Application (V2Anything App) for Electric Vehicles. IEEE Transactions on Industrial Informatics, 2014, 10, 1927-1937.	11.3	72
133	Electric vehicle assistant based on driver profile. International Journal of Electric and Hybrid Vehicles, 2014, 6, 335.	0.3	7
134	Operation Modes of Battery Chargers for Electric Vehicles in the Future Smart Grids. IFIP Advances in Information and Communication Technology, 2014, , 401-408.	0.7	5
135	Dynamic range prediction for an electric vehicle. , 2013, , .		23
136	Evaluation of a Shunt Active Power Filter with energy backup capability. , 2013, , .		4
137	Bidirectional battery charger with Grid-to-Vehicle, Vehicle-to-Grid and Vehicle-to-Home technologies. , 2013, , .		86
138	Collaborative Broker for Distributed Energy Resources. Intelligent Systems, Control and Automation: Science and Engineering, 2013, , 365-376.	0.5	10
139	Electric Vehicles On-Board Battery Charger for the Future Smart Grids. IFIP Advances in Information and Communication Technology, 2013, , 351-358.	0.7	16
140	Comparison of current-source and voltage-source Shunt Active Power Filters for harmonic compensation and reactive power control. , 2012, , .		17
141	Assessment of a battery charger for Electric Vehicles with reactive power control. , 2012, , .		63
142	Current-Source Shunt Active Power Filter with Periodic-Sampling Modulation Technique. , 2012, , .		4
143	Smart electric vehicle charging system. , 2011, , .		30
144	Impact of Electric Vehicles on power quality in a Smart Grid context. , 2011, , .		55

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145	iV2G Charging Platform. , 2010, , .		10
146	Vehicle Electrification: Technologies, Challenges, and a Global Perspective for Smart Grids. , 0, , .		5