

# Fernando Pinhabel Marafão

## List of Publications by Year in descending order

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97  
papers

1,449  
citations

516215

16  
h-index

433756

31  
g-index

98  
all docs

98  
docs citations

98  
times ranked

1004  
citing authors

#	ARTICLE	IF	CITATIONS
1	Repetitive-Based Control for Selective Harmonic Compensation in Active Power Filters. IEEE Transactions on Industrial Electronics, 2004, 51, 1018-1024.	5.2	301
2	Centralized Control of Distributed Single-Phase Inverters Arbitrarily Connected to Three-Phase Four-Wire Microgrids. IEEE Transactions on Smart Grid, 2017, 8, 437-446.	6.2	80
3	Multifunctional Control Strategy for Asymmetrical Cascaded H-Bridge Inverter in Microgrid Applications. IEEE Transactions on Industry Applications, 2017, 53, 1538-1551.	3.3	62
4	Multi-task control strategy for grid-tied inverters based on conservative power theory. IET Renewable Power Generation, 2015, 9, 154-165.	1.7	48
5	Frequency-Adjustable Positive Sequence Detector for Power Conditioning Applications. , 0, , .		42
6	Grid-Connected Symmetrical Cascaded Multilevel Converter for Power Quality Improvement. IEEE Transactions on Industry Applications, 2018, 54, 2792-2805.	3.3	41
7	Accountability in Smart Microgrids Based on Conservative Power Theory. IEEE Transactions on Instrumentation and Measurement, 2011, 60, 3058-3069.	2.4	40
8	PQ, DQ and CPT control methods for shunt active compensators &#x2014; A comparative study. , 2014, , .		36
9	Comparative analysis of Synchronization Algorithms based on PLL, RDFT and Kalman Filter. , 2007, , .		35
10	Optimal Multiobjective Control of Low-Voltage AC Microgrids: Power Flow Regulation and Compensation of Reactive Power and Unbalance. IEEE Transactions on Smart Grid, 2020, 11, 1239-1252.	6.2	35
11	Three-phase to single-phase direct connection for rural co-generation systems. , 0, , .		30
12	Intelligent Expert System for Power Quality Improvement Under Distorted and Unbalanced Conditions in Three-Phase AC Microgrids. IEEE Transactions on Smart Grid, 2018, 9, 6951-6960.	6.2	25
13	Coordinated Control of Distributed Three- and Single-Phase Inverters Connected to Three-Phase Three-Wire Microgrids. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2020, 8, 3861-3877.	3.7	25
14	Load Disaggregation Using Microscopic Power Features and Pattern Recognition. Energies, 2019, 12, 2641.	1.6	24
15	A selective harmonic compensation and power control approach exploiting distributed electronic converters in microgrids. International Journal of Electrical Power and Energy Systems, 2020, 115, 105452.	3.3	22
16	Decoupled Reference Generator for Shunt Active Filters Using the Conservative Power Theory. Journal of Control, Automation and Electrical Systems, 2013, 24, 522-534.	1.2	21
17	Power Metering: History and Future Trends. , 2017, , .		21
18	A comparative analysis of FBD, PQ and CPT current decompositions &#x2014; Part I: Three-phase, three-wire systems. , 2009, , .		20

#	ARTICLE	IF	CITATIONS
19	A comparative analysis of FBD, PQ and CPT current decompositions &#x2014; Part II: Three-phase four-wire systems. , 2009, , .		20
20	Application of Conservative Power Theory to load and line characterization and revenue metering. , 2012, , .		20
21	Power Quality, Smart Meters and Additional Information from Different Power Terms. IEEE Latin America Transactions, 2015, 13, 158-165.	1.2	20
22	Flexible active compensation based on load conformity factors applied to nonâ€sinusoidal and asymmetrical voltage conditions. IET Power Electronics, 2016, 9, 356-364.	1.5	20
23	A NILM Dataset for Cognitive Meters Based on Conservative Power Theory and Pattern Recognition Techniques. Journal of Control, Automation and Electrical Systems, 2018, 29, 742-755.	1.2	18
24	Load analyser using conservative power theory. , 2013, , .		16
25	Optimized Compensation of Unwanted Current Terms by AC Power Converters Under Generic Voltage Conditions. IEEE Transactions on Industrial Electronics, 2016, 63, 7743-7753.	5.2	16
26	Trends and Constraints on Brazilian Photovoltaic Industry: Energy Policies, Interconnection Codes, and Equipment Certification. IEEE Transactions on Industry Applications, 2018, 54, 4017-4027.	3.3	16
27	Selective disturbance compensation and comparisons of active filtering strategies. , 0, , .		15
28	Selective active filters using repetitive control techniques. , 2002, , .		15
29	Virtual Instrumentation Applied to the Implementation of IEEE-STD 1459-2000 Power Definitions. , 0, , .		15
30	Inverter control strategy for DG systems based on the Conservative power theory. , 2013, , .		15
31	Load Characterization and Revenue Metering Under Non-Sinusoidal and Asymmetrical Operation. IEEE Transactions on Instrumentation and Measurement, 2014, 63, 422-431.	2.4	15
32	NILM-based approach for energy efficiency assessment of household appliances. Energy Informatics, 2020, 3, .	1.4	14
33	Critical evaluation of FBD, PQ and CPT current decompositions for four-wire circuits. , 2009, , .		12
34	Integrated Local and Coordinated Overvoltage Control to Increase Energy Feed-In and Expand DER Participation in Low-Voltage Networks. IEEE Transactions on Sustainable Energy, 2022, 13, 1049-1061.	5.9	12
35	Selection of features from power theories to compose NILM datasets. Advanced Engineering Informatics, 2022, 52, 101556.	4.0	12
36	Time based decompositions of voltage, current and power functions. , 0, , .		11

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37	Three-phase four-wire circuits interpretation by means of different power theories. , 2010, , .		11
38	Novel expert system for defining power quality compensators. Expert Systems With Applications, 2015, 42, 3562-3570.	4.4	11
39	Cooperative operation based master-slave in islanded microgrid with CPT current decomposition. , 2015, , .		11
40	Coordinated operation in a multi-inverter based microgrid for both grid-connected and islanded modes using conservative power theory. , 2015, , .		11
41	Distributed selective harmonic mitigation and decoupled unbalance compensation by coordinated inverters in three-phase four-wire low-voltage networks. Electric Power Systems Research, 2020, 186, 106407.	2.1	11
42	General-compensation-purpose Static var Compensator prototype. HardwareX, 2019, 5, e00049.	1.1	10
43	Harmonic, reactive and unbalance compensation by means of CPT framework. , 2009, , .		9
44	Accountability and revenue metering in smart micro-grids. , 2010, , .		9
45	Evaluation of Pattern Recognition Algorithms for Applications on Power Factor Compensation. Journal of Control, Automation and Electrical Systems, 2018, 29, 75-90.	1.2	9
46	Enhanced health index for power transformers diagnosis. Engineering Failure Analysis, 2021, 126, 105427.	1.8	9
47	Shunt active compensation based on the Conservative Power Theory current's decomposition. , 2011, , .		8
48	Technology assessment for power quality mitigation devices “ Micro-DVR case study. Electric Power Systems Research, 2011, 81, 1215-1226.	2.1	8
49	Multifunctional control strategy for asymmetrical cascaded H-Bridge Inverter in microgrid applications. , 2015, , .		8
50	5-level Cascaded H-Bridge Multilevel microgrid Inverter applicable to multiple DG resources with power quality enhancement capability. , 2015, , .		7
51	Optimized Exploitation of Ancillary Services: Compensation of Reactive, Unbalance and Harmonic Currents Based on Particle Swarm Optimization. IEEE Latin America Transactions, 2021, 19, 314-325.	1.2	7
52	Model-Free Power Control for Low-Voltage AC Dispatchable Microgrids with Multiple Points of Connection. Energies, 2021, 14, 6390.	1.6	7
53	The Influence of Voltage Referential in Power Quality Indices Evaluation. IEEE Latin America Transactions, 2008, 6, 81-88.	1.2	6
54	Modeling and Control of a Single-Phase Grid-Connected Inverter with LCL Filter. IEEE Latin America Transactions, 2021, 19, 250-259.	1.2	6

#	ARTICLE	IF	CITATIONS
55	Conservative power theory discussion and evaluation by means of virtual instrumentation. , 2009, , .		5
56	An analysis of Generalized Symmetrical Components in non sinusoidal three phase systems. , 2011, , .		5
57	Reference generator for voltage controlled power conditioners. , 2011, , .		5
58	Three-phase smart inverter for flexible power conditioning in low voltage distribution systems. , 2017, , .		5
59	Experimental Implementation of a Single-Phase Microgrid: A Flexible Resource for Research and Educational Activities. , 2021, , .		5
60	Economic and Production-Related Implications for Industrial Energy Efficiency: A Logistic Regression Analysis on Cross-Cutting Technologies. Energies, 2022, 15, 1382.	1.6	5
61	Design of static VAR compensator using a general reactive energy definition. , 2013, , .		4
62	Selective Sharing of Load Current Components Among Parallel Power Electronic Interfaces in Three-phase Four-wire Stand-alone Microgrid. Electric Power Components and Systems, 2017, 45, 864-880.	1.0	4
63	Three/Four-leg Inverter Current Control Based on Generalized Symmetrical Components. , 2018, , .		4
64	Selective Power Conditioning in Two-Phase Three-Wire Systems Based on the Conservative Power Theory. , 2019, , .		4
65	Considerations on Communication Infrastructures for Cooperative Operation of Smart Inverters. , 2019, , .		4
66	Automatic Consumption Management for Prepaid Electricity Meter with NILM. IEEE Latin America Transactions, 2020, 18, 1102-1110.	1.2	4
67	Adaptive Power Factor Regulation Under Asymmetrical and Non-Sinusoidal Grid Condition With Distributed Energy Resource. IEEE Access, 2021, 9, 140487-140503.	2.6	4
68	Considerations on the modeling and control scheme of grid connected inverter with voltage support capability. , 2013, , .		3
69	A symmetrical Cascaded H-bridge Multilevel Inverter used as shunt active power filter for ideal and deteriorated voltage conditions. , 2016, , .		3
70	Embedded NILM as Home Energy Management System: A Heterogeneous Computing Approach. IEEE Latin America Transactions, 2020, 18, 360-367.	1.2	3
71	Resistive Shaping of Interconnected Low-Voltage Microgrids Operating Under Distorted Voltages. IEEE Transactions on Industrial Electronics, 2022, 69, 9075-9086.	5.2	3
72	Robust delta operator-based discrete systems for fixed-point DSP implementations. , 0, , .		2

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73	Development of a DC-DC converter for DC bus voltage control of series connected device. , 2009, , .		2
74	Making use of virtual instrumentation for the evaluation of Std-1459 and FBD method in three-phase four-wire circuits. , 2016, , .		2
75	Low cost digital module for demonstration of modulation strategies in DC-to-AC converters. , 2017, , .		2
76	Interactive android application for education in AC-to-DC converters. , 2017, , .		2
77	Multiobjective approach for power flow and unbalance control in low-voltage networks considering distributed energy resources. , 2017, , .		2
78	Power- and Current-Based Control of Distributed Inverters in Low-Voltage Microgrids: Considerations in Relation to Classic Droop Control. , 2020, , .		2
79	Metodologia de Projeto e Análise de Algoritmos de Sincronismo PLL. Eletrônica De Potência, 2024, 10, 7-14.	0.1	2
80	EXPERIMENTAL VALIDATION OF A FULLY-DISPATCHABLE MICROGRID WITH CENTRAL CONTROLLER. Eletrônica De Potência, 2018, 23, 1-11.	0.1	2
81	Possible shunt compensation strategies based on Conservative Power Theory. , 2010, , .		1
82	Dynamic voltage restorer development and testing. , 2011, , .		1
83	Simulation of a distributed generator with wireless communication using TrueTime and PLECS. , 2015, , .		1
84	Methodology for defining effective power factor compensation in three-phase systems. , 2015, , .		1
85	PV Microgeneration Perspective in Brazil: Approaching Interconnection Procedures and Equipment Certification. , 2017, , .		1
86	A guideline for employing PSIM on power converter applications: Prototyping and educational tool. , 2017, , .		1
87	Currents' physical components (CPC): Case studies in single phase systems. , 2018, , .		1
88	Embedded NILM as Home Energy Management System: A Heterogeneous Computing Approach. IEEE Latin America Transactions, 2019, 18, 360-367.	1.2	1
89	3-Phase Multi-Functional Grid-Tied Inverter for Compensation of Oscillating Instantaneous Power. , 2019, , .		1
90	Model development and controller design for DC-DC Boost converters in BCM with parallel cellular architecture. Mathematics and Computers in Simulation, 2021, 190, 38-56.	2.4	1

#	ARTICLE	IF	CITATIONS
91	Compensação Ativa Paralela Baseada na Teoria de Potência Conservativa. <i>Eletrônica De Potência</i> , 2024, 17, 409-418.	0.1	1
92	ECONOMIC, ENVIRONMENTAL AND PRODUCTIVE PRACTICES INFLUENCE ON THE INDUSTRIAL ENERGETIC EFFICIENCY. <i>Revista Gestão &amp; Sustentabilidade Ambiental</i> , 0, 9, 513.	0.1	1
93	Technology assessment for power quality mitigation devices - Micro-DVR case study. , 2008, , .		0
94	Selective current compensators based on the Conservative Power Theory. , 2009, , .		0
95	Harmonic analysis of static var compensator operating under distorted voltages. , 2016, , .		0
96	Automatic Management Methodology For Photovoltaic Distributed Generation Systems. <i>Eletrônica De Potência</i> , 2013, 18, 1257-1265.	0.1	0
97	Modelling and Controller Design for Y-Source Inverter Applied in Stand-Alone PV System. , 2021, , .		0