

Ca Ramos-Paja

List of Publications by Year in descending order

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111
papers

3,098
citations

186254

28
h-index

175241

52
g-index

119
all docs

119
docs citations

119
times ranked

2530
citing authors

#	ARTICLE	IF	CITATIONS
1	Grid-Connected Photovoltaic Generation Plants: Components and Operation. IEEE Industrial Electronics Magazine, 2013, 7, 6-20.	2.6	380
2	A Fast Current-Based MPPT Technique Employing Sliding Mode Control. IEEE Transactions on Industrial Electronics, 2013, 60, 1168-1178.	7.9	190
3	Maximum power point tracking architectures for photovoltaic systems in mismatching conditions: a review. IET Power Electronics, 2014, 7, 1396-1413.	2.1	143
4	Perturb and Observe MPPT algorithm with a current controller based on the sliding mode. International Journal of Electrical Power and Energy Systems, 2013, 44, 346-356.	5.5	132
5	Improved Design of Sliding-Mode Controllers Based on the Requirements of MPPT Techniques. IEEE Transactions on Power Electronics, 2016, 31, 235-247.	7.9	120
6	Modeling of photovoltaic fields in mismatched conditions for energy yield evaluations. Electric Power Systems Research, 2011, 81, 1003-1013.	3.6	114
7	Minimum Fuel Consumption Strategy for PEM Fuel Cells. IEEE Transactions on Industrial Electronics, 2009, 56, 685-696.	7.9	109
8	A genetic algorithm for identifying the single diode model parameters of a photovoltaic panel. Mathematics and Computers in Simulation, 2017, 131, 38-54.	4.4	107
9	Optimal Sizing and Location of Distributed Generators Based on PBIL and PSO Techniques. Energies, 2018, 11, 1018.	3.1	85
10	Linear power flow formulation for low-voltage DC power grids. Electric Power Systems Research, 2018, 163, 375-381.	3.6	80
11	A PEM Fuel-Cell Model Featuring Oxygen-Excess-Ratio Estimation and Power-Electronics Interaction. IEEE Transactions on Industrial Electronics, 2010, 57, 1914-1924.	7.9	79
12	Control of Photovoltaic Arrays: Dynamical Reconfiguration for Fighting Mismatched Conditions and Meeting Load Requests. IEEE Industrial Electronics Magazine, 2015, 9, 62-76.	2.6	78
13	An energy management system for optimal operation of BSS in DC distributed generation environments based on a parallel PSO algorithm. Journal of Energy Storage, 2020, 29, 101488.	8.1	65
14	Model-Based Degradation Analysis of Photovoltaic Modules Through Series Resistance Estimation. IEEE Transactions on Industrial Electronics, 2015, 62, 7256-7265.	7.9	62
15	Maximum power point tracking of photovoltaic systems based on the sliding mode control of the module admittance. Electric Power Systems Research, 2016, 136, 125-134.	3.6	58
16	A technique for mismatched PV array simulation. Renewable Energy, 2013, 55, 417-427.	8.9	57
17	A model of photovoltaic fields in mismatching conditions featuring an improved calculation speed. Electric Power Systems Research, 2013, 96, 81-90.	3.6	55
18	Optimized Configuration of Mismatched Photovoltaic Arrays. IEEE Journal of Photovoltaics, 2016, 6, 1210-1220.	2.5	52

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19	A perturbation strategy for fuel consumption minimization in polymer electrolyte membrane fuel cells: Analysis, Design and FPGA implementation. <i>Applied Energy</i> , 2014, 119, 21-32.	10.1	50
20	Reconfiguration analysis of photovoltaic arrays based on parameters estimation. <i>Simulation Modelling Practice and Theory</i> , 2013, 35, 50-68.	3.8	47
21	Minimizing the effects of shadowing in a PV module by means of active voltage sharing. , 2010, , .		42
22	Mathematical analysis of hybrid topologies efficiency for PEM fuel cell power systems design. <i>International Journal of Electrical Power and Energy Systems</i> , 2010, 32, 1049-1061.	5.5	41
23	Modeling of Step-up Grid-Connected Photovoltaic Systems for Control Purposes. <i>Energies</i> , 2012, 5, 1900-1926.	3.1	41
24	Sliding-Mode Controller for Maximum Power Point Tracking in Grid-Connected Photovoltaic Systems. <i>Energies</i> , 2015, 8, 12363-12387.	3.1	38
25	Sliding-Mode Control of a Charger/Discharger DC/DC Converter for DC-Bus Regulation in Renewable Power Systems. <i>Energies</i> , 2016, 9, 245.	3.1	38
26	Asymmetrical Interleaved DC/DC Switching Converters for Photovoltaic and Fuel Cell Applicationsâ€”Part 1: Circuit Generation, Analysis and Design. <i>Energies</i> , 2012, 5, 4590-4623.	3.1	34
27	Fuel cell emulator for oxygen excess ratio estimation on power electronics applications. <i>Computers and Electrical Engineering</i> , 2012, 38, 926-937.	4.8	34
28	Granular control of photovoltaic arrays by means of a multiâ€œoutput Maximum Power Point Tracking algorithm. <i>Progress in Photovoltaics: Research and Applications</i> , 2013, 21, 918-932.	8.1	34
29	Quantification of photovoltaic module degradation using model based indicators. <i>Mathematics and Computers in Simulation</i> , 2017, 131, 101-113.	4.4	30
30	A method for simulating large PV arrays that include reverse biased cells. <i>Applied Energy</i> , 2014, 123, 157-167.	10.1	27
31	General modeling procedure for photovoltaic arrays. <i>Electric Power Systems Research</i> , 2018, 155, 67-79.	3.6	27
32	Reconfiguration of Urban Photovoltaic Arrays Using Commercial Devices. <i>Energies</i> , 2016, 9, 2.	3.1	26
33	Control of a Charger/Discharger DC/DC Converter with Improved Disturbance Rejection for Bus Regulation. <i>Energies</i> , 2018, 11, 594.	3.1	24
34	PV field distributed maximum power point tracking by means of an active bypass converter. , 2011, , .		22
35	Photovoltaic modules diagnostic: An overview. , 2013, , .		22
36	The Role of Renewable Energy System in Reshaping the Electrical Grid Scenario. <i>IEEE Open Journal of the Industrial Electronics Society</i> , 2021, 2, 451-468.	6.8	21

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37	Identification of excitation systems with the generator online. Electric Power Systems Research, 2012, 87, 1-9.	3.6	19
38	Integrated Learning Platform for Internet-Based Control-Engineering Education. IEEE Transactions on Industrial Electronics, 2010, 57, 3284-3296.	7.9	18
39	Energy Management in PV Based Microgrids Designed for the Universidad Nacional de Colombia. Sustainability, 2020, 12, 1219.	3.2	18
40	Fuel cell MPPT for fuel consumption optimization. , 2010, , .		16
41	Charging/discharging system based on zeta/sepic converter and a sliding mode controller for dc bus voltage regulation. IET Power Electronics, 2020, 13, 1514-1527.	2.1	16
42	Design Method of Dual Active Bridge Converters for Photovoltaic Systems with High Voltage Gain. Energies, 2020, 13, 1711.	3.1	15
43	Fuzzy-based modelling technique for PEMFC electrical power generation systems emulation. IET Power Electronics, 2009, 2, 241-255.	2.1	14
44	A multivariable MPPT algorithm for granular control of photovoltaic systems. , 2010, , .		14
45	Systematic analysis of control techniques for the dual active bridge converter in photovoltaic applications. International Journal of Circuit Theory and Applications, 2021, 49, 3031-3052.	2.0	14
46	DC/DC pre-regulator for input current ripple reduction and efficiency improvement. Electric Power Systems Research, 2011, 81, 2048-2055.	3.6	13
47	Design and Control of a Buck-Boost Charger-Discharger for DC-Bus Regulation in Microgrids. Energies, 2017, 10, 1847.	3.1	13
48	Asymmetrical Interleaved DC/DC Switching Converters for Photovoltaic and Fuel Cell Applications-Part 2: Control-Oriented Models. Energies, 2013, 6, 5570-5596.	3.1	12
49	Energy management system for an isolated microgrid with photovoltaic generation. , 2017, , .		12
50	A Procedure for Modeling Photovoltaic Arrays under Any Configuration and Shading Conditions. Energies, 2018, 11, 767.	3.1	12
51	Optimal Location and Sizing of Distributed Generators in DC Networks Using a Hybrid Method Based on Parallel PBIL and PSO. Electronics (Switzerland), 2020, 9, 1808.	3.1	12
52	A method for the fast estimation of the maximum power points in mismatched PV strings. Electric Power Systems Research, 2015, 121, 115-125.	3.6	11
53	A fast current-based MPPT technique based on sliding mode control. , 2011, , .		10
54	Enhanced simulation of total cross tied photovoltaic arrays. Mathematics and Computers in Simulation, 2019, 158, 49-64.	4.4	10

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55	Charger/discharger DC/DC converter with interleaved configuration for DC bus regulation and battery protection. Energy Science and Engineering, 2020, 8, 530-543.	4.0	10
56	A Discrete-Continuous PSO for the Optimal Integration of D-STATCOMs into Electrical Distribution Systems by Considering Annual Power Loss and Investment Costs. Mathematics, 2022, 10, 2453.	2.2	10
57	Switching and linear power stages evaluation for PEM fuel cell emulation. International Journal of Circuit Theory and Applications, 2011, 39, 475-499.	2.0	9
58	Sliding-Mode Control of a Photovoltaic System Based on a Flyback Converter for Microinverter Applications. Applied Sciences (Switzerland), 2022, 12, 1399.	2.5	9
59	DCM operation of interleaved DC/DC converters for PV applications. , 2012, , .		8
60	Calculation of excitation system controllers to fulfill IEEE standard performance indexes. Electric Power Systems Research, 2012, 89, 196-203.	3.6	8
61	Sliding-Mode Control of Distributed Maximum Power Point Tracking Converters Featuring Overvoltage Protection. Energies, 2018, 11, 2220.	3.1	8
62	Reconfiguration of photovoltaic arrays based on genetic algorithm. Revista Facultad De IngenierÃa, 2015, , .	0.5	7
63	A Non-Invasive Procedure for Estimating the Exponential Model Parameters of Bypass Diodes in Photovoltaic Modules. Energies, 2019, 12, 303.	3.1	7
64	Hybrid Metaheuristic Optimization Methods for Optimal Location and Sizing DGs in DC Networks. Communications in Computer and Information Science, 2019, , 214-225.	0.5	7
65	Design and Control of a Battery Charger/Discharger Based on the Flyback Topology. Applied Sciences (Switzerland), 2021, 11, 10506.	2.5	7
66	PV Array Reconfiguration Based on Genetic Algorithm for Maximum Power Extraction and Energy Impact Analysis. Sustainability, 2022, 14, 3764.	3.2	7
67	Parameter Estimation of the Bishop Photovoltaic Model Using a Genetic Algorithm. Applied Sciences (Switzerland), 2022, 12, 2927.	2.5	7
68	Optimal Allocation and Sizing of PV Generation Units in Distribution Networks via the Generalized Normal Distribution Optimization Approach. Computers, 2022, 11, 53.	3.3	7
69	Fixed-frequency implementation of sliding-mode controllers for photovoltaic systems. International Journal of Energy and Environmental Engineering, 2019, 10, 287-305.	2.5	6
70	Sliding-mode control of a CuK converter for voltage regulation of a dc-bus. Sustainable Energy Technologies and Assessments, 2020, 42, 100807.	2.7	6
71	Improved modelling of bypass diodes for photovoltaic applications. AEJ - Alexandria Engineering Journal, 2022, 61, 6261-6273.	6.4	6
72	Evaluation of Fixed-Step Differential Equations Solution Methods for Fuel Cell Real-Time Simulation. , 2007, , .		5

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73	Control-Oriented Model of Photovoltaic Systems Based on a Dual Active Bridge Converter. Sustainability, 2021, 13, 7689.	3.2	5
74	Estimating the produced power by photovoltaic installations in shaded environments. DYNA (Colombia), 2015, 82, 37-43.	0.4	5
75	Mathematical Model for Regular and Irregular PV Arrays with Improved Calculation Speed. Sustainability, 2020, 12, 10684.	3.2	5
76	Co-Design of the Control and Power Stages of a Boost-Based Rectifier with Power Factor Correction Depending on Performance Criteria. Computation, 2022, 10, 61.	2.0	5
77	FPGA-based controller for mitigation of the 100 Hz oscillation in grid connected PV systems. , 2010, , .		4
78	Design method of the perturb and observe controller parameters for photovoltaic applications. , 2012, , .		4
79	Compensation of DC-link voltage oscillations in grid-connected PV systems based on high order dc/dc converters. , 2012, , .		4
80	A low-cost system for real-time measuring of the sunlight incident angle using IoT. HardwareX, 2022, 11, e00272.	2.2	4
81	Modeling and control of grid-connected photovoltaic systems for 100 Hz oscillations mitigation. , 2011, , .		3
82	A new solution of maximum power point tracking based on sliding mode control. , 2013, , .		3
83	Optimal Power Dispatch of Small-Scale Standalone Microgrid Located in Colombian Territory. Energies, 2018, 11, 1877.	3.1	3
84	Adaptive Sliding-Mode Controller for Flyback-Based PV Systems Featuring Constant Switching Frequency. Mathematics, 2022, 10, 1255.	2.2	3
85	Adaptive Control of Photovoltaic Systems Based on Dual Active Bridge Converters. Computation, 2022, 10, 89.	2.0	3
86	Improving the perturb and observe Maximum Power Point Tracking by using Sliding Mode control. , 2011, , .		2
87	Modeling of photovoltaic fields in mismatching conditions by means of inflection voltages. , 2012, , .		2
88	A compact dc/dc converter for DMPPT in applications to sustainable mobility. , 2012, , .		2
89	Fast estimation of MPPs in mismatched PV arrays based on lossless model. , 2015, , .		2
90	Model of Series-Parallel Photovoltaic Arrays Using Double-Diode Model and Parallel Computing. Computation, 2022, 10, 100.	2.0	2

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91	Predictive control of a photovoltaic DC/DC converter. , 2012, , .		1
92	Auto-tuning of PV controllers to improve the speed response and stability of the P&O algorithm. Ingenieria E Investigacion, 2015, 35, 5-12.	0.4	1
93	Maximum power point tracking in PV systems based on adaptive control and sliding mode control. Revista Facultad De IngenierÃa, 2015, , .	0.5	1
94	Sliding-mode controller for a photovoltaic system based on a Cuk converter. International Journal of Electrical and Computer Engineering, 2021, 11, 2027.	0.7	1
95	Overvoltage Protection for Distributed Maximum Power Point Tracking Converters in Series Connection. Communications in Computer and Information Science, 2016, , 308-319.	0.5	1
96	Model-based maximum power point tracking for wind generators. Revista Facultad De IngenierÃa, 2016, , .	0.5	1
97	Power Conversion System for Hybrid Battery-Capacitor Storage. IngenierÃa, 2020, 25, 194-211.	0.3	1
98	Effect of the Harmonic Voltage Distortion on the Efficiency of a Compact Fluorescent Lamp. Revista Facultad De IngenierÃa, 2019, 29, e11604.	0.2	1
99	Double Adaptive PI-Structure for Regulating a Microgrid DC Bus Using a Flyback-Based Battery Charger/Discharger Converter. Computation, 2022, 10, 53.	2.0	1
100	Low-cost system for sunlight incidence angle measurement using optical fiber. HardwareX, 2022, 11, e00302.	2.2	1
101	Analysis of Electrical Models for Photovoltaic Cells under Uniform and Partial Shading Conditions. Computation, 2022, 10, 111.	2.0	1
102	Modeling of asymmetrical boost converters. Ingenieria E Investigacion, 2014, 34, 53-59.	0.4	0
103	Maximum power point tracking based on the sliding mode control of the average PV admittance. , 2014, , .		0
104	Reducing the Fuel Consumption of Hybrid Fuel Cell/Photovoltaic Power Systems Using PBIL-Based Reconfiguration. , 2015, , .		0
105	Reconfiguration of Photovoltaic Arrays Based on a GPU-Accelerated Exhaustive Search Algorithm. , 2015, , .		0
106	Fast calculation of the maximum power point of photovoltaic generators under partial shading. Ingenieria E Investigacion, 2016, 36, 58.	0.4	0
107	Real Time Simulation of Mismatched PV Arrays. , 2018, , .		0
108	Active pre-filters for dc/dc Boost regulators. Ingenieria E Investigacion, 2014, 34, 49-54.	0.4	0

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109	Equivalent Model of a Three Phase System of Photovoltaic Generation to Analyze Voltage Variations in a Radial Distribution System. <i>Scientia Et Technica</i> , 2020, 25, 205-215.	0.2	0
110	Sliding-mode controller for a step up-down battery charger with a single current sensor. <i>International Journal of Electrical and Computer Engineering</i> , 2022, 12, 1251.	0.7	0
111	Dataset for Detecting the Electrical Behavior of Photovoltaic Panels from RGB Images. <i>Data</i> , 2022, 7, 82.	2.3	0