

Jose Ignacio Candela Garcia

List of Publications by Year in descending order

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140
papers

5,343
citations

279798

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189892

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140
all docs

140
docs citations

140
times ranked

3616
citing authors

#	ARTICLE	IF	CITATIONS
1	Decoupled Double Synchronous Reference Frame PLL for Power Converters Control. IEEE Transactions on Power Electronics, 2007, 22, 584-592.	7.9	1,039
2	Multiresonant Frequency-Locked Loop for Grid Synchronization of Power Converters Under Distorted Grid Conditions. IEEE Transactions on Industrial Electronics, 2011, 58, 127-138.	7.9	890
3	New Positive-sequence Voltage Detector for Grid Synchronization of Power Converters under Faulty Grid Conditions. , 0, , .		576
4	A Generalized Voltage Droop Strategy for Control of Multiterminal DC Grids. IEEE Transactions on Industry Applications, 2015, 51, 607-618.	4.9	220
5	Grid Voltage Synchronization for Distributed Generation Systems Under Grid Fault Conditions. IEEE Transactions on Industry Applications, 2015, 51, 3414-3425.	4.9	170
6	Grid synchronization of power converters using multiple second order generalized integrators. , 2008, , .		158
7	Centralized Protection Strategy for Medium Voltage DC Microgrids. IEEE Transactions on Power Delivery, 2017, 32, 430-440.	4.3	145
8	Protection of AC and DC distribution systems Embedding distributed energy resources: A comparative review and analysis. Renewable and Sustainable Energy Reviews, 2015, 51, 1578-1593.	16.4	110
9	Intelligent Connection Agent for Three-Phase Grid-Connected Microgrids. IEEE Transactions on Power Electronics, 2011, 26, 2993-3005.	7.9	100
10	Control of Energy Storage System Integrating Electrochemical Batteries and Supercapacitors for Grid-Connected Applications. IEEE Transactions on Industry Applications, 2019, 55, 1853-1862.	4.9	93
11	Control of PV generation systems using the synchronous power controller. , 2013, , .		91
12	Flexible Grid Connection and Islanding of SPC-Based PV Power Converters. IEEE Transactions on Industry Applications, 2018, 54, 2690-2702.	4.9	91
13	Hierarchical Control of HV-MTDC Systems With Droop-Based Primary and OPF-Based Secondary. IEEE Transactions on Smart Grid, 2015, 6, 1502-1510.	9.0	85
14	Control of grid-connected power converters based on a virtual admittance control loop. , 2013, , .		80
15	Double Synchronous Reference Frame PLL for Power Converters Control. , 2005, , .		77
16	Flexible Control of Power Flow in Multiterminal DC Grids Using DC-DC Converter. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2016, 4, 1135-1144.	5.4	67
17	Current Harmonics Cancellation in Three-Phase Four-Wire Systems by Using a Four-Branch Star Filtering Topology. IEEE Transactions on Power Electronics, 2009, 24, 1939-1950.	7.9	63
18	Harmonic Compensation Analysis in Offshore Wind Power Plants Using Hybrid Filters. IEEE Transactions on Industry Applications, 2014, 50, 2050-2060.	4.9	54

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19	Multi-terminal medium voltage DC grids fault location and isolation. IET Generation, Transmission and Distribution, 2016, 10, 3517-3528.	2.5	54
20	Decentralized Primary Control of MTDC Networks With Energy Storage and Distributed Generation. IEEE Transactions on Industry Applications, 2014, 50, 4122-4131.	4.9	53
21	Adaptive Droop for Control of Multiterminal DC Bus Integrating Energy Storage. IEEE Transactions on Power Delivery, 2015, 30, 16-24.	4.3	49
22	Design considerations for primary control in multi-terminal VSC-HVDC grids. Electric Power Systems Research, 2015, 122, 33-41.	3.6	46
23	Unified reference controller for flexible primary control and inertia sharing in multi-terminal voltage source converter-HVDC grids. IET Generation, Transmission and Distribution, 2017, 11, 750-758.	2.5	46
24	Multiterminal DC grids: Operating analogies to AC power systems. Renewable and Sustainable Energy Reviews, 2017, 70, 886-895.	16.4	45
25	Modelling of squirrel-cage induction motors for electromagnetic transient programs. IET Electric Power Applications, 2009, 3, 111.	1.8	44
26	Frequency Support Properties of the Synchronous Power Control for Grid-Connected Converters. IEEE Transactions on Industry Applications, 2019, 55, 5178-5189.	4.9	37
27	Control of D-STATCOM During Unbalanced Grid Faults Based on DC Voltage Oscillations and Peak Current Limitations. IEEE Transactions on Industry Applications, 2018, 54, 1680-1690.	4.9	35
28	A protection strategy for fault detection and location for multi-terminal MVDC distribution systems with renewable energy systems. , 2014, , .		29
29	New 4-Acyl-1-phenylaminocarbonyl-2-phenylpiperazine Derivatives as Potential Inhibitors of Adenovirus Infection. Synthesis, Biological Evaluation, and Structure-activity Relationships. Journal of Medicinal Chemistry, 2016, 59, 5432-5448.	6.4	26
30	Proposals for flexible operation of multi-terminal DC grids: Introducing flexible DC transmission system (FDCTS). , 2014, , .		25
31	Parameter estimation of a transformer with saturation using inrush measurements. Electric Power Systems Research, 2009, 79, 417-425.	3.6	22
32	Three-Phase Isolated Multimodular Converter in Renewable Energy Distribution Systems. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2020, 8, 854-865.	5.4	22
33	Intelligent control agent for transient to an island grid. , 2010, , .		20
34	Synchronous Power Control of Grid-Connected Power Converters under Asymmetrical Grid Fault. Energies, 2017, 10, 950.	3.1	20
35	Storage system requirements for grid supporting PV-power plants. , 2014, , .		18
36	A Unified Power Flow Controller Using a Power Electronics Integrated Transformer. IEEE Transactions on Power Delivery, 2019, 34, 828-839.	4.3	18

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37	Saturation model for squirrel-cage induction motors. Electric Power Systems Research, 2009, 79, 1054-1061.	3.6	16
38	A hybrid power flow controller for flexible operation of multi-terminal DC grids. , 2014, , .		16
39	Prefiltered Synchronization Structure for Grid-Connected Power Converters to Reduce the Stability Impact of PLL Dynamics. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 5499-5507.	5.4	16
40	Design of Controller for Virtual Synchronous Power Plant. IEEE Transactions on Industry Applications, 2021, 57, 4033-4041.	4.9	16
41	Comparison of different power loop controllers for synchronous power controlled grid-interactive converters. , 2015, , .		15
42	A communication-assisted protection scheme for direct-current distribution networks. Energy, 2016, 109, 578-591.	8.8	15
43	Three-Phase Custom Power Active Transformer for Power Flow Control Applications. IEEE Transactions on Power Electronics, 2019, 34, 2206-2219.	7.9	15
44	Correction to "Decoupled Double Synchronous Reference Frame PLL for Power Converters Control" [Mar 07 584-592]. IEEE Transactions on Power Electronics, 2007, 22, 1078-1078.	7.9	14
45	Microgrid connection management based on an intelligent connection agent. , 2010, , .		14
46	Synchronous power control for PV solar inverters with power reserve capability. , 2017, , .		14
47	Grid-connected converters with virtual electromechanical characteristics: experimental verification. CSEE Journal of Power and Energy Systems, 2017, 3, 286-295.	1.1	14
48	Flexible HVDC transmission systems small signal modelling: A case study on CIGRE Test MT-HVDC grid. , 2017, , .		14
49	Grid voltage harmonic damping method for SPC based power converters with multiple virtual admittance control. , 2017, , .		13
50	Overview of power processing structures for embedding Energy Storage in PV power converters. , 2011, , .		12
51	An active power synchronization control loop for grid-connected converters. , 2014, , .		12
52	Power System Compensation Using a Power-Electronics Integrated Transformer. IEEE Transactions on Power Delivery, 2018, 33, 1744-1754.	4.3	12
53	Custom Power Active Transformer for Flexible Operation of Power Systems. IEEE Transactions on Power Electronics, 2018, 33, 5773-5783.	7.9	12
54	Measurement-Based Network Clustering for Active Distribution Systems. IEEE Transactions on Smart Grid, 2019, 10, 6714-6723.	9.0	12

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55	Novel Analytical Method for Dynamic Design of Renewable SSG SPC Unit to Mitigate Low-Frequency Electromechanical Oscillations. IEEE Transactions on Power Electronics, 2020, 35, 7532-7544.	7.9	12
56	Efficient Space-Vector Modulation Algorithm for Multilevel Converters with Low Switching Frequencies in the Devices. , 0, , .		11
57	Comprehensive analogy between conventional AC grids and DC grids characteristics. , 2013, , .		11
58	Intelligent voltage control in a DC micro-grid containing PV generation and energy storage. , 2014, , .		11
59	A new electrostatic field measurement method: The coherent-notch field mill. Journal of Electrostatics, 2007, 65, 431-437.	1.9	10
60	An overview of harmonic analysis and resonances of large wind power plant. , 2011, , .		10
61	Advanced structures for grid synchronization of power converters in distributed generation applications. , 2012, , .		10
62	Analysis of ferroresonance effects in distribution networks with distributed source units. , 2013, , .		9
63	An active power self-synchronizing controller for grid-connected converters emulating inertia. , 2014, , .		9
64	Flexible grid connection and islanding of SPC-based PV power converters. , 2015, , .		9
65	Grid synchronization structure for wind converters under grid fault conditions. , 2016, , .		9
66	Grid resonance attenuation in long lines by using renewable energy sources. , 2017, , .		9
67	Analysis on impacts of the shunt conductances in multi-terminal HVDC grids optimal power-flow. , 2017, , .		9
68	Centralized Synchronous Controller Based on Load Angle Regulation for Photovoltaic Power Plants. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 485-496.	5.4	9
69	Study on harmonic resonances and damping in wind power plant. , 2012, , .		8
70	Harmonic resonance damping in Wind Power Plant. , 2012, , .		8
71	A hierarchical control structure for multi-terminal VSC-based HVDC grids with GVD characteristics. , 2013, , .		8
72	Stability Analysis of a Grid-Connected VSC Controlled by SPC. , 2018, , .		8

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73	Synchronous power controller merits for dynamic stability improvement in long line by renewables. , 2016, , .		7
74	Improving long line stability by integrating renewables using static synchronous generators. , 2016, , .		7
75	Grid Synchronization of Renewable Generation Systems Using Synchronous Power Controllers. , 2017, , .		7
76	Proposal of a resonant controller for a three phase four wire grid-connected shunt hybrid filter. , 2009, , .		6
77	Adaptive droop for primary control in MTDC networks with energy storage. , 2013, , .		6
78	Generalized voltage droop strategy for power synchronization control in multi-terminal DC grids - an analytical approach. , 2015, , .		6
79	An active power synchronizing controller for grid-connected power converters with configurable natural droop characteristics. , 2015, , .		6
80	Phase stability enhancement in big power networks using renewable generation units controlled by SPC. , 2017, , .		6
81	Decentralized control of MTDC networks with energy storage and distributed generation. , 2013, , .		5
82	Modeling and control of multi modular converters using optimal LQR controller with integral action. , 2013, , .		5
83	Connection and Disconnection Transients for Micro-Grids under Unbalance Load Condition. EPE Journal (European Power Electronics and Drives Journal), 2014, 24, 45-53.	0.7	5
84	A sensor-less sliding mode control scheme for a stand-alone wound rotor synchronous generator under unbalanced load conditions. International Journal of Electrical Power and Energy Systems, 2014, 60, 275-282.	5.5	5
85	Control of energy storage system integrating electrochemical batteries and SC for grid-connected applications. , 2016, , .		5
86	Active power limiter for grid connection of modern renewable SSG SPC. , 2017, , .		5
87	Generation frequency support by renewable SSG SPC unit on interconnected areas. , 2017, , .		5
88	Multilevel Single Phase Isolated Inverter with Reduced Number of Switches. , 2018, , .		5
89	Synchronous Power Controller for Distributed Generation Units. , 2019, , .		5
90	Energy Balancing With Wide Range of Operation in the Isolated Multi-Modular Converter. IEEE Access, 2020, 8, 84479-84489.	4.2	5

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91	Sensorless control of PMSG-based wind Energy Conversion Systems using a FLL-based synchronization technique. , 2011, , .		4
92	Posicast control — A novel approach to mitigate multi-machine power system oscillations in presence of wind farm. , 2014, , .		4
93	Implementation of the differential protection for MVDC distribution systems using real-time simulation and hardware-in-the-loop. , 2015, , .		4
94	A communication-assisted protection for MVDC distribution systems with distributed generation. , 2015, , .		4
95	Autonomous inertia-sharing control of multi-terminal VSC-HVDC grids. , 2016, , .		4
96	Supporting phase stability on interconnected grids by synchronous renewable Virtual Power Plants. , 2017, , .		4
97	Influence of the ICFF Decoupling Technique on the Stability of the Current Control Loop of a Grid-Tied VSC. , 2019, , .		4
98	Virtual Admittance PLL Structure for Grid-forming Power Converters in Microgrids. , 2020, , .		4
99	Harmonic Resonance Study for Wind Power Plant. Renewable Energy and Power Quality Journal, 0, , 1507-1512.	0.2	4
100	Enhanced performance controller for high power wind converters connected to weak grids. IET Renewable Power Generation, 2020, 14, 2058-2067.	3.1	4
101	Cancellation of neutral current harmonics by using a four-branch star hybrid filter. Power Electronics Specialist Conference (PESC), IEEE, 2008, , .	0.0	3
102	DCM-232 converter: A PV transformerless three-phase inverter. , 2011, , .		3
103	Efficiency analysis of DCM-232 three-phase PV topology. , 2012, , .		3
104	Application of Posicast control method to generator excitation system. , 2014, , .		3
105	A simulation study of proportional resonant controller based on the implementation of frequency-adaptive virtual flux estimation with the LCL filter. , 2015, , .		3
106	Design of a centralized protection technique for medium voltage DC microgrids. , 2015, , .		3
107	Control of D-STATCOM during unbalanced grid faults based on DC voltage oscillations and peak current limitations. , 2016, , .		3
108	Re-synchronization strategy for the synchronous power controller in HVDC systems. , 2017, , .		3

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109	Model and control of the isolated multi-modular converter. , 2017, , .		3
110	DC Distribution Networks. , 2017, , 509-561.		3
111	Four-branch star neutral current hybrid power filter and var compensator. , 2010, , .		2
112	Constant common mode voltage modulation strategy for the FB10 power converter. , 2011, , .		2
113	A control strategy for DC-link voltage control containing PV generation and energy storage — An intelligent approach. , 2014, , .		2
114	Adaptive Droop for Primary Control in MTDC Networks with Energy Storage. EPE Journal (European) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	0.7	2
115	Advanced control of a high power converter connected to a weak grid. , 2016, , .		2
116	Analysis on dynamic interaction of renewable SSG SPC with external power grid. , 2017, , .		2
117	Proportional-resonant current controller with orthogonal decoupling on the \hat{i}_{\pm}^2 -reference frame. , 2017, , .		2
118	A way of increasing stability margin of current control in VSCs connected to the grid through LCL filters. , 2017, , .		2
119	Active Power Limiter for Static Synchronous Generators in Renewable Applications. , 2018, , .		2
120	Stability Analysis of a Droop-Controlled Grid-Connected VSC. , 2018, , .		2
121	Sensor-less Sliding Mode Control of a stand-alone wound rotor synchronous generator with unbalanced load. , 2011, , .		1
122	Grid harmonic detection and system resonances identification in wave power plant applications. , 2013, , .		1
123	Frequency support properties of the synchronous power control for grid-connected converters. , 2016, , .		1
124	Control of VSC-HVDC with electromechanical characteristics and unified primary strategy. , 2016, , .		1
125	A comparative study of methods for estimating virtual flux at the point of common coupling in grid connected voltage source converters with LCL filter. , 2016, , .		1
126	Local and centralized control strategy for capacitor voltage balancing of modular multilevel converter. , 2016, , .		1

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127	Power station for large scale photovoltaic power plants. , 2017, , .		1
128	Remote Power Control Injection of Grid-Connected Power Converters Based on Virtual Flux. Energies, 2018, 11, 488.	3.1	1
129	Active Power Limiter for Static Synchronous Generators in Renewable Applications. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2020, , 1-1.	5.4	1
130	Quadrature Voltage Compensation in the Isolated Multi-Modular Converter. Energies, 2021, 14, 529.	3.1	1
131	Electromechanical Design of Synchronous Power Controller in Grid Integration of Renewable Power Converters to Support Dynamic Stability. Energies, 2021, 14, 2115.	3.1	1
132	Active transformer functionalities including an energy storage system. , 2021, , .		1
133	Four-branch star hybrid power filter for three-phase four-wire systems. , 2008, , .		0
134	Harmonic resonances damping using hybrid filter for WPP. , 2012, , .		0
135	Analysis on capability of harmonic damping using active filter acting as resistive harmonic impedance. , 2013, , .		0
136	Enhanced performance of SVC via using rotor speed deviation signal (RSDS). , 2015, , .		0
137	Application of subsynchronous damping controller to static var compensator. , 2015, , .		0
138	Enhancement of the stability of a distribution system through synchronous PV. , 2016, , .		0
139	Remote Power Control Strategy Based on Virtual Flux Approach for the Grid Tied Power Converters. , 2018, , .		0
140	Unified Power Quality Conditioner with Energy Storage based on Active Transformer. , 2020, , .		0