

Alejandro Garces

List of Publications by Year in descending order

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120
papers

2,927
citations

201674

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122
all docs

122
docs citations

122
times ranked

2388
citing authors

#	ARTICLE	IF	CITATIONS
1	An optimization model based on the frequency dependent power flow for the secondary control in islanded microgrids. Computers and Electrical Engineering, 2022, 97, 107617.	4.8	5
2	On the Conic Convex Approximation to Locate and Size Fixed-Step Capacitor Banks in Distribution Networks. Computation, 2022, 10, 32.	2.0	5
3	Dynamic Performance Evaluation of the Secondary Control in Islanded Microgrids Considering Frequency-Dependent Load Models. Energies, 2022, 15, 3976.	3.1	2
4	Power Flow in Bipolar DC Distribution Networks Considering Current Limits. IEEE Transactions on Power Systems, 2022, 37, 4098-4101.	6.5	10
5	A successive approximations method for power flow analysis in bipolar DC networks with asymmetric constant power terminals. Electric Power Systems Research, 2022, 211, 108264.	3.6	9
6	Simplified dynamic models for three-phase microgrids. International Transactions on Electrical Energy Systems, 2021, 31, e12742.	1.9	1
7	A Mixed-Integer Convex Model for the Optimal Placement and Sizing of Distributed Generators in Power Distribution Networks. Applied Sciences (Switzerland), 2021, 11, 627.	2.5	32
8	Short-Term Hydrothermal Scheduling With Solar and Wind Farms Using Second-Order Cone Optimization With Chance-Box Constraints. IEEE Access, 2021, 9, 74095-74109.	4.2	6
9	A Mixed-Integer Quadratic Formulation of the Phase-Balancing Problem in Residential Microgrids. Applied Sciences (Switzerland), 2021, 11, 1972.	2.5	11
10	Stabilization of MT-HVDC grids via passivity-based control and convex optimization. Electric Power Systems Research, 2021, 196, 107273.	3.6	8
11	Sequential Convex Optimization for the OPF in Isolated DC-grids. Lecture Notes in Electrical Engineering, 2021, , 9-19.	0.4	0
12	Stability Analysis for a Grid-Forming Converter with Inverse Droop Connected to an Infinite Bus. , 2021, , .		4
13	Passivity-Based Control of Power Systems Considering Hydro-Turbine With Surge Tank. IEEE Transactions on Power Systems, 2020, 35, 2002-2011.	6.5	29
14	Standard passivity-based control for multi-hydro-turbine governing systems with surge tank. Applied Mathematical Modelling, 2020, 79, 1-17.	4.2	12
15	Modeling and control of a small hydro-power plant for a DC microgrid. Electric Power Systems Research, 2020, 180, 106104.	3.6	22
16	Passivity-based control of islanded microgrids with unknown power loads. IMA Journal of Mathematical Control and Information, 2020, 37, 1548-1573.	1.7	4
17	Bilinear Control for Three-Phase Microgrids: A Proportional-Integral Passivity-Based Design. Electric Power Components and Systems, 2020, 48, 447-458.	1.8	1
18	Passivity-Based Control for Small Hydro-Power Generation With PMSG and VSC. IEEE Access, 2020, 8, 153001-153010.	4.2	17

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19	Numerical methods for power flow analysis in DC networks: State of the art, methods and challenges. International Journal of Electrical Power and Energy Systems, 2020, 123, 106299.	5.5	33
20	Small-signal stability in island residential microgrids considering droop controls and multiple scenarios of generation. Electric Power Systems Research, 2020, 185, 106371.	3.6	20
21	Convex Optimization for the Optimal Power Flow on DC Distribution Systems. Energy Systems, 2020, , 121-137.	0.5	2
22	Application of the Nested Convex Programming to the Optimal Power Flow in MT-HVDC Grids.. IFAC-PapersOnLine, 2020, 53, 13173-13177.	0.9	2
23	A Convex OPF Approximation for DC Networks Considering Voltage-Dependent Load Models. , 2020, , .		1
24	Voltage and Frequency Regulation on Isolated AC Three-phase Microgrids via s-DERs. , 2019, , .		1
25	An Approach for Nodal Admittance Matrix Real-Time Estimation on DC Microgrids. , 2019, , .		4
26	A Potential Function for the Power Flow in DC Microgrids: An Analysis of the Uniqueness and Existence of the Solution and Convergence of the Algorithms. Journal of Control, Automation and Electrical Systems, 2019, 30, 794-801.	2.0	16
27	Direct power control of electrical energy storage systems: A passivity-based PI approach. Electric Power Systems Research, 2019, 175, 105885.	3.6	18
28	Current PI Control for PV Systems in DC Microgrids: A PBC Design. , 2019, , .		3
29	Phase Balancing in Power Distribution Systems: A heuristic approach based on group-theory. , 2019, , .		6
30	Stability Analysis of DC-Microgrids: A Gradient Formulation. Journal of Control, Automation and Electrical Systems, 2019, 30, 985-993.	2.0	4
31	Power flow approximation for DC networks with constant power loads via logarithmic transform of voltage magnitudes. Electric Power Systems Research, 2019, 175, 105887.	3.6	16
32	Distributed energy resources integration in single-phase microgrids: An application of IDA-PBC and PI-PBC approaches. International Journal of Electrical Power and Energy Systems, 2019, 112, 221-231.	5.5	20
33	Direct power control for VSC-HVDC systems: An application of the global tracking passivity-based PI approach. International Journal of Electrical Power and Energy Systems, 2019, 110, 588-597.	5.5	34
34	Control for EESS in Three-Phase Microgrids Under Time-Domain Reference Frame via PBC Theory. IEEE Transactions on Circuits and Systems II: Express Briefs, 2019, 66, 2007-2011.	3.0	10
35	A Wirtinger Linearization for the Power Flow in Microgrids. , 2019, , .		1
36	Mitigating fluctuations of wind power generation using superconducting magnetic energy storage: a passivity-based approach. , 2019, , .		0

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37	Master-Slave Operation of DC Microgrids: An Adaptive Control Approach with Estimation. , 2019, , .		2
38	Power Flow in Islanded Microgrids: Formulation and Convergence Analysis. , 2019, , .		1
39	A Sequential Quadratic Programming Model for the Economic“Environmental Dispatch in MT-HVDC. , 2019, , .		3
40	Dynamics and Stability of Meshed Multiterminal HVDC Networks. IEEE Transactions on Power Systems, 2019, 34, 1824-1833.	6.5	26
41	Passivity-based control and stability analysis for hydro-turbine governing systems. Applied Mathematical Modelling, 2019, 68, 471-486.	4.2	28
42	Sequential quadratic programming models for solving the OPF problem in DC grids. Electric Power Systems Research, 2019, 169, 18-23.	3.6	44
43	Optimal Power Flow on DC Microgrids: A Quadratic Convex Approximation. IEEE Transactions on Circuits and Systems II: Express Briefs, 2019, 66, 1018-1022.	3.0	40
44	Economic dispatch of energy storage systems in dc microgrids employing a semidefinite programming model. Journal of Energy Storage, 2019, 21, 1-8.	8.1	94
45	Stability Analysis of Single-Phase Low-Voltage AC Microgrids With Constant Power Terminals. IEEE Transactions on Circuits and Systems II: Express Briefs, 2019, 66, 1212-1216.	3.0	9
46	Integración de REDs en Redes AC: una Familia de Controladores Basados en Pasividad. RIAI - Revista Iberoamericana De Automatica E Informatica Industrial, 2019, 16, 212.	1.0	7
47	A generalized passivity-based control approach for power compensation in distribution systems using electrical energy storage systems. Journal of Energy Storage, 2018, 16, 259-268.	8.1	27
48	Indirect IDA-PBC for active and reactive power support in distribution networks using SMES systems with PWM-CSC. Journal of Energy Storage, 2018, 17, 261-271.	8.1	19
49	On the Convergence of Newton's Method in Power Flow Studies for DC Microgrids. IEEE Transactions on Power Systems, 2018, 33, 5770-5777.	6.5	122
50	DERs integration in microgrids using VSCs via proportional feedback linearization control: Supercapacitors and distributed generators. Journal of Energy Storage, 2018, 16, 250-258.	8.1	31
51	Controller Design for VSCs in Distributed Generation Applications: an IDA-PBC Approach. , 2018, , .		0
52	A Convex Optimization Model for Bidirectional Vehicle-To-Grid Operation. , 2018, , .		0
53	Integration of PV Arrays in DC Power Grids via Unidirectional Boost Converters: a PBC Approach. , 2018, , .		2
54	An Exact Feedback Linearization Control of a SMES System to Support Power in Electrical Grids. , 2018, , .		0

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55	Control of a Detailed Model of Microgrids from a Hamiltonian Approach – Part of this work was supported by DGAPA-UNAM under grant IN116516.. IFAC-PapersOnLine, 2018, 51, 187-192.	0.9	10
56	Optimal Location of DGs in DC Power Grids Using a MINLP Model Implemented in GAMS. , 2018, , .		5
57	Passivity-Based Control for Hydro-Turbine Governing Systems. , 2018, , .		1
58	Group-Theory for the Analysis of Heuristic Algorithms in Power Distribution Systems. , 2018, , .		0
59	SCES Integration in Power Grids: a PBC Approach under abc , $\hat{1}\pm\hat{1}^20$ and $dq0$ Reference Frames. , 2018, , .		2
60	A Semidefinite Formulation of the Shifting Load Management. , 2018, , .		1
61	Small-Signal Stability in Low-Voltage DC-Grids. , 2018, , .		1
62	Control of a SMES for mitigating subsynchronous oscillations in power systems: A PBC-PI approach. Journal of Energy Storage, 2018, 20, 163-172.	8.1	21
63	Linear power flow formulation for low-voltage DC power grids. Electric Power Systems Research, 2018, 163, 375-381.	3.6	80
64	On the Stability of DC Microgrids with Two Constant Power Devices. , 2018, , .		3
65	Distribution Systems Operation Considering Energy Storage Devices and Distributed Generation. IEEE Latin America Transactions, 2017, 15, 890-900.	1.6	37
66	IDA-Passivity-Based Control for Superconducting Magnetic Energy Storage with PWM-CSC. , 2017, , .		15
67	Uniqueness of the power flow solutions in low voltage direct current grids. Electric Power Systems Research, 2017, 151, 149-153.	3.6	92
68	Supervisory LMI-Based State-Feedback Control for Current Source Power Conditioning of SMES. , 2017, , .		9
69	Mitigating reactive power and negative-sequence in distribution feeders with wind energy systems. , 2017, , .		0
70	Grid Integration of offshore wind farms using a Hybrid HVDC composed by an MMC with an LCC-based transmission system. Energy Procedia, 2017, 137, 391-400.	1.8	11
71	LQR control for superconducting magnetic energy storage on distribution networks using feedback linearization. , 2017, , .		1
72	HVDC meshed multi-terminal networks for offshore wind farms: Dynamic model, load flow and equilibrium. , 2017, , .		1

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73	A Generalized Model and Control for Supermagnetic and Supercapacitor Energy Storage. IngenierÃa Y Ciencia, 2017, 13, 147-171.	0.3	18
74	Despacho econÃmico en sistemas de potencia considerando estabilidad transitoria. Tecnura, 2017, 21, 27.	0.4	3
75	Optimal power flow in multiterminal HVDC systems considering DC/DC converters. , 2016, , .		22
76	Optimal microgrid management in the Colombian energy market with demand response and energy storage. , 2016, , .		11
77	A Linear Three-Phase Load Flow for Power Distribution Systems. IEEE Transactions on Power Systems, 2016, 31, 827-828.	6.5	213
78	A quadratic approximation for the optimal power flow in power distribution systems. Electric Power Systems Research, 2016, 130, 222-229.	3.6	42
79	Hydrothermal coordination considering wind and pumping storage unit in the Colombian smart grid. , 2015, , .		1
80	Wave energy: Modeling and Analysis of Power Grid Integration. IEEE Latin America Transactions, 2015, 13, 3863-3872.	1.6	3
81	Identification of a Proton-Exchange Membrane Fuel Cellâ€™s Model Parameters by Means of an Evolution Strategy. IEEE Transactions on Industrial Informatics, 2015, 11, 548-559.	11.3	74
82	Developing a virtual trade fair using an agent-oriented approach. Multimedia Tools and Applications, 2015, 74, 4561-4582.	3.9	8
83	Enhanced multiobjective algorithm for transmission expansion planning considering Nâ€™1 security criterion. International Transactions on Electrical Energy Systems, 2015, 25, 2225-2246.	1.9	13
84	Optimal operation of distributed energy storage units for minimizing energy losses. , 2014, , .		3
85	HVDC Transmission for Offshore Wind Farms. Green Energy and Technology, 2014, , 289-310.	0.6	2
86	A Generalized Power Control Approach in ABC Frame for Modular Multilevel Converter HVDC Links Based on Mathematical Optimization. IEEE Transactions on Power Delivery, 2014, 29, 386-394.	4.3	61
87	An Adaptive Control Strategy for a Wind Energy Conversion System Based on PWM-CSC and PMSC. IEEE Transactions on Power Systems, 2014, 29, 1446-1453.	6.5	54
88	Multiobjective transmission planning with security constraints. , 2013, , .		1
89	Multiobjective environmental transmission network expansion planning. , 2013, , .		3
90	Integration of Offshore Wind Farm Using a Hybrid HVDC Transmission Composed by the PWM Current-Source Converter and Line-Commutated Converter. IEEE Transactions on Energy Conversion, 2013, 28, 125-134.	5.2	87

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91	Optimal control for an HVDC system with series connected offshore wind turbines. , 2013, , .		6
92	Improving the dynamics of lagrange-based MMC controllers by means of adaptive filters for single-phase voltage, power and energy estimation. , 2013, , .		4
93	A generalized power control approach in ABC frame for modular multilevel converters based on Lagrange multipliers. , 2013, , .		4
94	Analysis and performance comparison of different power conditioning systems for SMES-based energy systems in wind turbines. , 2012, , .		3
95	A current-coupled topology for grid integration of wind turbines in Micro-Grids. , 2012, , .		0
96	Modulation features of a high-frequency conversion system for wind farm applications. , 2012, , .		0
97	Integration of Offshore Wind Farm Using a Hybrid HVDC Transmission Composed by PWM Current-Source Converter and Line-Commutated Converter. , 2012, , .		5
98	Optimal Operation of Microgrids in the Colombian energy market. , 2012, , .		5
99	A Study of Efficiency in a Reduced Matrix Converter for Offshore Wind Farms. IEEE Transactions on Industrial Electronics, 2012, 59, 184-193.	7.9	103
100	Environmental Transmission Expansion Planning using non-linear programming and evolutionary techniques. , 2012, , .		9
101	Coordinated control of series-connected offshore wind park based on matrix converters. Wind Energy, 2012, 15, 827-845.	4.2	27
102	A generalized compensation theory for active filters based on mathematical optimization in ABC frame. Electric Power Systems Research, 2012, 90, 1-10.	3.6	35
103	Optimal control of a reduced matrix converter for off-shore wind parks. , 2011, , .		1
104	A flexible and optimal power theory for reactive power compensation in ABC frame. , 2011, , .		1
105	A voltage regulator based on matrix converter for smart grid applications. , 2011, , .		5
106	A control strategy for series connected offshore wind turbines. , 2011, , .		3
107	Impact of operation principle on the losses of a reduced matrix converter for offshore wind parks. , 2010, , .		13
108	Power collection array for improved wave farm output based on reduced matrix converters. , 2010, , .		6

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109	High frequency wind energy conversion from the ocean. , 2010, , .		14
110	Reduced matrix converter operated as current source for off-shore wind farms. , 2010, , .		15
111	Comparative investigation of losses in a reduced matrix converter for off-shore wind turbines. , 2010, , .		14
112	Global communications in Moderately Open Multi-Agent Systems. , 2009, , .		1
113	Responsiveness to neurturin of subpopulations of embryonic rat spinal motoneuron does not correlate with expression of GFR α 1 or GFR α 2. Developmental Dynamics, 2001, 220, 189-197.	1.8	16
114	FGF9: A motoneuron survival factor expressed by medial thoracic and sacral motoneurons. Journal of Neuroscience Research, 2000, 60, 1-9.	2.9	34
115	GFR α 1 Is Required for Development of Distinct Subpopulations of Motoneuron. Journal of Neuroscience, 2000, 20, 4992-5000.	3.6	90
116	Cardiotrophin-1 requires LIFR β to promote survival of mouse motoneurons purified by a novel technique. Journal of Neuroscience Research, 1999, 55, 119-126.	2.9	136
117	Role of neurotrophic factors in motoneuron development. Journal of Physiology (Paris), 1998, 92, 279-281.	2.1	37
118	Persephin, a Novel Neurotrophic Factor Related to GDNF and Neurturin. Neuron, 1998, 20, 245-253.	8.1	460
119	Fgf-R3 is expressed in a subset of chicken spinal motoneurons. Mechanisms of Development, 1998, 78, 119-123.	1.7	13
120	Hepatocyte growth factor (HGF/SF) is a muscle-derived survival factor for a subpopulation of embryonic motoneurons. Development (Cambridge), 1997, 124, 2903-2913.	2.5	134