

# Alejandro Garces

## List of Publications by Year in descending order

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120  
papers

2,927  
citations

201674

27  
h-index

182427

51  
g-index

122  
all docs

122  
docs citations

122  
times ranked

2388  
citing authors

#	ARTICLE	IF	CITATIONS
1	Persephin, a Novel Neurotrophic Factor Related to GDNF and Neurturin. <i>Neuron</i> , 1998, 20, 245-253.	8.1	460
2	A Linear Three-Phase Load Flow for Power Distribution Systems. <i>IEEE Transactions on Power Systems</i> , 2016, 31, 827-828.	6.5	213
3	Cardiotrophin-1 requires LIFR $\beta$ to promote survival of mouse motoneurons purified by a novel technique. <i>Journal of Neuroscience Research</i> , 1999, 55, 119-126.	2.9	136
4	Hepatocyte growth factor (HGF/SF) is a muscle-derived survival factor for a subpopulation of embryonic motoneurons. <i>Development (Cambridge)</i> , 1997, 124, 2903-2913.	2.5	134
5	On the Convergence of Newton's Method in Power Flow Studies for DC Microgrids. <i>IEEE Transactions on Power Systems</i> , 2018, 33, 5770-5777.	6.5	122
6	A Study of Efficiency in a Reduced Matrix Converter for Offshore Wind Farms. <i>IEEE Transactions on Industrial Electronics</i> , 2012, 59, 184-193.	7.9	103
7	Economic dispatch of energy storage systems in dc microgrids employing a semidefinite programming model. <i>Journal of Energy Storage</i> , 2019, 21, 1-8.	8.1	94
8	Uniqueness of the power flow solutions in low voltage direct current grids. <i>Electric Power Systems Research</i> , 2017, 151, 149-153.	3.6	92
9	GFR $\beta$ 1 Is Required for Development of Distinct Subpopulations of Motoneuron. <i>Journal of Neuroscience</i> , 2000, 20, 4992-5000.	3.6	90
10	Integration of Offshore Wind Farm Using a Hybrid HVDC Transmission Composed by the PWM Current-Source Converter and Line-Commutated Converter. <i>IEEE Transactions on Energy Conversion</i> , 2013, 28, 125-134.	5.2	87
11	Linear power flow formulation for low-voltage DC power grids. <i>Electric Power Systems Research</i> , 2018, 163, 375-381.	3.6	80
12	Identification of a Proton-Exchange Membrane Fuel Cell's Model Parameters by Means of an Evolution Strategy. <i>IEEE Transactions on Industrial Informatics</i> , 2015, 11, 548-559.	11.3	74
13	A Generalized Power Control Approach in ABC Frame for Modular Multilevel Converter HVDC Links Based on Mathematical Optimization. <i>IEEE Transactions on Power Delivery</i> , 2014, 29, 386-394.	4.3	61
14	An Adaptive Control Strategy for a Wind Energy Conversion System Based on PWM-CSC and PMSG. <i>IEEE Transactions on Power Systems</i> , 2014, 29, 1446-1453.	6.5	54
15	Sequential quadratic programming models for solving the OPF problem in DC grids. <i>Electric Power Systems Research</i> , 2019, 169, 18-23.	3.6	44
16	A quadratic approximation for the optimal power flow in power distribution systems. <i>Electric Power Systems Research</i> , 2016, 130, 222-229.	3.6	42
17	Optimal Power Flow on DC Microgrids: A Quadratic Convex Approximation. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2019, 66, 1018-1022.	3.0	40
18	Role of neurotrophic factors in motoneuron development. <i>Journal of Physiology (Paris)</i> , 1998, 92, 279-281.	2.1	37

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19	Distribution Systems Operation Considering Energy Storage Devices and Distributed Generation. IEEE Latin America Transactions, 2017, 15, 890-900.	1.6	37
20	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
21	FGF9: A motoneuron survival factor expressed by medial thoracic and sacral motoneurons. Journal of Neuroscience Research, 2000, 60, 1-9.	2.9	34
22	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
23	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
24	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
25	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
26	Passivity-Based Control of Power Systems Considering Hydro-Turbine With Surge Tank. IEEE Transactions on Power Systems, 2020, 35, 2002-2011.	6.5	29
27	Passivity-based control and stability analysis for hydro-turbine governing systems. Applied Mathematical Modelling, 2019, 68, 471-486.	4.2	28
28	Coordinated control of series-connected offshore wind park based on matrix converters. Wind Energy, 2012, 15, 827-845.	4.2	27
29	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
30	Dynamics and Stability of Meshed Multiterminal HVDC Networks. IEEE Transactions on Power Systems, 2019, 34, 1824-1833.	6.5	26
31	Optimal power flow in multiterminal HVDC systems considering DC/DC converters. , 2016, , .		22
32	Modeling and control of a small hydro-power plant for a DC microgrid. Electric Power Systems Research, 2020, 180, 106104.	3.6	22
33	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
34	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
35	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
36	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

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37	A Generalized Model and Control for Supermagnetic and Supercapacitor Energy Storage. IngenierÍA Y Ciencia, 2017, 13, 147-171.	0.3	18
38	Direct power control of electrical energy storage systems: A passivity-based PI approach. Electric Power Systems Research, 2019, 175, 105885.	3.6	18
39	Passivity-Based Control for Small Hydro-Power Generation With PMSG and VSC. IEEE Access, 2020, 8, 153001-153010.	4.2	17
40	Responsiveness to neurturin of subpopulations of embryonic rat spinal motoneuron does not correlate with expression of GFR?1 or GFR?2. Developmental Dynamics, 2001, 220, 189-197.	1.8	16
41	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
42	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
43	Reduced matrix converter operated as current source for off-shore wind farms. , 2010, , .		15
44	IDA-Passivity-Based Control for Superconducting Magnetic Energy Storage with PWM-CSC. , 2017, , .		15
45	High frequency wind energy conversion from the ocean. , 2010, , .		14
46	Comparative investigation of losses in a reduced matrix converter for off-shore wind turbines. , 2010, , .		14
47	Fgf-R3 is expressed in a subset of chicken spinal motoneurons. Mechanisms of Development, 1998, 78, 119-123.	1.7	13
48	Impact of operation principle on the losses of a reduced matrix converter for offshore wind parks. , 2010, , .		13
49	Enhanced multiobjective algorithm for transmission expansion planning consideringNâ€™%âˆ’â€™%1 security criterion. International Transactions on Electrical Energy Systems, 2015, 25, 2225-2246.	1.9	13
50	Standard passivity-based control for multi-hydro-turbine governing systems with surge tank. Applied Mathematical Modelling, 2020, 79, 1-17.	4.2	12
51	Optimal microgrid management in the Colombian energy market with demand response and energy storage. , 2016, , .		11
52	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
53	A Mixed-Integer Quadratic Formulation of the Phase-Balancing Problem in Residential Microgrids. Applied Sciences (Switzerland), 2021, 11, 1972.	2.5	11
54	Control of a Detailed Model of Microgrids from a Hamiltonian Approach âŽ‰ âŽ‰Part of this work was supported by DGAPA-UNAM under grant IN116516.. IFAC-PapersOnLine, 2018, 51, 187-192.	0.9	10

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55	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
56	Power Flow in Bipolar DC Distribution Networks Considering Current Limits. IEEE Transactions on Power Systems, 2022, 37, 4098-4101.	6.5	10
57	Environmental Transmission Expansion Planning using non-linear programming and evolutionary techniques. , 2012, , .		9
58	Supervisory LMI-Based State-Feedback Control for Current Source Power Conditioning of SMES. , 2017, , .		9
59	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
60	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
61	Developing a virtual trade fair using an agent-oriented approach. Multimedia Tools and Applications, 2015, 74, 4561-4582.	3.9	8
62	Stabilization of MT-HVDC grids via passivity-based control and convex optimization. Electric Power Systems Research, 2021, 196, 107273.	3.6	8
63	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
64	Power collection array for improved wave farm output based on reduced matrix converters. , 2010, , .		6
65	Optimal control for an HVDC system with series connected offshore wind turbines. , 2013, , .		6
66	Phase Balancing in Power Distribution Systems: A heuristic approach based on group-theory. , 2019, , .		6
67	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
68	A voltage regulator based on matrix converter for smart grid applications. , 2011, , .		5
69	Integration of Offshore Wind Farm Using a Hybrid HVDC Transmission Composed by PWM Current-Source Converter and Line-Commutated Converter. , 2012, , .		5
70	Optimal Operation of Microgrids in the Colombian energy market. , 2012, , .		5
71	Optimal Location of DGs in DC Power Grids Using a MINLP Model Implemented in GAMS. , 2018, , .		5
72	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

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73	On the Conic Convex Approximation to Locate and Size Fixed-Step Capacitor Banks in Distribution Networks. <i>Computation</i> , 2022, 10, 32.	2.0	5
74	Improving the dynamics of lagrange-based MMC controllers by means of adaptive filters for single-phase voltage, power and energy estimation. , 2013, , .		4
75	A generalized power control approach in ABC frame for modular multilevel converters based on Lagrange multipliers. , 2013, , .		4
76	An Approach for Nodal Admittance Matrix Real-Time Estimation on DC Microgrids. , 2019, , .		4
77	Stability Analysis of DC-Microgrids: A Gradient Formulation. <i>Journal of Control, Automation and Electrical Systems</i> , 2019, 30, 985-993.	2.0	4
78	Passivity-based control of islanded microgrids with unknown power loads. <i>IMA Journal of Mathematical Control and Information</i> , 2020, 37, 1548-1573.	1.7	4
79	Stability Analysis for a Grid-Forming Converter with Inverse Droop Connected to an Infinite Bus. , 2021, , .		4
80	A control strategy for series connected offshore wind turbines. , 2011, , .		3
81	Analysis and performance comparison of different power conditioning systems for SMES-based energy systems in wind turbines. , 2012, , .		3
82	Multiobjective environmental transmission network expansion planning. , 2013, , .		3
83	Optimal operation of distributed energy storage units for minimizing energy losses. , 2014, , .		3
84	Wave energy: Modeling and Analysis of Power Grid Integration. <i>IEEE Latin America Transactions</i> , 2015, 13, 3863-3872.	1.6	3
85	On the Stability of DC Microgrids with Two Constant Power Devices. , 2018, , .		3
86	Current PI Control for PV Systems in DC Microgrids: A PBC Design. , 2019, , .		3
87	A Sequential Quadratic Programming Model for the Economic“Environmental Dispatch in MT-HVDC. , 2019, , .		3
88	Despacho económico en sistemas de potencia considerando estabilidad transitoria. <i>Tecnura</i> , 2017, 21, 27.	0.4	3
89	HVDC Transmission for Offshore Wind Farms. <i>Green Energy and Technology</i> , 2014, , 289-310.	0.6	2
90	Integration of PV Arrays in DC Power Grids via Unidirectional Boost Converters: a PBC Approach. , 2018, , .		2

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91	SCES Integration in Power Grids: a PBC Approach under $abc$ , $\hat{i}_{\pm 120}$ and $dq0$ Reference Frames. , 2018, , .		2
92	Master-Slave Operation of DC Microgrids: An Adaptive Control Approach with Estimation. , 2019, , .		2
93	Convex Optimization for the Optimal Power Flow on DC Distribution Systems. Energy Systems, 2020, , 121-137.	0.5	2
94	Application of the Nested Convex Programming to the Optimal Power Flow in MT-HVDC Grids.. IFAC-PapersOnLine, 2020, 53, 13173-13177.	0.9	2
95	Dynamic Performance Evaluation of the Secondary Control in Islanded Microgrids Considering Frequency-Dependent Load Models. Energies, 2022, 15, 3976.	3.1	2
96	Global communications in Moderately Open Multi-Agent Systems. , 2009, , .		1
97	Optimal control of a reduced matrix converter for off-shore wind parks. , 2011, , .		1
98	A flexible and optimal power theory for reactive power compensation in ABC frame. , 2011, , .		1
99	Multiobjective transmission planning with security constraints. , 2013, , .		1
100	Hydrothermal coordination considering wind and pumping storage unit in the Colombian smart grid. , 2015, , .		1
101	LQR control for superconducting magnetic energy storage on distribution networks using feedback linearization. , 2017, , .		1
102	HVDC meshed multi-terminal networks for offshore wind farms: Dynamic model, load flow and equilibrium. , 2017, , .		1
103	Passivity-Based Control for Hydro-Turbine Governing Systems. , 2018, , .		1
104	A Semidefinite Formulation of the Shifting Load Management. , 2018, , .		1
105	Small-Signal Stability in Low-Voltage DC-Grids. , 2018, , .		1
106	Voltage and Frequency Regulation on Isolated AC Three-phase Microgrids via s-DERs. , 2019, , .		1
107	A Wirtinger Linearization for the Power Flow in Microgrids. , 2019, , .		1
108	Power Flow in Islanded Microgrids: Formulation and Convergence Analysis. , 2019, , .		1

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109	Bilinear Control for Three-Phase Microgrids: A Proportional-Integral Passivity-Based Design. Electric Power Components and Systems, 2020, 48, 447-458.	1.8	1
110	Simplified dynamic models for three-phase microgrids. International Transactions on Electrical Energy Systems, 2021, 31, e12742.	1.9	1
111	A Convex OPF Approximation for DC Networks Considering Voltage-Dependent Load Models. , 2020, , .		1
112	A current-coupled topology for grid integration of wind turbines in Micro-Grids. , 2012, , .		0
113	Modulation features of a high-frequency conversion system for wind farm applications. , 2012, , .		0
114	Mitigating reactive power and negative-sequence in distribution feeders with wind energy systems. , 2017, , .		0
115	Controller Design for VSCs in Distributed Generation Applications: an IDA-PBC Approach. , 2018, , .		0
116	A Convex Optimization Model for Bidirectional Vehicle-To-Grid Operation. , 2018, , .		0
117	An Exact Feedback Linearization Control of a SMES System to Support Power in Electrical Grids. , 2018, , .		0
118	Group-Theory for the Analysis of Heuristic Algorithms in Power Distribution Systems. , 2018, , .		0
119	Mitigating fluctuations of wind power generation using superconducting magnetic energy storage: a passivity-based approach. , 2019, , .		0
120	Sequential Convex Optimization for the OPF in Isolated DC-grids. Lecture Notes in Electrical Engineering, 2021, , 9-19.	0.4	0