Jesus C Hernandez

List of Publications by Year
in descending order

92 papers	2,514 citations	172386 29 h-index	214721 47 g-index
92 all docs	92 docs citations	92 times ranked	1975 citing authors

#	Article	IF	Citations
1	Characterization of household-consumption load profiles in the time and frequency domain. International Journal of Electrical Power and Energy Systems, 2022, 137, 107756.	3.3	10
2	Optimal Design of PV Systems in Electrical Distribution Networks by Minimizing the Annual Equivalent Operative Costs through the Discrete-Continuous Vortex Search Algorithm. Sensors, 2022, 22, 851.	2.1	26
3	A Two-Stage Approach to Locate and Size PV Sources in Distribution Networks for Annual Grid Operative Costs Minimization. Electronics (Switzerland), 2022, 11, 961.	1.8	6
4	Derivative-Free Power Flow Solution for Bipolar DC Networks with Multiple Constant Power Terminals. Sensors, 2022, 22, 2914.	2.1	14
5	Efficient Integration of PV Sources in Distribution Networks to Reduce Annual Investment and Operating Costs Using the Modified Arithmetic Optimization Algorithm. Electronics (Switzerland), 2022, 11, 1680.	1.8	9
6	Control of Photovoltaic Plants Interconnected via VSC to Improve Power Oscillations in a Power System. Electronics (Switzerland), 2022, 11, 1744.	1.8	2
7	Optimal Pole-Swapping in Bipolar DC Networks Using Discrete Metaheuristic Optimizers. Electronics (Switzerland), 2022, 11, 2034.	1.8	7
8	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.	1.1	10
9	Evaluation of the latest Spanish grid code requirements from a PV power plant perspective. Energy Reports, 2022, 8, 8589-8604.	2.5	5
10	A new tool to analysing photovoltaic self-consumption systems with batteries. Renewable Energy, 2021, 168, 1327-1343.	4.3	18
11	A Mixed-Integer Conic Formulation for Optimal Placement and Dimensioning of DGs in DC Distribution Networks. Electronics (Switzerland), 2021, 10, 176.	1.8	10
12	A Mixed-Integer Convex Model for the Optimal Placement and Sizing of Distributed Generators in Power Distribution Networks. Applied Sciences (Switzerland), 2021, 11, 627.	1.3	32
13	Modeling of PV Module and DC/DC Converter Assembly for the Analysis of Induced Transient Response Due to Nearby Lightning Strike. Electronics (Switzerland), 2021, 10, 120.	1.8	12
14	Photovoltaic Power. Sustainability, 2021, 13, 2123.	1.6	0
15	Grid-Connected Renewable Energy Sources. Electronics (Switzerland), 2021, 10, 588.	1.8	3
16	Efficient Operative Cost Reduction in Distribution Grids Considering the Optimal Placement and Sizing of D-STATCOMs Using a Discrete-Continuous VSA. Applied Sciences (Switzerland), 2021, 11, 2175.	1.3	30
17	Simultaneous Minimization of Energy Losses and Greenhouse Gas Emissions in AC Distribution Networks Using BESS. Electronics (Switzerland), 2021, 10, 1002.	1.8	18
18	Optimization of battery/supercapacitor-based photovoltaic household-prosumers providing self-consumption and frequency containment reserve as influenced by temporal data granularity. Journal of Energy Storage, 2021, 36, 102366.	3.9	19

#	Article	IF	Citations
19	LQR-Based Adaptive Virtual Inertia for Grid Integration of Wind Energy Conversion System Based on Synchronverter Model. Electronics (Switzerland), 2021, 10, 1022.	1.8	4
20	Operating Cost Reduction in Distribution Networks Based on the Optimal Phase-Swapping including the Costs of the Working Groups and Energy Losses. Energies, 2021, 14, 4535.	1.6	11
21	Stabilization of MT-HVDC grids via passivity-based control and convex optimization. Electric Power Systems Research, 2021, 196, 107273.	2.1	8
22	Sensorless Adaptive Voltage Control for Classical DC-DC Converters Feeding Unknown Loads: A Generalized PI Passivity-Based Approach. Sensors, 2021, 21, 6367.	2.1	14
23	FCS-MPC Without Steady-State Error Applied to a Grid-Connected Cascaded H-Bridge Multilevel Inverter. IEEE Transactions on Power Electronics, 2021, 36, 11785-11799.	5.4	39
24	Novel optimization algorithm for the power and energy management and component sizing applied to hybrid storage-based photovoltaic household-prosumers for the provision of complementarity services. Journal of Power Sources, 2021, 482, 228918.	4.0	15
25	A Comparative Study on Power Flow Methods Applied to AC Distribution Networks with Single-Phase Representation. Electronics (Switzerland), 2021, 10, 2573.	1.8	9
26	Global Optimal Stabilization of MT-HVDC Systems: Inverse Optimal Control Approach. Electronics (Switzerland), 2021, 10, 2819.	1.8	2
27	Impact of nearby lightning on photovoltaic modules converters. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2021, ahead-of-print, 628.	0.5	2
28	Design and Implementation of a Smart Energy Meter Using a LoRa Network in Real Time. Electronics (Switzerland), 2021, 10, 3152.	1.8	8
29	An Approximate Mixed-Integer Convex Model to Reduce Annual Operating Costs in Radial Distribution Networks Using STATCOMs. Electronics (Switzerland), 2021, 10, 3102.	1.8	6
30	Optimal sizing and power schedule in PV household-prosumers for improving PV self-consumption and providing frequency containment reserve. Energy, 2020, 191, 116554.	4.5	72
31	Iterative harmonic load flow by using the point-estimate method and complex affine arithmetic for radial distribution systems with photovoltaic uncertainties. International Journal of Electrical Power and Energy Systems, 2020, 118, 105765.	3.3	19
32	Survey and assessment of technical and economic features for the provision of frequency control services by household-prosumers. Energy Policy, 2020, 146, 111739.	4.2	14
33	Voltage Stability Analysis in Medium-Voltage Distribution Networks Using a Second-Order Cone Approximation. Energies, 2020, 13, 5717.	1.6	8
34	Optimal sizing and management strategy for PV household-prosumers with self-consumption/sufficiency enhancement and provision of frequency containment reserve. Applied Energy, 2020, 277, 115529.	5.1	53
35	A Mixed-Integer Nonlinear Programming Model for Optimal Reconfiguration of DC Distribution Feeders. Energies, 2020, 13, 4440.	1.6	12
36	Optimal Selection and Location of BESS Systems in Medium-Voltage Rural Distribution Networks for Minimizing Greenhouse Gas Emissions. Electronics (Switzerland), 2020, 9, 2097.	1.8	7

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37	Optimal Selection and Location of Fixed-Step Capacitor Banks in Distribution Networks Using a Discrete Version of the Vortex Search Algorithm. Energies, 2020, 13, 4914.	1.6	36
38	Influence of Data Sampling Frequency on Household Consumption Load Profile Features: A Case Study in Spain. Sensors, 2020, 20, 6034.	2.1	18
39	Seasonality Effect Analysis and Recognition of Charging Behaviors of Electric Vehicles: A Data Science Approach. Sustainability, 2020, 12, 7769.	1.6	12
40	A Second-Order Cone Programming Reformulation of the Economic Dispatch Problem of BESS for Apparent Power Compensation in AC Distribution Networks. Electronics (Switzerland), 2020, 9, 1677.	1.8	19
41	Identification of Educational Models That Encourage Business Participation in Higher Education Institutions. Sustainability, 2020, 12, 8421.	1.6	4
42	Nonlinear Voltage Control for Three-Phase DC-AC Converters in Hybrid Systems: An Application of the PI-PBC Method. Electronics (Switzerland), 2020, 9, 847.	1.8	27
43	Tracing harmonic distortion and voltage unbalance in secondary radial distribution networks with photovoltaic uncertainties by an iterative multiphase harmonic load flow. Electric Power Systems Research, 2020, 185, 106342.	2.1	13
44	Direct Power Control Design for Charging Electric Vehicles: A Passivity-Based Control Approach. , 2020, , .		1
45	PI-PBC Approach for Voltage Regulation in Ä†uk Converters with Adaptive Load Estimation. , 2020, , .		2
46	Unbalance characteristics of fundamental and harmonic currents of threeâ€phase electric vehicle battery chargers. IET Generation, Transmission and Distribution, 2020, 14, 6220-6229.	1.4	4
47	Assessment of induced voltages in common and differentialâ€mode for a PV module due to nearby lightning strikes. IET Renewable Power Generation, 2019, 13, 1369-1378.	1.7	22
48	Design criteria for the optimal sizing of a hybrid energy storage system in PV household-prosumers to maximize self-consumption and self-sufficiency. Energy, 2019, 186, 115827.	4.5	84
49	Development and Calibration of an Open Source, Low-Cost Power Smart Meter Prototype for PV Household-Prosumers. Electronics (Switzerland), 2019, 8, 878.	1.8	41
50	An Improved Method for Obtaining Solar Irradiation Data at Temporal High-Resolution. Sustainability, 2019, 11, 5233.	1.6	14
51	Power Factor Compensation Using Teaching Learning Based Optimization and Monitoring System by Cloud Data Logger. Sensors, 2019, 19, 2172.	2.1	28
52	A Distributed Generation Hybrid System for Electric Energy Boosting Fueled with Olive Industry Wastes. Energies, 2019, 12, 500.	1.6	12
53	Monitoring PWM signals in stand-alone photovoltaic systems. Measurement: Journal of the International Measurement Confederation, 2019, 134, 412-425.	2.5	15
54	Primary frequency control and dynamic grid support for vehicle-to-grid in transmission systems. International Journal of Electrical Power and Energy Systems, 2018, 100, 152-166.	3.3	84

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55	Voltage behaviour in radial distribution systems under the uncertainties of photovoltaic systems and electric vehicle charging loads. International Transactions on Electrical Energy Systems, 2018, 28, e2490.	1.2	45
56	Enhanced utilityâ€scale photovoltaic units with frequency support functions and dynamic grid support for transmission systems. IET Renewable Power Generation, 2017, 11, 361-372.	1.7	92
57	Modelling and assessment of the combined technical impact of electric vehicles and photovoltaic generation in radial distribution systems. Energy, 2017, 141, 316-332.	4.5	75
58	Probabilistic Load-Flow Analysis of Biomass-Fuelled Gas Engines with Electrical Vehicles in Distribution Systems. Energies, 2017, 10, 1536.	1.6	33
59	Protection of a multiterminal DC compact node feeding electric vehicles on electric railway systems, secondary distribution networks, and PV systems. Turkish Journal of Electrical Engineering and Computer Sciences, 2016, 24, 3123-3143.	0.9	28
60	Power quality assessment of current electrical vehicle charging processes. , 2016, , .		6
61	Large photovoltaic systems providing frequency containment reserves. , 2016, , .		2
62	Stability assessment for transmission systems with large utilityâ€scale photovoltaic units. IET Renewable Power Generation, 2016, 10, 584-597.	1.7	86
63	Electric Vehicle Charging Stations Feeded by Renewable: PV and Train Regenerative Braking. IEEE Latin America Transactions, 2016, 14, 3262-3269.	1.2	57
64	Harmonic modelling of PV systems for probabilistic harmonic load flow studies. International Journal of Circuit Theory and Applications, 2015, 43, 1541-1565.	1.3	31
65	Overview of electrical protection requirements for integration of a smart DC node with bidirectional electric vehicle charging stations into existing AC and DC railway grids. Electric Power Systems Research, 2015, 122, 104-118.	2.1	47
66	Voltage unbalance assessment in secondary radial distribution networks with single-phase photovoltaic systems. International Journal of Electrical Power and Energy Systems, 2015, 64, 646-654.	3.3	74
67	Statistical characterisation of harmonic current emission for large photovoltaic plants. International Transactions on Electrical Energy Systems, 2014, 24, 1134-1150.	1.2	23
68	Electrical protection in a smart dc node that feeds electric vehicles charging stations. , 2014, , .		3
69	DC current injection into the network from transformerless and LF transformer photovoltaic inverters. , 2014, , .		5
70	Smart DC node to recharge electric vehicles from PV power, electric railway systems and secondary distribution network: assessment of fault currents. , 2014, , .		1
71	Location of Fraudulent Branch Lines or Faults in Short-Length Low Voltage Lines. Advances in Electrical and Computer Engineering, 2014, 14, 33-40.	0.5	4
72	Conflicts in the distribution network protection in the presence of large photovoltaic plants: the case ofENDESA. International Transactions on Electrical Energy Systems, 2013, 23, 669-688.	1.2	20

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73	Technical impact of photovoltaic-distributed generation on radial distribution systems: Stochastic simulations for a feeder in Spain. International Journal of Electrical Power and Energy Systems, 2013, 50, 25-32.	3.3	45
74	Measurement and assessment of power quality characteristics for photovoltaic systems: Harmonics, flicker, unbalance, and slow voltage variations. Electric Power Systems Research, 2013, 96, 23-35.	2.1	58
75	Case studies on large PV plants: Harmonic distortion, unbalance and their effects. , 2013, , .		26
76	Electrical protection for the grid-interconnection of photovoltaic-distributed generation. Electric Power Systems Research, 2012, 89, 85-99.	2.1	45
77	Probabilistic load flow for photovoltaic distributed generation using the Cornishâ€“Fisher expansion. Electric Power Systems Research, 2012, 89, 129-138.	2.1	147
78	Probabilistic load flow for radial distribution networks with photovoltaic generators. IET Renewable Power Generation, 2012, 6, 110.	1.7	93
79	Guidelines for Protection against Overcurrent in Photovoltaic Generators. Advances in Electrical and Computer Engineering, 2012, 12, 63-70.	0.5	26
80	Procedure for the technical measurement of harmonic, flicker and unbalance emission limits for photovoltaic-distributed generation. , 2011, , .		1
81	Probabilistic load flow for radial distribution networks with photovoltaic generators. , 2011, , .		7
82	Assessment of Shading Effects in Photovoltaic Modules. , 2011, , .		5
83	Guidelines for the technical assessment of harmonic, flicker and unbalance emission limits for PV-distributed generation. Electric Power Systems Research, 2011, 81, 1247-1257.	2.1	91
84	Characterization of the insulation and leakage currents of PV generators: Relevance for human safety. Renewable Energy, 2010, 35, 593-601.	4.3	54
85	Analysis of the cost for the refurbishment of small hydropower plants. Renewable Energy, 2009, 34, 2501-2509.	4.3	33
86	Guidelines for Protection Against Electric Shock in PV Generators. IEEE Transactions on Energy Conversion, 2009, 24, 274-282.	3.7	60
87	Impact comparison of PV system integration into rural and urban feeders. Energy Conversion and Management, 2008, 49, 1747-1765.	4.4	46
88	Lightning and Surge Protection in Photovoltaic Installations. IEEE Transactions on Power Delivery, 2008, 23, 1961-1971.	2.9	69
89	Optimal allocation and sizing for profitability and voltage enhancement of PV systems on feeders. Renewable Energy, 2007, 32, 1768-1789.	4.3	76
90	Optimal Placement and Sizing Procedure for PV Systems on Radial Distribution Systems. , 2006, , .		15

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91	Photovoltaic in grid-connected buildings, sizing and economic analysis. Renewable Energy, 1998, 15, 562-565.	4.3	13
92	Guidelines to requirements for protection against electric shock in PV generators. , 0, , .		2