Rodolfo Dufo-LÃ³pez

List of Publications by Year
in descending order

78 papers	7,185 citations	87843 38 h-index	98753 67 g-index
79 all docs	79 docs citations	79 times ranked	6750 citing authors

#	Article	IF	Citations
1	Off-grid full renewable hybrid systems: Control strategies, optimization, and modeling. , 2022, , 69-100.		0
2	Comparison of Lead-Acid and Li-Ion Batteries Lifetime Prediction Models in Stand-Alone Photovoltaic Systems. Applied Sciences (Switzerland), 2021, 11, 1099.	1.3	45
3	Comparison of Economic Performance of Lead-Acid and Li-Ion Batteries in Standalone Photovoltaic Energy Systems. Applied Sciences (Switzerland), 2021, 11, 3587.	1.3	10
4	Techno-Economic Feasibility Analysis through Optimization Strategies and Load Shifting in Isolated Hybrid Microgrids with Renewable Energy for the Non-Interconnected Zone (NIZ) of Colombia. Energies, 2020, 13, 6146.	1.6	11
5	Estimating Degradation Costs for Non-Cyclic Usage of Lithium-Ion Batteries. Applied Sciences (Switzerland), 2020, 10, 5330.	1.3	3
6	Embedding quasi-static time series within a genetic algorithm for stochastic optimization: the case of reactive power compensation on distribution systems. Journal of Computational Design and Engineering, 2020, 7, 177-194.	1.5	1
7	Special Issue on Standalone Renewable Energy System: Modeling and Controlling. Applied Sciences (Switzerland), 2020, 10, 2068.	1.3	0
8	Optimization of Isolated Hybrid Microgrids with Renewable Energy Based on Different Battery Models and Technologies. Energies, 2020, 13, 581.	1.6	27
9	Optimization and Feasibility of Standalone Hybrid Diesel-PV-Battery Microgrid Considering Battery Technologies. , 2020, , .		0
10	Design of an electric vehicle fast-charging station with integration of renewable energy and storage systems. International Journal of Electrical Power and Energy Systems, 2019, 105, 46-58.	3.3	268
11	Optimisation of off-grid hybrid renewable systems with thermoelectric generator. Energy Conversion and Management, 2019, 196, 1051-1067.	4.4	13
12	Contract design of direct-load control programs and their optimal management by genetic algorithm. Energy, 2019, 186, 115807.	4.5	14
13	Energy Management in Microgrids with Renewable Energy Sources: A Literature Review. Applied Sciences (Switzerland), 2019, 9, 3854.	1.3	177
14	Standalone Renewable Energy and Hydrogen in an Agricultural Context: A Demonstrative Case. Sustainability, 2019, 11, 951.	1.6	16
15	Evaluating the Effect of Financing Costs on PV Grid Parity by Applying a Probabilistic Methodology. Applied Sciences (Switzerland), 2019, 9, 425.	1.3	7
16	Probabilistic perspective of the optimal distributed generation integration on a distribution system. Electric Power Systems Research, 2019, 167, 9-20.	2.1	6
17	The lithium-ion battery: State of the art and future perspectives. Renewable and Sustainable Energy Reviews, 2018, 89, 292-308.	8.2	1,542
18	A computationally efficient Li-ion electrochemical battery model for long-term analysis of stand-alone renewable energy systems. Journal of Energy Storage, 2018, 17, 93-101.	3.9	27

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19	Novel probabilistic optimization model for lead-acid and vanadium redox flow batteries under real-time pricing programs. International Journal of Electrical Power and Energy Systems, 2018, 97, 72-84.	3.3	9
20	A novel framework for optimization of size and control strategy of lithium-ion battery based off-grid renewable energy systems. Energy Conversion and Management, 2018, 175, 99-111.	4.4	45
21	A novel lifetime prediction method for lithium-ion batteries in the case of stand-alone renewable energy systems. International Journal of Electrical Power and Energy Systems, 2018, 103, 115-126.	3.3	28
22	Probabilistic methodology for estimating the optimal photovoltaic capacity in distribution systems to avoid power flow reversals. IET Renewable Power Generation, 2018, 12, 1045-1064.	1.7	9
23	Daily operation optimisation of hybrid stand-alone system by model predictive control considering ageing model. Energy Conversion and Management, 2017, 134, 167-177.	4.4	37
24	Multi-objective demand response to real-time prices (RTP) using a task scheduling methodology. Energy, 2017, 138, 19-31.	4.5	57
25	Photovoltaic thermal hybrid solar collector and district heating configurations for a Central European multi-family house. Energy Conversion and Management, 2017, 148, 915-924.	4.4	44
26	Optimizing Daily Operation of Battery Energy Storage Systems Under Real-Time Pricing Schemes. IEEE Transactions on Smart Grid, 2017, 8, 316-330.	6.2	58
27	Optimum Design of Small-Scale Stand-Alone Hybrid Renewable Energy Systems. , 2017, , 279-306.		0
28	Analysis of Photovoltaic Self-Consumption Systems. Energies, 2016, 9, 681.	1.6	17
29	Techno-economic assessment of an off-grid PV system for developing regions to provide electricity for basic domestic needs: A 2020â€“2040 scenario. Applied Energy, 2016, 176, 309-319.	5.1	86
30	Optimisation of PV-wind-diesel-battery stand-alone systems to minimise cost and maximise human development index and job creation. Renewable Energy, 2016, 94, 280-293.	4.3	147
31	Optimisation of photovoltaicâ€“dieselâ€“battery stand-alone systems minimising system weight. Energy Conversion and Management, 2016, 119, 279-288.	4.4	41
32	Stochastic-heuristic methodology for the optimisation of components and control variables of PV-wind-diesel-battery stand-alone systems. Renewable Energy, 2016, 99, 919-935.	4.3	78
33	Operating conditions of lead-acid batteries in the optimization of hybrid energy systems and microgrids. Applied Energy, 2016, 179, 590-600.	5.1	59
34	Concept development and techno-economic assessment for a solar home system using lithium-ion battery for developing regions to provide electricity for lighting and electronic devices. Energy Conversion and Management, 2016, 122, 439-448.	4.4	36
35	Optimisation of energy supply at off-grid healthcare facilities using Monte Carlo simulation. Energy Conversion and Management, 2016, 113, 321-330.	4.4	53
36	Techno-economic analysis of grid-connected battery storage. Energy Conversion and Management, 2015, 91, 394-404.	4.4	123

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37	Optimisation of size and control of grid-connected storage under real time electricity pricing conditions. Applied Energy, 2015, 140, 395-408.	5.1	78
38	A comparative assessment of net metering and net billing policies. Study cases for Spain. Energy, 2015, 84, 684-694.	4.5	75
39	Asymmetrical multilevel inverter with staircase modulation for variable frequency drives in fractional horsepower applications. , 2015, , .		5
40	Effect of the MPPT and SOC control of the charge controller in PV systems. , 2015, , .		2
41	Sizing of off-grid renewable energy systems for drip irrigation in Mediterranean crops. Renewable Energy, 2015, 76, 566-574.	4.3	82
42	Can electric vehicles reduce electricity bill?. , 2014, , .		4
43	Comparison of different leadâ€“acid battery lifetime prediction models for use in simulation of stand-alone photovoltaic systems. Applied Energy, 2014, 115, 242-253.	5.1	279
44	Technical and economic effects of charge controller operation and coulombic efficiency on stand-alone hybrid power systems. Energy Conversion and Management, 2014, 86, 709-716.	4.4	24
45	Probabilistic modelling and analysis of stand-alone hybrid power systems. Energy, 2013, 63, 19-27.	4.5	69
46	Modeling the Multiobjective Optimization of Electricity Consumption for Residential Consumers. Advanced Materials Research, 2013, 748, 493-497.	0.3	2
47	Photovoltaic remuneration policies in the European Union. Energy Policy, 2013, 55, 317-328.	4.2	96
48	Photovoltaic Grid Parity in Spain. Lecture Notes in Electrical Engineering, 2013, , 235-239.	0.3	4
49	Grid-Connected Renewable Electricity Storage: Batteries vs. Hydrogen. Lecture Notes in Electrical Engineering, 2013, , 221-225.	0.3	3
50	A Qualitative Evaluation of Operational Conditions in PV/Wind/Battery Systems. , 2012, , .		1
51	New Methodology for the Generation of Hourly Wind Speed Data Applied to the Optimization of Stand-Alone Systems. Energy Procedia, 2012, 14, 1973-1978.	1.8	12
52	Computational Tool for the Efficiency Forecasting of Grid-Connected Photovoltaic Systems. Lecture Notes in Electrical Engineering, 2012, , 53-59.	0.3	1
53	Opportunity costs for bioelectricity sales in Brazilian sucro-energetic industries. Applied Energy, 2012, 92, 860-867.	5.1	20
54	Tecno-economic assessment of an off-grid PV-powered community kitchen for developing regions. Applied Energy, 2012, 91, 255-262.	5.1	39

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55	Optimal sizing of small wind/battery systems considering the DC bus voltage stability effect on energy capture, wind speed variability, and load uncertainty. Applied Energy, 2012, 93, 404-412.	5.1	59
56	Optimum residential load management strategy for real time pricing (RTP) demand response programs. Energy Policy, 2012, 45, 671-679.	4.2	160
57	Optimum load management strategy for wind/diesel/battery hybrid power systems. Renewable Energy, 2012, 44, 288-295.	4.3	68
58	Optimal Design of PV/Wind/Battery Systems by Genetic Algorithms Considering the Effect of Charge Regulation. Lecture Notes in Electrical Engineering, 2012, , 241-247.	0.3	6
59	Multi-objective optimization minimizing cost and life cycle emissions of stand-alone PVâ€“windâ€“diesel systems with batteries storage. Applied Energy, 2011, 88, 4033-4041.	5.1	377
60	Forecast of Hourly Average Wind Speed Using ARMA Model with Discrete Probability Transformation. Lecture Notes in Electrical Engineering, 2011, , 1003-1010.	0.3	15
61	Multi-Layer Methodology Applied to Multi-period and Multi-Objective Design of Power Distribution Systems. Lecture Notes in Electrical Engineering, 2011, , 1011-1018.	0.3	0
62	Techno-economical optimization of the production of hydrogen from PV-Wind systems connected to the electrical grid. Renewable Energy, 2010, 35, 747-758.	4.3	61
63	Efficient design of hybrid renewable energy systems using evolutionary algorithms. Energy Conversion and Management, 2009, 50, 479-489.	4.4	111
64	Design and economical analysis of hybrid PVâ€“wind systems connected to the grid for the intermittent production of hydrogen. Energy Policy, 2009, 37, 3082-3095.	4.2	87
65	Multi-objective design and control of hybrid systems minimizing costs and unmet load. Electric Power Systems Research, 2009, 79, 170-180.	2.1	78
66	Simulation and optimization of stand-alone hybrid renewable energy systems. Renewable and Sustainable Energy Reviews, 2009, 13, 2111-2118.	8.2	534
67	Generation management using batteries in wind farms: Economical and technical analysis for Spain. Energy Policy, 2009, 37, 126-139.	4.2	91
68	Data mining methodology for disaggregation of load demand. Electric Power Systems Research, 2009, 79, 1393-1399.	2.1	4
69	Multi-objective design of PVâ€“windâ€“dieselâ€“hydrogenâ€“battery systems. Renewable Energy, 2008, 33, 2559-2572.	4.3	434
70	Hourly energy management for grid-connected windâ€“hydrogen systems. International Journal of Hydrogen Energy, 2008, 33, 6401-6413.	3.8	71
71	Influence of mathematical models in design of PV-Diesel systems. Energy Conversion and Management, 2008, 49, 820-831.	4.4	43
72	Optimization of control strategies for stand-alone renewable energy systems with hydrogen storage. Renewable Energy, 2007, 32, 1102-1126.	4.3	330

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73	Economical and environmental analysis of grid connected photovoltaic systems in Spain. Renewable Energy, 2006, 31, 1107-1128.	4.3	149
74	Design of isolated hybrid systems minimizing costs and pollutant emissions. Renewable Energy, 2006, 31, 2227-2244.	4.3	182
75	Design and control strategies of PV-Diesel systems using genetic algorithms. Solar Energy, 2005, 79, 33-46.	2.9	403
76	New Methodology for the Optimization of the Management of Wind Farms, Including Energy Storage. Applied Mechanics and Materials, 0, 330, 183-187.	0.2	5
77	Introducing Off-Grid Renewable Energy Systems for Irrigation in Mediterranean Crops. Applied Mechanics and Materials, 0, 330, 198-202.	0.2	2
78	Grid Parity Analysis of PV Markets. Advanced Materials Research, 0, 827, 441-445.	0.3	1