

# Emilio Gomez-Lazaro

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

96  
papers

2,159  
citations

22  
h-index

44  
g-index

104  
ext. papers

2,760  
ext. citations

5.1  
avg, IF

5.27  
L-index

#	Paper	IF	Citations
96	C-E (curtailment [Energy share) map: An objective and quantitative measure to evaluate wind and solar curtailment. <i>Renewable and Sustainable Energy Reviews</i> , <b>2022</b> , 160, 112212	16.2	3
95	Failure rate and downtime survey of wind turbines located in Spain. <i>IET Renewable Power Generation</i> , <b>2021</b> , 15, 225-236	2.9	4
94	Wind Resource and Wind Power Generation Assessment for Education in Engineering. <i>Sustainability</i> , <b>2021</b> , 13, 2444	3.6	5
93	. <i>IEEE Access</i> , <b>2021</b> , 1-1	3.5	2
92	Short-Circuit Current Contribution of Doubly-Fed Wind Turbines According to IEC and IEEE Standards. <i>IEEE Transactions on Power Delivery</i> , <b>2020</b> , 1-1	4.3	1
91	Requirements for Validation of Dynamic Wind Turbine Models: An International Grid Code Review. <i>Electronics (Switzerland)</i> , <b>2020</b> , 9, 1707	2.6	3
90	Using SCADA Data for Wind Turbine Condition Monitoring: A Systematic Literature Review. <i>Energies</i> , <b>2020</b> , 13, 3132	3.1	32
89	Extensive frequency response and inertia analysis under high renewable energy source integration scenarios: application to the European interconnected power system. <i>IET Renewable Power Generation</i> , <b>2020</b> , 14, 2885-2896	2.9	4
88	Modelling Types 1 and 2 Wind Turbines Based on IEC 61400-27-1: Transient Response under Voltage Dips. <i>Energies</i> , <b>2020</b> , 13, 4078	3.1	2
87	In-Service Wind Turbine DFIG Diagnosis Using Current Signature Analysis. <i>IEEE Transactions on Industrial Electronics</i> , <b>2020</b> , 67, 2262-2271	8.9	15
86	Field validation of a standard Type 3 wind turbine model implemented in DigSILENT-PowerFactory following IEC 61400-27-1 guidelines. <i>International Journal of Electrical Power and Energy Systems</i> , <b>2020</b> , 116, 105553	5.1	11
85	On the participation of wind energy in response and reserve markets in Great Britain and Spain. <i>Renewable and Sustainable Energy Reviews</i> , <b>2019</b> , 115, 109360	16.2	11
84	Power systems with high renewable energy sources: A review of inertia and frequency control strategies over time. <i>Renewable and Sustainable Energy Reviews</i> , <b>2019</b> , 115, 109369	16.2	98
83	Performance evaluation of large solar photovoltaic power plants in Spain. <i>Energy Conversion and Management</i> , <b>2019</b> , 183, 515-528	10.6	41
82	Impact of Combined Demand-Response and Wind Power Plant Participation in Frequency Control for Multi-Area Power Systems. <i>Energies</i> , <b>2019</b> , 12, 1687	3.1	8
81	Generic Type 3 WT models: comparison between IEC and WECC approaches. <i>IET Renewable Power Generation</i> , <b>2019</b> , 13, 1168-1178	2.9	10
80	Analysing Current Signature Data to Diagnose an In-Service Wind Turbine Generator. <i>Journal of Physics: Conference Series</i> , <b>2019</b> , 1222, 012042	0.3	0

79	Compliance of a Generic Type 3 WT Model with the Spanish Grid Code. <i>Energies</i> , <b>2019</b> , 12, 1631	3.1	9
78	Hydropower Flexibility for Power Systems with Variable Renewable Energy Sources <b>2019</b> , 385-405		0
77	Vertical Wind Profile Characterization and Identification of Patterns Based on a Shape Clustering Algorithm. <i>IEEE Access</i> , <b>2019</b> , 7, 30890-30904	3.5	7
76	Technical Impacts of High Penetration Levels of Wind Power on Power System Stability <b>2019</b> , 47-65		1
75	Long-Term Operational Data Analysis of an In-Service Wind Turbine DFIG. <i>IEEE Access</i> , <b>2019</b> , 7, 17896-17906	3.6	5
74	Implementation of IEC 61400-27-1 Type 3 Model: Performance Analysis under Different Modeling Approaches. <i>Energies</i> , <b>2019</b> , 12, 2690	3.1	6
73	Fault-Ride Trough Validation of IEC 61400-27-1 Type 3 and Type 4 Models of Different Wind Turbine Manufacturers. <i>Energies</i> , <b>2019</b> , 12, 3039	3.1	6
72	Submission of a WECC DFIG Wind Turbine Model to Spanish Operation Procedure 12.3. <i>Energies</i> , <b>2019</b> , 12, 3749	3.1	8
71	Field Validation of Generic Type 4 Wind Turbine Models Based on IEC and WECC Guidelines. <i>IEEE Transactions on Energy Conversion</i> , <b>2019</b> , 34, 933-941	5.4	10
70	Wind farm simulations based on a DFIG machine using parallel programming. <i>Journal of Supercomputing</i> , <b>2019</b> , 75, 1641-1653	2.5	
69	Wind power within European grid codes: Evolution, status and outlook. <i>Wiley Interdisciplinary Reviews: Energy and Environment</i> , <b>2018</b> , 7, e285	4.7	6
68	Influence of solar technology in the economic performance of PV power plants in Europe. A comprehensive analysis. <i>Renewable and Sustainable Energy Reviews</i> , <b>2018</b> , 82, 488-501	16.2	58
67	Identification of linearised RMS-voltage dip patterns based on clustering in renewable plants. <i>IET Generation, Transmission and Distribution</i> , <b>2018</b> , 12, 1256-1262	2.5	6
66	Current signature analysis to monitor DFIG wind turbine generators: A case study. <i>Renewable Energy</i> , <b>2018</b> , 116, 5-14	8.1	30
65	Generic dynamic wind turbine models for power system stability analysis: A comprehensive review. <i>Renewable and Sustainable Energy Reviews</i> , <b>2018</b> , 81, 1939-1952	16.2	51
64	Current Signature and Vibration Analyses to Diagnose an In-Service Wind Turbine Drive Train. <i>Energies</i> , <b>2018</b> , 11, 960	3.1	24
63	Wind turbine reliability: A comprehensive review towards effective condition monitoring development. <i>Applied Energy</i> , <b>2018</b> , 228, 1569-1583	10.7	95
62	A techno-economic analysis of a real wind farm repowering experience: The Malpica case. <i>Energy Conversion and Management</i> , <b>2018</b> , 172, 182-199	10.6	39

61	Contribution of wind energy to balancing markets: The case of Spain. <i>Wiley Interdisciplinary Reviews: Energy and Environment</i> , <b>2018</b> , 7, e300	4.7	4
60	The role of wind energy production in addressing the European renewable energy targets: The case of Spain. <i>Journal of Cleaner Production</i> , <b>2018</b> , 196, 1198-1212	10.3	19
59	Field Validation of a Standard Type 3 Wind Turbine Model for Power System Stability, According to the Requirements Imposed by IEC 61400-27-1. <i>IEEE Transactions on Energy Conversion</i> , <b>2018</b> , 33, 137-145	5.4	23
58	Fast Power Reserve Emulation Strategy for VSWT Supporting Frequency Control in Multi-Area Power Systems. <i>Energies</i> , <b>2018</b> , 11, 2775	3.1	9
57	Technical impacts of high penetration levels of wind power on power system stability. <i>Wiley Interdisciplinary Reviews: Energy and Environment</i> , <b>2017</b> , 6, e216	4.7	33
56	Hydro power flexibility for power systems with variable renewable energy sources: an IEA Task 25 collaboration. <i>Wiley Interdisciplinary Reviews: Energy and Environment</i> , <b>2017</b> , 6, e220	4.7	23
55	Combining feed-in tariffs and net-metering schemes to balance development in adoption of photovoltaic energy: Comparative economic assessment and policy implications for European countries. <i>Energy Policy</i> , <b>2017</b> , 102, 440-452	7.2	75
54	Approach to fitting parameters and clustering for characterising measured voltage dips based on two-dimensional polarisation ellipses. <i>IET Renewable Power Generation</i> , <b>2017</b> , 11, 1335-1343	2.9	6
53	Condition monitoring of a wind turbine doubly-fed induction generator through current signature analysis. <i>Journal of Physics: Conference Series</i> , <b>2017</b> , 926, 012008	0.3	1
52	Implementation and Assessment of a Decentralized Load Frequency Control: Application to Power Systems with High Wind Energy Penetration. <i>Energies</i> , <b>2017</b> , 10, 151	3.1	6
51	Generic Type 3 Wind Turbine Model Based on IEC 61400-27-1: Parameter Analysis and Transient Response under Voltage Dips. <i>Energies</i> , <b>2017</b> , 10, 1441	3.1	16
50	Statistical and Clustering Analysis for Disturbances: A Case Study of Voltage Dips in Wind Farms. <i>IEEE Transactions on Power Delivery</i> , <b>2016</b> , 31, 2530-2537	4.3	8
49	The relationship between learning styles and motivation to transfer of learning in a vocational training programme. <i>Suma Psicológica</i> , <b>2016</b> , 23, 25-32	1.2	9
48	Probability Density Function Characterization for Aggregated Large-Scale Wind Power Based on Weibull Mixtures. <i>Energies</i> , <b>2016</b> , 9, 91	3.1	14
47	Validation of Generic Models for Variable Speed Operation Wind Turbines Following the Recent Guidelines Issued by IEC 61400-27. <i>Energies</i> , <b>2016</b> , 9, 1048	3.1	13
46	Variability in large-scale wind power generation. <i>Wind Energy</i> , <b>2016</b> , 19, 1649-1665	3.4	33
45	Wind and solar energy curtailment: A review of international experience. <i>Renewable and Sustainable Energy Reviews</i> , <b>2016</b> , 65, 577-586	16.2	228
44	Power quality surveys of photovoltaic power plants: characterisation and analysis of grid-code requirements. <i>IET Renewable Power Generation</i> , <b>2015</b> , 9, 466-473	2.9	44

43	An Analysis of Decentralized Demand Response as Frequency Control Support under Critical Wind Power Oscillations. <i>Energies</i> , <b>2015</b> , 8, 12881-12897	3.1	3
42	A New Solar Module Modeling for PV Applications Based on a Symmetrized and Shifted Gompertz Model. <i>IEEE Transactions on Energy Conversion</i> , <b>2015</b> , 30, 51-59	5.4	14
41	Simulation of DFIG wind turbines for transient studies: An alternative approach based on symbolic-numeric computations. <i>Journal of the Franklin Institute</i> , <b>2015</b> , 352, 1417-1439	4	5
40	Load influence on the response of AC-Contactors under power quality disturbances. <i>International Journal of Electrical Power and Energy Systems</i> , <b>2014</b> , 63, 846-854	5.1	15
39	Demand-Side Contribution to Primary Frequency Control With Wind Farm Auxiliary Control. <i>IEEE Transactions on Power Systems</i> , <b>2014</b> , 29, 2391-2399	7	42
38	Ad-hoc analytical solution based on local linearisations for doubly-fed induction generator wind turbine electromechanical simulations. <i>IET Renewable Power Generation</i> , <b>2014</b> , 8, 537-550	2.9	2
37	<b>2014</b> ,		9
36	Behavioral modeling of grid-connected photovoltaic inverters: Development and assessment. <i>Renewable Energy</i> , <b>2014</b> , 68, 686-696	8.1	13
35	A New Three-Phase DPLL Frequency Estimator Based on Nonlinear Weighted Mean for Power System Disturbances. <i>IEEE Transactions on Power Delivery</i> , <b>2013</b> , 28, 179-187	4.3	11
34	Validation of a DFIG wind turbine model submitted to two-phase voltage dips following the Spanish grid code. <i>Renewable Energy</i> , <b>2013</b> , 57, 27-34	8.1	20
33	Transmission planning for wind energy in the United States and Europe: status and prospects. <i>Wiley Interdisciplinary Reviews: Energy and Environment</i> , <b>2013</b> , 2, 1-13	4.7	11
32	Analysis of positive ramp limitation control strategies for reducing wind power fluctuations. <i>IET Renewable Power Generation</i> , <b>2013</b> , 7, 593-602	2.9	11
31	Methodologies to determine operating reserves due to increased wind power <b>2013</b> ,		10
30	Validation of a Mechanical Model for Fault Ride-Through: Application to a Gamesa G52 Commercial Wind Turbine. <i>IEEE Transactions on Energy Conversion</i> , <b>2013</b> , 28, 707-715	5.4	14
29	Power quality survey of a photovoltaic power plant <b>2013</b> ,		4
28	Spectral coherence model for power fluctuations in a wind farm. <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , <b>2012</b> , 102, 14-21	3.7	20
27	Evaluation of frequency response of variable speed wind farms for reducing stability problems in weak grids <b>2012</b> ,		6
26	Methodologies to Determine Operating Reserves Due to Increased Wind Power. <i>IEEE Transactions on Sustainable Energy</i> , <b>2012</b> , 3, 713-723	8.2	180

25	Experience and Challenges With Short-Term Balancing in European Systems With Large Share of Wind Power. <i>IEEE Transactions on Sustainable Energy</i> , <b>2012</b> , 3, 853-861	8.2	43
24	Assessment of DFIG simplified model parameters using field test data <b>2012</b> ,		7
23	Energy storage for wind integration: Hydropower and other contributions <b>2012</b> ,		3
22	Development and Assessment of a Wireless Sensor and Actuator Network for Heating and Cooling Loads. <i>IEEE Transactions on Smart Grid</i> , <b>2012</b> , 3, 1192-1202	10.7	10
21	Wind Power Variability and Singular Events <b>2012</b> ,		3
20	Validation of a double fed induction generator wind turbine model and wind farm verification following the Spanish grid code. <i>Wind Energy</i> , <b>2012</b> , 15, 645-659	3.4	18
19	Influence of voltage dips on industrial equipment: Analysis and assessment. <i>International Journal of Electrical Power and Energy Systems</i> , <b>2012</b> , 41, 87-95	5.1	59
18	<b>2012</b> ,		10
17	Comparison of instantaneous frequency estimation algorithms under power system disturbances <b>2012</b> ,		3
16	. <i>IEEE Transactions on Power Systems</i> , <b>2011</b> , 26, 241-251	7	58
15	Modeling Aluminum Smelter Plants Using Sliced Inverse Regression With a View Towards Load Flexibility. <i>IEEE Transactions on Power Systems</i> , <b>2011</b> , 26, 282-293	7	11
14	Impacts of large amounts of wind power on design and operation of power systems, results of IEA collaboration. <i>Wind Energy</i> , <b>2011</b> , 14, 179-192	3.4	273
13	Analysis of the AC-contactor electrical behavior under voltage dips <b>2010</b> ,		3
12	Characterization and Visualization of Voltage Dips in Wind Power Installations. <i>IEEE Transactions on Power Delivery</i> , <b>2009</b> , 24, 2071-2078	4.3	20
11	A measurement approach for obtaining static load model parameters in real time at the distribution level. <i>European Transactions on Electrical Power</i> , <b>2007</b> , 17, 173-190		2
10	Field tests of wind turbines submitted to real voltage dips under the new Spanish grid code requirements. <i>Wind Energy</i> , <b>2007</b> , 10, 483-495	3.4	15
9	Application of Wireless Sensor Network to Direct Load Control in Residential Areas <b>2007</b> ,		6
8	Characterization of Measured Voltage Dips in Wind Farms in the Light of the New Grid Codes <b>2007</b> ,		2

7	Results using Different Reactive Power Definitions for Wind Turbines Submitted to Voltage Dips: Application to the Spanish Grid Code <b>2006</b> ,		6
6	Modelling of magnetic anisotropy in the finite element method. <i>COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering</i> , <b>2006</b> , 25, 609-615	0.7	3
5	Application of smoothing techniques to solve the cooling and heating residential load aggregation problem. <i>COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering</i> , <b>2004</b> , 23, 48-64	0.7	5
4	An integrated tool for assessing the demand profile flexibility. <i>IEEE Transactions on Power Systems</i> , <b>2004</b> , 19, 668-675	7	22
3	Development and assessment of a load decomposition method applied at the distribution level. <i>IET Generation, Transmission and Distribution</i> , <b>2003</b> , 150, 245		3
2	DSTRP: A new algorithm for high impedance fault detection in compensated neutral grounded M.V. power systems. <i>European Transactions on Electrical Power</i> , <b>2003</b> , 13, 23-28		5
1	Advanced teaching method for learning power system operation based on load flow simulations. <i>Computer Applications in Engineering Education</i> ,	1.6	2