Francesco Castellani

List of Publications by Year
in descending order

82 papers	1,212 citations	331538 21 h-index	454834 30 g-index
84 all docs	84 docs citations	84 times ranked	864 citing authors

#	Article	IF	Citations
1	An application of the actuator disc model for wind turbine wakes calculations. Applied Energy, 2013, 101, 432-440.	5.1	77
2	Analyzing wind turbine directional behavior: SCADA data mining techniques for efficiency and power assessment. Applied Energy, 2017, 185, 1076-1086.	5.1	51
3	Experimental and numerical investigation of the effect of blade number on the aerodynamic performance of a small-scale horizontal axis wind turbine. AEJ - Alexandria Engineering Journal, 2021, 60, 3931-3944.	3.4	46
4	Numerical modelling for wind farm operational assessment in complex terrain. Journal of Wind Engineering and Industrial Aerodynamics, 2015, 147, 320-329.	1.7	44
5	Optimizing the design of horizontal-axis small wind turbines: From the laboratory to market. Journal of Wind Engineering and Industrial Aerodynamics, 2016, 154, 58-68.	1.7	44
6	Diagnosis of Faulty Wind Turbine Bearings Using Tower Vibration Measurements. Energies, 2020, 13, 1474.	1.6	44
7	Wind Turbine Power Curve Upgrades. Energies, 2018, 11, 1300.	1.6	39
8	A Study of Wind Turbine Wakes in Complex Terrain Through RANS Simulation and SCADA Data. Journal of Solar Energy Engineering, Transactions of the ASME, 2018, 140, .	1.1	38
9	A Study of Wind Turbine Performance Decline with Age through Operation Data Analysis. Energies, 2020, 13, 2086.	1.6	37
10	IEA-Task 31 WAKEBENCH: Towards a protocol for wind farm flow model evaluation. Part 2: Wind farm wake models. Journal of Physics: Conference Series, 2014, 524, 012185.	0.3	36
11	Data mining techniques for performance analysis of onshore wind farms. Applied Energy, 2015, 148, 220-233.	5.1	34
12	Precision Computation of Wind Turbine Power Upgrades: An Aerodynamic and Control Optimization Test Case. Journal of Energy Resources Technology, Transactions of the ASME, 2019, 141, .	1.4	31
13	Wind Turbine Systematic Yaw Error: Operation Data Analysis Techniques for Detecting It and Assessing Its Performance Impact. Energies, 2020, 13, 2351.	1.6	29
14	Data analysis and simulation of the Lillgrund wind farm. Wind Energy, 2021, 24, 634-648.	1.9	26
15	Multivariate SCADA Data Analysis Methods for Real-World Wind Turbine Power Curve Monitoring. Energies, 2021, 14, 1105.	1.6	26
16	SCADA Data Analysis Methods for Diagnosis of Electrical Faults to Wind Turbine Generators. Applied Sciences (Switzerland), 2021, 11, 3307.	1.3	26
17	Wind Energy Forecast in Complex Sites with a Hybrid Neural Network and CFD based Method. Energy Procedia, 2014, 45, 188-197.	1.8	25
18	Multi-Scale Wind Turbine Bearings Supervision Techniques Using Industrial SCADA and Vibration Data. Applied Sciences (Switzerland), 2021, 11, 6785.	1.3	25

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19	Experimental and Numerical Vibrational Analysis of a Horizontal-Axis Micro-Wind Turbine. Energies, 2018, 11, 456.	1.6	23
20	Wind Turbine Yaw Control Optimization and Its Impact on Performance. Machines, 2019, 7, 41.	1.2	23
21	Experimental Vibration Analysis of a Small Scale Vertical Wind Energy System for Residential Use. Machines, 2019, 7, 35.	1.2	23
22	Analysis of Wind Turbine Aging through Operation Curves. Energies, 2020, 13, 5623.	1.6	22
23	Wind Power Forecasting techniques in complex terrain: ANN vs. ANN-CFD hybrid approach. Journal of Physics: Conference Series, 2016, 753, 082002.	0.3	21
24	On the contribution of renewable energies for feeding a high altitude Smart Mini Grid. Applied Energy, 2017, 185, 1694-1701.	5.1	21
25	Effect of Wind Tunnel Blockage on the Performance of a Horizontal Axis Wind Turbine with Different Blade Number. Energies, 2019, 12, 1988.	1.6	20
26	The Yawing Behavior of Horizontal-Axis Wind Turbines: A Numerical and Experimental Analysis. Machines, 2019, 7, 15.	1.2	19
27	Estimation of the Performance Aging of the Vestas V52 Wind Turbine through Comparative Test Case Analysis. Energies, 2021, 14, 915.	1.6	19
28	Improving windfarm operation practice through numerical modelling and Supervisory Control and Data Acquisition data analysis. IET Renewable Power Generation, 2014, 8, 367-379.	1.7	18
29	How Wind Turbines Alignment to Wind Direction Affects Efficiency? A Case Study through SCADA Data Mining. Energy Procedia, 2015, 75, 697-703.	1.8	18
30	IEA-Task 31 WAKEBENCH: Towards a protocol for wind farm flow model evaluation. Part 1: Flow-over-terrain models. Journal of Physics: Conference Series, 2014, 524, 012105.	0.3	17
31	Analysing wind farm efficiency on complex terrains. Journal of Physics: Conference Series, 2014, 524, 012142.	0.3	16
32	Mathematical methods for SCADA data mining of onshore wind farms: Performance evaluation and wake analysis. Wind Engineering, 2016, 40, 69-85.	1.1	15
33	Video-Tachometer Methodology for Wind Turbine Rotor Speed Measurement. Sensors, 2020, 20, 7314.	2.1	14
34	A Practical Approach in the CFD Simulation of Off-shore Wind Farms through the Actuator Disc Technique. Energy Procedia, 2013, 35, 274-284.	1.8	13
35	A Procedure to Perform Multi-Objective Optimization for Sustainable Design of Buildings. Energies, 2016, 9, 915.	1.6	12
36	Numerical and Experimental Methods for the Assessment of Wind Turbine Control Upgrades. Applied Sciences (Switzerland), 2018, 8, 2639.	1.3	12

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37	Wind Turbine Power Curve Upgrades: Part II. Energies, 2019, 12, 1503.	1.6	12
38	Numerical and Experimental Methods for Wake Flow Analysis in Complex Terrain. Journal of Physics: Conference Series, 2015, 625, 012042.	0.3	11
39	Experimental and Numerical Analysis of the Dynamical Behavior of a Small Horizontal-Axis Wind Turbine under Unsteady Conditions: Part I. Machines, 2018, 6, 52.	1.2	11
40	Data-driven wind turbine aging models. Electric Power Systems Research, 2021, 201, 107495.	2.1	11
41	Wind Turbine Multivariate Power Modeling Techniques for Control and Monitoring Purposes. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2021, 143, .	0.9	11
42	About the Extension of Wind Turbine Power Curve in the High Wind Region. Journal of Solar Energy Engineering, Transactions of the ASME, 2019, 141, .	1.1	10
43	A SCADA data mining method for precision assessment of performance enhancement from aerodynamic optimization of wind turbine blades. Journal of Physics: Conference Series, 2018, 1037, 032001.	0.3	9
44	Day-Ahead Wind Power Forecast Through High-Resolution Mesoscale Model: Local Computational Fluid Dynamics Versus Artificial Neural Network Downscaling. Journal of Solar Energy Engineering, Transactions of the ASME, 2020, 142, .	1.1	9
45	Wind Turbine Power Curve Monitoring Based on Environmental and Operational Data. IEEE Transactions on Industrial Informatics, 2022, 18, 5209-5218.	7.2	9
46	Wind Turbine Loads Induced by Terrain and Wakes: An Experimental Study through Vibration Analysis and Computational Fluid Dynamics. Energies, 2017, 10, 1839.	1.6	8
47	An Operation Data-Based Method for the Diagnosis of Zero-Point Shift of Wind Turbines Yaw Angle. Journal of Solar Energy Engineering, Transactions of the ASME, 2020, 142, .	1.1	8
48	Wind turbine generator slip ring damage detection through temperature data analysis. Diagnostyka, 2019, 20, 3-9.	0.5	8
49	On the way to harness high-altitude wind power: Defining the operational asset for an airship wind generator. Applied Energy, 2013, 112, 592-600.	5.1	7
50	Innovative methods for wind turbine power curve upgrade assessment. Journal of Physics: Conference Series, 2018, 1102, 012036.	0.3	7
51	Aerodynamic Analysis of a Wind-Turbine Rotor Affected by Pitch Unbalance. Energies, 2021, 14, 745.	1.6	7
52	On the Possible Wind Energy Contribution for Feeding a High Altitude Smart Mini Grid. Energy Procedia, 2015, 75, 1072-1079.	1.8	6
53	Numerical and experimental investigation of a monotube hydraulic shock absorber. Archive of Applied Mechanics, 2017, 87, 1929-1946.	1.2	6
54	A life-cycle approach for multi-objective optimisation in building design: methodology and application to a case study. Civil Engineering and Environmental Systems, 2018, 35, 158-179.	0.4	6

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55	Data-Driven Methods for the Analysis of Wind Turbine Yaw Control Optimization. Journal of Solar Energy Engineering, Transactions of the ASME, 2021, 143, .	1.1	5
56	Spoilers Optimization to Reduce the Induced Stresses on a Racing Helmet. , 0, , .		4
57	Definition and Interpretation of Wind Farm Efficiency in Complex Terrain: A Discussion. Journal of Energy Resources Technology, Transactions of the ASME, 2019, 141, .	1.4	4
58	Mechanical behaviour of wind turbines operating above design conditions. Procedia Structural Integrity, 2019, 24, 495-509.	0.3	4
59	Wind-farm simulation over moderately complex terrain. Journal of Physics: Conference Series, 2017, 854, 012042.	0.3	3
60	Wind Flow Characterisation over a PV Module through URANS Simulations and Wind Tunnel Optical Flow Methods. Energies, 2021, 14, 6546.	1.6	3
61	Use of Genetic Algorithms as an Innovative Tool for Race Car Design. , 2003, , .		2
62	Wakes Calculation in a Offshore Wind Farm. Wind Engineering, 2013, 37, 269-280.	1.1	2
63	Applied statistics for extreme wind estimate. Wind Energy, 2015, 18, 613-624.	1.9	2
64	Numerical and Experimental Dynamics of a Monotube Shock Absorber. , 2016, , .		2
65	Analyzing wind turbine flow interaction through vibration data. Journal of Physics: Conference Series, 2016, 753, 112008.	0.3	2
66	Analysis of Wind Turbine Wakes Through Time-Resolved and SCADA Data of an Onshore Wind Farm. Journal of Solar Energy Engineering, Transactions of the ASME, 2018, 140, .	1.1	2
67	Experimental and Signal Processing Techniques for Fault Diagnosis on a Small Horizontal-Axis Wind Turbine Generator â€. Vibration, 2019, 2, 187-200.	0.9	2
68	Analyzing State Dynamics of Wind Turbines Through SCADA Data Mining. Applied Condition Monitoring, 2016, , 213-223.	0.4	2
69	Advanced Data Mining Techniques for Power Performance Verification of an On-Shore Wind Farm. Lecture Notes in Mechanical Engineering, 2014, , 645-654.	0.3	2
70	Editorial on the Special Issue â€œWind Turbine Monitoring through Operation Data Analysisâ€. Energies, 2022, 15, 3664.	1.6	2
71	Wind Tunnel Testing of Yaw by Individual Pitch Control Applied to Wake Steering. Frontiers in Energy Research, 0, 10, .	1.2	2
72	A new technique to improve expected aep estimation in very complex terrain. , 2005, , .		1

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73	The Knocking Noise on Twin Tube Shock Absorbers: Individuation and Analysis of the Phenomenon. , 2016, , .		1
74	Analyzing the Unsteady Dynamic Behaviour of a Small Wind Turbine for Urban Applications. Research Topics in Wind Energy, 2019, , 245-254.	0.2	1
75	Experimental Prediction Intervals for Monitoring Wind Turbines: an Ensemble Approach. , 2019, , .		1
76	Editorial on Special Issue â€œWind Turbine Power Optimization Technologyâ€. Energies, 2020, 13, 1796.	1.6	1
77	Permanent magnet synchronous generator coupled to variable speed small wind turbine: Modeling and experimental testing. , 2014, , .		0
78	Large Amplitude Oscillatory Shear From Viscoelastic Model With Stress Relaxation. Journal of Applied Mechanics, Transactions ASME, 2017, 84, .	1.1	0
79	Wake losses from averaged and time-resolved power measurements at full scale wind turbines. Journal of Physics: Conference Series, 2017, 854, 012006.	0.3	0
80	Condition monitoring techniques for machine bearings in non-stationary operation. Procedia Structural Integrity, 2019, 24, 483-494.	0.3	0
81	Wind turbine power curve upgrades: methods for the assessment and test cases study. Journal of Physics: Conference Series, 2020, 1452, 012004.	0.3	0
82	Numerical and Experimental Analysis of Small Scale Horizontal-Axis Wind Turbine in Yawed Conditions. Lecture Notes in Mechanical Engineering, 2020, , 285-298.	0.3	0