Patrick J Moriarty

List of Publications by Year
in descending order

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63	3,193	331538	377752
papers	citations	21 h-index	34 g-index

87	87	87	1791
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Grand challenges in the science of wind energy. Science, 2019, 366, .	6.0	482
2	A numerical study of the effects of atmospheric and wake turbulence on wind turbine dynamics. Journal of Turbulence, 2012, 13, N14.	0.5	349
3	Evaluating techniques for redirecting turbine wakes using SOWFA. Renewable Energy, 2014, 70, 211-218.	4.3	308
4	Simulation comparison of wake mitigation control strategies for a two-turbine case. Wind Energy, 2015, 18, 2135-2143.	1.9	206
5	A Large-Eddy Simulation of Wind-Plant Aerodynamics. , 2012, , .		166
6	Initial results from a field campaign of wake steering applied at a commercial wind farm â€“ Part 1. Wind Energy Science, 2019, 4, 273-285.	1.2	136
7	A large-eddy simulation study of wake propagation and power production in an array of tidal-current turbines. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2013, 371, 20120421.	1.6	94
8	Guidelines for Volume Force Distributions Within Actuator Line Modeling of Wind Turbines on Large-Eddy Simulation-Type Grids. Journal of Solar Energy Engineering, Transactions of the ASME, 2014, 136, .	1.1	92
9	A simulation study demonstrating the importance of large-scale trailing vortices in wake steering. Wind Energy Science, 2018, 3, 243-255.	1.2	76
10	An advanced modeling system for optimization of wind farm layout and wind turbine sizing using a multi-level extended pattern search algorithm. Energy, 2016, 106, 802-814.	4.5	65
11	Continued results from a field campaign of wake steering applied at a commercial wind farm â€“ Part 2. Wind Energy Science, 2020, 5, 945-958.	1.2	63
12	Mesoscale to microscale wind farm flow modeling and evaluation. Wiley Interdisciplinary Reviews: Energy and Environment, 2017, 6, e214.	1.9	58
13	On Bridging A Modeling Scale Gap: Mesoscale to Microscale Coupling for Wind Energy. Bulletin of the American Meteorological Society, 2019, 100, 2533-2550.	1.7	53
14	Prediction of Turbulent Inflow and Trailing-Edge Noise for Wind Turbines. , 2005, , .		50
15	A Comparison of Actuator Disk and Actuator Line Wind Turbine Models and Best Practices for Their Use. , 2012, , .		49
16	Aeroacoustic measurements of slat noise on a three-dimensional high-lift system. , 1999, , .		48
17	Consistent modelling of wind turbine noise propagation from source to receiver. Journal of the Acoustical Society of America, 2017, 142, 3297-3310.	0.5	48
18	Meteorology for Coastal/Offshore Wind Energy in the United States: Recommendations and Research Needs for the Next 10 Years. Bulletin of the American Meteorological Society, 2014, 95, 515-519.	1.7	46

#	Article	IF	Citations
19	Multimodel validation of single wakes in neutral and stratified atmospheric conditions. Wind Energy, 2020, 23, 2027-2055.	1.9	46
20	Effect of Turbulence Variation on Extreme Loads Prediction for Wind Turbines. Journal of Solar Energy Engineering, Transactions of the ASME, 2002, 124, 387-395.	1.1	43
21	Database for validation of design load extrapolation techniques. Wind Energy, 2008, 11, 559-576.	1.9	42
22	Downwind preâ€aligned rotors for extremeâ€scale wind turbines. Wind Energy, 2017, 20, 1241-1259.	1.9	41
23	Atmospheric and Wake Turbulence Impacts on Wind Turbine Fatigue Loadings. , 2012, , .		39
24	Objectives and Constraints for Wind Turbine Optimization. Journal of Solar Energy Engineering, Transactions of the ASME, 2014, 136, .	1.1	39
25	Wind turbine modeling overview for control engineers. , 2009, , .		38
26	A morphing downwind-aligned rotor concept based on a 13-MW wind turbine. Wind Energy, 2016, 19, 625-637.	1.9	37
27	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
28	Large-eddy simulation sensitivities to variations of configuration and forcing parameters in canonical boundary-layer flows for wind energy applications. Wind Energy Science, 2018, 3, 589-613.	1.2	22
29	Recent Improvement of a Semi-Empirical Aeroacoustic Prediction Code for Wind Turbines. , 2004, , .		20
30	Segmented Ultralight Pre-Aligned Rotor for Extreme-Scale Wind Turbines. , 2012, , .		20
31	Accuracy of State-of-the-Art Actuator-Line Modeling for Wind Turbine Wakes. , 2013, , .		20
32	A Comparison of the Dynamic Wake Meandering Model, Large-Eddy Simulation, and Field Data at the Egmond aan Zee Offshore Wind Plant. , 2015, , .		19
33	Wind Farm Wake Simulations in OpenFOAM. , 2010, , .		17
34	Adding complex terrain and stable atmospheric condition capability to the OpenFOAM-based flow solver of the simulator for on/offshore wind farm applications (SOWFA). ITM Web of Conferences, 2014, 2, 02001.	0.4	17
35	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
36	Lidar measurements of yawed-wind-turbine wakes: characterization and validation of analytical models. Wind Energy Science, 2020, 5, 1253-1272.	1.2	17

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37	Skewed Wake Induction Effects on Thrust Distribution on Small Wind Turbine Rotors. Journal of Solar Energy Engineering, Transactions of the ASME, 2001, 123, 290-295.	1.1	15
38	Safety-factor calibration for wind turbine extreme loads. Wind Energy, 2008, 11, 601-612.	1.9	15
39	Wind plants can impact long-term local atmospheric conditions. Scientific Reports, 2021, 11, 22939.	1.6	15
40	Load Estimation of Offshore Wind Turbines. Energies, 2018, 11, 1895.	1.6	14
41	The limits of renewable energy. AIMS Energy, 2021, 9, 812-829.	1.1	13
42	Structural Design and Analysis of a Segmented Ultralight Morphing Rotor (SUMR) for Extreme-Scale Wind Turbines. , 2012, , .		12
43	Objectives and Constraints for Wind Turbine Optimization. , 2013, , .		12
44	Morphing Segmented Wind Turbine Concept. , 2010, , .		11
45	Optimization of Wind Farm Layout and Wind Turbine Geometry Using a Multi-Level Extended Pattern Search Algorithm That Accounts for Variation in Wind Shear Profile Shape. , 2012, , .		11
46	Implementing the Dynamic Wake Meandering Model in the NWTC Design Codes. , 2014, , .		11
47	Can reanalysis products outperform mesoscale numerical weather prediction models in modeling the wind resource in simple terrain?. Wind Energy Science, 2022, 7, 487-504.	1.2	10
48	Effect of Turbulence Variation on Extreme Loads Prediction for Wind Turbines. , 2002, , 278.		9
49	Uncertainty quantification in the analyses of operational wind power plant performance. Journal of Physics: Conference Series, 2018, 1037, 052021.	0.3	9
50	Development and Validation of a Semi-Empirical Wind Turbine Aeroacoustic Code. , 2004, , .		7
51	Do wind turbines pose roll hazards to light aircraft?. Wind Energy Science, 2018, 3, 833-843.	1.2	7
52	Downwind Pre-Aligned Rotor for a 13.2 MW Wind Turbine. , 2015, , .		6
53	Considerations in coupling LES of the atmosphere to CFD around wind turbines. , 2012, , .		3
54	The Effect of Various Actuator-Line Modeling Approaches on Turbine-Turbine Interactions and Wake-Turbulence Statistics in Atmospheric Boundary-Layer Flow. , 2014, , .		3

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55	Blade Load Reduction for a 13 MW Downwind Pre-Aligned Rotor. , 2016, , .		3
56	Probabilistic Methods for Predicting Wind Turbine Design Loads. , 2003, , 235.		2
57	Modeling of Flow Acceleration Around Wind Farms. , 2007, , .		1
58	Design of the American Wake Experiment (AWAKEN) field campaign. Journal of Physics: Conference Series, 2022, 2265, 022058.	0.3	1
59	Probabilistic Methods for Predicting Wind Turbine Design Loads. , 2003, , .		0
60	A Message From the Special Issue Editor. Journal of Solar Energy Engineering, Transactions of the ASME, 2006, 128, 421-421.	1.1	0
61	Wind Energy special issue. Wind Energy, 2007, 10, 496-496.	1.9	0
62	Aeroacoustic Noise Measurements of a Wind Turbine with BSDS Blades Using an Acoustic Array. , 2010, , .		0
63	10.1121/1.5012747.1. , 2017, , .		0