Patrick J Moriarty

List of Publications by Year
in descending order

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	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
2	Design of the American Wake Experiment (AWAKEN) field campaign. Journal of Physics: Conference Series, 2022, 2265, 022058.	0.3	1
3	The limits of renewable energy. AIMS Energy, 2021, 9, 812-829.	1.1	13
4	Wind plants can impact long-term local atmospheric conditions. Scientific Reports, 2021, 11, 22939.	1.6	15
5	Multimodel validation of single wakes in neutral and stratified atmospheric conditions. Wind Energy, 2020, 23, 2027-2055.	1.9	46
6	Lidar measurements of yawed-wind-turbine wakes: characterization and validation of analytical models. Wind Energy Science, 2020, 5, 1253-1272.	1.2	17
7	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
8	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
9	Grand challenges in the science of wind energy. Science, 2019, 366, .	6.0	482
10	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
11	Uncertainty quantification in the analyses of operational wind power plant performance. Journal of Physics: Conference Series, 2018, 1037, 052021.	0.3	9
12	Load Estimation of Offshore Wind Turbines. Energies, 2018, 11, 1895.	1.6	14
13	A simulation study demonstrating the importance of large-scale trailing vortices in wake steering. Wind Energy Science, 2018, 3, 243-255.	1.2	76
14	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
15	Do wind turbines pose roll hazards to light aircraft?. Wind Energy Science, 2018, 3, 833-843.	1.2	7
16	Downwind preâ€aligned rotors for extremeâ€scale wind turbines. Wind Energy, 2017, 20, 1241-1259.	1.9	41
17	Mesoscale to microscale wind farm flow modeling and evaluation. Wiley Interdisciplinary Reviews: Energy and Environment, 2017, 6, e214.	1.9	58
18	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

#	ARTICLE	IF	CITATIONS
19	10.1121/1.5012747.1. , 2017, , .		0
20	A morphing downwind-aligned rotor concept based on a 13-MW wind turbine. Wind Energy, 2016, 19, 625-637.	1.9	37
21	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
22	Blade Load Reduction for a 13 MW Downwind Pre-Aligned Rotor. , 2016, , .		3
23	Simulation comparison of wake mitigation control strategies for a two-turbine case. Wind Energy, 2015, 18, 2135-2143.	1.9	206
24	Downwind Pre-Aligned Rotor for a 13.2 MW Wind Turbine. , 2015, , .		6
25	A Comparison of the Dynamic Wake Meandering Model, Large-Eddy Simulation, and Field Data at the Egmond aan Zee Offshore Wind Plant. , 2015, , .		19
26	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
27	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
28	Objectives and Constraints for Wind Turbine Optimization. Journal of Solar Energy Engineering, Transactions of the ASME, 2014, 136, .	1.1	39
29	Implementing the Dynamic Wake Meandering Model in the NWTC Design Codes. , 2014, , .		11
30	The Effect of Various Actuator-Line Modeling Approaches on Turbine-Turbine Interactions and Wake-Turbulence Statistics in Atmospheric Boundary-Layer Flow. , 2014, , .		3
31	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
32	Evaluating techniques for redirecting turbine wakes using SOWFA. Renewable Energy, 2014, 70, 211-218.	4.3	308
33	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
34	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
35	Objectives and Constraints for Wind Turbine Optimization. , 2013, , .		12
36	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

#	ARTICLE	IF	CITATIONS
37	Accuracy of State-of-the-Art Actuator-Line Modeling for Wind Turbine Wakes. , 2013, , .		20
38	A Comparison of Actuator Disk and Actuator Line Wind Turbine Models and Best Practices for Their Use. , 2012, , .		49
39	A Large-Eddy Simulation of Wind-Plant Aerodynamics. , 2012, , .		166
40	Considerations in coupling LES of the atmosphere to CFD around wind turbines. , 2012, , .		3
41	Structural Design and Analysis of a Segmented Ultralight Morphing Rotor (SUMR) for Extreme-Scale Wind Turbines. , 2012, , .		12
42	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
43	Atmospheric and Wake Turbulence Impacts on Wind Turbine Fatigue Loadings. , 2012, , .		39
44	Segmented Ultralight Pre-Aligned Rotor for Extreme-Scale Wind Turbines. , 2012, , .		20
45	A numerical study of the effects of atmospheric and wake turbulence on wind turbine dynamics. Journal of Turbulence, 2012, 13, N14.	0.5	349
46	Morphing Segmented Wind Turbine Concept. , 2010, , .		11
47	Aeroacoustic Noise Measurements of a Wind Turbine with BSDS Blades Using an Acoustic Array. , 2010, , .		0
48	Wind Farm Wake Simulations in OpenFOAM. , 2010, , .		17
49	Wind turbine modeling overview for control engineers. , 2009, , .		38
50	Database for validation of design load extrapolation techniques. Wind Energy, 2008, 11, 559-576.	1.9	42
51	Safety-factor calibration for wind turbine extreme loads. Wind Energy, 2008, 11, 601-612.	1.9	15
52	Wind Energy special issue. Wind Energy, 2007, 10, 496-496.	1.9	0
53	Modeling of Flow Acceleration Around Wind Farms. , 2007, , .		1
54	A Message From the Special Issue Editor. Journal of Solar Energy Engineering, Transactions of the ASME, 2006, 128, 421-421.	1.1	0

#	ARTICLE	IF	CITATIONS
55	Prediction of Turbulent Inflow and Trailing-Edge Noise for Wind Turbines. , 2005, , .		50
56	Development and Validation of a Semi-Empirical Wind Turbine Aeroacoustic Code. , 2004, , .		7
57	Recent Improvement of a Semi-Empirical Aeroacoustic Prediction Code for Wind Turbines. , 2004, , .		20
58	Probabilistic Methods for Predicting Wind Turbine Design Loads. , 2003, , .		0
59	Probabilistic Methods for Predicting Wind Turbine Design Loads. , 2003, , 235.		2
60	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
61	Effect of Turbulence Variation on Extreme Loads Prediction for Wind Turbines. , 2002, , 278.		9
62	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
63	Aeroacoustic measurements of slat noise on a three-dimensional high-lift system. , 1999, , .		48