

Matthew J Churchfield

List of Publications by Year in descending order

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29
papers

1,458
citations

759233

12
h-index

1125743

13
g-index

29
all docs

29
docs citations

29
times ranked

850
citing authors

#	ARTICLE	IF	CITATIONS
1	A numerical study of the effects of atmospheric and wake turbulence on wind turbine dynamics. <i>Journal of Turbulence</i> , 2012, 13, N14.	1.4	349
2	Large eddy simulations of the flow past wind turbines: actuator line and disk modeling. <i>Wind Energy</i> , 2015, 18, 1047-1060.	4.2	190
3	A Large-Eddy Simulation of Wind-Plant Aerodynamics. , 2012, , .		166
4	A large-eddy simulation study of wake propagation and power production in an array of tidal-current turbines. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2013, 371, 20120421.	3.4	94
5	Guidelines for Volume Force Distributions Within Actuator Line Modeling of Wind Turbines on Large-Eddy Simulation-Type Grids. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2014, 136, .	1.8	92
6	On atmospheric stability in the dynamic wake meandering model. <i>Wind Energy</i> , 2014, 17, 1689-1710.	4.2	58
7	Comparison of four large-eddy simulation research codes and effects of model coefficient and inflow turbulence in actuator-line-based wind turbine modeling. <i>Journal of Renewable and Sustainable Energy</i> , 2018, 10, .	2.0	54
8	On Bridging A Modeling Scale Gap: Mesoscale to Microscale Coupling for Wind Energy. <i>Bulletin of the American Meteorological Society</i> , 2019, 100, 2533-2550.	3.3	53
9	An Advanced Actuator Line Method for Wind Energy Applications and Beyond. , 2017, , .		50
10	A Comparison of Actuator Disk and Actuator Line Wind Turbine Models and Best Practices for Their Use. , 2012, , .		49
11	Evaluation of different wind fields for the investigation of the dynamic response of offshore wind turbines. <i>Wind Energy</i> , 2020, 23, 1810-1830.	4.2	46
12	Atmospheric and Wake Turbulence Impacts on Wind Turbine Fatigue Loadings. , 2012, , .		39
13	Load response of a floating wind turbine to turbulent atmospheric flow. <i>Applied Energy</i> , 2019, 242, 1588-1599.	10.1	37
14	Two improvements to the dynamic wake meandering model: including the effects of atmospheric shear on wake turbulence and incorporating turbulence buildâ€up in a row of wind turbines. <i>Wind Energy</i> , 2015, 18, 111-132.	4.2	32
15	Accuracy of State-of-the-Art Actuator-Line Modeling for Wind Turbine Wakes. , 2013, , .		20
16	Wind Turbine Wake Characterization from Temporally Disjunct 3-D Measurements. <i>Remote Sensing</i> , 2016, 8, 939.	4.0	20
17	Floating platform effects on power generation in spar and semisubmersible wind turbines. <i>Wind Energy</i> , 2021, 24, 901-916.	4.2	20
18	A Comparison of the Dynamic Wake Meandering Model, Large-Eddy Simulation, and Field Data at the Egmond aan Zee Offshore Wind Plant. , 2015, , .		19

#	ARTICLE	IF	CITATIONS
19	Evaluating tilt for wind plants. , 2017, , .		19
20	Implementing the Dynamic Wake Meandering Model in the NWTC Design Codes. , 2014, , .		11
21	Modeling Wind Turbine Tower and Nacelle Effects within an Actuator Line Model. , 2015, , .		10
22	On the Effects of Wind Turbine Wake Skew Caused by Wind Veer. , 2018, , .		10
23	Wind Turbine Wake-Redirection Control at the Fishermen's Atlantic City Windfarm. , 2015, , .		5
24	Validation of Actuator Line and Actuator Disk Models with Filtered Lifting Line Corrections Implemented in Nalu-Wind Large Eddy Simulations of the Atmospheric Boundary Layer. , 2022, , .		4
25	Considerations in coupling LES of the atmosphere to CFD around wind turbines. , 2012, , .		3
26	The Effect of Various Actuator-Line Modeling Approaches on Turbine-Turbine Interactions and Wake-Turbulence Statistics in Atmospheric Boundary-Layer Flow. , 2014, , .		3
27	Validation of Wind Power Plant Modeling Approaches in Complex Terrain. , 2019, , .		3
28	Development of a Wind Plant Large-Eddy Simulation with Measurement-Driven Atmospheric Inflow. , 2017, , .		1
29	Evaluating Terrain as a Turbulence Generation Method. Energies, 2021, 14, 6858.	3.1	1