

# Johan Meyers

## List of Publications by Year in descending order

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132  
papers

4,040  
citations

147566

31  
h-index

128067

60  
g-index

151  
all docs

151  
docs citations

151  
times ranked

1895  
citing authors

#	ARTICLE	IF	CITATIONS
1	A new wakeâ€merging method for windâ€farm power prediction in the presence of heterogeneous background velocity fields. <i>Wind Energy</i> , 2022, 25, 237-259.	1.9	24
2	Stable channel flow with spanwise heterogeneous surface temperature. <i>Journal of Fluid Mechanics</i> , 2022, 933, .	1.4	3
3	A parallel-in-time multiple shooting algorithm for large-scale PDE-constrained optimal control problems. <i>Journal of Computational Physics</i> , 2022, 452, 110926.	1.9	5
4	Validation of an analytical optimization framework for wind farm wake steering applications. , 2022, , .		2
5	Multiple shooting for large-scale optimal control problems governed by the Navier-Stokes equations. <i>AIP Conference Proceedings</i> , 2022, , .	0.3	0
6	Secondary motions above a staggered multi-scale rough wall. <i>Journal of Fluid Mechanics</i> , 2022, 941, .	1.4	2
7	Large-eddy simulation of airborne wind energy farms. <i>Wind Energy Science</i> , 2022, 7, 1093-1135.	1.2	5
8	Effects of self-induced gravity waves on finite wind-farm operations using a large-eddy simulation framework. <i>Journal of Physics: Conference Series</i> , 2022, 2265, 022043.	0.3	5
9	Tuning of an engineering wind farm model using measurements from Large Eddy Simulations. <i>Journal of Physics: Conference Series</i> , 2022, 2265, 022045.	0.3	2
10	Including realistic upper atmospheres in a wind-farm gravity-wave model. <i>Wind Energy Science</i> , 2022, 7, 1367-1382.	1.2	3
11	Reconstruction of turbulent flow fields from lidar measurements using large-eddy simulation. <i>Journal of Fluid Mechanics</i> , 2021, 906, .	1.4	23
12	Set-point optimization in wind farms to mitigate effects of flow blockage induced by atmospheric gravity waves. <i>Wind Energy Science</i> , 2021, 6, 247-271.	1.2	10
13	Turbulent boundary-layer flow over regular multiscale roughness. <i>Journal of Fluid Mechanics</i> , 2021, 917, .	1.4	14
14	A Fast-Converging Kernel Density Estimator for Dispersion in Horizontally Homogeneous Meteorological Conditions. <i>Atmosphere</i> , 2021, 12, 1343.	1.0	3
15	Expert Elicitation on Wind Farm Control. <i>Journal of Physics: Conference Series</i> , 2020, 1618, 022025.	0.3	21
16	Parametrization of homogeneous forested areas and effect on simulated dose rates near a nuclear research reactor. <i>Journal of Environmental Radioactivity</i> , 2020, 225, 106445.	0.9	2
17	Launch of the FarmConnors Wind Farm Control benchmark for code comparison. <i>Journal of Physics: Conference Series</i> , 2020, 1618, 022040.	0.3	5
18	Effect of conventionally neutral boundary layer height on turbine performance and wake mixing in offshore windfarms. <i>Journal of Physics: Conference Series</i> , 2020, 1618, 062049.	0.3	1

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19	Bayesian based estimation of turbulent flow fields from lidar observations in a conventionally neutral atmospheric boundary layer. <i>Journal of Physics: Conference Series</i> , 2020, 1618, 032047.	0.3	1
20	Study of the energy convergence of the Karhunen-Loeve decomposition applied to the large-eddy simulation of a high-Reynolds-number pressure-driven boundary layer. <i>Physical Review Fluids</i> , 2020, 5, .	1.0	1
21	Wake characteristics of pumping mode airborne wind energy systems. <i>Journal of Physics: Conference Series</i> , 2019, 1256, 012016.	0.3	11
22	On the decay of dispersive motions in the outer region of rough-wall boundary layers. <i>Journal of Fluid Mechanics</i> , 2019, 862, .	1.4	9
23	On the Feasibility of Using Large-Eddy Simulations for Real-Time Turbulent-Flow Forecasting in the Atmospheric Boundary Layer. <i>Boundary-Layer Meteorology</i> , 2019, 171, 213-235.	1.2	11
24	Periodic shadowing sensitivity analysis of chaotic systems. <i>Journal of Computational Physics</i> , 2019, 391, 119-141.	1.9	14
25	Sensitivity and feedback of wind-farm-induced gravity waves. <i>Journal of Fluid Mechanics</i> , 2019, 862, 990-1028.	1.4	30
26	A Modular Control Architecture for Airborne Wind Energy Systems. , 2019, , .		13
27	On the interaction of very-large-scale motions in a neutral atmospheric boundary layer with a row of wind turbines. <i>Journal of Fluid Mechanics</i> , 2018, 841, 1040-1072.	1.4	16
28	Comparing Meso-Micro Methodologies for Annual Wind Resource Assessment and Turbine Siting at Cabauw. <i>Journal of Physics: Conference Series</i> , 2018, 1037, 072030.	0.3	5
29	Towards an adjoint based 4D-Var state estimation for turbulent flow. <i>Journal of Physics: Conference Series</i> , 2018, 1037, 072055.	0.3	1
30	Annual impact of wind-farm gravity waves on the Belgianâ€“Dutch offshore wind-farm cluster. <i>Journal of Physics: Conference Series</i> , 2018, 1037, 072006.	0.3	11
31	Optimal dynamic induction and yaw control of wind farms: effects of turbine spacing and layout. <i>Journal of Physics: Conference Series</i> , 2018, 1037, 032015.	0.3	13
32	Coordinated pitch and torque control of wind farms for power tracking. , 2018, , .		5
33	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, .	0.8	54
34	Multigrid optimization for DNS-based optimal control in turbulent channel flows. <i>Journal of Computational Physics</i> , 2018, 366, 14-32.	1.9	6
35	Large Eddy Simulation of a wind tunnel wind farm experiment with one hundred static turbine models. <i>Journal of Physics: Conference Series</i> , 2018, 1037, 062006.	0.3	3
36	Dynamic Strategies for Yaw and Induction Control of Wind Farms Based on Large-Eddy Simulation and Optimization. <i>Energies</i> , 2018, 11, 177.	1.6	104

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37	Gravity Waves and Wind-Farm Efficiency in Neutral and Stable Conditions. <i>Boundary-Layer Meteorology</i> , 2018, 166, 269-299.	1.2	64
38	Optimal dynamic induction control of a pair of inline wind turbines. <i>Physics of Fluids</i> , 2018, 30, .	1.6	22
39	Simulation of Large Wind Farms in the Conventionally Neutral Atmospheric Boundary Layer Using LES. <i>ERCOFTAC Series</i> , 2018, , 469-474.	0.1	7
40	Effect of layout on asymptotic boundary layer regime in deep wind farms. <i>Physical Review Fluids</i> , 2018, 3, .	1.0	12
41	Wind farms providing secondary frequency regulation: evaluating the performance of model-based receding horizon control. <i>Wind Energy Science</i> , 2018, 3, 11-24.	1.2	12
42	Towards practical dynamic induction control of wind farms: analysis of optimally controlled wind-farm boundary layers and sinusoidal induction control of first-row turbines. <i>Wind Energy Science</i> , 2018, 3, 409-425.	1.2	67
43	A control-oriented dynamic wind farm model: WFSim. <i>Wind Energy Science</i> , 2018, 3, 75-95.	1.2	79
44	10.1063/1.5038600.1. , 2018, , .		0
45	Model-based receding horizon control of wind farms for secondary frequency regulation. <i>Wind Energy</i> , 2017, 20, 1261-1275.	1.9	66
46	Boundary-layer development and gravity waves in conventionally neutral wind farms. <i>Journal of Fluid Mechanics</i> , 2017, 814, 95-130.	1.4	88
47	Wind farm power fluctuations and spatial sampling of turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2017, 823, 329-344.	1.4	31
48	An optimal control framework for dynamic induction control of wind farms and their interaction with the atmospheric boundary layer. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017, 375, 20160100.	1.6	54
49	Measurement of unsteady loading and power output variability in a micro wind farm model in a wind tunnel. <i>Experiments in Fluids</i> , 2017, 58, 1.	1.1	60
50	Results of the GABLS3 diurnal-cycle benchmark for wind energy applications. <i>Journal of Physics: Conference Series</i> , 2017, 854, 012037.	0.3	6
51	Dynamic wake modeling and state estimation for improved model-based receding horizon control of wind farms. , 2017, , .		20
52	Comparison study between wind turbine and power kite wakes. <i>Journal of Physics: Conference Series</i> , 2017, 854, 012019.	0.3	6
53	Optimal Coordinated Control of Power Extraction in LES of a Wind Farm with Entrance Effects. <i>Energies</i> , 2016, 9, 29.	1.6	46
54	Wind tunnel study of the power output spectrum in a micro wind farm. <i>Journal of Physics: Conference Series</i> , 2016, 753, 072002.	0.3	3

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55	Shifted periodic boundary conditions for simulations of wall-bounded turbulent flows. <i>Physics of Fluids</i> , 2016, 28, .	1.6	91
56	Wake structure in actuator disk models of wind turbines in yaw under uniform inflow conditions. <i>Journal of Renewable and Sustainable Energy</i> , 2016, 8, .	0.8	183
57	Validation of four LES and a vortex model against stereo-PIV measurements in the near wake of an actuator disc and a wind turbine. <i>Renewable Energy</i> , 2016, 94, 510-523.	4.3	44
58	Turbulent Inflow Precursor Method with Time-Varying Direction for Large-Eddy Simulations and Applications to Wind Farms. <i>Boundary-Layer Meteorology</i> , 2016, 159, 305-328.	1.2	69
59	A framework for optimization of turbulent wind-farm boundary layers and application to optimal control of wind-farm energy extraction. , 2016, , .		4
60	Evaluation of a wind-farm parametrization in a regional climate model using large eddy simulations. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2016, 142, 3152-3161.	1.0	15
61	Effect of wind turbine response time on optimal dynamic induction control of wind farms. <i>Journal of Physics: Conference Series</i> , 2016, 753, 052007.	0.3	12
62	Multiscale aeroelastic simulations of large wind farms in the atmospheric boundary layer. <i>Journal of Physics: Conference Series</i> , 2016, 753, 082020.	0.3	9
63	Wind farms providing secondary frequency regulation: Evaluating the performance of model-based receding horizon control. <i>Journal of Physics: Conference Series</i> , 2016, 753, 052012.	0.3	12
64	Effect of Inversion-Layer Height and Coriolis Forces on Developing Wind-Farm Boundary Layers. , 2016, , .		2
65	Measuring power output intermittency and unsteady loading in a micro wind farm model. , 2016, , .		4
66	Optimal control of a transitional jet using a continuous adjoint method. <i>Computers and Fluids</i> , 2016, 126, 12-24.	1.3	8
67	On the efficiency of gradient based optimization algorithms for DNS-based optimal control in a turbulent channel flow. <i>Computers and Fluids</i> , 2016, 125, 11-24.	1.3	13
68	Wind-farm layout optimisation using a hybrid Jensen-LES approach. <i>Wind Energy Science</i> , 2016, 1, 311-325.	1.2	10
69	Large eddy simulation of a large wind-turbine array in a conventionally neutral atmospheric boundary layer. <i>Physics of Fluids</i> , 2015, 27, .	1.6	75
70	Stable reduced-order models for pollutant dispersion in the built environment. <i>Building and Environment</i> , 2015, 92, 360-367.	3.0	17
71	Fast prediction of indoor pollutant dispersion based on reduced-order ventilation models. <i>Building Simulation</i> , 2015, 8, 415-420.	3.0	24
72	Optimal control of energy extraction in wind-farm boundary layers. <i>Journal of Fluid Mechanics</i> , 2015, 768, 5-50.	1.4	159

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73	Dynamic dose assessment by Large Eddy Simulation of the near-range atmospheric dispersion. Journal of Radiological Protection, 2015, 35, 165-178.	0.6	7
74	Power smoothing in large wind farms using optimal control of rotating kinetic energy reserves. Wind Energy, 2015, 18, 1777-1791.	1.9	25
75	Effect of Ekman Layer on Windfarm Roughness and Displacement Height. ERCOFTAC Series, 2015, , 423-434.	0.1	2
76	Smoothing turbulence-induced power fluctuations in large wind farms by optimal control of the rotating kinetic energy of the turbines. Journal of Physics: Conference Series, 2014, 524, 012187.	0.3	1
77	Optimal control of wind farm power extraction in large eddy simulations. , 2014, , .		4
78	Sequential Quadratic Programming (SQP) for optimal control in direct numerical simulation of turbulent flow. Journal of Computational Physics, 2014, 256, 1-16.	1.9	23
79	Modification of vortex dynamics and transport properties of transitional axisymmetric jets using zero-net-mass-flux actuation. Physics of Fluids, 2014, 26, .	1.6	10
80	Asymptotic conditions for the use of linear ventilation models in the presence of buoyancy forces. Building Simulation, 2014, 7, 131-136.	3.0	16
81	Wind farm performance in conventionally neutral atmospheric boundary layers with varying inversion strengths. Journal of Physics: Conference Series, 2014, 524, 012114.	0.3	2
82	Analysis of turbulent flow properties and energy fluxes in optimally controlled wind-farm boundary layers. Journal of Physics: Conference Series, 2014, 524, 012178.	0.3	9
83	Airborne Wind Energy: Airfoil-Airmass Interaction. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 5814-5819.	0.4	9
84	Numerical simulations of flow fields through conventionally controlled wind turbines & wind farms. Journal of Physics: Conference Series, 2014, 524, 012158.	0.3	1
85	Reducing power gradients in large-scale wind farms by optimal active power control. , 2013, , .		2
86	Accounting for wind-direction fluctuations in Reynolds-averaged simulation of near-range atmospheric dispersion. Atmospheric Environment, 2013, 72, 142-150.	1.9	11
87	Influence of turbulent boundary conditions on RANS simulations of pollutant dispersion in mechanically ventilated enclosures with transitional slot Reynolds number. Building and Environment, 2013, 59, 397-407.	3.0	52
88	A constraint for the subgrid-scale stresses in the logarithmic region of high Reynolds number turbulent boundary layers: A solution to the log-layer mismatch problem. Physics of Fluids, 2013, 25, .	1.6	31
89	Flow visualization using momentum and energy transport tubes and applications to turbulent flow in wind farms. Journal of Fluid Mechanics, 2013, 715, 335-358.	1.4	72
90	Robust and Stable Periodic Flight of Power Generating Kite Systems in a Turbulent Wind Flow Field. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 140-145.	0.4	7

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91	An Improved Blending Formulation for Wall-Modeled Large-Eddy Simulations. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2012, , 111-120.	0.2	0
92	Optimal turbine spacing in fully developed wind farm boundary layers. Wind Energy, 2012, 15, 305-317.	1.9	271
93	On the construction and use of linear low-dimensional ventilation models. Indoor Air, 2012, 22, 427-441.	2.0	48
94	Maximizing dissipation in a turbulent shear flow by optimal control of its initial state. Physics of Fluids, 2011, 23, 045105.	1.6	12
95	Error-Landscape Assessment of Large-Eddy Simulations: A Review of the Methodology. Journal of Scientific Computing, 2011, 49, 65-77.	1.1	27
96	Globally conservative high-order filters for large-eddy simulation and computational aero-acoustics. Computers and Fluids, 2011, 48, 150-162.	1.3	13
97	Error-landscape assessment of large-eddy simulations: a review. ERCOFTAC Series, 2011, , 3-14.	0.1	0
98	Error-landscape-based multiobjective calibration of the Smagorinsky eddy-viscosity using high-Reynolds-number decaying turbulence data. Physics of Fluids, 2010, 22, .	1.6	11
99	Large eddy simulation study of fully developed wind-turbine array boundary layers. Physics of Fluids, 2010, 22, .	1.6	622
100	Optimization of Long-Term Mixing in a Turbulent Mixing Layer. , 2010, , .		1
101	Large Eddy Simulations of Large Wind-Turbine Arrays in the Atmospheric Boundary Layer. , 2010, , .		67
102	Optimization of Turbulent Mixing Restricted by Linear and Nonlinear Constraints. ERCOFTAC Series, 2010, , 269-274.	0.1	0
103	Error-Landscape Assessment of LES Accuracy Using Experimental Data. ERCOFTAC Series, 2010, , 205-210.	0.1	1
104	Constrained optimization of turbulent mixing-layer evolution. Journal of Turbulence, 2009, 10, N18.	0.5	14
105	On the use of high-order finite-difference discretization for LES with double decomposition of the subgrid-scale stresses. International Journal for Numerical Methods in Fluids, 2008, 56, 383-400.	0.9	2
106	Sensitivity analysis of initial condition parameters on the transitional temporal turbulent mixing layer. Journal of Turbulence, 2008, 9, N12.	0.5	6
107	ACOUSTIC PERFORMANCE OF NONREFLECTING BOUNDARY CONDITIONS FOR A RANGE OF INCIDENT ANGLES. Journal of Computational Acoustics, 2008, 16, 11-29.	1.0	2
108	A functional form for the energy spectrum parametrizing bottleneck and intermittency effects. Physics of Fluids, 2008, 20, .	1.6	59

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109	Assessment of LES Quality Measures Using the Error Landscape Approach. ERCOFTAC Series, 2008, , 131-142.	0.1	30
110	Uncertainty Modeling, Error Charts and Improvement of Subgrid Models. , 2008, , 37-44.		1
111	Is plane-channel flow a friendly case for the testing of large-eddy simulation subgrid-scale models?. Physics of Fluids, 2007, 19, 048105.	1.6	83
112	Evaluation of Smagorinsky variants in large-eddy simulations of wall-resolved plane channel flows. Physics of Fluids, 2007, 19, .	1.6	30
113	Sensitivity analysis of large-eddy simulations to subgrid-scale-model parametric uncertainty using polynomial chaos. Journal of Fluid Mechanics, 2007, 585, 255-279.	1.4	88
114	A computational error-assessment of central finite-volume discretizations in large-eddy simulation using a Smagorinsky model. Journal of Computational Physics, 2007, 227, 156-173.	1.9	71
115	Aeroacoustic Noise Source Mechanisms in Simple Expansion Chambers. , 2006, , .		4
116	On the model coefficients for the standard and the variational multi-scale Smagorinsky model. Journal of Fluid Mechanics, 2006, 569, 287.	1.4	96
117	Successive inverse polynomial interpolation to optimize Smagorinsky's model for large-eddy simulation of homogeneous turbulence. Physics of Fluids, 2006, 18, 118102.	1.6	12
118	Optimal model parameters for multi-objective large-eddy simulations. Physics of Fluids, 2006, 18, 095103.	1.6	47
119	A Framework to Assess the Quality and Robustness of LES Codes. , 2006, , .		0
120	Impact of Initial Flow Parameters on a Temporal Mixing Layer Evolution. , 2006, , 625-632.		0
121	Modelling and control of heat transfer phenomena inside a ventilated air space. Energy and Buildings, 2005, 37, 777-786.	3.1	8
122	Modelling mass transfer phenomena and quantification of ventilation performance in a full scale installation. Building and Environment, 2005, 40, 1583-1590.	3.0	12
123	Optimality of the dynamic procedure for large-eddy simulations. Physics of Fluids, 2005, 17, 045108.	1.6	43
124	Numerical Simulation and Controller Development for Energy Transfer in Imperfectly Mixed Fluids. Indoor and Built Environment, 2005, 14, 371-380.	1.5	2
125	Towards Accurate Flow and Acoustic Prediction Techniques for Cavity Flow Noise Applications. , 2005, , .		4
126	Determination of subfilter energy in large-eddy simulations. Journal of Turbulence, 2004, 5, .	0.5	9

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127	Combining CFD and data-based mechanistic (DBM) modelling approaches. Energy and Buildings, 2004, 36, 535-542.	3.1	18
128	CFD for model-based controller development. Building and Environment, 2004, 39, 621-633.	3.0	32
129	Identification of Global Error Behavior in LES Using a Database Approach. ERCOFTAC Series, 2004, , 163-170.	0.1	0
130	Database analysis of errors in large-eddy simulation. Physics of Fluids, 2003, 15, 2740-2755.	1.6	148
131	CFD MODEL VALIDATION FOR A VENTILATED INSTALLATION. Acta Horticulturae, 2003, , 405-411.	0.1	0
132	Flow modeling in air-cooled electronic enclosures. , 0, , .		16