Leonardo Chamorro

List of Publications by Year
in descending order

103	2,901	218381	182168
papers	citations	26 h-index	51 g-index

104	104	104	1832
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A Wind-Tunnel Investigation of Wind-Turbine Wakes: Boundary-Layer Turbulence Effects. Boundary-Layer Meteorology, 2009, 132, 129-149.	1.2	393
2	Effects of Thermal Stability and Incoming Boundary-Layer Flow Characteristics on Wind-Turbine Wakes: A Wind-Tunnel Study. Boundary-Layer Meteorology, 2010, 136, 515-533.	1.2	223
3	On the interaction between a turbulent open channel flow and an axial-flow turbine. Journal of Fluid Mechanics, 2013, 716, 658-670.	1.4	183
4	Turbulent Flow Inside and Above a Wind Farm: A Wind-Tunnel Study. Energies, 2011, 4, 1916-1936.	1.6	142
5	Performance of fabrics for home-made masks against the spread of COVID-19 through droplets: A quantitative mechanistic study. Extreme Mechanics Letters, 2020, 40, 100924.	2.0	123
6	Three-dimensional electronic microfliers inspired by wind-dispersed seeds. Nature, 2021, 597, 503-510.	13.7	120
7	Natural snowfall reveals large-scale flow structures in the wake of a 2.5-MW wind turbine. Nature Communications, 2014, 5, 4216.	5.8	99
8	Turbulent Flow Properties Around a Staggered Wind Farm. Boundary-Layer Meteorology, 2011, 141, 349-367.	1.2	96
9	Drag reduction of large wind turbine blades through riblets: Evaluation of riblet geometry and application strategies. Renewable Energy, 2013, 50, 1095-1105.	4.3	85
10	Turbulence effects on a fullâ€scale 2.5â€‰MW horizontalâ€axis wind turbine under neutrally stratified conditions. Wind Energy, 2015, 18, 339-349.	1.9	75
11	On the evolution of turbulent scales in the wake of a wind turbine model. Journal of Turbulence, 2012, 13, N27.	0.5	58
12	Automated, multiparametric monitoring of respiratory biomarkers and vital signs in clinical and home settings for COVID-19 patients. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	52
13	Near and far field flow disturbances induced by model hydrokinetic turbine: ADV and ADP comparison. Renewable Energy, 2013, 60, 1-6.	4.3	49
14	Characterizing the response of a wind turbine model under complex inflow conditions. Wind Energy, 2015, 18, 729-743.	1.9	48
15	Spectral behaviour of the turbulence-driven power fluctuations of wind turbines. Journal of Turbulence, 2015, 16, 832-846.	0.5	47
16	An Experimental Study on the Effects ofWinglets on the Wake and Performance of a ModelWind Turbine. Energies, 2015, 8, 11955-11972.	1.6	46
17	Wake and power fluctuations of a model wind turbine subjected to pitch and roll oscillations. Applied Energy, 2019, 253, 113605.	5.1	46
18	Local Scour around a Model Hydrokinetic Turbine in an Erodible Channel. Journal of Hydraulic Engineering, 2014, 140, .	0.7	44

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19	Impact of height heterogeneity on canopy turbulence. Journal of Fluid Mechanics, 2017, 813, 1176-1196.	1.4	44
20	Velocity and Surface Shear Stress Distributions Behind a Rough-to-Smooth Surface Transition: A Simple New Model. Boundary-Layer Meteorology, 2009, 130, 29-41.	1.2	43
21	Three-dimensional flow visualization in the wake of a miniature axial-flow hydrokinetic turbine. Experiments in Fluids, 2013, 54, 1.	1.1	39
22	Effects of Freestream Turbulence in a Model Wind Turbine Wake. Energies, 2016, 9, 830.	1.6	39
23	Effects of energetic coherent motions on the power and wake of an axial-flow turbine. Physics of Fluids, 2015, 27, .	1.6	37
24	Wind-tunnel study of surface boundary conditions for large-eddy simulation of turbulent flow past a rough-to-smooth surface transition. Journal of Turbulence, 2010, 11, N1.	0.5	32
25	Turbulent boundary layer over 2D and 3D large-scale wavy walls. Physics of Fluids, 2015, 27, .	1.6	29
26	Towards uncovering the structure of power fluctuations of wind farms. Physical Review E, 2017, 96, 063117.	0.8	28
27	Variableâ€sized wind turbines are a possibility for wind farm optimization. Wind Energy, 2014, 17, 1483-1494.	1.9	27
28	Heat conduction in porcine muscle and blood: experiments and time-fractional telegraph equation model. Journal of the Royal Society Interface, 2019, 16, 20190726.	1.5	25
29	Fractional Flow Speed-Up from Porous Windbreaks for Enhanced Wind-Turbine Power. Boundary-Layer Meteorology, 2017, 163, 253-271.	1.2	24
30	Engineered bio-inspired coating for passive flow control. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 1210-1214.	3.3	23
31	On the Evolution of the Integral Time Scale within Wind Farms. Energies, 2018, 11, 93.	1.6	23
32	Flow-induced oscillations of low-aspect-ratio flexible plates with various tip geometries. Physics of Fluids, 2018, 30, 097102.	1.6	22
33	A Comparative Analysis on the Response of a Wind-Turbine Model to Atmospheric and Terrain Effects. Boundary-Layer Meteorology, 2016, 158, 229-255.	1.2	21
34	Vortical structures in the near wake of tabs with various geometries. Journal of Fluid Mechanics, 2017, 825, 167-188.	1.4	21
35	On the couple dynamics of wall-mounted flexible plates in tandem. Journal of Fluid Mechanics, 2018, 852, .	1.4	20
36	Spectral energy cascade of body rotations and oscillations under turbulence. Physical Review E, 2016, 94, 063105.	0.8	18

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37	Flow-induced motions of flexible plates: fluttering, twisting and orbital modes. Journal of Fluid Mechanics, 2019, 864, 273-285.	1.4	18
38	Detection of tip-vortex signatures behind a 2.5 MW wind turbine. Journal of Wind Engineering and Industrial Aerodynamics, 2015, 143, 105-112.	1.7	16
39	On the dynamics of air bubbles in Rayleighâ€“BÃ©nard convection. Journal of Fluid Mechanics, 2020, 891, .	1.4	16
40	Nonâ€uniform velocity distribution effect on the Betzâ€“Joukowsky limit. Wind Energy, 2013, 16, 279-282.	1.9	15
41	Taking a Stab at Quantifying the Energetics of Biological Puncture. Integrative and Comparative Biology, 2019, 59, 1586-1596.	0.9	15
42	Three-dimensional Particle Tracking Velocimetry for Turbulence Applications: Case of a Jet Flow. Journal of Visualized Experiments, 2016, , 53745.	0.2	14
43	Flow around a semicircular cylinder with passive flow control mechanisms. Experiments in Fluids, 2017, 58, 1.	1.1	14
44	Interaction of low-level jets with wind turbines: On the basic mechanisms for enhanced performance. Journal of Renewable and Sustainable Energy, 2020, 12, .	0.8	14
45	On the dynamics of a model wind turbine under passive tower oscillations. Applied Energy, 2022, 311, 118608.	5.1	14
46	Influence of vortical structure impingement on the oscillation and rotation of flat plates. Journal of Fluids and Structures, 2017, 70, 417-427.	1.5	13
47	On the transient dynamics of the wake and trajectory of free falling cones with various apex angles. Experiments in Fluids, 2015, 56, 1.	1.1	12
48	Turbulence coherence and its impact on wind-farm power fluctuations. Journal of Fluid Mechanics, 2018, 855, 1116-1129.	1.4	12
49	On streamwise velocity spectra models with fractal and long-memory effects. Physics of Fluids, 2021, 33, 035116.	1.6	12
50	On the distinct drag, reconfiguration and wake of perforated structures. Journal of Fluid Mechanics, 2020, 890, .	1.4	12
51	Instability-driven frequency decoupling between structure dynamics and wake fluctuations. Physical Review Fluids, 2018, 3, .	1.0	12
52	On the Wind Turbine Wake and Forest Terrain Interaction. Energies, 2021, 14, 7204.	1.6	12
53	Transition to turbulence over 2D and 3D periodic large-scale roughnesses. Journal of Fluid Mechanics, 2016, 804, .	1.4	11
54	In-phase and out-of-phase pitch and roll oscillations of model wind turbines within uniform arrays. Applied Energy, 2020, 269, 114921.	5.1	11

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55	Lagrangian acceleration in Rayleigh-BÃ©nard convection at various aspect ratios. Physical Review Fluids, 2018, 3, .	1.0	11
56	Local topographyâ€induced pressure gradient effects on the wake and power output of a model wind turbine. Theoretical and Applied Mechanics Letters, 2021, 11, 100297.	1.3	10
57	Exploring wind farms with alternating two- and three-bladed wind turbines. Renewable Energy, 2019, 138, 764-774.	4.3	9
58	Lagrangian description of the unsteady flow induced by a single pulse of a jellyfish. Physical Review Fluids, 2019, 4, .	1.0	9
59	On the design of particle filters inspired by animal noses. Journal of the Royal Society Interface, 2022, 19, 20210849.	1.5	9
60	Turbulent boundary layer response to large-scale wavy topographies. Physics of Fluids, 2017, 29, 065113.	1.6	8
61	Passive pitching of splitters in the trailing edge of elliptic cylinders. Journal of Fluid Mechanics, 2017, 826, 363-375.	1.4	8
62	Windbreak Effects Within Infinite Wind Farms. Energies, 2017, 10, 1140.	1.6	8
63	On the acoustic fountain types and flow induced with focused ultrasound. Journal of Fluid Mechanics, 2021, 909, .	1.4	8
64	On the scale-to-scale coupling between a full-scale wind turbine and turbulence. Journal of Turbulence, 2015, 16, 617-632.	0.5	7
65	Modulation of aerodynamic force on a 2D elliptic body via passive splitter pitching under high turbulence. Journal of Fluids and Structures, 2017, 74, 205-213.	1.5	7
66	On the effect of orifice thickness and divergence angle in the near and intermediate fields of axisymmetric jets. Experimental Thermal and Fluid Science, 2021, 123, 110293.	1.5	7
67	Free fall of homogeneous and heterogeneous cones. Physical Review Fluids, 2020, 5, .	1.0	7
68	On the turbulence dynamics induced by a surrogate seagrass canopy. Journal of Fluid Mechanics, 2022, 934, .	1.4	7
69	On the near-wall effects induced by an axial-flow rotor. Renewable Energy, 2016, 91, 524-530.	4.3	6
70	On the Kelvinâ€“Helmholtz and von KÃ¡rmÃ¡n vortices in the near-wake of semicircular cylinders with flaps. Journal of Turbulence, 2018, 19, 61-71.	0.5	5
71	Flow modulation by a mushroom-like coating around the separation region of a wind-turbine airfoil section. Journal of Renewable and Sustainable Energy, 2018, 10, .	0.8	5
72	Exceeding ohmic scaling by more than one order of magnitude with a 3D ion concentration polarization system. Lab on A Chip, 2021, 21, 3094-3104.	3.1	5

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73	Fog Formation Related to Gravity Currents Interacting with Coastal Topography. Boundary-Layer Meteorology, 2021, 181, 499.	1.2	5
74	On the dynamics of three-dimensional slung prisms under very low and high turbulence flows. Journal of Fluid Mechanics, 2017, 816, 468-480.	1.4	4
75	Turbulence-driven reverse lift on two-dimensional and three-dimensional structures. Physical Review E, 2018, 98, .	0.8	4
76	Turbulent boundary layer around 2D permeable and impermeable obstacles. Experiments in Fluids, 2018, 59, 1.	1.1	4
77	Active pitching of short splitters past a cylinder: Drag increase and wake. Physical Review E, 2019, 100, 063106.	0.8	4
78	Modulation of turbulence scales passing through the rotor of a wind turbine. Journal of Turbulence, 2019, 20, 21-31.	0.5	4
79	Impact of Topographic Steps in the Wake and Power of a Wind Turbine: Part Aâ€"Statistics. Energies, 2020, 13, 6411.	1.6	4
80	Wakes behind surface-mounted obstacles: Impact of aspect ratio, incident angle, and surface roughness. Physical Review Fluids, 2018, 3, .	1.0	4
81	Impact of gaps on the flow statistics in an emergent rigid canopy. Physics of Fluids, 2022, 34, .	1.6	4
82	Experimental and Numerical Visualization of Counter Rotating Vortices. Journal of Heat Transfer, 2016, 138, .	1.2	3
83	On the Dynamics of Flexible Plates under Rotational Motions. Energies, 2018, 11, 3384.	1.6	3
84	Spatiotemporal Correlations in the Power Output of Wind Farms: On the Impact of Atmospheric Stability. Energies, 2019, 12, 1486.	1.6	3
85	Dynamics of flexible plates and flow under impulsive oscillation. Journal of Fluids and Structures, 2019, 87, 319-333.	1.5	3
86	Exploring the effects of low-level-jets on the energy entrainment of vertical-axis wind turbines. Journal of Renewable and Sustainable Energy, 2021, 13, .	0.8	3
87	A fast, non-iterative ray-intersection approach for three-dimensional microscale particle tracking. Lab on A Chip, 2022, 22, 964-971.	3.1	3
88	On the impact of layout in the dynamics of wind turbine arrays under passive oscillations. Journal of Renewable and Sustainable Energy, 0, , .	0.8	3
89	On the submerged low-Cauchy-number canopy dynamics under unidirectional flows. Journal of Fluids and Structures, 2022, 113, 103646.	1.5	3
90	Wind Turbines with Truncated Blades May Be a Possibility for Dense Wind Farms. Energies, 2020, 13, 1810.	1.6	2

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91	On the multiscale oscillations of a hinged plate under stratified coherent motions. Journal of Fluids and Structures, 2020, 94, 102944.	1.5	2
92	On the H-type transition to turbulenceâ€"Laboratory experiments and reduced-order modeling. Physics of Fluids, 2021, 33, .	1.6	2
93	Effect of the aspect ratio on the dynamics of air bubbles within Rayleighâ€"BÃ©nard convection. Physics of Fluids, 2021, 33, .	1.6	2
94	On the Unsteady Wake of a Rigid Plate Under Constant Acceleration and Deceleration. Journal of Fluids Engineering, Transactions of the ASME, 2020, 142, .	0.8	2
95	Dynamics of an oil-coated bubble rising in a quiescent water medium. Physical Review Fluids, 2022, 7, .	1.0	2
96	Channel Bed Slope Effect on the Height of Gravity Waves Produced by a Sudden Downstream Discharge Stoppage. Journal of Hydraulic Engineering, 2010, 136, 328-330.	0.7	1
97	Characterisation of the Eulerian and Lagrangian accelerations in the intermediate field of turbulent circular jets. Journal of Turbulence, 2017, 18, 87-102.	0.5	1
98	On the large- and small-scale motions in a separated, turbulent-boundary-layer flow. Journal of Turbulence, 2019, 20, 563-576.	0.5	1
99	On the large-scale streaks in the logarithmic layer of wall-bounded flows. Journal of Visualization, 0, , 1.	1.1	1
100	Spectral features of the wake and power fluctuations of model wind turbines under low-level jets. Journal of Renewable and Sustainable Energy, 0, , .	0.8	1
101	On the multi-scale turbulent structure interactions within wind farms. Journal of Physics: Conference Series, 2020, 1618, 062052.	0.3	0
102	Bacterias endÃ³fitas promotoras de crecimiento aisladas de pasto colosoana, departamento de Sucre, Colombia. Revista MVZ Cordoba, 0, , 6696-6709.	0.2	0
103	Characterization of the Flow and Surface Temperature Around Multiple Vortex Generators. Journal of Fluids Engineering, Transactions of the ASME, 2022, 144, .	0.8	0