Marcelo Chamecki

List of Publications by Year
in descending order

96	2,143	185998 28	288905 40
papers	citations	h-index	g-index

98	98	98	2138
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	On the Nature of the Transition Between Roll and Cellular Organization in the Convective Boundary Layer. Boundary-Layer Meteorology, 2017, 163, 41-68.	1.2	131
2	Large eddy simulation of pollen transport in the atmospheric boundary layer. Journal of Aerosol Science, 2009, 40, 241-255.	1.8	77
3	Air pollutants degrade floral scents and increase insect foraging times. Atmospheric Environment, 2016, 141, 361-374.	1.9	67
4	Pollen clumping and wind dispersal in an invasive angiosperm. American Journal of Botany, 2009, 96, 1703-1711.	0.8	59
5	Large-eddy simulation of turbulence and particle dispersion inside the canopy roughness sublayer. Journal of Fluid Mechanics, 2014, 753, 499-534.	1.4	59
6	Linking Meteorology, Turbulence, and Air Chemistry in the Amazon Rain Forest. Bulletin of the American Meteorological Society, 2016, 97, 2329-2342.	1.7	59
7	The local isotropy hypothesis and the turbulent kinetic energy dissipation rate in the atmospheric surface layer. Quarterly Journal of the Royal Meteorological Society, 2004, 130, 2733-2752.	1.0	57
8	Large-eddy simulation and parameterization of buoyant plume dynamics in stratified flow. Journal of Fluid Mechanics, 2016, 794, 798-833.	1.4	54
9	Random Errors in Turbulence Measurements in the Atmospheric Surface Layer: Implications for Moninâ€“Obukhov Similarity Theory. Journals of the Atmospheric Sciences, 2012, 69, 3700-3714.	0.6	49
10	Downward transport of ozone rich air and implications for atmospheric chemistry in the Amazon rainforest. Atmospheric Environment, 2016, 124, 64-76.	1.9	48
11	Inhibition of oil plume dilution in Langmuir ocean circulation. Geophysical Research Letters, 2014, 41, 1632-1638.	1.5	44
12	Estimating the Random Error in Eddy-Covariance Based Fluxes and Other Turbulence Statistics: The Filtering Method. Boundary-Layer Meteorology, 2012, 144, 113-135.	1.2	43
13	Anthesis synchronization and floral morphology determine diurnal patterns of ragweed pollen dispersal. Agricultural and Forest Meteorology, 2010, 150, 1307-1317.	1.9	42
14	A Hybrid Spectral/Finite-Volume Algorithm for Large-Eddy Simulation of Scalars in the Atmospheric Boundary Layer. Boundary-Layer Meteorology, 2008, 128, 473-484.	1.2	41
15	Oil plumes and dispersion in Langmuir, upper-ocean turbulence: Large-eddy simulations and K-profile parameterization. Journal of Geophysical Research: Oceans, 2015, 120, 4729-4759.	1.0	40
16	A population balance model for large eddy simulation of polydisperse droplet evolution. Journal of Fluid Mechanics, 2019, 878, 700-739.	1.4	40
17	Revisiting the formulations for the longitudinal velocity variance in the unstable atmospheric surface layer. Quarterly Journal of the Royal Meteorological Society, 2015, 141, 1699-1711.	1.0	39
18	High-frequency measurements of aeolian saltation flux: Field-based methodology and applications. Aeolian Research, 2018, 30, 97-114.	1.1	39

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19	A Study of Spectra, Structure and Correlation Functions and Their Implications for the Stationarity of Surface-Layer Turbulence. Boundary-Layer Meteorology, 2004, 110, 165-189.	1.2	38
20	The Intermittency of Windâ€Driven Sand Transport. Geophysical Research Letters, 2019, 46, 13430-13440.	1.5	37
21	Buoyancy effects on the integral lengthscales and mean velocity profile in atmospheric surface layer flows. Physics of Fluids, 2013, 25, .	1.6	36
22	Turbulent mixing and removal of ozone within an Amazon rainforest canopy. Journal of Geophysical Research D: Atmospheres, 2017, 122, 2791-2811.	1.2	36
23	Material Transport in the Ocean Mixed Layer: Recent Developments Enabled by Large Eddy Simulations. Reviews of Geophysics, 2019, 57, 1338-1371.	9.0	35
24	Particle boundary layer above and downstream of an area source: scaling, simulations, and pollen transport. Journal of Fluid Mechanics, 2011, 683, 1-26.	1.4	34
25	The influence of local meteorological conditions on the circadian rhythm of corn (Zea mays L.) pollen emission. Agricultural and Forest Meteorology, 2008, 148, 1078-1092.	1.9	33
26	Persistence of velocity fluctuations in non-Gaussian turbulence within and above plant canopies. Physics of Fluids, 2013, 25, .	1.6	33
27	Strong and weak, unsteady reconfiguration and its impact on turbulence structure within plant canopies. Physics of Fluids, 2014, 26, .	1.6	28
28	Numerical study of turbulent flow over complex aeolian dune fields: The White Sands National Monument. Physical Review E, 2014, 89, 013005.	0.8	28
29	Scaling and Similarity of the Anisotropic Coherent Eddies in Near-Surface Atmospheric Turbulence. Journals of the Atmospheric Sciences, 2018, 75, 943-964.	0.6	28
30	Scaling Laws for the Longitudinal Structure Function in the Atmospheric Surface Layer. Journals of the Atmospheric Sciences, 2017, 74, 1127-1147.	0.6	25
31	Air-Parcel Residence Times Within Forest Canopies. Boundary-Layer Meteorology, 2017, 165, 29-54.	1.2	25
32	Mean scalar concentration profile in a sheared and thermally stratified atmospheric surface layer. Physical Review E, 2013, 87, 023004.	0.8	24
33	Interpreting three-dimensional spore concentration measurements and escape fraction in a crop canopy using a coupled Eulerianâ€“Lagrangian stochastic model. Agricultural and Forest Meteorology, 2014, 194, 118-131.	1.9	24
34	The nonâ€local character of turbulence asymmetry in the convective atmospheric boundary layer. Quarterly Journal of the Royal Meteorological Society, 2017, 143, 494-507.	1.0	23
35	Concentration profiles of particles settling in the neutral and stratified atmospheric boundary layer. Boundary-Layer Meteorology, 2007, 125, 25-38.	1.2	22
36	A scaling law for the shear-production range of second-order structure functions. Journal of Fluid Mechanics, 2016, 801, 459-474.	1.4	22

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37	Inertial Effects on the Vertical Transport of Suspended Particles in a Turbulent Boundary Layer. Boundary-Layer Meteorology, 2018, 167, 235-256.	1.2	22
38	Flux-Profile Relationship for Dust Concentration in the Stratified Atmospheric Surface Layer. Boundary-Layer Meteorology, 2016, 160, 249-267.	1.2	21
39	Critical flux Richardson number for Kolmogorov turbulence enabled by TKE transport. Quarterly Journal of the Royal Meteorological Society, 2019, 145, 1551-1558.	1.0	21
40	Effects of Vegetation and Topography on the Boundary Layer Structure above the Amazon Forest. Journals of the Atmospheric Sciences, 2020, 77, 2941-2957.	0.6	21
41	Atmospheric Dispersion of Wheat Rust Spores: A New Theoretical Framework to Interpret Field Data and Estimate Downwind Dispersion. Journal of Applied Meteorology and Climatology, 2012, 51, 672-685.	0.6	20
42	Dispersion of Heavy Particles Emitted from Area Sources in the Unstable Atmospheric Boundary Layer. Boundary-Layer Meteorology, 2013, 146, 235-256.	1.2	20
43	Effects of swell on transport and dispersion of oil plumes within the ocean mixed layer. Journal of Geophysical Research: Oceans, 2016, 121, 3564-3578.	1.0	20
44	Environmental and biological controls on seasonal patterns of isoprene above a rain forest in central Amazonia. Agricultural and Forest Meteorology, 2018, 256-257, 391-406.	1.9	20
45	The Local Structure of Atmospheric Turbulence and Its Effect on the Smagorinsky Model for Large Eddy Simulation. Journals of the Atmospheric Sciences, 2007, 64, 1941-1958.	0.6	18
46	Dimensionless criteria for the productionâ€dissipation equilibrium of scalar fluctuations and their implications for scalar similarity. Water Resources Research, 2012, 48, .	1.7	18
47	Temporal Scales of the Nocturnal Flow Within and Above a Forest Canopy in Amazonia. Boundary-Layer Meteorology, 2016, 161, 73-98.	1.2	18
48	A Large-Eddy Simulation Study of Scalar Dissimilarity in the Convective Atmospheric Boundary Layer. Journals of the Atmospheric Sciences, 2014, 71, 3-15.	0.6	17
49	Direct partitioning of eddy-covariance water and carbon dioxide fluxes into ground and plant components. Agricultural and Forest Meteorology, 2022, 315, 108790.	1.9	17
50	Advances in Observing and Understanding Small-Scale Open Ocean Circulation During the Gulf of Mexico Research Initiative Era. Frontiers in Marine Science, 2020, 7, .	1.2	16
51	Evaluation of a random displacement model for predicting particle escape from canopies using a simple eddy diffusivity model. Agricultural and Forest Meteorology, 2016, 224, 40-48.	1.9	15
52	Effects of topography on inâ€canopy transport of gases emitted within dense forests. Quarterly Journal of the Royal Meteorological Society, 2019, 145, 2101-2114.	1.0	15
53	Diurnal variation in settling velocity of pollen released from maize and consequences for atmospheric dispersion and cross-pollination. Agricultural and Forest Meteorology, 2011, 151, 1055-1065.	1.9	14
54	Bottlenecks in turbulent kinetic energy spectra predicted from structure function inflections using the Von KÃ¡rmÃ¡n-Howarth equation. Physical Review E, 2015, 92, 033009.	0.8	14

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55	A Turbulence Velocity Scale for Predicting the Fate of Buoyant Materials in the Oceanic Mixed Layer. Geophysical Research Letters, 2018, 45, 11,817.	1.5	14
56	A Macroalgal Cultivation Modeling System (MACMODS): Evaluating the Role of Physical-Biological Coupling on Nutrients and Farm Yield. Frontiers in Marine Science, 2022, 9, .	1.2	14
57	Dispersion of particles released at the leading edge of a crop canopy. Agricultural and Forest Meteorology, 2015, 211-212, 37-47.	1.9	13
58	Convective storms and non-classical low-level jets during high ozone level episodes in the Amazon region: An ARM/GOAMAZON case study. Atmospheric Environment, 2017, 155, 199-209.	1.9	13
59	A TKEâ€Based Framework for Studying Disturbed Atmospheric Surface Layer Flows and Application to Vertical Velocity Variance Over Canopies. Geophysical Research Letters, 2018, 45, 6734-6740.	1.5	13
60	Effects of leaf area index and density on ultrafine particle deposition onto forest canopies: A LES study. Atmospheric Environment, 2018, 189, 153-163.	1.9	13
61	Effects of Gentle Topography on Forestâ€Atmosphere Gas Exchanges and Implications for Eddyâ€Covariance Measurements. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2020JD032581.	1.2	13
62	Numerical study of the effects of chemical dispersant on oil transport from an idealized underwater blowout. Physical Review Fluids, 2018, 3, .	1.0	13
63	Velocity asymmetry and turbulent transport closure in smooth- and rough-wall boundary layers. Physical Review Fluids, 2020, 5, .	1.0	13
64	ENDLESS: An extended nonperiodic domain large-eddy simulation approach for scalar plumes. Ocean Modelling, 2016, 101, 121-132.	1.0	12
65	Sea salt aerosol deposition in the coastal zone: A large eddy simulation study. Atmospheric Research, 2016, 180, 119-127.	1.8	11
66	Aerodynamic and deposition effects of street trees on PM2.5 concentration: From street to neighborhood scale. Building and Environment, 2020, 185, 107291.	3.0	11
67	An analytical model for dispersion of biological particles emitted from area sources: Inclusion of dispersion in the crosswind direction. Agricultural and Forest Meteorology, 2012, 157, 30-38.	1.9	10
68	Anisotropy of Unstably Stratified Near-Surface Turbulence. Boundary-Layer Meteorology, 2021, 180, 363-384.	1.2	10
69	Large-Eddy Simulation of smooth and rough channel flows using a one-dimensional stochastic wall model. Computers and Fluids, 2021, 230, 105135.	1.3	9
70	The Detection, Genesis, and Modeling of Turbulence Intermittency in the Stable Atmospheric Surface Layer. Journals of the Atmospheric Sciences, 2022, 79, 1171-1190.	0.6	9
71	Estimating the Instantaneous Dragâ€“Wind Relationship for a Horizontally Homogeneous Canopy. Boundary-Layer Meteorology, 2016, 160, 63-82.	1.2	8
72	A one-dimensional stochastic model of turbulence within and above plant canopies. Agricultural and Forest Meteorology, 2018, 250-251, 9-23.	1.9	7

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73	Parameterized Vertical Concentration Profiles for Aerosols in the Marine Atmospheric Boundary Layer. Journal of Geophysical Research D: Atmospheres, 2018, 123, 9688-9702.	1.2	7
74	Influences of nitrogen oxides and isoprene on ozone-temperature relationships in the Amazon rain forest. Atmospheric Environment, 2019, 206, 280-292.	1.9	7
75	A Similarity Model of Subfilter-Scale Energy for Large-Eddy Simulations of the Atmospheric Boundary Layer. Boundary-Layer Meteorology, 2012, 145, 69-91.	1.2	5
76	A Physically Based Theoretical Model of Spore Deposition for Predicting Spread of Plant Diseases. Phytopathology, 2016, 106, 244-253.	1.1	5
77	The Hurst Phenomenon in Error Estimates Related to Atmospheric Turbulence. Boundary-Layer Meteorology, 2018, 168, 387-416.	1.2	5
78	Generation of attached Langmuir circulations by a suspended macroalgal farm. Journal of Fluid Mechanics, 2021, 915, .	1.4	5
79	Modifications to the K-Profile Parameterization with Nondiffusive Fluxes for Langmuir Turbulence. Journal of Physical Oceanography, 2021, 51, 1503-1521.	0.7	5
80	Diffusiveâ€“Nondiffusive Flux Decompositions in Atmospheric Boundary Layers. Journals of the Atmospheric Sciences, 2020, 77, 3479-3494.	0.6	5
81	Self-similar geometries within the inertial subrange of scales in boundary layer turbulence. Journal of Fluid Mechanics, 2022, 942, .	1.4	5
82	Modeling subgrid-scale heat fluxes in the neutral and stratified atmospheric boundary layer. Journal of Turbulence, 2010, 11, N13.	0.5	4
83	Efficient numerical representation of the impacts of flexible plant reconfiguration on canopy posture and hydrodynamic drag. Journal of Hydraulic Research/De Recherches Hydrauliques, 2020, 58, 755-766.	0.7	4
84	Detection of Extreme Phenomena in the Stable Boundary Layer over the Amazonian Forest. Atmosphere, 2020, 11, 952.	1.0	4
85	Near-Surface Atmospheric Turbulence in the Presence of a Squall Line above a Forested and Deforested Region in the Central Amazon. Atmosphere, 2021, 12, 461.	1.0	4
86	Gentle Topography Increases Vertical Transport of Coarse Dust by Orders of Magnitude. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2021JD034564.	1.2	4
87	Application of digital filtering for minimizing aliasing effects in atmospheric turbulent surface layer spectra. Water Resources Research, 2006, 42, .	1.7	3
88	On the Forward Modeling of Radar Doppler Spectrum Width From LES: Implications for Model Evaluation. Journal of Geophysical Research D: Atmospheres, 2018, 123, 7444-7461.	1.2	3
89	Effects of Path Averaging in a Sonic Anemometer on the Estimation of Turbulence-Kinetic-Energy Dissipation Rates. Boundary-Layer Meteorology, 2019, 173, 99-113.	1.2	3
90	Overlapping Boundary Layers in Coastal Oceans. Journal of Physical Oceanography, 2022, 52, 627-646.	0.7	2

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91	Turbulent transport and reactions of plant-emitted hydrocarbons in an Amazonian rain forest. Atmospheric Environment, 2022, 279, 119094.	1.9	2
92	SNOHATS: Stratified atmospheric turbulence over snow surfaces. , 2007, , 520-522.		1
93	Reply to a comment by R. J. Smalley and R. A. Antonia on 'The local isotropy hypothesis and the turbulent kinetic energy dissipation rate in the atmospheric surface layer' (October B, 2004,) Tj ETQq1 1 0.784314 rgBT /Overlock 10	1.9	0
94	Publisher's Note: Mean scalar concentration profile in a sheared and thermally stratified atmospheric surface layer [Phys. Rev. E87, 023004 (2013)]. Physical Review E, 2013, 87, .	0.8	0
95	Large Eddy Simulation of Pollen Dispersion in the Atmosphere. ERCOFTAC Series, 2010, , 429-436.	0.1	0
96	Small Scale Physical and Bio-Chemical Processes Affecting the Transport of Oil after a Spill. International Oil Spill Conference Proceedings, 2021, 2021, .	0.1	0