

Marc B Parlange

List of Publications by Year in descending order

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74
papers

5,052
citations

101543

36
h-index

88630

70
g-index

74
all docs

74
docs citations

74
times ranked

4164
citing authors

#	ARTICLE	IF	CITATIONS
1	A scale-dependent Lagrangian dynamic model for large eddy simulation of complex turbulent flows. <i>Physics of Fluids</i> , 2005, 17, 025105.	4.0	508
2	A scale-dependent dynamic model for large-eddy simulation: application to a neutral atmospheric boundary layer. <i>Journal of Fluid Mechanics</i> , 2000, 415, 261-284.	3.4	473
3	Distributed fiber-optic temperature sensing for hydrologic systems. <i>Water Resources Research</i> , 2006, 42, .	4.2	472
4	Evapotranspiration: A process driving mass transport and energy exchange in the soil-plant-atmosphere-climate system. <i>Reviews of Geophysics</i> , 2012, 50, .	23.0	334
5	Fiber optics opens window on stream dynamics. <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	227
6	Surface length scales and shear stress: Implications for land-atmosphere interaction over complex terrain. <i>Water Resources Research</i> , 1999, 35, 2121-2132.	4.2	211
7	On Monin-Obukhov Similarity In The Stable Atmospheric Boundary Layer. <i>Boundary-Layer Meteorology</i> , 2001, 99, 225-248.	2.3	197
8	Modeling Flow around Bluff Bodies and Predicting Urban Dispersion Using Large Eddy Simulation. <i>Environmental Science & Technology</i> , 2006, 40, 2653-2662.	10.0	160
9	Large eddy simulation study of scalar transport in fully developed wind-turbine array boundary layers. <i>Physics of Fluids</i> , 2011, 23, .	4.0	145
10	Modeling turbulent flow over fractal trees with renormalized numerical simulation. <i>Journal of Computational Physics</i> , 2007, 225, 427-448.	3.8	126
11	Spatial Characteristics of Roughness Sublayer Mean Flow and Turbulence Over a Realistic Urban Surface. <i>Boundary-Layer Meteorology</i> , 2016, 160, 425-452.	2.3	112
12	Albedo effect on radiative errors in air temperature measurements. <i>Water Resources Research</i> , 2009, 45, .	4.2	82
13	Heated Optical Fiber for Distributed Soil-Moisture Measurements: A Lysimeter Experiment. <i>Vadose Zone Journal</i> , 2012, 11, vzt2011.0199.	2.2	77
14	Regional scale evaporation and the atmospheric boundary layer. <i>Reviews of Geophysics</i> , 1995, 33, 99.	23.0	75
15	A comparative quadrant analysis of turbulence in a plant canopy. <i>Water Resources Research</i> , 2007, 43, .	4.2	72
16	The Effects of Building Representation and Clustering in Large-Eddy Simulations of Flows in Urban Canopies. <i>Boundary-Layer Meteorology</i> , 2009, 132, 415-436.	2.3	72
17	Geomorphic signatures on Brutsaert base flow recession analysis. <i>Water Resources Research</i> , 2013, 49, 5462-5472.	4.2	70
18	Large-eddy simulation of plant canopy flows using plant-scale representation. <i>Boundary-Layer Meteorology</i> , 2007, 124, 183-203.	2.3	67

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19	Flow during the evening transition over steep Alpine slopes. Quarterly Journal of the Royal Meteorological Society, 2013, 139, 607-624.	2.7	66
20	Flow over Hills: A Large-Eddy Simulation of the Bolund Case. Boundary-Layer Meteorology, 2013, 148, 177-194.	2.3	64
21	Similarity Scaling Over a Steep Alpine Slope. Boundary-Layer Meteorology, 2013, 147, 401-419.	2.3	62
22	Field study of the dynamics and modelling of subgrid-scale turbulence in a stable atmospheric surface layer over a glacier. Journal of Fluid Mechanics, 2010, 665, 480-515.	3.4	58
23	The Effect of Scale on the Applicability of Taylor's Frozen Turbulence Hypothesis in the Atmospheric Boundary Layer. Boundary-Layer Meteorology, 2012, 143, 379-391.	2.3	58
24	Numerical study of dynamic Smagorinsky models in large-eddy simulation of the atmospheric boundary layer: Validation in stable and unstable conditions. Water Resources Research, 2006, 42, .	4.2	56
25	A Simple Model for the Afternoon and Early Evening Decay of Convective Turbulence Over Different Land Surfaces. Boundary-Layer Meteorology, 2011, 141, 301-324.	2.3	56
26	Evaporation from a shallow water table: Diurnal dynamics of water and heat at the surface of drying sand. Water Resources Research, 2013, 49, 4022-4034.	4.2	49
27	Pathology of Monin-Obukhov similarity in the stable boundary layer. Journal of Geophysical Research, 2005, 110, n/a-n/a.	3.3	47
28	Estimation of urban sensible heat flux using a dense wireless network of observations. Environmental Fluid Mechanics, 2009, 9, 635-653.	1.6	47
29	Turbulent kinetic energy budgets in a model canopy: comparisons between LES and wind-tunnel experiments. Environmental Fluid Mechanics, 2008, 8, 73-95.	1.6	45
30	Modelling Small-Scale Drifting Snow with a Lagrangian Stochastic Model Based on Large-Eddy Simulations. Boundary-Layer Meteorology, 2014, 153, 117-139.	2.3	45
31	Evolution of superficial lake water temperature profile under diurnal radiative forcing. Water Resources Research, 2011, 47, .	4.2	44
32	Hydrologic response of an alpine watershed: Application of a meteorological wireless sensor network to understand streamflow generation. Water Resources Research, 2011, 47, .	4.2	42
33	A Hybrid Spectral/Finite-Volume Algorithm for Large-Eddy Simulation of Scalars in the Atmospheric Boundary Layer. Boundary-Layer Meteorology, 2008, 128, 473-484.	2.3	41
34	Subgrid-Scale Dynamics of Water Vapour, Heat, and Momentum over a Lake. Boundary-Layer Meteorology, 2008, 128, 205-228.	2.3	40
35	NDVI relationship to monthly evaporation. Geophysical Research Letters, 1998, 25, 1753-1756.	4.0	38
36	Scale dependence of subgrid-scale model coefficients: An a priori study. Physics of Fluids, 2008, 20, 115106.	4.0	38

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37	Coherent structures and the k^{-1} spectral behaviour. <i>Physics of Fluids</i> , 2013, 25, 125107.	4.0	38
38	Influence of sediment settling velocity on mechanistic soil erosion modeling. <i>Water Resources Research</i> , 2008, 44, .	4.2	37
39	On the variability of the Priestley-Taylor coefficient over water bodies. <i>Water Resources Research</i> , 2016, 52, 150-163.	4.2	37
40	Controls on the diurnal streamflow cycles in two subbasins of an alpine headwater catchment. <i>Water Resources Research</i> , 2015, 51, 3403-3418.	4.2	35
41	Adapting Tilt Corrections and the Governing Flow Equations for Steep, Fully Three-Dimensional, Mountainous Terrain. <i>Boundary-Layer Meteorology</i> , 2016, 159, 539-565.	2.3	35
42	Limitation of the transport capacity approach in sediment transport modeling. <i>Water Resources Research</i> , 2007, 43, .	4.2	34
43	Buoyant Turbulent Kinetic Energy Production in Steep-Slope Katabatic Flow. <i>Boundary-Layer Meteorology</i> , 2016, 161, 405-416.	2.3	32
44	Estimation of wet surface evaporation from sensible heat flux measurements. <i>Water Resources Research</i> , 2009, 45, .	4.2	29
45	Perturbations to the Spatial and Temporal Characteristics of the Diurnally-Varying Atmospheric Boundary Layer Due to an Extensive Wind Farm. <i>Boundary-Layer Meteorology</i> , 2017, 162, 255-282.	2.3	29
46	Volume Averaging for Urban Canopies. <i>Boundary-Layer Meteorology</i> , 2019, 173, 349-372.	2.3	29
47	Momentum balance of katabatic flow on steep slopes covered with short vegetation. <i>Geophysical Research Letters</i> , 2014, 41, 4761-4768.	4.0	28
48	Towards oscillation-free implementation of the immersed boundary method with spectral-like methods. <i>Journal of Computational Physics</i> , 2011, 230, 8179-8191.	3.8	26
49	Effects of the water retention curve on evaporation from arid soils. <i>Geophysical Research Letters</i> , 2014, 41, 3110-3116.	4.0	24
50	Could electrical conductivity replace water level in rating curves for alpine streams?. <i>Water Resources Research</i> , 2013, 49, 343-351.	4.2	23
51	Concentration profiles of particles settling in the neutral and stratified atmospheric boundary layer. <i>Boundary-Layer Meteorology</i> , 2007, 125, 25-38.	2.3	22
52	Preferential Deposition of Snow and Dust Over Hills: Governing Processes and Relevant Scales. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 7951-7974.	3.3	22
53	Signatures of Air-Wave Interactions Over a Large Lake. <i>Boundary-Layer Meteorology</i> , 2018, 167, 445-468.	2.3	21
54	The Local Structure of Atmospheric Turbulence and Its Effect on the Smagorinsky Model for Large Eddy Simulation. <i>Journals of the Atmospheric Sciences</i> , 2007, 64, 1941-1958.	1.7	18

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55	Direct numerical simulation of turbulent slope flows up to Grashof number. <i>Journal of Fluid Mechanics</i> , 2017, 829, 589-620.	3.4	17
56	Modulation of Mean Wind and Turbulence in the Atmospheric Boundary Layer by Baroclinicity. <i>Journals of the Atmospheric Sciences</i> , 2018, 75, 3797-3821.	1.7	17
57	Large Wind Farms and the Scalar Flux over an Heterogeneously Rough Land Surface. <i>Boundary-Layer Meteorology</i> , 2014, 153, 471-495.	2.3	15
58	The random sweeping decorrelation hypothesis in stratified turbulent flows. <i>Fluid Dynamics Research</i> , 1995, 16, 275-295.	1.3	13
59	Carbon monoxide as a tracer of gas transport in snow and other natural porous media. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	13
60	Katabatic Flow: A Closed-Form Solution with Spatially-Varying Eddy Diffusivities. <i>Boundary-Layer Meteorology</i> , 2017, 162, 307-317.	2.3	12
61	Field study on drainage densities and rescaled width functions in a high-altitude alpine catchment. <i>Hydrological Processes</i> , 2016, 30, 2138-2152.	2.6	11
62	Geometric Alignments of the Subgrid-Scale Force in the Atmospheric Boundary Layer. <i>Boundary-Layer Meteorology</i> , 2009, 132, 1-9.	2.3	9
63	Are atmospheric surface layer flows ergodic?. <i>Geophysical Research Letters</i> , 2013, 40, 3342-3346.	4.0	9
64	Scrambling and Reorientation of Classical Atmospheric Boundary Layer Turbulence in Hurricane Winds. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL091695.	4.0	9
65	Suppressed convective rainfall by agricultural expansion in southeastern Burkina Faso. <i>Water Resources Research</i> , 2015, 51, 5521-5530.	4.2	8
66	A comparison of near-surface potential temperature variance budgets for unstable atmospheric flows with contrasting vegetation cover flat surfaces and a gentle slope. <i>Environmental Fluid Mechanics</i> , 2020, 20, 1251-1279.	1.6	6
67	Editorial: Future of Water Resources Research. <i>Water Resources Research</i> , 2005, 41, .	4.2	5
68	Sweeping Effects Modify Taylor's Frozen Turbulence Hypothesis for Scalars in the Roughness Sublayer. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL093746.	4.0	5
69	On the use of spatially discrete data to compute energy and mass balance. <i>Water Resources Research</i> , 2012, 48, .	4.2	3
70	Wind turbines and water in irrigated areas. <i>Agricultural Water Management</i> , 2015, 152, 299-300.	5.6	2
71	A Local Similarity Function for Katabatic Flows Derived from Field Observations Over Steep and Shallow Angled Slopes. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL095479.	4.0	2
72	Measuring sensible heat flux with high spatial density. , 2012, , .		1

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73	Ecohydrology: a fast moving field. <i>Ecohydrology</i> , 2012, 5, 519-519.	2.4	0
74	Engineering forum/panel discussion. , 2014, , .		0