W Kendall Melville

List of Publications by Year
in descending order

61 papers	3,983 citations	126901 33 h-index	128286 60 g-index
64 all docs	64 docs citations	64 times ranked	2347 citing authors

#	Article	IF	Citations
1	LONG NONLINEAR INTERNAL WAVES. Annual Review of Fluid Mechanics, 2006, 38, 395-425.	25.0	662
2	Distribution of breaking waves at the ocean surface. Nature, 2002, 417, 58-63.	27.8	217
3	Surface gravity wave effects in the oceanic boundary layer: large-eddy simulation with vortex force and stochastic breakers. Journal of Fluid Mechanics, 2007, 593, 405-452.	3.4	211
4	The velocity field under breaking waves: coherent structures and turbulence. Journal of Fluid Mechanics, 2002, 454, 203-233.	3.4	199
5	Air entrainment and bubble statistics in breaking waves. Journal of Fluid Mechanics, 2016, 801, 91-129.	3.4	158
6	Inertial scaling of dissipation in unsteady breaking waves. Journal of Fluid Mechanics, 2008, 611, 307-332.	3.4	134
7	Experiments on the stability and transition of wind-driven water surfaces. Journal of Fluid Mechanics, 2001, 446, 25-65.	3.4	126
8	Field measurements and scaling of ocean surface waveâ€breaking statistics. Geophysical Research Letters, 2013, 40, 3074-3079.	4.0	114
9	Airborne Observations of Fetch-Limited Waves in the Gulf of Tehuantepec. Journal of Physical Oceanography, 2010, 40, 441-465.	1.7	111
10	The oceanic boundary layer driven by wave breaking with stochastic variability. Part 1. Direct numerical simulations. Journal of Fluid Mechanics, 2004, 507, 143-174.	3.4	108
11	Laboratory measurements of the generation and evolution of Langmuir circulations. Journal of Fluid Mechanics, 1998, 364, 31-58.	3.4	101
12	Field Measurements of Surface and Near-Surface Turbulence in the Presence of Breaking Waves. Journal of Physical Oceanography, 2015, 45, 943-965.	1.7	96
13	Spectral Energy Dissipation due to Surface Wave Breaking. Journal of Physical Oceanography, 2012, 42, 1421-1444.	1.7	87
14	Transient Evolution of Langmuir Turbulence in Ocean Boundary Layers Driven by Hurricane Winds and Waves. Journal of Physical Oceanography, 2012, 42, 1959-1980.	1.7	86
15	Capillary effects on wave breaking. Journal of Fluid Mechanics, 2015, 769, 541-569.	3.4	86
16	Nonlinear gravityâ€“capillary waves with forcing and dissipation. Journal of Fluid Mechanics, 1998, 354, 1-42.	3.4	79
17	Observations of Wave Breaking Kinematics in Fetch-Limited Seas. Journal of Physical Oceanography, 2010, 40, 2575-2604.	1.7	76
18	Observations of Surface Waveâ€“Current Interaction. Journal of Physical Oceanography, 2017, 47, 615-632.	1.7	65

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19	The Analysis of Sea Surface Imagery for Whitecap Kinematics. Journal of Atmospheric and Oceanic Technology, 2011, 28, 219-243.	1.3	59
20	Wave-Coherent Airflow and Critical Layers over Ocean Waves. Journal of Physical Oceanography, 2013, 43, 2156-2172.	1.7	59
21	Measurements of the Directional Spectrum across the Equilibrium Saturation Ranges of Wind-Generated Surface Waves. Journal of Physical Oceanography, 2017, 47, 2123-2138.	1.7	58
22	Gas Transfer by Breaking Waves. Geophysical Research Letters, 2018, 45, 10,482.	4.0	56
23	Turbulence and mixing in unsteady breaking surface waves. Journal of Fluid Mechanics, 2009, 628, 85-119.	3.4	53
24	Development and Testing of Instrumentation for UAV-Based Flux Measurements within Terrestrial and Marine Atmospheric Boundary Layers. Journal of Atmospheric and Oceanic Technology, 2013, 30, 1295-1319.	1.3	52
25	Lagrangian transport by breaking surface waves. Journal of Fluid Mechanics, 2017, 829, 364-391.	3.4	49
26	Measurements of Ocean Surface Turbulence and Waveâ€“Turbulence Interactions. Journal of Physical Oceanography, 2009, 39, 2310-2323.	1.7	48
27	An Integrated System for the Study of Wind-Wave Source Terms in Finite-Depth Water. Journal of Atmospheric and Oceanic Technology, 2005, 22, 814-831.	1.3	47
28	An experimental and numerical study of parasitic capillary waves. Physics of Fluids, 1998, 10, 1315-1323.	4.0	46
29	Wave-Coherent Airâ€“Sea Heat Flux. Journal of Physical Oceanography, 2008, 38, 788-802.	1.7	42
30	A Portable Airborne Scanning Lidar System for Ocean and Coastal Applications. Journal of Atmospheric and Oceanic Technology, 2009, 26, 2626-2641.	1.3	41
31	The Use of Ship-Launched Fixed-Wing UAVs for Measuring the Marine Atmospheric Boundary Layer and Ocean Surface Processes. Journal of Atmospheric and Oceanic Technology, 2016, 33, 2029-2052.	1.3	41
32	Numerical Modeling of Fetch-Limited Waves in the Gulf of Tehuantepec. Journal of Physical Oceanography, 2010, 40, 466-486.	1.7	38
33	Vortex generation by deep-water breaking waves. Journal of Fluid Mechanics, 2013, 734, 198-218.	3.4	37
34	Infrared Techniques for Measuring Ocean Surface Processes. Journal of Atmospheric and Oceanic Technology, 2008, 25, 307-326.	1.3	34
35	The Modular Aerial Sensing System. Journal of Atmospheric and Oceanic Technology, 2016, 33, 1169-1184.	1.3	33
36	Air entrainment by breaking waves. Geophysical Research Letters, 2017, 44, 3779-3787.	4.0	33

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37	Autonomous Surface Vehicle Measurements of the Oceanâ€™s Response to Tropical Cyclone Freda. Journal of Atmospheric and Oceanic Technology, 2014, 31, 2169-2190.	1.3	30
38	Laboratory study of polarized microwave scattering by surface waves at grazing incidence: the influence of long waves. IEEE Transactions on Geoscience and Remote Sensing, 1996, 34, 1331-1342.	6.3	29
39	Sound-speed measurements in the surface-wave layer. Journal of the Acoustical Society of America, 1997, 102, 2607-2625.	1.1	29
40	Southern California Coastal Response to the 2015â€“2016 El NiÃ±o. Journal of Geophysical Research F: Earth Surface, 2018, 123, 3069-3083.	2.8	28
41	Current generation by deep-water breaking waves. Journal of Fluid Mechanics, 2016, 803, 275-291.	3.4	26
42	Lagrangian Transport by Nonbreaking and Breaking Deep-Water Waves at the Ocean Surface. Journal of Physical Oceanography, 2019, 49, 983-992.	1.7	26
43	The Effects of Small-Scale Turbulence on Airâ€“Sea Heat Flux. Journal of Physical Oceanography, 2011, 41, 205-220.	1.7	25
44	Hydraulic jumps at boundaries in rotating fluids. Journal of Fluid Mechanics, 1996, 324, 55-82.	3.4	24
45	Evidence of Sea-State Dependence of Aerosol Concentration in the Marine Atmospheric Boundary Layer. Journal of Physical Oceanography, 2017, 47, 69-84.	1.7	24
46	Vertical Profiles of the Wave-Induced Airflow above Ocean Surface Waves. Journal of Physical Oceanography, 2018, 48, 2901-2922.	1.7	24
47	The equilibrium dynamics and statistics of gravityâ€“capillary waves. Journal of Fluid Mechanics, 2015, 767, 449-466.	3.4	22
48	Dissipation of wave energy and turbulence in a shallow coral reef lagoon. Journal of Geophysical Research, 2012, 117, .	3.3	20
49	Airborne Measurements of Surface Wind and Slope Statistics over the Ocean. Journal of Physical Oceanography, 2019, 49, 2799-2814.	1.7	18
50	The Influence of Wind Direction on Campbell Scientific CSAT3 and Gill R3-50 Sonic Anemometer Measurements. Journal of Atmospheric and Oceanic Technology, 2016, 33, 2477-2497.	1.3	17
51	Spatial Statistics of the Sea Surface in Fetch-Limited Conditions. Journal of Physical Oceanography, 2011, 41, 1821-1841.	1.7	16
52	Laboratory studies of Lagrangian transport by breaking surface waves. Journal of Fluid Mechanics, 2019, 876, .	3.4	16
53	Wave modulation: the geometry, kinematics, and dynamics of surface-wave packets. Journal of Fluid Mechanics, 2016, 803, 292-312.	3.4	14
54	Wave slope and wave age effects in measurements of electromagnetic bias. Journal of Geophysical Research, 2004, 109, .	3.3	13

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55	Measuring Turbulent Kinetic Energy Dissipation at a Wavy Sea Surface. Journal of Atmospheric and Oceanic Technology, 2015, 32, 1498-1514.	1.3	12
56	Electromagnetic bias estimates based on TOPEX, buoy, and wave model data. Journal of Geophysical Research, 2003, 108, .	3.3	10
57	Focusing deep-water surface gravity wave packets: wave breaking criterion in a simplifiedÂmodel. Journal of Fluid Mechanics, 2019, 873, 238-259.	3.4	8
58	Airborne lidar measurements of wave energy dissipation in a coral reef lagoon system. Journal of Geophysical Research, 2012, 117, .	3.3	6
59	A Model of Strongly Forced Wind Waves. Journal of Physical Oceanography, 2009, 39, 2502-2522.	1.7	2
60	Wind-Wave Breaking. Procedia IUTAM, 2018, 26, 30-42.	1.2	1
61	AMBIENT SURFACE NOISE AND OCEAN SURFACE WAVES. , 1996, , .		1