Doug Vandemark

List of Publications by Year
in descending order

118 papers	6,091 citations	101384 36 h-index	74018 75 g-index
121 all docs	121 docs citations	121 times ranked	6592 citing authors

#	Article	IF	Citations
1	A unified directional spectrum for long and short wind-driven waves. Journal of Geophysical Research, 1997, 102, 15781-15796.	3.3	973
2	Global Carbon Budget 2015. Earth System Science Data, 2015, 7, 349-396.	3.7	616
3	A multi-decade record of high-quality <i>f</i>CO₂ data in version 3 of the Surface Ocean CO₂ Atlas (SOCAT). Earth System Science Data, 2016, 8, 383-413.	3.7	413
4	AERONET-OC: A Network for the Validation of Ocean Color Primary Products. Journal of Atmospheric and Oceanic Technology, 2009, 26, 1634-1651.	0.5	306
5	A Global View of Swell and Wind Sea Climate in the Ocean by Satellite Altimeter and Scatterometer. Journal of Atmospheric and Oceanic Technology, 2002, 19, 1849-1859.	0.5	208
6	Hurricane Directional Wave Spectrum Spatial Variation in the Open Ocean. Journal of Physical Oceanography, 2001, 31, 2472-2488.	0.7	178
7	A uniform, quality controlled Surface Ocean CO₂ Atlas (SOCAT). Earth System Science Data, 2013, 5, 125-143.	3.7	158
8	An update to the Surface Ocean CO₂ Atlas (SOCAT version 2). Earth System Science Data, 2014, 6, 69-90.	3.7	158
9	Contribution of non-carbonate anions to total alkalinity and overestimation of <i>p</i>CO₂ in New England and New Brunswick rivers. Biogeosciences, 2011, 8, 3069-3076.	1.3	153
10	A Two-Parameter Wind Speed Algorithm for Ku-Band Altimeters. Journal of Atmospheric and Oceanic Technology, 2002, 19, 2030-2048.	0.5	120
11	SMOS satellite Lâ€band radiometer: A new capability for ocean surface remote sensing in hurricanes. Journal of Geophysical Research, 2012, 117, .	3.3	113
12	Air-Sea Fluxes With a Focus on Heat and Momentum. Frontiers in Marine Science, 2019, 6, .	1.2	111
13	Surface Ocean CO₂ Atlas (SOCAT) gridded data products. Earth System Science Data, 2013, 5, 145-153.	3.7	101
14	Ocean Wave Slope Observations Using Radar Backscatter and Laser Altimeters. Journal of Physical Oceanography, 2004, 34, 2825-2842.	0.7	88
15	The EDOP Radar System on the High-Altitude NASA ER-2 Aircraft. Journal of Atmospheric and Oceanic Technology, 1996, 13, 795-809.	0.5	85
16	Hurricane Directional Wave Spectrum Spatial Variation at Landfall. Journal of Physical Oceanography, 2002, 32, 1667-1684.	0.7	76
17	The ERS Scatterometer Wind Measurement Accuracy: Evidence of Seasonal and Regional Biases. Journal of Atmospheric and Oceanic Technology, 2001, 18, 1684-1697.	0.5	73
18	Spatial and temporal coherence between Amazon River discharge, salinity, and light absorption by colored organic carbon in western tropical Atlantic surface waters. Journal of Geophysical Research, 2011, 116, .	3.3	69

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19	A new bistatic model for electromagnetic scattering from perfectly conducting random surfaces. Waves in Random and Complex Media, 1999, 9, 281-294.	1.5	67
20	Seasonal observations of surface waters in two Gulf of Maine estuary-plume systems: Relationships between watershed attributes, optical measurements and surface pCO2. Estuarine, Coastal and Shelf Science, 2008, 77, 245-252.	0.9	61
21	Phenomenal Sea States and Swell from a North Atlantic Storm in February 2011: A Comprehensive Analysis. Bulletin of the American Meteorological Society, 2012, 93, 1825-1832.	1.7	60
22	A network for standardized ocean color validation measurements. Eos, 2006, 87, 293.	0.1	59
23	Effect of Long Waves on Ku-Band Ocean Radar Backscatter at Low Incidence Angles Using TRMM and Altimeter Data. IEEE Geoscience and Remote Sensing Letters, 2007, 4, 542-546.	1.4	56
24	One- and Two-Dimensional Wind Speed Models for Ka-Band Altimetry. Journal of Atmospheric and Oceanic Technology, 2014, 31, 630-638.	0.5	55
25	Importance of peakedness in sea surface slope measurements and applications. Journal of Geophysical Research, 2000, 105, 17195-17202.	3.3	53
26	Global ERS 1 and 2 and NSCAT observations: Upwind/crosswind and upwind/downwind measurements. Journal of Geophysical Research, 1999, 104, 11459-11469.	3.3	51
27	Episodic riverine influence on surface DIC in the coastal Gulf of Maine. Estuarine, Coastal and Shelf Science, 2009, 82, 108-118.	0.9	51
28	Evaluating and Extending the Ocean Wind Climate Data Record. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2017, 10, 2165-2185.	2.3	51
29	Assessment of wind-forcing impact on a global wind-wave model using the TOPEX altimeter. Ocean Engineering, 2006, 33, 1431-1461.	1.9	48
30	Estimation of wind stress using dual-frequency TOPEX data. Journal of Geophysical Research, 1998, 103, 25101-25108.	3.3	47
31	Temporal and spatial dynamics of CO₂air-sea flux in the Gulf of Maine. Journal of Geophysical Research, 2011, 116, .	3.3	44
32	Contrasting Carbon Dioxide Inputs and Exchange in Three Adjacent New England Estuaries. Estuaries and Coasts, 2011, 34, 68-77.	1.0	44
33	Improved electromagnetic bias theory. Journal of Geophysical Research, 2000, 105, 1299-1310.	3.3	42
34	Momentum transfer over the coastal zone. Journal of Geophysical Research, 2001, 106, 12437-12448.	3.3	40
35	A labelled ocean SAR imagery dataset of ten geophysical phenomena from Sentinelâ€1 wave mode. Geoscience Data Journal, 2019, 6, 105-115.	1.8	40
36	Comparison of spaceborne measurements of sea surface salinity and colored detrital matter in the Amazon plume. Journal of Geophysical Research: Oceans, 2015, 120, 3177-3192.	1.0	39

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37	Sea state bias in altimeter sea level estimates determined by combining wave model and satellite data. Journal of Geophysical Research, 2010, 115, .	3.3	37
38	SEASTAR: A Mission to Study Ocean Submesoscale Dynamics and Small-Scale Atmosphere-Ocean Processes in Coastal, Shelf and Polar Seas. Frontiers in Marine Science, 2019, 6, .	1.2	37
39	Relationship between ERS Scatterometer Measurement and Integrated Wind and Wave Parameters. Journal of Atmospheric and Oceanic Technology, 2004, 21, 368-373.	0.5	36
40	Demonstration of ocean surface salinity microwave measurements from space using AMSRâ€E data over the Amazon plume. Geophysical Research Letters, 2009, 36, .	1.5	36
41	Examining the Impact of Surface Currents on Satellite Scatterometer and Altimeter Ocean Winds. Journal of Atmospheric and Oceanic Technology, 2012, 29, 1776-1793.	0.5	36
42	Classification of the global Sentinel-1 SAR vignettes for ocean surface process studies. Remote Sensing of Environment, 2019, 234, 111457.	4.6	36
43	Salinity from Space Unlocks Satellite-Based Assessment of Ocean Acidification. Environmental Science & Technology, 2015, 49, 1987-1994.	4.6	34
44	Weakly nonlinear theory and sea state bias estimations. Journal of Geophysical Research, 1999, 104, 7641-7647.	3.3	32
45	Analysis of Dual-Frequency Ocean Backscatter Measurements at Ku- and Ka-Bands Using Near-Nadir Incidence GPM Radar Data. IEEE Geoscience and Remote Sensing Letters, 2016, 13, 1310-1314.	1.4	31
46	Global oceanic precipitation: A joint view by TOPEX and the TOPEX microwave radiometer. Journal of Geophysical Research, 1997, 102, 10457-10471.	3.3	30
47	A new bistatic model for electromagnetic scattering from perfectly conducting random surfaces: numerical evaluation and comparison with SPM. Waves in Random and Complex Media, 2001, 11, 33-43.	1.5	29
48	Direct estimation of sea state impacts on radar altimeter sea level measurements. Geophysical Research Letters, 2002, 29, 1-1-1-4.	1.5	29
49	Remote Sensing of Clouds and Fog with a 1.4-mm Radar. Journal of Atmospheric and Oceanic Technology, 1989, 6, 1090-1097.	0.5	27
50	Improved electromagnetic bias theory: Inclusion of hydrodynamic modulations. Journal of Geophysical Research, 2001, 106, 4655-4664.	3.3	27
51	Interannual Variation in Offshore Advection of Amazonâ€Orinoco Plume Waters: Observations, Forcing Mechanisms, and Impacts. Journal of Geophysical Research: Oceans, 2017, 122, 8966-8982.	1.0	27
52	Electromagnetic bias in sea surface range measurements at frequencies of the TOPEX/Poseidon satellite. IEEE Transactions on Geoscience and Remote Sensing, 1993, 31, 376-388.	2.7	26
53	Measured changes in ocean surface roughness due to atmospheric boundary layer rolls. Journal of Geophysical Research, 2001, 106, 4639-4654.	3.3	26
54	Assessing Coastal SMAP Surface Salinity Accuracy and Its Application to Monitoring Gulf of Maine Circulation Dynamics. Remote Sensing, 2018, 10, 1232.	1.8	26

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55	CO2 Input Dynamics and Airâ€“Sea Exchange in a Large New England Estuary. Estuaries and Coasts, 2014, 37, 1078-1091.	1.0	25
56	Altimeter Estimation of Sea Surface Wind Stress for Light to Moderate Winds. Journal of Atmospheric and Oceanic Technology, 1997, 14, 716-722.	0.5	24
57	Gulf of Maine salinity variation and its correlation with upstream Scotian Shelf currents at seasonal and interannual time scales. Journal of Geophysical Research: Oceans, 2016, 121, 8585-8607.	1.0	24
58	Sea Surface Radar Scattering at L-Band Based on Numerical Solution of Maxwellâ€™s Equations in 3-D (NMM3D). IEEE Transactions on Geoscience and Remote Sensing, 2018, 56, 3137-3147.	2.7	24
59	Eastern Mediterranean salinification observed in satellite salinity from SMAP mission. Journal of Marine Systems, 2019, 198, 103190.	0.9	22
60	Optimum satellite remote sensing of the marine carbonate system using empirical algorithms in the global ocean, the Greater Caribbean, the Amazon Plume and the Bay of Bengal. Remote Sensing of Environment, 2019, 235, 111469.	4.6	22
61	A dual-frequency approach for retrieving sea surface wind speed from TOPEX altimetry. Journal of Geophysical Research, 2002, 107, 19-1-19-10.	3.3	21
62	Estimating Gale to Hurricane Force Winds Using the Satellite Altimeter. Journal of Atmospheric and Oceanic Technology, 2011, 28, 453-458.	0.5	21
63	New models for satellite altimeter sea state bias correction developed using global wave model data. Journal of Geophysical Research, 2006, 111, .	3.3	20
64	Projecting ocean acidification impacts for the Gulf of Maine to 2050. Elementa, 2021, 9, .	1.1	18
65	Measurement of Directional Wave Spectra Using Aircraft Laser Altimeters. Journal of Atmospheric and Oceanic Technology, 2005, 22, 869-885.	0.5	17
66	Interannual and seasonal variabilities in airâ€sea CO₂ fluxes along the U.S. eastern continental shelf and their sensitivity to increasing air temperatures and variable winds. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 295-311.	1.3	17
67	Assessing the effects of sea-state related errors on the precision of high-rate Jason-3 altimeter sea level data. Advances in Space Research, 2021, 68, 963-977.	1.2	17
68	How Can Present and Future Satellite Missions Support Scientific Studies that Address Ocean Acidification?. Oceanography, 2015, 25, 108-121.	0.5	16
69	SIPCO2: A simple, inexpensive surface water pCO₂ sensor. Limnology and Oceanography: Methods, 2017, 15, 291-301.	1.0	16
70	Airborne radar measurements of ocean wave spectra and wind speed during the grand banks ERSâ€1 SAR wave experiment. Atmosphere - Ocean, 1994, 32, 143-178.	0.6	15
71	Higherâ€“order hydrodynamic modulation: theory and applications for ocean waves. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2001, 457, 2585-2608.	1.0	15
72	Impact of high-frequency waves on the ocean altimeter range bias. Journal of Geophysical Research, 2005, 110, .	3.3	15

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73	Satellite detection of an unusual intrusion of salty slope water into a marginal sea: Using SMAP to monitor Gulf of Maine inflows. Remote Sensing of Environment, 2018, 217, 550-561.	4.6	13
74	An assessment of marine atmospheric boundary layer roll detection using Sentinel-1 SAR data. Remote Sensing of Environment, 2020, 250, 112031.	4.6	13
75	Altimeter sea state bias: A new look at global range error estimates. Geophysical Research Letters, 2001, 28, 3947-3950.	1.5	12
76	Assessment of the Cycle-to-Cycle Noise Level of the Geosat Follow-On, TOPEX, and Poseidon Altimeters. Journal of Atmospheric and Oceanic Technology, 2002, 19, 2095-2107.	0.5	12
77	Investigation of C-band altimeter cross section dependence on wind speed and sea state. Canadian Journal of Remote Sensing, 2002, 28, 484-489.	1.1	12
78	Evaluation of MODIS ocean colour products at a northeast United States coast site near the Martha's Vineyard Coastal Observatory. International Journal of Remote Sensing, 2008, 29, 4479-4497.	1.3	12
79	Spline-Based Nonparametric Estimation of the Altimeter Sea-State Bias Correction. IEEE Geoscience and Remote Sensing Letters, 2010, 7, 577-581.	1.4	12
80	On the Skewness of the Sea Slope Probability Distribution. Geophysical Monograph Series, 0, , 59-63.	0.1	12
81	Sea Surface Reflectivity Variation With Ocean Temperature at Ka-Band Observed Using Near-Nadir Satellite Radar Data. IEEE Geoscience and Remote Sensing Letters, 2016, 13, 510-514.	1.4	12
82	The dependence of nadir ocean surface emissivity on wind vector as measured with microwave radiometer. IEEE Transactions on Geoscience and Remote Sensing, 2002, 40, 515-523.	2.7	11
83	Absolute Calibration of Jason-1 and Envisat Altimeter Ku-Band Radar Cross Sections from Cross Comparison with TRMM Precipitation Radar Measurements. Journal of Atmospheric and Oceanic Technology, 2005, 22, 1389-1402.	0.5	9
84	Altimeter Data Evaluation in the Coastal Gulf of Maine and Mid-Atlantic Bight Regions. Marine Geodesy, 2011, 34, 340-363.	0.9	9
85	In Situ and Satellite Evaluation of Airâ€“Sea Flux Variation near Ocean Temperature Gradients. Journal of Climate, 2016, 29, 1583-1602.	1.2	9
86	Examining the Accuracy of GlobCurrent Upper Ocean Velocity Data Products on the Northwestern Atlantic Shelf. Remote Sensing, 2018, 10, 1205.	1.8	9
87	Variability of USA East Coast surface total alkalinity distributions revealed by automated instrument measurements. Marine Chemistry, 2021, 232, 103960.	0.9	9
88	Identification of Possible Wave Damping by Rain Using TOPEX and TMR Data. Remote Sensing of Environment, 1998, 63, 40-48.	4.6	8
89	Truncated Hamiltonian versus surface perturbation in nonlinear wave theories. Waves in Random and Complex Media, 2000, 10, 103-116.	1.5	7
90	The Grand Banks ERS-1 SAR wave experiment. Eos, 1993, 74, 41-45.	0.1	6

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91	Automated Geophysical Classification of Sentinel-1 Wave Mode SAR Images Through Deep-Learning. , 2018, , .		6
92	Airborne measurements of the ocean's K_uâ€band radar crossâ€section at low incidence angles. Atmosphere - Ocean, 1994, 32, 179-193.	0.6	4
93	Characteristics of Marine Atmospheric Boundary Layer Roll Vortices from Sentinel-1 Sar Wave Mode. , 2019, , .		4
94	Winter surface salinity in the northeastern Gulf of Maine from five years of SMAP satellite data. Journal of Marine Systems, 2021, 216, 103508.	0.9	4
95	Controls on buffering and coastal acidification in a temperate estuary. Limnology and Oceanography, 0, , .	1.6	4
96	Automated Global Classification of Surface Layer Stratification Using Highâ€Resolution Sea Surface Roughness Measurements by Satellite Synthetic Aperture Radar. Geophysical Research Letters, 2022, 49, .	1.5	4
97	A new look at the diurnal variation of global oceanic precipitation from the ocean TOPography Experiment (TOPEX) and the TOPEX Microwave Radiometer (TMR). International Journal of Remote Sensing, 1998, 19, 171-180.	1.3	3
98	Sea surface slope statistics from a low-altitude aircraft. , 0, , .		3
99	Analysis of random nonlinear water waves: the Stokesâ€“Woodward technique. Comptes Rendus - Mecanique, 2003, 331, 189-196.	2.1	3
100	Reanalysis of skylab S-194 L-band data in view of validating sea surface roughness corrections for salinity measurements from space. , 0, , .		3
101	Time-series measurements of atmospheric and oceanic CO<inf>2</inf> and O<inf>2</inf> in the Western Gulf of Maine. , 2008, , .		3
102	CO<inf>2</inf> gas exchange and ocean acidification studies in the coastal Gulf of Maine. , 2010, , .		3
103	Intramonth oscillations of Atlantic ITCZ observed in SMAP satellite salinity. International Journal of Remote Sensing, 2020, 41, 839-857.	1.3	2
104	Use of a global wave model to correct altimeter sea level estimates. , 0, , .		1
105	Regional Fused Sea Surface Temperature System for the Gulf of Maine. , 2008, , .		1
106	Radar scattering of ocean surfaces at L band based on numerical solutions of maxwell equations in three-dimensions (NMM3D). , 2017, , .		1
107	Super Sites for Advancing Understanding of the Oceanic and Atmospheric Boundary Layers. Marine Technology Society Journal, 2021, 55, 144-145.	0.3	1
108	Experience With Moored Observations in the Western Gulf of Maine From 2006 to 2012. Marine Technology Society Journal, 2013, 47, 19-32.	0.3	1

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109	Eastward propagating surface salinity anomalies in the tropical North Atlantic. Remote Sensing Letters, 2022, 13, 334-342.	0.6	1
110	Non-linear waves and the electromagnetic bias. , 1998, , .		0
111	Realtime storm surge measurement with a scanning radar altimeter. , 0, , .		0
112	A time-frequency application with the stokes-woodward technique. IEEE Transactions on Geoscience and Remote Sensing, 2003, 41, 2670-2673.	2.7	0
113	Satellite ocean color and aerosol validation at Martha's Vineyard Coastal Observatory. , 2006, , .		0
114	Automated validation of satellite derived coastal optical products. , 2007, , .		0
115	Assessing ocean salinity retrieval using WindSAT data over the Amazone river plume and North Brazil Current retroflection. , 2008, , .		0
116	Investigating ocean altimeter data and applications in the Gulf of Maine. , 2008, , .		0
117	Field assessment of optical transparency in the low-level marine boundary layer: preliminary data from coastal New England sites. Proceedings of SPIE, 2016, , .	0.8	0
118	Estimating gale to hurricane force winds using the satellite altimeter. Journal of Atmospheric and Oceanic Technology, 0, , 110324113234082.	0.5	0