Nicolas Reul

List of Publications by Year
in descending order

107 papers	6,316 citations	81900 39 h-index	66911 78 g-index
111 all docs	111 docs citations	111 times ranked	4940 citing authors

#	Article	IF	Citations
1	Eastward propagating surface salinity anomalies in the tropical North Atlantic. Remote Sensing Letters, 2022, 13, 334-342.	1.4	1
2	Satellite and In Situ Sampling Mismatches: Consequences for the Estimation of Satellite Sea Surface Salinity Uncertainties. Remote Sensing, 2022, 14, 1878.	4.0	3
3	Correcting Sea Surface Temperature Spurious Effects in Salinity Retrieved From Spaceborne L-Band Radiometer Measurements. IEEE Transactions on Geoscience and Remote Sensing, 2021, 59, 7256-7269.	6.3	23
4	Satellite Observations of the Sea Surface Salinity Response to Tropical Cyclones. Geophysical Research Letters, 2021, 48, .	4.0	28
5	Objective Analysis of SMOS and SMAP Sea Surface Salinity to Reduce Large-Scale and Time-Dependent Biases from Low to High Latitudes. Journal of Atmospheric and Oceanic Technology, 2021, 38, 405-421.	1.3	11
6	Winter surface salinity in the northeastern Gulf of Maine from five years of SMAP satellite data. Journal of Marine Systems, 2021, 216, 103508.	2.1	4
7	Seasonal Variability of Freshwater Plumes in the Eastern Gulf of Guinea as Inferred From Satellite Measurements. Journal of Geophysical Research: Oceans, 2021, 126, e2020JC017041.	2.6	18
8	Estimating tropical cyclone surface winds: Current status, emerging technologies, historical evolution, and a look to the future. Tropical Cyclone Research and Review, 2021, 10, 125-150.	2.2	38
9	SMOS Level 3 Salinity Maps at CATDS: What do We Learn with Recent Reprocessings?. , 2021, , .		0
10	CCI+SSS, A New SMOS L2 Reprocessing Reduces Errors on Sea Surface Salinity Time Series. , 2021, , .		2
11	Satelliteâ€Based Sea Surface Salinity Designed for Ocean and Climate Studies. Journal of Geophysical Research: Oceans, 2021, 126, e2021JC017676.	2.6	29
12	The Salinity Pilot-Mission Exploitation Platform (Pi-MEP): A Hub for Validation and Exploitation of Satellite Sea Surface Salinity Data. Remote Sensing, 2021, 13, 4600.	4.0	6
13	Ocean and Sea Ice Retrievals From an Endâ€Toâ€End Simulation of the Copernicus Imaging Microwave Radiometer (CIMR) 1.4â€"36.5Â GHz Measurements. Journal of Geophysical Research: Oceans, 2021, 126, e2021JC017610.	2.6	5
14	Intramonth oscillations of Atlantic ITCZ observed in SMAP satellite salinity. International Journal of Remote Sensing, 2020, 41, 839-857.	2.9	2
15	New insights into SMOS sea surface salinity retrievals in the Arctic Ocean. Remote Sensing of Environment, 2020, 249, 112027.	11.0	31
16	Sea surface salinity estimates from spaceborne L-band radiometers: An overview of the first decade of observation (2010â€"2019). Remote Sensing of Environment, 2020, 242, 111769.	11.0	120
17	Pronounced Impact of Salinity on Rapidly Intensifying Tropical Cyclones. Bulletin of the American Meteorological Society, 2020, 101, E1497-E1511.	3.3	41
18	Ocean Surface Foam and Microwave Emission: Dependence on Frequency and Incidence Angle. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 8223-8234.	6.3	16

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19	Whitecap and Wind Stress Observations by Microwave Radiometers: Global Coverage and Extreme Conditions. Journal of Physical Oceanography, 2019, 49, 2291-2307.	1.7	16
20	Remotely Sensed Winds and Wind Stresses for Marine Forecasting and Ocean Modeling. Frontiers in Marine Science, 2019, 6, .	2.5	71
21	Eastern Mediterranean salinification observed in satellite salinity from SMAP mission. Journal of Marine Systems, 2019, 198, 103190.	2.1	22
22	Satellite Salinity Observing System: Recent Discoveries and the Way Forward. Frontiers in Marine Science, 2019, 6, .	2.5	120
23	The Tropical Atlantic Observing System. Frontiers in Marine Science, 2019, 6, .	2.5	80
24	A Simplified Model for the Baroclinic and Barotropic Ocean Response to Moving Tropical Cyclones: 2. Model and Simulations. Journal of Geophysical Research: Oceans, 2019, 124, 3462-3485.	2.6	9
25	A Simplified Model for the Baroclinic and Barotropic Ocean Response to Moving Tropical Cyclones: 1. Satellite Observations. Journal of Geophysical Research: Oceans, 2019, 124, 3446-3461.	2.6	13
26	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.	11.0	22
27	Direct Comparison Between Active C-Band Radar and Passive L-Band Radiometer Measurements: Extreme Event Cases. IEEE Geoscience and Remote Sensing Letters, 2018, 15, 897-901.	3.1	8
28	Assimilation of <scp>SMOS</scp> Lâ€band wind speeds: impact on Met Office global <scp>NWP</scp> and tropical cyclone predictions. Quarterly Journal of the Royal Meteorological Society, 2018, 144, 614-629.	2.7	7
29	Revised Mitigation of Systematic Errors in SMOS Sea Surface Salinity. , 2018, , .		1
30	Present and Future of L-Band Radiometry. , 2018, , .		2
31	New SMOS Sea Surface Salinity with reduced systematic errors and improved variability. Remote Sensing of Environment, 2018, 214, 115-134.	11.0	132
32	Importance of the Equatorial Undercurrent on the sea surface salinity in the eastern equatorial Atlantic in boreal spring. Journal of Geophysical Research: Oceans, 2017, 122, 521-538.	2.6	24
33	Seasonal and interannual variability of the <scp>E</scp>astern <scp>T</scp>ropical <scp>P</scp>acific <scp>F</scp>resh <scp>P</scp>ool. Journal of Geophysical Research: Oceans, 2017, 122, 1749-1771.	2.6	30
34	Interannual surface salinity on <scp>N</scp>orthwest <scp>A</scp>tlantic shelf. Journal of Geophysical Research: Oceans, 2017, 122, 3638-3659.	2.6	25
35	A New Generation of Tropical Cyclone Size Measurements from Space. Bulletin of the American Meteorological Society, 2017, 98, 2367-2385.	3.3	47
36	Lessons learnt from SMOS after 7 years in orbit. , 2017, , .		4

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37	On the upper ocean response to tropical cyclones: Model interpretation. , 2017, , .		0
38	On the upper ocean response to tropical cyclones: Satellite microwave observation. , 2017, , .		0
39	Applications of SMAP data to retrieval of ocean surface wind and salinity. Proceedings of SPIE, 2016, , .	0.8	3
40	SMAP L-Band Passive Microwave Observations of Ocean Surface Wind During Severe Storms. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 7339-7350.	6.3	58
41	A revised L-band radio-brightness sensitivity to extreme winds under Tropical Cyclones: the five year SMOS-storm database. Remote Sensing of Environment, 2016, 180, 274-291.	11.0	57
42	Satellite and In Situ Salinity: Understanding Near-Surface Stratification and Subfootprint Variability. Bulletin of the American Meteorological Society, 2016, 97, 1391-1407.	3.3	126
43	Status of Radio Frequency Interference (RFI) in the 1400â€“1427 MHz passive band based on six years of SMOS mission. Remote Sensing of Environment, 2016, 180, 64-75.	11.0	97
44	ESA's Soil Moisture and Ocean Salinity mission: From science to operational applications. Remote Sensing of Environment, 2016, 180, 3-18.	11.0	77
45	Geophysical Model Function for the AMSR2 C-Band Wind Excess Emissivity at High Winds. IEEE Geoscience and Remote Sensing Letters, 2016, 13, 78-81.	3.1	13
46	Remote sensing of surface ocean PH exploiting sea surface salinity satellite observations. , 2015, , .		6
47	How Can Present and Future Satellite Missions Support Scientific Studies that Address Ocean Acidification?. Oceanography, 2015, 25, 108-121.	1.0	16
48	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.	2.6	39
49	Use of satellite observations for operational oceanography: recent achievements and future prospects. Journal of Operational Oceanography, 2015, 8, s12-s27.	1.2	64
50	New Possibilities for Geophysical Parameter Retrievals Opened by GCOM-W1 AMSR2. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2015, 8, 4248-4261.	4.9	31
51	Salinity from Space Unlocks Satellite-Based Assessment of Ocean Acidification. Environmental Science & Technology, 2015, 49, 1987-1994.	10.0	34
52	The salinity signature of the equatorial Pacific cold tongue as revealed by the satellite SMOS mission. Geoscience Letters, 2014, 1, .	3.3	13
53	SMOS salinity in the subtropical North Atlantic salinity maximum: 1. Comparison with Aquarius and in situ salinity. Journal of Geophysical Research: Oceans, 2014, 119, 8878-8896.	2.6	39
54	Multisensor observations of the <scp>A</scp>mazonâ€<scp>O</scp>rinoco river plume interactions with hurricanes. Journal of Geophysical Research: Oceans, 2014, 119, 8271-8295.	2.6	53

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55	Sea Surface Salinity Observations from Space with the SMOS Satellite: A New Means to Monitor the Marine Branch of the Water Cycle. Surveys in Geophysics, 2014, 35, 681-722.	4.6	132
56	New possibilities for geophysical parameter retrievals opened by GCOM-W1 AMSR2. , 2014, , .		1
57	Sea surface salinity structure of the meandering Gulf Stream revealed by SMOS sensor. Geophysical Research Letters, 2014, 41, 3141-3148.	4.0	60
58	Sea surface salinity under rain cells: SMOS satellite and in situ drifters observations. Journal of Geophysical Research: Oceans, 2014, 119, 5533-5545.	2.6	47
59	SMOS ocean salinity: Recent improvements and applications. , 2014, , .		1
60	Perspectives and Integration in SOLAS Science. Springer Earth System Sciences, 2014, , 247-306.	0.2	2
61	SMOS reveals the signature of Indian Ocean Dipole events. Ocean Dynamics, 2013, 63, 1203-1212.	2.2	42
62	SMOS first data analysis for sea surface salinity determination. International Journal of Remote Sensing, 2013, 34, 3654-3670.	2.9	81
63	Sea Surface Salinity Observations from Space with the SMOS Satellite: A New Means to Monitor the Marine Branch of the Water Cycle. Space Sciences Series of ISSI, 2013, , 681-722.	0.0	2
64	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.	3.3	60
65	Remote Sensing of Sea Surface Salinity From CAROLS L-Band Radiometer in the Gulf of Biscay. IEEE Transactions on Geoscience and Remote Sensing, 2012, 50, 1703-1715.	6.3	17
66	Haline hurricane wake in the Amazon/Orinoco plume: AQUARIUS/SACD and SMOS observations. Geophysical Research Letters, 2012, 39, .	4.0	107
67	SMOS satellite Lâ€band radiometer: A new capability for ocean surface remote sensing in hurricanes. Journal of Geophysical Research, 2012, 117, .	3.3	113
68	ESA's Soil Moisture and Ocean Salinity Mission: Mission Performance and Operations. IEEE Transactions on Geoscience and Remote Sensing, 2012, 50, 1354-1366.	6.3	183
69	Seasonal dynamics of sea surface salinity off Panama: The far Eastern Pacific Fresh Pool. Journal of Geophysical Research, 2012, 117, .	3.3	83
70	Overview of the First SMOS Sea Surface Salinity Products. Part I: Quality Assessment for the Second Half of 2010. IEEE Transactions on Geoscience and Remote Sensing, 2012, 50, 1636-1647.	6.3	66
71	First Assessment of SMOS Data Over Open Ocean: Part IIâ€"Sea Surface Salinity. IEEE Transactions on Geoscience and Remote Sensing, 2012, 50, 1662-1675.	6.3	103
72	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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73	High-Resolution Imaging of the Ocean Surface Backscatter by Inversion of Altimeter Waveforms. Journal of Atmospheric and Oceanic Technology, 2011, 28, 1050-1062.	1.3	7
74	SMOS: The Challenging Sea Surface Salinity Measurement From Space. Proceedings of the IEEE, 2010, 98, 649-665.	21.3	339
75	The SMOS Mission: New Tool for Monitoring Key Elements ofthe Global Water Cycle. Proceedings of the IEEE, 2010, 98, 666-687.	21.3	1,507
76	Overview of SMOS Level 2 Ocean Salinity processing and first results. , 2010, , .		4
77	Ocean Remote Sensing Data Integration and Products. , 2010, , .		6
78	Demonstration of ocean surface salinity microwave measurements from space using AMSRâ€Ɛ data over the Amazon plume. Geophysical Research Letters, 2009, 36, .	4.0	36
79	Air Flow Structure Over Short-gravity Breaking Water Waves. Boundary-Layer Meteorology, 2008, 126, 477-505.	2.3	81
80	Earth-Viewing L-Band Radiometer Sensing of Sea Surface Scattered Celestial Sky Radiationâ€"Part I: General Characteristics. IEEE Transactions on Geoscience and Remote Sensing, 2008, 46, 659-674.	6.3	42
81	Earth-Viewing L-Band Radiometer Sensing of Sea Surface Scattered Celestial Sky Radiationâ€"Part II: Application to SMOS. IEEE Transactions on Geoscience and Remote Sensing, 2008, 46, 675-688.	6.3	41
82	Overview of the SMOS Sea Surface Salinity Prototype Processor. IEEE Transactions on Geoscience and Remote Sensing, 2008, 46, 621-645.	6.3	117
83	Impact of surface roughness on L-band emissivity of the ocean -Theoretical and empirical analysis-. , 2008, , .		0
84	Assessing ocean salinity retrieval using WindSAT data over the Amazone river plume and North Brazil Current retroflection. , 2008, , .		0
85	Predicted Doppler shifts induced by ocean surface wave displacements using asymptotic electromagnetic wave scattering theories. Waves in Random and Complex Media, 2008, 18, 185-196.	2.7	54
86	Combined Airborne Radio-instruments for Ocean and Land Studies (CAROLS). , 2008, , .		1
87	Preparing the potential and challenge of remote sensing-based sea surface salinity estimation: the CoSMOS airborne campaign. Proceedings of SPIE, 2008, , .	0.8	3
88	SMOS sea surface salinity prototype processor: Algorithm validation. , 2007, , .		0
89	Modeling Sun Glitter at L-Band for Sea Surface Salinity Remote Sensing With SMOS. IEEE Transactions on Geoscience and Remote Sensing, 2007, 45, 2073-2087.	6.3	55
90	A simplified asymptotic theory for ocean surface electromagnetic wave scattering. Waves in Random and Complex Media, 2007, 17, 321-341.	2.7	43

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91	Importance of the sea surface curvature to interpret the normalized radar cross section. Journal of Geophysical Research, 2007, 112, .	3.3	49
92	Impact on Sea Surface Salinity Retrieval of Different Auxiliary Data Within the SMOS Mission. IEEE Transactions on Geoscience and Remote Sensing, 2006, 44, 2769-2778.	6.3	32
93	A satellite altimeter model for ocean slick detection. Journal of Geophysical Research, 2006, 111, .	3.3	38
94	An Iterative Convergence Algorithm to Retrieve Sea Surface Salinity from SMOS L-band Radiometric Measurements. , 2006, , .		7
95	Global analysis of sea surface salinity variability from satellite data. , 2005, , .		1
96	The emissivity of foam-covered water surface at L-band: theoretical modeling and experimental results from the FROG 2003 field experiment. IEEE Transactions on Geoscience and Remote Sensing, 2005, 43, 925-937.	6.3	72
97	On the limiting aerodynamic roughness of the ocean in very strong winds. Geophysical Research Letters, 2004, 31, .	4.0	671
98	A model of sea-foam thickness distribution for passive microwave remote sensing applications. Journal of Geophysical Research, 2003, 108, .	3.3	87
99	The influence of oblique waves on the azimuthal response of a Ku-band scatterometer: a laboratory study. IEEE Transactions on Geoscience and Remote Sensing, 1999, 37, 36-47.	6.3	4
100	Air flow separation over unsteady breaking waves. Physics of Fluids, 1999, 11, 1959-1961.	4.0	77
101	Measuring sea surface salinity from an airborne SAR in the Gironde region, France. , 0, , .		3
102	A simple algorithm for sea surface salinity retrieval from L-band radiometric measurements at nadir. , 0, , .		1
103	Impact and compensation of diffuse sun scattering in 2D aperture synthesis radiometers imagery. , 0, , .		9
104	On the use of rigorous microwave interaction models to support remote sensing of natural surfaces. , 0, , .		2
105	Reanalysis of skylab S-194 L-band data in view of validating sea surface roughness corrections for salinity measurements from space. , 0, , .		3
106	Impact on sea surface salinity retrieval of multi-source auxiliary data within the SMOS mission. , 0, , .		2
107	Retrieved Sea Surface Salinity Dependence on Multisource Auxiliary Data within the SMOS mission. , 0, , .		1