List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	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
2	Soil moisture retrieval from space: the Soil Moisture and Ocean Salinity (SMOS) mission. IEEE Transactions on Geoscience and Remote Sensing, 2001, 39, 1729-1735.	6.3	1,390
3	SMOS: The Challenging Sea Surface Salinity Measurement From Space. Proceedings of the IEEE, 2010, 98, 649-665.	21.3	339
4	HyMeX: A 10-Year Multidisciplinary Program on the Mediterranean Water Cycle. Bulletin of the American Meteorological Society, 2014, 95, 1063-1082.	3.3	288
5	Identification of Marine Eddies from Altimetric Maps. Journal of Atmospheric and Oceanic Technology, 2003, 20, 772-778.	1.3	254
6	The role of straits and channels in understanding the characteristics of Mediterranean circulation. Progress in Oceanography, 1999, 44, 65-108.	3.2	247
7	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
8	Vortices of the Mediterranean Sea: An Altimetric Perspective. Journal of Physical Oceanography, 2006, 36, 87-103.	1.7	181
9	Physical forcing and physical/biochemical variability of the Mediterranean Sea: a review of unresolved issues and directions for future research. Ocean Science, 2014, 10, 281-322.	3.4	154
10	The determination of surface salinity with the European SMOS space mission. IEEE Transactions on Geoscience and Remote Sensing, 2004, 42, 2196-2205.	6.3	140
11	Interaction of dense shelf water cascading and openâ€sea convection in the northwestern Mediterranean during winter 2012. Geophysical Research Letters, 2013, 40, 1379-1385.	4.0	136
12	The WISE 2000 and 2001 field experiments in support of the SMOS mission: sea surface L-band brightness temperature observations and their application to sea surface salinity retrieval. IEEE Transactions on Geoscience and Remote Sensing, 2004, 42, 804-823.	6.3	132
13	Overview of the SMOS Sea Surface Salinity Prototype Processor. IEEE Transactions on Geoscience and Remote Sensing, 2008, 46, 621-645.	6.3	117
14	Recent advances in observing the physical oceanography of the western Mediterranean Sea. Progress in Oceanography, 1999, 44, 37-64.	3.2	112
15	Spatial structure of anticyclonic eddies in the Algerian basin (Mediterranean Sea) analyzed using the Okubo–Weiss parameter. Deep-Sea Research Part II: Topical Studies in Oceanography, 2004, 51, 3009-3028.	1.4	105
16	First Assessment of SMOS Data Over Open Ocean: Part II—Sea Surface Salinity. IEEE Transactions on Geoscience and Remote Sensing, 2012, 50, 1662-1675.	6.3	103
17	General patterns of circulation, sediment fluxes and ecology of the Palamós (La Fonera) submarine canyon, northwestern Mediterranean. Progress in Oceanography, 2005, 66, 89-119.	3.2	101
18	The surface circulation of the Balearic Sea. Journal of Geophysical Research, 1990, 95, 1559-1568.	3.3	97

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19	Surface circulation variability in the Balearic Basin. Journal of Geophysical Research, 1994, 99, 3285.	3.3	90
20	Sequence of hydrographic changes in NW Mediterranean deep water due to the exceptional winter of 2005. Scientia Marina, 2007, 71, 339-346.	0.6	83
21	SMOS first data analysis for sea surface salinity determination. International Journal of Remote Sensing, 2013, 34, 3654-3670.	2.9	81
22	MedArgo: a drifting profiler program in the Mediterranean Sea. Ocean Science, 2007, 3, 379-395.	3.4	76
23	Water and nutrient fluxes off Northwest Africa. Continental Shelf Research, 2008, 28, 915-936.	1.8	66
24	Microwave interferometric radiometry in remote sensing: An invited historical review. Radio Science, 2014, 49, 415-449.	1.6	66
25	Marine circulation along the Ebro continental margin. Marine Geology, 1990, 95, 165-177.	2.1	65
26	The path of the Levantine intermediate water to the Alboran sea. Deep-sea Research Part A, Oceanographic Research Papers, 1987, 34, 1745-1755.	1.5	62
27	Surface distribution of chlorophyll, particles and gelbstoff in the Atlantic jet of the Alborán Sea: from submesoscale to subinertial scales of variability. Journal of Marine Systems, 2001, 29, 277-292.	2.1	49
28	Long-term monitoring programme of the hydrological variability in the Mediterranean Sea: a first overview of the HYDROCHANGES network. Ocean Science, 2013, 9, 301-324.	3.4	49
29	Multifractal Method for the Instantaneous Evaluation of the Stream Function in Geophysical Flows. Physical Review Letters, 2005, 95, 104502.	7.8	48
30	Nearâ€inertial motion on the shelfâ€slope front off northeast Spain. Journal of Geophysical Research, 1992, 97, 7277-7281.	3.3	46
31	Microcanonical multifractal formalism: Application to the estimation of ocean surface velocities. Journal of Geophysical Research, 2007, 112, .	3.3	46
32	The multifractal structure of satellite sea surface temperature maps can be used to obtain global maps of streamlines. Ocean Science, 2009, 5, 447-460.	3.4	45
33	SMOS Semi-Empirical Ocean Forward Model Adjustment. IEEE Transactions on Geoscience and Remote Sensing, 2012, 50, 1676-1687.	6.3	45
34	Deep structure of an open sea eddy in the Algerian Basin. Journal of Marine Systems, 2002, 33-34, 179-195.	2.1	44
35	Sea surface emissivity observations at L-band: first results of the Wind and Salinity Experiment WISE 2000. IEEE Transactions on Geoscience and Remote Sensing, 2002, 40, 2117-2130.	6.3	40
36	Wind speed effect on L-band brightness temperature inferred from EuroSTARRS and WISE 2001 field experiments. IEEE Transactions on Geoscience and Remote Sensing, 2004, 42, 2206-2213.	6.3	38

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37	Surface circulation and dynamics of the Balearic Sea. Coastal and Estuarine Studies, 1994, , 73-91.	0.4	37
38	Hydrology and currents observed in the channel of Sardinia during the PRIMO-1 experiment from November 1993 to October 1994. Journal of Marine Systems, 1999, 20, 333-355.	2.1	35
39	Analysis of mesoscale phenomena in the Algerian basin observed with drifting buoys and infrared images. Deep-Sea Research Part I: Oceanographic Research Papers, 2002, 49, 245-266.	1.4	34
40	Determination of sea surface salinity and wind speed by L-band microwave radiometry from a fixed platform. International Journal of Remote Sensing, 2004, 25, 111-128.	2.9	34
41	Recent observation indicates convection' role in deep water circulation. Eos, 1996, 77, 61.	0.1	33
42	Tracking a big anticyclonic eddy in the western Mediterranean Sea. Scientia Marina, 2004, 68, 331-342.	0.6	32
43	Complex empirical orthogonal functions analysis of ERS-1 and TOPEX/POSEIDON combined altimetric data in the region of the Algerian current. Journal of Geophysical Research, 1998, 103, 8059-8071.	3.3	28
44	Observations on the Circulation in the Alboran Sea UsingERSIAltimetry and Sea Surface Temperature Data. Journal of Physical Oceanography, 1996, 26, 1426-1439.	1.7	27
45	Linear and non-linear T–S models for the eastern North Atlantic from Argo data: Role of surface salinity observations. Deep-Sea Research Part I: Oceanographic Research Papers, 2009, 56, 1605-1614.	1.4	27
46	Statistical analysis of the surface circulation in the Algerian Current using Lagrangian buoys. Journal of Marine Systems, 2001, 29, 69-85.	2.1	25
47	Non-Gaussian Velocity Probability Density Functions: An Altimetric Perspective of the Mediterranean Sea. Journal of Physical Oceanography, 2006, 36, 2153-2164.	1.7	25
48	Toward an Optimal SMOS Ocean Salinity Inversion Algorithm. IEEE Geoscience and Remote Sensing Letters, 2009, 6, 509-513.	3.1	24
49	Transformation of Levantine Intermediate Water tracked by MEDARGO floats in the Western Mediterranean. Ocean Science, 2006, 2, 281-290.	3.4	22
50	Determination of the Sea Surface Salinity Error Budget in the Soil Moisture and Ocean Salinity Mission. IEEE Transactions on Geoscience and Remote Sensing, 2010, 48, 1684-1693.	6.3	22
51	Subtropical surface layer salinity budget and the role of mesoscale turbulence. Journal of Geophysical Research: Oceans, 2014, 119, 4124-4140.	2.6	22
52	Mesoscale variability in the Alboran Sea: Synthetic aperture radar imaging of frontal eddies. Journal of Geophysical Research, 2002, 107, 12-1.	3.3	21
53	Simulated SMOS Levels 2 and 3 Products: The Effect of Introducing ARGO Data in the Processing Chain and Its Impact on the Error Induced by the Vicinity of the Coast. IEEE Transactions on Geoscience and Remote Sensing, 2009, 47, 3041-3050.	6.3	20
54	Introduction to the Special Issue on the ESA's Soil Moisture and Ocean Salinity Mission (SMOS)—Instrument Performance and First Results. IEEE Transactions on Geoscience and Remote Sensing, 2012, 50, 1351-1353.	6.3	20

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55	Annual cycles of sea level and sea surface temperature in the western Mediterranean Sea. Journal of Geophysical Research, 2003, 108, .	3.3	19
56	SMOS and Aquarius/SAC-D Missions: The Era of Spaceborne Salinity Measurements is About to Begin. , 2010, , 35-58.		19
57	Surface Salinity in the North Atlantic Subtropical Gyre During the STRASSE/SPURS Summer 2012 Cruise. Oceanography, 2015, 28, 114-123.	1.0	17
58	Sea surface salinity retrievals from HUT-2D L-band radiometric measurements. Remote Sensing of Environment, 2010, 114, 1756-1764.	11.0	15
59	Minimization of Image Distortion in SMOS Brightness Temperature Maps Over the Ocean. IEEE Geoscience and Remote Sensing Letters, 2012, 9, 18-22.	3.1	15
60	Determination of the sea surface emissivity at Lâ€band and application to SMOS salinity retrieval algorithms: Review of the contributions of the UPCâ€ICM. Radio Science, 2008, 43, .	1.6	14
61	Towards a coherent sea surface salinity product from SMOS radiometric measurements and ARGO buoys. , 2007, , .		13
62	Surface salinity response to changes in the model parameters and forcings in a climatological simulation of the eastern North-Atlantic Ocean. Ocean Modelling, 2008, 23, 21-32.	2.4	13
63	A new space technology for ocean observation: the SMOS mission. Scientia Marina, 2012, 76, 249-259.	0.6	13
64	Surpact: A SMOS Surface Wave Rider for Air-Sea Interaction. Oceanography, 2013, 26, 48-57.	1.0	12
65	Review of the CALIMAS Team Contributions to European Space Agency's Soil Moisture and Ocean Salinity Mission Calibration and Validation. Remote Sensing, 2012, 4, 1272-1309.	4.0	11
66	Validation of Salinity Data from Surface Drifters. Journal of Atmospheric and Oceanic Technology, 2014, 31, 967-983.	1.3	9
67	SMOS: a satellite mission to measure ocean surface salinity. , 2001, , .		7
68	An Iterative Convergence Algorithm to Retrieve Sea Surface Salinity from SMOS L-band Radiometric Measurements. , 2006, , .		7
69	Uso de un modelo semi-empÃŧico de emisividad del mar para la estimación aproximada de la salinidad superficial a partir de medidas realizadas con un radiómetro aerotransportado. Scientia Marina, 2008, 72, .	0.6	7
70	Thirty years of research and development of Lagrangian buoys at the Institute of Marine Sciences. Scientia Marina, 2016, 80, 141-158.	0.6	6
71	Sea Surface Salinity mapping with SMOS space mission. Elsevier Oceanography Series, 2003, , 186-189.	0.1	5
72	Estimation of heading gyrocompass error using a GPS 3DF system: Impact on ADCP measurements. Scientia Marina, 2002, 66, 347-354.	0.6	5

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73	Advection and dissipation rates in the upper ocean mixed layer heat anomaly budget over the North Atlantic in summer. Journal of Geophysical Research, 2003, 108, .	3.3	4
74	Recovery of North-East Atlantic temperature fields from profiling floats: Determination of the optimal float number from sampling and instrumental error analysis. Journal of Marine Systems, 2007, 65, 212-223.	2.1	4
75	Overview of SMOS Level 2 Ocean Salinity processing and first results. , 2010, , .		4
76	SMOS measurements preliminary validation against modeled brightness temperatures and external-source salinity data. , 2010, , .		4
77	From the Determination of Sea Emissivity to the Retrieval of Salinity: Recent Contributions to the SMOS Mission from the UPC and ICM. , 2006, , .		3
78	Towards an ocean salinity error budget estimation within the SMOS mission. , 2007, , .		3
79	<title>Tracking anticyclonic open-sea eddies in the Algerian basin by altimetry</title> . , 2000, , .		2
80	Analysis of the SMOS ocean salinity inversion algorithm. , 2007, , .		2
81	Inverse modeling of salinity–temperature–depth relationships: Application to the upper eastern North Atlantic subtropical gyre. Journal of Marine Systems, 2010, 80, 144-159.	2.1	2
82	Perspectives and Integration in SOLAS Science. Springer Earth System Sciences, 2014, , 247-306.	0.2	2
83	Long-term sustained observing system for climatic variability studies in the Mediterranean. Elsevier Oceanography Series, 2003, , 78-86.	0.1	1
84	Sea surface emissivity at L-band: results of the WInd and Salinity Experiments WISE 2000 and 2001 and preliminary results from FROG 2003. , 2004, , .		1
85	Derivation of an experimental satellite-based T-S diagram. , 2012, , .		1
86	Impact of the Local Oscillator calibration on the SMOS sea surface Salinity maps. , 2012, , .		1
87	Impact of the Local Oscillator Calibration Rate on the SMOS Measurements and Retrieved Salinities. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 4633-4642.	6.3	1
88	SMOS ocean salinity: Recent improvements and applications. , 2014, , .		1
89	Image motion analysis using scale space approximation and simulated annealing. Lecture Notes in Computer Science, 1999, , 645-654.	1.3	0
90	<title>Modeling spatial structures in SST images through Eulerian vector fields</title> . , 2000, , .		0

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91	<title>WISE 2000 campaign: sea surface salinity and wind retrievals from L-band radiometry</title> . , 2000, 4172, 65.		0
92	3D, EOF-based spatial analysis of gyroscope observations in the north atlantic ocean. Elsevier Oceanography Series, 2003, 69, 513-515.	0.1	0
93	ESA's activities toward retrieval concepts for the Soil Moisture and Ocean Salinity (SMOS) mission. , 2004, , .		0
94	SMOS sea surface salinity prototype processor: Algorithm validation. , 2007, , .		0
95	The impact of combining SMOS and ARGO data on the SMOS Level 2 and 3 products and effect of the vicinity of the coast. , 2008, , .		0
96	Meridional variability in SMOS salinity retrievals: Trade-off between sensitivity to geophysical effects and increased temporal sampling. , 2009, , .		0
97	Crucial times for Spanish physical oceanography. Scientia Marina, 2012, 76, 11-28.	0.6	0
98	A look to the HyMeX program. Tethys, 0, , .	0.0	0