

Dimitris Menemenlis

List of Publications by Year in descending order

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118
papers

7,335
citations

50244

46
h-index

62565

80
g-index

134
all docs

134
docs citations

134
times ranked

7140
citing authors

#	ARTICLE	IF	CITATIONS
1	Oceanic sources, sinks, and transport of atmospheric CO ₂ . Global Biogeochemical Cycles, 2009, 23, .	1.9	455
2	Inverse estimates of anthropogenic CO ₂ uptake, transport, and storage by the ocean. Global Biogeochemical Cycles, 2006, 20, n/a-n/a.	1.9	331
3	Contrasting carbon cycle responses of the tropical continents to the 2015–2016 El Niño. Science, 2017, 358, .	6.0	307
4	On the formulation of sea-ice models. Part 1: Effects of different solver implementations and parameterizations. Ocean Modelling, 2010, 33, 129-144.	1.0	305
5	Ocean submesoscales as a key component of the global heat budget. Nature Communications, 2018, 9, 775.	5.8	255
6	Mesoscale to Submesoscale Wavenumber Spectra in Drake Passage. Journal of Physical Oceanography, 2016, 46, 601-620.	0.7	199
7	Using Green's Functions to Calibrate an Ocean General Circulation Model. Monthly Weather Review, 2005, 133, 1224-1240.	0.5	179
8	Effects of the Indonesian Throughflow on the Pacific and Indian Oceans. Journal of Physical Oceanography, 2002, 32, 1404-1429.	0.7	171
9	Inverse estimates of the oceanic sources and sinks of natural CO ₂ and the implied oceanic carbon transport. Global Biogeochemical Cycles, 2007, 21, .	1.9	156
10	Continued retreat of Thwaites Glacier, West Antarctica, controlled by bed topography and ocean circulation. Geophysical Research Letters, 2017, 44, 6191-6199.	1.5	153
11	Subaqueous melting of Store Glacier, west Greenland from three-dimensional, high-resolution numerical modeling and ocean observations. Geophysical Research Letters, 2013, 40, 4648-4653.	1.5	146
12	Numerical experiments on subaqueous melting of Greenland tidewater glaciers in response to ocean warming and enhanced subglacial discharge. Annals of Glaciology, 2012, 53, 229-234.	2.8	138
13	Seasonality in Transition Scale from Balanced to Unbalanced Motions in the World Ocean. Journal of Physical Oceanography, 2018, 48, 591-605.	0.7	132
14	Sensitivity of the ice-shelf/ocean system to the sub-ice-shelf cavity shape measured by NASA IceBridge in Pine Island Glacier, West Antarctica. Annals of Glaciology, 2012, 53, 156-162.	2.8	130
15	Small-scale open ocean currents have large effects on wind wave heights. Journal of Geophysical Research: Oceans, 2017, 122, 4500-4517.	1.0	128
16	Partitioning Ocean Motions Into Balanced Motions and Internal Gravity Waves: A Modeling Study in Anticipation of Future Space Missions. Journal of Geophysical Research: Oceans, 2018, 123, 8084-8105.	1.0	126
17	The Origin, Pathway, and Destination of Ni ³⁺ Water Estimated by a Simulated Passive Tracer and Its Adjoint. Journal of Physical Oceanography, 2004, 34, 582-604.	0.7	123
18	Arctic ice-ocean simulation with optimized model parameters: Approach and assessment. Journal of Geophysical Research, 2011, 116, .	3.3	120

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19	Seasonality of submesoscale dynamics in the Kuroshio Extension. <i>Geophysical Research Letters</i> , 2016, 43, 11,304.	1.5	120
20	NASA supercomputer improves prospects for ocean climate research. <i>Eos</i> , 2005, 86, 89.	0.1	109
21	Carbon monitoring system flux estimation and attribution: impact of ACOS-GOSAT XCO ₂ sampling on the inference of terrestrial biospheric sources and sinks. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2022, 66, 22486.	0.8	90
22	Ocean-Scale Interactions From Space. <i>Earth and Space Science</i> , 2019, 6, 795-817.	1.1	90
23	Spreading of warm ocean waters around Greenland as a possible cause for glacier acceleration. <i>Annals of Glaciology</i> , 2012, 53, 257-266.	2.8	89
24	Measuring currents, ice drift, and waves from space: the Sea surface Kinematics Multiscale monitoring (SKIM) concept. <i>Ocean Science</i> , 2018, 14, 337-354.	1.3	87
25	Circum-Antarctic Shoreward Heat Transport Derived From an Eddy- and Tide-Resolving Simulation. <i>Geophysical Research Letters</i> , 2018, 45, 834-845.	1.5	86
26	Ocean forcing drives glacier retreat in Greenland. <i>Science Advances</i> , 2021, 7, .	4.7	86
27	Modeling of ocean-induced ice melt rates of five west Greenland glaciers over the past two decades. <i>Geophysical Research Letters</i> , 2016, 43, 6374-6382.	1.5	85
28	Can large eddy simulation techniques improve mesoscale rich ocean models?. <i>Geophysical Monograph Series</i> , 2008, , 319-337.	0.1	84
29	Enhanced upward heat transport at deep submesoscale ocean fronts. <i>Nature Geoscience</i> , 2020, 13, 50-55.	5.4	84
30	Improved modeling of the Arctic halocline with a subgrid-scale brine rejection parameterization. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	79
31	Spectral decomposition of internal gravity wave sea surface height in global models. <i>Journal of Geophysical Research: Oceans</i> , 2017, 122, 7803-7821.	1.0	78
32	Global-scale dispersal and connectivity in mangroves. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 915-922.	3.3	75
33	Understanding of Contemporary Regional Sea-Level Change and the Implications for the Future. <i>Reviews of Geophysics</i> , 2020, 58, e2019RG000672.	9.0	74
34	Carbon isotope evidence for the latitudinal distribution and wind speed dependence of the air-sea gas transfer velocity. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2006, 58, 390-417.	0.8	71
35	A Near-Uniform Basin-Wide Sea Level Fluctuation of the Mediterranean Sea. <i>Journal of Physical Oceanography</i> , 2007, 37, 338-358.	0.7	69
36	Origin of Circumpolar Deep Water intruding onto the Amundsen and Bellingshausen Sea continental shelves. <i>Nature Communications</i> , 2018, 9, 3403.	5.8	69

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37	Multimegahertz-range acoustic data obtained by bottom-mounted hydrophone arrays for measurement of ocean temperature. <i>IEEE Journal of Oceanic Engineering</i> , 1999, 24, 202-214.	2.1	65
38	Ocean-induced Melt Triggers Glacier Retreat in Northwest Greenland. <i>Geophysical Research Letters</i> , 2018, 45, 8334-8342.	1.5	65
39	Modeling transport and fate of riverine dissolved organic carbon in the Arctic Ocean. <i>Global Biogeochemical Cycles</i> , 2009, 23, .	1.9	60
40	An Observing System Simulation Experiment for the Calibration and Validation of the Surface Water Ocean Topography Sea Surface Height Measurement Using In Situ Platforms. <i>Journal of Atmospheric and Oceanic Technology</i> , 2018, 35, 281-297.	0.5	59
41	A Primer on Global Internal Tide and Internal Gravity Wave Continuum Modeling in HYCOM and MITgcm. , 0, , .		56
42	A decade of acoustic thermometry in the North Pacific Ocean. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	52
43	SKIM, a Candidate Satellite Mission Exploring Global Ocean Currents and Waves. <i>Frontiers in Marine Science</i> , 2019, 6, .	1.2	52
44	Ice shelf basal melt rates around Antarctica from simulations and observations. <i>Journal of Geophysical Research: Oceans</i> , 2016, 121, 1085-1109.	1.0	51
45	Simulated Response of the Arctic Freshwater Budget to Extreme NAO Wind Forcing. <i>Journal of Climate</i> , 2009, 22, 2422-2437.	1.2	50
46	On the formulation of sea-ice models. Part 2: Lessons from multi-year adjoint sea-ice export sensitivities through the Canadian Arctic Archipelago. <i>Ocean Modelling</i> , 2010, 33, 145-158.	1.0	50
47	On the Spatial Scales to be Resolved by the Surface Water and Ocean Topography Ka-Band Radar Interferometer. <i>Journal of Atmospheric and Oceanic Technology</i> , 2019, 36, 87-99.	0.5	50
48	Global and Brazilian Carbon Response to El Niño Modoki 2011–2010. <i>Earth and Space Science</i> , 2017, 4, 637-660.	1.1	49
49	A new river discharge and river temperature climatology data set for the pan-Arctic region. <i>Ocean Modelling</i> , 2015, 88, 1-15.	1.0	46
50	Changes in the Arctic Ocean CO ₂ sink (1996–2007): A regional model analysis. <i>Global Biogeochemical Cycles</i> , 2013, 27, 1108-1118.	1.9	44
51	Reconstructing Upper-Ocean Vertical Velocity Field from Sea Surface Height in the Presence of Unbalanced Motion. <i>Journal of Physical Oceanography</i> , 2020, 50, 55-79.	0.7	44
52	The ECCO–Darwin Data–Assimilative Global Ocean Biogeochemistry Model: Estimates of Seasonal to Multidecadal Surface Ocean CO ₂ and Air–Sea CO ₂ Flux. <i>Journal of Advances in Modeling Earth Systems</i> , 2020, 12, e2019MS001888.	1.3	43
53	Atlantic to Mediterranean Sea Level Difference Driven by Winds near Gibraltar Strait. <i>Journal of Physical Oceanography</i> , 2007, 37, 359-376.	0.7	42
54	Pathways of ocean heat towards Pine Island and Thwaites grounding lines. <i>Scientific Reports</i> , 2019, 9, 16649.	1.6	42

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55	Assessing the magnitude of CO ₂ flux uncertainty in atmospheric CO ₂ records using products from NASA's Carbon Monitoring Flux Pilot Project. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 734-765.	1.2	41
56	Role of tides on the formation of the Antarctic slope front at the Weddell-Scotia Confluence. <i>Journal of Geophysical Research: Oceans</i> , 2015, 120, 3658-3680.	1.0	41
57	Carbon Monitoring System Flux Net Biosphere Exchange 2020 (CMS-Flux NBE 2020). <i>Earth System Science Data</i> , 2021, 13, 299-330.	3.7	40
58	Source and Pathway of the Western Arctic Upper Halocline in a Data-Constrained Coupled Ocean and Sea Ice Model. <i>Journal of Physical Oceanography</i> , 2012, 42, 802-823.	0.7	39
59	A review of recent results on ocean acoustic wave propagation in random media: basin scales. <i>IEEE Journal of Oceanic Engineering</i> , 1999, 24, 138-155.	2.1	38
60	Acceleration and Overturning of the Antarctic Slope Current by Winds, Eddies, and Tides. <i>Journal of Physical Oceanography</i> , 2019, 49, 2043-2074.	0.7	38
61	Sea-ice deformation in a coupled ocean-sea-ice model and in satellite remote sensing data. <i>Cryosphere</i> , 2017, 11, 1553-1573.	1.5	37
62	Scaling Properties of Arctic Sea Ice Deformation in a High-Resolution Viscous-Plastic Sea Ice Model and in Satellite Observations. <i>Journal of Geophysical Research: Oceans</i> , 2018, 123, 672-687.	1.0	36
63	Global Estimates of the Energy Transfer From the Wind to the Ocean, With Emphasis on Near-Inertial Oscillations. <i>Journal of Geophysical Research: Oceans</i> , 2019, 124, 5723-5746.	1.0	36
64	Characterizing the Transition From Balanced to Unbalanced Motions in the Southern California Current. <i>Journal of Geophysical Research: Oceans</i> , 2019, 124, 2088-2109.	1.0	35
65	High-Frequency Submesoscale Motions Enhance the Upward Vertical Heat Transport in the Global Ocean. <i>Journal of Geophysical Research: Oceans</i> , 2020, 125, e2020JC016544.	1.0	35
66	Contrasting Effects of Historical Sea Level Rise and Contemporary Ocean Currents on Regional Gene Flow of <i>Rhizophora racemosa</i> in Eastern Atlantic Mangroves. <i>PLoS ONE</i> , 2016, 11, e0150950.	1.1	35
67	Numerical Investigations of Seasonal and Interannual Variability of North Pacific Subtropical Mode Water and Its Implications for Pacific Climate Variability. <i>Journal of Climate</i> , 2011, 24, 2648-2665.	1.2	34
68	Surface Kinetic Energy Distributions in the Global Oceans From a High-Resolution Numerical Model and Surface Drifter Observations. <i>Geophysical Research Letters</i> , 2019, 46, 9757-9766.	1.5	34
69	Quantifying the processes controlling intraseasonal mixed-layer temperature variability in the tropical Indian Ocean. <i>Journal of Geophysical Research: Oceans</i> , 2015, 120, 692-715.	1.0	33
70	Observations and modeling of ocean-induced melt beneath Petermann Glacier Ice Shelf in northwestern Greenland. <i>Geophysical Research Letters</i> , 2017, 44, 8396-8403.	1.5	33
71	Linearization of an Oceanic General Circulation Model for Data Assimilation and Climate Studies. <i>Journal of Atmospheric and Oceanic Technology</i> , 1997, 14, 1420-1443.	0.5	31
72	Objective Determination of Feature Resolution in Two Sea Surface Temperature Analyses. <i>Journal of Climate</i> , 2013, 26, 2514-2533.	1.2	31

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73	Amundsen and Bellingshausen Seas simulation with optimized ocean, sea ice, and thermodynamic ice shelf model parameters. <i>Journal of Geophysical Research: Oceans</i> , 2017, 122, 6180-6195.	1.0	31
74	Characterizing meso- to submesoscale features in the South China Sea. <i>Progress in Oceanography</i> , 2020, 188, 102420.	1.5	31
75	A model of the Arctic Ocean carbon cycle. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	29
76	Mapping Mediterranean Altimeter Data with a Multiresolution Optimal Interpolation Algorithm. <i>Journal of Atmospheric and Oceanic Technology</i> , 1998, 15, 535-546.	0.5	28
77	Modeling the Recent Changes in the Arctic Ocean CO ₂ Sink (2006–2013). <i>Global Biogeochemical Cycles</i> , 2019, 33, 420-438.	1.9	28
78	Long-Term Earth-Moon Evolution With High-Level Orbit and Ocean Tide Models. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2021JE006875.	1.5	28
79	Investigating Solution Convergence in a Global Ocean Model Using a 2048-Processor Cluster of Distributed Shared Memory Machines. <i>Scientific Programming</i> , 2007, 15, 107-115.	0.5	27
80	Global coupled sea ice-ocean state estimation. <i>Climate Dynamics</i> , 2017, 49, 931-956.	1.7	26
81	Ice Flexure Forced by Internal Wave Packets in the Arctic Ocean. <i>Science</i> , 1991, 254, 832-835.	6.0	24
82	Impact of ECCO Ocean-State Estimates on the Initialization of Seasonal Climate Forecasts. <i>Journal of Climate</i> , 2008, 21, 1929-1947.	1.2	24
83	Putting It All Together: Adding Value to the Global Ocean and Climate Observing Systems With Complete Self-Consistent Ocean State and Parameter Estimates. <i>Frontiers in Marine Science</i> , 2019, 6, .	1.2	23
84	Basin-scale ocean circulation from combined altimetric, tomographic and model data. <i>Nature</i> , 1997, 385, 618-621.	13.7	22
85	Using Green's Functions to initialize and adjust a global, eddying ocean biogeochemistry general circulation model. <i>Ocean Modelling</i> , 2015, 95, 1-14.	1.0	22
86	Modelling mangrove propagule dispersal trajectories using high-resolution estimates of ocean surface winds and currents. <i>Biotropica</i> , 2017, 49, 472-481.	0.8	21
87	Using SAILDRONES to Validate Arctic Sea-Surface Salinity from the SMAP Satellite and from Ocean Models. <i>Remote Sensing</i> , 2021, 13, 831.	1.8	20
88	Local Air-Sea Interactions at Ocean Mesoscale and Submesoscale in a Western Boundary Current. <i>Geophysical Research Letters</i> , 2022, 49, .	1.5	20
89	Error Estimates for an Ocean General Circulation Model from Altimeter and Acoustic Tomography Data. <i>Monthly Weather Review</i> , 2000, 128, 763-778.	0.5	19
90	Improved Internal Wave Spectral Continuum in a Regional Ocean Model. <i>Journal of Geophysical Research: Oceans</i> , 2020, 125, e2019JC015974.	1.0	19

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91	On the time-averaged mean state of ocean models and the properties of long range acoustic propagation. <i>Journal of Geophysical Research: Oceans</i> , 2013, 118, 4346-4362.	1.0	18
92	Inferring Connectivity Range in Submerged Aquatic Populations (<i>Ruppia</i> L.) Along European Coastal Lagoons From Genetic Imprint and Simulated Dispersal Trajectories. <i>Frontiers in Plant Science</i> , 2018, 9, 806.	1.7	18
93	Decomposition of the Multimodal Multidirectional M2 Internal Tide Field. <i>Journal of Atmospheric and Oceanic Technology</i> , 2019, 36, 1157-1173.	0.5	16
94	Statistical Comparisons of Temperature Variance and Kinetic Energy in Global Ocean Models and Observations: Results From Mesoscale to Internal Wave Frequencies. <i>Journal of Geophysical Research: Oceans</i> , 2020, 125, e2019JC015306.	1.0	16
95	Attribution of Space-Time Variability in Global Ocean Dissolved Inorganic Carbon. <i>Global Biogeochemical Cycles</i> , 2022, 36, .	1.9	14
96	Spatial and Temporal Characteristics of the Submesoscale Energetics in the Gulf of Mexico. <i>Journal of Physical Oceanography</i> , 2021, 51, 475-489.	0.7	13
97	Acoustical Measurement of Current and Vorticity beneath Ice. <i>Journal of Atmospheric and Oceanic Technology</i> , 1992, 9, 827-849.	0.5	11
98	Local and Remote Forcing of Interannual Sea-Level Variability at Nantucket Island. <i>Journal of Geophysical Research: Oceans</i> , 2022, 127, .	1.0	11
99	Three-to-Six-Day Air-Sea Oscillation in Models and Observations. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL085837.	1.5	10
100	Mapping and pseudoinverse algorithms for ocean data assimilation. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2003, 41, 43-51.	2.7	9
101	Impact of Data Assimilation on ECCO2 Equatorial Undercurrent and North Equatorial Countercurrent in the Pacific Ocean. <i>Journal of Atmospheric and Oceanic Technology</i> , 2015, 32, 131-143.	0.5	9
102	Altimetry-Based Diagnosis of Deep-Reaching Sub-Mesoscale Ocean Fronts. <i>Fluids</i> , 2020, 5, 145.	0.8	9
103	Numerical Investigation of Mechanisms Underlying Oceanic Internal Gravity Wave Power-Law Spectra. <i>Journal of Physical Oceanography</i> , 2020, 50, 2713-2733.	0.7	9
104	S-MODE: The Sub-Mesoscale Ocean Dynamics Experiment. , 2020, , .		9
105	Antipodal acoustic thermometry: 1960, 2004. <i>Deep-Sea Research Part I: Oceanographic Research Papers</i> , 2014, 86, 1-20.	0.6	8
106	Diagnosing Ocean-Wave-Turbulence Interactions From Space. <i>Geophysical Research Letters</i> , 2019, 46, 8933-8942.	1.5	8
107	Pacific Abyssal Transport and Mixing: Through the Samoan Passage versus around the Manihiki Plateau. <i>Journal of Physical Oceanography</i> , 2019, 49, 1577-1592.	0.7	8
108	Improved representation of river runoff in Estimating the Circulation and Climate of the Ocean Version 4 (ECCOv4) simulations: implementation, evaluation, and impacts to coastal plume regions. <i>Geoscientific Model Development</i> , 2021, 14, 1801-1819.	1.3	8

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109	Response to Comment on "Contrasting carbon cycle responses of the tropical continents to the 2015–2016 El Niño". <i>Science</i> , 2018, 362, .	6.0	6
110	Role of Mixed-Layer Instabilities in the Seasonal Evolution of Eddy Kinetic Energy Spectra in a Global Submesoscale Permitting Simulation. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL094777.	1.5	6
111	Separating Energetic Internal Gravity Waves and Small-Scale Frontal Dynamics. <i>Geophysical Research Letters</i> , 2022, 49, .	1.5	6
112	Consequences of different air-sea feedbacks on ocean using MITgcm and MERRA-2 forcing: Implications for coupled data assimilation systems. <i>Ocean Modelling</i> , 2018, 132, 91-111.	1.0	5
113	Geostrophy Assessment and Momentum Balance of the Global Oceans in a Tide- and Eddy-Resolving Model. <i>Journal of Geophysical Research: Oceans</i> , 2021, 126, e2021JC017422.	1.0	5
114	Influence of Nonseasonal River Discharge on Sea Surface Salinity and Height. <i>Journal of Advances in Modeling Earth Systems</i> , 2022, 14, .	1.3	4
115	Development of adjoint-based ocean state estimation for the Amundsen and Bellingshausen seas and ice shelf cavities using MITgcm-ECCO (66j). <i>Geoscientific Model Development</i> , 2021, 14, 4909-4924.	1.3	3
116	RADlv1: a non-steady-state early diagenetic model for ocean sediments in Julia and MATLAB/GNU Octave. <i>Geoscientific Model Development</i> , 2022, 15, 2105-2131.	1.3	3
117	Earth system model parameter adjustment using a Green's functions approach. <i>Geoscientific Model Development</i> , 2022, 15, 2309-2324.	1.3	2
118	Regional ocean forecasting systems and their applications: Design considerations of such a system for the South China Sea. <i>Aquatic Ecosystem Health and Management</i> , 2015, 18, 443-453.	0.3	1