

# John C Marshall

## List of Publications by Year in descending order

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84  
papers

13,170  
citations

57631

44  
h-index

58464

82  
g-index

84  
all docs

84  
docs citations

84  
times ranked

9244  
citing authors

#	ARTICLE	IF	CITATIONS
1	A finite-volume, incompressible Navier Stokes model for studies of the ocean on parallel computers. <i>Journal of Geophysical Research</i> , 1997, 102, 5753-5766.	3.3	1,968
2	Hydrostatic, quasi-hydrostatic, and nonhydrostatic ocean modeling. <i>Journal of Geophysical Research</i> , 1997, 102, 5733-5752.	3.3	1,089
3	Open-ocean convection: Observations, theory, and models. <i>Reviews of Geophysics</i> , 1999, 37, 1-64.	9.0	932
4	North Atlantic climate variability: phenomena, impacts and mechanisms. <i>International Journal of Climatology</i> , 2001, 21, 1863-1898.	1.5	860
5	Closure of the meridional overturning circulation through Southern Ocean upwelling. <i>Nature Geoscience</i> , 2012, 5, 171-180.	5.4	757
6	Representation of Topography by Shaved Cells in a Height Coordinate Ocean Model. <i>Monthly Weather Review</i> , 1997, 125, 2293-2315.	0.5	520
7	Observations, inferences, and mechanisms of the Atlantic Meridional Overturning Circulation: A review. <i>Reviews of Geophysics</i> , 2016, 54, 5-63.	9.0	508
8	Specification of Eddy Transfer Coefficients in Coarse-Resolution Ocean Circulation Models*. <i>Journal of Physical Oceanography</i> , 1997, 27, 381-402.	0.7	425
9	Residual-Mean Solutions for the Antarctic Circumpolar Current and Its Associated Overturning Circulation. <i>Journal of Physical Oceanography</i> , 2003, 33, 2341-2354.	0.7	383
10	Southern Ocean warming delayed by circumpolar upwelling and equatorward transport. <i>Nature Geoscience</i> , 2016, 9, 549-554.	5.4	381
11	Global ocean circulation during 1992â€“1997, estimated from ocean observations and a general circulation model. <i>Journal of Geophysical Research</i> , 2002, 107, 1-1.	3.3	302
12	The Relationship between ITCZ Location and Cross-Equatorial Atmospheric Heat Transport: From the Seasonal Cycle to the Last Glacial Maximum. <i>Journal of Climate</i> , 2013, 26, 3597-3618.	1.2	298
13	Convection with Rotation in a Neutral Ocean: A Study of Open-Ocean Deep Convection. <i>Journal of Physical Oceanography</i> , 1993, 23, 1009-1039.	0.7	258
14	Implementation of an Atmosphereâ€“Ocean General Circulation Model on the Expanded Spherical Cube. <i>Monthly Weather Review</i> , 2004, 132, 2845-2863.	0.5	249
15	Changes in ITCZ location and cross-equatorial heat transport at the Last Glacial Maximum, Heinrich Stadial 1, and the mid-Holocene. <i>Earth and Planetary Science Letters</i> , 2014, 390, 69-79.	1.8	241
16	GISSâ€“E2.1: Configurations and Climatology. <i>Journal of Advances in Modeling Earth Systems</i> , 2020, 12, e2019MS002025.	1.3	234
17	The oceanâ€™s role in setting the mean position of the Inter-Tropical Convergence Zone. <i>Climate Dynamics</i> , 2014, 42, 1967-1979.	1.7	233
18	Antarctic Ocean and Sea Ice Response to Ozone Depletion: A Two-Time-Scale Problem. <i>Journal of Climate</i> , 2015, 28, 1206-1226.	1.2	179

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19	Scales, Growth Rates, and Spectral Fluxes of Baroclinic Instability in the Ocean. <i>Journal of Physical Oceanography</i> , 2011, 41, 1057-1076.	0.7	173
20	The ocean's role in the transient response of climate to abrupt greenhouse gas forcing. <i>Climate Dynamics</i> , 2015, 44, 2287-2299.	1.7	162
21	Estimating Eddy Stresses by Fitting Dynamics to Observations Using a Residual-Mean Ocean Circulation Model and Its Adjoint. <i>Journal of Physical Oceanography</i> , 2005, 35, 1891-1910.	0.7	152
22	Understanding Arctic Ocean Circulation: A Review of Ocean Dynamics in a Changing Climate. <i>Journal of Geophysical Research: Oceans</i> , 2020, 125, e2018JC014378.	1.0	150
23	Global surface eddy diffusivities derived from satellite altimetry. <i>Journal of Geophysical Research: Oceans</i> , 2013, 118, 901-916.	1.0	135
24	The Dependence of Southern Ocean Meridional Overturning on Wind Stress. <i>Journal of Physical Oceanography</i> , 2011, 41, 2261-2278.	0.7	134
25	Impact of the Atlantic meridional overturning circulation on ocean heat storage and transient climate change. <i>Geophysical Research Letters</i> , 2014, 41, 2108-2116.	1.5	130
26	Reconciling thermodynamic and dynamic methods of computation of water-mass transformation rates. <i>Deep-Sea Research Part I: Oceanographic Research Papers</i> , 1999, 46, 545-572.	0.6	129
27	The Role of Eddy Transfer in Setting the Stratification and Transport of a Circumpolar Current. <i>Journal of Physical Oceanography</i> , 2002, 32, 39-54.	0.7	128
28	Effects of vertical variations of thickness diffusivity in an ocean general circulation model. <i>Ocean Modelling</i> , 2007, 18, 122-141.	1.0	117
29	The ocean's role in polar climate change: asymmetric Arctic and Antarctic responses to greenhouse gas and ozone forcing. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2014, 372, 20130040.	1.6	114
30	Coupling of Trade Winds with Ocean Circulation Damps ITCZ Shifts. <i>Journal of Climate</i> , 2017, 30, 4395-4411.	1.2	93
31	Climate Determinism Revisited: Multiple Equilibria in a Complex Climate Model. <i>Journal of Climate</i> , 2011, 24, 992-1012.	1.2	87
32	Fast and slow responses of Southern Ocean sea surface temperature to SAM in coupled climate models. <i>Climate Dynamics</i> , 2017, 48, 1595-1609.	1.7	85
33	Direct Estimate of Lateral Eddy Diffusivity Upstream of Drake Passage. <i>Journal of Physical Oceanography</i> , 2014, 44, 2593-2616.	0.7	68
34	Control of Lower-Limb Overturning Circulation in the Southern Ocean by Diapycnal Mixing and Mesoscale Eddy Transfer. <i>Journal of Physical Oceanography</i> , 2008, 38, 2832-2845.	0.7	61
35	Sensitivity of Antarctic sea ice to the Southern Annular Mode in coupled climate models. <i>Climate Dynamics</i> , 2017, 49, 1813-1831.	1.7	59
36	Observations of Seasonal Upwelling and Downwelling in the Beaufort Sea Mediated by Sea Ice. <i>Journal of Physical Oceanography</i> , 2018, 48, 795-805.	0.7	58

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37	Hemispherically asymmetric trade wind changes as signatures of past ITCZ shifts. <i>Quaternary Science Reviews</i> , 2018, 180, 214-228.	1.4	58
38	The Interannual Variability of Tropical Precipitation and Interhemispheric Energy Transport. <i>Journal of Climate</i> , 2014, 27, 3377-3392.	1.2	56
39	Modulation of the Seasonal Cycle of Antarctic Sea Ice Extent Related to the Southern Annular Mode. <i>Geophysical Research Letters</i> , 2017, 44, 9761-9768.	1.5	55
40	Carbon dioxide and oxygen fluxes in the Southern Ocean: Mechanisms of interannual variability. <i>Global Biogeochemical Cycles</i> , 2007, 21, n/a-n/a.	1.9	53
41	The Ice-Ocean Governor: Ice-Ocean Stress Feedback Limits Beaufort Gyre Spin-Up. <i>Geophysical Research Letters</i> , 2018, 45, 11,293.	1.5	50
42	CMIP6 Historical Simulations (1850-2014) With GISS-E2.1. <i>Journal of Advances in Modeling Earth Systems</i> , 2021, 13, e2019MS002034.	1.3	49
43	On the Relationship between Subduction Rates and Diabatic Forcing of the Mixed Layer. <i>Journal of Physical Oceanography</i> , 1991, 21, 1793-1802.	0.7	48
44	Exploring Mechanisms of Variability and Predictability of Atlantic Meridional Overturning Circulation in Two Coupled Climate Models. <i>Journal of Climate</i> , 2012, 25, 4067-4080.	1.2	47
45	Observed mesoscale eddy signatures in Southern Ocean surface mixed-layer depth. <i>Journal of Geophysical Research: Oceans</i> , 2017, 122, 617-635.	1.0	47
46	What controls the uptake of transient tracers in the Southern Ocean?. <i>Global Biogeochemical Cycles</i> , 2004, 18, n/a-n/a.	1.9	44
47	Western U.S. lake expansions during Heinrich stadials linked to Pacific Hadley circulation. <i>Science Advances</i> , 2018, 4, eaav0118.	4.7	42
48	Seasonally derived components of the Canada Basin halocline. <i>Geophysical Research Letters</i> , 2017, 44, 5008-5015.	1.5	41
49	Observational Inferences of Lateral Eddy Diffusivity in the Halocline of the Beaufort Gyre. <i>Geophysical Research Letters</i> , 2017, 44, 12,331.	1.5	41
50	Efficient ocean modeling using non-hydrostatic algorithms. <i>Journal of Marine Systems</i> , 1998, 18, 115-134.	0.9	39
51	Contributions of Greenhouse Gas Forcing and the Southern Annular Mode to Historical Southern Ocean Surface Temperature Trends. <i>Geophysical Research Letters</i> , 2018, 45, 1086-1097.	1.5	36
52	Antarctic Glacial Melt as a Driver of Recent Southern Ocean Climate Trends. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL086892.	1.5	34
53	Ocean Basin Geometry and the Salinification of the Atlantic Ocean. <i>Journal of Climate</i> , 2013, 26, 6163-6184.	1.2	33
54	The dependence of the ocean's MOC on mesoscale eddy diffusivities: A model study. <i>Ocean Modelling</i> , 2017, 111, 1-8.	1.0	31

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55	A Three-Way Balance in the Beaufort Gyre: The Ice-Ocean Governor, Wind Stress, and Eddy Diffusivity. <i>Journal of Geophysical Research: Oceans</i> , 2019, 124, 3107-3124.	1.0	31
56	Entry, Flux, and Exit of Potential Vorticity in Ocean Circulation. <i>Journal of Physical Oceanography</i> , 2001, 31, 777-789.	0.7	30
57	Twentieth century correlations between extratropical SST variability and ITCZ shifts. <i>Geophysical Research Letters</i> , 2017, 44, 9039-9047.	1.5	28
58	Seasonal Variation in the Correlation Between Anomalies of Sea Level and Chlorophyll in the Antarctic Circumpolar Current. <i>Geophysical Research Letters</i> , 2018, 45, 5011-5019.	1.5	27
59	Oceananigans.jl: Fast and friendly geophysical fluid dynamics on GPUs. <i>Journal of Open Source Software</i> , 2020, 5, 2018.	2.0	27
60	Estimates of Air-Sea Feedbacks on Sea Surface Temperature Anomalies in the Southern Ocean. <i>Journal of Climate</i> , 2016, 29, 439-454.	1.2	26
61	Eddy Compensation Dampens Southern Ocean Sea Surface Temperature Response to Westerly Wind Trends. <i>Geophysical Research Letters</i> , 2019, 46, 4365-4377.	1.5	26
62	Linking ITCZ Migrations to the AMOC and North Atlantic/Pacific SST Decadal Variability. <i>Journal of Climate</i> , 2020, 33, 893-905.	1.2	26
63	Source waters for the highly productive Patagonian shelf in the southwestern Atlantic. <i>Journal of Marine Systems</i> , 2016, 158, 120-128.	0.9	25
64	On the Feedback of Ice-Ocean Stress Coupling from Geostrophic Currents in an Anticyclonic Wind Regime over the Beaufort Gyre. <i>Journal of Physical Oceanography</i> , 2019, 49, 369-383.	0.7	24
65	Exploring Ocean Circulation on Icy Moons Heated From Below. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	1.5	24
66	Mesoscale modulation of air-sea CO <sub>2</sub> flux in Drake Passage. <i>Journal of Geophysical Research: Oceans</i> , 2016, 121, 6635-6649.	1.0	23
67	Climate response functions for the Arctic Ocean: A proposed coordinated modelling experiment. <i>Geoscientific Model Development</i> , 2017, 10, 2833-2848.	1.3	23
68	The Southern Ocean Sea Surface Temperature Response to Ozone Depletion: A Multimodel Comparison. <i>Journal of Climate</i> , 2019, 32, 5107-5121.	1.2	22
69	Future Climate Change Under SSP Emission Scenarios With GISS-E2.1. <i>Journal of Advances in Modeling Earth Systems</i> , 2022, 14, .	1.3	22
70	Role of the ocean's AMOC in setting the uptake efficiency of transient tracers. <i>Geophysical Research Letters</i> , 2017, 44, 5590-5598.	1.5	20
71	Exploring the Role of the Ice-Ocean Governor and Mesoscale Eddies in the Equilibration of the Beaufort Gyre: Lessons from Observations. <i>Journal of Physical Oceanography</i> , 2020, 50, 269-277.	0.7	16
72	Sea-Ice Melt Driven by Ice-Ocean Stresses on the Mesoscale. <i>Journal of Geophysical Research: Oceans</i> , 2020, 125, e2020JC016404.	1.0	15

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73	Uncertainty Quantification of Ocean Parameterizations: Application to the K&EParameterization for Penetrative Convection. Journal of Advances in Modeling Earth Systems, 2020, 12, e2020MS002108.	1.3	13
74	Interannual SAM Modulation of Antarctic Sea Ice Extent Does Not Account for Its Long&Eterm Trends, Pointing to a Limited Role for Ozone Depletion. Geophysical Research Letters, 2021, 48, e2021GL094871.	1.5	12
75	Anomalous chlorofluorocarbon uptake by mesoscale eddies in the <sc>D</sc>ake <sc>P</sc>assage region. Journal of Geophysical Research: Oceans, 2015, 120, 1065-1078.	1.0	11
76	Impact of Current&EWind Interaction on Vertical Processes in the Southern Ocean. Journal of Geophysical Research: Oceans, 2020, 125, e2020JC016046.	1.0	10
77	Southern Ocean Heat Storage, Reemergence, and Winter Sea Ice Decline Induced by Summertime Winds. Journal of Climate, 2021, 34, 1403-1415.	1.2	9
78	Impact of Near&EInertial Waves on Vertical Mixing and Air&ESea CO<sub>2</sub> Fluxes in the Southern Ocean. Journal of Geophysical Research: Oceans, 2019, 124, 4605-4617.	1.0	7
79	On the effects of the ocean on atmospheric CFC-11 lifetimes and emissions. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, e2021528118.	3.3	5
80	Water mass transformation and overturning circulation in the Arabian Gulf. Journal of Physical Oceanography, 2021, , .	0.7	4
81	Observations of Upwelling and Downwelling Around Antarctica Mediated by Sea Ice. Frontiers in Marine Science, 0, 9, .	1.2	4
82	Suppressed<i>p</i>CO<sub>2</sub> in the Southern Ocean Due to the Interaction Between Current and Wind. Journal of Geophysical Research: Oceans, 2021, 126, e2021JC017884.	1.0	3
83	Wind Feedback Mediated by Sea Ice in the Nordic Seas. Journal of Climate, 2020, 33, 6621-6632.	1.2	1
84	Polar Phasing and Cross&EEquatorial Heat Transfer Following a Simulated Abrupt NH Warming of a Glacial Climate. Paleoceanography and Paleoclimatology, 2020, 35, e2019PA003810.	1.3	0