John C Marshall

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

80 papers	10,260 citations	40 h-index	84 g-index
84 ext. papers	11,557 ext. citations	4.9 avg, IF	6.51 L-index

#	Paper	IF	Citations
80	A finite-volume, incompressible Navier Stokes model for studies of the ocean on parallel computers. *Journal of Geophysical Research*, **1997**, 102, 5753-5766		1584
79	Hydrostatic, quasi-hydrostatic, and nonhydrostatic ocean modeling. *Journal of Geophysical Research* , **1997**, 102, 5733-5752		908
78	Open-ocean convection: Observations, theory, and models. *Reviews of Geophysics*, **1999**, 37, 1-64	23.1	788
77	North Atlantic climate variability: phenomena, impacts and mechanisms. *International Journal of Climatology*, **2001**, 21, 1863-1898	3.5	764
76	Closure of the meridional overturning circulation through Southern Ocean upwelling. *Nature Geoscience*, **2012**, 5, 171-180	18.3	568
75	Representation of Topography by Shaved Cells in a Height Coordinate Ocean Model. *Monthly Weather Review*, **1997**, 125, 2293-2315	2.4	445
74	Specification of Eddy Transfer Coefficients in Coarse-Resolution Ocean Circulation Models*. *Journal of Physical Oceanography*, **1997**, 27, 381-402	2.4	377
73	Observations, inferences, and mechanisms of the Atlantic Meridional Overturning Circulation: A review. *Reviews of Geophysics*, **2016**, 54, 5-63	23.1	317
72	Residual-Mean Solutions for the Antarctic Circumpolar Current and Its Associated Overturning Circulation. *Journal of Physical Oceanography*, **2003**, 33, 2341-2354	2.4	305
71	Southern Ocean warming delayed by circumpolar upwelling and equatorward transport. *Nature Geoscience*, **2016**, 9, 549-554	18.3	264
70	Global ocean circulation during 1992–1997, estimated from ocean observations and a general circulation model. *Journal of Geophysical Research*, **2002**, 107, 1-1		261
69	The Relationship between ITCZ Location and Cross-Equatorial Atmospheric Heat Transport: From the Seasonal Cycle to the Last Glacial Maximum. *Journal of Climate*, **2013**, 26, 3597-3618	4.4	237
68	Convection with Rotation in a Neutral Ocean: A Study of Open-Ocean Deep Convection. *Journal of Physical Oceanography*, **1993**, 23, 1009-1039	2.4	230
67	Implementation of an Atmosphere–Ocean General Circulation Model on the Expanded Spherical Cube. *Monthly Weather Review*, **2004**, 132, 2845-2863	2.4	213
66	Changes in ITCZ location and cross-equatorial heat transport at the Last Glacial Maximum, Heinrich Stadial 1, and the mid-Holocene. *Earth and Planetary Science Letters*, **2014**, 390, 69-79	5.3	187
65	The ocean's role in setting the mean position of the Inter-Tropical Convergence Zone. *Climate Dynamics*, **2014**, 42, 1967-1979	4.2	172
64	Scales, Growth Rates, and Spectral Fluxes of Baroclinic Instability in the Ocean. *Journal of Physical Oceanography*, **2011**, 41, 1057-1076	2.4	141

63	Antarctic Ocean and Sea Ice Response to Ozone Depletion: A Two-Time-Scale Problem. *Journal of Climate*, **2015**, 28, 1206-1226	4.4	139
62	Estimating Eddy Stresses by Fitting Dynamics to Observations Using a Residual-Mean Ocean Circulation Model and Its Adjoint. *Journal of Physical Oceanography*, **2005**, 35, 1891-1910	2.4	133
61	The ocean's role in the transient response of climate to abrupt greenhouse gas forcing. *Climate Dynamics*, **2015**, 44, 2287-2299	4.2	114
60	The Role of Eddy Transfer in Setting the Stratification and Transport of a Circumpolar Current. *Journal of Physical Oceanography*, **2002**, 32, 39-54	2.4	112
59	The Dependence of Southern Ocean Meridional Overturning on Wind Stress. *Journal of Physical Oceanography*, **2011**, 41, 2261-2278	2.4	111
58	Global surface eddy diffusivities derived from satellite altimetry. *Journal of Geophysical Research: Oceans*, **2013**, 118, 901-916	3.3	107
57	Reconciling thermodynamic and dynamic methods of computation of water-mass transformation rates. *Deep-Sea Research Part I: Oceanographic Research Papers*, **1999**, 46, 545-572	2.5	107
56	Effects of vertical variations of thickness diffusivity in an ocean general circulation model. *Ocean Modelling*, **2007**, 18, 122-141	3	101
55	Impact of the Atlantic meridional overturning circulation on ocean heat storage and transient climate change. *Geophysical Research Letters*, **2014**, 41, 2108-2116	4.9	98
54	GISS-E2.1: Configurations and Climatology. *Journal of Advances in Modeling Earth Systems*, **2020**, 12, e2019MS002025	7.1	93
53	The ocean's role in polar climate change: asymmetric Arctic and Antarctic responses to greenhouse gas and ozone forcing. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2014**, 372, 20130040	3	97
52	Coupling of Trade Winds with Ocean Circulation Damps ITCZ Shifts. *Journal of Climate*, **2017**, 30, 4395-4411	4.4	79
51	Climate Determinism Revisited: Multiple Equilibria in a Complex Climate Model. *Journal of Climate*, **2011**, 24, 992-1012	4.4	74
50	Fast and slow responses of Southern Ocean sea surface temperature to SAM in coupled climate models. *Climate Dynamics*, **2017**, 48, 1595-1609	4.2	69
49	Control of Lower-Limb Overturning Circulation in the Southern Ocean by Diapycnal Mixing and Mesoscale Eddy Transfer. *Journal of Physical Oceanography*, **2008**, 38, 2832-2845	2.4	56
48	Understanding Arctic Ocean Circulation: A Review of Ocean Dynamics in a Changing Climate. *Journal of Geophysical Research: Oceans*, **2020**, 125, e2018JC014378	3.3	55
47	Direct Estimate of Lateral Eddy Diffusivity Upstream of Drake Passage. *Journal of Physical Oceanography*, **2014**, 44, 2593-2616	2.4	52
46	The Interannual Variability of Tropical Precipitation and Interhemispheric Energy Transport. *Journal of Climate*, **2014**, 27, 3377-3392	4.4	51

45	Sensitivity of Antarctic sea ice to the Southern Annular Mode in coupled climate models. *Climate Dynamics*, **2017**, 49, 1813-1831	4.2	45
44	Carbon dioxide and oxygen fluxes in the Southern Ocean: Mechanisms of interannual variability. *Global Biogeochemical Cycles*, **2007**, 21, n/a-n/a	5.9	44
43	Observations of Seasonal Upwelling and Downwelling in the Beaufort Sea Mediated by Sea Ice. *Journal of Physical Oceanography*, **2018**, 48, 795-805	2.4	42
42	On the Relationship between Subduction Rates and Diabatic Forcing of the Mixed Layer. *Journal of Physical Oceanography*, **1991**, 21, 1793-1802	2.4	42
41	Exploring Mechanisms of Variability and Predictability of Atlantic Meridional Overturning Circulation in Two Coupled Climate Models. *Journal of Climate*, **2012**, 25, 4067-4080	4.4	41
40	What controls the uptake of transient tracers in the Southern Ocean?. *Global Biogeochemical Cycles*, **2004**, 18, n/a-n/a	5.9	39
39	Hemispherically asymmetric trade wind changes as signatures of past ITCZ shifts. *Quaternary Science Reviews*, **2018**, 180, 214-228	3.9	33
38	Observed mesoscale eddy signatures in Southern Ocean surface mixed-layer depth. *Journal of Geophysical Research: Oceans*, **2017**, 122, 617-635	3.3	32
37	Efficient ocean modeling using non-hydrostatic algorithms. *Journal of Marine Systems*, **1998**, 18, 115-134	2.7	32
36	Modulation of the Seasonal Cycle of Antarctic Sea Ice Extent Related to the Southern Annular Mode. *Geophysical Research Letters*, **2017**, 44, 9761-9768	4.9	32
35	Observational Inferences of Lateral Eddy Diffusivity in the Halocline of the Beaufort Gyre. *Geophysical Research Letters*, **2017**, 44, 12,331	4.9	30
34	The Ice-Ocean Governor: Ice-Ocean Stress Feedback Limits Beaufort Gyre Spin-Up. *Geophysical Research Letters*, **2018**, 45, 11,293	4.9	30
33	Ocean Basin Geometry and the Salinification of the Atlantic Ocean. *Journal of Climate*, **2013**, 26, 6163-6184	4.4	29
32	Entry, Flux, and Exit of Potential Vorticity in Ocean Circulation. *Journal of Physical Oceanography*, **2001**, 31, 777-789	2.4	29
31	The dependence of the ocean□ MOC on mesoscale eddy diffusivities: A model study. *Ocean Modelling*, **2017**, 111, 1-8	3	26
30	Seasonally derived components of the Canada Basin halocline. *Geophysical Research Letters*, **2017**, 44, 5008-5015	4.9	25
29	Western U.S. lake expansions during Heinrich stadials linked to Pacific Hadley circulation. *Science Advances*, **2018**, 4, eaav0118	14.3	24
28	Contributions of Greenhouse Gas Forcing and the Southern Annular Mode to Historical Southern Ocean Surface Temperature Trends. *Geophysical Research Letters*, **2018**, 45, 1086-1097	4.9	21

27	Source waters for the highly productive Patagonian shelf in the southwestern Atlantic. *Journal of Marine Systems*, **2016**, 158, 120-128	2.7	20
26	Twentieth century correlations between extratropical SST variability and ITCZ shifts. *Geophysical Research Letters*, **2017**, 44, 9039-9047	4.9	20
25	Estimates of Air–Sea Feedbacks on Sea Surface Temperature Anomalies in the Southern Ocean. *Journal of Climate*, **2016**, 29, 439-454	4.4	19
24	Climate response functions for the Arctic Ocean: a proposed coordinated modelling experiment. *Geoscientific Model Development*, **2017**, 10, 2833-2848	6.3	18
23	Seasonal Variation in the Correlation Between Anomalies of Sea Level and Chlorophyll in the Antarctic Circumpolar Current. *Geophysical Research Letters*, **2018**, 45, 5011-5019	4.9	17
22	On the Feedback of Ice–Ocean Stress Coupling from Geostrophic Currents in an Anticyclonic Wind Regime over the Beaufort Gyre. *Journal of Physical Oceanography*, **2019**, 49, 369-383	2.4	15
21	A Three-Way Balance in the Beaufort Gyre: The Ice-Ocean Governor, Wind Stress, and Eddy Diffusivity. *Journal of Geophysical Research: Oceans*, **2019**, 124, 3107-3124	3.3	15
20	Eddy Compensation Dampens Southern Ocean Sea Surface Temperature Response to Westerly Wind Trends. *Geophysical Research Letters*, **2019**, 46, 4365-4377	4.9	13
19	Mesoscale modulation of air-sea CO2 flux in Drake Passage. *Journal of Geophysical Research: Oceans*, **2016**, 121, 6635-6649	3.3	13
18	CMIP6 Historical Simulations (1850–2014) With GISS-E2.1. *Journal of Advances in Modeling Earth Systems*, **2021**, 13, e2019MS002034	7.1	12
17	Anomalous chlorofluorocarbon uptake by mesoscale eddies in the Drake Passage region. *Journal of Geophysical Research: Oceans*, **2015**, 120, 1065-1078	3.3	10
16	Antarctic Glacial Melt as a Driver of Recent Southern Ocean Climate Trends. *Geophysical Research Letters*, **2020**, 47, e2019GL086892	4.9	10
15	Role of the Ocean's AMOC in setting the Uptake Efficiency of Transient Tracers. *Geophysical Research Letters*, **2017**, 44, 5590-5598	4.9	10
14	Linking ITCZ Migrations to the AMOC and North Atlantic/Pacific SST Decadal Variability. *Journal of Climate*, **2020**, 33, 893-905	4.4	10
13	The Southern Ocean Sea Surface Temperature Response to Ozone Depletion: A Multimodel Comparison. *Journal of Climate*, **2019**, 32, 5107-5121	4.4	7
12	Oceananigans.jl: Fast and friendly geophysical fluid dynamics on GPUs. *Journal of Open Source Software*, **2020**, 5, 2018	5.2	7
11	Sea-Ice Melt Driven by Ice-Ocean Stresses on the Mesoscale. *Journal of Geophysical Research: Oceans*, **2020**, 125, e2020JC016404	3.3	6
10	Impact of Current-Wind Interaction on Vertical Processes in the Southern Ocean. *Journal of Geophysical Research: Oceans*, **2020**, 125, e2020JC016046	3.3	5

9	Exploring the Role of the Ice-Ocean Governor and Mesoscale Eddies in the Equilibration of the Beaufort Gyre: Lessons from Observations. *Journal of Physical Oceanography*, **2020**, 50, 269-277	2.4	5
8	Impact of Near-Inertial Waves on Vertical Mixing and Air-Sea CO2 Fluxes in the Southern Ocean. *Journal of Geophysical Research: Oceans*, **2019**, 124, 4605-4617	3.3	4
7	Uncertainty Quantification of Ocean Parameterizations: Application to the K-Profile-Parameterization for Penetrative Convection. *Journal of Advances in Modeling Earth Systems*, **2020**, 12, e2020MS002108	7.1	3
6	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,	11.5	3
5	Southern Ocean Heat Storage, Reemergence, and Winter Sea Ice Decline Induced by Summertime Winds. *Journal of Climate*, **2021**, 34, 1403-1415	4.4	2
4	Interannual SAM Modulation of Antarctic Sea Ice Extent Does Not Account for Its Long-Term Trends, Pointing to a Limited Role for Ozone Depletion. *Geophysical Research Letters*, **2021**, 48, e2021GL094871	4.9	1
3	Wind Feedback Mediated by Sea Ice in the Nordic Seas. *Journal of Climate*, **2020**, 33, 6621-6632	4.4	1
2	Suppressed pCO2 in the Southern Ocean Due to the Interaction Between Current and Wind. *Journal of Geophysical Research: Oceans*, **2021**, 126, e2021JC017884	3.3	0
1	Polar Phasing and Cross-Equatorial Heat Transfer Following a Simulated Abrupt NH Warming of a Glacial Climate. *Paleoceanography and Paleoclimatology*, **2020**, 35, e2019PA003810	3.3	