

A J Adcroft

List of Publications by Year in Descending Order

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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.

66

papers

7,524

citations

35

h-index

74

g-index

74

ext. papers

8,536

ext. citations

4.6

avg, IF

5.58

L-index

#	Paper	IF	Citations
66	The Effects of Ice Floe-Floe Interactions on Pressure Ridging in Sea Ice. <i>Journal of Advances in Modeling Earth Systems</i> , 2021 , 13, e2020MS002336	7.1	2
65	Next-generation regional ocean projections for living marine resource management in a changing climate. <i>ICES Journal of Marine Science</i> , 2021 , 78, 1969-1987	2.7	5
64	A Primer on the Vertical Lagrangian-Remap Method in Ocean Models Based on Finite Volume Generalized Vertical Coordinates. <i>Journal of Advances in Modeling Earth Systems</i> , 2020 , 12, e2019MS001954	7.1	8
63	The GFDL Earth System Model Version 4.1 (GFDL-ESM 4.1): Overall Coupled Model Description and Simulation Characteristics. <i>Journal of Advances in Modeling Earth Systems</i> , 2020 , 12, e2019MS002015	7.1	97
62	Climate Sensitivity of GFDL's CM4.0. <i>Journal of Advances in Modeling Earth Systems</i> , 2020 , 12, e2019MS001838	7.1	12
61	Evaluation of global ocean-ice model simulations based on the experimental protocols of the Ocean Model Intercomparison Project phase 2 (OMIP-2). <i>Geoscientific Model Development</i> , 2020 , 13, 3643-3708	6.3	29
60	A General-Coordinate, Nonlocal Neutral Diffusion Operator. <i>Journal of Advances in Modeling Earth Systems</i> , 2020 , 12, e2019MS001992	7.1	3
59	GFDL's SPEAR Seasonal Prediction System: Initialization and Ocean Tendency Adjustment (OTA) for Coupled Model Predictions. <i>Journal of Advances in Modeling Earth Systems</i> , 2020 , 12, e2020MS002149	7.1	9
58	Parameterizing the Impact of Unresolved Temperature Variability on the Large-Scale Density Field: Part 1. Theory.. <i>Journal of Advances in Modeling Earth Systems</i> , 2020 , 12, e2020MS002185	7.1	4
57	SPEAR: The Next Generation GFDL Modeling System for Seasonal to Multidecadal Prediction and Projection. <i>Journal of Advances in Modeling Earth Systems</i> , 2020 , 12, e2019MS001895	7.1	40
56	Modeling Ice Shelf Cavities and Tabular Icebergs Using Lagrangian Elements. <i>Journal of Geophysical Research: Oceans</i> , 2019 , 124, 3378-3392	3.3	3
55	Challenges and Prospects in Ocean Circulation Models. <i>Frontiers in Marine Science</i> , 2019 , 6,	4.5	54
54	Toward an Energetically Consistent, Resolution Aware Parameterization of Ocean Mesoscale Eddies. <i>Journal of Advances in Modeling Earth Systems</i> , 2019 , 11, 2844-2860	7.1	17
53	The GFDL Global Ocean and Sea Ice Model OM4.0: Model Description and Simulation Features. <i>Journal of Advances in Modeling Earth Systems</i> , 2019 , 11, 3167-3211	7.1	88
52	Structure and Performance of GFDL's CM4.0 Climate Model. <i>Journal of Advances in Modeling Earth Systems</i> , 2019 , 11, 3691-3727	7.1	128
51	Comparing Ocean Surface Boundary Vertical Mixing Schemes Including Langmuir Turbulence. <i>Journal of Advances in Modeling Earth Systems</i> , 2019 , 11, 3545-3592	7.1	33
50	Diagnosing Subgrid Mesoscale Eddy Fluxes With and Without Topography. <i>Journal of Advances in Modeling Earth Systems</i> , 2019 , 11, 3995-4015	7.1	3

49	Simulating Water Residence Time in the Coastal Ocean: A Global Perspective. <i>Geophysical Research Letters</i> , 2019 , 46, 13910-13919	4.9	19
48	The KPP Boundary Layer Scheme for the Ocean: Revisiting Its Formulation and Benchmarking One-Dimensional Simulations Relative to LES. <i>Journal of Advances in Modeling Earth Systems</i> , 2018 , 10, 2647-2685	7.1	39
47	Application of Discrete Element Methods to Approximate Sea Ice Dynamics. <i>Journal of Advances in Modeling Earth Systems</i> , 2018 , 10, 2228-2244	7.1	9
46	Attribution of horizontal and vertical contributions to spurious mixing in an Arbitrary LagrangianEulerian ocean model. <i>Ocean Modelling</i> , 2017 , 119, 45-56	3	11
45	Modeling tabular icebergs submerged in the ocean. <i>Journal of Advances in Modeling Earth Systems</i> , 2017 , 9, 1948-1972	7.1	12
44	OMIP contribution to CMIP6: experimental and diagnostic protocol for the physical component of the Ocean Model Intercomparison Project. <i>Geoscientific Model Development</i> , 2016 , 9, 3231-3296	6.3	130
43	The effects of Antarctic iceberg calving-size distribution in a global climate model. <i>Journal of Geophysical Research: Oceans</i> , 2016 , 121, 5773-5788	3.3	47
42	Energy Flux into Internal Lee Waves: Sensitivity to Future Climate Changes Using Linear Theory and a Climate Model. <i>Journal of Climate</i> , 2015 , 28, 2365-2384	4.4	19
41	Parameterization of eddy fluxes based on a mesoscale energy budget. <i>Ocean Modelling</i> , 2015 , 92, 28-41	3	37
40	Energy budget-based backscatter in an eddy permitting primitive equation model. <i>Ocean Modelling</i> , 2015 , 94, 15-26	3	46
39	A framework for parameterization of heterogeneous ocean convection. <i>Ocean Modelling</i> , 2014 , 82, 1-14	3	8
38	An order-invariant real-to-integer conversion sum. <i>Parallel Computing</i> , 2014 , 40, 140-143	1	0
37	Atlantic watermass and circulation response to persistent freshwater forcing in two coupled general circulation models. <i>Climate Dynamics</i> , 2014 , 42, 59-68	4.2	2
36	Influence of Ocean and Atmosphere Components on Simulated Climate Sensitivities. <i>Journal of Climate</i> , 2013 , 26, 231-245	4.4	28
35	Representation of topography by porous barriers and objective interpolation of topographic data. <i>Ocean Modelling</i> , 2013 , 67, 13-27	3	17
34	GFDL-ESM2 Global Coupled Climate-Carbon Earth System Models. Part II: Carbon System Formulation and Baseline Simulation Characteristics*. <i>Journal of Climate</i> , 2013 , 26, 2247-2267	4.4	460
33	Sensitivity of Twenty-First-Century Global-Mean Steric Sea Level Rise to Ocean Model Formulation. <i>Journal of Climate</i> , 2013 , 26, 2947-2956	4.4	23
32	Routes to energy dissipation for geostrophic flows in the Southern Ocean. <i>Nature Geoscience</i> , 2013 , 6, 48-51	18.3	102

31	Simulated Climate and Climate Change in the GFDL CM2.5 High-Resolution Coupled Climate Model. <i>Journal of Climate</i> , 2012 , 25, 2755-2781	4.4	395
30	Spurious diapycnal mixing and the role of momentum closure. <i>Ocean Modelling</i> , 2012 , 45-46, 37-58	3	100
29	Investigation of the Surface and Circulation Impacts of Cloud-Brightening Geoengineering. <i>Journal of Climate</i> , 2012 , 25, 7527-7543	4.4	5
28	GFDL-ESM2 Global Coupled Climate-Carbon Earth System Models. Part I: Physical Formulation and Baseline Simulation Characteristics. <i>Journal of Climate</i> , 2012 , 25, 6646-6665	4.4	791
27	Dynamics of a dense gravity current flowing over a corrugation. <i>Ocean Modelling</i> , 2011 , 38, 71-84	3	10
26	Simulations of underwater plumes of dissolved oil in the Gulf of Mexico. <i>Geophysical Research Letters</i> , 2010 , 37, n/a-n/a	4.9	67
25	Parameterization of ocean eddies: Potential vorticity mixing, energetics and Arnold's first stability theorem. <i>Ocean Modelling</i> , 2010 , 32, 188-204	3	68
24	Parameterizing the fresh-water flux from land ice to ocean with interactive icebergs in a coupled climate model. <i>Ocean Modelling</i> , 2010 , 34, 111-124	3	81
23	High-order regridding/remapping schemes for continuous isopycnal and generalized coordinates in ocean models. <i>Journal of Computational Physics</i> , 2009 , 228, 8665-8692	4.1	17
22	Reconciling estimates of the free surface height in Lagrangian vertical coordinate ocean models with mode-split time stepping. <i>Ocean Modelling</i> , 2009 , 29, 15-26	3	40
21	Formulating the Equations of Ocean Models. <i>Geophysical Monograph Series</i> , 2008 , 281-317	1.1	9
20	A finite volume discretization of the pressure gradient force using analytic integration. <i>Ocean Modelling</i> , 2008 , 22, 106-113	3	32
19	A high-order finite volume remapping scheme for nonuniform grids: The piecewise quartic method (PQM). <i>Journal of Computational Physics</i> , 2008 , 227, 7394-7422	4.1	36
18	On methods for solving the oceanic equations of motion in generalized vertical coordinates. <i>Ocean Modelling</i> , 2006 , 11, 224-233	3	50
17	The vertical structure of ocean heat transport. <i>Geophysical Research Letters</i> , 2005 , 32,	4.9	63
16	Atmosphere-Ocean Modeling Exploiting Fluid Isomorphisms. <i>Monthly Weather Review</i> , 2004 , 132, 2882-2894	4.4	52
15	Rescaled height coordinates for accurate representation of free-surface flows in ocean circulation models. <i>Ocean Modelling</i> , 2004 , 7, 269-284	3	164
14	Conservation of properties in a free-surface model. <i>Ocean Modelling</i> , 2004 , 6, 221-244	3	69

13	How Sensitive Are Coarse General Circulation Models to Fundamental Approximations in the Equations of Motion?. <i>Journal of Physical Oceanography</i> , 2004 , 34, 306-319	2.4	35
12	Implementation of an Atmosphere-Ocean General Circulation Model on the Expanded Spherical Cube. <i>Monthly Weather Review</i> , 2004 , 132, 2845-2863	2.4	213
11	Internal Wave Breaking at Concave and Convex Continental Slopes*. <i>Journal of Physical Oceanography</i> , 2003 , 33, 2224-2246	2.4	132
10	Volume, heat, and freshwater transports of the global ocean circulation 1993-2000, estimated from a general circulation model constrained by World Ocean Circulation Experiment (WOCE) data. <i>Journal of Geophysical Research</i> , 2003 , 108, 7-1		120
9	Global ocean circulation during 1992-1997, estimated from ocean observations and a general circulation model. <i>Journal of Geophysical Research</i> , 2002 , 107, 1-1		261
8	Impact of geothermal heating on the global ocean circulation. <i>Geophysical Research Letters</i> , 2001 , 28, 1735-1738	4.9	76
7	Geothermal heating and its influence on the meridional overturning circulation. <i>Journal of Geophysical Research</i> , 2001 , 106, 31141-31154		32
6	A New Treatment of the Coriolis Terms in C-Grid Models at Both High and Low Resolutions. <i>Monthly Weather Review</i> , 1999 , 127, 1928-1936	2.4	77
5	. <i>Tellus, Series A: Dynamic Meteorology and Oceanography</i> , 1998 , 50, 95-108	2	43
4	Representation of Topography by Shaved Cells in a Height Coordinate Ocean Model. <i>Monthly Weather Review</i> , 1997 , 125, 2293-2315	2.4	445
3	Comment on "Climate control requires a dam at the Strait of Gibraltar" <i>Eos</i> , 1997 , 78, 507	1.5	2
2	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		1584
1	Hydrostatic, quasi-hydrostatic, and nonhydrostatic ocean modeling. <i>Journal of Geophysical Research</i> , 1997 , 102, 5733-5752		908