Richard Greatbatch

List of Publications by Year
in descending order

120	4,409	109264	128225
papers	citations	35 h-index	60 g-index

131	131	131	4342
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A note on the representation of steric sea level in models that conserve volume rather than mass. Journal of Geophysical Research, 1994, 99, 12767.	3.3	243
2	Western boundary currents regulated by interaction between ocean eddies and the atmosphere. Nature, 2016, 535, 533-537.	13.7	236
3	A diagnosis of interpentadal circulation changes in the North Atlantic. Journal of Geophysical Research, 1991, 96, 22009-22023.	3.3	168
4	Towards a mesoscale eddy closure. Ocean Modelling, 2008, 20, 223-239.	1.0	152
5	The North Atlantic Oscillation. Stochastic Environmental Research and Risk Assessment, 2000, 14, 0213-0242.	1.9	142
6	Challenges and Prospects in Ocean Circulation Models. Frontiers in Marine Science, 2019, 6, .	1.2	133
7	Changes in the North Atlantic Oscillation influence CO₂ uptake in the North Atlantic over the past 2 decades. Global Biogeochemical Cycles, 2008, 22, .	1.9	127
8	On the role of circulation and mixing in the ventilation of oxygen minimum zones with a focus on the eastern tropical North Atlantic. Biogeosciences, 2015, 12, 489-512.	1.3	109
9	An assessment of global and regional sea level for years 1993â€“2007 in a suite of interannual CORE-II simulations. Ocean Modelling, 2014, 78, 35-89.	1.0	106
10	Physical processes that impact the evolution of global mean sea level in ocean climate models. Ocean Modelling, 2012, 51, 37-72.	1.0	102
11	The formation of a subsurface anticyclonic eddy in the <scp>P</scp>eruâ€<scp>C</scp>hile <scp>U</scp>ndercurrent and its impact on the nearâ€coastal salinity, oxygen, and nutrient distributions. Journal of Geophysical Research: Oceans, 2016, 121, 476-501.	1.0	95
12	Enhanced vertical propagation of storm-induced near-inertial energy in an eddying ocean channel model. Geophysical Research Letters, 2005, 32, n/a-n/a.	1.5	93
13	Interannual atmospheric variability forced by the deep equatorial Atlantic Ocean. Nature, 2011, 473, 497-500.	13.7	83
14	Wind work in a model of the northwest Atlantic Ocean. Geophysical Research Letters, 2007, 34, .	1.5	81
15	Nonstationary impact of ENSO on Euro-Atlantic winter climate. Geophysical Research Letters, 2004, 31, .	1.5	76
16	Hindcast of the 1976/77 and 1998/99 Climate Shifts in the Pacific. Journal of Climate, 2013, 26, 7650-7661.	1.2	76
17	Evidence of nonlinear dynamics in the eastward shift of the NAO. Geophysical Research Letters, 2003, 30, .	1.5	72
18	Barotropic waves generated by storms moving rapidly over shallow water. Journal of Geophysical Research, 2002, 107, 16-1.	3.3	67

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19	A Damped Decadal Oscillation in the North Atlantic Climate System. Journal of Climate, 2003, 16, 4043-4060.	1.2	61
20	On Parameterizing Vertical Mixing of Momentum in Non-eddy Resolving Ocean Models. Journal of Physical Oceanography, 1990, 20, 1634-1637.	0.7	58
21	Decadal hindcasts initialized using observed surface wind stress: Evaluation and prediction out to 2024. Geophysical Research Letters, 2015, 42, 6454-6461.	1.5	58
22	Interpreting Eddy Fluxes. Journal of Physical Oceanography, 2007, 37, 1282-1296.	0.7	56
23	The changing relationship between the NAO and northern hemisphere climate variability. Geophysical Research Letters, 2002, 29, 52-1.	1.5	55
24	Trend in Northern Hemisphere Winter Atmospheric Circulation during the Last Half of the Twentieth Century. Journal of Climate, 2004, 17, 3745-3760.	1.2	51
25	Spreading of near-inertial energy in a 1/12Â° model of the North Atlantic Ocean. Geophysical Research Letters, 2007, 34, .	1.5	50
26	Four-Gyre Circulation in a Barotropic Model with Double-Gyre Wind Forcing. Journal of Physical Oceanography, 2000, 30, 1461-1471.	0.7	48
27	Tropical Forcing of the Summer East Atlantic Pattern. Geophysical Research Letters, 2017, 44, 11,166.	1.5	48
28	Two major modes of variability of the East Asian summer monsoon. Quarterly Journal of the Royal Meteorological Society, 2010, 136, 829-841.	1.0	46
29	Atlantic Multidecadal Variability in a model with an improved North Atlantic Current. Geophysical Research Letters, 2016, 43, 8199-8206.	1.5	46
30	Seasonal variability of eddy kinetic energy in a global highâ€resolution ocean model. Geophysical Research Letters, 2015, 42, 9379-9386.	1.5	45
31	Tropical rainfall predictions from multiple seasonal forecast systems. International Journal of Climatology, 2019, 39, 974-988.	1.5	45
32	On the seasonal variability of eddy kinetic energy in the Gulf Stream region. Geophysical Research Letters, 2008, 35, .	1.5	44
33	Annual and Semiannual Cycle of Equatorial Atlantic Circulation Associated with Basin-Mode Resonance. Journal of Physical Oceanography, 2016, 46, 3011-3029.	0.7	40
34	Predictability of European winter 2019/20: Indian Ocean dipole impacts on the <scp>NAO</scp>. Atmospheric Science Letters, 2020, 21, e1005.	0.8	40
35	Discrepancies between Different Northern Hemisphere Summer Atmospheric Data Products. Journal of Climate, 2006, 19, 1261-1273.	1.2	39
36	Factors influencing Northern Hemisphere winter mean atmospheric circulation anomalies during the period 1960/61 to 2001/02. Quarterly Journal of the Royal Meteorological Society, 2012, 138, 1970-1982.	1.0	39

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37	Ventilation of the equatorial Atlantic by the equatorial deep jets. Journal of Geophysical Research, 2012, 117, .	3.3	38
38	Impact of variability in the Indian summer monsoon on the East Asian summer monsoon. Atmospheric Science Letters, 2013, 14, 14-19.	0.8	38
39	The Deep Equatorial Ocean Circulation in Wind-Forced Numerical Solutions. Journal of Physical Oceanography, 2015, 45, 1709-1734.	0.7	38
40	The variability of the East Asian summer monsoon and its relationship to ENSO in a partially coupled climate model. Climate Dynamics, 2014, 42, 367-379.	1.7	37
41	Oxygen variance and meridional oxygen supply in the Tropical North East Atlantic oxygen minimum zone. Climate Dynamics, 2014, 43, 2999-3024.	1.7	35
42	On Conservation Equations in Oceanography: How Accurate Are Boussinesq Ocean Models?. Journal of Physical Oceanography, 2002, 32, 1574-1584.	0.7	34
43	A model for the inertial recirculation of a gyre. Journal of Marine Research, 1987, 45, 601-634.	0.3	32
44	Hindcasting the NAO using diabatic forcing of a simple AGCM. Geophysical Research Letters, 2002, 29, 50-1-50-4.	1.5	32
45	On the relationship between Atlantic NiÃ±o variability and ocean dynamics. Climate Dynamics, 2018, 51, 597-612.	1.7	32
46	The impact of sea surface temperature bias on equatorial Atlantic interannual variability in partially coupled model experiments. Geophysical Research Letters, 2015, 42, 5540-5546.	1.5	30
47	A new two-way nesting technique for ocean modeling based on the smoothed semi-prognostic method. Ocean Dynamics, 2005, 55, 162-177.	0.9	29
48	Transport driven by eddy momentum fluxes in the Gulf Stream Extension region. Geophysical Research Letters, 2010, 37, .	1.5	29
49	Tropical links of the Arctic Oscillation. Geophysical Research Letters, 2002, 29, 4-1-4-4.	1.5	28
50	Local versus Tropical Diabatic Heating and the Winter North Atlantic Oscillation. Journal of Climate, 2007, 20, 2058-2075.	1.2	28
51	Remote control of North Atlantic Oscillation predictability via the stratosphere. Quarterly Journal of the Royal Meteorological Society, 2017, 143, 706-719.	1.0	28
52	Initialization and Ensemble Generation for Decadal Climate Predictions: A Comparison of Different Methods. Journal of Advances in Modeling Earth Systems, 2019, 11, 149-172.	1.3	28
53	Evolution of the Atlantic Multidecadal Variability in a Model with an Improved North Atlantic Current. Journal of Climate, 2017, 30, 5491-5512.	1.2	27
54	Prospects for decadal prediction of the North Atlantic Oscillation (NAO). Geophysical Research Letters, 2002, 29, 104-1-104-4.	1.5	26

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55	On advection and diffusion in the mesosphere and lower thermosphere: The role of rotational fluxes. Journal of Geophysical Research, 2004, 109, .	3.3	26
56	The use of a flow field correction technique for alleviating the North Atlantic cold bias with application to the Kiel Climate Model. Ocean Dynamics, 2015, 65, 1079-1093.	0.9	26
57	The Non-Boussinesq Temporal Residual Mean. Journal of Physical Oceanography, 2003, 33, 1231-1239.	0.7	25
58	On the Northern Annular Mode Surface Signal Associated with Stratospheric Variability. Journals of the Atmospheric Sciences, 2013, 70, 2103-2118.	0.6	24
59	Intraseasonal variation of the East Asian summer monsoon associated with the Maddenâ€“Julian Oscillation. Atmospheric Science Letters, 2018, 19, e794.	0.8	24
60	On the Width of the Equatorial Deep Jets. Journal of Physical Oceanography, 2012, 42, 1729-1740.	0.7	22
61	Role of Equatorial Basin-Mode Resonance for the Seasonal Variability of the Angola Current at 11Â°S. Journal of Physical Oceanography, 2018, 48, 261-281.	0.7	21
62	Seasonal prediction of equatorial Atlantic sea surface temperature using simple initialization and bias correction techniques. Atmospheric Science Letters, 2019, 20, e898.	0.8	21
63	On the Net Cyclonic Circulation in Large Stratified Lakes*. Journal of Physical Oceanography, 1998, 28, 527-534.	0.7	20
64	Tropical/Extratropical forcing of the AO/NAO: A corrigendum. Geophysical Research Letters, 2003, 30, .	1.5	20
65	Tropical origin of the severe European winter of 1962/1963. Quarterly Journal of the Royal Meteorological Society, 2015, 141, 153-165.	1.0	20
66	Forcing of the Atlantic Equatorial Deep Jets Derived from Observations. Journal of Physical Oceanography, 2016, 46, 3549-3562.	0.7	20
67	Advective spreading of storm-induced inertial oscillations in a model of the northwest Atlantic Ocean. Geophysical Research Letters, 2004, 31, .	1.5	18
68	A diagnosis of isopycnal mixing by mesoscale eddies. Ocean Modelling, 2009, 27, 98-106.	1.0	18
69	Using atmospheric model output to simulate the meteorological tsunami response to Tropical Storm Helene (2000). Journal of Geophysical Research, 2009, 114, .	3.3	18
70	Evidence for the Maintenance of Slowly Varying Equatorial Currents by Intraseasonal Variability. Geophysical Research Letters, 2018, 45, 1923-1929.	1.5	18
71	Vorticity fluxes in shallow water ocean models. Atmosphere - Ocean, 2001, 39, 1-14.	0.6	16
72	Tropical influence independent of ENSO on the austral summer Southern Annular Mode. Geophysical Research Letters, 2014, 41, 3643-3648.	1.5	16

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73	Diagnosing the role of eddies in driving the circulation of the northwest Atlantic Ocean. Geophysical Research Letters, 2004, 31, .	1.5	15
74	Surface eddy diffusivity for heat in a model of the northwest Atlantic Ocean. Geophysical Research Letters, 2006, 33, .	1.5	15
75	The Role of Anomalously Warm Sea Surface Temperatures on the Intensity of Hurricane Juan (2003) during Its Approach to Nova Scotia. Monthly Weather Review, 2006, 134, 1484-1504.	0.5	15
76	Tropical impact on the interannual variability and long-term trend of the Southern Annular Mode during austral summer from 1960/1961 to 2001/2002. Climate Dynamics, 2015, 44, 2215-2228.	1.7	15
77	Inferring the eddy-induced diffusivity for heat in the surface mixed layer using satellite data. Geophysical Research Letters, 2006, 33, .	1.5	14
78	Influence of the Barotropic Mean Flow on the Width and the Structure of the Atlantic Equatorial Deep Jets. Journal of Physical Oceanography, 2014, 44, 2485-2497.	0.7	14
79	The Relationship between Northern Hemisphere Winter Blocking and Tropical Modes of Variability. Journal of Climate, 2017, 30, 9321-9337.	1.2	14
80	Initialization shock in decadal hindcasts due to errors in wind stress over the tropical Pacific. Climate Dynamics, 2017, 49, 2685-2693.	1.7	14
81	Energy budget-based backscatter in a shallow water model of a double gyre basin. Ocean Modelling, 2018, 132, 1-11.	1.0	14
82	A Comparison of the Atlantic and Pacific Bjerknes Feedbacks: Seasonality, Symmetry, and Stationarity. Journal of Geophysical Research: Oceans, 2019, 124, 2374-2403.	1.0	14
83	Threeâ€Dimensional Numerical Simulations of Internal Tides in the Angolan Upwelling Region. Journal of Geophysical Research: Oceans, 2021, 126, e2020JC016460.	1.0	14
84	Doppler-Shifted Inertial Oscillations on a Î² Plane. Journal of Physical Oceanography, 2005, 35, 1480-1488.	0.7	13
85	The possible role in the ocean heat budget of eddy-induced mixing due to air-sea interaction. Geophysical Research Letters, 2007, 34, .	1.5	13
86	Application of a nestedâ€grid ocean circulation model to Lunenburg Bay of Nova Scotia: Verification against observations. Journal of Geophysical Research, 2008, 113, .	3.3	13
87	Origin of variability in Northern Hemisphere winter blocking on interannual to decadal timescales. Geophysical Research Letters, 2015, 42, 10,037.	1.5	13
88	Reconciling the Stommel Box Model with the Stommelâ€“Arons Model: A Possible Role for Southern Hemisphere Wind Forcing?. Journal of Physical Oceanography, 2003, 33, 1618-1632.	0.7	12
89	Impact of the MJO on the interannual variation of the Pacificâ€“Japan mode of the East Asian summer monsoon. Climate Dynamics, 2019, 52, 3489-3501.	1.7	12
90	Decomposition of the Mean Barotropic Transport in a Highâ€Resolution Model of the North Atlantic Ocean. Geophysical Research Letters, 2017, 44, 11,537.	1.5	11

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91	Instability-Driven Benthic Storms below the Separated Gulf Stream and the North Atlantic Current in a High-Resolution Ocean Model. Journal of Physical Oceanography, 2018, 48, 2283-2303.	0.7	11
92	Partially coupled spin-up of the MPI-ESM: implementation and first results. Geoscientific Model Development, 2015, 8, 51-68.	1.3	10
93	Interannual variability of tropical <scp>P</scp>acific sea level from 1993 to 2014. Journal of Geophysical Research: Oceans, 2017, 122, 602-616.	1.0	10
94	Factors Influencing the Seasonal Predictability of Northern Hemisphere Severe Winter Storms. Geophysical Research Letters, 2019, 46, 365-373.	1.5	10
95	Discontinuities in the late 1960's in different atmospheric data products. Geophysical Research Letters, 2006, 33, .	1.5	9
96	Influence of the equatorial deep jets on the north equatorial countercurrent. Ocean Dynamics, 2015, 65, 1095-1102.	0.9	9
97	ENERGETICS OF THE GLOBAL OCEAN: THE ROLE OF MESOSCALE EDDIES. World Scientific Series on Asia-Pacific Weather and Climate, 2016, , 109-134.	0.2	9
98	The Generalized heat function. Geophysical Research Letters, 2007, 34, .	1.5	8
99	An analysis of trends in the boreal winter mean tropospheric circulation during the second half of the 20th century. Geophysical Research Letters, 2012, 39, .	1.5	8
100	Multiple timescales of stochastically forced North Atlantic Ocean variability: A model study. Ocean Dynamics, 2015, 65, 1367-1381.	0.9	8
101	Maintenance Mechanism for the Teleconnection Pattern over the High Latitudes of the Eurasian Continent in Summer. Journal of Climate, 2020, 33, 1017-1030.	1.2	8
102	Interpreting the Atmospheric Circulation Trend during the Last Half of the Twentieth Century: Application of an Adjoint Model. Journal of Climate, 2008, 21, 4629-4646.	1.2	7
103	Equatorial Deep Jets and Their Influence on the Mean Equatorial Circulation in an Idealized Ocean Model Forced by Intraseasonal Momentum Flux Convergence. Geophysical Research Letters, 2020, 47, e2020GL087808.	1.5	7
104	A coupled ice-ocean modeling study of the northwest Atlantic Ocean. Journal of Geophysical Research, 2004, 109, .	3.3	6
105	Influence of assimilated eddies on the large-scale circulation in a model of the northwest Atlantic Ocean. Geophysical Research Letters, 2006, 33, .	1.5	6
106	The Use of a Vortex Insertion Technique to Simulate the Extratropical Transition of Hurricane Michael (2000). Weather and Forecasting, 2007, 22, 480-500.	0.5	6
107	On the Extratropical Influence of Variations of the Upper-Tropospheric Equatorial Zonal-Mean Zonal Wind during Boreal Winter. Journal of Climate, 2015, 28, 168-185.	1.2	6
108	Interannual Variability of Antarctic Intermediate Water in the Tropical North Atlantic. Journal of Geophysical Research: Oceans, 2019, 124, 4044-4057.	1.0	6

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109	Impact of an adiabatic correction technique on the simulation of CFC-12 in a model of the North Atlantic Ocean. Geophysical Research Letters, 2004, 31, n/a-n/a.	1.5	5
110	The East Asian Summer Monsoon in pacemaker experiments driven by ENSO. Ocean Dynamics, 2015, 65, 385-393.	0.9	5
111	Austral winter external and internal atmospheric variability between 1980 and 2014. Geophysical Research Letters, 2016, 43, 2234-2239.	1.5	5
112	Tropical precipitation influencing boreal winter midlatitude blocking. Atmospheric Science Letters, 2019, 20, e900.	0.8	5
113	Nonstationarity of the link between the Tropics and the summer East Atlantic pattern. Atmospheric Science Letters, 2021, 22, e1026.	0.8	5
114	Sensitivity of a simple atmospheric model to changing surface friction with implications for seasonal prediction. Quarterly Journal of the Royal Meteorological Society, 2022, 148, 199-213.	1.0	4
115	New insight into the influence of the greenland high on summer arctic sea ice. Environmental Research Letters, 0, , .	2.2	4
116	Simulation of CFCs in the North Atlantic Ocean using an adiabatically corrected ocean circulation model. Journal of Geophysical Research, 2006, 111, .	3.3	3
117	Reconstructing Tropical Pacific Sea Level Variability for the Period 1961â€“2002 Using a Linear Multimode Model. Journal of Geophysical Research: Oceans, 2018, 123, 2037-2048.	1.0	3
118	Role of thermocline feedback in the increasing occurrence of Central Pacific ENSO. Regional Studies in Marine Science, 2021, 41, 101584.	0.4	2
119	Decomposing Barotropic Transport Variability in a Highâ€Resolution Model of the North Atlantic Ocean. Journal of Geophysical Research: Oceans, 2020, 125, e2019JC015516.	1.0	1
120	Atlantic equatorial deep jets in Argo float data. Journal of Physical Oceanography, 2022, , .	0.7	1