John A Church

List of Publications by Year
in descending order

138 papers	15,355 citations	22132 59 h-index	18633 119 g-index
152 all docs	152 docs citations	152 times ranked	11479 citing authors

#	Article	IF	Citations
1	Sea-Level Rise from the Late 19th to the Early 21st Century. Surveys in Geophysics, 2011, 32, 585-602.	2.1	1,238
2	A 20th century acceleration in global sea-level rise. Geophysical Research Letters, 2006, 33, n/a-n/a.	1.5	1,181
3	Improved estimates of upper-ocean warming and multi-decadal sea-level rise. Nature, 2008, 453, 1090-1093.	13.7	676
4	Estimates of the Regional Distribution of Sea Level Rise over the 1950â€“2000 Period. Journal of Climate, 2004, 17, 2609-2625.	1.2	531
5	Recent Climate Observations Compared to Projections. Science, 2007, 316, 709-709.	6.0	519
6	Revisiting the Earth's sea-level and energy budgets from 1961 to 2008. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	415
7	Global sea-level budget 1993â€“present. Earth System Science Data, 2018, 10, 1551-1590.	3.7	409
8	Unabated planetary warming and its ocean structure since 2006. Nature Climate Change, 2015, 5, 240-245.	8.1	377
9	A review of global ocean temperature observations: Implications for ocean heat content estimates and climate change. Reviews of Geophysics, 2013, 51, 450-483.	9.0	367
10	The increasing rate of global mean sea-level rise during 1993â€“2014. Nature Climate Change, 2017, 7, 492-495.	8.1	313
11	Energy budget constraints on climate response. Nature Geoscience, 2013, 6, 415-416.	5.4	270
12	Concepts and Terminology for Sea Level: Mean, Variability and Change, Both Local and Global. Surveys in Geophysics, 2019, 40, 1251-1289.	2.1	262
13	Large-scale freshening of intermediate waters in the Pacific and Indian oceans. Nature, 1999, 400, 440-443.	13.7	245
14	Changing Expendable Bathythermograph Fall Rates and Their Impact on Estimates of Thermosteric Sea Level Rise. Journal of Climate, 2008, 21, 5657-5672.	1.2	232
15	Observed decreases in oxygen content of the global ocean. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	227
16	Unabated global mean sea-level rise over the satellite altimeter era. Nature Climate Change, 2015, 5, 565-568.	8.1	227
17	Variability and trends in the directional wave climate of the Southern Hemisphere. International Journal of Climatology, 2010, 30, 475-491.	1.5	223
18	Sea-level rise at tropical Pacific and Indian Ocean islands. Global and Planetary Change, 2006, 53, 155-168.	1.6	221

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19	The Leeuwin Current off Western Australia, 1986â€“1987. Journal of Physical Oceanography, 1991, 21, 323-345.	0.7	220
20	Understanding global sea levels: past, present and future. Sustainability Science, 2008, 3, 9-22.	2.5	211
21	Significant decadal-scale impact of volcanic eruptions on sea level and ocean heat content. Nature, 2005, 438, 74-77.	13.7	207
22	Evidence for the accelerations of sea level on multiâ€decade and century timescales. International Journal of Climatology, 2009, 29, 777-789.	1.5	199
23	Twentieth-Century Global-Mean Sea Level Rise: Is the Whole Greater than the Sum of the Parts?. Journal of Climate, 2013, 26, 4476-4499.	1.2	197
24	Sea level trends, interannual and decadal variability in the Pacific Ocean. Geophysical Research Letters, 2012, 39, .	1.5	194
25	Ocean heat transport across 24Â°N in the Pacific. Deep-sea Research Part A, Oceanographic Research Papers, 1991, 38, 297-324.	1.6	173
26	Exploring high-end scenarios for local sea level rise to develop flood protection strategies for a low-lying deltaâ€”the Netherlands as an example. Climatic Change, 2011, 109, 617-645.	1.7	166
27	Interactions between sea-level rise and wave exposure on reef island dynamics in the Solomon Islands. Environmental Research Letters, 2016, 11, 054011.	2.2	163
28	Coastal sea level changes, observed and projected during the 20th and 21st century. Climatic Change, 2016, 134, 269-281.	1.7	153
29	Surface Eddy Momentum Flux and Velocity Variances in the Southern Ocean from Geosat Altimetry. Journal of Physical Oceanography, 1994, 24, 2050-2071.	0.7	146
30	Changes in the global hydrologicalâ€cycle inferred from ocean salinity. Geophysical Research Letters, 2010, 37, .	1.5	144
31	Sea-Level Rise by 2100. Science, 2013, 342, 1445-1445.	6.0	140
32	Comparison of results from several AOGCMs for global and regional sea-level change 1900-2100. Climate Dynamics, 2001, 18, 225-240.	1.7	139
33	Simulated Lagrangian pathways between the Leeuwin Current System and the upper-ocean circulation of the southeast Indian Ocean. Deep-Sea Research Part II: Topical Studies in Oceanography, 2007, 54, 797-817.	0.6	124
34	Ocean temperatures chronicle the ongoing warming of Earth. Nature Climate Change, 2016, 6, 116-118.	8.1	123
35	Measuring Global Ocean Heat Content to Estimate the Earth Energy Imbalance. Frontiers in Marine Science, 2019, 6, .	1.2	123
36	Human-induced global ocean warming onÂmultidecadal timescales. Nature Climate Change, 2012, 2, 524-529.	8.1	116

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37	Meeting User Needs for Sea Level Rise Information: A Decision Analysis Perspective. Earth's Future, 2019, 7, 320-337.	2.4	112
38	Time of emergence for regional sea-level change. Nature Climate Change, 2014, 4, 1006-1010.	8.1	109
39	Australian sea levelsâ€"Trends, regional variability and influencing factors. Earth-Science Reviews, 2014, 136, 155-174.	4.0	106
40	Anthropogenic forcing dominates global mean sea-level rise since 1970. Nature Climate Change, 2016, 6, 701-705.	8.1	105
41	Understanding and Projecting Sea Level Change. Oceanography, 2011, 24, 130-143.	0.5	104
42	A Model of Sea Level Rise Caused by Ocean Thermal Expansion. Journal of Climate, 1991, 4, 438-456.	1.2	103
43	An assessment of climate change impacts and adaptation for the Torres Strait Islands, Australia. Climatic Change, 2010, 102, 405-433.	1.7	102
44	Modelling the advection of vertically migrating shrimp larvae. Journal of Marine Research, 1983, 41, 511-538.	0.3	101
45	Warming of the water column in the southwest Pacific Ocean. Nature, 1992, 357, 59-62.	13.7	96
46	Evaluating the ability of process based models to project sea-level change. Environmental Research Letters, 2013, 8, 014051.	2.2	92
47	Coastal and global averaged sea level rise for 1950 to 2000. Geophysical Research Letters, 2005, 32, .	1.5	89
48	An Earth-System Prediction Initiative for the Twenty-First Century. Bulletin of the American Meteorological Society, 2010, 91, 1377-1388.	1.7	88
49	Eddy shedding and energy conversions in the East Australian Current. Journal of Geophysical Research, 2006, 111, .	3.3	85
50	East Australian Current volume transports at 30Â°S: Estimates from the World Ocean Circulation Experiment hydrographic sections PR11/P6 and the PCM3 current meter array. Journal of Geophysical Research, 2000, 105, 28509-28526.	3.3	83
51	Sensitivity of Global Upper-Ocean Heat Content Estimates to Mapping Methods, XBT Bias Corrections, and Baseline Climatologies*. Journal of Climate, 2016, 29, 4817-4842.	1.2	83
52	Eddy momentum flux and its contribution to the Southern Ocean momentum balance. Nature, 1992, 357, 482-484.	13.7	82
53	Using Sea Level Rise Projections for Urban Planning in Australia. Journal of Coastal Research, 2004, 202, 586-598.	0.1	72
54	The Australian Coastal Experiment: A Search for Coastal-Trapped Waves. Journal of Physical Oceanography, 1986, 16, 1230-1249.	0.7	70

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55	The East Australian current 1978. Deep-sea Research Part A, Oceanographic Research Papers, 1981, 28, 937-957.	1.6	68
56	Absolute Calibration in Bass Strait, Australia: TOPEX, Jason-1 and OSTM/Jason-2. Marine Geodesy, 2011, 34, 242-260.	0.9	65
57	Towards a global regionally varying allowance for sea-level rise. Ocean Engineering, 2013, 71, 17-27.	1.9	65
58	Evaluating Model Simulations of Twentieth-Century Sea Level Rise. Part I: Global Mean Sea Level Change. Journal of Climate, 2017, 30, 8539-8563.	1.2	64
59	Sea level projections for the Australian region in the 21st century. Geophysical Research Letters, 2017, 44, 8481-8491.	1.5	62
60	Strong export of Antarctic Bottom Water east of the Kerguelen plateau. Nature Geoscience, 2010, 3, 327-331.	5.4	60
61	A mechanism for near-shore concentration and estuarine recruitment of post-larval Penaeus plebejus hess (Decapoda, Penaeidae). Estuarine, Coastal and Shelf Science, 1995, 40, 115-138.	0.9	58
62	Absolute Calibration of TOPEX/Poseidon and Jason-1 Using GPS Buoys in Bass Strait, Australia Special Issue: Jason-1 Calibration/Validation. Marine Geodesy, 2003, 26, 285-304.	0.9	58
63	Regional Dynamic Sea Level Simulated in the CMIP5 and CMIP6 Models: Mean Biases, Future Projections, and Their Linkages. Journal of Climate, 2020, 33, 6377-6398.	1.2	58
64	Evaluating Model Simulations of Twentieth-Century Sea-Level Rise. Part II: Regional Sea-Level Changes. Journal of Climate, 2017, 30, 8565-8593.	1.2	57
65	Interdecadal water mass changes in the Southern Ocean between 30Â°E and 160Â°E. Geophysical Research Letters, 2005, 32, n/a-n/a.	1.5	56
66	Regional Sea-Level Projection. Science, 2012, 336, 550-551.	6.0	55
67	Rapid barotropic sea level rise from ice sheet melting. Journal of Geophysical Research, 2012, 117, .	3.3	55
68	Freshwater and Heat Changes in the North and South Pacific Oceans between the 1960s and 1985â€“94. Journal of Climate, 2001, 14, 1613-1633.	1.2	54
69	Sea-Level Rise from the Late 19th to the Early 21st Century. Space Sciences Series of ISSI, 2011, , 585-602.	0.0	53
70	Coastal-Trapped Waves on the East Australian Continental Shelf Part I: Propagation of Modes. Journal of Physical Oceanography, 1986, 16, 1929-1943.	0.7	52
71	Detection and attribution of global mean thermosteric sea level change. Geophysical Research Letters, 2014, 41, 5951-5959.	1.5	51
72	Currents off south-eastern Australia: results from the Australian coastal experiment. Marine and Freshwater Research, 1988, 39, 245.	0.7	49

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73	Lessons Learned from IPCC AR4: Scientific Developments Needed to Understand, Predict, and Respond to Climate Change. Bulletin of the American Meteorological Society, 2009, 90, 497-514.	1.7	47
74	Pitfalls with the Numerical Representation of Isopycnal Diapycnal Mixing. Journal of Physical Oceanography, 1986, 16, 196-199.	0.7	46
75	Framework for Highâ€End Estimates of Sea Level Rise for Stakeholder Applications. Earth's Future, 2019, 7, 923-938.	2.4	46
76	A 6 year record of baroclinic transport variability of the Antarctic Circumpolar Current at 140Â°E derived from expendable bathythermograph and altimeter measurements. Journal of Geophysical Research, 2002, 107, 19-1.	3.3	45
77	Pan-oceanic response to increasing anthropogenic aerosols: Impacts on the Southern Hemisphere oceanic circulation. Geophysical Research Letters, 2006, 33, .	1.5	42
78	Recent Progress in Understanding and Projecting Regional and Global Mean Sea Level Change. Current Climate Change Reports, 2015, 1, 224-246.	2.8	42
79	A Permanent Undercurrent Adjacent to the Great Barrier Reef. Journal of Physical Oceanography, 1983, 13, 1747-1749.	0.7	40
80	MODELING PROPOSAL: Coordinating Global Ocean Wave Climate Projections. Bulletin of the American Meteorological Society, 2010, 91, 451-454.	1.7	40
81	Information for Australian impact and adaptation planning in response to sea-level rise. , 2015, 65, 127-149.		40
82	Projection of subtropical gyre circulation and associated sea level changes in the Pacific based on CMIP3 climate models. Climate Dynamics, 2014, 43, 131-144.	1.7	39
83	TOPEX/Poseidon and Jason-1: Absolute Calibration in Bass Strait, Australia. Marine Geodesy, 2004, 27, 107-131.	0.9	38
84	Understanding Sea Level Rise and Variability. Eos, 2007, 88, 43.	0.1	38
85	Seaâ€Level Trend Uncertainty With Pacific Climatic Variability and Temporallyâ€Correlated Noise. Journal of Geophysical Research: Oceans, 2018, 123, 1978-1993.	1.0	34
86	The Energy Source for the Coastal-Trapped Waves in the Australian Coastal Experiment Region. Journal of Physical Oceanography, 1987, 17, 289-300.	0.7	33
87	CLIMATE CHANGE: How Fast Are Sea Levels Rising?. Science, 2001, 294, 802-803.	6.0	33
88	Internal climate memory in observations and models. Geophysical Research Letters, 2015, 42, 1232-1242.	1.5	33
89	Evaluation of the interdecadal variability of sea surface temperature and sea level in the Pacific in CMIP3 and CMIP5 models. International Journal of Climatology, 2016, 36, 3723-3740.	1.5	33
90	Coastal-Trapped Waves on the East Australian Continental Shelf Part II: Model Verification. Journal of Physical Oceanography, 1986, 16, 1945-1957.	0.7	32

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91	Basal melt, seasonal water mass transformation, ocean current variability, and deep convection processes along the Amery Ice Shelf calving front, East Antarctica. Journal of Geophysical Research: Oceans, 2016, 121, 4946-4965.	1.0	32
92	Antarctic coastal polynya response to climate change. Journal of Geophysical Research, 2007, 112, .	3.3	30
93	Characterizing and minimizing the effects of noise in tide gauge time series: relative and geocentric sea level rise around Australia. Geophysical Journal International, 2013, 194, 719-736.	1.0	30
94	Anthropogenic Aerosols, Greenhouse Gases, and the Uptake, Transport, and Storage of Excess Heat in the Climate System. Geophysical Research Letters, 2019, 46, 4894-4903.	1.5	30
95	A southern hemisphere verification for the TOPEX/POSEIDON satellite altimeter mission. Journal of Geophysical Research, 1994, 99, 24505.	3.3	28
96	Role of eddies in cooling the Leeuwin Current. Geophysical Research Letters, 2006, 33, .	1.5	28
97	Simulating the Role of Surface Forcing on Observed Multidecadal Upper-Ocean Salinity Changes. Journal of Climate, 2016, 29, 5575-5588.	1.2	28
98	Evaluation of the Local Seaâ€Level Budget at Tide Gauges Since 1958. Geophysical Research Letters, 2021, 48, e2021GL094502.	1.5	28
99	Projected ocean warming constrained by the ocean observational record. Nature Climate Change, 2021, 11, 834-839.	8.1	27
100	Satellite Altimetry for Geodetic, Oceanographic, and Climate Studies in the Australian Region. , 2011, , 473-508.		27
101	Reconciling global mean and regional sea level change in projections and observations. Nature Communications, 2021, 12, 990.	5.8	26
102	Seasonal prediction of global sea level anomalies using an oceanâ€“atmosphere dynamical model. Climate Dynamics, 2014, 43, 2131-2145.	1.7	24
103	The Sea Level Response to External Forcings in Historical Simulations of CMIP5 Climate Models*. Journal of Climate, 2015, 28, 8521-8539.	1.2	24
104	Quantifying internally generated and externally forced climate signals at regional scales in CMIP5 models. Geophysical Research Letters, 2015, 42, 9394-9403.	1.5	24
105	Oceanâ€Only FAFMIP: Understanding Regional Patterns of Ocean Heat Content and Dynamic Sea Level Change. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS002027.	1.3	24
106	Distinguishing the Quasi-Decadal and Multidecadal Sea Level and Climate Variations in the Pacific: Implications for the ENSO-Like Low-Frequency Variability. Journal of Climate, 2017, 30, 5097-5117.	1.2	23
107	Linear systems analysis of momentum on the continental shelf and slope of the central Great Barrier Reef. Journal of Geophysical Research, 1991, 96, 22169-22190.	3.3	22
108	A Mass and Energy Conservation Analysis of Drift in the CMIP6 Ensemble. Journal of Climate, 2020, , 1-43.	1.2	22

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109	Processes Responsible for the Southern Hemisphere Ocean Heat Uptake and Redistribution under Anthropogenic Warming. Journal of Climate, 2020, 33, 3787-3807.	1.2	20
110	Current and Density Observations across the Wake of Hurricane Gay. Journal of Physical Oceanography, 1989, 19, 259-265.	0.7	19
111	Transports across the Tasman Sea from WOCE repeat sections: The East Australian Current 1990â€“94. New Zealand Journal of Marine and Freshwater Research, 1997, 31, 469-475.	0.8	19
112	Our changing oceans: conclusions of the first International Symposium on the Effects of climate change on the world's oceans. ICES Journal of Marine Science, 2009, 66, 1435-1438.	1.2	19
113	Adequacy of the Ocean Observation System for Quantifying Regional Heat and Freshwater Storage and Change. Frontiers in Marine Science, 2019, 6, .	1.2	19
114	Seasonal coastal sea level prediction using a dynamical model. Geophysical Research Letters, 2015, 42, 6747-6753.	1.5	18
115	Variability and change of sea level and its components in the <scp>I</scp>ndoâ€‹<scp>P</scp>acific region during the altimetry era. Journal of Geophysical Research: Oceans, 2017, 122, 1862-1881.	1.0	17
116	Comment on â€œOcean heat content and EarthÊ¼s radiation imbalance. II. Relation to climate shiftsâ€• Physics Letters, Section A: General, Atomic and Solid State Physics, 2012, 376, 3466-3468.	0.9	16
117	Observed poleward freshwater transport since 1970. Nature, 2022, 602, 617-622.	13.7	16
118	Effect of Salinity on Estimating Geostrophic Transport of the Indonesian Throughflow along the IX1 XBT Section. Journal of Oceanography, 2005, 61, 795-801.	0.7	14
119	ENSO-Related Global Ocean Heat Content Variations. Journal of Climate, 2019, 32, 45-68.	1.2	13
120	Processes controlling the larval dispersal and postlarval recruitment of penaeid prawns. Coastal and Estuarine Studies, 1994, , 235-252.	0.4	12
121	Regional Sea Level Variability and Trends, 1960â€“2007: A Comparison of Sea Level Reconstructions and Ocean Syntheses. Journal of Geophysical Research: Oceans, 2017, 122, 9068-9091.	1.0	12
122	Near bottom currents and their relation to the transport in the Kuroshio Extension. Geophysical Research Letters, 2004, 31, .	1.5	11
123	Detecting a forced signal in satellite-era sea-level change. Environmental Research Letters, 2020, 15, 094079.	2.2	11
124	A Change in Circulation?. Science, 2007, 317, 908-909.	6.0	10
125	Statistical description of the East Australian Current low-frequency variability from the WOCE PCM3 array. Marine and Freshwater Research, 2006, 57, 273.	0.7	9
126	Sea-Level and Ocean Heat-Content Change. International Geophysics, 2013, , 697-725.	0.6	9

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127	Does the nonlinearity of the equation of state impose an upper bound on the buoyancy frequency?. Journal of Marine Research, 2003, 61, 745-764.	0.3	8
128	Fifty Year Trends in Global Ocean Heat Content Traced to Surface Heat Fluxes in the Subâ€Polar Ocean. Geophysical Research Letters, 2021, 48, e2020GL091439.	1.5	7
129	Sea Level Change. , 2019, , 493-499.		6
130	Evolving patterns of sterodynamic sea-level rise under mitigation scenarios and insights from linear system theory. Climate Dynamics, 2021, 57, 635-656.	1.7	4
131	The Changing Oceans. Science, 2010, 328, 1453-1453.	6.0	2
132	Progress and Challenges in Monitoring Ocean Temperature and Heat Content. , 2010, , .		2
133	The Prediction of Wind-Forced Currents and Sea Level on the Southeast Australian Continental Shelf. Journal of Physical Oceanography, 1994, 24, 2695-2702.	0.7	1
134	No chaos in the satellite-data record. Nature, 2017, 549, 334-334.	13.7	1
135	Sea-Level and Climate Change. Encyclopedia of Earth Sciences Series, 2019, , 1485-1492.	0.1	1
136	Energy Conservation in the Australian Coastal Experiment: Coastal-Trapped Wave Calculations. Journal of Physical Oceanography, 1990, 20, 1113-1114.	0.7	0
137	Matthias Tomczak. Progress in Oceanography, 2008, 77, 273-275.	1.5	0
138	Sea-Level and Climate Change. Encyclopedia of Earth Sciences Series, 2018, , 1-8.	0.1	0