Rong-Hua Zhang

List of Publications by Year
in descending order

110	3,093	159525	189801
papers	citations	30 h-index	50 g-index

113	113	113	1464
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Origin of upper-ocean warming and El NiÃ±o change on decadal scales in the tropical Pacific Ocean. Nature, 1998, 391, 879-883.	13.7	241
2	Progress in ENSO prediction and predictability study. National Science Review, 2018, 5, 826-839.	4.6	151
3	Purely satellite dataâ€“driven deep learning forecast of complicated tropical instability waves. Science Advances, 2020, 6, eaba1482.	4.7	122
4	Structure and Cycle of Decadal Variability of Upper-Ocean Temperature in the North Pacific. Journal of Climate, 1997, 10, 710-727.	1.2	114
5	Salinity anomaly as a trigger for ENSO events. Scientific Reports, 2014, 4, 6821.	1.6	92
6	A Numerical Simulation of the Mean Water Pathways in the Subtropical and Tropical Pacific Ocean. Journal of Physical Oceanography, 1998, 28, 322-343.	0.7	91
7	A new intermediate coupled model for El NiÃ±o simulation and prediction. Geophysical Research Letters, 2003, 30, .	1.5	91
8	Ensemble hindcasts of SST anomalies in the tropical Pacific using an intermediate coupled model. Geophysical Research Letters, 2006, 33, .	1.5	79
9	Ensemble ENSO hindcasts initialized from multiple ocean analyses. Geophysical Research Letters, 2012, 39, .	1.5	73
10	Freshwater Flux (FWF)-Induced Oceanic Feedback in a Hybrid Coupled Model of the Tropical Pacific. Journal of Climate, 2009, 22, 853-879.	1.2	72
11	Retrospective El NiÃ±o Forecasts Using an Improved Intermediate Coupled Model. Monthly Weather Review, 2005, 133, 2777-2802.	0.5	71
12	The IOCAS intermediate coupled model (IOCAS ICM) and its real-time predictions of the 2015â€“2016 El NiÃ±o event. Science Bulletin, 2016, 61, 1061-1070.	4.3	70
13	A review of progress in coupled ocean-atmosphere model developments for ENSO studies in China. Journal of Oceanology and Limnology, 2020, 38, 930-961.	0.6	62
14	On the connection between South Pacific subtropical spiciness anomalies and decadal equatorial variability in an ocean general circulation model. Journal of Geophysical Research, 2005, 110, .	3.3	58
15	A successful real-time forecast of the 2010â€“11 La NiÃ±a event. Scientific Reports, 2013, 3, .	1.6	55
16	Interannual Variability of the Coupled Tropical Pacific Oceanâ€“Atmosphere System Associated with the El NiÃ±oâ€“Southern Oscillation. Journal of Climate, 1997, 10, 1312-1330.	1.2	52
17	Ensemble hindcasts of ENSO events over the past 120 years using a large number of ensembles. Advances in Atmospheric Sciences, 2009, 26, 359-372.	1.9	51
18	Rectified effects of tropical instability wave (TIW)â€induced atmospheric wind feedback in the tropical Pacific. Geophysical Research Letters, 2008, 35, .	1.5	46

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19	Impact of altimetry data on ENSO ensemble initializations and predictions. Geophysical Research Letters, 2007, 34, .	1.5	45
20	Modulation of El NiÃ±o-Southern Oscillation by freshwater flux and salinity variability in the tropical Pacific. Advances in Atmospheric Sciences, 2012, 29, 647-660.	1.9	44
21	The roles of atmospheric wind and entrained water temperature (Te) in the second-year cooling of the 2010â€“12 La NiÃ±a event. Climate Dynamics, 2017, 48, 597-617.	1.7	44
22	Impact of sea surface salinity assimilation on coupled forecasts in the tropical Pacific. Journal of Geophysical Research, 2011, 116, .	3.3	43
23	Structure and evolution of interannual variability of the tropical Pacific upper ocean temperature. Journal of Geophysical Research, 1996, 101, 20501-20524.	3.3	42
24	Effects of interannual salinity variability and freshwater flux forcing on the development of the 2007/08 La NiÃ±a event diagnosed from Argo and satellite data. Dynamics of Atmospheres and Oceans, 2012, 57, 45-57.	0.7	41
25	Effects of interannual salinity variability on the barrier layer in the western-central equatorial Pacific: A diagnostic analysis from Argo. Advances in Atmospheric Sciences, 2014, 31, 532-542.	1.9	39
26	An Empirical Parameterization of Subsurface Entrainment Temperature for Improved SST Anomaly Simulations in an Intermediate Ocean Model. Journal of Climate, 2005, 18, 350-371.	1.2	38
27	Interannually varying salinity effects on ENSO in the tropical pacific: a diagnostic analysis from Argo. Ocean Dynamics, 2015, 65, 691-705.	0.9	37
28	Recent ENSO evolution and its real-time prediction challenges. National Science Review, 2022, 9, nwac052.	4.6	35
29	Effect of Penetrating Momentum Flux over the Surface Boundary/Mixed Layer in az-Coordinate OGCM of the Tropical Pacific. Journal of Physical Oceanography, 2002, 32, 3616-3637.	0.7	33
30	The Roles of Atmospheric Stochastic Forcing (SF) and Oceanic Entrainment Temperature (Te) in Decadal Modulation of ENSO. Journal of Climate, 2008, 21, 674-704.	1.2	33
31	An improved ENSO simulation by representing chlorophyll-induced climate feedback in the NCAR Community Earth System Model. Scientific Reports, 2017, 7, 17123.	1.6	33
32	Role of ocean biologyâ€induced climate feedback in the modulation of El NiÃ±oâ€Southern Oscillation. Geophysical Research Letters, 2009, 36, .	1.5	31
33	ENSO Modulations due to Interannual Variability of Freshwater Forcing and Ocean Biology-induced Heating in the Tropical Pacific. Scientific Reports, 2016, 5, 18506.	1.6	31
34	An Argoâ€Derived Background Diffusivity Parameterization for Improved Ocean Simulations in the Tropical Pacific. Geophysical Research Letters, 2018, 45, 1509-1517.	1.5	30
35	Effects of tropical instability wave (TIW)-induced surface wind feedback in the tropical Pacific Ocean. Climate Dynamics, 2014, 42, 467-485.	1.7	28
36	Improving SST Anomaly Simulations in a Layer Ocean Model with an Embedded Entrainment Temperature Submodel. Journal of Climate, 2006, 19, 4638-4663.	1.2	24

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37	Testing a four-dimensional variational data assimilation method using an improved intermediate coupled model for ENSO analysis and prediction. Advances in Atmospheric Sciences, 2016, 33, 875-888.	1.9	24
38	A New Hybrid Coupled Model of Atmosphere, Ocean Physics, and Ocean Biogeochemistry to Represent Biogeophysical Feedback Effects in the Tropical Pacific. Journal of Advances in Modeling Earth Systems, 2018, 10, 1901-1923.	1.3	24
39	A Modified Vertical Mixing Parameterization for Its Improved Ocean and Coupled Simulations in the Tropical Pacific. Journal of Physical Oceanography, 2019, 49, 21-37.	0.7	24
40	North Pacific Upper-Ocean Cold Temperature Biases in CMIP6 Simulations and the Role of Regional Vertical Mixing. Journal of Climate, 2020, 33, 7523-7538.	1.2	24
41	Interannual Biases Induced by Freshwater Flux and Coupled Feedback in the Tropical Pacific. Monthly Weather Review, 2010, 138, 1715-1737.	0.5	22
42	Using Satellite Ocean Color Data to Derive an Empirical Model for the Penetration Depth of Solar Radiation (Hp) in the Tropical Pacific Ocean. Journal of Atmospheric and Oceanic Technology, 2011, 28, 944-965.	0.5	22
43	Improving ENSO prediction in a hybrid coupled model with an embedded entrainment temperature parameterisation. International Journal of Climatology, 2013, 33, 343-355.	1.5	22
44	Interdecadal Change in Properties of El NiÃ±oâ€“Southern Oscillation in an Intermediate Coupled Model. Journal of Climate, 2005, 18, 1369-1380.	1.2	21
45	An Empirical Model for Surface Wind Stress Response to SST Forcing Induced by Tropical Instability Waves (TIWs) in the Eastern Equatorial Pacific. Monthly Weather Review, 2009, 137, 2021-2046.	0.5	21
46	Ocean Chlorophyll-Induced Heating Feedbacks on ENSO in a Coupled Ocean Physicsâ€“Biology Model Forced by Prescribed Wind Anomalies. Journal of Climate, 2018, 31, 1811-1832.	1.2	21
47	Improved ENSO forecasts by assimilating sea surface temperature observations into an intermediate coupled model. Advances in Atmospheric Sciences, 2006, 23, 615-624.	1.9	20
48	Initial error-induced optimal perturbations in ENSO predictions, as derived from an intermediate coupled model. Advances in Atmospheric Sciences, 2017, 34, 791-803.	1.9	20
49	A Hybrid Neural Network Model for ENSO Prediction in Combination with Principal Oscillation Pattern Analyses. Advances in Atmospheric Sciences, 2022, 39, 889-902.	1.9	19
50	Structure and effect of ocean biology-induced heating (OBH) in the tropical Pacific, diagnosed from a hybrid coupled model simulation. Climate Dynamics, 2015, 44, 695-715.	1.7	18
51	Effects of different freshwater flux representations in an ocean general circulation model of the tropical Pacific. Science Bulletin, 2017, 62, 345-351.	4.3	18
52	Separating freshwater flux effects on ENSO in a hybrid coupled model of the tropical Pacific. Climate Dynamics, 2020, 54, 4605-4626.	1.7	18
53	Subduction of decadal North Pacific thermal anomalies in an ocean GCM. Geophysical Research Letters, 2001, 28, 2449-2452.	1.5	17
54	An oceanâ€biologyâ€induced negative feedback on ENSO as derived from a hybrid coupled model of the tropical Pacific. Journal of Geophysical Research: Oceans, 2015, 120, 8052-8076.	1.0	17

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55	Freshwater Flux and Ocean Chlorophyll Produce Nonlinear Feedbacks in the Tropical Pacific. Journal of Climate, 2019, 32, 2037-2055.	1.2	17
56	An Embedding Method for Improving Interannual Variability Simulations in a Hybrid Coupled Model of the Tropical Pacific Oceanâ€“Atmosphere System. Journal of Climate, 2004, 17, 2794-2812.	1.2	17
57	Simulation of the 1986â€“1987 El NiÃ±o and 1988 La NiÃ±a events with a free surface tropical Pacific Ocean general circulation model. Journal of Geophysical Research, 1994, 99, 7743.	3.3	16
58	Effects of Salinity Variability on Recent El NiÃ±o Events. Atmosphere, 2019, 10, 475.	1.0	16
59	Sensitivity of ENSO variability to Pacific freshwater flux adjustment in the Community Earth System Model. Advances in Atmospheric Sciences, 2014, 31, 1009-1021.	1.9	15
60	A hybrid coupled model for the pacific ocean-atmosphere system. Part I: Description and basic performance. Advances in Atmospheric Sciences, 2015, 32, 301-318.	1.9	15
61	Idealized Experiments for Optimizing Model Parameters Using a 4D-Variational Method in an Intermediate Coupled Model of ENSO. Advances in Atmospheric Sciences, 2018, 35, 410-422.	1.9	15
62	Model parameter-related optimal perturbations and their contributions to El NiÃ±o prediction errors. Climate Dynamics, 2019, 52, 1425-1441.	1.7	15
63	Propagation and mechanism of decadal upper-ocean variability in the North Pacific. Geophysical Research Letters, 1999, 26, 739-742.	1.5	14
64	Mesoscale wind stressâ€“SST coupling in the Kuroshio extension and its effect on the ocean. Journal of Oceanography, 2017, 73, 785-798.	0.7	14
65	ENSO Predictions in an Intermediate Coupled Model Influenced by Removing Initial Condition Errors in Sensitive Areas: A Target Observation Perspective. Advances in Atmospheric Sciences, 2018, 35, 853-867.	1.9	14
66	A Coupled Ocean Physicsâ€Biology Modeling Study on Tropical Instability Waveâ€Induced Chlorophyll Impacts in the Pacific. Journal of Geophysical Research: Oceans, 2018, 123, 5160-5179.	1.0	14
67	Interannual Salinity Variability in the Tropical Pacific in CMIP5 Simulations. Advances in Atmospheric Sciences, 2019, 36, 378-396.	1.9	14
68	A Positive Feedback Onto ENSO Due to Tropical Instability Wave (TIW)â€Induced Chlorophyll Effects in the Pacific. Geophysical Research Letters, 2019, 46, 889-897.	1.5	14
69	Processes leading to second-year cooling of the 2010â€“12 La NiÃ±a event, diagnosed using GODAS. Advances in Atmospheric Sciences, 2015, 32, 424-438.	1.9	13
70	Interannual Salinity Variability Associated With the Central Pacific and Eastern Pacific El NiÃ±os in the Tropical Pacific. Journal of Geophysical Research: Oceans, 2020, 125, e2020JC016090.	1.0	13
71	Role of off-equatorial subsurface anomalies in initiating the 1991-1992 El NiÃ±o as revealed by the National Centers for Environmental Prediction ocean reanalysis data. Journal of Geophysical Research, 2000, 105, 6327-6339.	3.3	12
72	A modulating effect of <scp>T</scp>ropical <scp>I</scp>nstability <scp>W</scp>ave (<scp>TIW</scp>)â€induced surface wind feedback in a hybrid coupled model of the tropical <scp>P</scp>acific. Journal of Geophysical Research: Oceans, 2016, 121, 7326-7353.	1.0	12

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73	Role of subsurface entrainment temperature (Te) in the onset of El NiÃ±o events, as represented in an intermediate coupled model. Climate Dynamics, 2016, 46, 1417-1435.	1.7	12
74	Indian Ocean warming as a potential trigger for super phytoplankton blooms in the eastern equatorial Pacific from El NiÃ±o to La NiÃ±a transitions. Environmental Research Letters, 2021, 16, 054040.	2.2	12
75	Observed structural relationships between ocean chlorophyll variability and its heating effects on the ENSO. Climate Dynamics, 2019, 53, 5165-5186.	1.7	11
76	Estimating Convection Parameters in the GFDL CM2.1 Model Using Ensemble Data Assimilation. Journal of Advances in Modeling Earth Systems, 2018, 10, 989-1010.	1.3	10
77	Scaling wind stirring effects in an oceanic bulk mixed layer model with application to an OGCM of the tropical Pacific. Climate Dynamics, 2018, 51, 1927-1946.	1.7	10
78	The Thermocline Biases in the Tropical North Pacific and Their Attributions. Journal of Climate, 2021, 34, 1635-1648.	1.2	10
79	A design of an oceanic GCM without the rigid lid approximation and its application to the numerical simulation of the circulation of the Pacific Ocean. Journal of Marine Systems, 1991, 1, 271-292.	0.9	9
80	A new approach to improved SST anomaly simulations using altimeter data: Parameterizing entrainment temperature from sea level. Geophysical Research Letters, 2004, 31, n/a-n/a.	1.5	9
81	Quantitative analysis of the feedback induced by the freshwater flux in the tropical Pacific using CMIP5. Advances in Atmospheric Sciences, 2015, 32, 1341-1353.	1.9	9
82	An improved simulation of the 2015 El NiÃ±o event by optimally correcting the initial conditions and model parameters in an intermediate coupled model. Climate Dynamics, 2018, 51, 269-282.	1.7	9
83	Roles of Wind Stress and Subsurface Cold Water in the Second-Year Cooling of the 2017/18 La NiÃ±a Event. Advances in Atmospheric Sciences, 2020, 37, 847-860.	1.9	9
84	The Optimal Precursors for ENSO Events Depicted Using the Gradient-definition-based Method in an Intermediate Coupled Model. Advances in Atmospheric Sciences, 2019, 36, 1381-1392.	1.9	7
85	The onset of the 1991-92 El NiÃ±o event in the tropical Pacific Ocean: The NECC subsurface pathway. Geophysical Research Letters, 1999, 26, 847-850.	1.5	6
86	An empirical parameterization for the salinity of subsurface water entrained into the ocean mixed layer (Se) in the tropical Pacific. Geophysical Research Letters, 2006, 33, .	1.5	6
87	Mesoscale SST perturbation-induced impacts on climatological precipitation in the Kuroshio-Oyashio extension region, as revealed by the WRF simulations. Journal of Oceanology and Limnology, 2019, 37, 385-397.	0.6	6
88	Sea surface salinity-derived indexes for distinguishing two types of El NiÃ±o events in the tropical Pacific. Science China Earth Sciences, 2021, 64, 1267-1284.	2.3	6
89	On the Second-Year Warming in Late 2019 over the Tropical Pacific and Its Attribution to an Indian Ocean Dipole Event. Advances in Atmospheric Sciences, 2021, 38, 2153-2166.	1.9	6
90	Mesoscale Surface Windâ€SST Coupling in a Highâ€Resolution CESM Over the KE and ARC Regions. Journal of Advances in Modeling Earth Systems, 2021, 13, e2021MS002822.	1.3	6

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91	Assessment of interannual sea surface salinity variability and its effects on the barrier layer in the equatorial Pacific using BNU-ESM. Advances in Atmospheric Sciences, 2016, 33, 339-351.	1.9	5
92	Interannualâ€toâ€Decadal Variations of Particulate Organic Carbon and the Contribution of Phytoplankton in the Tropical Pacific During 1981â€“2016: A Model Study. Journal of Geophysical Research: Oceans, 2021, 126, .	1.0	5
93	Rectified Effects of Interannual Chlorophyll Variability on the Tropical Pacific Climate Revealed by a Hybrid Coupled Physicsâ€Biology Model. Journal of Geophysical Research: Oceans, 2021, 126, e2021JC017263.	1.0	5
94	Zonal Structure of Tropical Pacific Surface Salinity Anomalies Affects ENSO Intensity and Asymmetry. Geophysical Research Letters, 2022, 49, .	1.5	5
95	Decadal variability of temperature at a depth of 400 meters in the North Pacific Ocean. Geophysical Research Letters, 1998, 25, 1197-1200.	1.5	4
96	Simulation of salinity variability and the related freshwater flux forcing in the tropical Pacific: An evaluation using the Beijing normal university earth system model (BNU-ESM). Advances in Atmospheric Sciences, 2015, 32, 1551-1564.	1.9	4
97	A Hybrid Coupled Ocean-Atmosphere Model and Its Simulation of ENSO and Atmospheric Responses. Advances in Atmospheric Sciences, 2019, 36, 643-657.	1.9	4
98	Factors affecting interdecadal variability of airâ€“sea CO2 fluxes in the tropical Pacific, revealed by an ocean physicalâ€“biogeochemical model. Climate Dynamics, 2019, 53, 3985-4004.	1.7	4
99	Roles of different physical processes in upper ocean responses to Typhoon Rammasun (2008)-induced wind forcing. Science China Earth Sciences, 2019, 62, 684-692.	2.3	4
100	Effects on Ocean Biology Induced by El NiÃ±oâ€Accompanied Positive Freshwater Flux Anomalies in the Tropical Pacific. Journal of Geophysical Research: Oceans, 2020, 125, e2019JC015790.	1.0	4
101	Using Satellite Data to Represent Tropical Instability Waves (TIWs)-Induced Wind for Ocean Modeling: A Negative Feedback onto TIW Activity in the Pacific. Remote Sensing, 2013, 5, 2660-2687.	1.8	3
102	Impact of tropical instability wavesâ€induced <scp>SST</scp> forcing on the atmosphere in the tropical Pacific, evaluated using <scp>CAM5</scp>.1. Atmospheric Science Letters, 2014, 15, 186-194.	0.8	3
103	Representing surface wind stress response to mesoscale SST perturbations in western coast of South America using Tikhonov regularization method. Journal of Oceanology and Limnology, 2020, 38, 679-694.	0.6	3
104	Structure and Evolution of Decadal Spiciness Variability in the North Pacific during 2004â€“20, Revealed from Argo Observations. Advances in Atmospheric Sciences, 2022, 39, 953-966.	1.9	3
105	Mesoscale wind stress-SST coupling induced feedback to the ocean in the western coast of South America. Journal of Oceanology and Limnology, 2021, 39, 785-799.	0.6	2
106	Coupling oceanâ€“atmosphere intensity determines ocean chlorophyll-induced SST change in the tropical Pacific. Climate Dynamics, 2021, 56, 3775-3795.	1.7	2
107	Subsurface warm biases in the tropical Atlantic and their attributions to the role of wind forcing and ocean vertical mixing. Journal of Climate, 2022, , 1-28.	1.2	2
108	Effects of Temperature and Salinity on Surface Currents in the Equatorial Pacific. Journal of Geophysical Research: Oceans, 2022, 127, .	1.0	2

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109	Mesoscale wind stress-SST coupled perturbations in the Kuroshio Extension. Progress in Oceanography, 2019, 172, 108-123.	1.5	1
110	An ocean modeling study to quantify wind forcing and oceanic mixing effects on the tropical North Pacific subsurface warm bias in CMIP and OMIP simulations. Climate Dynamics, 2022, 58, 999-1014.	1.7	1