Zhengyu Liu

List of Publications by Year
in descending order

132	10,709	36303 51	32842 100
papers	citations	h-index	g-index

133	133	133	9086
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Global warming preceded by increasing carbon dioxide concentrations during the last deglaciation. Nature, 2012, 484, 49-54.	27.8	1,141
2	Impact of the Indian Ocean SST basin mode on the Asian summer monsoon. Geophysical Research Letters, 2007, 34, .	4.0	628
3	Chinese cave records and the East Asia Summer Monsoon. Quaternary Science Reviews, 2014, 83, 115-128.	3.0	452
4	Global climate evolution during the last deglaciation. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, E1134-42.	7.1	422
5	The Holocene temperature conundrum. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E3501-5.	7.1	344
6	Atmospheric bridge, oceanic tunnel, and global climatic teleconnections. Reviews of Geophysics, 2007, 45, .	23.0	322
7	The global monsoon across time scales: Mechanisms and outstanding issues. Earth-Science Reviews, 2017, 174, 84-121.	9.1	290
8	Modeling climate shift of El Nino variability in the Holocene. Geophysical Research Letters, 2000, 27, 2265-2268.	4.0	289
9	Ice-shelf collapse from subsurface warming as a trigger for Heinrich events. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 13415-13419.	7.1	278
10	Noâ€analog climates and shifting realized niches during the late quaternary: implications for 21stâ€century predictions by species distribution models. Global Change Biology, 2012, 18, 1698-1713.	9.5	243
11	Simulation of the evolutionary response of global summer monsoons to orbital forcing over the past 280,000Âyears. Climate Dynamics, 2008, 30, 567-579.	3.8	230
12	Evolution and forcing mechanisms of El NiÃ±o over the past 21,000 years. Nature, 2014, 515, 550-553.	27.8	228
13	Greenland temperature response to climate forcing during the last deglaciation. Science, 2014, 345, 1177-1180.	12.6	226
14	Rethinking Tropical Ocean Response to Global Warming: The Enhanced Equatorial Warming*. Journal of Climate, 2005, 18, 4684-4700.	3.2	212
15	Dynamics of Interdecadal Climate Variability: A Historical Perspective*. Journal of Climate, 2012, 25, 1963-1995.	3.2	204
16	Assessing Global Vegetationâ€“Climate Feedbacks from Observations*. Journal of Climate, 2006, 19, 787-814.	3.2	189
17	Northern Hemisphere forcing of Southern Hemisphere climate during the last deglaciation. Nature, 2013, 494, 81-85.	27.8	186
18	A GCM Study of Tropicalâ€“Subtropical Upper-Ocean Water Exchange. Journal of Physical Oceanography, 1994, 24, 2606-2623.	1.7	180

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19	Coherent changes of southeastern equatorial and northern African rainfall during the last deglaciation. Science, 2014, 346, 1223-1227.	12.6	172
20	Seasonal origin of the thermal maxima at the Holocene and the last interglacial. Nature, 2021, 589, 548-553.	27.8	154
21	Astronomical and glacial forcing of East Asian summer monsoon variability. Quaternary Science Reviews, 2015, 115, 132-142.	3.0	141
22	Southern Hemisphere forcing of Pliocene Î´¹⁸O and the evolution of Indoâ€Asian monsoons. Paleoceanography, 2008, 23, .	3.0	139
23	Correlation and anti-correlation of the East Asian summer and winter monsoons during the last 21,000 years. Nature Communications, 2016, 7, 11999.	12.8	135
24	Atmospheric Response to North Pacific SST: The Role ofOceanâ€“Atmosphere Coupling*. Journal of Climate, 2004, 17, 1859-1882.	3.2	134
25	Forced Planetary Wave Response in a Thermocline Gyre. Journal of Physical Oceanography, 1999, 29, 1036-1055.	1.7	102
26	On the cause of abrupt vegetation collapse in North Africa during the Holocene: Climate variability vs. vegetation feedback. Geophysical Research Letters, 2006, 33, .	4.0	99
27	Global Vegetation and Climate Change due to Future Increases in CO2 as Projected by a Fully Coupled Model with Dynamic Vegetation*. Journal of Climate, 2007, 20, 70-90.	3.2	94
28	Modeling El NiÃ±o and its tropical teleconnections during the last glacial-interglacial cycle. Geophysical Research Letters, 2003, 30, n/a-n/a.	4.0	86
29	Younger Dryas cooling and the Greenland climate response to CO ₂. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 11101-11104.	7.1	85
30	North Atlantic Decadal Variability: Airâ€“Sea Coupling, Oceanic Memory, and Potential Northern Hemisphere Resonance*. Journal of Climate, 2005, 18, 331-349.	3.2	76
31	Extratropical control of tropical climate, the atmospheric bridge and oceanic tunnel. Geophysical Research Letters, 2003, 30, n/a-n/a.	4.0	74
32	On the observed relationship between the Pacific Decadal Oscillation and the Atlantic Multi-decadal Oscillation. Journal of Oceanography, 2011, 67, 27-35.	1.7	73
33	A Simple Model Study of ENSO Suppression by External Periodic Forcing*. Journal of Climate, 2002, 15, 1088-1098.	3.2	72
34	A data-model comparison pinpoints Holocene spatiotemporal pattern of East Asian summer monsoon. Quaternary Science Reviews, 2021, 261, 106911.	3.0	72
35	Regional and global forcing of glacier retreat during the last deglaciation. Nature Communications, 2015, 6, 8059.	12.8	71
36	Reduced ENSO variability at the LGM revealed by an isotopeâ€enabled Earth system model. Geophysical Research Letters, 2017, 44, 6984-6992.	4.0	71

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37	Possible obliquity-forced warmth in southern Asia during the last glacial stage. Science Bulletin, 2021, 66, 1136-1145.	9.0	71
38	Equatorward Propagation of Coupled Airâ€“Sea Disturbances with Application to the Annual Cycle of the Eastern Tropical Pacific. Journals of the Atmospheric Sciences, 1994, 51, 3807-3822.	1.7	69
39	Deglacial Î´18O and hydrologic variability in the tropical Pacific and Indian Oceans. Earth and Planetary Science Letters, 2014, 387, 240-251.	4.4	69
40	Atmospheric Teleconnections of Tropical Atlantic Variability: Interhemispheric, Tropicalâ€“Extratropical, and Cross-Basin Interactions. Journal of Climate, 2007, 20, 856-870.	3.2	67
41	Nonâ€linear alignment of El NiÃ±o to the 11â€yr solar cycle. Geophysical Research Letters, 2008, 35, .	4.0	65
42	Greening of the Sahara suppressed ENSO activity during the mid-Holocene. Nature Communications, 2017, 8, 16020.	12.8	63
43	Mechanisms and Predictability of Pacific Decadal Variability. Current Climate Change Reports, 2018, 4, 128-144.	8.6	60
44	The role of North Brazil Current transport in the paleoclimate of the Brazilian Nordeste margin and paleoceanography of the western tropical Atlantic during the late Quaternary. Palaeogeography, Palaeoclimatology, Palaeoecology, 2014, 415, 3-13.	2.3	58
45	An observational study of the impact of the North Pacific SST on the atmosphere. Geophysical Research Letters, 2006, 33, n/a-n/a.	4.0	57
46	Modeling the climatic drivers of spatial patterns in vegetation composition since the Last Glacial Maximum. Ecography, 2013, 36, 460-473.	4.5	57
47	The 1976/77 North Pacific Climate Regime Shift: The Role of Subtropical Ocean Adjustment and Coupled Oceanâ€“Atmosphere Feedbacks*. Journal of Climate, 2005, 18, 5125-5140.	3.2	56
48	Seasonal and Long-Term Atmospheric Responses to Reemerging North Pacific Ocean Variability: A Combined Dynamical and Statistical Assessment*. Journal of Climate, 2007, 20, 955-980.	3.2	56
49	Basin mode of Indian Ocean sea surface temperature and Northern Hemisphere circumglobal teleconnection. Geophysical Research Letters, 2009, 36, .	4.0	55
50	A Review of Paleo El NiÃ±o-Southern Oscillation. Atmosphere, 2018, 9, 130.	2.3	54
51	A Coupled Theory of Tropical Climatology: Warm Pool, Cold Tongue, and Walker Circulation. Journal of Climate, 1997, 10, 1662-1679.	3.2	53
52	Linear weakening of the AMOC in response to receding glacial ice sheets in CCSM3. Geophysical Research Letters, 2014, 41, 6252-6258.	4.0	53
53	Pacific subtropical-tropical thermocline water exchange in the National Centers for Environmental Prediction ocean model. Journal of Geophysical Research, 1999, 104, 11065-11076.	3.3	51
54	Why is the AMOC Monostable in Coupled General Circulation Models?. Journal of Climate, 2014, 27, 2427-2443.	3.2	49

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55	Interpreting Precessionâ€Driven Î´¹⁸O Variability in the South Asian Monsoon Region. Journal of Geophysical Research D: Atmospheres, 2018, 123, 5927-5946.	3.3	49
56	Combined statistical and dynamical assessment of simulated vegetationâ€“rainfall interactions in North Africa during the midâ€Holocene¹. Global Change Biology, 2008, 14, 347-368.	9.5	48
57	On the Assessment of Nonlocal Climate Feedback. Part I: The Generalized Equilibrium Feedback Assessment*. Journal of Climate, 2008, 21, 134-148.	3.2	48
58	Tropical cooling at the last glacial maximum and extratropical ocean ventilation1. Geophysical Research Letters, 2002, 29, 48-1-48-4.	4.0	47
59	Statistical and dynamical assessment of vegetation feedbacks on climate over the boreal forest. Climate Dynamics, 2008, 31, 691-712.	3.8	47
60	The ice age ecologist: testing methods for reserve prioritization during the last global warming. Global Ecology and Biogeography, 2013, 22, 289-301.	5.8	47
61	Planetary wave modes in the thermocline: Nonâ€Dopplerâ€shift mode, advective mode and Green mode. Quarterly Journal of the Royal Meteorological Society, 1999, 125, 1315-1339.	2.7	46
62	Temperature and leaf wax Î´2H records demonstrate seasonal and regional controls on Asian monsoon proxies. Geology, 2014, 42, 1075-1078.	4.4	46
63	Heterodynes dominate precipitation isotopes in the East Asian monsoon region, reflecting interaction of multiple climate factors. Earth and Planetary Science Letters, 2016, 455, 196-206.	4.4	46
64	Hemispheric Insolation Forcing of the Indian Ocean and Asian Monsoon: Local versus Remote Impacts*. Journal of Climate, 2006, 19, 6195-6208.	3.2	45
65	Vegetation feedback causes delayed ecosystem response to East Asian Summer Monsoon Rainfall during the Holocene. Nature Communications, 2021, 12, 1843.	12.8	42
66	Is Tropical Atlantic Variability driven by the North Atlantic Oscillation?. Geophysical Research Letters, 2002, 29, 31-1.	4.0	41
67	Reduced interdecadal variability of Atlantic Meridional Overturning Circulation under global warming. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 3175-3178.	7.1	38
68	Asynchronous warming and Î´¹⁸O evolution of deep Atlantic water masses during the last deglaciation. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 11075-11080.	7.1	38
69	Weakening Atlantic overturning circulation causes South Atlantic salinity pile-up. Nature Climate Change, 2020, 10, 998-1003.	18.8	38
70	Extratropical control of recent tropical Pacific decadal climate variability: a relay teleconnection. Climate Dynamics, 2006, 28, 99-112.	3.8	37
71	Origin of Pacific Multidecadal Variability in Community Climate System Model, Version 3 (CCSM3): A Combined Statistical and Dynamical Assessment. Journal of Climate, 2008, 21, 114-133.	3.2	37
72	Calendar effect on phase study in paleoclimate transient simulation with orbital forcing. Climate Dynamics, 2011, 37, 1949-1960.	3.8	37

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73	A Possible Role of Dust in Resolving the Holocene Temperature Conundrum. Scientific Reports, 2018, 8, 4434.	3.3	37
74	Observed Atmospheric Responses to Global SST Variability Modes: A Unified Assessment Using GEFA*. Journal of Climate, 2010, 23, 1739-1759.	3.2	36
75	Half-precessional cycle of thermocline temperature in the western equatorial Pacific and its bihemispheric dynamics. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 7044-7051.	7.1	36
76	The Role of Ocean in the Response of Tropical Climatology to Global Warming: The Westâ€“East SST Contrast. Journal of Climate, 1998, 11, 864-875.	3.2	34
77	Tropicalâ€“extratropical climate interaction as revealed in idealized coupled climate model experiments. Climate Dynamics, 2005, 24, 863-879.	3.8	34
78	On the Mechanism of Pacific Multidecadal Climate Variability in CCSM3: The Role of the Subpolar North Pacific Ocean. Journal of Physical Oceanography, 2009, 39, 2052-2076.	1.7	34
79	Last Century Warming Over the Canadian Atlantic Shelves Linked to Weak Atlantic Meridional Overturning Circulation. Geophysical Research Letters, 2018, 45, 12,376.	4.0	33
80	Contrasting Responses of the Hadley Circulation to Equatorially Asymmetric and Symmetric Meridional Sea Surface Temperature Structures. Journal of Climate, 2016, 29, 8949-8963.	3.2	30
81	Coupled ocean-atmosphere response to north tropical Atlantic SST: Tropical Atlantic dipole and ENSO. Geophysical Research Letters, 2005, 32, .	4.0	29
82	Modeling the time-dependent response of the Asian summer monsoon to obliquity forcing in a coupled GCM: a PHASEMAP sensitivity experiment. Climate Dynamics, 2011, 36, 695-710.	3.8	29
83	Understanding the control of extratropical atmospheric variability on ENSO using a coupled data assimilation approach. Climate Dynamics, 2017, 48, 3139-3160.	3.8	29
84	Strongly Coupled Data Assimilation Using Leading Averaged Coupled Covariance (LACC). Part II: CGCM Experiments*. Monthly Weather Review, 2015, 143, 4645-4659.	1.4	28
85	The transient response of atmospheric and oceanic heat transports to anthropogenic warming. Nature Climate Change, 2019, 9, 222-226.	18.8	28
86	The pathway of the interdecadal variability in the Pacific Ocean. Science Bulletin, 2000, 45, 1555-1561.	1.7	26
87	Oceanic conditions in the eastern equatorial Pacific during the onset of ENSO in the Holocene. Quaternary Research, 2003, 60, 142-148.	1.7	26
88	Why Is There a Tritium Maximum in the Central Equatorial Pacific Thermocline?. Journal of Physical Oceanography, 1998, 28, 1527-1533.	1.7	25
89	Estimating the Observed Atmospheric Response to SST Anomalies: Maximum Covariance Analysis, Generalized Equilibrium Feedback Assessment, and Maximum Response Estimation. Journal of Climate, 2011, 24, 2523-2539.	3.2	25
90	Abrupt Heinrich Stadial 1 cooling missing in Greenland oxygen isotopes. Science Advances, 2021, 7, .	10.3	24

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91	Global Hydrological Cycle Response to Rapid and Slow Global Warming. Journal of Climate, 2013, 26, 8781-8786.	3.2	23
92	Understanding Bjerknes Compensation in Atmosphere and Ocean Heat Transports Using a Coupled Box Model. Journal of Climate, 2016, 29, 2145-2160.	3.2	22
93	Abrupt intensification of ENSO forced by deglacial ice-sheet retreat in CCSM3. Climate Dynamics, 2016, 46, 1877-1891.	3.8	21
94	Heat Transport Compensation in Atmosphere and Ocean over the Past 22,000 Years. Scientific Reports, 2015, 5, 16661.	3.3	20
95	On the stability of the Atlantic meridional overturning circulation during the last deglaciation. Climate Dynamics, 2015, 44, 1257-1275.	3.8	19
96	Midlatitude land surface temperature impacts the timing and structure of glacial maxima. Geophysical Research Letters, 2017, 44, 984-992.	4.0	19
97	Speleothems of South American and Asian Monsoons Influenced by a Green Sahara. Geophysical Research Letters, 2020, 47, e2020GL089695.	4.0	16
98	Relative importance of wind and buoyancy forcing for interdecadal regime shifts in the Pacific Ocean. Science in China Series D: Earth Sciences, 2003, 46, 417-427.	0.9	14
99	How does extratropical warming affect ENSO?. Geophysical Research Letters, 2005, 32, .	4.0	13
100	Potential Impact of the Eurasian Boreal Forest on North Pacific Climate Variability*. Journal of Climate, 2007, 20, 981-992.	3.2	13
101	Deglacial variability of South China hydroclimate heavily contributed by autumn rainfall. Nature Communications, 2021, 12, 5875.	12.8	13
102	A mechanistic understanding of oxygen isotopic changes in the Western United States at the Last Glacial Maximum. Quaternary Science Reviews, 2021, 274, 107255.	3.0	13
103	Local Insolation Drives Afroâ€Asian Monsoon at Orbitalâ€Scale in Holocene. Geophysical Research Letters, 2022, 49, .	4.0	13
104	Oceanic Regulation of the Atmospheric Walker Circulation. Bulletin of the American Meteorological Society, 1997, 78, 407-412.	3.3	12
105	Toward Understanding Tropical Atlantic Variability Using Coupled Modeling Surgery. Geophysical Monograph Series, 0, , 157-170.	0.1	12
106	Varying Sensitivity of East Asia Summer Monsoon Circulation to Temperature Change Since Last Glacial Maximum. Geophysical Research Letters, 2019, 46, 9103-9109.	4.0	12
107	Influence of Extratropical Thermal and Wind Forcings on Equatorial Thermocline in an Ocean GCM*. Journal of Physical Oceanography, 2004, 34, 174-187.	1.7	11
108	Periodic Forcing and ENSO Suppression in the Cane-Zebiak Model. Journal of Oceanography, 2005, 61, 109-113.	1.7	11

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109	Understanding the temporal slope of the temperatureâ€water isotope relation during the deglaciation using isoCAM3: The slope equation. Journal of Geophysical Research D: Atmospheres, 2016, 121, 10,342.	3.3	10
110	Investigating the Direct Meltwater Effect in Terrestrial Oxygenâ€Isotope Paleoclimate Records Using an Isotopeâ€Enabled Earth System Model. Geophysical Research Letters, 2017, 44, 12,501.	4.0	10
111	Potential predictability and forecast skill in ensemble climate forecast: a skill-persistence rule. Climate Dynamics, 2018, 51, 2725-2742.	3.8	10
112	Assessing the Ability of Zonal Î´¹⁸O Contrast in Benthic Foraminifera to Reconstruct Deglacial Evolution of Atlantic Meridional Overturning Circulation. Paleoceanography and Paleoclimatology, 2019, 34, 800-812.	2.9	10
113	Deglacial trends in Indo-Pacific warm pool hydroclimate in an isotope-enabled Earth system model and implications for isotope-based paleoclimate reconstructions. Quaternary Science Reviews, 2021, 270, 107188.	3.0	10
114	Assessing the stability of the Atlantic meridional overturning circulation of the past, present, and future. Journal of Meteorological Research, 2014, 28, 803-819.	2.4	9
115	A Mechanism for Abrupt Climate Change Associated with Tropical Pacific SSTs*. Journal of Climate, 2006, 19, 242-256.	3.2	8
116	Remineralization dominating the Î´13C decrease in the mid-depth Atlantic during the last deglaciation. Earth and Planetary Science Letters, 2021, 571, 117106.	4.4	8
117	Tropical Ocean Decadal Variability and Resonance of Planetary Wave Basin Modes. Part II: Numerical Study*. Journal of Climate, 2004, 17, 1711-1721.	3.2	6
118	Modeling precipitation <i>Î´</i>¹⁸O variability in East Asia since the Last Glacial Maximum: temperature and amount effects across different timescales. Climate of the Past, 2016, 12, 2077-2085.	3.4	6
119	A Systematic Comparison of Particle Filter and EnKF in Assimilating Timeâ€Averaged Observations. Journal of Geophysical Research D: Atmospheres, 2017, 122, 13,155.	3.3	6
120	Variation of summer precipitation Î´¹⁸O on the Chinese Loess Plateau since the last interglacial. Journal of Quaternary Science, 2021, 36, 1214-1220.	2.1	6
121	Tropical SST Response to Global Warming in the Twentieth Century. Journal of Climate, 2009, 22, 1305-1312.	3.2	5
122	Examining El NiÃ±o in the Holocene: implications and challenges. National Science Review, 2018, 5, 807-809.	9.5	5
123	Nonlinear Responses of Droughts Over China to Volcanic Eruptions at Different Drought Phases. Geophysical Research Letters, 2022, 49, .	4.0	5
124	Migration of Afro-Asian Monsoon Fringe Since Last Glacial Maximum. Frontiers in Earth Science, 2020, 8, .	1.8	4
125	Interpreting the lake-status record of the East Asian monsoon using a hydrological model. Quaternary Research, 2021, 99, 80-95.	1.7	4
126	The Driving Mechanisms on Southern Ocean Upwelling Change during the Last Deglaciation. Geosciences (Switzerland), 2021, 11, 266.	2.2	4

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127	Assessing the Modern Multiâ€Ðecadal Scale Aridification Over the Northern China From a Historical Perspective. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	3.3	4
128	Reply to: Non-trivial role of internal climate feedback on interglacial temperature evolution. Nature, 2021, 600, E4-E6.	27.8	2
129	Responses of East Asian winter monsoonâ€Australian summer monsoon to Local and Remote orbital forcing during Holocene. Geophysical Research Letters, 0, , .	4.0	2
130	Holocene temperature response to external forcing: assessing the linear response and its spatial and temporal dependence. Climate of the Past, 2019, 15, 1411-1425.	3.4	1
131	Modeling surgery: A new way toward understanding earth climate variability. Journal of Ocean University of China, 2005, 4, 306-314.	1.2	0
132	Quantitatively Isolating Extratropical Atmospheric Impact on the Tropical Pacific Interannual Variability in Coupled Climate Model. IEEE Access, 2020, 8, 163857-163867.	4.2	0