Jian Lu

List of Publications by Year
in descending order

85 papers	7,672 citations	117571 34 h-index	53190 85 g-index
88 all docs	88 docs citations	88 times ranked	7721 citing authors

#	Article	IF	Citations
1	Model Projections of an Imminent Transition to a More Arid Climate in Southwestern North America. Science, 2007, 316, 1181-1184.	6.0	1,792
2	GFDL's CM2 Global Coupled Climate Models. Part I: Formulation and Simulation Characteristics. Journal of Climate, 2006, 19, 643-674.	1.2	1,431
3	Expansion of the Hadley cell under global warming. Geophysical Research Letters, 2007, 34, .	1.5	652
4	Response of the Zonal Mean Atmospheric Circulation to El NiÃ±o versus Global Warming. Journal of Climate, 2008, 21, 5835-5851.	1.2	393
5	Responses of East Asian summer monsoon to historical SST and atmospheric forcing during 1950â€“2000. Climate Dynamics, 2010, 34, 501-514.	1.7	353
6	Width of the Hadley cell in simple and comprehensive general circulation models. Geophysical Research Letters, 2007, 34, .	1.5	208
7	Dynamical and thermodynamical modulations on future changes of landfalling atmospheric rivers over western North America. Geophysical Research Letters, 2015, 42, 7179-7186.	1.5	153
8	Oceanic forcing of the late 20th century Sahel drought. Geophysical Research Letters, 2005, 32, n/a-n/a.	1.5	151
9	Re-examining tropical expansion. Nature Climate Change, 2018, 8, 768-775.	8.1	140
10	A projection of changes in landfalling atmospheric river frequency and extreme precipitation over western North America from the Large Ensemble CESM simulations. Geophysical Research Letters, 2016, 43, 1357-1363.	1.5	128
11	Phase Speed Spectra and the Latitude of Surface Westerlies: Interannual Variability and Global Warming Trend. Journal of Climate, 2008, 21, 5942-5959.	1.2	124
12	Expansion of the Hadley Cell under Global Warming: Winter versus Summer. Journal of Climate, 2012, 25, 8387-8393.	1.2	124
13	The Position of the Midlatitude Storm Track and Eddy-Driven Westerlies in Aquaplanet AGCMs. Journals of the Atmospheric Sciences, 2010, 67, 3984-4000.	0.6	100
14	Winter Northern Hemisphere surface air temperature variability associated with the Arctic Oscillation and North Atlantic Oscillation. Geophysical Research Letters, 2005, 32, .	1.5	76
15	Larger Increases in More Extreme Local Precipitation Events as Climate Warms. Geophysical Research Letters, 2019, 46, 6885-6891.	1.5	76
16	Uncertainties in Projecting Future Changes in Atmospheric Rivers and Their Impacts on Heavy Precipitation over Europe. Journal of Climate, 2016, 29, 6711-6726.	1.2	75
17	Breaking down the tropospheric circulation response by forcing. Climate Dynamics, 2012, 39, 2361-2375.	1.7	69
18	Resolution and Dynamical Core Dependence of Atmospheric River Frequency in Global Model Simulations. Journal of Climate, 2015, 28, 2764-2776.	1.2	66

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19	Southern Ocean Heat Uptake, Redistribution, and Storage in a Warming Climate: The Role of Meridional Overturning Circulation. Journal of Climate, 2018, 31, 4727-4743.	1.2	66
20	Robust spring drying in the southwestern U.S. and seasonal migration of wet/dry patterns in a warmer climate. Geophysical Research Letters, 2014, 41, 1745-1751.	1.5	64
21	Seasonally dependent responses of subtropical highs and tropical rainfall to anthropogenic warming. Nature Climate Change, 2018, 8, 787-792.	8.1	63
22	The Role of Oceanic Feedback in the Climate Response to Doubling CO₂. Journal of Climate, 2012, 25, 7544-7563.	1.2	60
23	Sensitivities of zonal mean atmospheric circulation to SST warming in an aquaâ€planet model. Geophysical Research Letters, 2010, 37, .	1.5	54
24	Sensitivities and Mechanisms of the Zonal Mean Atmospheric Circulation Response to Tropical Warming. Journals of the Atmospheric Sciences, 2013, 70, 2487-2504.	0.6	54
25	Local finiteâ€amplitude wave activity as an objective diagnostic of midlatitude extreme weather. Geophysical Research Letters, 2015, 42, 10,952.	1.5	54
26	Exploring a Multiresolution Approach Using AMIP Simulations. Journal of Climate, 2015, 28, 5549-5574.	1.2	51
27	The tropical rain belts with an annual cycle and a continent model intercomparison project: TRACMIP. Journal of Advances in Modeling Earth Systems, 2016, 8, 1868-1891.	1.3	47
28	The Role of Ocean Dynamical Thermostat in Delaying the El NiÃ±oâ€"Like Response over the Equatorial Pacific to Climate Warming. Journal of Climate, 2017, 30, 2811-2827.	1.2	47
29	The Role of Subtropical Irreversible PV Mixing in the Zonal Mean Circulation Response to Global Warmingâ€"Like Thermal Forcing. Journal of Climate, 2014, 27, 2297-2316.	1.2	44
30	Toward the Dynamical Convergence on the Jet Stream in Aquaplanet AGCMs. Journal of Climate, 2015, 28, 6763-6782.	1.2	42
31	Future Changes in Seasonality of the North Pacific and North Atlantic Subtropical Highs. Geophysical Research Letters, 2018, 45, 11,959.	1.5	42
32	How Tropical Pacific Surface Cooling Contributed to Accelerated Sea Ice Melt from 2007 to 2012 as Ice Is Thinned by Anthropogenic Forcing. Journal of Climate, 2019, 32, 8583-8602.	1.2	41
33	Roles of SST versus Internal Atmospheric Variability in Winter Extreme Precipitation Variability along the U.S. West Coast. Journal of Climate, 2018, 31, 8039-8058.	1.2	39
34	Thermodynamic and Dynamic Mechanisms for Hydrological Cycle Intensification over the Full Probability Distribution of Precipitation Events. Journals of the Atmospheric Sciences, 2019, 76, 497-516.	0.6	38
35	Tropical Expansion Driven by Poleward Advancing Midlatitude Meridional Temperature Gradients. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2020JD033158.	1.2	37
36	The Active Role of the Ocean in the Temporal Evolution of Climate Sensitivity. Geophysical Research Letters, 2018, 45, 306-315.	1.5	33

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37	Delineating the Eddyâ€“Zonal Flow Interaction in the Atmospheric Circulation Response to Climate Forcing: Uniform SST Warming in an Idealized Aquaplanet Model. Journals of the Atmospheric Sciences, 2013, 70, 2214-2233.	0.6	32
38	Precipitation characteristic changes due to global warming in a highâ€resolution (16 km) ECMWF simulation. Quarterly Journal of the Royal Meteorological Society, 2019, 145, 303-317.	1.0	32
39	The robust dynamical contribution to precipitation extremes in idealized warming simulations across model resolutions. Geophysical Research Letters, 2014, 41, 2971-2978.	1.5	29
40	Uncertainty in future projections of the North Pacific subtropical high and its implication for California winter precipitation change. Journal of Geophysical Research D: Atmospheres, 2016, 121, 795-806.	1.2	29
41	Contributions of Extreme and Nonâ€Extreme Precipitation to California Precipitation Seasonality Changes Under Warming. Geophysical Research Letters, 2019, 46, 13470-13478.	1.5	29
42	Exploring the impacts of physics and resolution on aquaâ€planet simulations from a nonhydrostatic global variableâ€resolution modeling framework. Journal of Advances in Modeling Earth Systems, 2016, 8, 1751-1768.	1.3	28
43	Sensitivity of Surface Temperature to Oceanic Forcing via q-Flux Greenâ€™s Function Experiments. Part I: Linear Response Function. Journal of Climate, 2018, 31, 3625-3641.	1.2	25
44	Emergence of seasonal delay of tropical rainfall during 1979â€“2019. Nature Climate Change, 2021, 11, 605-612.	8.1	25
45	Extreme Wetâ€Bulb Temperatures in China: The Significant Role of Moisture. Journal of Geophysical Research D: Atmospheres, 2019, 124, 11944-11960.	1.2	24
46	Mechanisms for an Amplified Precipitation Seasonal Cycle in the U.S. West Coast under Global Warming. Journal of Climate, 2019, 32, 4681-4698.	1.2	24
47	Responses of the Hadley Circulation to Regional Sea Surface Temperature Changes. Journal of Climate, 2020, 33, 429-441.	1.2	24
48	Local increase of anticyclonic wave activity over northern Eurasia under amplified Arctic warming. Geophysical Research Letters, 2017, 44, 3299-3308.	1.5	23
49	Testing the Clausius-Clapeyron constraint on the aerosol-induced changes in mean and extreme precipitation. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	22
50	Exploring the effects of a nonhydrostatic dynamical core in highâ€resolution aquaplanet simulations. Journal of Geophysical Research D: Atmospheres, 2017, 122, 3245-3265.	1.2	21
51	On the Relative Roles of the Atmosphere and Ocean in the Atlantic Multidecadal Variability. Geophysical Research Letters, 2018, 45, 9186-9196.	1.5	19
52	Contrasting Phase Changes of Precipitation Annual Cycle Between Land and Ocean Under Global Warming. Geophysical Research Letters, 2020, 47, e2020GL090327.	1.5	19
53	Sensitivity of Surface Temperature to Oceanic Forcing via <i>q</i>-Flux Greenâ€™s Function Experiments. Part II: Feedback Decomposition and Polar Amplification. Journal of Climate, 2018, 31, 6745-6761.	1.2	16
54	Remote Drying in the North Atlantic as a Common Response to Precessional Changes and CO₂ Increase Over Land. Geophysical Research Letters, 2018, 45, 3615-3624.	1.5	15

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55	Sensitivity of the Latitude of the Westerly Jet Stream to Climate Forcing. Geophysical Research Letters, 2020, 47, e2019GL086563.	1.5	15
56	Uncertainty in El NiÃ±o-like warming and California precipitation changes linked by the Interdecadal Pacific Oscillation. Nature Communications, 2021, 12, 6484.	5.8	15
57	The Transient Circulation Response to Radiative Forcings and Sea Surface Warming*. Journal of Climate, 2014, 27, 9323-9336.	1.2	14
58	On the Oceanic Origin for the Enhanced Seasonal Cycle of SST in the Midlatitudes under Global Warming. Journal of Climate, 2020, 33, 8401-8413.	1.2	14
59	Resolution Dependence and Rossby Wave Modulation of Atmospheric Rivers in an Aquaplanet Model. Journal of Geophysical Research D: Atmospheres, 2018, 123, 6297-6311.	1.2	12
60	Sensitivity of the ITCZ Location to Ocean Forcing Via Qâ€Flux Green's Function Experiments. Geophysical Research Letters, 2018, 45, 13,116.	1.5	12
61	Contrasting Recent and Future ITCZ Changes From Distinct Tropical Warming Patterns. Geophysical Research Letters, 2020, 47, e2020GL089846.	1.5	12
62	Doubleâ€ITCZ as an Emergent Constraint for Future Precipitation Over Mediterranean Climate Regions in the North Hemisphere. Geophysical Research Letters, 2021, 48, e2020GL091569.	1.5	12
63	Future Changes in the Great Plains Lowâ€Level Jet Governed by Seasonally Dependent Pattern Changes in the North Atlantic Subtropical High. Geophysical Research Letters, 2021, 48, e2020GL090356.	1.5	12
64	Black Carbon Increases Frequency of Extreme ENSO Events. Journal of Climate, 2019, 32, 8323-8333.	1.2	11
65	The Dominant Contribution of Southern Ocean Heat Uptake to Timeâ€Evolving Radiative Feedback in CESM. Geophysical Research Letters, 2021, 48, e2021GL093302.	1.5	11
66	Enhanced hydrological extremes in the western United States under global warming through the lens of water vapor wave activity. Npj Climate and Atmospheric Science, 2018, 1, .	2.6	10
67	Sensitivity of Surface Temperature to Oceanic Forcing via q-Flux Greenâ€™s Function Experiments. Part III: Asymmetric Response to Warming and Cooling. Journal of Climate, 2020, 33, 1283-1297.	1.2	10
68	Response of the Hydrological Cycle in Asian Monsoon Systems to Global Warming Through the Lens of Water Vapor Wave Activity Analysis. Geophysical Research Letters, 2018, 45, 11,904.	1.5	9
69	Decoding the dynamics of poleward shifting climate zones using aqua-planet model simulations. Climate Dynamics, 2022, 58, 3513-3526.	1.7	9
70	Multiple Metrics Informed Projections of Future Precipitation in China. Geophysical Research Letters, 2021, 48, e2021GL093810.	1.5	8
71	Weakening of Upward Mass but Intensification of Upward Energy Transport in a Warming Climate. Geophysical Research Letters, 2019, 46, 1672-1680.	1.5	8
72	Examining the Hydrological Variations in an Aquaplanet World Using Wave Activity Transformation. Journal of Climate, 2017, 30, 2559-2576.	1.2	7

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73	A Robust Increase of the Intraseasonal Periodic Behavior of the Precipitation and Eddy Kinetic Energy in a Warming Climate. Geophysical Research Letters, 2018, 45, 7790-7799.	1.5	6
74	Sub-cloud moist entropy curvature as a predictor for changes in the seasonal cycle of tropical precipitation. Climate Dynamics, 2019, 53, 3463-3479.	1.7	6
75	Neutral modes of surface temperature and the optimal ocean thermal forcing for global cooling. Npj Climate and Atmospheric Science, 2020, 3, .	2.6	6
76	The Leading Modes of Asian Summer Monsoon Variability as Pulses of Atmospheric Energy Flow. Geophysical Research Letters, 2021, 48, e2020GL091629.	1.5	6
77	Seasonally dependent future changes in the US Midwest hydroclimate and extremes. Journal of Climate, 2021, , 1-35.	1.2	5
78	Improved annular mode variability in a global atmospheric general circulation model with 16 km horizontal resolution. Geophysical Research Letters, 2013, 40, 4893-4899.	1.5	3
79	Investigating the zonal wind response to SST warming using transient ensemble AGCM experiments. Climate Dynamics, 2017, 48, 523-540.	1.7	3
80	The Evolution Dynamical Processes of Ural Blocking Through the Lens of Local Finiteâ€Amplitude Wave Activity Budget Analysis. Geophysical Research Letters, 2021, 48, e2020GL091727.	1.5	3
81	Linear Response Function Reveals the Most Effective Remote Forcing in Causing September Arctic Sea Ice Melting in CESM. Geophysical Research Letters, 2021, 48, e2021GL094189.	1.5	3
82	Evidence for Coupling Between the Subseasonal Oscillations in the Southern Hemisphere Midlatitude Ocean and Atmosphere. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033872.	1.2	2
83	Conservation of Dry Air, Water, and Energy in CAM and Its Potential Impact on Tropical Rainfall. Journal of Climate, 2022, 35, 2895-2917.	1.2	2
84	Neutral Mode Dominates the Forced Global and Regional Surface Temperature Response in the Past and Future. Geophysical Research Letters, 2022, 49, .	1.5	1
85	How Moist and Dry Intrusions Control the Local Hydrologic Cycle in Present and Future Climates. Journal of Climate, 2021, 34, 4343-4359.	1.2	0