

Aiguo Dai

List of Publications by Year in descending order

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107
papers

29,531
citations

19657

61
h-index

24982

109
g-index

113
all docs

113
docs citations

113
times ranked

24476
citing authors

#	ARTICLE	IF	CITATIONS
1	Increasing drought under global warming in observations and models. <i>Nature Climate Change</i> , 2013, 3, 52-58.	18.8	3,342
2	Drought under global warming: a review. <i>Wiley Interdisciplinary Reviews: Climate Change</i> , 2011, 2, 45-65.	8.1	2,354
3	The Changing Character of Precipitation. <i>Bulletin of the American Meteorological Society</i> , 2003, 84, 1205-1218.	3.3	2,280
4	Global warming and changes in drought. <i>Nature Climate Change</i> , 2014, 4, 17-22.	18.8	2,231
5	A Global Dataset of Palmer Drought Severity Index for 1870–2002: Relationship with Soil Moisture and Effects of Surface Warming. <i>Journal of Hydrometeorology</i> , 2004, 5, 1117-1130.	1.9	1,740
6	Estimates of Freshwater Discharge from Continents: Latitudinal and Seasonal Variations. <i>Journal of Hydrometeorology</i> , 2002, 3, 660-687.	1.9	912
7	Precipitation Characteristics in Eighteen Coupled Climate Models. <i>Journal of Climate</i> , 2006, 19, 4605-4630.	3.2	902
8	Changes in Continental Freshwater Discharge from 1948 to 2004. <i>Journal of Climate</i> , 2009, 22, 2773-2792.	3.2	767
9	Characteristics and trends in various forms of the Palmer Drought Severity Index during 1900–2008. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	747
10	Estimates of the Global Water Budget and Its Annual Cycle Using Observational and Model Data. <i>Journal of Hydrometeorology</i> , 2007, 8, 758-769.	1.9	716
11	Surface Observed Global Land Precipitation Variations during 1900–88. <i>Journal of Climate</i> , 1997, 10, 2943-2962.	3.2	551
12	Global patterns of ENSO-induced precipitation. <i>Geophysical Research Letters</i> , 2000, 27, 1283-1286.	4.0	533
13	Dryland climate change: Recent progress and challenges. <i>Reviews of Geophysics</i> , 2017, 55, 719-778.	23.0	507
14	Drylands face potential threat under 2°C global warming target. <i>Nature Climate Change</i> , 2017, 7, 417-422.	18.8	450
15	Simulation of Global Land Surface Conditions from 1948 to 2004. Part I: Forcing Data and Evaluations. <i>Journal of Hydrometeorology</i> , 2006, 7, 953-975.	1.9	416
16	Observed and model-simulated diurnal cycles of precipitation over the contiguous United States. <i>Journal of Geophysical Research</i> , 1999, 104, 6377-6402.	3.3	412
17	The Diurnal Cycle and Its Depiction in the Community Climate System Model. <i>Journal of Climate</i> , 2004, 17, 930-951.	3.2	408
18	Recent Climatology, Variability, and Trends in Global Surface Humidity. <i>Journal of Climate</i> , 2006, 19, 3589-3606.	3.2	397

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19	Global Precipitation and Thunderstorm Frequencies. Part II: Diurnal Variations. <i>Journal of Climate</i> , 2001, 14, 1112-1128.	3.2	373
20	How Often Does It Rain?. <i>Journal of Climate</i> , 2006, 19, 916-934.	3.2	371
21	Decadal modulation of global surface temperature by internal climate variability. <i>Nature Climate Change</i> , 2015, 5, 555-559.	18.8	368
22	Effects of Mount Pinatubo volcanic eruption on the hydrological cycle as an analog of geoen지니어ing. <i>Geophysical Research Letters</i> , 2007, 34, .	4.0	366
23	Continental-scale convection-permitting modeling of the current and future climate of North America. <i>Climate Dynamics</i> , 2017, 49, 71-95.	3.8	362
24	Responses of East Asian summer monsoon to historical SST and atmospheric forcing during 1950â€“2000. <i>Climate Dynamics</i> , 2010, 34, 501-514.	3.8	353
25	Arctic amplification is caused by sea-ice loss under increasing CO2. <i>Nature Communications</i> , 2019, 10, 121.	12.8	350
26	Global variations in droughts and wet spells: 1900-1995. <i>Geophysical Research Letters</i> , 1998, 25, 3367-3370.	4.0	346
27	The recent Sahel drought is real. <i>International Journal of Climatology</i> , 2004, 24, 1323-1331.	3.5	343
28	How Often Will It Rain?. <i>Journal of Climate</i> , 2007, 20, 4801-4818.	3.2	323
29	Climate Change and Drought: a Precipitation and Evaporation Perspective. <i>Current Climate Change Reports</i> , 2018, 4, 301-312.	8.6	303
30	Summer Precipitation Frequency, Intensity, and Diurnal Cycle over China: A Comparison of Satellite Data with Rain Gauge Observations. <i>Journal of Climate</i> , 2008, 21, 3997-4010.	3.2	300
31	A U.S. CLIVAR Project to Assess and Compare the Responses of Global Climate Models to Drought-Related SST Forcing Patterns: Overview and Results. <i>Journal of Climate</i> , 2009, 22, 5251-5272.	3.2	282
32	Impact of Ural Blocking on Winter Warm Arcticâ€“Cold Eurasian Anomalies. Part I: Blocking-Induced Amplification. <i>Journal of Climate</i> , 2016, 29, 3925-3947.	3.2	270
33	The influence of the inter-decadal Pacific oscillation on US precipitation during 1923â€“2010. <i>Climate Dynamics</i> , 2013, 41, 633-646.	3.8	242
34	Climates of the Twentieth and Twenty-First Centuries Simulated by the NCAR Climate System Model. <i>Journal of Climate</i> , 2001, 14, 485-519.	3.2	230
35	The Magnitude and Causes of Global Drought Changes in the Twenty-First Century under a Lowâ€“Moderate Emissions Scenario. <i>Journal of Climate</i> , 2015, 28, 4490-4512.	3.2	226
36	The influence of the Interdecadal Pacific Oscillation on Temperature and Precipitation over the Globe. <i>Climate Dynamics</i> , 2015, 45, 2667-2681.	3.8	223

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37	Challenges in Quantifying Changes in the Global Water Cycle. <i>Bulletin of the American Meteorological Society</i> , 2015, 96, 1097-1115.	3.3	212
38	The frequency, intensity, and diurnal cycle of precipitation in surface and satellite observations over low- and mid-latitudes. <i>Climate Dynamics</i> , 2007, 29, 727-744.	3.8	211
39	Increased Quasi Stationarity and Persistence of Winter Ural Blocking and Eurasian Extreme Cold Events in Response to Arctic Warming. Part I: Insights from Observational Analyses. <i>Journal of Climate</i> , 2017, 30, 3549-3568.	3.2	193
40	Uncertainties in historical changes and future projections of drought. Part I: estimates of historical drought changes. <i>Climatic Change</i> , 2017, 144, 519-533.	3.6	191
41	Climate Change Impacts on the Water Balance of the Colorado Headwaters: High-Resolution Regional Climate Model Simulations. <i>Journal of Hydrometeorology</i> , 2014, 15, 1091-1116.	1.9	166
42	Observed Changes in the Distributions of Daily Precipitation Frequency and Amount over China from 1960 to 2013. <i>Journal of Climate</i> , 2015, 28, 6960-6978.	3.2	159
43	Impact of Ural Blocking on Winter Warm Arctic and Cold Eurasian Anomalies. Part II: The Link to the North Atlantic Oscillation. <i>Journal of Climate</i> , 2016, 29, 3949-3971.	3.2	152
44	Uncertainties in historical changes and future projections of drought. Part II: model-simulated historical and future drought changes. <i>Climatic Change</i> , 2017, 144, 535-548.	3.6	133
45	Global Precipitation and Thunderstorm Frequencies. Part I: Seasonal and Interannual Variations. <i>Journal of Climate</i> , 2001, 14, 1092-1111.	3.2	130
46	A New Approach to Homogenize Daily Radiosonde Humidity Data. <i>Journal of Climate</i> , 2011, 24, 965-991.	3.2	118
47	Changes in Atmospheric Blocking Circulations Linked with Winter Arctic Warming: A New Perspective. <i>Journal of Climate</i> , 2018, 31, 7661-7678.	3.2	95
48	How much do precipitation extremes change in a warming climate?. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	91
49	Radiation Dry Bias Correction of Vaisala RS92 Humidity Data and Its Impacts on Historical Radiosonde Data. <i>Journal of Atmospheric and Oceanic Technology</i> , 2013, 30, 197-214.	1.3	91
50	Changes in Convective Available Potential Energy and Convective Inhibition under Global Warming. <i>Journal of Climate</i> , 2020, 33, 2025-2050.	3.2	90
51	Global Water Vapor Trend from 1988 to 2011 and Its Diurnal Asymmetry Based on GPS, Radiosonde, and Microwave Satellite Measurements. <i>Journal of Climate</i> , 2016, 29, 5205-5222.	3.2	86
52	Impacts of internal variability on temperature and precipitation trends in large ensemble simulations by two climate models. <i>Climate Dynamics</i> , 2019, 52, 289-306.	3.8	84
53	A new mechanism for warm-season precipitation response to global warming based on convection-permitting simulations. <i>Climate Dynamics</i> , 2020, 55, 343-368.	3.8	84
54	Increased Quasi Stationarity and Persistence of Winter Ural Blocking and Eurasian Extreme Cold Events in Response to Arctic Warming. Part II: A Theoretical Explanation. <i>Journal of Climate</i> , 2017, 30, 3569-3587.	3.2	83

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55	Little influence of Arctic amplification on mid-latitude climate. <i>Nature Climate Change</i> , 2020, 10, 231-237.	18.8	80
56	Hydroclimatic Trends in the Mississippi River Basin from 1948 to 2004. <i>Journal of Climate</i> , 2007, 20, 4599-4614.	3.2	77
57	A nonlinear multiscale interaction model for atmospheric blocking: The eddy-blocking matching mechanism. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2014, 140, 1785-1808.	2.7	75
58	Metrics for the Diurnal Cycle of Precipitation: Toward Routine Benchmarks for Climate Models. <i>Journal of Climate</i> , 2016, 29, 4461-4471.	3.2	73
59	The winter midlatitude-Arctic interaction: effects of North Atlantic SST and high-latitude blocking on Arctic sea ice and Eurasian cooling. <i>Climate Dynamics</i> , 2019, 52, 2981-3004.	3.8	69
60	Trends in Tropospheric Humidity from 1970 to 2008 over China from a Homogenized Radiosonde Dataset. <i>Journal of Climate</i> , 2012, 25, 4549-4567.	3.2	68
61	The Recent Decline and Recovery of Indian Summer Monsoon Rainfall: Relative Roles of External Forcing and Internal Variability. <i>Journal of Climate</i> , 2020, 33, 5035-5060.	3.2	65
62	Atlantic Thermohaline Circulation in a Coupled General Circulation Model: Unforced Variations versus Forced Changes. <i>Journal of Climate</i> , 2005, 18, 3270-3293.	3.2	61
63	South Asian summer monsoon projections constrained by the interdecadal Pacific oscillation. <i>Science Advances</i> , 2020, 6, eaay6546.	10.3	58
64	The Footprint of the Inter-decadal Pacific Oscillation in Indian Ocean Sea Surface Temperatures. <i>Scientific Reports</i> , 2016, 6, 21251.	3.3	56
65	A Nonlinear Theory of Atmospheric Blocking: A Potential Vorticity Gradient View. <i>Journals of the Atmospheric Sciences</i> , 2019, 76, 2399-2427.	1.7	53
66	Winter Eurasian cooling linked with the Atlantic Multidecadal Oscillation. <i>Environmental Research Letters</i> , 2017, 12, 125002.	5.2	49
67	Asymmetric Modulation of ENSO Teleconnections by the Interdecadal Pacific Oscillation. <i>Journal of Climate</i> , 2018, 31, 7337-7361.	3.2	48
68	Contributions of Internal Variability and External Forcing to the Recent Pacific Decadal Variations. <i>Geophysical Research Letters</i> , 2018, 45, 7084-7092.	4.0	47
69	Precipitation Characteristics in the Community Atmosphere Model and Their Dependence on Model Physics and Resolution. <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 2352-2374.	3.8	47
70	Floridian heatwaves and extreme precipitation: future climate projections. <i>Climate Dynamics</i> , 2019, 52, 495-508.	3.8	46
71	Aerosol-forced multidecadal variations across all ocean basins in models and observations since 1920. <i>Science Advances</i> , 2020, 6, eabb0425.	10.3	46
72	Anchoring of atmospheric teleconnection patterns by Arctic Sea ice loss and its link to winter cold anomalies in East Asia. <i>International Journal of Climatology</i> , 2021, 41, 547-558.	3.5	43

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73	Hydroclimatic trends during 1950â€“2018 over global land. <i>Climate Dynamics</i> , 2021, 56, 4027-4049.	3.8	43
74	A Characterization of Tropical Transient Activity in the CAM3 Atmospheric Hydrologic Cycle. <i>Journal of Climate</i> , 2006, 19, 2222-2242.	3.2	39
75	The uncertainties and causes of the recent changes in global evapotranspiration from 1982 to 2010. <i>Climate Dynamics</i> , 2017, 49, 279-296.	3.8	38
76	Dependence of estimated precipitation frequency and intensity on data resolution. <i>Climate Dynamics</i> , 2018, 50, 3625-3647.	3.8	38
77	Evaluation of atmospheric precipitable water from reanalysis products using homogenized radiosonde observations over China. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 10,703.	3.3	35
78	Quantifying Contributions of Internal Variability and External Forcing to Atlantic Multidecadal Variability Since 1870. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL089504.	4.0	35
79	The Impact of Seaâ€“Ice Loss on Arctic Climate Feedbacks and Their Role for Arctic Amplification. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL094599.	4.0	33
80	Nonlinear Climate Responses to Increasing CO2 and Anthropogenic Aerosols Simulated by CESM1. <i>Journal of Climate</i> , 2020, 33, 281-301.	3.2	32
81	A Connection of Winter Eurasian Cold Anomaly to the Modulation of Ural Blocking by ENSO. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL094304.	4.0	32
82	An Externally Forced Decadal Rainfall Seesaw Pattern Over the Sahel and Southeast Amazon. <i>Geophysical Research Letters</i> , 2019, 46, 923-932.	4.0	31
83	Decadal Relationship between European Blocking and the North Atlantic Oscillation during 1978â€“2011. Part I: Atlantic Conditions. <i>Journals of the Atmospheric Sciences</i> , 2015, 72, 1152-1173.	1.7	30
84	The Convectiveâ€“Total Precipitation Ratio and the â€œDrizzlingâ€“Bias in Climate Models. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD034198.	3.3	30
85	Contributions of Arctic Seaâ€“Ice Loss and East Siberian Atmospheric Blocking to 2020 Recordâ€“Breaking Meiyuâ€“Baiu Rainfall. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL092748.	4.0	29
86	A new approach to construct representative future forcing data for dynamic downscaling. <i>Climate Dynamics</i> , 2020, 55, 315-323.	3.8	28
87	Snowfall and snowpack in the Western U.S. as captured by convection permitting climate simulations: current climate and pseudo global warming future climate. <i>Climate Dynamics</i> , 2021, 57, 2191-2215.	3.8	27
88	Projected Changes in Daily Variability and Seasonal Cycle of Near-Surface Air Temperature over the Globe during the Twenty-First Century. <i>Journal of Climate</i> , 2019, 32, 8537-8561.	3.2	26
89	Detection and Attribution of Atmospheric Precipitable Water Changes since the 1970s over China. <i>Scientific Reports</i> , 2019, 9, 17609.	3.3	20
90	Decadal Variability of Winter Warm Arcticâ€“Cold Eurasia Dipole Patterns Modulated by Pacific Decadal Oscillation and Atlantic Multidecadal Oscillation. <i>Earth's Future</i> , 2022, 10, .	6.3	20

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91	CMIP6 Model-projected Hydroclimatic and Drought Changes and Their Causes in the 21st Century. <i>Journal of Climate</i> , 2021, , 1-58.	3.2	19
92	Trends in northern midlatitude atmospheric wave power from 1950 to 2099. <i>Climate Dynamics</i> , 2020, 54, 2903-2918.	3.8	15
93	Recent Eurasian winter cooling partly caused by internal multidecadal variability amplified by Arctic sea ice-air interactions. <i>Climate Dynamics</i> , 2022, 58, 3261-3277.	3.8	15
94	Sea ice-air interactions amplify multidecadal variability in the North Atlantic and Arctic region. <i>Nature Communications</i> , 2022, 13, 2100.	12.8	15
95	Arctic Amplification Weakens the Variability of Daily Temperatures over Northern Middle-High Latitudes. <i>Journal of Climate</i> , 2021, 34, 2591-2609.	3.2	14
96	Improved methods for estimating equilibrium climate sensitivity from transient warming simulations. <i>Climate Dynamics</i> , 2020, 54, 4515-4543.	3.8	11
97	Northern Hemisphere Winter Air Temperature Patterns and Their Associated Atmospheric and Ocean Conditions. <i>Journal of Climate</i> , 2020, 33, 6165-6186.	3.2	11
98	Reconciling Human and Natural Drivers of the Tripole Pattern of Multidecadal Summer Temperature Variations Over Eurasia. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL093971.	4.0	10
99	The modulation of Interdecadal Pacific Oscillation and Atlantic Multidecadal Oscillation on winter Eurasian cold anomaly via the Ural blocking change. <i>Climate Dynamics</i> , 2022, 59, 127-150.	3.8	10
100	Little Influence of Asian Anthropogenic Aerosols on Summer Temperature in Central East Asia Since 1960. <i>Geophysical Research Letters</i> , 2022, 49, .	4.0	9
101	Are the Transient and Equilibrium Climate Change Patterns Similar in Response to Increased CO ₂ ?. <i>Journal of Climate</i> , 2020, 33, 8003-8023.	3.2	8
102	The joint impacts of Atlantic and Pacific multidecadal variability on South American precipitation and temperature. <i>Journal of Climate</i> , 2021, , 1-55.	3.2	7
103	Understanding the interdecadal variability of autumn precipitation over North Central China using model simulations. <i>International Journal of Climatology</i> , 2020, 40, 874-886.	3.5	5
104	Linkage between Projected Precipitation and Atmospheric Thermodynamic Changes. <i>Journal of Climate</i> , 2020, 33, 7155-7178.	3.2	5
105	Arctic amplification is the main cause of the Atlantic meridional overturning circulation weakening under large CO ₂ increases. <i>Climate Dynamics</i> , 2022, 58, 3243-3259.	3.8	5
106	Influence of Anthropogenic Warming on the Atlantic Multidecadal Variability and Its Impact on Global Climate in the Twenty-First Century in the MPI-GE Simulations. <i>Journal of Climate</i> , 2022, 35, 2805-2821.	3.2	3
107	Reconciling Roles of External Forcing and Internal Variability in Indian Ocean Decadal Variability Since 1920. <i>Geophysical Research Letters</i> , 2022, 49, .	4.0	2