Andreas Prein

List of Publications by Year
in descending order

51 papers	4,853 citations	218592 26 h-index	189801 50 g-index
65 all docs	65 docs citations	65 times ranked	4731 citing authors

#	Article	IF	Citations
1	A review on regional convectionâ€permitting climate modeling: Demonstrations, prospects, and challenges. Reviews of Geophysics, 2015, 53, 323-361.	9.0	907
2	The future intensification of hourly precipitation extremes. Nature Climate Change, 2017, 7, 48-52.	8.1	591
3	Continental-scale convection-permitting modeling of the current and future climate of North America. Climate Dynamics, 2017, 49, 71-95.	1.7	362
4	Anthropogenic intensification of short-duration rainfall extremes. Nature Reviews Earth & Environment, 2021, 2, 107-122.	12.2	279
5	Projected increases and shifts in rain-on-snow flood risk over western North America. Nature Climate Change, 2018, 8, 808-812.	8.1	261
6	Regional climate downscaling over Europe: perspectives from the EURO-CORDEX community. Regional Environmental Change, 2020, 20, 1.	1.4	227
7	Precipitation in the EURO-CORDEX $$0.11^{circ }$$ 0 . 11 â˜ and $$0.44^{circ }$$ 0 . 44 â˜ simulations: high resolution, high benefits?. Climate Dynamics, 2016, 46, 383-412.	1.7	215
8	Increased rainfall volume from future convective storms in the US. Nature Climate Change, 2017, 7, 880-884.	8.1	211
9	Impacts of uncertainties in European gridded precipitation observations on regional climate analysis. International Journal of Climatology, 2017, 37, 305-327.	1.5	194
10	Simulating North American mesoscale convective systems with a convection-permitting climate model. Climate Dynamics, 2020, 55, 95-110.	1.7	125
11	Climate change impacts on the power generation potential of a European mid-century wind farms scenario. Environmental Research Letters, 2016, 11, 034013.	2.2	120
12	Running dry: The U.S. Southwest's drift into a drier climate state. Geophysical Research Letters, 2016, 43, 1272-1279.	1.5	119
13	Importance of Regional Climate Model Grid Spacing for the Simulation of Heavy Precipitation in the Colorado Headwaters. Journal of Climate, 2013, 26, 4848-4857.	1.2	102
14	A new mechanism for warm-season precipitation response to global warming based on convection-permitting simulations. Climate Dynamics, 2020, 55, 343-368.	1.7	84
15	Future Changes in European Severe Convection Environments in a Regional Climate Model Ensemble. Journal of Climate, 2017, 30, 6771-6794.	1.2	82
16	Global estimates of damaging hail hazard. Weather and Climate Extremes, 2018, 22, 10-23.	1.6	73
17	Challenges and outlook for convection-permitting climate modelling. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20190547.	1.6	67
18	Added value of kilometer-scale modeling over the third pole region: a CORDEX-CPTP pilot study. Climate Dynamics, 2021, 57, 1673-1687.	1.7	60

#	Article	IF	Citations
19	Uncertainties in Future U.S. Extreme Precipitation From Downscaled Climate Projections. Geophysical Research Letters, 2020, 47, e2019GL086797.	1.5	59
20	The INTENSE project: using observations and models to understand the past, present and future of sub-daily rainfall extremes. Advances in Science and Research, 0, 15, 117-126.	1.0	59
21	Towards advancing scientific knowledge of climate change impacts on short-duration rainfall extremes. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20190542.	1.6	56
22	Sensitivity of organized convective storms to model grid spacing in current and future climates. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20190546.	1.6	52
23	Increased melting level height impacts surface precipitation phase and intensity. Nature Climate Change, 2020, 10, 771-776.	8.1	47
24	Intensification of short-duration rainfall extremes and implications for flood risk: current state of the art and future directions. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20190541.	1.6	44
25	Updraft and Downdraft Core Size and Intensity as Revealed by Radar Wind Profilers: MCS Observations and Idealized Model Comparisons. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031774.	1.2	34
26	Simulating the convective precipitation diurnal cycle in North Americaâ€™s current and future climate. Climate Dynamics, 2020, 55, 369-382.	1.7	33
27	Evaluation of CMIP5 Models in the Context of Dynamical Downscaling over Europe. Journal of Climate, 2015, 28, 5575-5582.	1.2	32
28	Challenges and Advances in Convection-Permitting Climate Modeling. Bulletin of the American Meteorological Society, 2017, 98, 1027-1030.	1.7	30
29	Simulating North American Weather Types With Regional Climate Models. Frontiers in Environmental Science, 2019, 7, .	1.5	29
30	Mesoscale Convective System Precipitation Characteristics over East Asia. Part I: Regional Differences and Seasonal Variations. Journal of Climate, 2020, 33, 9271-9286.	1.2	26
31	Clustering of Observed Diurnal Cycles of Precipitation over the United States for Evaluation of a WRF Multiphysics Regional Climate Ensemble. Journal of Climate, 2017, 30, 9267-9286.	1.2	24
32	Can We Constrain Uncertainty in Hydrologic Cycle Projections?. Geophysical Research Letters, 2019, 46, 3911-3916.	1.5	23
33	Linking Global Changes of Snowfall and Wet-Bulb Temperature. Journal of Climate, 2020, 33, 39-59.	1.2	21
34	U.S. Extreme Precipitation Weather Types Increased in Frequency During the 20th Century. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD034287.	1.2	21
35	Kilometer-scale modeling projects a tripling of Alaskan convective storms in future climate. Climate Dynamics, 2020, 55, 3543-3564.	1.7	20
36	The conterminous United States are projected to become more prone to flash floods in a high-end emissions scenario. Communications Earth & Environment, 2022, 3, .	2.6	17

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37	New hourly extreme precipitation regions and regional annual probability estimates for the <scp>UK</scp>. International Journal of Climatology, 2021, 41, 582-600.	1.5	16
38	A Benchmark to Test Generalization Capabilities of Deep Learning Methods to Classify Severe Convective Storms in a Changing Climate. Earth and Space Science, 2021, 8, e2020EA001490.	1.1	15
39	Extreme-value analysis for the characterization of extremes in water resources: A generalized workflow and case study on New Mexico monsoon precipitation. Weather and Climate Extremes, 2020, 29, 100260.	1.6	14
40	Recent Trends in the Near-Surface Climatology of the Northern North American Great Plains. Journal of Climate, 2020, 33, 461-475.	1.2	12
41	Investigating the sensitivity to resolving aerosol interactions in downscaling regional model experiments with WRFv3.8.1 over Europe. Geoscientific Model Development, 2020, 13, 2511-2532.	1.3	12
42	Separating Dynamic and Thermodynamic Impacts of Climate Change on Daytime Convective Development over Land. Journal of Climate, 2019, 32, 5213-5234.	1.2	9
43	Dynamic and thermodynamic impacts of climate change on organized convection in Alaska. Climate Dynamics, 2021, 56, 2569-2593.	1.7	8
44	Moisture Attribution and Sensitivity Analysis of a Winter Tornado Outbreak. Weather and Forecasting, 2020, 35, 1263-1288.	0.5	8
45	Dryline characteristics in North Americaâ€™s historical and future climates. Climate Dynamics, 2021, 57, 2171-2188.	1.7	6
46	Retrieval of Cloud Liquid Water Using Microwave Signals from LEO Satellites: A Feasibility Study through Simulations. Atmosphere, 2020, 11, 460.	1.0	5
47	Subâ€Seasonal Predictability of North American Monsoon Precipitation. Geophysical Research Letters, 2022, 49, .	1.5	4
48	On the role of atmospheric simulations horizontal grid spacing for flood modeling. Climate Dynamics, 2022, 59, 3167-3174.	1.7	3
49	The response of tropical cyclone intensity to changes in environmental temperature. Weather and Climate Dynamics, 2022, 3, 693-711.	1.2	3
50	Populated regional climate models (Pop-RCMs): The next frontier in regional climate modeling. , 2022, 1, e0000042.		3
51	The Character and Changing Frequency of Extreme California Fire Weather. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	1.2	2