Markus Donat

List of Publications by Year
in descending order

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99 papers	13,395 citations	31902 53 h-index	34900 98 g-index
116 all docs	116 docs citations	116 times ranked	13090 citing authors

#	Article	IF	Citations
1	A hierarchical approach to defining marine heatwaves. Progress in Oceanography, 2016, 141, 227-238.	1.5	1,081
2	Longer and more frequent marine heatwaves over the past century. Nature Communications, 2018, 9, 1324.	5.8	1,081
3	More extreme precipitation in the worldâ€™s dry and wet regions. Nature Climate Change, 2016, 6, 508-513.	8.1	1,043
4	Updated analyses of temperature and precipitation extreme indices since the beginning of the twentieth century: The HadEX2 dataset. Journal of Geophysical Research D: Atmospheres, 2013, 118, 2098-2118.	1.2	1,029
5	Marine heatwaves threaten global biodiversity and the provision of ecosystem services. Nature Climate Change, 2019, 9, 306-312.	8.1	883
6	Allowable CO2 emissions based on regional and impact-related climate targets. Nature, 2016, 529, 477-483.	13.7	491
7	The effects of climate extremes on global agricultural yields. Environmental Research Letters, 2019, 14, 054010.	2.2	382
8	Categorizing and Naming Marine Heatwaves. Oceanography, 2018, 31, .	0.5	368
9	No pause in the increase of hot temperature extremes. Nature Climate Change, 2014, 4, 161-163.	8.1	365
10	A global assessment of marine heatwaves and their drivers. Nature Communications, 2019, 10, 2624.	5.8	337
11	Global Land-Based Datasets for Monitoring Climatic Extremes. Bulletin of the American Meteorological Society, 2013, 94, 997-1006.	1.7	316
12	Projected Marine Heatwaves in the 21st Century and the Potential for Ecological Impact. Frontiers in Marine Science, 2019, 6, .	1.2	300
13	Changes in extreme temperature and precipitation in the Arab region: longâ€term trends and variability related to <scp>ENSO</scp> and <scp>NAO</scp>. International Journal of Climatology, 2014, 34, 581-592.	1.5	288
14	Marine Heatwaves. Annual Review of Marine Science, 2021, 13, 313-342.	5.1	254
15	The shifting probability distribution of global daytime and nightâ€time temperatures. Geophysical Research Letters, 2012, 39, .	1.5	253
16	Explaining Extreme Events of 2012 from a Climate Perspective. Bulletin of the American Meteorological Society, 2013, 94, S1-S74.	1.7	229
17	Development of an Updated Global Land In Situâ€Based Data Set of Temperature and Precipitation Extremes: HadEX3. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD032263.	1.2	182
18	State of the Climate in 2017. Bulletin of the American Meteorological Society, 2018, 99, Si-S310.	1.7	160

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19	Consistency of Temperature and Precipitation Extremes across Various Global Gridded In Situ and Reanalysis Datasets. Journal of Climate, 2014, 27, 5019-5035.	1.2	156
20	Drivers and impacts of the most extreme marine heatwave events. Scientific Reports, 2020, 10, 19359.	1.6	155
21	State of the Climate in 2015. Bulletin of the American Meteorological Society, 2016, 97, Si-S275.	1.7	142
22	State of the Climate in 2013. Bulletin of the American Meteorological Society, 2014, 95, S1-S279.	1.7	138
23	The efficacy of using gridded data to examine extreme rainfall characteristics: a case study for Australia. International Journal of Climatology, 2013, 33, 2376-2387.	1.5	133
24	The timing of anthropogenic emergence in simulated climate extremes. Environmental Research Letters, 2015, 10, 094015.	2.2	126
25	How much does it rain over land?. Geophysical Research Letters, 2016, 43, 341-348.	1.5	116
26	Temperature and precipitation extremes in centuryâ€long gridded observations, reanalyses, and atmospheric model simulations. Journal of Geophysical Research D: Atmospheres, 2016, 121, 11,174.	1.2	110
27	Influence of landâ€atmosphere feedbacks on temperature and precipitation extremes in the GLACEâ€CMIP5 ensemble. Journal of Geophysical Research D: Atmospheres, 2016, 121, 607-623.	1.2	102
28	Future changes in European winter storm losses and extreme wind speeds inferred from GCM and RCM multi-model simulations. Natural Hazards and Earth System Sciences, 2011, 11, 1351-1370.	1.5	98
29	Land radiative management as contributor to regional-scale climate adaptation and mitigation. Nature Geoscience, 2018, 11, 88-96.	5.4	96
30	Effects of land cover change on temperature and rainfall extremes in multi-model ensemble simulations. Earth System Dynamics, 2012, 3, 213-231.	2.7	94
31	Towards reliable extreme weather and climate event attribution. Nature Communications, 2019, 10, 1732.	5.8	94
32	Reanalysis suggests long-term upward trends in European storminess since 1871. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	92
33	Extreme Rainfall Variability in Australia: Patterns, Drivers, and Predictability*. Journal of Climate, 2014, 27, 6035-6050.	1.2	92
34	Climate model simulated changes in temperature extremes due to land cover change. Journal of Geophysical Research, 2012, 117, .	3.3	88
35	Asymmetry in the response of eastern Australia extreme rainfall to lowâ€frequency Pacific variability. Geophysical Research Letters, 2013, 40, 2271-2277.	1.5	88
36	Multiâ€dataset comparison of gridded observed temperature and precipitation extremes over China. International Journal of Climatology, 2015, 35, 2809-2827.	1.5	85

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37	Intercomparison of annual precipitation indices and extremes over global land areas from in situ, space-based and reanalysis products. Environmental Research Letters, 2020, 15, 055002.	2.2	85
38	Initialized Earth System prediction from subseasonal to decadal timescales. Nature Reviews Earth & Environment, 2021, 2, 340-357.	12.2	85
39	Intensification of precipitation extremes in the worldâ€™s humid and water-limited regions. Environmental Research Letters, 2019, 14, 065003.	2.2	80
40	Examination of wind storms over Central Europe with respect to circulation weather types and NAO phases. International Journal of Climatology, 2010, 30, 1289-1300.	1.5	79
41	Regional warming of hot extremes accelerated by surface energy fluxes. Geophysical Research Letters, 2017, 44, 7011-7019.	1.5	79
42	Precipitation From Persistent Extremes is Increasing in Most Regions and Globally. Geophysical Research Letters, 2019, 46, 6041-6049.	1.5	79
43	State of the Climate in 2014. Bulletin of the American Meteorological Society, 2015, 96, ES1-ES32.	1.7	78
44	European storminess and associated circulation weather types: future changes deduced from a multi-model ensemble of GCM simulations. Climate Research, 2010, 42, 27-43.	0.4	77
45	Reassessing changes in diurnal temperature range: Intercomparison and evaluation of existing global data set estimates. Journal of Geophysical Research D: Atmospheres, 2016, 121, 5138-5158.	1.2	75
46	Changes in regional climate extremes as a function of global mean temperature: an interactive plotting framework. Geoscientific Model Development, 2017, 10, 3609-3634.	1.3	75
47	Attribution of extreme temperature changes during 1951â€“2010. Climate Dynamics, 2016, 46, 1769-1782.	1.7	74
48	On the use of indices to study extreme precipitation on sub-daily and daily timescales. Environmental Research Letters, 2019, 14, 125008.	2.2	73
49	Rainfall Estimates on a Gridded NetworkÂ(REGEN) â€“ a global land-based gridded dataset of daily precipitation fromÂ1950 to 2016. Hydrology and Earth System Sciences, 2020, 24, 919-943.	1.9	73
50	Determining the Anthropogenic Greenhouse Gas Contribution to the Observed Intensification of Extreme Precipitation. Geophysical Research Letters, 2020, 47, e2019GL086875.	1.5	66
51	Observed and simulated temperature extremes during the recent warming hiatus. Environmental Research Letters, 2014, 9, 064023.	2.2	60
52	Comparing regional precipitation and temperature extremes in climate model and reanalysis products. Weather and Climate Extremes, 2016, 13, 35-43.	1.6	56
53	How Well Do Gridded Datasets of Observed Daily Precipitation Compare over Australia?. Advances in Meteorology, 2015, 2015, 1-15.	0.6	52
54	High-resolution refinement of a storm loss model and estimation of return periods of loss-intensive storms over Germany. Natural Hazards and Earth System Sciences, 2011, 11, 2821-2833.	1.5	50

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55	Evaluating the Contribution of Landâ€Atmosphere Coupling to Heat Extremes in CMIP5 Models. Geophysical Research Letters, 2018, 45, 9003-9012.	1.5	50
56	Systematic investigation of gridding-related scaling effects on annual statistics of daily temperature and precipitation maxima: A case study for south-east Australia. Weather and Climate Extremes, 2015, 9, 6-16.	1.6	48
57	Assessing the Robustness of Future Extreme Precipitation Intensification in the CMIP5 Ensemble. Journal of Climate, 2018, 31, 6505-6525.	1.2	45
58	Reassessing changes in diurnal temperature range: A new data set and characterization of data biases. Journal of Geophysical Research D: Atmospheres, 2016, 121, 5115-5137.	1.2	43
59	Changes in temperature extremes on the Tibetan Plateau and their attribution. Environmental Research Letters, 2019, 14, 124015.	2.2	43
60	Greater increases in temperature extremes in low versus high income countries. Environmental Research Letters, 2017, 12, 034007.	2.2	41
61	Extraordinary heat during the 1930s US Dust Bowl and associated large-scale conditions. Climate Dynamics, 2016, 46, 413-426.	1.7	40
62	Representation of climate extreme indices in the ACCESS1.3b coupled atmosphereâ€“land surface model. Geoscientific Model Development, 2014, 7, 545-567.	1.3	35
63	Investigating uncertainties in global gridded datasets of climate extremes. Climate of the Past, 2014, 10, 2171-2199.	1.3	35
64	Changes in Observed Daily Precipitation over Global Land Areas since 1950. Journal of Climate, 2021, 34, 3-19.	1.2	35
65	Southern Hemisphere winter cyclone activity under recent and future climate conditions in multiâ€model <scp>AOGCM</scp> simulations. International Journal of Climatology, 2014, 34, 3400-3416.	1.5	34
66	Understanding and Reducing Future Uncertainty in Midlatitude Daily Heat Extremes Via Land Surface Feedback Constraints. Geophysical Research Letters, 2018, 45, 10,627.	1.5	33
67	The ENSO-Australian rainfall teleconnection in reanalysis and CMIP5. Climate Dynamics, 2015, 44, 2623-2635.	1.7	32
68	Assessment of a full-field initialized decadal climate prediction system with the CMIP6 version of EC-Earth. Earth System Dynamics, 2021, 12, 173-196.	2.7	32
69	Understanding the role of sea surface temperature-forcing for variability in global temperature and precipitation extremes. Weather and Climate Extremes, 2018, 21, 1-9.	1.6	31
70	Reduced heat exposure by limiting global warming to 1.5 Â°C. Nature Climate Change, 2018, 8, 549-551.	8.1	29
71	Benefits and limitations of regional multi-model ensembles for storm loss estimations. Climate Research, 2010, 44, 211-225.	0.4	29
72	Evaluating modelâ€simulated variability in temperature extremes using modified percentile indices. International Journal of Climatology, 2014, 34, 3304-3311.	1.5	24

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73	Intensification of the Daily Wet Day Rainfall Distribution Across Australia. Geophysical Research Letters, 2018, 45, 8568-8576.	1.5	24
74	Projections of global warming-induced impacts on winter storm losses in the German private household sector. Climatic Change, 2013, 121, 195-207.	1.7	23
75	The Sensitivity of Daily Temperature Variability and Extremes to Dataset Choice. Journal of Climate, 2018, 31, 1337-1359.	1.2	23
76	Modulation of Land-Use Change Impacts on Temperature Extremes via Landâ€"Atmosphere Coupling over Australia. Earth Interactions, 2015, 19, 1-24.	0.7	22
77	A Multiregion Model Evaluation and Attribution Study of Historical Changes in the Area Affected by Temperature and Precipitation Extremes. Journal of Climate, 2016, 29, 8285-8299.	1.2	19
78	Calibrating Climate Model Ensembles for Assessing Extremes in a Changing Climate. Journal of Geophysical Research D: Atmospheres, 2018, 123, 5988-6004.	1.2	19
79	Toward Consistent Observational Constraints in Climate Predictions and Projections. Frontiers in Climate, 2021, 3, .	1.3	18
80	Summer temperature response to extreme soil water conditions in the Mediterranean transitional climate regime. Climate Dynamics, 2022, 58, 1943-1963.	1.7	15
81	Windstorms, the Most Costly Natural Hazard in Europe. , 0, , 109-120.		13
82	Multi-Model Forecast Quality Assessment of CMIP6 Decadal Predictions. Journal of Climate, 2022, 35, 4363-4382.	1.2	13
83	A Global Probabilistic Dataset for Monitoring Meteorological Droughts. Bulletin of the American Meteorological Society, 2020, 101, E1628-E1644.	1.7	12
84	Amplified warming of seasonal cold extremes relative to the mean in the Northern Hemisphere extratropics. Earth System Dynamics, 2020, 11, 97-111.	2.7	12
85	Largeâ€Scale Drivers and Seasonal Predictability of Extreme Wind Speeds Over the North Atlantic and Europe. Journal of Geophysical Research D: Atmospheres, 2018, 123, 11,518.	1.2	11
86	Changes in climate extremes in observations and climate model simulations. From the past to the future. , 2020, , 31-57.		11
87	Changes in daily temperature extremes relative to the mean in Coupled Model Intercomparison Project Phase 5 models and observations. International Journal of Climatology, 2019, 39, 5273-5291.	1.5	8
88	Constraining decadal variability yields skillful projections of nearâ€term climate change. Geophysical Research Letters, 2021, 48, e2021GL094915.	1.5	8
89	Increased Likelihood of Brisbane, Australia, G20 Heat Event Due to Anthropogenic Climate Change. Bulletin of the American Meteorological Society, 2015, 96, S141-S144.	1.7	7
90	Atmospheric feedback explains disparate climate response to regional Arctic sea-ice loss. Npj Climate and Atmospheric Science, 2021, 4, .	2.6	7

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91	Stewardship Maturity Assessment Tools for Modernization of Climate Data Management. Data Science Journal, 2021, 20, .	0.6	6
92	Decadal predictability of temperature and precipitation means and extremes in a perfect-model experiment. Climate Dynamics, 2019, 53, 3711-3729.	1.7	5
93	Temperature and precipitation responses to El NiÃ±o-Southern Oscillation in a hierarchy of datasets with different levels of observational constraints. Climate Dynamics, 2020, 55, 2351-2376.	1.7	5
94	How Reliable Are Decadal Climate Predictions of Near-Surface Air Temperature?. Journal of Climate, 2021, 34, 697-713.	1.2	5
95	A Framework to Determine the Limits of Achievable Skill for Interannual to Decadal Climate Predictions. Journal of Geophysical Research D: Atmospheres, 2019, 124, 2882-2896.	1.2	4
96	Local noise and global confidence. Nature Climate Change, 2013, 3, 1018-1019.	8.1	3
97	The Biggest Unknowns Related to Decadal Prediction: What 50 Experts Think Are the 5 Major Knowledge Gaps. Bulletin of the American Meteorological Society, 2019, 100, ES255-ES259.	1.7	2
98	Marine heatwaves are reliably forecast by climate models. Nature, 2022, 604, 432-433.	13.7	0
99	Representation and annual to decadal predictability of Euroâ€Atlantic weather regimes in the CMIP6 version of the ECâ€Earth coupled climate model. Journal of Geophysical Research D: Atmospheres, 0, , .	1.2	0