Gabriele C Hegerl

List of Publications by Year
in descending order

143 papers	19,227 citations	18465 62 h-index	11928 134 g-index
149 all docs	149 docs citations	149 times ranked	15096 citing authors

#	Article	IF	Citations
1	Human contribution to more-intense precipitation extremes. Nature, 2011, 470, 378-381.	13.7	1,695
2	Indices for monitoring changes in extremes based on daily temperature and precipitation data. Wiley Interdisciplinary Reviews: Climate Change, 2011, 2, 851-870.	3.6	1,325
3	Trends in Intense Precipitation in the Climate Record. Journal of Climate, 2005, 18, 1326-1350.	1.2	1,125
4	Annular Modes in the Extratropical Circulation. Part II: Trends. Journal of Climate, 2000, 13, 1018-1036.	1.2	936
5	Changes in Temperature and Precipitation Extremes in the IPCC Ensemble of Global Coupled Model Simulations. Journal of Climate, 2007, 20, 1419-1444.	1.2	882
6	Detection of human influence on twentieth-century precipitation trends. Nature, 2007, 448, 461-465.	13.7	872
7	Decadal Prediction. Bulletin of the American Meteorological Society, 2009, 90, 1467-1486.	1.7	662
8	An Assessment of Earth's Climate Sensitivity Using Multiple Lines of Evidence. Reviews of Geophysics, 2020, 58, e2019RG000678.	9.0	498
9	The equilibrium sensitivity of the Earth's temperature to radiation changes. Nature Geoscience, 2008, 1, 735-743.	5.4	445
10	Avoiding Inhomogeneity in Percentile-Based Indices of Temperature Extremes. Journal of Climate, 2005, 18, 1641-1651.	1.2	363
11	Climate sensitivity constrained by temperature reconstructions over the past seven centuries. Nature, 2006, 440, 1029-1032.	13.7	343
12	Detecting Greenhouse-Gas-Induced Climate Change with an Optimal Fingerprint Method. Journal of Climate, 1996, 9, 2281-2306.	1.2	304
13	The Detection and Attribution Model Intercomparison Project (DAMIPÂv1.0) contribution to CMIP6. Geoscientific Model Development, 2016, 9, 3685-3697.	1.3	280
14	Spatial and seasonal patterns in climate change, temperatures, and precipitation across the United States. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 7324-7329.	3.3	260
15	European summer temperatures since Roman times. Environmental Research Letters, 2016, 11, 024001.	2.2	260
16	Detection and attribution of climate change: a regional perspective. Wiley Interdisciplinary Reviews: Climate Change, 2010, 1, 192-211.	3.6	259
17	A verification framework for interannual-to-decadal predictions experiments. Climate Dynamics, 2013, 40, 245-272.	1.7	254
18	Attributing intensification of precipitation extremes to human influence. Geophysical Research Letters, 2013, 40, 5252-5257.	1.5	254

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19	Multi-fingerprint detection and attribution analysis of greenhouse gas, greenhouse gas-plus-aerosol and solar forced climate change. Climate Dynamics, 1997, 13, 613-634.	1.7	250
20	Detection of Human Influence on a New, Validated 1500-Year Temperature Reconstruction. Journal of Climate, 2007, 20, 650-666.	1.2	249
21	Simulation of the influence of solar radiation variations on the global climate with an ocean-atmosphere general circulation model. Climate Dynamics, 1997, 13, 757-767.	1.7	243
22	Use of models in detection and attribution of climate change. Wiley Interdisciplinary Reviews: Climate Change, 2011, 2, 570-591.	3.6	225
23	Attribution of polar warming to humanÂinfluence. Nature Geoscience, 2008, 1, 750-754.	5.4	222
24	Beyond equilibrium climate sensitivity. Nature Geoscience, 2017, 10, 727-736.	5.4	217
25	Challenges in Quantifying Changes in the Global Water Cycle. Bulletin of the American Meteorological Society, 2015, 96, 1097-1115.	1.7	212
26	A Review of Uncertainties in Global Temperature Projections over the Twenty-First Century. Journal of Climate, 2008, 21, 2651-2663.	1.2	209
27	The Effect of Local Sea Surface Temperatures on Atmospheric Circulation over the Tropical Atlantic Sector. Journal of Climate, 2000, 13, 2195-2216.	1.2	195
28	Influence of Modes of Climate Variability on Global Temperature Extremes. Journal of Climate, 2008, 21, 3872-3889.	1.2	190
29	Detectability of Anthropogenic Changes in Annual Temperature and Precipitation Extremes. Journal of Climate, 2004, 17, 3683-3700.	1.2	186
30	Understanding, modeling and predicting weather and climate extremes: Challenges and opportunities. Weather and Climate Extremes, 2017, 18, 65-74.	1.6	178
31	Detection of volcanic, solar and greenhouse gas signals in paleo-reconstructions of Northern Hemispheric temperature. Geophysical Research Letters, 2003, 30, n/a-n/a.	1.5	163
32	Small influence of solar variability on climate over the past millennium. Nature Geoscience, 2014, 7, 104-108.	5.4	162
33	Influence of Modes of Climate Variability on Global Precipitation Extremes. Journal of Climate, 2010, 23, 6248-6262.	1.2	150
34	Detection and Attribution of Recent Climate Change: A Status Report. Bulletin of the American Meteorological Society, 1999, 80, 2631-2659.	1.7	145
35	Separating Forced from Chaotic Climate Variability over the Past Millennium. Journal of Climate, 2013, 26, 6954-6973.	1.2	139
36	The Model Intercomparison Project on the climatic response to Volcanic forcing (VolMIP): experimental design and forcing input data for CMIP6. Geoscientific Model Development, 2016, 9, 2701-2719.	1.3	138

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37	Decreased monsoon precipitation in the Northern Hemisphere due to anthropogenic aerosols. Geophysical Research Letters, 2014, 41, 6023-6029.	1.5	133
38	Regional climate changes as simulated in time-slice experiments. Climatic Change, 1995, 31, 273-304.	1.7	128
39	Detection of changes in temperature extremes during the second half of the 20th century. Geophysical Research Letters, 2005, 32, .	1.5	127
40	Distinguishing the Roles of Natural and Anthropogenically Forced Decadal Climate Variability. Bulletin of the American Meteorological Society, 2011, 92, 141-156.	1.7	125
41	Detectable Changes in the Frequency of Temperature Extremes. Journal of Climate, 2013, 26, 1561-1574.	1.2	124
42	Influence of human and natural forcing on European seasonal temperatures. Nature Geoscience, 2011, 4, 99-103.	5.4	118
43	The effect of volcanic eruptions on global precipitation. Journal of Geophysical Research D: Atmospheres, 2013, 118, 8770-8786.	1.2	117
44	Millennial temperature reconstruction intercomparison and evaluation. Climate of the Past, 2007, 3, 591-609.	1.3	116
45	The early 20th century warming: Anomalies, causes, and consequences. Wiley Interdisciplinary Reviews: Climate Change, 2018, 9, e522.	3.6	116
46	Constraining human contributions to observed warming since the pre-industrial period. Nature Climate Change, 2021, 11, 207-212.	8.1	108
47	Monte Carlo climate change forecasts with a global coupled ocean-atmosphere model. Climate Dynamics, 1994, 10, 1-19.	1.7	106
48	The global precipitation response to volcanic eruptions in the CMIP5 models. Environmental Research Letters, 2014, 9, 104012.	2.2	102
49	Causes of climate change over the historical record. Environmental Research Letters, 2019, 14, 123006.	2.2	95
50	Modeling ocean heat content changes during the last millennium. Geophysical Research Letters, 2003, 30, .	1.5	94
51	Importance of the pre-industrial baseline for likelihood of exceeding Paris goals. Nature Climate Change, 2017, 7, 563-567.	8.1	93
52	Last phase of the Little Ice Age forced by volcanic eruptions. Nature Geoscience, 2019, 12, 650-656.	5.4	93
53	Connecting Atmospheric Blocking to European Temperature Extremes in Spring. Journal of Climate, 2017, 30, 585-594.	1.2	88
54	Elusive extremes. Nature Geoscience, 2011, 4, 142-143.	5.4	82

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55	Climate Change Detection and Attribution: Beyond Mean Temperature Signals. Journal of Climate, 2006, 19, 5058-5077.	1.2	79
56	Role of the North Atlantic Oscillation in decadal temperature trends. Environmental Research Letters, 2017, 12, 114010.	2.2	79
57	Detecting anthropogenic influence with a multi-model ensemble. Geophysical Research Letters, 2002, 29, 31-1-31-4.	1.5	78
58	The importance of ENSO phase during volcanic eruptions for detection and attribution. Geophysical Research Letters, 2016, 43, 2851-2858.	1.5	75
59	The role of land use change in the recent warming of daily extreme temperatures. Geophysical Research Letters, 2013, 40, 589-594.	1.5	71
60	Summer heat waves over Eastern China: dynamical processes and trend attribution. Environmental Research Letters, 2017, 12, 024015.	2.2	71
61	A climate change simulation starting from 1935. Climate Dynamics, 1995, 11, 71-84.	1.7	67
62	Detectable Impact of Local and Remote Anthropogenic Aerosols on the 20th Century Changes of West African and South Asian Monsoon Precipitation. Journal of Geophysical Research D: Atmospheres, 2018, 123, 4871-4889.	1.2	67
63	Risks of Climate Engineering. Science, 2009, 325, 955-956.	6.0	65
64	A Comparison of Surface Air Temperature Variability in Three 1000-Yr Coupled Oceanâ€“Atmosphere Model Integrations. Journal of Climate, 2000, 13, 513-537.	1.2	62
65	Emerging local warming signals in observational data. Geophysical Research Letters, 2012, 39, .	1.5	59
66	Systematic change in global patterns of streamflow following volcanic eruptions. Nature Geoscience, 2015, 8, 838-842.	5.4	59
67	Relating changes in synoptic circulation to the surface rainfall response using self-organising maps. Climate Dynamics, 2015, 44, 861-879.	1.7	59
68	Detectable regional changes in the number of warm nights. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	58
69	Causes of Robust Seasonal Land Precipitation Changes*. Journal of Climate, 2013, 26, 6679-6697.	1.2	57
70	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
71	Atmospheric Climate Change Detection by Radio Occultation Data Using a Fingerprinting Method. Journal of Climate, 2011, 24, 5275-5291.	1.2	53
72	Have greenhouse gases intensified the contrast between wet and dry regions?. Geophysical Research Letters, 2013, 40, 4783-4787.	1.5	53

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73	Optimal detection and attribution of climate change: sensitivity of results to climate model differences. Climate Dynamics, 2000, 16, 737-754.	1.7	52
74	Quantifying anthropogenic influence on recent near-surface temperature change. Surveys in Geophysics, 2006, 27, 491-544.	2.1	50
75	Delayed winter warming: A robust decadal response to strong tropical volcanic eruptions?. Geophysical Research Letters, 2013, 40, 204-209.	1.5	48
76	Comparison of Statistically Optimal Approaches to Detecting Anthropogenic Climate Change. Journal of Climate, 1997, 10, 1125-1133.	1.2	46
77	Implications of changes in the northern hemisphere circulation for the detection of anthropogenic climate change. Geophysical Research Letters, 2000, 27, 993-996.	1.5	44
78	Determining the likelihood of pauses and surges in global warming. Geophysical Research Letters, 2015, 42, 5974-5982.	1.5	41
79	Changes in seasonal land precipitation during the latter twentiethâ€century. Geophysical Research Letters, 2012, 39, .	1.5	40
80	Attributing cause and effect. Nature, 2008, 453, 296-297.	13.7	39
81	Attributing and Projecting Heatwaves Is Hard: We Can Do Better. Earth's Future, 2022, 10, .	2.4	39
82	Comparing Methods to Constrain Future European Climate Projections Using a Consistent Framework. Journal of Climate, 2020, 33, 8671-8692.	1.2	37
83	Inter-annual tropical Pacific climate variability in an isotope-enabled CGCM: implications for interpreting coral stable oxygen isotope records of ENSO. Climate of the Past, 2013, 9, 1543-1557.	1.3	36
84	A Description of a 1260-Year Control Integration with the Coupled ECHAM1/LSG General Circulation Model. Journal of Climate, 1997, 10, 1525-1543.	1.2	35
85	Singleâ€step attribution of increasing frequencies of very warm regional temperatures to human influence. Atmospheric Science Letters, 2011, 12, 220-227.	0.8	35
86	Factors Contributing to Record-Breaking Heat Waves over the Great Plains during the 1930s Dust Bowl. Journal of Climate, 2017, 30, 2437-2461.	1.2	35
87	Strengthening contrast between precipitation in tropical wet and dry regions. Geophysical Research Letters, 2017, 44, 365-373.	1.5	35
88	Evaluation of the HadGEM3-A simulations in view of detection and attribution of human influence on extreme events in Europe. Climate Dynamics, 2019, 52, 1187-1210.	1.7	34
89	Celebrating the anniversary of three key events in climate change science. Nature Climate Change, 2019, 9, 180-182.	8.1	34
90	Future changes in the frequency of temperature extremes may be underestimated in tropical and subtropical regions. Communications Earth & Environment, 2021, 2, .	2.6	32

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91	The value of values in climate science. Nature Climate Change, 2022, 12, 4-6.	8.1	31
92	The influences of data precision on the calculation of temperature percentile indices. International Journal of Climatology, 2009, 29, 321-327.	1.5	30
93	Impacts of the 1900â€"74 Increase in Anthropogenic Aerosol Emissions from North America and Europe on Eurasian Summer Climate. Journal of Climate, 2018, 31, 8381-8399.	1.2	30
94	OCEAN SCIENCE: Warming the World's Oceans. Science, 2005, 309, 254-255.	6.0	29
95	A Bayesian Climate Change Detection and Attribution Assessment. Journal of Climate, 2005, 18, 2429-2440.	1.2	28
96	Can a Decadal Forecasting System Predict Temperature Extreme Indices?*. Journal of Climate, 2013, 26, 3728-3744.	1.2	28
97	Effects of Memory Biases on Variability of Temperature Reconstructions. Journal of Climate, 2019, 32, 8713-8731.	1.2	28
98	Present-day greenhouse gases could cause more frequent and longer Dust Bowl heatwaves. Nature Climate Change, 2020, 10, 505-510.	8.1	28
99	Human influence strengthens the contrast between tropical wet and dry regions. Environmental Research Letters, 2020, 15, 104026.	2.2	27
100	Effect of Observational Sampling Error on the Detection of Anthropogenic Climate Change*. Journal of Climate, 2001, 14, 198-207.	1.2	26
101	Influence of Patterns of Climate Variability on the Difference between Satellite and Surface Temperature Trends. Journal of Climate, 2002, 15, 2412-2428.	1.2	25
102	Monte Carlo climate change forecasts with a global coupled ocean-atmosphere model. Climate Dynamics, 1994, 10, 1-19.	1.7	25
103	Possible causes of data model discrepancy in the temperature history of the last Millennium. Scientific Reports, 2018, 8, 7572.	1.6	24
104	Quantifying human contributions to past and future ocean warming and thermosteric sea level rise. Environmental Research Letters, 2019, 14, 074020.	2.2	24
105	Changes in temperature and heat waves over Africa using observational and reanalysis data sets. International Journal of Climatology, 2022, 42, 1165-1180.	1.5	23
106	Effects of forcing differences and initial conditions on inter-model agreement in the VolMIP volc-pinatubo-full experiment. Geoscientific Model Development, 2022, 15, 2265-2292.	1.3	22
107	Evaluation of mechanisms of hot and cold days in climate models over Central Europe. Environmental Research Letters, 2015, 10, 014002.	2.2	21
108	Projections of northern hemisphere extratropical climate underestimate internal variability and associated uncertainty. Communications Earth & Environment, 2021, 2, .	2.6	21

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109	Comparisons of two methods of removing anthropogenically related variability from the near-surface observational temperature field. Journal of Geophysical Research, 1998, 103, 13777-13786.	3.3	20
110	Uncertainty levels in predicted patterns of anthropogenic climate change. Journal of Geophysical Research, 2000, 105, 15525-15542.	3.3	20
111	Contrasting the Effects of the 1850â€“1975 Increase in Sulphate Aerosols from North America and Europe on the Atlantic in the CESM. Geophysical Research Letters, 2018, 45, 11,930.	1.5	20
112	Comparisons of the Second-Moment Statistics of Climate Models. Journal of Climate, 1996, 9, 2204-2221.	1.2	19
113	Greenhouse gas induced climate change. Environmental Science and Pollution Research, 1996, 3, 99-102.	2.7	18
114	Impacts of Anthropogenic Forcings and El NiÃ±o on Chinese Extreme Temperatures. Advances in Atmospheric Sciences, 2018, 35, 994-1002.	1.9	18
115	Toward Consistent Observational Constraints in Climate Predictions and Projections. Frontiers in Climate, 2021, 3, .	1.3	18
116	From Past to Future Warming. Science, 2014, 343, 844-845.	6.0	17
117	Robust increase in population exposure to heat stress with increasing global warming. Environmental Research Letters, 2022, 17, 064049.	2.2	17
118	The Local Aerosol Emission Effect on Surface Shortwave Radiation and Temperatures. Journal of Advances in Modeling Earth Systems, 2019, 11, 806-817.	1.3	15
119	Origins of Modelâ€“Data Discrepancies in Optimal Fingerprinting. Journal of Climate, 2002, 15, 1348-1356.	1.2	14
120	Observational constraints on the effective climate sensitivity from the historical period. Environmental Research Letters, 2020, 15, 034043.	2.2	14
121	Precipitation sensitivity to warming estimated from long island records. Environmental Research Letters, 2016, 11, 074024.	2.2	13
122	Disentangling the causes of the 1816 European year without a summer. Environmental Research Letters, 2019, 14, 094019.	2.2	13
123	Ocean and land forcing of the record-breaking Dust Bowl heatwaves across central United States. Nature Communications, 2020, 11, 2870.	5.8	13
124	Patterns of change: whose fingerprint is seen in global warming?. Environmental Research Letters, 2011, 6, 044025.	2.2	12
125	Using the Past to Predict the Future?. Science, 2011, 334, 1360-1361.	6.0	12
126	Large-scale emergence of regional changes in year-to-year temperature variability by the end of the 21st century. Nature Communications, 2021, 12, 7237.	5.8	12

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127	The Potential Effect of GCM Uncertainties and Internal Atmospheric Variability on Anthropogenic Signal Detection. Journal of Climate, 1998, 11, 659-675.	1.2	10
128	Detection and prediction of mean and extreme European summer temperatures with a multimodel ensemble. Journal of Geophysical Research D: Atmospheres, 2013, 118, 9631-9641.	1.2	10
129	Central-Eastern China Persistent Heat Waves: Evaluation of the AMIP Models. Journal of Climate, 2018, 31, 3609-3624.	1.2	10
130	Orbital Forcing Strongly Influences Seasonal Temperature Trends During the Last Millennium. Geophysical Research Letters, 2021, 48, e2020GL088776.	1.5	10
131	Inferring changes in ENSO amplitude from the variance of proxy records. Geophysical Research Letters, 2015, 42, 1197-1204.	1.5	9
132	Forced and Unforced Decadal Behavior of the Interhemispheric SST Contrast during the Instrumental Period (1881â€“2012): Contextualizing the Late 1960sâ€“Early 1970s Shift. Journal of Climate, 2020, 33, 3487-3509.	1.2	9
133	The past as guide to the future. Nature, 1998, 392, 758-759.	13.7	8
134	Reconciling Two Approaches to the Detection of Anthropogenic Influence on Climate. Journal of Climate, 2002, 15, 326-329.	1.2	7
135	Assessing the Significance of Changes in ENSO Amplitude Using Variance Metrics. Journal of Climate, 2014, 27, 4911-4922.	1.2	7
136	Near-term prediction of impact-relevant extreme temperature indices. Climatic Change, 2015, 132, 61-76.	1.7	7
137	Circulation analogues and uncertainty in the time-evolution of extreme event probabilities: evidence from the 1947 Central European heatwave. Climate Dynamics, 2019, 53, 2229-2247.	1.7	7
138	Substantial changes in the probability of future annual temperature extremes. Atmospheric Science Letters, 2021, 22, e1061.	0.8	7
139	Climate change is physics. Communications Earth & Environment, 2022, 3, .	2.6	5
140	Discussion of reified Bayesian modelling and inference for physical systems by Michael Goldstein and Jonathan Rougier. Journal of Statistical Planning and Inference, 2009, 139, 1243-1245.	0.4	3
141	Marine heatwaves in global sea surface temperature records since 1850. Environmental Research Letters, 2022, 17, 084027.	2.2	3
142	Uncertainty in climate-sensitivity estimates (Reply). Nature, 2007, 446, E2-E2.	13.7	2
143	Global warming: it's not only size that matters. Environmental Research Letters, 2011, 6, 031002.	2.2	0