

Gabriele C Hegerl

List of Publications by Citations

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137
papers

14,736
citations

55
h-index

121
g-index

149
ext. papers

16,823
ext. citations

9.1
avg. IF

6.63
L-index

#	Paper	IF	Citations
137	Human contribution to more-intense precipitation extremes. <i>Nature</i> , 2011 , 470, 378-81	50.4	1341
136	Trends in Intense Precipitation in the Climate Record. <i>Journal of Climate</i> , 2005 , 18, 1326-1350	4.4	986
135	Indices for monitoring changes in extremes based on daily temperature and precipitation data. <i>Wiley Interdisciplinary Reviews: Climate Change</i> , 2011 , 2, 851-870	8.4	933
134	Annular Modes in the Extratropical Circulation. Part II: Trends. <i>Journal of Climate</i> , 2000 , 13, 1018-1036	4.4	821
133	Detection of human influence on twentieth-century precipitation trends. <i>Nature</i> , 2007 , 448, 461-5	50.4	743
132	Changes in Temperature and Precipitation Extremes in the IPCC Ensemble of Global Coupled Model Simulations. <i>Journal of Climate</i> , 2007 , 20, 1419-1444	4.4	739
131	Decadal Prediction. <i>Bulletin of the American Meteorological Society</i> , 2009 , 90, 1467-1486	6.1	552
130	The equilibrium sensitivity of the Earth's temperature to radiation changes. <i>Nature Geoscience</i> , 2008 , 1, 735-743	18.3	396
129	Climate sensitivity constrained by temperature reconstructions over the past seven centuries. <i>Nature</i> , 2006 , 440, 1029-32	50.4	307
128	Avoiding Inhomogeneity in Percentile-Based Indices of Temperature Extremes. <i>Journal of Climate</i> , 2005 , 18, 1641-1651	4.4	279
127	Detecting Greenhouse-Gas-Induced Climate Change with an Optimal Fingerprint Method. <i>Journal of Climate</i> , 1996 , 9, 2281-2306	4.4	246
126	Spatial and seasonal patterns in climate change, temperatures, and precipitation across the United States. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 7324-9	11.5	229
125	Detection of Human Influence on a New, Validated 1500-Year Temperature Reconstruction. <i>Journal of Climate</i> , 2007 , 20, 650-666	4.4	227
124	Simulation of the influence of solar radiation variations on the global climate with an ocean-atmosphere general circulation model. <i>Climate Dynamics</i> , 1997 , 13, 757-767	4.2	213
123	An Assessment of Earth's Climate Sensitivity Using Multiple Lines of Evidence. <i>Reviews of Geophysics</i> , 2020 , 58, e2019RG000678	23.1	209
122	A verification framework for interannual-to-decadal predictions experiments. <i>Climate Dynamics</i> , 2013 , 40, 245-272	4.2	207
121	Detection and attribution of climate change: a regional perspective. <i>Wiley Interdisciplinary Reviews: Climate Change</i> , 2010 , 1, 192-211	8.4	206

120	Multi-fingerprint detection and attribution analysis of greenhouse gas, greenhouse gas-plus-aerosol and solar forced climate change. <i>Climate Dynamics</i> , 1997 , 13, 613-634	4.2	191
119	European summer temperatures since Roman times. <i>Environmental Research Letters</i> , 2016 , 11, 024001	6.2	185
118	A Review of Uncertainties in Global Temperature Projections over the Twenty-First Century. <i>Journal of Climate</i> , 2008 , 21, 2651-2663	4.4	180
117	Attributing intensification of precipitation extremes to human influence. <i>Geophysical Research Letters</i> , 2013 , 40, 5252-5257	4.9	174
116	The Effect of Local Sea Surface Temperatures on Atmospheric Circulation over the Tropical Atlantic Sector. <i>Journal of Climate</i> , 2000 , 13, 2195-2216	4.4	171
115	Challenges in Quantifying Changes in the Global Water Cycle. <i>Bulletin of the American Meteorological Society</i> , 2015 , 96, 1097-1115	6.1	168
114	Attribution of polar warming to human influence. <i>Nature Geoscience</i> , 2008 , 1, 750-754	18.3	167
113	Detectability of Anthropogenic Changes in Annual Temperature and Precipitation Extremes. <i>Journal of Climate</i> , 2004 , 17, 3683-3700	4.4	166
112	Use of models in detection and attribution of climate change. <i>Wiley Interdisciplinary Reviews: Climate Change</i> , 2011 , 2, 570-591	8.4	165
111	Influence of Modes of Climate Variability on Global Temperature Extremes. <i>Journal of Climate</i> , 2008 , 21, 3872-3889	4.4	162
110	Beyond equilibrium climate sensitivity. <i>Nature Geoscience</i> , 2017 , 10, 727-736	18.3	155
109	Detection of volcanic, solar and greenhouse gas signals in paleo-reconstructions of Northern Hemispheric temperature. <i>Geophysical Research Letters</i> , 2003 , 30, n/a-n/a	4.9	141
108	Influence of Modes of Climate Variability on Global Precipitation Extremes. <i>Journal of Climate</i> , 2010 , 23, 6248-6262	4.4	124
107	The Detection and Attribution Model Intercomparison Project (DAMIP v1.0) contribution to CMIP6. <i>Geoscientific Model Development</i> , 2016 , 9, 3685-3697	6.3	124
106	Small influence of solar variability on climate over the past millennium. <i>Nature Geoscience</i> , 2014 , 7, 104-108	18.3	118
105	Detection of changes in temperature extremes during the second half of the 20th century. <i>Geophysical Research Letters</i> , 2005 , 32,	4.9	116
104	Detection and Attribution of Recent Climate Change: A Status Report. <i>Bulletin of the American Meteorological Society</i> , 1999 , 80, 2631-2659	6.1	116
103	Distinguishing the Roles of Natural and Anthropogenically Forced Decadal Climate Variability. <i>Bulletin of the American Meteorological Society</i> , 2011 , 92, 141-156	6.1	115

102	Separating Forced from Chaotic Climate Variability over the Past Millennium. <i>Journal of Climate</i> , 2013 , 26, 6954-6973	4.4	111
101	Understanding, modeling and predicting weather and climate extremes: Challenges and opportunities. <i>Weather and Climate Extremes</i> , 2017 , 18, 65-74	6	106
100	Detectable Changes in the Frequency of Temperature Extremes. <i>Journal of Climate</i> , 2013 , 26, 1561-1574	4.4	101
99	Influence of human and natural forcing on European seasonal temperatures. <i>Nature Geoscience</i> , 2011 , 4, 99-103	18.3	100
98	The Model Intercomparison Project on the climatic response to Volcanic forcing (VolMIP): experimental design and forcing input data for CMIP6. <i>Geoscientific Model Development</i> , 2016 , 9, 2701-2719	6.3	99
97	Regional climate changes as simulated in time-slice experiments. <i>Climatic Change</i> , 1995 , 31, 273-304	4.5	97
96	Millennial temperature reconstruction intercomparison and evaluation. <i>Climate of the Past</i> , 2007 , 3, 591-609	5.9	96
95	Decreased monsoon precipitation in the Northern Hemisphere due to anthropogenic aerosols. <i>Geophysical Research Letters</i> , 2014 , 41, 6023-6029	4.9	91
94	The effect of volcanic eruptions on global precipitation. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013 , 118, 8770-8786	4.4	89
93	Modeling ocean heat content changes during the last millennium. <i>Geophysical Research Letters</i> , 2003 , 30,	4.9	87
92	Detecting anthropogenic influence with a multi-model ensemble. <i>Geophysical Research Letters</i> , 2002 , 29, 31-1-31-4	4.9	73
91	The global precipitation response to volcanic eruptions in the CMIP5 models. <i>Environmental Research Letters</i> , 2014 , 9, 104012	6.2	70
90	Monte Carlo climate change forecasts with a global coupled ocean-atmosphere model. <i>Climate Dynamics</i> , 1994 , 10, 1-19	4.2	68
89	Importance of the Pre-Industrial Baseline in Determining the Likelihood of Exceeding the Paris Limits. <i>Nature Climate Change</i> , 2017 , 7, 563-567	21.4	67
88	The early 20th century warming: Anomalies, causes, and consequences. <i>Wiley Interdisciplinary Reviews: Climate Change</i> , 2018 , 9, e522	8.4	67
87	Climate Change Detection and Attribution: Beyond Mean Temperature Signals. <i>Journal of Climate</i> , 2006 , 19, 5058-5077	4.4	65
86	Connecting Atmospheric Blocking to European Temperature Extremes in Spring. <i>Journal of Climate</i> , 2017 , 30, 585-594	4.4	60
85	The importance of ENSO phase during volcanic eruptions for detection and attribution. <i>Geophysical Research Letters</i> , 2016 , 43, 2851-2858	4.9	60

84	The role of land use change in the recent warming of daily extreme temperatures. <i>Geophysical Research Letters</i> , 2013 , 40, 589-594	4.9	59
83	A Comparison of Surface Air Temperature Variability in Three 1000-Yr Coupled Ocean-Atmosphere Model Integrations. <i>Journal of Climate</i> , 2000 , 13, 513-537	4.4	55
82	Detectable regional changes in the number of warm nights. <i>Geophysical Research Letters</i> , 2011 , 38, n/a-n/a	4.9	51
81	Causes of Robust Seasonal Land Precipitation Changes*. <i>Journal of Climate</i> , 2013 , 26, 6679-6697	4.4	48
80	Climate change. Risks of climate engineering. <i>Science</i> , 2009 , 325, 955-6	33.3	48
79	Causes of climate change over the historical record. <i>Environmental Research Letters</i> , 2019 , 14, 123006	6.2	47
78	Summer heat waves over Eastern China: dynamical processes and trend attribution. <i>Environmental Research Letters</i> , 2017 , 12, 024015	6.2	45
77	Atmospheric Climate Change Detection by Radio Occultation Data Using a Fingerprinting Method. <i>Journal of Climate</i> , 2011 , 24, 5275-5291	4.4	45
76	Optimal detection and attribution of climate change: sensitivity of results to climate model differences. <i>Climate Dynamics</i> , 2000 , 16, 737-754	4.2	45
75	Systematic change in global patterns of streamflow following volcanic eruptions. <i>Nature Geoscience</i> , 2015 , 8, 838-842	18.3	43
74	Role of the North Atlantic Oscillation in decadal temperature trends. <i>Environmental Research Letters</i> , 2017 , 12, 114010	6.2	42
73	Have greenhouse gases intensified the contrast between wet and dry regions?. <i>Geophysical Research Letters</i> , 2013 , 40, 4783-4787	4.9	42
72	A climate change simulation starting from 1935. <i>Climate Dynamics</i> , 1995 , 11, 71-84	4.2	42
71	Last phase of the Little Ice Age forced by volcanic eruptions. <i>Nature Geoscience</i> , 2019 , 12, 650-656	18.3	41
70	Delayed winter warming: A robust decadal response to strong tropical volcanic eruptions?. <i>Geophysical Research Letters</i> , 2013 , 40, 204-209	4.9	41
69	Detectable Impact of Local and Remote Anthropogenic Aerosols on the 20th Century Changes of West African and South Asian Monsoon Precipitation. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018 , 123, 4871-4889	4.4	40
68	Quantifying anthropogenic influence on recent near-surface temperature change. <i>Surveys in Geophysics</i> , 2006 , 27, 491-544	7.6	40
67	Emerging local warming signals in observational data. <i>Geophysical Research Letters</i> , 2012 , 39, n/a-n/a	4.9	38

66	Implications of changes in the northern hemisphere circulation for the detection of anthropogenic climate change. <i>Geophysical Research Letters</i> , 2000 , 27, 993-996	4.9	38
65	Relating changes in synoptic circulation to the surface rainfall response using self-organising maps. <i>Climate Dynamics</i> , 2015 , 44, 861-879	4.2	35
64	Constraining human contributions to observed warming since the pre-industrial period. <i>Nature Climate Change</i> , 2021 , 11, 207-212	21.4	35
63	Comparison of Statistically Optimal Approaches to Detecting Anthropogenic Climate Change. <i>Journal of Climate</i> , 1997 , 10, 1125-1133	4.4	34
62	Determining the likelihood of pauses and surges in global warming. <i>Geophysical Research Letters</i> , 2015 , 42, 5974-5982	4.9	33
61	Changes in seasonal land precipitation during the latter twentieth-century. <i>Geophysical Research Letters</i> , 2012 , 39, n/a-n/a	4.9	31
60	Single-step attribution of increasing frequencies of very warm regional temperatures to human influence. <i>Atmospheric Science Letters</i> , 2011 , 12, 220-227	2.4	31
59	Inter-annual tropical Pacific climate variability in an isotope-enabled CGCM: implications for interpreting coral stable oxygen isotope records of ENSO. <i>Climate of the Past</i> , 2013 , 9, 1543-1557	3.9	30
58	The influences of data precision on the calculation of temperature percentile indices. <i>International Journal of Climatology</i> , 2009 , 29, 321-327	3.5	27
57	Ocean science. Warming the world's oceans. <i>Science</i> , 2005 , 309, 254-5	33.3	26
56	A Bayesian Climate Change Detection and Attribution Assessment. <i>Journal of Climate</i> , 2005 , 18, 2429-2440	4.4	25
55	Strengthening contrast between precipitation in tropical wet and dry regions. <i>Geophysical Research Letters</i> , 2017 , 44, 365-373	4.9	24
54	A Description of a 1260-Year Control Integration with the Coupled ECHAM1/LSG General Circulation Model. <i>Journal of Climate</i> , 1997 , 10, 1525-1543	4.4	24
53	Factors Contributing to Record-Breaking Heat Waves over the Great Plains during the 1930s Dust Bowl. <i>Journal of Climate</i> , 2017 , 30, 2437-2461	4.4	23
52	Evaluation of the HadGEM3-A simulations in view of detection and attribution of human influence on extreme events in Europe. <i>Climate Dynamics</i> , 2019 , 52, 1187-1210	4.2	22
51	Towards advancing scientific knowledge of climate change impacts on short-duration rainfall extremes. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2021 , 379, 20190542	3	22
50	Can a Decadal Forecasting System Predict Temperature Extreme Indices?*. <i>Journal of Climate</i> , 2013 , 26, 3728-3744	4.4	21
49	Effect of Observational Sampling Error on the Detection of Anthropogenic Climate Change*. <i>Journal of Climate</i> , 2001 , 14, 198-207	4.4	21

48	Impacts of the 1900–2014 Increase in Anthropogenic Aerosol Emissions from North America and Europe on Eurasian Summer Climate. <i>Journal of Climate</i> , 2018 , 31, 8381-8399	4.4	19
47	Evaluation of mechanisms of hot and cold days in climate models over Central Europe. <i>Environmental Research Letters</i> , 2015 , 10, 014002	6.2	19
46	Influence of Patterns of Climate Variability on the Difference between Satellite and Surface Temperature Trends. <i>Journal of Climate</i> , 2002 , 15, 2412-2428	4.4	19
45	Quantifying human contributions to past and future ocean warming and thermosteric sea level rise. <i>Environmental Research Letters</i> , 2019 , 14, 074020	6.2	17
44	Uncertainty levels in predicted patterns of anthropogenic climate change. <i>Journal of Geophysical Research</i> , 2000 , 105, 15525-15542		16
43	Possible causes of data model discrepancy in the temperature history of the last Millennium. <i>Scientific Reports</i> , 2018 , 8, 7572	4.9	16
42	Comparisons of the Second-Moment Statistics of Climate Models. <i>Journal of Climate</i> , 1996 , 9, 2204-2221	4.4	15
41	Contrasting the Effects of the 1850–1975 Increase in Sulphate Aerosols from North America and Europe on the Atlantic in the CESM. <i>Geophysical Research Letters</i> , 2018 , 45, 11,930-11,940	4.9	15
40	Effects of Memory Biases on Variability of Temperature Reconstructions. <i>Journal of Climate</i> , 2019 , 32, 8713-8731	4.4	14
39	Present-day greenhouse gases could cause more frequent and longer Dust Bowl heatwaves. <i>Nature Climate Change</i> , 2020 , 10, 505-510	21.4	14
38	Impacts of Anthropogenic Forcings and El Niño on Chinese Extreme Temperatures. <i>Advances in Atmospheric Sciences</i> , 2018 , 35, 994-1002	2.9	14
37	Origins of Model-Data Discrepancies in Optimal Fingerprinting. <i>Journal of Climate</i> , 2002 , 15, 1348-1356	4.4	14
36	Atmospheric science. From past to future warming. <i>Science</i> , 2014 , 343, 844-5	33.3	13
35	Climate change. Using the past to predict the future?. <i>Science</i> , 2011 , 334, 1360-1	33.3	12
34	Comparing Methods to Constrain Future European Climate Projections Using a Consistent Framework. <i>Journal of Climate</i> , 2020 , 33, 8671-8692	4.4	12
33	Patterns of change: whose fingerprint is seen in global warming?. <i>Environmental Research Letters</i> , 2011 , 6, 044025	6.2	10
32	Observational constraints on the effective climate sensitivity from the historical period. <i>Environmental Research Letters</i> , 2020 , 15, 034043	6.2	10
31	The Local Aerosol Emission Effect on Surface Shortwave Radiation and Temperatures. <i>Journal of Advances in Modeling Earth Systems</i> , 2019 , 11, 806-817	7.1	9

30	Detection and prediction of mean and extreme European summer temperatures with a multimodel ensemble. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013 , 118, 9631-9641	4.4	9
29	Inferring changes in ENSO amplitude from the variance of proxy records. <i>Geophysical Research Letters</i> , 2015 , 42, 1197-1204	4.9	9
28	Comparisons of two methods of removing anthropogenically related variability from the near-surface observational temperature field. <i>Journal of Geophysical Research</i> , 1998 , 103, 13777-13786		9
27	Human influence strengthens the contrast between tropical wet and dry regions. <i>Environmental Research Letters</i> , 2020 , 15, 104026	6.2	9
26	Ocean and land forcing of the record-breaking Dust Bowl heatwaves across central United States. <i>Nature Communications</i> , 2020 , 11, 2870	17.4	8
25	Central-Eastern China Persistent Heat Waves: Evaluation of the AMIP Models. <i>Journal of Climate</i> , 2018 , 31, 3609-3624	4.4	8
24	The Potential Effect of GCM Uncertainties and Internal Atmospheric Variability on Anthropogenic Signal Detection. <i>Journal of Climate</i> , 1998 , 11, 659-675	4.4	8
23	Greenhouse gas induced climate change. <i>Environmental Science and Pollution Research</i> , 1996 , 3, 99-102	5.1	8
22	Precipitation sensitivity to warming estimated from long island records. <i>Environmental Research Letters</i> , 2016 , 11, 074024	6.2	8
21	Future changes in the frequency of temperature extremes may be underestimated in tropical and subtropical regions. <i>Communications Earth & Environment</i> , 2021 , 2,	6.1	8
20	Reconciling Two Approaches to the Detection of Anthropogenic Influence on Climate. <i>Journal of Climate</i> , 2002 , 15, 326-329	4.4	7
19	Near-term prediction of impact-relevant extreme temperature indices. <i>Climatic Change</i> , 2015 , 132, 61-76	4.5	6
18	Disentangling the causes of the 1816 European year without a summer. <i>Environmental Research Letters</i> , 2019 , 14, 094019	6.2	6
17	Assessing the Significance of Changes in ENSO Amplitude Using Variance Metrics. <i>Journal of Climate</i> , 2014 , 27, 4911-4922	4.4	6
16	Detection and Attribution Model Intercomparison Project (DAMIP)		6
15	Forced and Unforced Decadal Behavior of the Interhemispheric SST Contrast during the Instrumental Period (1881-2012): Contextualizing the Late 1960s-Early 1970s Shift. <i>Journal of Climate</i> , 2020 , 33, 3487-3509	4.4	5
14	Circulation analogues and uncertainty in the time-evolution of extreme event probabilities: evidence from the 1947 Central European heatwave. <i>Climate Dynamics</i> , 2019 , 53, 2229-2247	4.2	4
13	Monte Carlo climate change forecasts with a global coupled ocean-atmosphere model. <i>Climate Dynamics</i> , 1994 , 10, 1-19	4.2	4

12	The value of values in climate science. <i>Nature Climate Change</i> ,	21.4	4
11	Orbital Forcing Strongly Influences Seasonal Temperature Trends During the Last Millennium. <i>Geophysical Research Letters</i> , 2021 , 48, e2020GL088776	4.9	4
10	Projections of northern hemisphere extratropical climate underestimate internal variability and associated uncertainty. <i>Communications Earth & Environment</i> , 2021 , 2,	6.1	4
9	Discussion of reified Bayesian modelling and inference for physical systems by Michael Goldstein and Jonathan Rougier. <i>Journal of Statistical Planning and Inference</i> , 2009 , 139, 1243-1245	0.8	3
8	Toward Consistent Observational Constraints in Climate Predictions and Projections. <i>Frontiers in Climate</i> , 2021 , 3,	7.1	2
7	Substantial changes in the probability of future annual temperature extremes. <i>Atmospheric Science Letters</i> , e1061	2.4	2
6	Changes in temperature and heat waves over Africa using observational and reanalysis data sets. <i>International Journal of Climatology</i> ,	3.5	2
5	Effects of forcing differences and initial conditions on inter-model agreement in the VolMIP volc-pinatubo-full experiment. <i>Geoscientific Model Development</i> , 2022 , 15, 2265-2292	6.3	2
4	Attributing and Projecting Heatwaves Is Hard: We Can Do Better. <i>Earth's Future</i> , 2022 , 10,	7.9	2
3	Uncertainty in climate-sensitivity estimates (Reply). <i>Nature</i> , 2007 , 446, E2-E2	50.4	1
2	Large-scale emergence of regional changes in year-to-year temperature variability by the end of the 21 century.. <i>Nature Communications</i> , 2021 , 12, 7237	17.4	1
1	Global warming: it's not only size that matters. <i>Environmental Research Letters</i> , 2011 , 6, 031002	6.2	