Gabriele C Hegerl

List of Publications by Year in Descending Order

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	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	6.3	2
136	Attributing and Projecting Heatwaves Is Hard: We Can Do Better. *Earth's Future*, **2022**, 10,	7.9	2
135	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	3	22
134	Toward Consistent Observational Constraints in Climate Predictions and Projections. *Frontiers in Climate*, **2021**, 3,	7.1	2
133	Constraining human contributions to observed warming since the pre-industrial period. *Nature Climate Change*, **2021**, 11, 207-212	21.4	35
132	Future changes in the frequency of temperature extremes may be underestimated in tropical and subtropical regions. *Communications Earth & Environment*, **2021**, 2,	6.1	8
131	Orbital Forcing Strongly Influences Seasonal Temperature Trends During the Last Millennium. *Geophysical Research Letters*, **2021**, 48, e2020GL088776	4.9	4
130	Projections of northern hemisphere extratropical climate underestimate internal variability and associated uncertainty. *Communications Earth & Environment*, **2021**, 2,	6.1	4
129	Large-scale emergence of regional changes in year-to-year temperature variability by the end of the 21 century.. *Nature Communications*, **2021**, 12, 7237	17.4	1
128	Present-day greenhouse gases could cause more frequent and longer Dust Bowl heatwaves. *Nature Climate Change*, **2020**, 10, 505-510	21.4	14
127	Ocean and land forcing of the record-breaking Dust Bowl heatwaves across central United States. *Nature Communications*, **2020**, 11, 2870	17.4	8
126	Forced and Unforced Decadal Behavior of the Interhemispheric SST Contrast during the Instrumental Period (1881–2012): Contextualizing the Late 1960s–Early 1970s Shift. *Journal of Climate*, **2020**, 33, 3487-3509	4.4	5
125	Comparing Methods to Constrain Future European Climate Projections Using a Consistent Framework. *Journal of Climate*, **2020**, 33, 8671-8692	4.4	12
124	Observational constraints on the effective climate sensitivity from the historical period. *Environmental Research Letters*, **2020**, 15, 034043	6.2	10
123	Human influence strengthens the contrast between tropical wet and dry regions. *Environmental Research Letters*, **2020**, 15, 104026	6.2	9
122	An Assessment of Earth's Climate Sensitivity Using Multiple Lines of Evidence. *Reviews of Geophysics*, **2020**, 58, e2019RG000678	23.1	209
121	Quantifying human contributions to past and future ocean warming and thermosteric sea level rise. *Environmental Research Letters*, **2019**, 14, 074020	6.2	17

120	Effects of Memory Biases on Variability of Temperature Reconstructions. *Journal of Climate*, **2019**, 32, 8713-8731	4.4	14
119	The Local Aerosol Emission Effect on Surface Shortwave Radiation and Temperatures. *Journal of Advances in Modeling Earth Systems*, **2019**, 11, 806-817	7.1	9
118	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	4.2	22
117	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	4.2	4
116	Last phase of the Little Ice Age forced by volcanic eruptions. *Nature Geoscience*, **2019**, 12, 650-656	18.3	41
115	Disentangling the causes of the 1816 European year without a summer. *Environmental Research Letters*, **2019**, 14, 094019	6.2	6
114	Causes of climate change over the historical record. *Environmental Research Letters*, **2019**, 14, 123006	6.2	47
113	Central-Eastern China Persistent Heat Waves: Evaluation of the AMIP Models. *Journal of Climate*, **2018**, 31, 3609-3624	4.4	8
112	Impacts of the 1900–74 Increase in Anthropogenic Aerosol Emissions from North America and Europe on Eurasian Summer Climate. *Journal of Climate*, **2018**, 31, 8381-8399	4.4	19
111	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	4.4	40
110	Impacts of Anthropogenic Forcings and El Niño on Chinese Extreme Temperatures. *Advances in Atmospheric Sciences*, **2018**, 35, 994-1002	2.9	14
109	Contrasting the Effects of the 1850–1975 Increase in Sulphate Aerosols from North America and Europe on the Atlantic in the CESM. *Geophysical Research Letters*, **2018**, 45, 11,930-11,940	4.9	15
108	The early 20th century warming: Anomalies, causes, and consequences. *Wiley Interdisciplinary Reviews: Climate Change*, **2018**, 9, e522	8.4	67
107	Possible causes of data model discrepancy in the temperature history of the last Millennium. *Scientific Reports*, **2018**, 8, 7572	4.9	16
106	Factors Contributing to Record-Breaking Heat Waves over the Great Plains during the 1930s Dust Bowl. *Journal of Climate*, **2017**, 30, 2437-2461	4.4	23
105	Strengthening contrast between precipitation in tropical wet and dry regions. *Geophysical Research Letters*, **2017**, 44, 365-373	4.9	24
104	Role of the North Atlantic Oscillation in decadal temperature trends. *Environmental Research Letters*, **2017**, 12, 114010	6.2	42
103	Summer heat waves over Eastern China: dynamical processes and trend attribution. *Environmental Research Letters*, **2017**, 12, 024015	6.2	45

102	Beyond equilibrium climate sensitivity. *Nature Geoscience*, **2017**, 10, 727-736	18.3	155
101	Importance of the Pre-Industrial Baseline in Determining the Likelihood of Exceeding the Paris Limits. *Nature Climate Change*, **2017**, 7, 563-567	21.4	67
100	Understanding, modeling and predicting weather and climate extremes: Challenges and opportunities. *Weather and Climate Extremes*, **2017**, 18, 65-74	6	106
99	Connecting Atmospheric Blocking to European Temperature Extremes in Spring. *Journal of Climate*, **2017**, 30, 585-594	4.4	60
98	European summer temperatures since Roman times. *Environmental Research Letters*, **2016**, 11, 024001	6.2	185
97	Precipitation sensitivity to warming estimated from long island records. *Environmental Research Letters*, **2016**, 11, 074024	6.2	8
96	The Detection and Attribution Model Intercomparison Project (DAMIP v1.0) contribution to CMIP6. *Geoscientific Model Development*, **2016**, 9, 3685-3697	6.3	124
95	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	6.3	99
94	The importance of ENSO phase during volcanic eruptions for detection and attribution. *Geophysical Research Letters*, **2016**, 43, 2851-2858	4.9	60
93	Near-term prediction of impact-relevant extreme temperature indices. *Climatic Change*, **2015**, 132, 61-76	4.5	6
92	Systematic change in global patterns of streamflow following volcanic eruptions. *Nature Geoscience* , **2015**, 8, 838-842	18.3	43
91	Relating changes in synoptic circulation to the surface rainfall response using self-organising maps. *Climate Dynamics*, **2015**, 44, 861-879	4.2	35
90	Challenges in Quantifying Changes in the Global Water Cycle. *Bulletin of the American Meteorological Society*, **2015**, 96, 1097-1115	6.1	168
89	Determining the likelihood of pauses and surges in global warming. *Geophysical Research Letters*, **2015**, 42, 5974-5982	4.9	33
88	Inferring changes in ENSO amplitude from the variance of proxy records. *Geophysical Research Letters*, **2015**, 42, 1197-1204	4.9	9
87	Evaluation of mechanisms of hot and cold days in climate models over Central Europe. *Environmental Research Letters*, **2015**, 10, 014002	6.2	19
86	Atmospheric science. From past to future warming. *Science*, **2014**, 343, 844-5	33.3	13
85	Small influence of solar variability on climate over the past millennium. *Nature Geoscience*, **2014**, 7, 104-108	18.3	118

84	Decreased monsoon precipitation in the Northern Hemisphere due to anthropogenic aerosols. *Geophysical Research Letters*, **2014**, 41, 6023-6029	4.9	91
83	The global precipitation response to volcanic eruptions in the CMIP5 models. *Environmental Research Letters*, **2014**, 9, 104012	6.2	70
82	Assessing the Significance of Changes in ENSO Amplitude Using Variance Metrics. *Journal of Climate*, **2014**, 27, 4911-4922	4.4	6
81	Causes of Robust Seasonal Land Precipitation Changes*. *Journal of Climate*, **2013**, 26, 6679-6697	4.4	48
80	Detection and prediction of mean and extreme European summer temperatures with a multimodel ensemble. *Journal of Geophysical Research D: Atmospheres*, **2013**, 118, 9631-9641	4.4	9
79	A verification framework for interannual-to-decadal predictions experiments. *Climate Dynamics*, **2013**, 40, 245-272	4.2	207
78	The role of land use change in the recent warming of daily extreme temperatures. *Geophysical Research Letters*, **2013**, 40, 589-594	4.9	59
77	Delayed winter warming: A robust decadal response to strong tropical volcanic eruptions?. *Geophysical Research Letters*, **2013**, 40, 204-209	4.9	41
76	Have greenhouse gases intensified the contrast between wet and dry regions?. *Geophysical Research Letters*, **2013**, 40, 4783-4787	4.9	42
75	Can a Decadal Forecasting System Predict Temperature Extreme Indices?*. *Journal of Climate*, **2013** , 26, 3728-3744	4.4	21
74	Separating Forced from Chaotic Climate Variability over the Past Millennium. *Journal of Climate*, **2013**, 26, 6954-6973	4.4	111
73	Detectable Changes in the Frequency of Temperature Extremes. *Journal of Climate*, **2013**, 26, 1561-1574	4.4	101
72	Attributing intensification of precipitation extremes to human influence. *Geophysical Research Letters*, **2013**, 40, 5252-5257	4.9	174
71	The effect of volcanic eruptions on global precipitation. *Journal of Geophysical Research D: Atmospheres*, **2013**, 118, 8770-8786	4.4	89
70	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	3.9	30
69	Changes in seasonal land precipitation during the latter twentieth-century. *Geophysical Research Letters*, **2012**, 39, n/a-n/a	4.9	31
68	Emerging local warming signals in observational data. *Geophysical Research Letters*, **2012**, 39, n/a-n/a	4.9	38
67	Detectable regional changes in the number of warm nights. *Geophysical Research Letters*, **2011**, 38, n/a-n/a	4.9	51

66	Influence of human and natural forcing on European seasonal temperatures. *Nature Geoscience*, **2011**, 4, 99-103	18.3	100
65	Human contribution to more-intense precipitation extremes. *Nature*, **2011**, 470, 378-81	50.4	1341
64	Use of models in detection and attribution of climate change. *Wiley Interdisciplinary Reviews: Climate Change*, **2011**, 2, 570-591	8.4	165
63	Indices for monitoring changes in extremes based on daily temperature and precipitation data. *Wiley Interdisciplinary Reviews: Climate Change*, **2011**, 2, 851-870	8.4	933
62	Single-step attribution of increasing frequencies of very warm regional temperatures to human influence. *Atmospheric Science Letters*, **2011**, 12, 220-227	2.4	31
61	Distinguishing the Roles of Natural and Anthropogenically Forced Decadal Climate Variability. *Bulletin of the American Meteorological Society*, **2011**, 92, 141-156	6.1	115
60	Global warming: it's not only size that matters. *Environmental Research Letters*, **2011**, 6, 031002	6.2	
59	Patterns of change: whose fingerprint is seen in global warming?. *Environmental Research Letters*, **2011**, 6, 044025	6.2	10
58	Climate change. Using the past to predict the future?. *Science*, **2011**, 334, 1360-1	33.3	12
57	Atmospheric Climate Change Detection by Radio Occultation Data Using a Fingerprinting Method. *Journal of Climate*, **2011**, 24, 5275-5291	4.4	45
56	Influence of Modes of Climate Variability on Global Precipitation Extremes. *Journal of Climate*, **2010**, 23, 6248-6262	4.4	124
55	Detection and attribution of climate change: a regional perspective. *Wiley Interdisciplinary Reviews: Climate Change*, **2010**, 1, 192-211	8.4	206
54	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, 7324-9	11.5	229
53	Decadal Prediction. *Bulletin of the American Meteorological Society*, **2009**, 90, 1467-1486	6.1	552
52	Climate change. Risks of climate engineering. *Science*, **2009**, 325, 955-6	33.3	48
51	The influences of data precision on the calculation of temperature percentile indices. *International Journal of Climatology*, **2009**, 29, 321-327	3.5	27
50	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	0.8	3
49	The equilibrium sensitivity of the Earth's temperature to radiation changes. *Nature Geoscience*, **2008**, 1, 735-743	18.3	396

48	Attribution of polar warming to human influence. *Nature Geoscience*, **2008**, 1, 750-754	18.3	167
47	A Review of Uncertainties in Global Temperature Projections over the Twenty-First Century. *Journal of Climate*, **2008**, 21, 2651-2663	4.4	180
46	Influence of Modes of Climate Variability on Global Temperature Extremes. *Journal of Climate*, **2008**, 21, 3872-3889	4.4	162
45	Millennial temperature reconstruction intercomparison and evaluation. *Climate of the Past*, **2007**, 3, 591-609	3.9	96
44	Uncertainty in climate-sensitivity estimates (Reply). *Nature*, **2007**, 446, E2-E2	50.4	1
43	Detection of human influence on twentieth-century precipitation trends. *Nature*, **2007**, 448, 461-5	50.4	743
42	Detection of Human Influence on a New, Validated 1500-Year Temperature Reconstruction. *Journal of Climate*, **2007**, 20, 650-666	4.4	227
41	Changes in Temperature and Precipitation Extremes in the IPCC Ensemble of Global Coupled Model Simulations. *Journal of Climate*, **2007**, 20, 1419-1444	4.4	739
40	Climate Change Detection and Attribution: Beyond Mean Temperature Signals. *Journal of Climate*, **2006**, 19, 5058-5077	4.4	65
39	Climate sensitivity constrained by temperature reconstructions over the past seven centuries. *Nature*, **2006**, 440, 1029-32	50.4	307
38	Quantifying anthropogenic influence on recent near-surface temperature change. *Surveys in Geophysics*, **2006**, 27, 491-544	7.6	40
37	Detection of changes in temperature extremes during the second half of the 20th century. *Geophysical Research Letters*, **2005**, 32,	4.9	116
36	Ocean science. Warming the worldS oceans. *Science*, **2005**, 309, 254-5	33.3	26
35	Trends in Intense Precipitation in the Climate Record. *Journal of Climate*, **2005**, 18, 1326-1350	4.4	986
34	Avoiding Inhomogeneity in Percentile-Based Indices of Temperature Extremes. *Journal of Climate*, **2005**, 18, 1641-1651	4.4	279
33	A Bayesian Climate Change Detection and Attribution Assessment. *Journal of Climate*, **2005**, 18, 2429-2440	4.4	25
32	Detectability of Anthropogenic Changes in Annual Temperature and Precipitation Extremes. *Journal of Climate*, **2004**, 17, 3683-3700	4.4	166
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	4.9	141

30	Modeling ocean heat content changes during the last millennium. *Geophysical Research Letters*, **2003**, 30,	4.9	87
29	Origins of Model–Data Discrepancies in Optimal Fingerprinting. *Journal of Climate*, **2002**, 15, 1348-1356	4.4	14
28	Reconciling Two Approaches to the Detection of Anthropogenic Influence on Climate. *Journal of Climate*, **2002**, 15, 326-329	4.4	7
27	Detecting anthropogenic influence with a multi-model ensemble. *Geophysical Research Letters*, **2002**, 29, 31-1-31-4	4.9	73
26	Influence of Patterns of Climate Variability on the Difference between Satellite and Surface Temperature Trends. *Journal of Climate*, **2002**, 15, 2412-2428	4.4	19
25	Effect of Observational Sampling Error on the Detection of Anthropogenic Climate Change*. *Journal of Climate*, **2001**, 14, 198-207	4.4	21
24	The Effect of Local Sea Surface Temperatures on Atmospheric Circulation over the Tropical Atlantic Sector. *Journal of Climate*, **2000**, 13, 2195-2216	4.4	171
23	A Comparison of Surface Air Temperature Variability in Three 1000-Yr Coupled Ocean–Atmosphere Model Integrations. *Journal of Climate*, **2000**, 13, 513-537	4.4	55
22	Optimal detection and attribution of climate change: sensitivity of results to climate model differences. *Climate Dynamics*, **2000**, 16, 737-754	4.2	45
21	Uncertainty levels in predicted patterns of anthropogenic climate change. *Journal of Geophysical Research*, **2000**, 105, 15525-15542		16
20	Annular Modes in the Extratropical Circulation. Part II: Trends. *Journal of Climate*, **2000**, 13, 1018-1036	4.4	821
19	Implications of changes in the northern hemisphere circulation for the detection of anthropogenic climate change. *Geophysical Research Letters*, **2000**, 27, 993-996	4.9	38
18	Detection and Attribution of Recent Climate Change: A Status Report. *Bulletin of the American Meteorological Society*, **1999**, 80, 2631-2659	6.1	116
17	Comparisons of two methods of removing anthropogenically related variability from the near-surface observational temperature field. *Journal of Geophysical Research*, **1998**, 103, 13777-13786		9
16	The Potential Effect of GCM Uncertainties and Internal Atmospheric Variability on Anthropogenic Signal Detection. *Journal of Climate*, **1998**, 11, 659-675	4.4	8
15	A Description of a 1260-Year Control Integration with the Coupled ECHAM1/LSG General Circulation Model. *Journal of Climate*, **1997**, 10, 1525-1543	4.4	24
14	Comparison of Statistically Optimal Approaches to Detecting Anthropogenic Climate Change. *Journal of Climate*, **1997**, 10, 1125-1133	4.4	34
13	Multi-fingerprint detection and attribution analysis of greenhouse gas, greenhouse gas-plus-aerosol and solar forced climate change. *Climate Dynamics*, **1997**, 13, 613-634	4.2	191

12	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	4.2	213
11	Comparisons of the Second-Moment Statistics of Climate Models. *Journal of Climate*, **1996**, 9, 2204-2221	4.4	15
10	Greenhouse gas induced climate change. *Environmental Science and Pollution Research*, **1996**, 3, 99-102	5.1	8
9	Detecting Greenhouse-Gas-Induced Climate Change with an Optimal Fingerprint Method. *Journal of Climate*, **1996**, 9, 2281-2306	4.4	246
8	Regional climate changes as simulated in time-slice experiments. *Climatic Change*, **1995**, 31, 273-304	4.5	97
7	A climate change simulation starting from 1935. *Climate Dynamics*, **1995**, 11, 71-84	4.2	42
6	Monte Carlo climate change forecasts with a global coupled ocean-atmosphere model. *Climate Dynamics*, **1994**, 10, 1-19	4.2	68
5	Monte Carlo climate change forecasts with a global coupled ocean-atmosphere model. *Climate Dynamics*, **1994**, 10, 1-19	4.2	4
4	The value of values in climate science. *Nature Climate Change*,	21.4	4
3	Detection and Attribution Model Intercomparison Project (DAMIP)		6
2	Substantial changes in the probability of future annual temperature extremes. *Atmospheric Science Letters*,e1061	2.4	2
1	Changes in temperature and heat waves over Africa using observational and reanalysis data sets. *International Journal of Climatology*,	3.5	2