

Martin Claussen

List of Publications by Year in descending order

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128
papers

12,610
citations

41323

49
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27389

106
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167
docs citations

167
times ranked

10420
citing authors

#	ARTICLE	IF	CITATIONS
1	Climate and carbon cycle changes from 1850 to 2100 in MPIâ€ESM simulations for the Coupled Model Intercomparison Project phase 5. <i>Journal of Advances in Modeling Earth Systems</i> , 2013, 5, 572-597.	1.3	1,280
2	Developments in the MPIâ€EM Earth System Model version 1.2 (MPIâ€ESM1.2) and Its Response to Increasing CO ₂ . <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 998-1038.	1.3	582
3	Simulation of an abrupt change in Saharan vegetation in the Mid-Holocene. <i>Geophysical Research Letters</i> , 1999, 26, 2037-2040.	1.5	510
4	A reconstruction of global agricultural areas and land cover for the last millennium. <i>Global Biogeochemical Cycles</i> , 2008, 22, .	1.9	475
5	Earth system models of intermediate complexity: closing the gap in the spectrum of climate system models. <i>Climate Dynamics</i> , 2002, 18, 579-586.	1.7	411
6	Simulation of modern and glacial climates with a coupled global model of intermediate complexity. <i>Nature</i> , 1998, 391, 351-356.	13.7	403
7	CLIMBER-2: a climate system model of intermediate complexity. Part I: model description and performance for present climate. <i>Climate Dynamics</i> , 2000, 16, 1-17.	1.7	367
8	The Influence of Vegetation-Atmosphere-Ocean Interaction on Climate During the Mid-Holocene. <i>Science</i> , 1998, 280, 1916-1919.	6.0	360
9	Effect of Anthropogenic Land-Use and Land-Cover Changes on Climate and Land Carbon Storage in CMIP5 Projections for the Twenty-First Century. <i>Journal of Climate</i> , 2013, 26, 6859-6881.	1.2	329
10	Impact of soil moistureâ€climate feedbacks on CMIP5 projections: First results from the GLACEâ€CMIP5 experiment. <i>Geophysical Research Letters</i> , 2013, 40, 5212-5217.	1.5	314
11	Carbon cycle, vegetation, and climate dynamics in the Holocene: Experiments with the CLIMBER-2 model. <i>Global Biogeochemical Cycles</i> , 2002, 16, 86-1-86-20.	1.9	302
12	The Max Planck Institute Grand Ensemble: Enabling the Exploration of Climate System Variability. <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 2050-2069.	1.3	288
13	The Greening of the Sahara during the Mid-Holocene: Results of an Interactive Atmosphere-Biome Model. <i>Global Ecology and Biogeography Letters</i> , 1997, 6, 369.	0.6	287
14	Climate and carbon-cycle variability over the last millennium. <i>Climate of the Past</i> , 2010, 6, 723-737.	1.3	284
15	Biogeophysical versus biogeochemical feedbacks of large-scale land cover change. <i>Geophysical Research Letters</i> , 2001, 28, 1011-1014.	1.5	279
16	Global biogeophysical interactions between forest and climate. <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	273
17	Role of land cover changes for atmospheric CO ₂ increase and climate change during the last 150 years. <i>Global Change Biology</i> , 2004, 10, 1253-1266.	4.2	244
18	Coherent high- and low-latitude control of the northwest African hydrological balance. <i>Nature Geoscience</i> , 2008, 1, 670-675.	5.4	233

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19	Nonlinearities, Feedbacks and Critical Thresholds within the Earth's Climate System. <i>Climatic Change</i> , 2004, 65, 11-38.	1.7	229
20	On the stability of the atmosphere-vegetation system in the Sahara/Sahel region. <i>Journal of Geophysical Research</i> , 1998, 103, 31613-31624.	3.3	225
21	Biogeophysical effects of historical land cover changes simulated by six Earth system models of intermediate complexity. <i>Climate Dynamics</i> , 2006, 26, 587-600.	1.7	220
22	CLIMBER-2: a climate system model of intermediate complexity. Part II: model sensitivity. <i>Climate Dynamics</i> , 2001, 17, 735-751.	1.7	196
23	Catalogue of abrupt shifts in Intergovernmental Panel on Climate Change climate models. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, E5777-86.	3.3	182
24	Modeling bio-geophysical feedback in the African and Indian monsoon region. <i>Climate Dynamics</i> , 1997, 13, 247-257.	1.7	173
25	Simulation of the last glacial cycle with a coupled climate ice-sheet model of intermediate complexity. <i>Climate of the Past</i> , 2010, 6, 229-244.	1.3	156
26	Modelling climate response to historical land cover change. <i>Global Ecology and Biogeography</i> , 1999, 8, 509-517.	2.7	153
27	Combined biogeophysical and biogeochemical effects of large-scale forest cover changes in the MPI earth system model. <i>Biogeosciences</i> , 2010, 7, 1383-1399.	1.3	144
28	Estimation of areally-averaged surface fluxes. <i>Boundary-Layer Meteorology</i> , 1991, 54, 387-410.	1.2	139
29	Mid-Holocene greening of the Sahara: first results of the GAIM 6000 year BP Experiment with two asynchronously coupled atmosphere/biome models. <i>Climate Dynamics</i> , 2000, 16, 643-659.	1.7	137
30	Evaluation of vegetation cover and land surface albedo in <scp>MPI</scp> and <scp>ESM CMIP5</scp> simulations. <i>Journal of Advances in Modeling Earth Systems</i> , 2013, 5, 48-57.	1.3	130
31	Transient simulation of the last glacial inception. Part I: glacial inception as a bifurcation in the climate system. <i>Climate Dynamics</i> , 2005, 24, 545-561.	1.7	121
32	Synergy between small- and large-scale feedbacks of vegetation on the water cycle. <i>Global Change Biology</i> , 2005, 11, 1003-1012.	4.2	118
33	On coupling global biome models with climate models. <i>Climate Research</i> , 1994, 4, 203-221.	0.4	117
34	On multiple solutions of the atmosphere-vegetation system in present-day climate. <i>Global Change Biology</i> , 1998, 4, 549-559.	4.2	111
35	Climate Change in Northern Africa: The Past is Not the Future. <i>Climatic Change</i> , 2003, 57, 99-118.	1.7	109
36	Modelling global terrestrial vegetation-climate interaction. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 1998, 353, 53-63.	1.8	103

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37	Geoengineering climate by stratospheric sulfur injections: Earth system vulnerability to technological failure. <i>Climatic Change</i> , 2009, 92, 243-259.	1.7	99
38	Area-averaging of surface fluxes in a neutrally stratified, horizontally inhomogeneous atmospheric boundary layer. <i>Atmospheric Environment Part A General Topics</i> , 1990, 24, 1349-1360.	1.3	96
39	EMIC Intercomparison Project (EMIPâ€‘CO2): comparative analysis of EMIC simulations of climate, and of equilibrium and transient responses to atmospheric CO2 doubling. <i>Climate Dynamics</i> , 2005, 25, 363-385.	1.7	96
40	Asian irrigation, African rain: Remote impacts of irrigation. <i>Geophysical Research Letters</i> , 2016, 43, 3737-3745.	1.5	93
41	Simulation of the global bio-geophysical interactions during the Last Glacial Maximum. <i>Climate Dynamics</i> , 1998, 14, 461-471.	1.7	90
42	Late Quaternary vegetation-climate feedbacks. <i>Climate of the Past</i> , 2009, 5, 203-216.	1.3	74
43	Simulated climateâ€‘vegetation interaction in semi-arid regions affected by plant diversity. <i>Nature Geoscience</i> , 2013, 6, 954-958.	5.4	71
44	Global temperature modes shed light on the Holocene temperature conundrum. <i>Nature Communications</i> , 2020, 11, 4726.	5.8	71
45	Comparison of the last interglacial climate simulated by a coupled global model of intermediate complexity and an AOGCM. <i>Climate Dynamics</i> , 2000, 16, 799-814.	1.7	62
46	Transient simulation of the last glacial inception. Part II: sensitivity and feedback analysis. <i>Climate Dynamics</i> , 2005, 24, 563-576.	1.7	62
47	Past abrupt changes, tipping points and cascading impacts in the Earth system. <i>Nature Geoscience</i> , 2021, 14, 550-558.	5.4	62
48	Simulated global-scale response of the climate system to Dansgaard/Oeschger and Heinrich events. <i>Climate Dynamics</i> , 2003, 21, 361-370.	1.7	58
49	International Geosphereâ€‘Biosphere Programme and Earth system science: Three decades of co-evolution. <i>Anthropocene</i> , 2015, 12, 3-16.	1.6	57
50	Biomes computed from simulated climatologies. <i>Climate Dynamics</i> , 1994, 9, 235-243.	1.7	56
51	The effect of a dynamic background albedo scheme on Sahel/Sahara precipitation during the mid-Holocene. <i>Climate of the Past</i> , 2011, 7, 117-131.	1.3	56
52	Local ecosystem feedbacks and critical transitions in the climate. <i>Ecological Complexity</i> , 2011, 8, 223-228.	1.4	54
53	Contribution of oceanic and vegetation feedbacks to Holocene climate change in monsoonal Asia. <i>Climate of the Past</i> , 2010, 6, 195-218.	1.3	53
54	Coupled climateâ€‘carbon simulations indicate minor global effects of wars and epidemics on atmospheric CO ₂ between \approx 800 and 1850. <i>Holocene</i> , 2011, 21, 843-851.	0.9	48

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55	Quantifying the effect of vegetation dynamics on the climate of the Last Glacial Maximum. <i>Climate of the Past</i> , 2005, 1, 1-7.	1.3	46
56	Flux aggregation at large scales: on the limits of validity of the concept of blending height. <i>Journal of Hydrology</i> , 1995, 166, 371-382.	2.3	45
57	Analysis of rainfall records: possible relation to self-organized criticality. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1998, 254, 557-568.	1.2	44
58	Implications of climate variability for the detection of multiple equilibria and for rapid transitions in the atmosphere-vegetation system. <i>Climate Dynamics</i> , 2012, 38, 1775-1790.	1.7	43
59	The end of the African humid period as seen by a transient comprehensive Earth system model simulation of the last 8000 years. <i>Climate of the Past</i> , 2020, 16, 117-140.	1.3	41
60	On multiple solutions of the atmosphere-vegetation system in present-day climate. <i>Global Change Biology</i> , 1998, 4, 549-559.	4.2	41
61	Theory and Modeling of the African Humid Period and the Green Sahara. , 2017, , .		41
62	Spatial variability of Holocene changes in the annual precipitation pattern: a model-data synthesis for the Asian monsoon region. <i>Climate Dynamics</i> , 2013, 40, 2919-2936.	1.7	37
63	Earth system models: a test using the mid-Holocene in the Southern Hemisphere. <i>Quaternary Science Reviews</i> , 2002, 21, 819-824.	1.4	35
64	Contribution of anthropogenic land cover change emissions to pre-industrial atmospheric CO ₂ . <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2022, 62, 329.	0.8	34
65	Strength of forest-albedo feedback in mid-Holocene climate simulations. <i>Climate of the Past</i> , 2011, 7, 1027-1039.	1.3	34
66	Did Humankind Prevent a Holocene Glaciation?. <i>Climatic Change</i> , 2005, 69, 409-417.	1.7	33
67	The influence of land cover change in the Asian monsoon region on present-day and mid-Holocene climate. <i>Biogeosciences</i> , 2011, 8, 1499-1519.	1.3	33
68	On the momentum forcing of a large-scale sea-ice model. <i>Climate Dynamics</i> , 1993, 9, 71-80.	1.7	32
69	Landscape variability and surface flux parameterization in climate models. <i>Agricultural and Forest Meteorology</i> , 1995, 73, 181-188.	1.9	32
70	Sensitivity of the last glacial inception to initial and surface conditions. <i>Climate Dynamics</i> , 2006, 27, 333-344.	1.7	32
71	Local advection processes in the surface layer of the marginal ice zone. <i>Boundary-Layer Meteorology</i> , 1991, 54, 1-27.	1.2	31
72	Mechanisms and time scales of glacial inception simulated with an Earth system model of intermediate complexity. <i>Climate of the Past</i> , 2009, 5, 245-258.	1.3	29

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73	The flow in a turbulent boundary layer upstream of a change in surface roughness. <i>Boundary-Layer Meteorology</i> , 1987, 40, 31-86.	1.2	28
74	The influence of vegetation dynamics on anthropogenic climate change. <i>Earth System Dynamics</i> , 2012, 3, 233-243.	2.7	27
75	The impact of sub-grid scale sea-ice inhomogeneities on the performance of the atmospheric general circulation model ECHAM3. <i>Climate Dynamics</i> , 1996, 12, 477-496.	1.7	26
76	Impact of CO ₂ and climate on Last Glacial maximum vegetation – a factor separation. <i>Biogeosciences</i> , 2013, 10, 3593-3604.	1.3	26
77	The evolution of sub-monsoon systems in the Afro-Asian monsoon region during the Holocene – comparison of different transient climate model simulations. <i>Climate of the Past</i> , 2015, 11, 305-326.	1.3	25
78	The link between marine sediment records and changes in Holocene Saharan landscape: simulating the dust cycle. <i>Climate of the Past</i> , 2016, 12, 1009-1027.	1.3	24
79	What was the source of the atmospheric CO ₂ increase during the Holocene?. <i>Biogeosciences</i> , 2019, 16, 2543-2555.	1.3	24
80	Simulated climate variability in the region of Rapa Nui during the last millennium. <i>Climate of the Past</i> , 2011, 7, 579-586.	1.3	23
81	Environmental change during MIS4 and MIS 3 opened corridors in the Horn of Africa for Homo sapiens expansion. <i>Quaternary Science Reviews</i> , 2018, 202, 139-153.	1.4	23
82	Harmonising plant functional type distributions for evaluating Earth system models. <i>Climate of the Past</i> , 2019, 15, 335-366.	1.3	23
83	Holocene vegetation transitions and their climatic drivers in MPI-ESM1.2. <i>Climate of the Past</i> , 2021, 17, 2481-2513.	1.3	23
84	A model of turbulence spectra in the atmospheric surface layer. <i>Boundary-Layer Meteorology</i> , 1985, 33, 151-172.	1.2	21
85	CO ₂ -Induced Sahel Greening in Three CMIP5 Earth System Models. <i>Journal of Climate</i> , 2014, 27, 7163-7184.	1.2	21
86	Rapid increase in simulated North Atlantic dust deposition due to fast change of northwest African landscape during the Holocene. <i>Climate of the Past</i> , 2018, 14, 1051-1066.	1.3	21
87	The climate of a retrograde rotating Earth. <i>Earth System Dynamics</i> , 2018, 9, 1191-1215.	2.7	21
88	Estimation of regional heat and moisture fluxes in homogeneous terrain with bluff roughness elements. <i>Journal of Hydrology</i> , 1995, 166, 353-369.	2.3	19
89	Biome changes in Asia since the mid-Holocene – an analysis of different transient Earth system model simulations. <i>Climate of the Past</i> , 2017, 13, 107-134.	1.3	19
90	Variability of global biome patterns as a function of initial and boundary conditions in a climate model. <i>Climate Dynamics</i> , 1996, 12, 371-379.	1.7	18

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91	Biomes computed from simulated climatologies. <i>Climate Dynamics</i> , 1994, 9, 235-243.	1.7	16
92	The ICON Earth System Model Version 1.0. <i>Journal of Advances in Modeling Earth Systems</i> , 2022, 14, .	1.3	16
93	Detecting hotspots of atmosphereâ€“vegetation interaction via slowing down â€“ Part 1: A stochastic approach. <i>Earth System Dynamics</i> , 2013, 4, 63-78.	2.7	15
94	Models of eddy viscosity for numerical simulation of horizontally inhomogeneous, neutral surface-layer flow. <i>Boundary-Layer Meteorology</i> , 1988, 42, 337-369.	1.2	13
95	Climate variabilityâ€“induced uncertainty in midâ€“Holocene atmosphereâ€“oceanâ€“vegetation feedbacks. <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	12
96	Holocene vegetation and biomass changes on the Tibetan Plateau â€“ a model-pollen data comparison. <i>Climate of the Past</i> , 2011, 7, 881-901.	1.3	12
97	Title is missing!. <i>Environmental Modeling and Assessment</i> , 1999, 4, 209-216.	1.2	11
98	Earth system model simulations show different feedback strengths of the terrestrial carbon cycle under glacial and interglacial conditions. <i>Earth System Dynamics</i> , 2018, 9, 413-425.	2.7	11
99	Plant functional diversity affects climateâ€“vegetation interaction. <i>Biogeosciences</i> , 2018, 15, 1947-1968.	1.3	10
100	On the inner-layer scale height of boundary-layer flow over low hills. <i>Boundary-Layer Meteorology</i> , 1988, 44, 411-413.	1.2	9
101	Could gradual changes in Holocene Saharan landscape have caused the observed abrupt shift in North Atlantic dust deposition?. <i>Earth and Planetary Science Letters</i> , 2017, 473, 104-112.	1.8	9
102	Background albedo dynamics improve simulated precipitation variability in the Sahel region. <i>Earth System Dynamics</i> , 2014, 5, 89-101.	2.7	8
103	The Nexus of Climate Change, Land Use, and Conflict: Complex Humanâ€“Environment Interactions in Northern Africa. <i>Bulletin of the American Meteorological Society</i> , 2015, 96, 1561-1564.	1.7	8
104	Sahel Rainfallâ€“Tropical Easterly Jet Relationship on Synoptic to Intraseasonal Time Scales. <i>Monthly Weather Review</i> , 2019, 147, 1733-1752.	0.5	7
105	Modification of blending procedure in a proposed new PBL Resistance Law. <i>Boundary-Layer Meteorology</i> , 1994, 68, 201-205.	1.2	5
106	Impact of surface parameter uncertainties on the development of a trough in the Fram Strait region. <i>Tellus, Series A: Dynamic Meteorology and Oceanography</i> , 2010, 62, 377-392.	0.8	5
107	Detecting hotspots of atmosphereâ€“vegetation interaction via slowing down â€“ Part 2: Application to a global climate model. <i>Earth System Dynamics</i> , 2013, 4, 79-93.	2.7	5
108	Palaeo plant diversity in subtropical Africa â€“ ecological assessment of a conceptual model of climateâ€“vegetation interaction. <i>Climate of the Past</i> , 2015, 11, 1361-1374.	1.3	5

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109	Transitivity of the climate-vegetation system in a warm climate. <i>Climate of the Past</i> , 2015, 11, 1563-1574.	1.3	5
110	Surface-layer similarity in turbulent circular Couette flow. <i>Journal of Fluid Mechanics</i> , 1984, 144, 123-131.	1.4	4
111	Estimation of the Monin-Obukhov similarity functions from a spectral model. <i>Boundary-Layer Meteorology</i> , 1985, 33, 233-243.	1.2	4
112	KlimaÄnderungen: MÖgliche Ursachen in Vergangenheit und Zukunft. <i>Environmental Sciences Europe</i> , 2003, 15, 21-30.	0.1	4
113	39. Modelling the end of an interglacial (MIS 1, 5, 7, 9, 11). <i>Developments in Quaternary Sciences</i> , 2007, 7, 583-593.	0.1	4
114	Radiative forcing and feedback by forests in warm climates - a sensitivity study. <i>Earth System Dynamics</i> , 2016, 7, 535-547.	2.7	4
115	Simulated range of mid-Holocene precipitation changes from extended lakes and wetlands over North Africa. <i>Climate of the Past</i> , 2022, 18, 1035-1046.	1.3	4
116	On extension of Malkus' theory of turbulence to stably stratified shear flow. <i>Boundary-Layer Meteorology</i> , 1983, 27, 209-215.	1.2	3
117	Neutral surface-layer flow over isolated roughness strips. <i>Boundary-Layer Meteorology</i> , 1989, 48, 431-442.	1.2	3
118	1. Introduction to climate forcing and climate feedbacks. <i>Developments in Quaternary Sciences</i> , 2007, 7, 3-11.	0.1	3
119	Two drastically different climate states on an Earth-like terra-planet. <i>Earth System Dynamics</i> , 2018, 9, 739-756.	2.7	3
120	Influence of the representation of convection on the mid-Holocene West African Monsoon. <i>Climate of the Past</i> , 2021, 17, 1665-1684.	1.3	3
121	40. Chronology and climate forcing of the last four interglacials. <i>Developments in Quaternary Sciences</i> , 2007, 7, 597-614.	0.1	2
122	Preface "Climate change: from the geological past to the uncertain future" a symposium honouring Andr� Berger. <i>Climate of the Past</i> , 2009, 5, 707-711.	1.3	2
123	Hans Ertel and potential vorticity a century of geophysical fluid dynamics. <i>Meteorologische Zeitschrift</i> , 2004, 13, 451-451.	0.5	1
124	Hidden glacial carbon. <i>Nature Geoscience</i> , 2012, 5, 6-7.	5.4	1
125	Implications of land use change in tropical northern Africa under global warming. <i>Earth System Dynamics</i> , 2015, 6, 769-780.	2.7	1
126	Simple tipping or complex transition? Lessons from a green Sahara. <i>Past Global Change Magazine</i> , 2016, 24, 20-21.	0.4	1

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127	Corrigendum to Preface "Climate change: from the geological past to the uncertain future" a symposium honouring André Berger" published in Clim. Past, 5, 707-711, 2009. Climate of the Past, 2009, 5, 723-723.	1.3	0
128	Effect of nitrogen limitation and soil biophysics on Holocene greening of the Sahara. Climate of the Past, 2022, 18, 313-326.	1.3	0