Stefan Rahmstorf

List of Publications by Year
in descending order

132 papers	26,533 citations	17776 65 h-index	14386 132 g-index
149 all docs	149 docs citations	149 times ranked	25238 citing authors

#	Article	IF	Citations
1	Reply to: Atlantic circulation change still uncertain. Nature Geoscience, 2022, 15, 168-170.	5.4	7
2	Current Atlantic Meridional Overturning Circulation weakest in last millennium. Nature Geoscience, 2021, 14, 118-120.	5.4	200
3	Reply to Comment on â€˜On the relationship between Atlantic meridional overturning circulation slowdown and global surface warmingâ€™. Environmental Research Letters, 2021, 16, 038002.	2.2	2
4	Changes in North Atlantic Atmospheric Circulation in a Warmer Climate Favor Winter Flooding and Summer Drought over Europe. Journal of Climate, 2021, 34, 2277-2295.	1.2	19
5	Ten new insights in climate science 2021: a horizon scan. Global Sustainability, 2021, 4, .	1.6	26
6	Increasing heat and rainfall extremes now far outside the historical climate. Npj Climate and Atmospheric Science, 2021, 4, .	2.6	41
7	Estimating global mean sea-level rise and its uncertainties by 2100 and 2300 from an expert survey. Npj Climate and Atmospheric Science, 2020, 3, .	2.6	49
8	On the relationship between Atlantic meridional overturning circulation slowdown and global surface warming. Environmental Research Letters, 2020, 15, 024003.	2.2	22
9	Early Last Interglacial ocean warming drove substantial ice mass loss from Antarctica. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 3996-4006.	3.3	50
10	The concerns of the young protesters are justified: A statement by<i>Scientists for Future</i>concerning the protests for more climate protection. Gaia, 2019, 28, 79-87.	0.3	56
11	Extreme weather events in early summer 2018 connected by a recurrent hemispheric wave-7 pattern. Environmental Research Letters, 2019, 14, 054002.	2.2	209
12	Concerns of young protesters are justified. Science, 2019, 364, 139-140.	6.0	96
13	Climate tipping points â€" too risky to bet against. Nature, 2019, 575, 592-595.	13.7	1,162
14	Abrupt Climate Change. , 2019, , 405-411.		1
15	Observed fingerprint of a weakening Atlantic Ocean overturning circulation. Nature, 2018, 556, 191-196.	13.7	612
16	A fluctuation in surface temperature in historical context: reassessment and retrospective on the evidence. Environmental Research Letters, 2018, 13, 123008.	2.2	23
17	The â€˜pauseâ€™ in global warming in historical context: (II). Comparing models to observations. Environmental Research Letters, 2018, 13, 123007.	2.2	17
18	Projected changes in persistent extreme summer weather events: The role of quasi-resonant amplification. Science Advances, 2018, 4, eaat3272.	4.7	104

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19	Summertime Planetary Wave Resonance in the Northern and Southern Hemispheres. Journal of Climate, 2017, 30, 6133-6150.	1.2	46
20	Global temperature evolution: recent trends and some pitfalls. Environmental Research Letters, 2017, 12, 054001.	2.2	143
21	Influence of Anthropogenic Climate Change on Planetary Wave Resonance and Extreme Weather Events. Scientific Reports, 2017, 7, 45242.	1.6	215
22	Rising hazard of storm-surge flooding. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 11806-11808.	3.3	85
23	Three years to safeguard our climate. Nature, 2017, 546, 593-595.	13.7	305
24	Record temperature streak bears anthropogenic fingerprint. Geophysical Research Letters, 2017, 44, 7936-7944.	1.5	31
25	Evidence for wave resonance as a key mechanism for generating high-amplitude quasi-stationary waves in boreal summer. Climate Dynamics, 2017, 49, 1961-1979.	1.7	70
26	Global mean sea-level rise in a world agreed upon in Paris. Environmental Research Letters, 2017, 12, 124010.	2.2	27
27	Record Balkan floods of 2014 linked to planetary wave resonance. Science Advances, 2016, 2, e1501428.	4.7	62
28	The Likelihood of Recent Record Warmth. Scientific Reports, 2016, 6, 19831.	1.6	41
29	Role of quasiresonant planetary wave dynamics in recent boreal spring-to-autumn extreme events. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 6862-6867.	3.3	73
30	Why the right climate target was agreed in Paris. Nature Climate Change, 2016, 6, 649-653.	8.1	309
31	Temperature-driven global sea-level variability in the Common Era. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E1434-41.	3.3	334
32	Change points of global temperature. Environmental Research Letters, 2015, 10, 084002.	2.2	80
33	Thermohaline Circulationâ˜†. , 2015, , .		2
34	Sea-level rise due to polar ice-sheet mass loss during past warm periods. Science, 2015, 349, aaa4019.	6.0	501
35	Exceptional twentieth-century slowdown in Atlantic Ocean overturning circulation. Nature Climate Change, 2015, 5, 475-480.	8.1	686
36	Reply to comment received from J.M. Gregory etÂ al. regarding â€œExpert assessment of future sea-level rise by 2100 and 2300 ADâ€•by Benjamin P. Horton, Stefan Rahmstorf, Simon E. Engelhart and Andrew C. Kemp (2014), Quaternary Science Reviews 84, 1â€"6. Quaternary Science Reviews, 2014, 97, 195-196.	1.4	0

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37	Quasi-resonant circulation regimes and hemispheric synchronization of extreme weather in boreal summer. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 12331-12336.	3.3	218
38	Expert assessment of sea-level rise by AD 2100 and AD 2300. Quaternary Science Reviews, 2014, 84, 1-6.	1.4	224
39	A note on climate change adaptation for seaports: a challenge for global ports, a challenge for global society. Climatic Change, 2013, 120, 683-695.	1.7	111
40	Global increase in record-breaking monthly-mean temperatures. Climatic Change, 2013, 118, 771-782.	1.7	231
41	Reply to Screen and Simmonds: From means to mechanisms. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E2328.	3.3	10
42	On the Origin of the Surface Air Temperature Difference between the Hemispheres in Earth's Present-Day Climate. Journal of Climate, 2013, 26, 7136-7150.	1.2	101
43	Quasiresonant amplification of planetary waves and recent Northern Hemisphere weather extremes. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 5336-5341.	3.3	305
44	Predictability of twentieth century sea-level rise from past data. Environmental Research Letters, 2013, 8, 014013.	2.2	31
45	Ursachen und Folgen des Klimawandels - ein kurzer Ãœberblick Ã¼ber den Wissensstand mit historischem Kontext. Mauerwerk, 2013, 17, 260-264.	0.2	2
46	GLACIAL CLIMATES | Thermohaline Circulation. , 2013, , 737-747.		2
47	Paleoclimatic Ocean Circulation and Sea-Level Changes. International Geophysics, 2013, , 31-56.	0.6	0
48	Sea-level rise: towards understanding local vulnerability. Environmental Research Letters, 2012, 7, 021001.	2.2	18
49	Is journalism failing on climate?. Environmental Research Letters, 2012, 7, 041003.	2.2	10
50	On the relation between Meridional Overturning Circulation and sea-level gradients in the Atlantic. Earth System Dynamics, 2012, 3, 109-120.	2.7	11
51	Comparing climate projections to observations up to 2011. Environmental Research Letters, 2012, 7, 044035.	2.2	123
52	Testing the robustness of semi-empirical sea level projections. Climate Dynamics, 2012, 39, 861-875.	1.7	104
53	Hot enough for you?. New Scientist, 2012, 215, 24-25.	0.0	0
54	Long-term sea-level rise implied by 1.5â€‰Â°C and 2â€‰Â°C warming levels. Nature Climate Change, 2012, 2, 867-870.	8.1	178

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55	A decade of weather extremes. Nature Climate Change, 2012, 2, 491-496.	8.1	1,660
56	Discussion of: Houston, J.R. and Dean, R.G., 2011. Sea-Level Acceleration Based on U.S. Tide Gauges and Extensions of Previous Global-Gauge Analyses. Journal of Coastal Research, 27(3), 409â€“417. Journal of Coastal Research, 2011, 27, 784.	0.1	30
57	Increase of extreme events in a warming world. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 17905-17909.	3.3	920
58	Declining ocean chlorophyll under unabated anthropogenic CO ₂ emissions. Environmental Research Letters, 2011, 6, 034035.	2.2	41
59	Climate related sea-level variations over the past two millennia. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 11017-11022.	3.3	376
60	Global temperature evolution 1979â€“2010. Environmental Research Letters, 2011, 6, 044022.	2.2	309
61	Reply to Grinsted et al.: Estimating land subsidence in North Carolina. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, .	3.3	1
62	Setting the record straight (again). Nature, 2010, 467, 920-920.	13.7	1
63	Reply to Taboada and AnadÃ³n: Critique of sea-level rise study invalid. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, .	3.3	5
64	The budget approach: A framework for a global transformation toward a low-carbon economy. Journal of Renewable and Sustainable Energy, 2010, 2, .	0.8	37
65	On the effect of a new grand minimum of solar activity on the future climate on Earth. Geophysical Research Letters, 2010, 37, .	1.5	71
66	A new view on sea level rise. Nature Climate Change, 2010, 1, 44-45.	8.1	208
67	Global sea level linked to global temperature. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 21527-21532.	3.3	973
68	On the stability of the Atlantic meridional overturning circulation. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 20584-20589.	3.3	99
69	An Integrated Assessment of changes in the thermohaline circulation. Climatic Change, 2009, 96, 489-537.	1.7	66
70	Two-way coupling of an ENSO model to the global climate model CLIMBER-3. Ocean Modelling, 2009, 29, 94-101.	1.0	1
71	Ocean circulation. Geophysical Monograph Series, 2009, , 99-118.	0.1	4
72	Tipping elements in the Earth's climate system. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 1786-1793.	3.3	2,599

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73	The Role of Northern Sea Ice Cover for the Weakening of the Thermohaline Circulation under Global Warming. Journal of Climate, 2007, 20, 4160-4171.	1.2	42
74	Recent Climate Observations Compared to Projections. Science, 2007, 316, 709-709.	6.0	519
75	A Semi-Empirical Approach to Projecting Future Sea-Level Rise. Science, 2007, 315, 368-370.	6.0	1,306
76	On the driving processes of the Atlantic meridional overturning circulation. Reviews of Geophysics, 2007, 45, .	9.0	491
77	Lowering of glacial atmospheric CO₂ in response to changes in oceanic circulation and marine biogeochemistry. Paleoceanography, 2007, 22, .	3.0	180
78	GLACIAL CLIMATES | Thermohaline Circulation. , 2007, , 739-750.		10
79	Expert judgements on the response of the Atlantic meridional overturning circulation to climate change. Climatic Change, 2007, 82, 235-265.	1.7	101
80	How cold was the Last Glacial Maximum?. Geophysical Research Letters, 2006, 33, .	1.5	102
81	Climate sensitivity estimated from ensemble simulations of glacial climate. Climate Dynamics, 2006, 27, 149-163.	1.7	154
82	Tropical versus high latitude freshwater influence on the Atlantic circulation. Climate Dynamics, 2006, 27, 715-725.	1.7	12
83	Testing Climate Reconstructions. Science, 2006, 312, 1872b-1873b.	6.0	7
84	Possible solar origin of the 1,470-year glacial climate cycle demonstrated in a coupled model. Nature, 2005, 438, 208-211.	13.7	231
85	Dynamic sea level changes following changes in the thermohaline circulation. Climate Dynamics, 2005, 24, 347-354.	1.7	195
86	The earth system model of intermediate complexity CLIMBER-3Î±. Part I: description and performance for present-day conditions. Climate Dynamics, 2005, 25, 237-263.	1.7	93
87	Thermohaline Circulation Changes: A Question of Risk Assessment. Climatic Change, 2005, 68, 241-247.	1.7	13
88	Thermohaline circulation hysteresis: A model intercomparison. Geophysical Research Letters, 2005, 32, .	1.5	344
89	A low-order model for the response of the Atlantic thermohaline circulation to climate change. Ocean Dynamics, 2004, 54, 8-26.	0.9	30
90	The importance of ocean temperature to global biogeochemistry. Earth and Planetary Science Letters, 2004, 222, 333-348.	1.8	74

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91	Thermohaline circulation: The current climate. Nature, 2003, 421, 699-699.	13.7	122
92	Timing of abrupt climate change: A precise clock. Geophysical Research Letters, 2003, 30, n/a-n/a.	1.5	273
93	Abrupt Glacial Climate Changes due to Stochastic Resonance. Physical Review Letters, 2002, 88, 038501.	2.9	257
94	On freshwater-dependent bifurcations in box models of the interhemispheric thermohaline circulation. Tellus, Series A: Dynamic Meteorology and Oceanography, 2002, 54, 89-98.	0.8	12
95	An investigation of rapid warm transitions during MIS2 and MIS3 using Greenland ice-core data and the CLIMBER-2 model. Annals of Glaciology, 2002, 35, 398-402.	2.8	6
96	Increasing River Discharge to the Arctic Ocean. Science, 2002, 298, 2171-2173.	6.0	1,304
97	Stochastic resonance in glacial climate. Eos, 2002, 83, 129.	0.1	91
98	Did Antarctic sea-ice expansion cause glacial CO2decline?. Geophysical Research Letters, 2002, 29, 11-1.	1.5	29
99	Ocean circulation and climate during the past 120,000 years. Nature, 2002, 419, 207-214.	13.7	984
100	On freshwater-dependent bifurcations in box models of the interhemispheric thermohaline circulation. Tellus, Series A: Dynamic Meteorology and Oceanography, 2002, 54, 89-98.	0.8	14
101	A simple model of seasonal open ocean convection Part II: Labrador Sea stability and stochastic forcing. Ocean Dynamics, 2001, 52, 0036-0049.	0.9	30
102	A simple model of seasonal open ocean convection Part I: Theory. Ocean Dynamics, 2001, 52, 0026-0035.	0.9	11
103	CLIMBER-2: a climate system model of intermediate complexity. Part II: model sensitivity. Climate Dynamics, 2001, 17, 735-751.	1.7	196
104	Rapid changes of glacial climate simulated in a coupled climate model. Nature, 2001, 409, 153-158.	13.7	905
105	The Thermohaline Ocean Circulation: A System with Dangerous Thresholds?. Climatic Change, 2000, 46, 247-256.	1.7	191
106	CLIMBER-2: a climate system model of intermediate complexity. Part I: model description and performance for present climate. Climate Dynamics, 2000, 16, 1-17.	1.7	367
107	Comparison of the last interglacial climate simulated by a coupled global model of intermediate complexity and an AOGCM. Climate Dynamics, 2000, 16, 799-814.	1.7	62
108	Anthropogenic Climate Change: The Risk of Unpleasant Surprises. ZEW Economic Studies, 2000, , 7-11.	0.1	3

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109	Shifting seas in the greenhouse?. Nature, 1999, 399, 523-524.	13.7	90
110	Title is missing!. Environmental Modeling and Assessment, 1999, 4, 209-216.	1.2	11
111	Long-Term Global Warming Scenarios Computed with an Efficient Coupled Climate Model. Climatic Change, 1999, 43, 353-367.	1.7	267
112	Simple Theoretical Model May Explain Apparent Climate Instability. Journal of Climate, 1999, 12, 1349-1352.	1.2	38
113	Sensitivity of Ventilation Rates and Radiocarbon Uptake to Subgrid-Scale Mixing in Ocean Models. Journal of Physical Oceanography, 1999, 29, 2802-2828.	0.7	53
114	Rapid Transitions of the Thermohaline Ocean Circulation. , 1999, , 139-149.		6
115	Decadal Variability of the Thermohaline Ocean Circulation. , 1999, , 309-331.		13
116	Simulation of modern and glacial climates with a coupled global model of intermediate complexity. Nature, 1998, 391, 351-356.	13.7	403
117	Influence of mediterranean outflow on climate. Eos, 1998, 79, 281-281.	0.1	81
118	Influence of Southern Hemisphere Winds on North Atlantic Deep Water Flow. Journal of Physical Oceanography, 1997, 27, 2040-2054.	0.7	97
119	Risk of sea-change in the Atlantic. Nature, 1997, 388, 825-826.	13.7	87
120	On the freshwater forcing and transport of the Atlantic thermohaline circulation. Climate Dynamics, 1996, 12, 799-811.	1.7	467
121	Comments on â€œInstability of the Thermohaline Circulation with Respect to Mixed Boundary Conditions: Is It Really a Problem for Realistic Models?â€• Journal of Physical Oceanography, 1996, 26, 1099-1105.	0.7	2
122	Multiple Convection Patterns and Thermohaline Flow in an Idealized OGCM. Journal of Climate, 1995, 8, 3028-3039.	1.2	72
123	Bifurcations of the Atlantic thermohaline circulation in response to changes in the hydrological cycle. Nature, 1995, 378, 145-149.	13.7	674
124	The Role of Temperature Feedback in Stabilizing the Thermohaline Circulation. Journal of Physical Oceanography, 1995, 25, 787-805.	0.7	192
125	Climate drift in an ocean model coupled to a simple, perfectly matched atmosphere. Climate Dynamics, 1995, 11, 447-458.	1.7	39
126	Climate drift in an ocean model coupled to a simple, perfectly matched atmosphere. Climate Dynamics, 1995, 11, 447-458.	1.7	3

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127	Rapid climate transitions in a coupled oceanâ€"atmosphere model. Nature, 1994, 372, 82-85.	13.7	233
128	Modelling ocean temperatures and mixedâ€layer depths in the Tasman sea off the South Island, New Zealand. New Zealand Journal of Marine and Freshwater Research, 1992, 26, 37-51.	0.8	19
129	A zonalâ€averaged model of the ocean's response to climatic change. Journal of Geophysical Research, 1991, 96, 6951-6963.	3.3	8
130	Improving the accuracy of wind speed observations from ships. Deep-sea Research Part A, Oceanographic Research Papers, 1989, 36, 1267-1276.	1.6	8
131	Propagation of self-gravitating density waves in the deDonder gauge on a gravitational background field. General Relativity and Gravitation, 1988, 20, 1193-1201.	0.7	10
132	Stability and Variability of the Thermohaline Circulation in the Past and Future: a Study with a Coupled Model of Intermediate Complexity. Geophysical Monograph Series, 0, , 261-275.	0.1	7