Roland SÃ©fÃ©rian

List of Publications by Year
in descending order

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77	14,244	66343	66911
papers	citations	42 h-index	78 g-index

133	133	133	17842
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Tripling of western US particulate pollution from wildfires in a warming climate. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2111372119.	7.1	29
2	The impact of stratospheric aerosol intervention on the North Atlantic and Quasi-Biennial Oscillations in the Geoengineering Model Intercomparison Project (GeoMIP) G6sulfur experiment. Atmospheric Chemistry and Physics, 2022, 22, 2999-3016.	4.9	15
3	Stratospheric ozone response to sulfate aerosol and solar dimming climate interventions based on the G6 Geoengineering Model Intercomparison Project (GeoMIP) simulations. Atmospheric Chemistry and Physics, 2022, 22, 4557-4579.	4.9	19
4	Impact of bioenergy crop expansion on climateâ€“carbon cycle feedbacks in overshoot scenarios. Earth System Dynamics, 2022, 13, 779-794.	7.1	8
5	Assessing Model Predictions of Carbon Dynamics in Global Drylands. Frontiers in Environmental Science, 2022, 10, .	3.3	5
6	Global Carbon Budget 2021. Earth System Science Data, 2022, 14, 1917-2005.	9.9	663
7	Multi-century dynamics of the climate and carbon cycle under both high and net negative emissions scenarios. Earth System Dynamics, 2022, 13, 885-909.	7.1	17
8	Comparing different generations of idealized solar geoengineering simulations in the Geoengineering Model Intercomparison Project (GeoMIP). Atmospheric Chemistry and Physics, 2021, 21, 4231-4247.	4.9	22
9	Predictable Variations of the Carbon Sinks and Atmospheric CO₂Growth in a Multiâ€Model Framework. Geophysical Research Letters, 2021, 48, e2020GL090695.	4.0	17
10	Climate model projections from the Scenario Model Intercomparison ProjectÂ(ScenarioMIP) of CMIP6. Earth System Dynamics, 2021, 12, 253-293.	7.1	236
11	The Climate Response to Emissions Reductions Due to COVIDâ€19: Initial Results From CovidMIP. Geophysical Research Letters, 2021, 48, e2020GL091883.	4.0	43
12	Compatible Fossil Fuel CO2 Emissions in the CMIP6 Earth System Modelsâ€™ Historical and Shared Socioeconomic Pathway Experiments of the Twenty-First Century. Journal of Climate, 2021, 34, 2853-2875.	3.2	23
13	Evaluation of ocean dimethylsulfide concentration and emission in CMIP6 models. Biogeosciences, 2021, 18, 3823-3860.	3.3	24
14	Brief communication: Reduction in the future Greenland ice sheet surface melt with the help of solar geoengineering. Cryosphere, 2021, 15, 3013-3019.	3.9	17
15	Identifying the sources of uncertainty in climate model simulations of solar radiation modification with the G6sulfur and G6solar Geoengineering Model Intercomparison Project (GeoMIP) simulations. Atmospheric Chemistry and Physics, 2021, 21, 10039-10063.	4.9	45
16	Climate-driven chemistry and aerosol feedbacks in CMIP6 Earth system models. Atmospheric Chemistry and Physics, 2021, 21, 1105-1126.	4.9	39
17	Opportunities and challenges in using remaining carbon budgets to guide climate policy. Nature Geoscience, 2020, 13, 769-779.	12.9	68
18	Tracking Improvement in Simulated Marine Biogeochemistry Between CMIP5 and CMIP6. Current Climate Change Reports, 2020, 6, 95-119.	8.6	155

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19	Quantification of Chaotic Intrinsic Variability of Seaâ€Air CO₂ Fluxes at Interannual Timescales. Geophysical Research Letters, 2020, 47, e2020GL088304.	4.0	4
20	The CNRM Global Atmosphere Model ARPEGEâ€Climat 6.3: Description and Evaluation. Journal of Advances in Modeling Earth Systems, 2020, 12, e2020MS002075.	3.8	46
21	Consistency and Challenges in the Ocean Carbon Sink Estimate for the Global Carbon Budget. Frontiers in Marine Science, 2020, 7, .	2.5	114
22	The Global Land Carbon Cycle Simulated With ISBAâ€CTRIP: Improvements Over the Last Decade. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001886.	3.8	42
23	Is there warming in the pipeline? A multi-model analysis of the Zero Emissions Commitment from CO₂. Biogeosciences, 2020, 17, 2987-3016.	3.3	87
24	Twenty-first century ocean warming, acidification, deoxygenation, and upper-ocean nutrient and primary production decline from CMIP6 model projections. Biogeosciences, 2020, 17, 3439-3470.	3.3	348
25	Presentâ€Day and Historical Aerosol and Ozone Characteristics in CNRM CMIP6 Simulations. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001816.	3.8	36
26	Uncertainty in carbon budget estimates due to internal climate variability. Environmental Research Letters, 2020, 15, 104064.	5.2	7
27	Carbonâ€“concentration and carbonâ€“climate feedbacks in CMIP6 models and their comparison to CMIP5 models. Biogeosciences, 2020, 17, 4173-4222.	3.3	255
28	Global climate response to idealized deforestation in CMIP6 models. Biogeosciences, 2020, 17, 5615-5638.	3.3	55
29	Global Carbon Budget 2020. Earth System Science Data, 2020, 12, 3269-3340.	9.9	1,477
30	Impact of Solar Radiation Modification on Allowable CO₂ Emissions: What Can We Learn From Multimodel Simulations?. Earth's Future, 2019, 7, 664-676.	6.3	9
31	Evaluation of an Online Gridâ€Coarsening Algorithm in a Global Eddyâ€Admitting Ocean Biogeochemical Model. Journal of Advances in Modeling Earth Systems, 2019, 11, 1759-1783.	3.8	32
32	Estimating and tracking the remaining carbon budget for stringent climate targets. Nature, 2019, 571, 335-342.	27.8	229
33	Recent Changes in the ISBAâ€CTRIP Land Surface System for Use in the CNRMâ€CM6 Climate Model and in Global Offâ€Line Hydrological Applications. Journal of Advances in Modeling Earth Systems, 2019, 11, 1207-1252.	3.8	120
34	Evaluation of CNRM Earth System Model, CNRMâ€ESM2â€1: Role of Earth System Processes in Presentâ€Day and Future Climate. Journal of Advances in Modeling Earth Systems, 2019, 11, 4182-4227.	3.8	309
35	Decadal trends in the ocean carbon sink. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 11646-11651.	7.1	94
36	Evaluation of CMIP6 DECK Experiments With CNRMâ€CM6â€1. Journal of Advances in Modeling Earth Systems, 2019, 11, 2177-2213.	3.8	494

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37	The oceanic cycle of carbon monoxide and its emissions to the atmosphere. Biogeosciences, 2019, 16, 881-902.	3.3	42
38	The Zero Emissions Commitment Model Intercomparison Project (ZECMIP) contribution to C4MIP: quantifying committed climate changes following zero carbon emissions. Geoscientific Model Development, 2019, 12, 4375-4385.	3.6	56
39	Global Carbon Budget 2019. Earth System Science Data, 2019, 11, 1783-1838.	9.9	1,159
40	Land Surface Cooling Induced by Sulfate Geoengineering Constrained by Major Volcanic Eruptions. Geophysical Research Letters, 2018, 45, 5663-5671.	4.0	16
41	Constraints on biomass energy deployment in mitigation pathways: the case of water scarcity. Environmental Research Letters, 2018, 13, 054011.	5.2	19
42	Impact of the 2015/2016 El NiÃ±o on the terrestrial carbon cycle constrained by bottom-up and top-down approaches. Philosophical Transactions of the Royal Society B: Biological Sciences, 2018, 373, 20170304.	4.0	63
43	An interactive ocean surface albedo scheme (OSAv1.0): formulation and evaluation in ARPEGE-Climat (V6.1) and LMDZ (V5A). Geoscientific Model Development, 2018, 11, 321-338.	3.6	24
44	Assessing the Decadal Predictability of Land and Ocean Carbon Uptake. Geophysical Research Letters, 2018, 45, 2455-2466.	4.0	28
45	The many possible climates from the Paris Agreementâ€™s aim of 1.5 Â°C warming. Nature, 2018, 558, 41-49.	27.8	116
46	Global Carbon Budget 2018. Earth System Science Data, 2018, 10, 2141-2194.	9.9	1,167
47	Global Carbon Budget 2017. Earth System Science Data, 2018, 10, 405-448.	9.9	801
48	Rapid emergence of climate change in environmental drivers of marine ecosystems. Nature Communications, 2017, 8, 14682.	12.8	216
49	Managing living marine resources in a dynamic environment: The role of seasonal to decadal climate forecasts. Progress in Oceanography, 2017, 152, 15-49.	3.2	165
50	Emergent constraints on projections of declining primary production in the tropical oceans. Nature Climate Change, 2017, 7, 355-358.	18.8	108
51	The interactions between soilâ€“biosphereâ€“atmosphere (ISBA) land surface model multi-energy balance (MEB) option in SURFEXv8 â€“ Part 2: Introduction of a litter formulation and model evaluation for local-scale forest sites. Geoscientific Model Development, 2017, 10, 1621-1644.	3.6	19
52	Inconsistent strategies to spin up models in CMIP5: implications for ocean biogeochemical model performance assessment. Geoscientific Model Development, 2016, 9, 1827-1851.	3.6	68
53	Projected decreases in future marine export production: the role of the carbon flux through the upper ocean ecosystem. Biogeosciences, 2016, 13, 4023-4047.	3.3	106
54	Development and evaluation of CNRM Earth system model â€“ CNRM-ESM1. Geoscientific Model Development, 2016, 9, 1423-1453.	3.6	65

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55	In the wake of Paris Agreement, scientists must embrace new directions for climate change research. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 7287-7290.	7.1	79
56	Net primary productivity estimates and environmental variables in the Arctic Ocean: An assessment of coupled physical-biogeochemical models. Journal of Geophysical Research: Oceans, 2016, 121, 8635-8669.	2.6	34
57	Natural variability of marine ecosystems inferred from a coupled climate to ecosystem simulation. Journal of Marine Systems, 2016, 153, 55-66.	2.1	14
58	Human-induced greening of the northern extratropical land surface. Nature Climate Change, 2016, 6, 959-963.	18.8	145
59	Global Carbon Budget 2016. Earth System Science Data, 2016, 8, 605-649.	9.9	905
60	On the Southern Ocean CO₂ uptake and the role of the biological carbon pump in the 21st century. Global Biogeochemical Cycles, 2015, 29, 1451-1470.	4.9	85
61	Natural variability of CO₂ and O₂ fluxes: What can we learn from centuriesâ€long climate models simulations?. Journal of Geophysical Research: Oceans, 2015, 120, 384-404.	2.6	63
62	Drivers and uncertainties of future global marine primary production in marine ecosystem models. Biogeosciences, 2015, 12, 6955-6984.	3.3	252
63	Intercomparison of dissolved trace elements at the Bermuda Atlantic Time Series station. Marine Chemistry, 2015, 177, 476-489.	2.3	58
64	Bidecadal North Atlantic ocean circulation variability controlled by timing of volcanic eruptions. Nature Communications, 2015, 6, 6545.	12.8	101
65	Reconstructing the subsurface ocean decadal variability using surface nudging in a perfect model framework. Climate Dynamics, 2015, 44, 315-338.	3.8	30
66	Global Carbon Budget 2015. Earth System Science Data, 2015, 7, 349-396.	9.9	616
67	Global carbon budget 2014. Earth System Science Data, 2015, 7, 47-85.	9.9	463
68	Projected pH reductions by 2100 might put deep North Atlantic biodiversity at risk. Biogeosciences, 2014, 11, 6955-6967.	3.3	49
69	Nonlinearity of Ocean Carbon Cycle Feedbacks in CMIP5 Earth System Models. Journal of Climate, 2014, 27, 3869-3888.	3.2	62
70	Multiyear predictability of tropical marine productivity. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 11646-11651.	7.1	61
71	Detecting the anthropogenic influences on recent changes in ocean carbon uptake. Geophysical Research Letters, 2014, 41, 5968-5977.	4.0	20
72	Perspectives and Integration in SOLAS Science. Springer Earth System Sciences, 2014, , 247-306.	0.2	2

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73	Skill assessment of three earth system models with common marine biogeochemistry. Climate Dynamics, 2013, 40, 2549-2573.	3.8	108
74	On the evolution of the oceanic component of the IPSL climate models from CMIP3 to CMIP5: A mean state comparison. Ocean Modelling, 2013, 72, 167-184.	2.4	35
75	Dynamical and biogeochemical control on the decadal variability of ocean carbon fluxes. Earth System Dynamics, 2013, 4, 109-127.	7.1	25
76	Multiple stressors of ocean ecosystems in the 21st century: projections with CMIP5 models. Biogeosciences, 2013, 10, 6225-6245.	3.3	1,191
77	Water Mass Analysis of Effect of Climate Change on Airâ€“Sea CO₂ Fluxes: The Southern Ocean. Journal of Climate, 2012, 25, 3894-3908.	3.2	34