Roland SÃ©fÃ©rian

List of Publications by Year
in descending order

77 papers	14,244 citations	66315 42 h-index	66879 78 g-index
133 all docs	133 docs citations	133 times ranked	17842 citing authors

#	Article	IF	Citations
1	Global Carbon Budget 2020. Earth System Science Data, 2020, 12, 3269-3340.	3.7	1,477
2	Multiple stressors of ocean ecosystems in the 21st century: projections with CMIP5 models. Biogeosciences, 2013, 10, 6225-6245.	1.3	1,191
3	Global Carbon Budget 2018. Earth System Science Data, 2018, 10, 2141-2194.	3.7	1,167
4	Global Carbon Budget 2019. Earth System Science Data, 2019, 11, 1783-1838.	3.7	1,159
5	Global Carbon Budget 2016. Earth System Science Data, 2016, 8, 605-649.	3.7	905
6	Global Carbon Budget 2017. Earth System Science Data, 2018, 10, 405-448.	3.7	801
7	Global Carbon Budget 2021. Earth System Science Data, 2022, 14, 1917-2005.	3.7	663
8	Global Carbon Budget 2015. Earth System Science Data, 2015, 7, 349-396.	3.7	616
9	Evaluation of CMIP6 DECK Experiments With CNRMâ€CM6â€1. Journal of Advances in Modeling Earth Systems, 2019, 11, 2177-2213.	1.3	494
10	Global carbon budget 2014. Earth System Science Data, 2015, 7, 47-85.	3.7	463
11	Twenty-first century ocean warming, acidification, deoxygenation, and upper-ocean nutrient and primary production decline from CMIP6 model projections. Biogeosciences, 2020, 17, 3439-3470.	1.3	348
12	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.	1.3	309
13	Carbonâ€"concentration and carbonâ€"climate feedbacks in CMIP6 models and their comparison to CMIP5 models. Biogeosciences, 2020, 17, 4173-4222.	1.3	255
14	Drivers and uncertainties of future global marine primary production in marine ecosystem models. Biogeosciences, 2015, 12, 6955-6984.	1.3	252
15	Climate model projections from the Scenario Model Intercomparison ProjectÂ(ScenarioMIP) of CMIP6. Earth System Dynamics, 2021, 12, 253-293.	2.7	236
16	Estimating and tracking the remaining carbon budget for stringent climate targets. Nature, 2019, 571, 335-342.	13.7	229
17	Rapid emergence of climate change in environmental drivers of marine ecosystems. Nature Communications, 2017, 8, 14682.	5.8	216
18	Managing living marine resources in a dynamic environment: The role of seasonal to decadal climate forecasts. Progress in Oceanography, 2017, 152, 15-49.	1.5	165

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19	Tracking Improvement in Simulated Marine Biogeochemistry Between CMIP5 and CMIP6. Current Climate Change Reports, 2020, 6, 95-119.	2.8	155
20	Human-induced greening of the northern extratropical land surface. Nature Climate Change, 2016, 6, 959-963.	8.1	145
21	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.	1.3	120
22	The many possible climates from the Paris Agreementâ€™s aim of 1.5 Â°C warming. Nature, 2018, 558, 41-49.	13.7	116
23	Consistency and Challenges in the Ocean Carbon Sink Estimate for the Global Carbon Budget. Frontiers in Marine Science, 2020, 7, .	1.2	114
24	Skill assessment of three earth system models with common marine biogeochemistry. Climate Dynamics, 2013, 40, 2549-2573.	1.7	108
25	Emergent constraints on projections of declining primary production in the tropical oceans. Nature Climate Change, 2017, 7, 355-358.	8.1	108
26	Projected decreases in future marine export production: the role of the carbon flux through the upper ocean ecosystem. Biogeosciences, 2016, 13, 4023-4047.	1.3	106
27	Bidecadal North Atlantic ocean circulation variability controlled by timing of volcanic eruptions. Nature Communications, 2015, 6, 6545.	5.8	101
28	Decadal trends in the ocean carbon sink. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 11646-11651.	3.3	94
29	Is there warming in the pipeline? A multi-model analysis of the Zero Emissions Commitment from CO₂. Biogeosciences, 2020, 17, 2987-3016.	1.3	87
30	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.	1.9	85
31	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.	3.3	79
32	Inconsistent strategies to spin up models in CMIP5: implications for ocean biogeochemical model performance assessment. Geoscientific Model Development, 2016, 9, 1827-1851.	1.3	68
33	Opportunities and challenges in using remaining carbon budgets to guide climate policy. Nature Geoscience, 2020, 13, 769-779.	5.4	68
34	Development and evaluation of CNRM Earth system model â€“ CNRM-ESM1. Geoscientific Model Development, 2016, 9, 1423-1453.	1.3	65
35	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.	1.0	63
36	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.	1.8	63

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37	Nonlinearity of Ocean Carbon Cycle Feedbacks in CMIP5 Earth System Models. Journal of Climate, 2014, 27, 3869-3888.	1.2	62
38	Multiyear predictability of tropical marine productivity. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 11646-11651.	3.3	61
39	Intercomparison of dissolved trace elements at the Bermuda Atlantic Time Series station. Marine Chemistry, 2015, 177, 476-489.	0.9	58
40	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.	1.3	56
41	Global climate response to idealized deforestation in CMIP6 models. Biogeosciences, 2020, 17, 5615-5638.	1.3	55
42	Projected pH reductions by 2100 might put deep North Atlantic biodiversity at risk. Biogeosciences, 2014, 11, 6955-6967.	1.3	49
43	The CNRM Global Atmosphere Model ARPEGEâ€Climat 6.3: Description and Evaluation. Journal of Advances in Modeling Earth Systems, 2020, 12, e2020MS002075.	1.3	46
44	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.	1.9	45
45	The Climate Response to Emissions Reductions Due to COVIDâ€•19: Initial Results From CovidMIP. Geophysical Research Letters, 2021, 48, e2020GL091883.	1.5	43
46	The oceanic cycle of carbon monoxide and its emissions to the atmosphere. Biogeosciences, 2019, 16, 881-902.	1.3	42
47	The Global Land Carbon Cycle Simulated With ISBAâ€CTRIP: Improvements Over the Last Decade. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001886.	1.3	42
48	Climate-driven chemistry and aerosol feedbacks in CMIP6 Earth system models. Atmospheric Chemistry and Physics, 2021, 21, 1105-1126.	1.9	39
49	Presentâ€Day and Historical Aerosol and Ozone Characteristics in CNRM CMIP6 Simulations. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001816.	1.3	36
50	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.	1.0	35
51	Water Mass Analysis of Effect of Climate Change on Airâ€"Sea CO₂ Fluxes: The Southern Ocean. Journal of Climate, 2012, 25, 3894-3908.	1.2	34
52	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.	1.0	34
53	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.	1.3	32
54	Reconstructing the subsurface ocean decadal variability using surface nudging in a perfect model framework. Climate Dynamics, 2015, 44, 315-338.	1.7	30

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55	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.	3.3	29
56	Assessing the Decadal Predictability of Land and Ocean Carbon Uptake. Geophysical Research Letters, 2018, 45, 2455-2466.	1.5	28
57	Dynamical and biogeochemical control on the decadal variability of ocean carbon fluxes. Earth System Dynamics, 2013, 4, 109-127.	2.7	25
58	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.	1.3	24
59	Evaluation of ocean dimethylsulfide concentration and emission in CMIP6 models. Biogeosciences, 2021, 18, 3823-3860.	1.3	24
60	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.	1.2	23
61	Comparing different generations of idealized solar geoengineering simulations in the Geoengineering Model Intercomparison Project (GeoMIP). Atmospheric Chemistry and Physics, 2021, 21, 4231-4247.	1.9	22
62	Detecting the anthropogenic influences on recent changes in ocean carbon uptake. Geophysical Research Letters, 2014, 41, 5968-5977.	1.5	20
63	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.	1.3	19
64	Constraints on biomass energy deployment in mitigation pathways: the case of water scarcity. Environmental Research Letters, 2018, 13, 054011.	2.2	19
65	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.	1.9	19
66	Predictable Variations of the Carbon Sinks and Atmospheric CO₂Growth in a Multiâ€Model Framework. Geophysical Research Letters, 2021, 48, e2020GL090695.	1.5	17
67	Brief communication: Reduction in the future Greenland ice sheet surface melt with the help of solar geoengineering. Cryosphere, 2021, 15, 3013-3019.	1.5	17
68	Multi-century dynamics of the climate and carbon cycle under both high and net negative emissions scenarios. Earth System Dynamics, 2022, 13, 885-909.	2.7	17
69	Land Surface Cooling Induced by Sulfate Geoengineering Constrained by Major Volcanic Eruptions. Geophysical Research Letters, 2018, 45, 5663-5671.	1.5	16
70	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.	1.9	15
71	Natural variability of marine ecosystems inferred from a coupled climate to ecosystem simulation. Journal of Marine Systems, 2016, 153, 55-66.	0.9	14
72	Impact of Solar Radiation Modification on Allowable CO₂ Emissions: What Can We Learn From Multimodel Simulations?. Earth's Future, 2019, 7, 664-676.	2.4	9

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73	Impact of bioenergy crop expansion on climateâ€“carbon cycle feedbacks in overshoot scenarios. Earth System Dynamics, 2022, 13, 779-794.	2.7	8
74	Uncertainty in carbon budget estimates due to internal climate variability. Environmental Research Letters, 2020, 15, 104064.	2.2	7
75	Assessing Model Predictions of Carbon Dynamics in Global Drylands. Frontiers in Environmental Science, 2022, 10, .	1.5	5
76	Quantification of Chaotic Intrinsic Variability of Seaâ€Air CO₂ Fluxes at Interannual Timescales. Geophysical Research Letters, 2020, 47, e2020GL088304.	1.5	4
77	Perspectives and Integration in SOLAS Science. Springer Earth System Sciences, 2014, , 247-306.	0.1	2