Romain Roehrig

List of Publications by Year
in descending order

59 papers	3,054 citations	172457 29 h-index	168389 53 g-index
69 all docs	69 docs citations	69 times ranked	4153 citing authors

#	Article	IF	Citations
1	Evaluation of CMIP6 DECK Experiments With CNRMâ€CM6â€1. Journal of Advances in Modeling Earth Systems, 2019, 11, 2177-2213.	3.8	494
2	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
3	LMDZ5B: the atmospheric component of the IPSL climate model with revisited parameterizations for clouds and convection. Climate Dynamics, 2013, 40, 2193-2222.	3.8	256
4	The Present and Future of the West African Monsoon: A Process-Oriented Assessment of CMIP5 Simulations along the AMMA Transect. Journal of Climate, 2013, 26, 6471-6505.	3.2	189
5	ESMValTool (v1.0) â€“ a community diagnostic and performance metrics tool for routine evaluation of Earth system models in CMIP. Geoscientific Model Development, 2016, 9, 1747-1802.	3.6	127
6	Evaluating Climate Models with the CLIVAR 2020 ENSO Metrics Package. Bulletin of the American Meteorological Society, 2021, 102, E193-E217.	3.3	93
7	Intraseasonal variability of the West African monsoon. Atmospheric Science Letters, 2011, 12, 58-66.	1.9	87
8	Clouds and Convective Selfâ€Aggregation in a Multimodel Ensemble of Radiativeâ€Convective Equilibrium Simulations. Journal of Advances in Modeling Earth Systems, 2020, 12, e2020MS002138.	3.8	86
9	Intraseasonal Variability of the Saharan Heat Low and Its Link with Midlatitudes. Journal of Climate, 2010, 23, 2544-2561.	3.2	79
10	Coupling between lowerâ€tropospheric convective mixing and lowâ€level clouds: Physical mechanisms and dependence on convection scheme. Journal of Advances in Modeling Earth Systems, 2016, 8, 1892-1911.	3.8	66
11	The impact of parametrized convection on cloud feedback. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140414.	3.4	63
12	Vertical structure and physical processes of the Maddenâ€Julian oscillation: Linking hindcast fidelity to simulated diabatic heating and moistening. Journal of Geophysical Research D: Atmospheres, 2015, 120, 4690-4717.	3.3	63
13	CAUSES: Attribution of Surface Radiation Biases in NWP and Climate Models near the U.S. Southern Great Plains. Journal of Geophysical Research D: Atmospheres, 2018, 123, 3612-3644.	3.3	62
14	CAUSES: On the Role of Surface Energy Budget Errors to the Warm Surface Air Temperature Error Over the Central United States. Journal of Geophysical Research D: Atmospheres, 2018, 123, 2888-2909.	3.3	60
15	Control of deep convection by sub-cloud lifting processes: the ALP closure in the LMDZ5B general circulation model. Climate Dynamics, 2013, 40, 2271-2292.	3.8	59
16	Radiative flux and forcing parameterization error in aerosolâ€free clear skies. Geophysical Research Letters, 2015, 42, 5485-5492.	4.0	57
17	Modulation of radiative aerosols effects by atmospheric circulation over the Euro-Mediterranean region. Atmospheric Chemistry and Physics, 2020, 20, 8315-8349.	4.9	54
18	Introduction to CAUSES: Description of Weather and Climate Models and Their Nearâ€Surface Temperature Errors in 5Âday Hindcasts Near the Southern Great Plains. Journal of Geophysical Research D: Atmospheres, 2018, 123, 2655-2683.	3.3	53

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19	Direct and semi-direct radiative forcing of biomass-burning aerosols over the southeast AtlanticÂ(SEA) and its sensitivity to absorbing properties: a regional climate modeling study. Atmospheric Chemistry and Physics, 2020, 20, 13191-13216.	4.9	49
20	The tropical rain belts with an annual cycle and a continent model intercomparison project: TRACMIP. Journal of Advances in Modeling Earth Systems, 2016, 8, 1868-1891.	3.8	47
21	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
22	10â€“25-Day Intraseasonal Variability of Convection over the Sahel: A Role of the Saharan Heat Low and Midlatitudes. Journal of Climate, 2011, 24, 5863-5878.	3.2	40
23	A multiâ€scale analysis of the extreme rain event of Ouagadougou in 2009. Quarterly Journal of the Royal Meteorological Society, 2017, 143, 3094-3109.	2.7	37
24	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
25	Are atmospheric biases responsible for the tropical Atlantic SST biases in the CNRM-CM5 coupled model?. Climate Dynamics, 2014, 43, 2963-2984.	3.8	33
26	A singleâ€column model intercomparison on the stratocumulus representation in presentâ€day and future climate. Journal of Advances in Modeling Earth Systems, 2015, 7, 617-647.	3.8	33
27	Processâ€Based Climate Model Development Harnessing Machine Learning: I. A Calibration Tool for Parameterization Improvement. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002217.	3.8	32
28	Robustness, uncertainties, and emergent constraints in the radiative responses of stratocumulus cloud regimes to future warming. Climate Dynamics, 2016, 46, 3025-3039.	3.8	31
29	Detection of Intraseasonal Large-Scale Heat Waves: Characteristics and Historical Trends during the Sahelian Spring. Journal of Climate, 2018, 31, 61-80.	3.2	29
30	Vertical structure and physical processes of the Maddenâ€Julian Oscillation: Biases and uncertainties at short range. Journal of Geophysical Research D: Atmospheres, 2015, 120, 4749-4763.	3.3	26
31	Simulation of the transport, vertical distribution, optical properties and radiative impact of smoke aerosols with the ALADIN regional climate model during the ORACLES-2016 and LASIC experiments. Atmospheric Chemistry and Physics, 2019, 19, 4963-4990.	4.9	25
32	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
33	High sensitivity of tropical precipitation to local sea surface temperature. Nature, 2021, 589, 408-414.	27.8	24
34	Representation of daytime moist convection over the semiâ€arid Tropics by parametrizations used in climate and meteorological models. Quarterly Journal of the Royal Meteorological Society, 2015, 141, 2220-2236.	2.7	23
35	Internal processes within the African Easterly Wave system. Quarterly Journal of the Royal Meteorological Society, 2015, 141, 1121-1136.	2.7	21
36	West African Monsoon Intraseasonal Variability: A Precipitable Water Perspective. Journals of the Atmospheric Sciences, 2013, 70, 1035-1052.	1.7	19

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37	Evaluating Marine Stratocumulus Clouds in the CNRMâ€CM6â€1 Model Using Shortâ€Term Hindcasts. Journal of Advances in Modeling Earth Systems, 2019, 11, 127-148.	3.8	19
38	The diurnal cycle of marine cloud feedback in climate models. Climate Dynamics, 2015, 44, 1419-1436.	3.8	18
39	Processâ€Based Climate Model Development Harnessing Machine Learning: II. Model Calibration From Single Column to Global. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002225.	3.8	18
40	Interâ€model comparison of subseasonal tropical variability in aquaplanet experiments: Effect of a warm pool. Journal of Advances in Modeling Earth Systems, 2016, 8, 1526-1551.	3.8	14
41	Process-level improvements in CMIP5 models and their impact on tropical variability, the Southern Ocean, and monsoons. Earth System Dynamics, 2018, 9, 33-67.	7.1	13
42	Impact of humidity biases on light precipitation occurrence: observations versus simulations. Atmospheric Chemistry and Physics, 2019, 19, 1471-1490.	4.9	12
43	Lowâ€Level Marine Tropical Clouds in Six CMIP6 Models Are Too Few, Too Bright but Also Too Compact and Too Homogeneous. Geophysical Research Letters, 2022, 49, .	4.0	12
44	Understanding the <scp>W</scp>est <scp>A</scp>frican <scp>M</scp>onsoon from the analysis of diabatic heating distributions as simulated by climate models. Journal of Advances in Modeling Earth Systems, 2017, 9, 239-270.	3.8	10
45	Historically-based run-time bias corrections substantially improve model projections of 100 years of future climate change. Communications Earth & Environment, 2020, 1, .	6.8	10
46	The April 2010 North African heatwave: when the water vapor greenhouse effect drives nighttime temperatures. Climate Dynamics, 2020, 54, 3879-3905.	3.8	10
47	Drivers of the enhanced decline of land near-surface relative humidity to abrupt 4xCO2 in CNRM-CM6-1. Climate Dynamics, 2020, 55, 1613-1629.	3.8	10
48	Singleâ€Column Modeling of Convection During the CINDY2011/DYNAMO Field Campaign With the CNRM Climate Model Version 6. Journal of Advances in Modeling Earth Systems, 2018, 10, 578-602.	3.8	8
49	Mesoâ€scale contribution to airâ€“sea turbulent fluxes at GCM scale. Quarterly Journal of the Royal Meteorological Society, 2020, 146, 2466-2495.	2.7	7
50	Tracking Changes in Climate Sensitivity in CNRM Climate Models. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002190.	3.8	7
51	Examining the <scp>W</scp>est <scp>A</scp>frican <scp>M</scp>onsoon circulation response to atmospheric heating in a <scp>GCM</scp> dynamical core. Journal of Advances in Modeling Earth Systems, 2017, 9, 149-167.	3.8	6
52	Characterizing Convection Schemes Using Their Responses to Imposed Tendency Perturbations. Journal of Advances in Modeling Earth Systems, 2021, 13, e2021MS002461.	3.8	6
53	Robustness and drivers of the Northern Hemisphere extratropical atmospheric circulation response to a CO$$_2$$-induced warming in CNRM-CM6-1. Climate Dynamics, 2020, 54, 2267-2285.	3.8	5
54	Representation by two climate models of the dynamical and diabatic processes involved in the development of an explosively deepening cyclone during NAWDEX. Weather and Climate Dynamics, 2021, 2, 233-253.	3.5	5

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55	Modeling the GABLS4 Stronglyâ€Stable Boundary Layer With a GCM Turbulence Parameterization: Parametric Sensitivity or Intrinsic Limits?. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002269.	3.8	4
56	Competition Between Atmospheric and Surface Parameterizations for the Control of Airâ€Sea Latent Heat Fluxes in Two Singleâ€Column Models. Geophysical Research Letters, 2019, 46, 7780-7789.	4.0	2
57	Sahelian Heat Wave Characterization From Observational Data Sets. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD034465.	3.3	2
58	Investigating Parametric Dependence of Climate Feedbacks in the Atmospheric Component of CNRMâ€CM6â€1. Geophysical Research Letters, 2022, 49, .	4.0	2
59	Assessment of the sea surface temperature diurnal cycle in CNRM-CM6-1 based on its 1D coupled configuration. Geoscientific Model Development, 2022, 15, 3347-3370.	3.6	1