

Hui Wan

List of Publications by Year in descending order

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Version: 2024-02-01

42
papers

2,198
citations

331259

21
h-index

288905

40
g-index

62
all docs

62
docs citations

62
times ranked

3001
citing authors

#	ARTICLE	IF	CITATIONS
1	The DOE E3SM Coupled Model Version 1: Overview and Evaluation at Standard Resolution. <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 2089-2129.	1.3	404
2	The global aerosol-climate model ECHAM-HAM, version 2: sensitivity to improvements in process representations. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 8911-8949.	1.9	319
3	An Overview of the Atmospheric Component of the Energy Exascale Earth System Model. <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 2377-2411.	1.3	168
4	Technical Note: On the use of nudging for aerosol-climate model intercomparison studies. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 8631-8645.	1.9	143
5	ICON, the Atmosphere Component of the ICON Earth System Model: I. Model Description. <i>Journal of Advances in Modeling Earth Systems</i> , 2018, 10, 1613-1637.	1.3	123
6	Design of a new dynamical core for global atmospheric models based on some efficient numerical methods. <i>Science in China Series A: Mathematics</i> , 2004, 47, 4.	0.5	102
7	The ICON-1.2 hydrostatic atmospheric dynamical core on triangular grids - Part 1: Formulation and performance of the baseline version. <i>Geoscientific Model Development</i> , 2013, 6, 735-763.	1.3	84
8	Radon activity in the lower troposphere and its impact on ionization rate: a global estimate using different radon emissions. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 7817-7838.	1.9	73
9	Evaluation of the atmospheric transport in a GCM using radon measurements: sensitivity to cumulus convection parameterization. <i>Atmospheric Chemistry and Physics</i> , 2008, 8, 2811-2832.	1.9	59
10	Parametric Sensitivity and Uncertainty Quantification in the Version 1 of E3SM Atmosphere Model Based on Short Perturbed Parameter Ensemble Simulations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 13,046.	1.2	53
11	Physics-Dynamics Coupling in Weather, Climate, and Earth System Models: Challenges and Recent Progress. <i>Monthly Weather Review</i> , 2018, 146, 3505-3544.	0.5	52
12	Short ensembles: an efficient method for discerning climate-relevant sensitivities in atmospheric general circulation models. <i>Geoscientific Model Development</i> , 2014, 7, 1961-1977.	1.3	49
13	Impact of light-absorbing particles on snow albedo darkening and associated radiative forcing over high-mountain Asia: high-resolution WRF-Chem modeling and new satellite observations. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 7105-7128.	1.9	46
14	Improvements in climate simulation with modifications to the Tiedtke convective parameterization in the grid-point atmospheric model of IAP LASG (GAMIL). <i>Advances in Atmospheric Sciences</i> , 2007, 24, 323-335.	1.9	42
15	Coupled model simulations of climate changes in the 20th century and beyond. <i>Advances in Atmospheric Sciences</i> , 2008, 25, 641-654.	1.9	41
16	Short-term time step convergence in a climate model. <i>Journal of Advances in Modeling Earth Systems</i> , 2015, 7, 215-225.	1.3	37
17	Impact of Nudging Strategy on the Climate Representativeness and Hindcast Skill of Constrained EAMv1 Simulations. <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 3911-3933.	1.3	37
18	Impact of numerical choices on water conservation in the E3SM Atmosphere Model version 1 (EAMv1). <i>Geoscientific Model Development</i> , 2018, 11, 1971-1988.	1.3	33

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19	Icosahedral Shallow Water Model (ICOSWM): results of shallow water test cases and sensitivity to model parameters. <i>Geoscientific Model Development</i> , 2009, 2, 231-251.	1.3	30
20	Numerical issues associated with compensating and competing processes in climate models: an example from ECHAM-HAM. <i>Geoscientific Model Development</i> , 2013, 6, 861-874.	1.3	29
21	Ensemble Heldâ€“Suarez Test with a Spectral Transform Model: Variability, Sensitivity, and Convergence. <i>Monthly Weather Review</i> , 2008, 136, 1075-1092.	0.5	27
22	Can nudging be used to quantify model sensitivities in precipitation and cloud forcing?. <i>Journal of Advances in Modeling Earth Systems</i> , 2016, 8, 1073-1091.	1.3	26
23	Tropospheric aerosol size distributions simulated by three online global aerosol models using the M7 microphysics module. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 6409-6434.	1.9	23
24	Quantifying the impact of sub-grid surface wind variability on sea salt and dust emissions in CAM5. <i>Geoscientific Model Development</i> , 2016, 9, 607-632.	1.3	19
25	Role of Troposphereâ€“Convectionâ€“Land Coupling in the Southwestern Amazon Precipitation Bias of the Community Earth System Model Version 1 (CESM1). <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 8374-8399.	1.2	19
26	Better calibration of cloud parameterizations and subgrid effects increases the fidelity of the E3SM Atmosphere Model version 1. <i>Geoscientific Model Development</i> , 2022, 15, 2881-2916.	1.3	17
27	Effective radiative forcing of anthropogenic aerosols in E3SM version 1: historical changes, causality, decomposition, and parameterization sensitivities. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 9129-9160.	1.9	16
28	Consistency problem with tracer advection in the Atmospheric Model GAMIL. <i>Advances in Atmospheric Sciences</i> , 2008, 25, 306-318.	1.9	15
29	Investigation of short-term effective radiative forcing of fire aerosols over North America using nudged hindcast ensembles. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 31-47.	1.9	13
30	Quantifying and attributing time step sensitivities in present-day climate simulations conducted with EAMv1. <i>Geoscientific Model Development</i> , 2021, 14, 1921-1948.	1.3	13
31	Performance of a reconfigured atmospheric general circulation model at low resolution. <i>Advances in Atmospheric Sciences</i> , 2007, 24, 712-728.	1.9	11
32	A new and inexpensive non-bit-for-bit solution reproducibility test based on time step convergence (TSC1.0). <i>Geoscientific Model Development</i> , 2017, 10, 537-552.	1.3	9
33	Resolutionâ€“dependent behavior of subgridâ€“scale vertical transport in the Zhangâ€“McFarlane convection parameterization. <i>Journal of Advances in Modeling Earth Systems</i> , 2015, 7, 537-550.	1.3	8
34	The Global Atmosphereâ€“Aerosol Model ICONâ€“ECHAM2.3â€“Initial Model Evaluation and Effects of Radiation Balance Tuning on Aerosol Optical Thickness. <i>Journal of Advances in Modeling Earth Systems</i> , 2022, 14, .	1.3	6
35	Comparison between GAMIL, and CAM2 on interannual variability simulation. <i>Advances in Atmospheric Sciences</i> , 2007, 24, 82-88.	1.9	5
36	Improving Time Step Convergence in an Atmosphere Model With Simplified Physics: The Impacts of Closure Assumption and Process Coupling. <i>Journal of Advances in Modeling Earth Systems</i> , 2020, 12, e2019MS001982.	1.3	5

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37	The challenges of theory-software translation. F1000Research, 2020, 9, 1192.	0.8	4
38	CondiDiag1.0: a flexible online diagnostic tool for conditional sampling and budget analysis in the E3SM atmosphere model (EAM). Geoscientific Model Development, 2022, 15, 3205-3231.	1.3	4
39	Improving Time Step Convergence in an Atmosphere Model With Simplified Physics: Using Mathematical Rigor to Avoid Nonphysical Behavior in a Parameterization. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001974.	1.3	3
40	Methodology for building granular testing in multicomponent scientific software. , 2018, , .		2
41	Improving Solution Accuracy and Convergence for Stochastic Physics Parameterizations with Colored Noise. Monthly Weather Review, 2020, 148, 2251-2263.	0.5	1
42	An Objective and Efficient Method for Assessing the Impact of Reduced-precision Calculations On Solution Correctness. Journal of Advances in Modeling Earth Systems, 2019, 11, 3131-3147.	1.3	0