Katherine Evans

List of Publications by Year
in descending order

52 papers	1,856 citations	471509 17 h-index	276875 41 g-index
65 all docs	65 docs citations	65 times ranked	2778 citing authors

#	Article	IF	Citations
1	The DOE E3SM Coupled Model Version 1: Overview and Evaluation at Standard Resolution. Journal of Advances in Modeling Earth Systems, 2019, 11, 2089-2129.	3.8	404
2	CAM-SE: A scalable spectral element dynamical core for the Community Atmosphere Model. International Journal of High Performance Computing Applications, 2012, 26, 74-89.	3.7	302
3	Climate, environmental and socio-economic change: weighing up the balance in vector-borne disease transmission. Philosophical Transactions of the Royal Society B: Biological Sciences, 2015, 370, 20130551.	4.0	215
4	An Overview of the Atmospheric Component of the Energy Exascale Earth System Model. Journal of Advances in Modeling Earth Systems, 2019, 11, 2377-2411.	3.8	168
5	Toward a Science of Tumor Forecasting for Clinical Oncology. Cancer Research, 2015, 75, 918-923.	0.9	74
6	Description and evaluation of the Community Ice Sheet Model (CISM) v2.1. Geoscientific Model Development, 2019, 12, 387-424.	3.6	68
7	AMIP Simulation with the CAM4 Spectral Element Dynamical Core. Journal of Climate, 2013, 26, 689-709.	3.2	60
8	Doubling of U.S. Population Exposure to Climate Extremes by 2050. Earth's Future, 2020, 8, e2019EF001421.	6.3	46
9	A case study of CUDA FORTRAN and OpenACC for an atmospheric climate kernel. Journal of Computational Science, 2015, 9, 1-6.	2.9	36
10	Linearity of Climate Response to Increases in Black Carbon Aerosols. Journal of Climate, 2013, 26, 8223-8237.	3.2	27
11	High-performance computing in water resources hydrodynamics. Journal of Hydroinformatics, 2020, 22, 1217-1235.	2.4	27
12	Intermediate frequency atmospheric disturbances: A dynamical bridge connecting western U.S. extreme precipitation with East Asian cold surges. Journal of Geophysical Research D: Atmospheres, 2014, 119, 3723-3735.	3.3	25
13	Tropical Indian Ocean Mediates ENSO Influence Over Central Southwest Asia During the Wet Season. Geophysical Research Letters, 2020, 47, e2020GL089308.	4.0	25
14	Piecewise Tendency Diagnosis of Weather Regime Transitions. Journals of the Atmospheric Sciences, 2003, 60, 1941-1959.	1.7	24
15	Characteristics of Bay of Bengal Monsoon Depressions in the 21st Century. Geophysical Research Letters, 2018, 45, 6637-6645.	4.0	23
16	Accuracy Analysis of a Spectral Element Atmospheric Model Using a Fully Implicit Solution Framework. Monthly Weather Review, 2010, 138, 3333-3341.	1.4	22
17	Development of a 2-D algorithm to simulate convection and phase transition efficiently. Journal of Computational Physics, 2006, 219, 404-417.	3.8	21
18	Implementation of the Jacobian-free Newtonâ€“Krylov method for solving the first-order ice sheet momentum balance. Journal of Computational Physics, 2011, 230, 6531-6545.	3.8	19

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19	An ice sheet model validation framework for the Greenland ice sheet. Geoscientific Model Development, 2017, 10, 255-270.	3.6	18
20	Shift in seasonal climate patterns likely to impact residential energy consumption in the United States. Environmental Research Letters, 2019, 14, 074006.	5.2	16
21	Identification of major moisture sources across the Mediterranean Basin. Climate Dynamics, 2020, 54, 4109-4127.	3.8	16
22	A Spectral Deferred Correction Method Applied to the Shallow Water Equations on a Sphere. Monthly Weather Review, 2013, 141, 3435-3449.	1.4	14
23	Simulation of Hurricane Harvey flood event through coupled hydrologicâ€hydraulic models: Challenges and next steps. Journal of Flood Risk Management, 2021, 14, e12716.	3.3	14
24	An efficient Bayesian data-worth analysis using a multilevel Monte Carlo method. Advances in Water Resources, 2018, 113, 223-235.	3.8	13
25	Multiwavelet Discontinuous Galerkin-Accelerated Exact Linear Part (ELP) Method for the Shallow-Water Equations on the Cubed Sphere. Monthly Weather Review, 2011, 139, 457-473.	1.4	12
26	Interannual Tropospheric Aerosol Variability in the Late Twentieth Century and Its Impact on Tropical Atlantic and West African Climate by Direct and Semidirect Effects. Journal of Climate, 2012, 25, 8031-8056.	3.2	12
27	Fidelity of Precipitation Extremes in High Resolution Global Climate Simulations. Procedia Computer Science, 2015, 51, 2178-2187.	2.0	12
28	Shift Toward Intense and Widespread Precipitation Events Over the United States by Midâ€21st Century. Geophysical Research Letters, 2020, 47, e2020GL089899.	4.0	12
29	Temporal accuracy analysis of phase change convection simulations using the JFNK-SIMPLE algorithm. International Journal for Numerical Methods in Fluids, 2007, 55, 637-653.	1.6	10
30	A spectral transform dynamical core option within the Community Atmosphere Model (CAM4). Journal of Advances in Modeling Earth Systems, 2014, 6, 902-922.	3.8	10
31	The Statistics and Horizontal Structure of Anomalous Weather Regimes in the Community Climate Model. Monthly Weather Review, 1998, 126, 841-859.	1.4	9
32	A modern solver interface to manage solution algorithms in the Community Earth System Model. International Journal of High Performance Computing Applications, 2012, 26, 54-62.	3.7	9
33	Model Resolution Sensitivity of the Simulation of North Atlantic Oscillation Teleconnections to Precipitation Extremes. Journal of Geophysical Research D: Atmospheres, 2018, 123, 11,392.	3.3	8
34	Exploring an Ensemble-Based Approach to Atmospheric Climate Modeling and Testing at Scale. Procedia Computer Science, 2017, 108, 735-744.	2.0	7
35	LIVVkit: An extensible, pythonâ€based, land ice verification and validation toolkit for ice sheet models. Journal of Advances in Modeling Earth Systems, 2017, 9, 854-869.	3.8	7
36	Northern Hemisphere Blocking in â^¼25â€kmâ€Resolution E3SM v0.3 Atmosphereâ€Land Simulations. Journal of Geophysical Research D: Atmospheres, 2019, 124, 2465-2482.	3.3	7

#	Article	IF	Citations
37	Web-based visual analytics for extreme scale climate science. , 2014, , .		6
38	Algorithmically scalable block preconditioner for fully implicit shallow-water equations in CAM-SE. Computational Geosciences, 2015, 19, 49-61.	2.4	6
39	A Multivariate Approach to Ensure Statistical Reproducibility of Climate Model Simulations. , 2019, , .		6
40	The role of humidity in determining future electricity demand in the southeastern United States. Environmental Research Letters, 2021, 16, 114017.	5.2	6
41	Enhanced algorithm efficiency for phase change convection using a multigrid preconditioner with a SIMPLE smoother. Journal of Computational Physics, 2007, 223, 121-126.	3.8	5
42	Ongoing solution reproducibility of earth system models as they progress toward exascale computing. International Journal of High Performance Computing Applications, 2019, 33, 784-790.	3.7	5
43	LIVVkit 2.1: automated and extensible ice sheet model validation. Geoscientific Model Development, 2019, 12, 1067-1086.	3.6	4
44	Performance analysis of fully explicit and fully implicit solvers within a spectral element shallow-water atmosphere model. International Journal of High Performance Computing Applications, 2019, 33, 268-284.	3.7	4
45	On the Use of Finite Difference Matrix-vector Products in Newton-krylov Solvers for Implicit Climate Dynamics with Spectral Elements. Procedia Computer Science, 2015, 51, 2036-2045.	2.0	3
46	Automated Fortranâ€“C++ Bindings for Large-Scale Scientific Applications. Computing in Science and Engineering, 2020, 22, 84-94.	1.2	3
47	Emulation to simulate low-resolution atmospheric data. International Journal of Computer Mathematics, 2014, 91, 770-780.	1.8	2
48	A Scalable Semiâ€Implicit Barotropic Mode Solver for the MPASâ€Ocean. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002238.	3.8	2
49	Time Acceleration Methods for Advection on the Cubed Sphere. Lecture Notes in Computer Science, 2009, , 253-262.	1.3	1
50	Phyllode inoculation provides a rapid protocol for preliminary screening of Acacia species for tolerance to Ceratocystis wilt and canker disease. European Journal of Plant Pathology, 2022, 163, 321-339.	1.7	1
51	Progress towards accelerating the unified model on hybrid multi-core systems. , 2021, , .		0
52	Atmospheric and Oceanic Computational Science. Lecture Notes in Computer Science, 2009, , 241-242.	1.3	0