Matt Norman

List of Publications by Year
in descending order

25 papers	279 citations	1040056 9 h-index	940533 16 g-index
27 all docs	27 docs citations	27 times ranked	301 citing authors

#	Article	IF	Citations
1	Unprecedented cloud resolution in a GPU-enabled full-physics atmospheric climate simulation on OLCFâ€™s summit supercomputer. International Journal of High Performance Computing Applications, 2022, 36, 93-105.	3.7	11
2	SAM++: Porting the E3SM-MMF cloud resolving model using a C++ portability library. International Journal of High Performance Computing Applications, 2022, 36, 214-230.	3.7	1
3	Reconstructing High Resolution ESM Data Through a Novel Fast Super Resolution Convolutional Neural Network (FSRCNN). Geophysical Research Letters, 2022, 49, .	4.0	11
4	A highâ€order WENOâ€limited finiteâ€volume algorithm for atmospheric flow using the ADERâ€differential transform time discretization. Quarterly Journal of the Royal Meteorological Society, 2021, 147, 1661-1690.	2.7	7
5	Progress towards accelerating the unified model on hybrid multi-core systems. , 2021, , .		0
6	A Holistic Algorithmic Approach to Improving Accuracy, Robustness, and Computational Efficiency for Atmospheric Dynamics. SIAM Journal of Scientific Computing, 2020, 42, B1302-B1327.	2.8	5
7	Initial Results From the Superâ€Parameterized E3SM. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001863.	3.8	28
8	Using Deep Neural Networks as Costâ€Effective Surrogate Models for Superâ€Parameterized E3SM Radiative Transfer. Geophysical Research Letters, 2019, 46, 6069-6079.	4.0	41
9	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
10	A Positiveâ€Definite, WENOâ€Limited, Highâ€Order Finite Volume Solver for 2â€D Transport on the Cubed Sphere Using an ADER Time Discretization. Journal of Advances in Modeling Earth Systems, 2018, 10, 1587-1612.	3.8	8
11	Exploring an Ensemble-Based Approach to Atmospheric Climate Modeling and Testing at Scale. Procedia Computer Science, 2017, 108, 735-744.	2.0	7
12	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
13	Exascale Programming Approaches for Accelerated Climate Modeling for Energy. , 2017, , 187-206.		5
14	Arbitrarily High-Order-Accurate, Hermite WENO Limited, Boundary-Averaged Multi-Moment Constrained Finite-Volume (BA-MCV) Schemes for 1-D Transport. Procedia Computer Science, 2015, 51, 2688-2697.	2.0	4
15	A case study of CUDA FORTRAN and OpenACC for an atmospheric climate kernel. Journal of Computational Science, 2015, 9, 1-6.	2.9	36
16	Developing A Large Time Step, Robust, and Low Communication Multi-Moment PDE Integration Scheme for Exascale Applications. Procedia Computer Science, 2015, 51, 1848-1857.	2.0	0
17	Hermite WENO limiting for multi-moment finite-volume methods using the ADER-DT time discretization for 1-D systems of conservation laws. Journal of Computational Physics, 2015, 282, 381-396.	3.8	8
18	The Fluxâ€Form Semiâ€Lagrangian Spectral Element (<scp>FFâ€SLSE</scp>) method for tracer transport. Quarterly Journal of the Royal Meteorological Society, 2014, 140, 1069-1085.	2.7	13

#	Article	IF	Citations
19	A WENO-limited, ADER-DT, finite-volume scheme for efficient, robust, and communication-avoiding multi-dimensional transport. Journal of Computational Physics, 2014, 274, 1-18.	3.8	10
20	Algorithmic improvements for schemes using the ADER time discretization. Journal of Computational Physics, 2013, 243, 176-178.	3.8	10
21	Targeting Atmospheric Simulation Algorithms for Large, Distributed-Memory, GPU-Accelerated Computers. Lecture Notes in Earth System Sciences, 2013, , 271-282.	0.6	3
22	Multi-moment ADER-Taylor methods for systems of conservation laws with source terms in one dimension. Journal of Computational Physics, 2012, 231, 6622-6642.	3.8	20
23	A low communication and large time step explicit finite-volume solver for non-hydrostatic atmospheric dynamics. Journal of Computational Physics, 2011, 230, 1567-1584.	3.8	30
24	Inherently Conservative Nonpolynomial-Based Remapping Schemes: Application to Semi-Lagrangian Transport. Monthly Weather Review, 2008, 136, 5044-5061.	1.4	9
25	On the Accuracy of Semi-Lagrangian Numerical Simulation of Internal Gravity Wave Motion in the Atmosphere. Journal of the Meteorological Society of Japan, 2005, 83, 851-869.	1.8	1