JÃ¶rn Behrens

List of Publications by Year
in descending order

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55	1,164	361413	395702
papers	citations	20 h-index	33 g-index

77	77	77	1162
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The Making of the NEAM Tsunami Hazard Model 2018 (NEAMTHM18). Frontiers in Earth Science, 2021, 8, .	1.8	50
2	Semi-Lagrangian Subgrid Reconstruction for Advection-Dominant Multiscale Problems with Rough Data. Journal of Scientific Computing, 2021, 87, 1.	2.3	1
3	Metrics for Performance Quantification of Adaptive Mesh Refinement. Journal of Scientific Computing, 2021, 87, 1.	2.3	3
4	Probabilistic Tsunami Hazard and Risk Analysis: A Review of Research Gaps. Frontiers in Earth Science, 2021, 9, .	1.8	65
5	Extending legacy climate models by adaptive mesh refinement for single-component tracer transport: a case study with ECHAM6-HAMMOZ (ECHAM6.3-HAM2.3-MOZ1.0). Geoscientific Model Development, 2021, 14, 2289-2316.	3.6	2
6	Editorial: From Tsunami Science to Hazard and Risk Assessment: Methods and Models. Frontiers in Earth Science, 2021, 9, .	1.8	3
7	A Structure-Preserving Approximation of the Discrete Split Rotating Shallow Water Equations. Lecture Notes in Computational Science and Engineering, 2021, , 103-113.	0.3	0
8	Linked 3-D modelling of megathrust earthquake-tsunami events: from subduction to tsunami run up. Geophysical Journal International, 2020, 224, 487-516.	2.4	17
9	An adaptive discontinuous Galerkin method for the simulation of hurricane storm surge. Ocean Dynamics, 2020, 70, 641-666.	2.2	6
10	Multiscale Finite Elements for Transient Advection-Diffusion Equations through Advection-Induced Coordinates. Multiscale Modeling and Simulation, 2020, 18, 543-571.	1.6	1
11	Coupled, Physics-Based Modeling Reveals Earthquake Displacements are Critical to the 2018 Palu, Sulawesi Tsunami. Pure and Applied Geophysics, 2019, 176, 4069-4109.	1.9	96
12	A limiterâ€based wellâ€balanced discontinuous Galerkin method for shallowâ€water flows with wetting and drying: Triangular grids. International Journal for Numerical Methods in Fluids, 2019, 91, 395-418.	1.6	19
13	Duality based error estimation in the presence of discontinuities. Applied Numerical Mathematics, 2019, 144, 83-99.	2.1	5
14	A structure-preserving split finite element discretization of the split wave equations. Applied Mathematics and Computation, 2018, 325, 375-400.	2.2	2
15	A well-balanced meshless tsunami propagation and inundation model. Advances in Water Resources, 2018, 115, 273-285.	3.8	8
16	An adaptive semi-Lagrangian advection model for transport of volcanic emissions in the atmosphere. Natural Hazards and Earth System Sciences, 2018, 18, 1517-1534.	3.6	3
17	A Mathematics Inspired Notation of Scales in the Climate System. Geosciences (Switzerland), 2018, 8, 213.	2.2	0
18	Enabling Adaptive Mesh Refinement for Single Components in ECHAM6. Lecture Notes in Computer Science, 2018, , 56-68.	1.3	1

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19	Depthâ€averaged nonâ€hydrostatic extension for shallow water equations with quadratic vertical pressure profile: equivalence to Boussinesqâ€type equations. International Journal for Numerical Methods in Fluids, 2017, 84, 569-583.	1.6	26
20	Probabilistic Tsunami Hazard Analysis: Multiple Sources and Global Applications. Reviews of Geophysics, 2017, 55, 1158-1198.	23.0	170
21	Comparison of Wetting and Drying Between a RKDG2 Method and Classical FV Based Second-Order Hydrostatic Reconstruction. Springer Proceedings in Mathematics and Statistics, 2017, , 237-245.	0.2	5
22	A Discontinuous Galerkin Method forÂNon-hydrostatic Shallow Water Flows. Springer Proceedings in Mathematics and Statistics, 2017, , 247-255.	0.2	1
23	An Experimental and Numerical Study of Long Wave Run-Up on a Plane Beach. Journal of Marine Science and Engineering, 2016, 4, 1.	2.6	40
24	Optimization of the ADERâ€DG method in GPU applied to linear hyperbolic PDEs. International Journal for Numerical Methods in Fluids, 2016, 81, 195-219.	1.6	2
25	Numerical methods and scientific computing for climate and geosciences. , 2016, , 281-293.		1
26	Thermal structure and basal sliding parametrisation at Pine Island Glacier â€“ a 3-D full-Stokes model study. Cryosphere, 2015, 9, 675-690.	3.9	7
27	New computational methods in tsunami science. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140382.	3.4	48
28	Quasi-nodal third-order Bernstein polynomials in a discontinuous Galerkin model for flooding and drying. Environmental Earth Sciences, 2015, 74, 7275-7284.	2.7	6
29	A limiter-based well-balanced discontinuous Galerkin method for shallow-water flows with wetting and drying: One-dimensional case. Advances in Water Resources, 2015, 85, 1-13.	3.8	40
30	Well-Balanced Inundation Modeling for Shallow-Water Flows with Discontinuous Galerkin Schemes. Springer Proceedings in Mathematics and Statistics, 2014, , 965-973.	0.2	8
31	Comparison between adaptive and uniform discontinuous Galerkin simulations in dry 2D bubble experiments. Journal of Computational Physics, 2013, 235, 371-393.	3.8	30
32	Efficiency for Adaptive Triangular Meshes: Key Issues of Future Approaches. SpringerBriefs in Earth System Sciences, 2012, , 35-49.	0.1	2
33	Tsunami Modelling with Unstructured Grids. Interaction between Tides and Tsunami Waves. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2011, , 191-206.	0.3	7
34	A new multi-sensor approach to simulation assisted tsunami early warning. Natural Hazards and Earth System Sciences, 2010, 10, 1085-1100.	3.6	58
35	Numerical Methods in Support of Advanced Tsunami Early Warning. , 2010, , 399-416.		3
36	Efficiency considerations in triangular adaptive mesh refinement. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2009, 367, 4577-4589.	3.4	30

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37	Tsunami simulations on several scales. Ocean Dynamics, 2008, 58, 429-440.	2.2	65
38	Memory efficient adaptive mesh generation and implementation of multigrid algorithms using Sierpinski curves. International Journal of Computational Science and Engineering, 2008, 4, 12.	0.5	36
39	A parallel adaptive barotropic model of the atmosphere. Journal of Computational Physics, 2007, 223, 609-628.	3.8	23
40	Rotating Shallow Water Equations in Spherical Geometries. , 2006, , 167-172.		0
41	Principles of Adaptive Atmospheric Modeling. , 2006, , 9-22.		4
42	Data Structures for Computational Efficiency. , 2006, , 49-69.		1
43	Some Basic Mathematical Tools. , 2006, , 161-162.		0
44	Metrics for Parallelizing Irregularly Structured Problems. , 2006, , 163-165.		0
45	Issues in Parallelization of Irregularly Structured Problems. , 2006, , 71-78.		0
46	Numerical Treatment of Differential Operators on Adaptive Grids. , 2006, , 79-90.		0
47	Discretization of Conservation Laws. , 2006, , 91-121.		0
48	Adaptive Atmospheric Modeling: Scientific Computing at Its Best. Computing in Science and Engineering, 2005, 7, 76-83.	1.2	8
49	amatos: Parallel adaptive mesh generator for atmospheric and oceanic simulation. Ocean Modelling, 2005, 10, 171-183.	2.4	64
50	Grid-free adaptive semi-Lagrangian advection using radial basis functions. Computers and Mathematics With Applications, 2002, 43, 319-327.	2.7	52
51	Parallelizing an Adaptive Dynamical Grid Generator in a Climatological Trace Gas Transport Application. Lecture Notes in Computer Science, 2001, , 170-176.	1.3	1
52	Evolution of Small-Scale Filaments in an Adaptive Advection Model for Idealized Tracer Transport. Monthly Weather Review, 2000, 128, 2976-2982.	1.4	24
53	Parallelizing an Unstructured Grid Generator with a Space-Filling Curve Approach. Lecture Notes in Computer Science, 2000, , 815-823.	1.3	30
54	Atmospheric and ocean modeling with an adaptive finite element solver for the shallow-water equations. Applied Numerical Mathematics, 1998, 26, 217-226.	2.1	36

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55	An Adaptive Semi-Lagrangian Advection Scheme and Its Parallelization. Monthly Weather Review, 1996, 124, 2386-2395.	1.4	28