JÃ¶rn Behrens

List of Publications by Year
in descending order

55 papers	1,164 citations	361413 20 h-index	395702 33 g-index
77 all docs	77 docs citations	77 times ranked	1162 citing authors

#	Article	IF	Citations
1	Probabilistic Tsunami Hazard Analysis: Multiple Sources and Global Applications. Reviews of Geophysics, 2017, 55, 1158-1198.	23.0	170
2	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
3	Tsunami simulations on several scales. Ocean Dynamics, 2008, 58, 429-440.	2.2	65
4	Probabilistic Tsunami Hazard and Risk Analysis: A Review of Research Gaps. Frontiers in Earth Science, 2021, 9, .	1.8	65
5	amatos: Parallel adaptive mesh generator for atmospheric and oceanic simulation. Ocean Modelling, 2005, 10, 171-183.	2.4	64
6	A new multi-sensor approach to simulation assisted tsunami early warning. Natural Hazards and Earth System Sciences, 2010, 10, 1085-1100.	3.6	58
7	Grid-free adaptive semi-Lagrangian advection using radial basis functions. Computers and Mathematics With Applications, 2002, 43, 319-327.	2.7	52
8	The Making of the NEAM Tsunami Hazard Model 2018 (NEAMTHM18). Frontiers in Earth Science, 2021, 8, .	1.8	50
9	New computational methods in tsunami science. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140382.	3.4	48
10	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
11	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
12	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
13	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
14	Efficiency considerations in triangular adaptive mesh refinement. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2009, 367, 4577-4589.	3.4	30
15	Comparison between adaptive and uniform discontinuous Galerkin simulations in dry 2D bubble experiments. Journal of Computational Physics, 2013, 235, 371-393.	3.8	30
16	Parallelizing an Unstructured Grid Generator with a Space-Filling Curve Approach. Lecture Notes in Computer Science, 2000, , 815-823.	1.3	30
17	An Adaptive Semi-Lagrangian Advection Scheme and Its Parallelization. Monthly Weather Review, 1996, 124, 2386-2395.	1.4	28
18	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

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19	Evolution of Small-Scale Filaments in an Adaptive Advection Model for Idealized Tracer Transport. Monthly Weather Review, 2000, 128, 2976-2982.	1.4	24
20	A parallel adaptive barotropic model of the atmosphere. Journal of Computational Physics, 2007, 223, 609-628.	3.8	23
21	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
22	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
23	Adaptive Atmospheric Modeling: Scientific Computing at Its Best. Computing in Science and Engineering, 2005, 7, 76-83.	1.2	8
24	A well-balanced meshless tsunami propagation and inundation model. Advances in Water Resources, 2018, 115, 273-285.	3.8	8
25	Well-Balanced Inundation Modeling for Shallow-Water Flows with Discontinuous Galerkin Schemes. Springer Proceedings in Mathematics and Statistics, 2014, , 965-973.	0.2	8
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	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
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	An adaptive discontinuous Galerkin method for the simulation of hurricane storm surge. Ocean Dynamics, 2020, 70, 641-666.	2.2	6
30	Duality based error estimation in the presence of discontinuities. Applied Numerical Mathematics, 2019, 144, 83-99.	2.1	5
31	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
32	Principles of Adaptive Atmospheric Modeling. , 2006, , 9-22.		4
33	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
34	Metrics for Performance Quantification of Adaptive Mesh Refinement. Journal of Scientific Computing, 2021, 87, 1.	2.3	3
35	Numerical Methods in Support of Advanced Tsunami Early Warning. , 2010, , 399-416.		3
36	Editorial: From Tsunami Science to Hazard and Risk Assessment: Methods and Models. Frontiers in Earth Science, 2021, 9, .	1.8	3

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37	Optimization of the ADERâ€ÐG method in GPU applied to linear hyperbolic PDEs. International Journal for Numerical Methods in Fluids, 2016, 81, 195-219.	1.6	2
38	A structure-preserving split finite element discretization of the split wave equations. Applied Mathematics and Computation, 2018, 325, 375-400.	2.2	2
39	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
40	Efficiency for Adaptive Triangular Meshes: Key Issues of Future Approaches. SpringerBriefs in Earth System Sciences, 2012, , 35-49.	0.1	2
41	Multiscale Finite Elements for Transient Advection-Diffusion Equations through Advection-Induced Coordinates. Multiscale Modeling and Simulation, 2020, 18, 543-571.	1.6	1
42	Semi-Lagrangian Subgrid Reconstruction for Advection-Dominant Multiscale Problems with Rough Data. Journal of Scientific Computing, 2021, 87, 1.	2.3	1
43	Data Structures for Computational Efficiency. , 2006, , 49-69.		1
44	A Discontinuous Galerkin Method forÂNon-hydrostatic Shallow Water Flows. Springer Proceedings in Mathematics and Statistics, 2017, , 247-255.	0.2	1
45	Enabling Adaptive Mesh Refinement for Single Components in ECHAM6. Lecture Notes in Computer Science, 2018, , 56-68.	1.3	1
46	Parallelizing an Adaptive Dynamical Grid Generator in a Climatological Trace Gas Transport Application. Lecture Notes in Computer Science, 2001, , 170-176.	1.3	1
47	Numerical methods and scientific computing for climate and geosciences. , 2016, , 281-293.		1
48	Rotating Shallow Water Equations in Spherical Geometries. , 2006, , 167-172.		0
49	A Mathematics Inspired Notation of Scales in the Climate System. Geosciences (Switzerland), 2018, 8, 213.	2.2	0
50	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
51	Some Basic Mathematical Tools. , 2006, , 161-162.		0
52	Metrics for Parallelizing Irregularly Structured Problems. , 2006, , 163-165.		0
53	Issues in Parallelization of Irregularly Structured Problems. , 2006, , 71-78.		0
54	Numerical Treatment of Differential Operators on Adaptive Grids. , 2006, , 79-90.		0

#	Article	IF	Citations
55	Discretization of Conservation Laws. , 2006, , 91-121.		0