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List of Publications by Year
in descending order

48 papers	1,583 citations	430874 18 h-index	315739 38 g-index
52 all docs	52 docs citations	52 times ranked	1143 citing authors

#	Article	IF	Citations
1	Feasibility and clinical usefulness of modelling glioblastoma migration in adjuvant radiotherapy. Zeitschrift Fur Medizinische Physik, 2022, 32, 149-158.	1.5	3
2	A comprehensive study on electroencephalography and magnetoencephalography sensitivity to cortical and subcortical sources. Human Brain Mapping, 2021, 42, 978-992.	3.6	61
3	The Dune framework: Basic concepts and recent developments. Computers and Mathematics With Applications, 2021, 81, 75-112.	2.7	57
4	Estimating the extent of glioblastoma invasion. Journal of Mathematical Biology, 2021, 82, 10.	1.9	6
5	Towards Local-Failure Local-Recovery inÂPDE Frameworks: The Case of Linear Solvers. Lecture Notes in Computer Science, 2021, , 17-38.	1.3	1
6	Lightweight, semi-automatic variability extraction: a case study on scientific computing. Empirical Software Engineering, 2021, 26, 1.	3.9	0
7	An Unfitted dG Scheme for Coupled Bulk-Surface PDEs on Complex Geometries. Computational Methods in Applied Mathematics, 2021, 21, 569-591.	0.8	1
8	DUNEuroâ€"A software toolbox for forward modeling in bioelectromagnetism. PLoS ONE, 2021, 16, e0252431.	2.5	25
9	Modeling glioma invasion with anisotropy- and hypoxia-triggered motility enhancement: From subcellular dynamics to macroscopic PDEs with multiple taxis. Mathematical Models and Methods in Applied Sciences, 2021, 31, 177-222.	3.3	14
10	A Stabilized DG Cut Cell Method for Discretizing the Linear Transport Equation. SIAM Journal of Scientific Computing, 2020, 42, A3677-A3703.	2.8	18
11	A novel method for calibrating head models to account for variability in conductivity and its evaluation in a sphere model. Physics in Medicine and Biology, 2020, 65, 245043.	3.0	5
12	A Reactionâ€"Diffusionâ€"Advection Model for the Establishment and Maintenance of Transport-Mediated Polarity and Symmetry Breaking. Frontiers in Applied Mathematics and Statistics, 2020, 6, .	1.3	1
13	Efficient implementation of the localized orthogonal decomposition method. Computer Methods in Applied Mechanics and Engineering, 2019, 350, 123-153.	6.6	19
14	A realistic, accurate and fast source modeling approach for the EEG forward problem. NeuroImage, 2019, 184, 56-67.	4.2	30
15	Geometric Reconstruction of Implicitly Defined Surfaces and Domains with Topological Guarantees. ACM Transactions on Mathematical Software, 2018, 44, 1-20.	2.9	12
16	A High-Level C++ Approach to Manage Local Errors, Asynchrony and Faults in an MPI Application. , 2018, , .		4
17	The Discontinuous Galerkin Finite Element Method for Solving the MEG and the Combined MEG/EEG Forward Problem. Frontiers in Neuroscience, 2018, 12, 30.	2.8	36
18	Galerkin local maximum entropy method. International Journal for Numerical Methods in Fluids, 2018, 88, 100-115.	1.6	1

#	Article	IF	Citations
19	A Discontinuous Galerkin Method to Solve the EEG Forward Problem Using the Subtraction Approach. SIAM Journal of Scientific Computing, 2017, 39, B138-B164.	2.8	48
20	On a structured multiscale model for acid-mediated tumor invasion: The effects of adhesion and proliferation. Mathematical Models and Methods in Applied Sciences, 2017, 27, 1355-1390.	3.3	28
21	Stencil computations for PDEâ€based applications with examples from DUNE and hypre. Concurrency Computation Practice and Experience, 2017, 29, e4097.	2.2	6
22	Variability of stencil computations for porous media. Concurrency Computation Practice and Experience, 2017, 29, e4119.	2.2	2
23	ArbiLoMod, a Simulation Technique Designed for Arbitrary Local Modifications. SIAM Journal of Scientific Computing, 2017, 39, A1435-A1465.	2.8	12
24	A phase field approach to pressurized fractures using discontinuous Galerkin methods. Mathematics and Computers in Simulation, 2017, 137, 266-285.	4.4	9
25	A Mixed Finite Element Method to Solve the EEG Forward Problem. IEEE Transactions on Medical Imaging, 2017, 36, 930-941.	8.9	30
26	Simple and fast spectral domain algorithm for quantitative phase imaging of living cells with digital holographic microscopy. Optics Letters, 2017, 42, 227.	3.3	79
27	Effective equations for anisotropic glioma spread with proliferation: a multiscale approach and comparisons with previous settings. Mathematical Medicine and Biology, 2016, 33, 435-459.	1.2	28
28	The Unfitted Discontinuous Galerkin Method for Solving the EEG Forward Problem. IEEE Transactions on Biomedical Engineering, 2016, 63, 2564-2575.	4.2	21
29	Hardware-Based Efficiency Advances in the EXA-DUNE Project. Lecture Notes in Computational Science and Engineering, 2016, , 3-23.	0.3	5
30	A multiscale model for glioma spread including cell-tissue interactions and proliferation. Mathematical Biosciences and Engineering, 2016, 13, 443-460.	1.9	44
31	Influence of cell shape, inhomogeneities and diffusion barriers in cell polarization models. Physical Biology, 2015, 12, 066014.	1.8	42
32	Glioma follow white matter tracts: a multiscale DTI-based model. Journal of Mathematical Biology, 2015, 71, 551-582.	1.9	88
33	A Case Study on a Quality Assurance Process for a Scientific Framework. Computing in Science and Engineering, 2014, 16, 58-66.	1.2	1
34	Boundary control of bidomain equations with state-dependent switching source functions in the ionic model. Journal of Computational Physics, 2014, 273, 227-242.	3.8	2
35	EXA-DUNE: Flexible PDE Solvers, Numerical Methods and Applications. Lecture Notes in Computer Science, 2014, , 530-541.	1.3	9
36	Heterogeneous Coupling for Implicitly Described Domains. Lecture Notes in Computational Science and Engineering, 2014, , 809-817.	0.3	1

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37	An unfitted interior penalty discontinuous Galerkin method for incompressible Navier–Stokes two‐phase flow. International Journal for Numerical Methods in Fluids, 2013, 71, 269-293.	1.6	41
38	Design and rationale of a quality assurance process for a scientific framework. , 2013, , .		3
39	System Testing a Scientific Framework Using a Regression-Test Environment. Computing in Science and Engineering, 2012, 14, 38-45.	1.2	12
40	Dune-UDG: A Cut-Cell Framework for Unfitted Discontinuous Galerkin Methods. , 2012, , 89-100.		15
41	An Unfitted Discontinuous Galerkin method for pore-scale simulations of solute transport. Mathematics and Computers in Simulation, 2011, 81, 2051-2061.	4.4	12
42	Supporting the testing of scientific frameworks with software product line engineering. , 2011, , .		8
43	An unfitted finite element method using discontinuous Galerkin. International Journal for Numerical Methods in Engineering, 2009, 79, 1557-1576.	2.8	103
44	Modelling in vitro growth of dense root networks. Journal of Theoretical Biology, 2008, 254, 99-109.	1.7	34
45	A generic grid interface for parallel and adaptive scientific computing. Part I: abstract framework. Computing (Vienna/New York), 2008, 82, 103-119.	4.8	258
46	A generic grid interface for parallel and adaptive scientific computing. Part II: implementation and tests in DUNE. Computing (Vienna/New York), 2008, 82, 121-138.	4.8	332
47	Modeling and Simulation of Hairy Root Growth. , 2008, , 101-115.		2
48	Towards a Unified Framework for Scientific Computing. , 2005, , 167-174.		9