Ch Engwer

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/5287364/publications.pdf

Version: 2024-02-01

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	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
2	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
3	An unfitted finite element method using discontinuous Galerkin. International Journal for Numerical Methods in Engineering, 2009, 79, 1557-1576.	2.8	103
4	Glioma follow white matter tracts: a multiscale DTI-based model. Journal of Mathematical Biology, 2015, 71, 551-582.	1.9	88
5	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
6	A comprehensive study on electroencephalography and magnetoencephalography sensitivity to cortical and subcortical sources. Human Brain Mapping, 2021, 42, 978-992.	3.6	61
7	The Dune framework: Basic concepts and recent developments. Computers and Mathematics With Applications, 2021, 81, 75-112.	2.7	57
8	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
9	A multiscale model for glioma spread including cell-tissue interactions and proliferation. Mathematical Biosciences and Engineering, 2016, 13, 443-460.	1.9	44
10	Influence of cell shape, inhomogeneities and diffusion barriers in cell polarization models. Physical Biology, 2015, 12, 066014.	1.8	42
11	An unfitted interior penalty discontinuous Galerkin method for incompressible Navierâ€“Stokes twoâ€phase flow. International Journal for Numerical Methods in Fluids, 2013, 71, 269-293.	1.6	41
12	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
13	Modelling in vitro growth of dense root networks. Journal of Theoretical Biology, 2008, 254, 99-109.	1.7	34
14	A Mixed Finite Element Method to Solve the EEG Forward Problem. IEEE Transactions on Medical Imaging, 2017, 36, 930-941.	8.9	30
15	A realistic, accurate and fast source modeling approach for the EEG forward problem. NeuroImage, 2019, 184, 56-67.	4.2	30
16	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
17	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
18	DUNEuroâ€”A software toolbox for forward modeling in bioelectromagnetism. PLoS ONE, 2021, 16, e0252431.	2.5	25

#	Article	IF	Citations
19	The Unfitted Discontinuous Galerkin Method for Solving the EEG Forward Problem. IEEE Transactions on Biomedical Engineering, 2016, 63, 2564-2575.	4.2	21
20	Efficient implementation of the localized orthogonal decomposition method. Computer Methods in Applied Mechanics and Engineering, 2019, 350, 123-153.	6.6	19
21	A Stabilized DG Cut Cell Method for Discretizing the Linear Transport Equation. SIAM Journal of Scientific Computing, 2020, 42, A3677-A3703.	2.8	18
22	Dune-UDG: A Cut-Cell Framework for Unfitted Discontinuous Galerkin Methods. , 2012, , 89-100.		15
23	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
24	An Unfitted Discontinuous Galerkin method for pore-scale simulations of solute transport. Mathematics and Computers in Simulation, 2011, 81, 2051-2061.	4.4	12
25	System Testing a Scientific Framework Using a Regression-Test Environment. Computing in Science and Engineering, 2012, 14, 38-45.	1.2	12
26	Geometric Reconstruction of Implicitly Defined Surfaces and Domains with Topological Guarantees. ACM Transactions on Mathematical Software, 2018, 44, 1-20.	2.9	12
27	ArbiLoMod, a Simulation Technique Designed for Arbitrary Local Modifications. SIAM Journal of Scientific Computing, 2017, 39, A1435-A1465.	2.8	12
28	Towards a Unified Framework for Scientific Computing. , 2005, , 167-174.		9
29	A phase field approach to pressurized fractures using discontinuous Galerkin methods. Mathematics and Computers in Simulation, 2017, 137, 266-285.	4.4	9
30	EXA-DUNE: Flexible PDE Solvers, Numerical Methods and Applications. Lecture Notes in Computer Science, 2014, , 530-541.	1.3	9
31	Supporting the testing of scientific frameworks with software product line engineering. , 2011, , .		8
32	Stencil computations for PDEâ€based applications with examples from DUNE and hypre. Concurrency Computation Practice and Experience, 2017, 29, e4097.	2.2	6
33	Estimating the extent of glioblastoma invasion. Journal of Mathematical Biology, 2021, 82, 10.	1.9	6
34	Hardware-Based Efficiency Advances in the EXA-DUNE Project. Lecture Notes in Computational Science and Engineering, 2016, , 3-23.	0.3	5
35	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
36	A High-Level C++ Approach to Manage Local Errors, Asynchrony and Faults in an MPI Application. , 2018, , .		4

#	Article	IF	Citations
37	Design and rationale of a quality assurance process for a scientific framework. , 2013, , .		3
38	Feasibility and clinical usefulness of modelling glioblastoma migration in adjuvant radiotherapy. Zeitschrift Fur Medizinische Physik, 2022, 32, 149-158.	1.5	3
39	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
40	Variability of stencil computations for porous media. Concurrency Computation Practice and Experience, 2017, 29, e4119.	2.2	2
41	Modeling and Simulation of Hairy Root Growth. , 2008, , 101-115.		2
42	A Case Study on a Quality Assurance Process for a Scientific Framework. Computing in Science and Engineering, 2014, 16, 58-66.	1.2	1
43	Galerkin local maximum entropy method. International Journal for Numerical Methods in Fluids, 2018, 88, 100-115.	1.6	1
44	Towards Local-Failure Local-Recovery inÂPDE Frameworks: The Case of Linear Solvers. Lecture Notes in Computer Science, 2021, , 17-38.	1.3	1
45	An Unfitted dG Scheme for Coupled Bulk-Surface PDEs on Complex Geometries. Computational Methods in Applied Mathematics, 2021, 21, 569-591.	0.8	1
46	Heterogeneous Coupling for Implicitly Described Domains. Lecture Notes in Computational Science and Engineering, 2014, , 809-817.	0.3	1
47	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
48	Lightweight, semi-automatic variability extraction: a case study on scientific computing. Empirical Software Engineering, 2021, 26, 1.	3.9	0