

Xiaozhe Hu

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1212812/publications.pdf>

Version: 2024-02-01

60
papers

1,114
citations

516561

16
h-index

454834

30
g-index

60
all docs

60
docs citations

60
times ranked

946
citing authors

#	ARTICLE	IF	CITATIONS
1	Monolithic Multigrid for a Reduced-Quadrature Discretization of Poroelasticity. <i>SIAM Journal of Scientific Computing</i> , 2023, 45, S54-S81.	1.3	4
2	Enforcing exact physics in scientific machine learning: A data-driven exterior calculus on graphs. <i>Journal of Computational Physics</i> , 2022, 456, 110969.	1.9	12
3	Random-Walk Based Approximate k-Nearest Neighbors Algorithm for Diffusion State Distance. <i>Lecture Notes in Computer Science</i> , 2022, , 3-15.	1.0	0
4	An efficient high-order numerical solver for diffusion equations with strong anisotropy. <i>Computer Physics Communications</i> , 2022, 276, 108333.	3.0	3
5	A stabilized hybrid mixed finite element method for poroelasticity. <i>Computational Geosciences</i> , 2021, 25, 757-774.	1.2	13
6	Block preconditioners for mixed-dimensional discretization of flow in fractured porous media. <i>Computational Geosciences</i> , 2021, 25, 671-686.	1.2	10
7	A Finite-Element Framework for a Mimetic Finite-Difference Discretization of Maxwell's Equations. <i>SIAM Journal of Scientific Computing</i> , 2021, 43, A2638-A2659.	1.3	5
8	A Posteriori Error Estimates for Multilevel Methods for Graph Laplacians. <i>SIAM Journal of Scientific Computing</i> , 2021, 43, S727-S742.	1.3	2
9	Diffusion State Distances: Multitemporal Analysis, Fast Algorithms, and Applications to Biological Networks. <i>SIAM Journal on Mathematics of Data Science</i> , 2021, 3, 142-170.	1.0	5
10	Well-Posedness and Discretization for a Class of Models for Mixed-Dimensional Problems with High-Dimensional Gap. <i>SIAM Journal on Applied Mathematics</i> , 2021, 81, 2218-2245.	0.8	3
11	Auxiliary space preconditioning for mixed finite element discretizations of Richards's equation. <i>Computers and Mathematics With Applications</i> , 2020, 80, 405-416.	1.4	2
12	Mixed-Dimensional Auxiliary Space Preconditioners. <i>SIAM Journal of Scientific Computing</i> , 2020, 42, A3367-A3396.	1.3	7
13	Robust Preconditioners for a New Stabilized Discretization of the Poroelastic Equations. <i>SIAM Journal of Scientific Computing</i> , 2020, 42, B761-B791.	1.3	15
14	Using hierarchical matrices in the solution of the time-fractional heat equation by multigrid waveform relaxation. <i>Journal of Computational Physics</i> , 2020, 416, 109540.	1.9	6
15	Convergence analysis of the Fast Subspace Descent method for convex optimization problems. <i>Mathematics of Computation</i> , 2020, 89, 2249-2282.	1.1	9
16	Randomized and fault-tolerant method of subspace corrections. <i>Research in Mathematical Sciences</i> , 2019, 6, 1.	0.5	0
17	Modifying AMG Coarse Spaces with Weak Approximation Property to Exhibit Approximation in Energy Norm. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2019, 40, 1131-1152.	0.7	2
18	Assessment of network module identification across complex diseases. <i>Nature Methods</i> , 2019, 16, 843-852.	9.0	213

#	ARTICLE	IF	CITATIONS
19	A spatially adaptive high-order meshless method for fluid-structure interactions. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019, 355, 67-93.	3.4	20
20	Common Randomized Shortest Paths (C-RSP): A Simple Yet Effective Framework for Multi-view Graph Embedding. , 2019, , .		5
21	An Adaptive Multigrid Method Based on Path Cover. <i>SIAM Journal of Scientific Computing</i> , 2019, 41, S220-S241.	1.3	10
22	A weak Galerkin finite element method for the Navier-Stokes equations. <i>Journal of Computational and Applied Mathematics</i> , 2019, 362, 614-625.	1.1	28
23	An a posteriori error estimator for the weak Galerkin least-squares finite-element method. <i>Journal of Computational and Applied Mathematics</i> , 2019, 362, 383-399.	1.1	7
24	Anti-myeloma activity and molecular logic operation by Natural Killer cells in microfluidic droplets. <i>Sensors and Actuators B: Chemical</i> , 2019, 282, 580-589.	4.0	14
25	A consistent spatially adaptive smoothed particle hydrodynamics method for fluid-structure interactions. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019, 347, 402-424.	3.4	29
26	Vector-potential finite-element formulations for two-dimensional resistive magnetohydrodynamics. <i>Computers and Mathematics With Applications</i> , 2019, 77, 476-493.	1.4	2
27	New Stabilized Discretizations for Poroelasticity Equations. <i>Lecture Notes in Computer Science</i> , 2019, , 3-14.	1.0	1
28	Computing the diffusion state distance on graphs via algebraic multigrid and random projections. <i>Numerical Linear Algebra With Applications</i> , 2018, 25, e2156.	0.9	7
29	A compatible high-order meshless method for the Stokes equations with applications to suspension flows. <i>Journal of Computational Physics</i> , 2018, 355, 310-326.	1.9	18
30	Weak Galerkin method for the Biot's consolidation model. <i>Computers and Mathematics With Applications</i> , 2018, 75, 2017-2030.	1.4	27
31	Robust Block Preconditioners for Biot's Model. <i>Lecture Notes in Computational Science and Engineering</i> , 2018, , 3-16.	0.1	11
32	Newton Solvers for Drift-Diffusion and Electrokinetic Equations. <i>SIAM Journal of Scientific Computing</i> , 2018, 40, B982-B1006.	1.3	14
33	Optimal Interpolation and Compatible Relaxation in Classical Algebraic Multigrid. <i>SIAM Journal of Scientific Computing</i> , 2018, 40, A1473-A1493.	1.3	17
34	New stabilized discretizations for poroelasticity and the Stokes equations. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2018, 341, 467-484.	3.4	55
35	A nonconforming finite element method for the Biot's consolidation model in poroelasticity. <i>Journal of Computational and Applied Mathematics</i> , 2017, 310, 143-154.	1.1	57
36	Multigrid algorithms for h_p -version interior penalty discontinuous Galerkin methods on polygonal and polyhedral meshes. <i>Calcolo</i> , 2017, 54, 1169-1198.	0.6	24

#	ARTICLE	IF	CITATIONS
37	Numerical studies of a class of linear solvers for fine-scale petroleum reservoir simulation. <i>Computing and Visualization in Science</i> , 2017, 18, 93-102.	1.2	4
38	Robust Solvers for Maxwell's Equations with Dissipative Boundary Conditions. <i>SIAM Journal of Scientific Computing</i> , 2017, 39, S3-S23.	1.3	10
39	Adaptive finite element method for fractional differential equations using hierarchical matrices. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2017, 325, 56-76.	3.4	54
40	On the approximation of Laplacian eigenvalues in graph disaggregation. <i>Linear and Multilinear Algebra</i> , 2017, 65, 1805-1822.	0.5	1
41	A two-grid SA-AMG convergence bound that improves when increasing the polynomial degree. <i>Numerical Linear Algebra With Applications</i> , 2016, 23, 746-771.	0.9	8
42	Compact moving least squares: An optimization framework for generating high-order compact meshless discretizations. <i>Journal of Computational Physics</i> , 2016, 326, 596-611.	1.9	16
43	Robust preconditioners for incompressible MHD models. <i>Journal of Computational Physics</i> , 2016, 316, 721-746.	1.9	47
44	Fast Multilevel Solvers for a Class of Discrete Fourth Order Parabolic Problems. <i>Journal of Scientific Computing</i> , 2016, 69, 201-226.	1.1	2
45	Stability and monotonicity for some discretizations of the Biot's consolidation model. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2016, 298, 183-204.	3.4	81
46	Corrigendum to: "Acceleration of a two-grid method for eigenvalue problems". <i>Mathematics of Computation</i> , 2015, 84, 2701-2704.	1.1	6
47	A Multigrid Solver based on Distributive Smoother and Residual Overweighting for Oseen Problems. <i>Numerical Mathematics</i> , 2015, 8, 237-252.	0.6	9
48	Local Fourier Analysis of Multigrid Methods with Polynomial Smoothers and Aggressive Coarsening. <i>Numerical Mathematics</i> , 2015, 8, 1-21.	0.6	6
49	A finite element framework for some mimetic finite difference discretizations. <i>Computers and Mathematics With Applications</i> , 2015, 70, 2661-2673.	1.4	9
50	On Adaptive Eulerian-Lagrangian Method for Linear Convection-Diffusion Problems. <i>Journal of Scientific Computing</i> , 2014, 58, 90-114.	1.1	5
51	Two-Grid Methods for Maxwell Eigenvalue Problems. <i>SIAM Journal on Numerical Analysis</i> , 2014, 52, 2027-2047.	1.1	45
52	Application of auxiliary space preconditioning in field-scale reservoir simulation. <i>Science China Mathematics</i> , 2013, 56, 2737-2751.	0.8	13
53	Combined Preconditioning with Applications in Reservoir Simulation. <i>Multiscale Modeling and Simulation</i> , 2013, 11, 507-521.	0.6	23
54	Comparative Convergence Analysis of Nonlinear AMLI-Cycle Multigrid. <i>SIAM Journal on Numerical Analysis</i> , 2013, 51, 1349-1369.	1.1	11

#	ARTICLE	IF	CITATIONS
55	A Parallel Auxiliary Grid Algebraic Multigrid Method for Graphic Processing Units. SIAM Journal of Scientific Computing, 2013, 35, C263-C283.	1.3	10
56	Development of A Fast Auxiliary Subspace Pre-conditioner for Numerical Reservoir Simulators. , 2011, , .		34
57	Acceleration of a two-grid method for eigenvalue problems. Mathematics of Computation, 2011, 80, 1287-1301.	1.1	56
58	The boundary penalty method for the diffusion equation subject to the specification of mass. Applied Mathematics and Computation, 2007, 186, 735-748.	1.4	1
59	On the iterative algorithm for large sparse saddle point problems. Applied Mathematics and Computation, 2006, 178, 372-379.	1.4	4
60	Preconditioners for elliptic problems via non-uniform meshes. Applied Mathematics and Computation, 2006, 181, 1182-1198.	1.4	2