

Yalchin Efendiev

List of Publications by Year in descending order

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51
papers

1,837
citations

279798

23
h-index

254184

43
g-index

53
all docs

53
docs citations

53
times ranked

575
citing authors

#	ARTICLE	IF	CITATIONS
1	Partially explicit time discretization for nonlinear time fractional diffusion equations. Communications in Nonlinear Science and Numerical Simulation, 2022, 113, 106440.	3.3	3
2	Online Coupled Generalized Multiscale Finite Element Method for the Poroelasticity Problem in Fractured and Heterogeneous Media. Fluids, 2021, 6, 298.	1.7	4
3	Contrast-Independent, Partially-Explicit Time Discretizations for Nonlinear Multiscale Problems. Mathematics, 2021, 9, 3000.	2.2	6
4	Deep global model reduction learning in porous media flow simulation. Computational Geosciences, 2020, 24, 261-274.	2.4	12
5	Learning Algorithms for Coarsening Uncertainty Space and Applications to Multiscale Simulations. Mathematics, 2020, 8, 720.	2.2	8
6	Mixed Generalized Multiscale Finite Element Method for a Simplified Magnetohydrodynamics Problem in Perforated Domains. Computation, 2020, 8, 58.	2.0	2
7	Multiscale Model Reduction of the Unsaturated Flow Problem in Heterogeneous Porous Media with Rough Surface Topography. Mathematics, 2020, 8, 904.	2.2	9
8	Constraint energy minimizing generalized multiscale finite element method for dual continuum model. Communications in Mathematical Sciences, 2020, 18, 663-685.	1.0	10
9	Selected Applications of the Theory of Connections: A Technique for Analytical Constraint Embedding. Mathematics, 2019, 7, 537.	2.2	10
10	Prediction of Relative Air Permeability of Porous Media With Weibull Pore Size Distribution. Water Resources Research, 2019, 55, 10037-10049.	4.2	9
11	Prediction of Discretization of GMsFEM Using Deep Learning. Mathematics, 2019, 7, 412.	2.2	9
12	Generalized Multiscale Finite Element Methods with energy minimizing oversampling. International Journal for Numerical Methods in Engineering, 2019, 117, 316-343.	2.8	6
13	Generalized multiscale finite elements for simulation of elastic-wave propagation in fractured media. Geophysics, 2018, 83, WA9-WA20.	2.6	29
14	Fast online generalized multiscale finite element method using constraint energy minimization. Journal of Computational Physics, 2018, 355, 450-463.	3.8	35
15	Non-local multi-continua upscaling for flows in heterogeneous fractured media. Journal of Computational Physics, 2018, 372, 22-34.	3.8	72
16	Constraint Energy Minimizing Generalized Multiscale Finite Element Method. Computer Methods in Applied Mechanics and Engineering, 2018, 339, 298-319.	6.6	109
17	Constraint energy minimizing generalized multiscale finite element method in the mixed formulation. Computational Geosciences, 2018, 22, 677-693.	2.4	30
18	Space-time GMsFEM for transport equations. GEM - International Journal on Geomathematics, 2018, 9, 265-292.	1.6	1

#	ARTICLE	IF	CITATIONS
19	Residual-driven online multiscale methods for acoustic-wave propagation in 2D heterogeneous media. <i>Geophysics</i> , 2017, 82, T69-T77.	2.6	2
20	Coupling of multiscale and multi-continuum approaches. <i>GEM - International Journal on Geomathematics</i> , 2017, 8, 9-41.	1.6	39
21	Online adaptive local multiscale model reduction for heterogeneous problems in perforated domains. <i>Applicable Analysis</i> , 2017, 96, 2002-2031.	1.3	35
22	An Online Generalized Multiscale Discontinuous Galerkin Method (GMsDGM) for Flows in Heterogeneous Media. <i>Communications in Computational Physics</i> , 2017, 21, 401-422.	1.7	28
23	Online Adaptive Local-Global Model Reduction for Flows in Heterogeneous Porous Media. <i>Computation</i> , 2016, 4, 22.	2.0	23
24	Adaptive Mixed GMsFEM for Flows in Heterogeneous Media. <i>Numerical Mathematics</i> , 2016, 9, 497-527.	1.3	22
25	Multiscale model reduction for shale gas transport in fractured media. <i>Computational Geosciences</i> , 2016, 20, 953-973.	2.4	38
26	Adaptive multiscale model reduction with Generalized Multiscale Finite Element Methods. <i>Journal of Computational Physics</i> , 2016, 320, 69-95.	3.8	141
27	Generalized multiscale finite element methods for problems in perforated heterogeneous domains. <i>Applicable Analysis</i> , 2016, 95, 2254-2279.	1.3	36
28	A generalized multiscale finite element method for elastic wave propagation in fractured media. <i>GEM - International Journal on Geomathematics</i> , 2016, 7, 163-182.	1.6	28
29	Homogenization of Brinkman flows in heterogeneous dynamic media. <i>Stochastics and Partial Differential Equations: Analysis and Computations</i> , 2015, 3, 479-505.	0.9	3
30	Multilevel Markov Chain Monte Carlo Method for High-Contrast Single-Phase Flow Problems. <i>Communications in Computational Physics</i> , 2015, 17, 259-286.	1.7	22
31	Mixed Generalized Multiscale Finite Element Methods and Applications. <i>Multiscale Modeling and Simulation</i> , 2015, 13, 338-366.	1.6	114
32	A numerical homogenization method for heterogeneous, anisotropic elastic media based on multiscale theory. <i>Geophysics</i> , 2015, 80, D385-D401.	2.6	32
33	Hierarchical multiscale modeling for flows in fractured media using generalized multiscale finite element method. <i>GEM - International Journal on Geomathematics</i> , 2015, 6, 141-162.	1.6	43
34	Generalized multiscale finite element method for elasticity equations. <i>GEM - International Journal on Geomathematics</i> , 2014, 5, 225-254.	1.6	47
35	Generalized Multiscale Finite Element Methods for Wave Propagation in Heterogeneous Media. <i>Multiscale Modeling and Simulation</i> , 2014, 12, 1691-1721.	1.6	91
36	Bayesian Uncertainty Quantification for Subsurface Inversion Using a Multiscale Hierarchical Model. <i>Technometrics</i> , 2014, 56, 381-392.	1.9	14

#	ARTICLE	IF	CITATIONS
37	Multiscale modeling of acoustic wave propagation in 2D media. <i>Geophysics</i> , 2014, 79, T61-T75.	2.6	33
38	Effective equations for fluid-structure interaction with applications to poroelasticity. <i>Applicable Analysis</i> , 2014, 93, 771-790.	1.3	26
39	Generalized Multiscale Finite Element Methods. <i>Nonlinear Elliptic Equations. Communications in Computational Physics</i> , 2014, 15, 733-755.	1.7	32
40	Multiscale Lattice Boltzmann Method for Flow Simulations in Highly Heterogenous Porous Media. , 2013, , .		3
41	Generalized multiscale finite element methods (GMsFEM). <i>Journal of Computational Physics</i> , 2013, 251, 116-135.	3.8	477
42	An Efficient Hierarchical Multiscale Finite Element Method for Stokes Equations in Slowly Varying Media. <i>Multiscale Modeling and Simulation</i> , 2013, 11, 30-58.	1.6	30
43	A multiscale method for elastic wave equation modeling. , 2013, , .		3
44	Multiscale Finite Element Methods for Flows on Rough Surfaces. <i>Communications in Computational Physics</i> , 2013, 14, 979-1000.	1.7	2
45	Robust Two-level Domain Decomposition Preconditioners for High-contrast Anisotropic Flows in Multiscale Media. <i>Computational Methods in Applied Mathematics</i> , 2012, 12, 415-436.	0.8	14
46	A priori estimates for two multiscale finite element methods using multiple global fields to wave equations. <i>Numerical Methods for Partial Differential Equations</i> , 2012, 28, 1869-1892.	3.6	11
47	On homogenization of stokes flow in slowly varying media with applications to fluidâ€“structure interaction. <i>GEM - International Journal on Geomathematics</i> , 2011, 2, 281-305.	1.6	21
48	Mixed multiscale finite element methods using approximate global information based on partial upscaling. <i>Computational Geosciences</i> , 2010, 14, 319-341.	2.4	18
49	Modified Markov Chain Monte Carlo Method forÂDynamic Data Integration Using Streamline Approach. <i>Mathematical Geosciences</i> , 2008, 40, 213-232.	2.4	14
50	Improving predictions for water spills using DDDAS. <i>Parallel and Distributed Processing Symposium (IPDPS), Proceedings of the International Conference on</i> , 2008, , .	1.0	0
51	Numerical Homogenization of Monotone Elliptic Operators. <i>Multiscale Modeling and Simulation</i> , 2003, 2, 62-79.	1.6	29