

# Yalchin Efendiev

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2215550/publications.pdf>

Version: 2024-02-01

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	Generalized multiscale finite element methods (GMsFEM). Journal of Computational Physics, 2013, 251, 116-135.	3.8	477
2	Adaptive multiscale model reduction with Generalized Multiscale Finite Element Methods. Journal of Computational Physics, 2016, 320, 69-95.	3.8	141
3	Mixed Generalized Multiscale Finite Element Methods and Applications. Multiscale Modeling and Simulation, 2015, 13, 338-366.	1.6	114
4	Constraint Energy Minimizing Generalized Multiscale Finite Element Method. Computer Methods in Applied Mechanics and Engineering, 2018, 339, 298-319.	6.6	109
5	Generalized Multiscale Finite Element Methods for Wave Propagation in Heterogeneous Media. Multiscale Modeling and Simulation, 2014, 12, 1691-1721.	1.6	91
6	Non-local multi-continua upscaling for flows in heterogeneous fractured media. Journal of Computational Physics, 2018, 372, 22-34.	3.8	72
7	Generalized multiscale finite element method for elasticity equations. GEM - International Journal on Geomathematics, 2014, 5, 225-254.	1.6	47
8	Hierarchical multiscale modeling for flows in fractured media using generalized multiscale finite element method. GEM - International Journal on Geomathematics, 2015, 6, 141-162.	1.6	43
9	Coupling of multiscale and multi-continuum approaches. GEM - International Journal on Geomathematics, 2017, 8, 9-41.	1.6	39
10	Multiscale model reduction for shale gas transport in fractured media. Computational Geosciences, 2016, 20, 953-973.	2.4	38
11	Generalized multiscale finite element methods for problems in perforated heterogeneous domains. Applicable Analysis, 2016, 95, 2254-2279.	1.3	36
12	Online adaptive local multiscale model reduction for heterogeneous problems in perforated domains. Applicable Analysis, 2017, 96, 2002-2031.	1.3	35
13	Fast online generalized multiscale finite element method using constraint energy minimization. Journal of Computational Physics, 2018, 355, 450-463.	3.8	35
14	Multiscale modeling of acoustic wave propagation in 2D media. Geophysics, 2014, 79, T61-T75.	2.6	33
15	Generalized Multiscale Finite Element Methods. Nonlinear Elliptic Equations. Communications in Computational Physics, 2014, 15, 733-755.	1.7	32
16	A numerical homogenization method for heterogeneous, anisotropic elastic media based on multiscale theory. Geophysics, 2015, 80, D385-D401.	2.6	32
17	An Efficient Hierarchical Multiscale Finite Element Method for Stokes Equations in Slowly Varying Media. Multiscale Modeling and Simulation, 2013, 11, 30-58.	1.6	30
18	Constraint energy minimizing generalized multiscale finite element method in the mixed formulation. Computational Geosciences, 2018, 22, 677-693.	2.4	30

#	ARTICLE	IF	CITATIONS
19	Numerical Homogenization of Monotone Elliptic Operators. Multiscale Modeling and Simulation, 2003, 2, 62-79.	1.6	29
20	Generalized multiscale finite elements for simulation of elastic-wave propagation in fractured media. Geophysics, 2018, 83, WA9-WA20.	2.6	29
21	A generalized multiscale finite element method for elastic wave propagation in fractured media. GEM - International Journal on Geomathematics, 2016, 7, 163-182.	1.6	28
22	An Online Generalized Multiscale Discontinuous Galerkin Method (GMsDGM) for Flows in Heterogeneous Media. Communications in Computational Physics, 2017, 21, 401-422.	1.7	28
23	Effective equations for fluid-structure interaction with applications to poroelasticity. Applicable Analysis, 2014, 93, 771-790.	1.3	26
24	Online Adaptive Local-Global Model Reduction for Flows in Heterogeneous Porous Media. Computation, 2016, 4, 22.	2.0	23
25	Multilevel Markov Chain Monte Carlo Method for High-Contrast Single-Phase Flow Problems. Communications in Computational Physics, 2015, 17, 259-286.	1.7	22
26	Adaptive Mixed GMsFEM for Flows in Heterogeneous Media. Numerical Mathematics, 2016, 9, 497-527.	1.3	22
27	On homogenization of stokes flow in slowly varying media with applications to fluid-structure interaction. GEM - International Journal on Geomathematics, 2011, 2, 281-305.	1.6	21
28	Mixed multiscale finite element methods using approximate global information based on partial upscaling. Computational Geosciences, 2010, 14, 319-341.	2.4	18
29	Modified Markov Chain Monte Carlo Method for Dynamic Data Integration Using Streamline Approach. Mathematical Geosciences, 2008, 40, 213-232.	2.4	14
30	Robust Two-level Domain Decomposition Preconditioners for High-contrast Anisotropic Flows in Multiscale Media. Computational Methods in Applied Mathematics, 2012, 12, 415-436.	0.8	14
31	Bayesian Uncertainty Quantification for Subsurface Inversion Using a Multiscale Hierarchical Model. Technometrics, 2014, 56, 381-392.	1.9	14
32	Deep global model reduction learning in porous media flow simulation. Computational Geosciences, 2020, 24, 261-274.	2.4	12
33	A priori estimates for two multiscale finite element methods using multiple global fields to wave equations. Numerical Methods for Partial Differential Equations, 2012, 28, 1869-1892.	3.6	11
34	Selected Applications of the Theory of Connections: A Technique for Analytical Constraint Embedding. Mathematics, 2019, 7, 537.	2.2	10
35	Constraint energy minimizing generalized multiscale finite element method for dual continuum model. Communications in Mathematical Sciences, 2020, 18, 663-685.	1.0	10
36	Prediction of Relative Air Permeability of Porous Media With Weibull Pore Size Distribution. Water Resources Research, 2019, 55, 10037-10049.	4.2	9

#	ARTICLE	IF	CITATIONS
37	Prediction of Discretization of GMsFEM Using Deep Learning. Mathematics, 2019, 7, 412.	2.2	9
38	Multiscale Model Reduction of the Unsaturated Flow Problem in Heterogeneous Porous Media with Rough Surface Topography. Mathematics, 2020, 8, 904.	2.2	9
39	Learning Algorithms for Coarsening Uncertainty Space and Applications to Multiscale Simulations. Mathematics, 2020, 8, 720.	2.2	8
40	Generalized Multiscale Finite Element Methods with energy minimizing oversampling. International Journal for Numerical Methods in Engineering, 2019, 117, 316-343.	2.8	6
41	Contrast-Independent, Partially-Explicit Time Discretizations for Nonlinear Multiscale Problems. Mathematics, 2021, 9, 3000.	2.2	6
42	Online Coupled Generalized Multiscale Finite Element Method for the Poroelasticity Problem in Fractured and Heterogeneous Media. Fluids, 2021, 6, 298.	1.7	4
43	Multiscale Lattice Boltzmann Method for Flow Simulations in Highly Heterogeneous Porous Media. , 2013, , .		3
44	A multiscale method for elastic wave equation modeling. , 2013, , .		3
45	Homogenization of Brinkman flows in heterogeneous dynamic media. Stochastics and Partial Differential Equations: Analysis and Computations, 2015, 3, 479-505.	0.9	3
46	Partially explicit time discretization for nonlinear time fractional diffusion equations. Communications in Nonlinear Science and Numerical Simulation, 2022, 113, 106440.	3.3	3
47	Multiscale Finite Element Methods for Flows on Rough Surfaces. Communications in Computational Physics, 2013, 14, 979-1000.	1.7	2
48	Residual-driven online multiscale methods for acoustic-wave propagation in 2D heterogeneous media. Geophysics, 2017, 82, T69-T77.	2.6	2
49	Mixed Generalized Multiscale Finite Element Method for a Simplified Magnetohydrodynamics Problem in Perforated Domains. Computation, 2020, 8, 58.	2.0	2
50	Space-time GMsFEM for transport equations. GEM - International Journal on Geomathematics, 2018, 9, 265-292.	1.6	1
51	Improving predictions for water spills using DDDAS. Parallel and Distributed Processing Symposium (IPDPS), Proceedings of the International Conference on, 2008, , .	1.0	0