

Assyr Abdulle

List of Publications by Year in descending order

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61
papers

1,821
citations

331670

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265206

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g-index

64
all docs

64
docs citations

64
times ranked

771
citing authors

#	ARTICLE	IF	CITATIONS
1	Convergence analysis of explicit stabilized integrators for parabolic semilinear stochastic PDEs. IMA Journal of Numerical Analysis, 2023, 43, 258-292.	2.9	2
2	Eigenfunction martingale estimating functions and filtered data for drift estimation of discretely observed multiscale diffusions. Statistics and Computing, 2022, 32, 34.	1.5	4
3	A probabilistic finite element method based on random meshes: A posteriori error estimators and Bayesian inverse problems. Computer Methods in Applied Mechanics and Engineering, 2021, 384, 113961.	6.6	5
4	Ensemble Kalman Filter for Multiscale Inverse Problems. Multiscale Modeling and Simulation, 2020, 18, 1565-1594.	1.6	6
5	Random time step probabilistic methods for uncertainty quantification in chaotic and geometric numerical integration. Statistics and Computing, 2020, 30, 907-932.	1.5	14
6	Effective Models and Numerical Homogenization for Wave Propagation in Heterogeneous Media on Arbitrary Timescales. Foundations of Computational Mathematics, 2020, 20, 1505-1547.	2.5	6
7	A Bayesian Numerical Homogenization Method for Elliptic Multiscale Inverse Problems. SIAM-ASA Journal on Uncertainty Quantification, 2020, 8, 414-450.	2.0	7
8	Numerical Homogenization and Model Order Reduction for Multiscale Inverse Problems. Multiscale Modeling and Simulation, 2019, 17, 399-433.	1.6	7
9	Finite element heterogeneous multiscale method for elastic waves in heterogeneous media. Computer Methods in Applied Mechanics and Engineering, 2018, 335, 1-23.	6.6	4
10	Effective Models for Long Time Wave Propagation in Locally Periodic Media. SIAM Journal on Numerical Analysis, 2018, 56, 2701-2730.	2.3	5
11	Optimal Explicit Stabilized Integrator of Weak Order 1 for Stiff and Ergodic Stochastic Differential Equations. SIAM-ASA Journal on Uncertainty Quantification, 2018, 6, 937-964.	2.0	18
12	A Discontinuous Galerkin Reduced Basis Numerical Homogenization Method for Fluid Flow in Porous Media. SIAM Journal of Scientific Computing, 2017, 39, A83-A113.	2.8	3
13	A three-scale offline-online numerical method for fluid flow in porous media. Journal of Computational Physics, 2017, 337, 175-202.	3.8	1
14	On heterogeneous coupling of multiscale methods for problems with and without scale separation. Research in Mathematical Sciences, 2017, 4, 1.	1.0	4
15	A Priori Error Analysis of the Finite Element Heterogeneous Multiscale Method for the Wave Equation over Long Time. SIAM Journal on Numerical Analysis, 2016, 54, 1507-1534.	2.3	15
16	Effective models for the multidimensional wave equation in heterogeneous media over long time and numerical homogenization. Mathematical Models and Methods in Applied Sciences, 2016, 26, 2651-2684.	3.3	12
17	Localized orthogonal decomposition method for the wave equation with a continuum of scales. Mathematics of Computation, 2016, 86, 549-587.	2.1	34
18	A reduced basis finite element heterogeneous multiscale method for Stokes flow in porous media. Computer Methods in Applied Mechanics and Engineering, 2016, 307, 1-31.	6.6	9

#	ARTICLE	IF	CITATIONS
19	An Optimization Based Coupling Method for Multiscale Problems. Multiscale Modeling and Simulation, 2016, 14, 1377-1416.	1.6	3
20	Error estimates for finite element approximations of nonlinear monotone elliptic problems with application to numerical homogenization. Numerical Methods for Partial Differential Equations, 2016, 32, 955-969.	3.6	7
21	Multiscale Model Reduction Methods for Flow in Heterogeneous Porous Media. Lecture Notes in Computational Science and Engineering, 2016, , 333-349.	0.3	0
22	The role of numerical integration in numerical homogenization. ESAIM Proceedings and Surveys, 2015, 50, 1-20.	0.4	3
23	Fully discrete analysis of the heterogeneous multiscale method for elliptic problems with multiple scales. IMA Journal of Numerical Analysis, 2015, 35, 133-160.	2.9	10
24	A reduced basis localized orthogonal decomposition. Journal of Computational Physics, 2015, 295, 379-401.	3.8	20
25	Reduced basis finite element heterogeneous multiscale method for quasilinear elliptic homogenization problems. Discrete and Continuous Dynamical Systems - Series S, 2015, 8, 91-118.	1.1	12
26	An optimization-based, heterogeneous to homogeneous coupling method. Communications in Mathematical Sciences, 2015, 13, 1639-1648.	1.0	5
27	Multiscale Adaptive Method for Stokes Flow in Heterogeneous Media. Lecture Notes in Computational Science and Engineering, 2015, , 367-375.	0.3	0
28	Finite Element Heterogeneous Multiscale Method for the Wave Equation: Long-Time Effects. Multiscale Modeling and Simulation, 2014, 12, 1230-1257.	1.6	32
29	Adaptive reduced basis finite element heterogeneous multiscale method. Computer Methods in Applied Mechanics and Engineering, 2013, 257, 203-220.	6.6	49
30	A posteriori error estimates in quantities of interest for the finite element heterogeneous multiscale method. Numerical Methods for Partial Differential Equations, 2013, 29, 1629-1656.	3.6	12
31	Analysis of the finite element heterogeneous multiscale method for quasilinear elliptic homogenization problems. Mathematics of Computation, 2013, 83, 513-536.	2.1	22
32	PIROCK: A swiss-knife partitioned implicit-explicit orthogonal Runge-Kutta Chebyshev integrator for stiff diffusion-advection-reaction problems with or without noise. Journal of Computational Physics, 2013, 242, 869-888.	3.8	20
33	Stabilized multilevel Monte Carlo method for stiff stochastic differential equations. Journal of Computational Physics, 2013, 251, 445-460.	3.8	25
34	Multilevel Monte Carlo Methods for Stochastic Elliptic Multiscale PDEs. Multiscale Modeling and Simulation, 2013, 11, 1033-1070.	1.6	24
35	Weak Second Order Explicit Stabilized Methods for Stiff Stochastic Differential Equations. SIAM Journal of Scientific Computing, 2013, 35, A1792-A1814.	2.8	31
36	Explicit stabilized integration of stiff deterministic or stochastic problems. , 2012, ,		0

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37	The heterogeneous multiscale method. Acta Numerica, 2012, 21, 1-87.	10.7	334
38	COUPLING HETEROGENEOUS MULTISCALE FEM WITH RUNGE-KUTTA METHODS FOR PARABOLIC HOMOGENIZATION PROBLEMS: A FULLY DISCRETE SPACETIME ANALYSIS. Mathematical Models and Methods in Applied Sciences, 2012, 22, 1250002.	3.3	21
39	Boosted Hybrid Method for Solving Chemical Reaction Systems with Multiple Scales in Time and Population Size. Communications in Computational Physics, 2012, 12, 981-1005.	1.7	4
40	Reduced basis finite element heterogeneous multiscale method for high-order discretizations of elliptic homogenization problems. Journal of Computational Physics, 2012, 231, 7014-7036.	3.8	50
41	A priori error estimates for finite element methods with numerical quadrature for nonmonotone nonlinear elliptic problems. Numerische Mathematik, 2012, 121, 397-431.	1.9	24
42	Finite Element Heterogeneous Multiscale Method for the Wave Equation. Multiscale Modeling and Simulation, 2011, 9, 766-792.	1.6	94
43	The effect of numerical integration in the finite element method for nonmonotone nonlinear elliptic problems with application to numerical homogenization methods. Comptes Rendus Mathematique, 2011, 349, 1041-1046.	0.3	8
44	A Priori and a Posteriori Error Analysis for Numerical Homogenization: A Unified Framework. Series in Contemporary Applied Mathematics, 2011, , 280-305.	0.8	33
45	Discontinuous Galerkin finite element heterogeneous multiscale method for elliptic problems with multiple scales. Mathematics of Computation, 2011, 81, 687-713.	2.1	29
46	A short and versatile finite element multiscale code for homogenization problems. Computer Methods in Applied Mechanics and Engineering, 2009, 198, 2839-2859.	6.6	47
47	A posteriori error analysis of the heterogeneous multiscale method for homogenization problems. Comptes Rendus Mathematique, 2009, 347, 1081-1086.	0.3	18
48	Multiscale method based on discontinuous Galerkin methods for homogenization problems. Comptes Rendus Mathematique, 2008, 346, 97-102.	0.3	11
49	Finite Element Heterogeneous Multiscale Methods with Near Optimal Computational Complexity. Multiscale Modeling and Simulation, 2008, 6, 1059-1084.	1.6	35
50	S-ROCK: Chebyshev Methods for Stiff Stochastic Differential Equations. SIAM Journal of Scientific Computing, 2008, 30, 997-1014.	2.8	60
51	Stabilized methods for stiff stochastic systems. Comptes Rendus Mathematique, 2007, 345, 593-598.	0.3	18
52	ANALYSIS OF A HETEROGENEOUS MULTISCALE FEM FOR PROBLEMS IN ELASTICITY. Mathematical Models and Methods in Applied Sciences, 2006, 16, 615-635.	3.3	45
53	Heterogeneous Multiscale Methods with Quadrilateral Finite Elements. , 2006, , 743-751.		7
54	On A Priori Error Analysis of Fully Discrete Heterogeneous Multiscale FEM. Multiscale Modeling and Simulation, 2005, 4, 447-459.	1.6	95

#	ARTICLE	IF	CITATIONS
55	Heterogeneous Multiscale FEM for Diffusion Problems on Rough Surfaces. Multiscale Modeling and Simulation, 2005, 3, 195-220.	1.6	87
56	Finite difference heterogeneous multi-scale method for homogenization problems. Journal of Computational Physics, 2003, 191, 18-39.	3.8	98
57	Fourth Order Chebyshev Methods with Recurrence Relation. SIAM Journal of Scientific Computing, 2002, 23, 2041-2054.	2.8	125
58	Second order Chebyshev methods based on orthogonal polynomials. Numerische Mathematik, 2001, 90, 1-18.	1.9	109
59	On Roots and Error Constants of Optimal Stability Polynomials. BIT Numerical Mathematics, 2000, 40, 177-182.	2.0	25
60	Drift Estimation of Multiscale Diffusions Based on Filtered Data. Foundations of Computational Mathematics, 0, , 1.	2.5	4
61	A parabolic local problem with exponential decay of the resonance error for numerical homogenization. Mathematical Models and Methods in Applied Sciences, 0, , 1-40.	3.3	4