Olof Runborg

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/11121726/publications.pdf

Version: 2024-02-01

38	1,416	623734 14	377865 34
papers	citations	h-index	g-index

39	39	39	827
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Equation-Free, Coarse-Grained Multiscale Computation: Enabling Mocroscopic Simulators to Perform System-Level Analysis. Communications in Mathematical Sciences, 2003, 1, 715-762.	1.0	570
2	Computational high frequency wave propagation. Acta Numerica, 2003, 12, 181-266.	10.7	166
3	Multi-scale methods for wave propagation in heterogeneous media. Communications in Mathematical Sciences, 2011, 9, 33-56.	1.0	84
4	Multi-phase computations in geometrical optics. Journal of Computational and Applied Mathematics, 1996, 74, 175-192.	2.0	79
5	High-Frequency Wave Propagation by the Segment Projection Method. Journal of Computational Physics, 2002, 178, 373-390.	3.8	69
6	Normal Multiresolution Approximation of Curves. Constructive Approximation, 2004, 20, 399-463.	3.0	51
7	Wavelet-Based Numerical Homogenization with Applications. Lecture Notes in Computational Science and Engineering, 2002, , 97-148.	0.3	50
8	Taylor expansion and discretization errors in Gaussian beam superposition. Wave Motion, 2010, 47, 421-439.	2.0	37
9	Some new results in multiphase geometrical optics. ESAIM: Mathematical Modelling and Numerical Analysis, 2000, 34, 1203-1231.	1.9	36
10	Error estimates for Gaussian beam superpositions. Mathematics of Computation, 2012, 82, 919-952.	2.1	35
11	A Contribution to Wavelet-Based Subgrid Modeling. Applied and Computational Harmonic Analysis, 1999, 7, 151-164.	2.2	29
12	Analysis of Heterogeneous Multiscale Methods for Long Time Wave Propagation Problems. Multiscale Modeling and Simulation, 2014, 12, 1135-1166.	1.6	22
13	A time dependent approach for removing the cell boundary error in elliptic homogenization problems. Journal of Computational Physics, 2016, 314, 206-227.	3.8	19
14	Resolution of the finite Markov moment problem. Comptes Rendus Mathematique, 2005, 341, 775-780.	0.3	16
15	A Sparse Spectral Method for Homogenization Multiscale Problems. Multiscale Modeling and Simulation, 2007, 6, 711-740.	1.6	16
16	Existence, Uniqueness, and a Constructive Solution Algorithm for a Class of Finite Markov Moment Problems. SIAM Journal on Applied Mathematics, 2008, 68, 1618-1640.	1.8	14
17	Numerical microlocal analysis of harmonic wavefields. Journal of Computational Physics, 2004, 199, 717-741.	3.8	13
18	A fast phase space method for computing creeping rays. Journal of Computational Physics, 2006, 219, 276-295.	3.8	12

#	Article	IF	Citations
19	Simulation of a Waveguide Filter Using Wavelet-Based Numerical Homogenization. Journal of Computational Physics, 2001, 166, 361-382.	3.8	11
20	Accuracy of staircase approximations in finite-difference methods for wave propagation. Numerische Mathematik, 2014, 128, 741-771.	1.9	10
21	Finite Moment Problems and Applications to Multiphase Computations in Geometric Optics. Communications in Mathematical Sciences, 2005, 3, 373-392.	1.0	10
22	Multiscale Methods for Wave Propagation in Heterogeneous Media Over Long Time. Lecture Notes in Computational Science and Engineering, 2012, , 167-186.	0.3	9
23	Computational high frequency wave propagation. , 2003, , 181-266.		7
24	Gaussian Beam Methods for the Helmholtz Equation. SIAM Journal on Applied Mathematics, 2014, 74, 771-793.	1.8	7
25	Fast interface tracking via a multiresolution representation of curves and surfaces. Communications in Mathematical Sciences, 2009, 7, 365-398.	1.0	7
26	A wavefront-based Gaussian beam method for computing high frequency wave propagation problems. Computers and Mathematics With Applications, 2015, 69, 949-963.	2.7	6
27	Sobolev and max norm error estimates for Gaussian beam superpositions. Communications in Mathematical Sciences, 2016, 14, 2037-2072.	1.0	5
28	Analysis of high order fast interface tracking methods. Numerische Mathematik, 2014, 128, 339-375.	1.9	4
29	Estimates for the Upscaling Error in Heterogeneous Multiscale Methods for Wave Propagation Problems in Locally Periodic Media. Multiscale Modeling and Simulation, 2017, 15, 948-976.	1.6	4
30	Introduction to Normal Multiresolution Approximation. , 2005, , 205-224.		4
31	Analysis of a fast method for solving the high frequency Helmholtz equation in one dimension. BIT Numerical Mathematics, 2011, 51, 721-755.	2.0	3
32	Coupling of Gaussian Beam and Finite Difference Solvers for Semiclassical SchrÃ¶dinger Equations. Advances in Applied Mathematics and Mechanics, 2015, 7, 687-714.	1.2	3
33	On homogenization of the Landauâ€“Lifshitz equation with rapidly oscillating material coefficient. Communications in Mathematical Sciences, 2022, 20, 653-694.	1.0	3
34	Upscaling Errors in Heterogeneous Multiscale Methods for the Landau--Lifshitz Equation. Multiscale Modeling and Simulation, 2022, 20, 1-35.	1.6	2
35	Adaptive fast interface tracking methods. Journal of Computational Physics, 2017, 337, 42-61.	3.8	1
36	Wavelets andWavelet Based Numerical Homogenization. Lecture Notes in Computational Science and Engineering, 2009, , 195-235.	0.3	1

#	Article	IF	Citations
37	Projection Generated Homogenization. , 2002, , 129-150.		1
38	A Fast Method for the Creeping Ray Contribution to Scattering Problems. AIP Conference Proceedings, 2006, , .	0.4	0