

Sergej Rjasanow

List of Publications by Year in descending order

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35
papers

1,075
citations

687363

13
h-index

454955

30
g-index

35
all docs

35
docs citations

35
times ranked

613
citing authors

#	ARTICLE	IF	CITATIONS
1	Adaptive Low-Rank Approximation of Collocation Matrices. Computing (Vienna/New York), 2003, 70, 1-24.	4.8	410
2	The adaptive cross-approximation technique for the 3D boundary-element method. IEEE Transactions on Magnetics, 2002, 38, 421-424.	2.1	195
3	A Stochastic Weighted Particle Method for the Boltzmann Equation. Journal of Computational Physics, 1996, 124, 243-253.	3.8	66
4	Fast deterministic method of solving the Boltzmann equation for hard spheres. European Journal of Mechanics, B/Fluids, 1999, 18, 869-887.	2.5	66
5	Reduction of the Number of Particles in the Stochastic Weighted Particle Method for the Boltzmann Equation. Journal of Computational Physics, 1998, 145, 382-405.	3.8	42
6	Electrostatic potentials of proteins in water: a structured continuum approach. Bioinformatics, 2007, 23, e99-e103.	4.1	41
7	Numerical solution of the Boltzmann equation on the uniform grid. Computing (Vienna/New York), 2002, 69, 163-186.	4.8	34
8	Galerkin-Petrov approach for the Boltzmann equation. Journal of Computational Physics, 2018, 366, 341-365.	3.8	30
9	Direct simulation of the uniformly heated granular boltzmann equation. Mathematical and Computer Modelling, 2005, 42, 683-700.	2.0	19
10	Numerical solution of the Boltzmann equation using a fully conservative difference scheme based on the fast fourier transform. Transport Theory and Statistical Physics, 2000, 29, 289-310.	0.4	14
11	Numerics of boundary-domain integral and integro-differential equations for BVP with variable coefficient in 3D. Computational Mechanics, 2013, 51, 495-503.	4.0	14
12	A generalized collision mechanism for stochastic particle schemes approximating Boltzmann-type equations. Computers and Mathematics With Applications, 1998, 35, 165-178.	2.7	13
13	Simulation of rare events by the stochastic weighted particle method for the Boltzmann equation. Mathematical and Computer Modelling, 2001, 33, 907-926.	2.0	13
14	Adaptive cross-approximation for surface reconstruction using radial basis functions. Journal of Engineering Mathematics, 2008, 62, 149-160.	1.2	13
15	Two efficient methods for a multifrequency solution of the Helmholtz equation. Computing and Visualization in Science, 2005, 8, 159-167.	1.2	12
16	ACA accelerated high order BEM for Maxwell problems. Computational Mechanics, 2013, 51, 431-441.	4.0	12
17	Hierarchical Cholesky decomposition of sparse matrices arising from curl-curl-equation. Journal of Numerical Mathematics, 2007, 15, .	3.5	10
18	A Weak Formulation of the Boltzmann Equation Based on the Fourier Transform. Journal of Statistical Physics, 2007, 129, 483-492.	1.2	9

#	ARTICLE	IF	CITATIONS
19	Matrix valued adaptive cross approximation. <i>Mathematical Methods in the Applied Sciences</i> , 2017, 40, 2522-2531.	2.3	9
20	Fast Boundary Element Methods in Computational Electromagnetism. , 2007, , 249-279.		7
21	An equi-directional generalization of adaptive cross approximation for higher-order tensors. <i>Applied Numerical Mathematics</i> , 2013, 74, 1-16.	2.1	6
22	Numerical Study of a Stochastic Weighted Particle Method for a Model Kinetic Equation. <i>Journal of Computational Physics</i> , 1996, 128, 351-362.	3.8	5
23	Multifrequency analysis for the Helmholtz equation. <i>Computational Mechanics</i> , 2003, 32, 234-239.	4.0	5
24	On Estimates of the Boltzmann Collision Operator with Cut-off. <i>Journal of Mathematical Fluid Mechanics</i> , 2006, 8, 242-266.	1.0	5
25	Time Splitting Error in DSMC Schemes for the Spatially Homogeneous Inelastic Boltzmann Equation. <i>SIAM Journal on Numerical Analysis</i> , 2007, 45, 54-67.	2.3	5
26	Boundary element method for calculation of effective elastic moduli in 3D linear elasticity. <i>Mathematical Methods in the Applied Sciences</i> , 2010, 33, 1021-1034.	2.3	5
27	Boundary Element Method for Linear Elasticity with Conservative Body Forces. <i>Lecture Notes in Applied and Computational Mechanics</i> , 2013, , 275-297.	2.2	5
28	Mapping Properties of the Boltzmann Collision Operator. <i>Integral Equations and Operator Theory</i> , 2005, 52, 61-84.	0.8	3
29	Vlasov–Poisson System Tackled by Particle Simulation Utilizing Boundary Element Methods. <i>SIAM Journal of Scientific Computing</i> , 2020, 42, B299-B326.	2.8	3
30	Monte-Carlo methods for the Boltzmann equation. <i>Modeling and Simulation in Science, Engineering and Technology</i> , 2004, , 81-115.	0.6	2
31	Matrix-valued radial basis functions for the Lamé system. <i>Mathematical Methods in the Applied Sciences</i> , 2018, 41, 6080-6107.	2.3	1
32	A Compression Method for the Helmholtz Equation. , 2004, , 786-795.		1
33	Numerical studies of a granular gas in a host medium. <i>Journal of Computational Physics</i> , 2012, 231, 1339-1359.	3.8	0
34	ACA Improvement by Surface Segmentation. <i>Lecture Notes in Computational Science and Engineering</i> , 2019, , 277-295.	0.3	0
35	Fast Boundary Element Methods for Composite Materials. <i>Mathematical Engineering</i> , 2019, , 97-141.	0.2	0