

Sergey A Zabelok

List of Publications by Year in descending order

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35
papers

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all docs

35
docs citations

35
times ranked

203
citing authors

#	ARTICLE	IF	CITATIONS
1	Unified solver for rarefied and continuum flows with adaptive mesh and algorithm refinement. Journal of Computational Physics, 2007, 223, 589-608.	3.8	227
2	Construction of a Unified Continuum/Kinetic Solver for Aerodynamic Problems. Journal of Spacecraft and Rockets, 2005, 42, 598-606.	1.9	31
3	Adaptive kinetic-fluid solvers for heterogeneous computing architectures. Journal of Computational Physics, 2015, 303, 455-469.	3.8	30
4	Supersonic Flows with Nontraditional Transport Described by Kinetic Methods. Communications in Computational Physics, 2012, 11, 1334-1346.	1.7	17
5	Simulations of pressure-driven flows through channels and pipes with unified flow solver. Vacuum, 2012, 86, 1717-1724.	3.5	17
6	Nonequilibrium kinetic processes with chemical reactions and complex structures in open systems. Europhysics Letters, 2014, 106, 20002.	2.0	16
7	Comparative study for rarefied gas flow into vacuum through a short circular pipe. Vacuum, 2014, 103, 5-8.	3.5	15
8	Unified Flow Solver for Aerospace Applications. , 2006, , .		9
9	Direct methods for solving the Boltzmann equations: Comparisons with direct simulation Monte Carlo and possibilities. Physics of Fluids, 2019, 31, .	4.0	9
10	A new effect of the nongradient transport in relaxation zones. Europhysics Letters, 2009, 88, 30012.	2.0	8
11	The possibility of anomalous heat transfer in flows with nonequilibrium boundary conditions. Doklady Physics, 2017, 62, 149-153.	0.7	7
12	Evaluation of a Unified Kinetic/Continuum Solver for Computing Heat Flux in Hypersonic Blunt Body Flows. , 2007, , .		5
13	Nonequilibrium nonclassical phenomena in regions with membrane boundaries. Physics of Fluids, 2021, 33, .	4.0	5
14	Parallel algorithms in the conservative splitting method for the Boltzmann equation. , 1998, , 361-366.		3
15	Acceleration of Deterministic Boltzmann Solver with Graphics Processing Units. , 2011, , .		3
16	GPU accelerated kinetic solvers for rarefied gas dynamics. , 2012, , .		2
17	Complex nonequilibrium flows with slow and fast chemical reactions for simulation processes in open systems. Journal of Mechanical Science and Technology, 2015, 29, 1859-1867.	1.5	2
18	Problem with nonequilibrium boundary conditions in the kinetic theory of gases. Computational Mathematics and Mathematical Physics, 2016, 56, 854-863.	0.8	2

#	ARTICLE	IF	CITATIONS
19	Switching of solitons in tunnel-coupled optical waveguides by a weak signal of a different frequency. Doklady Physics, 2003, 48, 463-468.	0.7	1
20	Kinetics with chemical reactions and nonequilibrium structures in open systems. , 2013, , .		1
21	Multi-GPU kinetic solvers using MPI and CUDA. , 2014, , .		1
22	Multi-scale Simulations of Gas Flows with Unified Flow Solver. Lecture Notes in Computer Science, 2007, , 850-857.	1.3	1
23	Parallel algorithms of direct solving the Boltzmann equation in aerodynamics problems. , 2004, , 49-56.		1
24	Coupling Direct Boltzmann and Continuum Flow Solvers. AIP Conference Proceedings, 2005, , .	0.4	0
25	Kinetic Effects for Couette Flows with Oscillating Walls. , 2008, , .		0
26	Generalized Description of Spatial Relaxation and Nonclassical Transport Processes. , 2008, , .		0
27	New possibilities of kinetic description of nonequilibrium structures. , 2012, , .		0
28	Unified flow solver for transient rarefied-continuum flows. , 2012, , .		0
29	Kinetic models with chemical reactions and nonequilibrium entropy in open systems. , 2014, , .		0
30	Deterministic GPU Boltzmann solver. , 2014, , .		0
31	Problems for kinetic equation with nonequilibrium boundary conditions and possible tests. AIP Conference Proceedings, 2016, , .	0.4	0
32	Numerical simulations of complex nonequilibrium flows in finite regions on the basis of the Boltzmann kinetic equation. Journal of Physics: Conference Series, 2019, 1163, 012055.	0.4	0
33	Study of the Kinetic Anomalous Transport Effects in Nonequilibrium Flows. Smart Innovation, Systems and Technologies, 2021, , 89-103.	0.6	0
34	Unified Flow Solver Combining Boltzmann and Continuum Models for Simulations of Gas Flows for the Entire Range of Knudsen Numbers. , 2009, , 719-724.		0
35	Unstable and turbulent flows simulated by means of the Boltzmann kinetic equation. Springer Proceedings in Physics, 2009, , 895-895.	0.2	0