Sauro Succi

List of Publications by Citations

498 papers	16,249 citations	57 h-index	111 g-index
523 ext. papers	17,658 ext. citations	3.5 avg, IF	6.96 L-index

#	Paper	IF	Citations
498	The lattice Boltzmann equation: theory and applications. *Physics Reports*, **1992**, 222, 145-197	27.7	1603
497	Extended self-similarity in turbulent flows. *Physical Review E*, **1993**, 48, R29-R32	2.4	736
496	Lattice Gas Dynamics with Enhanced Collisions. *Europhysics Letters*, **1989**, 9, 345-349	1.6	712
495	MHD-Limits to Plasma Confinement. *Plasma Physics and Controlled Fusion*, **1984**, 26, 209-215	2	506
494	Extended Boltzmann kinetic equation for turbulent flows. *Science*, **2003**, 301, 633-6	33.3	504
493	Three-Dimensional Flows in Complex Geometries with the Lattice Boltzmann Method. *Europhysics Letters*, **1989**, 10, 433-438	1.6	314
492	Generalized lattice Boltzmann method with multirange pseudopotential. *Physical Review E*, **2007**, 75, 026702	2.4	298
491	Mesoscopic modeling of slip motion at fluid-solid interfaces with heterogeneous catalysis. *Physical Review Letters*, **2002**, 89, 064502	7.4	261
490	Ground state of trapped interacting bose-einstein condensates by an explicit imaginary-time algorithm. *Physical Review E*, **2000**, 62, 7438-44	2.4	240
489	Expanded analogy between Boltzmann kinetic theory of fluids and turbulence. *Journal of Fluid Mechanics*, **2004**, 519, 301-314	3.7	214
488	Mesoscopic modeling of a two-phase flow in the presence of boundaries: The contact angle. *Physical Review E*, **2006**, 74, 021509	2.4	192
487	Surface roughness-hydrophobicity coupling in microchannel and nanochannel flows. *Physical Review Letters*, **2006**, 97, 204503	7.4	161
486	The lattice Boltzmann equation on irregular lattices. *Journal of Statistical Physics*, **1992**, 68, 401-407	1.5	159
485	Colloquium: Role of the H theorem in lattice Boltzmann hydrodynamic simulations. *Reviews of Modern Physics*, **2002**, 74, 1203-1220	40.5	156
484	Lattice Boltzmann equation for quantum mechanics. *Physica D: Nonlinear Phenomena*, **1993**, 69, 327-332	3.3	153
483	The permeability of a random medium: Comparison of simulation with theory. *Physics of Fluids A, Fluid Dynamics*, **1990**, 2, 2085-2088		153
482	RECENT ADVANCES IN LATTICE BOLTZMANN COMPUTING **1995**, 195-242		151

481	The Lattice Boltzmann Equation **2018**,		150
480	Lattice Boltzmann 2038. *Europhysics Letters*, **2015**, 109, 50001	1.6	143
479	Analytical calculation of slip flow in lattice Boltzmann models with kinetic boundary conditions. *Physics of Fluids*, **2005**, 17, 093602	4.4	141
478	Maximum Entropy Principle for Lattice Kinetic Equations. *Physical Review Letters*, **1998**, 81, 6-9	7.4	129
477	Lattice Boltzmann model for anisotropic liquid-solid phase transition. *Physical Review Letters*, **2001**, 86, 3578-81	7.4	127
476	The lattice Boltzmann equation: A new tool for computational fluid-dynamics. *Physica D: Nonlinear Phenomena*, **1991**, 47, 219-230	3.3	127
475	Numerical methods for atomic quantum gases with applications to Bose-Einstein condensates and to ultracold fermions. *Physics Reports*, **2004**, 395, 223-355	27.7	116
474	Lattice Boltzmann method at finite Knudsen numbers. *Europhysics Letters*, **2005**, 69, 549-555	1.6	114
473	Numerical solution of the gross-pitaevskii equation using an explicit finite-difference scheme: An application to trapped bose-einstein condensates. *Physical Review E*, **2000**, 62, 1382-9	2.4	102
472	MUPHY: A parallel MUlti PHYsics/scale code for high performance bio-fluidic simulations. *Computer Physics Communications*, **2009**, 180, 1495-1502	4.2	101
471	Fast lattice Boltzmann solver for relativistic hydrodynamics. *Physical Review Letters*, **2010**, 105, 014502	7.4	99
470	Simulating the Flow Around a Circular Cylinder with a Lattice Boltzmann Equation. *Europhysics Letters*, **1989**, 8, 517-521	1.6	97
469	A flexible high-performance Lattice Boltzmann GPU code for the simulations of fluid flows in complex geometries. *Concurrency Computation Practice and Experience*, **2010**, 22, 1-14	1.4	89
468	Lattice Boltzmann method on unstructured grids: further developments. *Physical Review E*, **2003**, 68, 016701	2.4	87
467	A multi-relaxation lattice kinetic method for passive scalar diffusion. *Journal of Computational Physics*, **2005**, 206, 453-462	4.1	87
466	Discrete Boltzmann modeling of multiphase flows: hydrodynamic and thermodynamic non-equilibrium effects. *Soft Matter*, **2015**, 11, 5336-45	3.6	83
465	Simulating two-dimensional thermal channel flows by means of a lattice Boltzmann method with new boundary conditions. *Future Generation Computer Systems*, **2004**, 20, 935-944	7.5	83
464	Hydrodynamic correlations in the translocation of a biopolymer through a nanopore: theory and multiscale simulations. *Physical Review E*, **2008**, 78, 036704	2.4	82

463	Lattice Boltzmann method with self-consistent thermo-hydrodynamic equilibria. *Journal of Fluid Mechanics*, **2009**, 628, 299-309	3.7	80
462	Multiscale Coupling of Molecular Dynamics and Hydrodynamics: Application to DNA Translocation through a Nanopore. *Multiscale Modeling and Simulation*, **2006**, 5, 1156-1173	1.8	80
461	Lattice Boltzmann across scales: from turbulence to DNA translocation. *European Physical Journal B* , **2008**, 64, 471-479	1.2	78
460	Exponential Tails in Two-Dimensional Rayleigh-Bnard Convection. *Europhysics Letters*, **1993**, 21, 305-310	1.6	78
459	Mesoscopic lattice Boltzmann modeling of soft-glassy systems: Theory and simulations. *Journal of Chemical Physics*, **2009**, 131, 104903	3.9	77
458	Numerical solution of the Schrdinger equation using discrete kinetic theory. *Physical Review E*, **1996**, 53, 1969-1975	2.4	77
457	Lattice Boltzmann simulations of phase-separating flows at large density ratios: the case of doubly-attractive pseudo-potentials. *Soft Matter*, **2010**, 6, 4357	3.6	76
456	Massively Parallel Lattice-Boltzmann Simulation of Turbulent Channel Flow. *International Journal of Modern Physics C*, **1997**, 08, 869-877	1.1	75
455	Challenges in lattice Boltzmann computing. *Journal of Statistical Physics*, **1995**, 81, 5-16	1.5	75
454	A Lattice Boltzmann Model for Anisotropic Crystal Growth from Melt. *Journal of Statistical Physics*, **2002**, 107, 173-186	1.5	74
453	Intermittency and Structure Functions in Channel Flow Turbulence. *Physical Review Letters*, **1999**, 82, 5044-5047	7.4	74
452	Recent advances of Lattice Boltzmann techniques on unstructured grids. *Progress in Computational Fluid Dynamics*, **2005**, 5, 85	0.7	72
451	Lattice boltzmann versus molecular dynamics simulation of nanoscale hydrodynamic flows. *Physical Review Letters*, **2006**, 96, 224503	7.4	71
450	Galilean-invariant lattice-Boltzmann models with H theorem. *Physical Review E*, **2003**, 68, 025103	2.4	71
449	Multiscale Lattice Boltzmann Schemes with Turbulence Modeling. *Journal of Computational Physics*, **2001**, 170, 812-829	4.1	68
448	Diffusion and hydrodynamic dispersion with the lattice Boltzmann method. *Physical Review A*, **1992**, 45, 5771-5774	2.6	65
447	Regularized lattice Bhatnagar-Gross-Krook model for two- and three-dimensional cavity flow simulations. *Physical Review E*, **2014**, 89, 053317	2.4	64
446	Lattice Boltzmann approach for complex nonequilibrium flows. *Physical Review E*, **2015**, 92, 043308	2.4	63

445	Multiple-relaxation-time lattice Boltzmann approach to compressible flows with flexible specific-heat ratio and Prandtl number. *Europhysics Letters*, **2010**, 90, 54003	1.6	63
444	Preturbulent regimes in graphene flow. *Physical Review Letters*, **2011**, 106, 156601	7.4	63
443	Mesoscopic modelling of heterogeneous boundary conditions for microchannel flows. *Journal of Fluid Mechanics*, **2006**, 548, 257	3.7	62
442	. *Computing in Science and Engineering*, **2001**, 3, 26-37	1.5	62
441	Mesoscopic simulation of non-ideal fluids with self-tuning of the equation of state. *Soft Matter*, **2012**, 8, 3798	3.6	57
440	Lattice Boltzmann Methods for Multiphase Flow Simulations across Scales. *Communications in Computational Physics*, **2011**, 9, 269-296	2.4	56
439	Lattice Boltzmann simulation of open flows with heat transfer. *Physics of Fluids*, **2003**, 15, 2778-2781	4.4	55
438	Two-dimensional Navier-Stokes simulation of deformation and breakup of liquid patches. *Physical Review Letters*, **1995**, 75, 244-247	7.4	54
437	Roughness as a Route to the Ultimate Regime of Thermal Convection. *Physical Review Letters*, **2017** , 118, 074503	7.4	53
436	Role of Oxygen Functionalities in Graphene Oxide Architectural Laminate Subnanometer Spacing and Water Transport. *Environmental Science & Technology*, **2017**, 51, 4280-4288	10.3	53
435	Statistical regularities in the rank-citation profile of scientists. *Scientific Reports*, **2011**, 1, 181	4.9	53
434	Hydrokinetic approach to large-scale cardiovascular blood flow. *Computer Physics Communications*, **2010**, 181, 462-472	4.2	52
433	Numerical simulations of ion temperature gradient-driven turbulence. *Physics of Fluids B*, **1990**, 2, 67-74		52
432	Mesoscopic Models of Liquid/Solid Phase Transitions. *International Journal of Modern Physics C*, **1998**, 09, 1405-1415	1.1	51
431	Numerical solution of the nonlinear Schr□dinger equation using smoothed-particle hydrodynamics. *Physical Review E*, **2015**, 91, 053304	2.4	50
430	Mesoscopic two-phase model for describing apparent slip in micro-channel flows. *Europhysics Letters*, **2006**, 74, 651-657	1.6	49
429	On the Scaling of the Velocity and Temperature Structure Functions in Rayleigh-B□nard Convection. *Europhysics Letters*, **1994**, 25, 341-346	1.6	49
428	Nonequilibrium thermohydrodynamic effects on the Rayleigh-Taylor instability in compressible flows. *Physical Review E*, **2016**, 94, 023106	2.4	49

427	The emergence of supramolecular forces from lattice kinetic models of non-ideal fluids: applications to the rheology of soft glassy materials. *Soft Matter*, **2012**, 8, 10773	3.6	47
426	Isotropic discrete Laplacian operators from lattice hydrodynamics. *Journal of Computational Physics* , **2013**, 234, 1-7	4.1	47
425	Lattice Kinetic Theory for Numerical Combustion. *Journal of Scientific Computing*, **1997**, 12, 395-408	2.3	47
424	Phase-field lattice kinetic scheme for the numerical simulation of dendritic growth. *Physical Review E*, **2005**, 72, 066705	2.4	47
423	Prediction of coronary artery plaque progression and potential rupture from 320-detector row prospectively ECG-gated single heart beat CT angiography: Lattice Boltzmann evaluation of endothelial shear stress. *International Journal of Cardiovascular Imaging*, **2009**, 25, 289-299	2.5	46
422	Direct numerical evidence of stress-induced cavitation. *Journal of Fluid Mechanics*, **2013**, 728, 362-375	3.7	45
421	Hydrodynamic model for conductivity in graphene. *Scientific Reports*, **2013**, 3, 1052	4.9	45
420	Numerical validation of the quantum lattice Boltzmann scheme in two and three dimensions. *Physical Review E*, **2007**, 75, 066704	2.4	45
419	Extended self-similarity in the numerical simulation of three-dimensional homogeneous flows. *Physical Review E*, **1994**, 50, R1745-R1747	2.4	45
418	Lattice Boltzmann scheme for two-dimensional magnetohydrodynamics. *Physical Review A*, **1991**, 43, 4521-4524	2.6	45
417	Non-Newtonian particulate flow simulation: A direct-forcing immersed boundary lattice Boltzmann approach. *Physica A: Statistical Mechanics and Its Applications*, **2016**, 447, 1-20	3.3	44
416	Translocation of biomolecules through solid-state nanopores: Theory meets experiments. *Journal of Polymer Science, Part B: Polymer Physics*, **2011**, 49, 985-1011	2.6	44
415	Quantum lattice Boltzmann simulation of expanding Bose-Einstein condensates in random potentials. *Physical Review E*, **2008**, 77, 066708	2.4	44
414	Improved Lattice Boltzmann Without Parasitic Currents for Rayleigh-Taylor Instability. *Communications in Computational Physics*, **2010**, 7, 423-444	2.4	44
413	Mesoscopic lattice boltzmann modeling of flowing soft systems. *Physical Review Letters*, **2009**, 102, 026002	7.4	43
412	Kinetic theory of turbulence modeling: smallness parameter, scaling and microscopic derivation of Smagorinsky model. *Physica A: Statistical Mechanics and Its Applications*, **2004**, 338, 379-394	3.3	43
411	Big data: the end of the scientific method?. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2019**, 377, 20180145	3	42
410	Lattice Boltzmann phase-field modelling of binary-alloy solidification. *Physica A: Statistical Mechanics and Its Applications*, **2006**, 362, 78-83	3.3	41

409	Capillary filling in microchannels with wall corrugations: a comparative study of the Concus-Finn criterion by continuum, kinetic, and atomistic approaches. *Langmuir*, **2009**, 25, 12653-60	4	40
408	Polar-coordinate lattice Boltzmann modeling of compressible flows. *Physical Review E*, **2014**, 89, 013307	2.4	39
407	Unstructured lattice Boltzmann method in three dimensions. *International Journal for Numerical Methods in Fluids*, **2005**, 49, 619-633	1.9	39
406	Mapping reactive flow patterns in monolithic nanoporous catalysts. *Microfluidics and Nanofluidics*, **2016**, 20, 1	2.8	38
405	Simulation of turbulent flows with the entropic multirelaxation time lattice Boltzmann method on body-fitted meshes. *Journal of Fluid Mechanics*, **2018**, 849, 35-56	3.7	38
404	Simulation of three dimensional MHD natural convection using double MRT Lattice Boltzmann method. *Physica A: Statistical Mechanics and Its Applications*, **2019**, 515, 474-496	3.3	38
403	Capillary filling using lattice Boltzmann equations: The case of multi-phase flows. *European Physical Journal: Special Topics*, **2009**, 166, 111-116	2.3	37
402	Fully relativistic lattice Boltzmann algorithm. *Physical Review C*, **2011**, 84,	2.7	36
401	Lattice Boltzmann models for nonideal fluids with arrested phase-separation. *Physical Review E*, **2008**, 77, 036705	2.4	36
400	Ground-state computation of Bose-Einstein condensates by an imaginary-time quantum lattice Boltzmann scheme. *Physical Review E*, **2007**, 76, 036712	2.4	36
399	Electrorheology in nanopores via lattice Boltzmann simulation. *Journal of Chemical Physics*, **2004**, 120, 4492-7	3.9	36
398	Analysis of subgrid scale turbulence using the Boltzmann Bhatnagar-Gross-Krook kinetic equation. *Physical Review E*, **1999**, 59, R2527-R2530	2.4	36
397	Two-dimensional turbulence with the lattice Boltzmann equation. *Journal of Physics A*, **1990**, 23, L1-L5		36
396	Modeling realistic multiphase flows using a non-orthogonal multiple-relaxation-time lattice Boltzmann method. *Physics of Fluids*, **2019**, 31, 042105	4.4	35
395	Lattice Boltzmann Analysis of Fluid-Structure Interaction with Moving Boundaries. *Communications in Computational Physics*, **2013**, 13, 823-834	2.4	35
394	Evidence of thin-film precursors formation in hydrokinetic and atomistic simulations of nano-channel capillary filling. *Europhysics Letters*, **2008**, 84, 44003	1.6	35
393	A multi-component discrete Boltzmann model for nonequilibrium reactive flows. *Scientific Reports*, **2017**, 7, 14580	4.9	34
392	Bottom-up coarse-graining of a simple graphene model: the blob picture. *Journal of Chemical Physics*, **2011**, 134, 064106	3.9	34

391	A note on the lattice Boltzmann method beyond the Chapman-Enskog limits. *Europhysics Letters*, **2006**, 73, 370-376	1.6	34
390	Superradiance from hydrodynamic vortices: A numerical study. *Physical Review A*, **2006**, 73,	2.6	34
389	Effects of Knudsen diffusivity on the effective reactivity of nanoporous catalyst media. *Journal of Computational Science*, **2016**, 17, 377-383	3.4	34
388	A multispeed Discrete Boltzmann Model for transcritical 2D shallow water flows. *Journal of Computational Physics*, **2015**, 284, 117-132	4.1	33
387	Three-Dimensional Lattice Pseudo-Potentials for Multiphase Flow Simulations at High Density Ratios. *Journal of Statistical Physics*, **2015**, 161, 1404-1419	1.5	32
386	Immersed Boundary Thermal Lattice Boltzmann Methods for Non-Newtonian Flows Over a Heated Cylinder: A Comparative Study. *Communications in Computational Physics*, **2015**, 18, 489-515	2.4	32
385	Interplay between shape and roughness in early-stage microcapillary imbibition. *Langmuir*, **2012**, 28, 2596-603	4	32
384	Mesoscale modelling of near-contact interactions for complex flowing interfaces. *Journal of Fluid Mechanics*, **2019**, 872, 327-347	3.7	31
383	Lattice Boltzmann simulations of capillary filling: Finite vapour density effects. *European Physical Journal: Special Topics*, **2009**, 171, 237-243	2.3	31
382	Thermohydrodynamic lattice BGK schemes with non-perturbative equilibria. *Europhysics Letters*, **1998**, 41, 279-284	1.6	31
381	Discrete Boltzmann trans-scale modeling of high-speed compressible flows. *Physical Review E*, **2018** , 97, 053312	2.4	31
380	Lattice Boltzmann modeling of water entry problems. *International Journal of Modern Physics C*, **2014**, 25, 1441012	1.1	30
379	Turbulent channel flow simulations using a coarse-grained extension of the lattice Boltzmann method. *Fluid Dynamics Research*, **1997**, 19, 289-302	1.2	30
378	Lattice Quantum Mechanics: An Application to Bose Einstein Condensation. *International Journal of Modern Physics C*, **1998**, 09, 1577-1585	1.1	30
377	Non-Newtonian unconfined flow and heat transfer over a heated cylinder using the direct-forcing immersed boundary-thermal lattice Boltzmann method. *Physical Review E*, **2014**, 89, 053312	2.4	29
376	Relativistic lattice Boltzmann model with improved dissipation. *Physical Review D*, **2013**, 87,	4.9	29
375	Simulating the Immune Response on a Distributed Parallel Computer. *International Journal of Modern Physics C*, **1997**, 08, 527-545	1.1	29
374	Quantized current blockade and hydrodynamic correlations in biopolymer translocation through nanopores: evidence from multiscale simulations. *Nano Letters*, **2008**, 8, 1115-9	11.5	29

373	Duality in matrix lattice Boltzmann models. *Physical Review E*, **2008**, 78, 066701	2.4	29
372	Excised acoustic black holes: The scattering problem in the time domain. *Physical Review D*, **2005**, 72,	4.9	29
371	Towards a Renormalized Lattice Boltzmann Equation for Fluid Turbulence. *Journal of Statistical Physics*, **2002**, 107, 261-278	1.5	29
370	High-resolution lattice-gas simulation of two-dimensional turbulence. *Physical Review Letters*, **1988**, 60, 2738-2740	7.4	29
369	Fluid flow around NACA 0012 airfoil at low-Reynolds numbers with hybrid lattice Boltzmann method. *Computers and Fluids*, **2018**, 166, 200-208	2.8	28
368	Entropic lattice pseudo-potentials for multiphase flow simulations at high Weber and Reynolds numbers. *Physics of Fluids*, **2017**, 29, 092103	4.4	28
367	Derivation of the lattice Boltzmann model for relativistic hydrodynamics. *Physical Review D*, **2010**, 82,	4.9	28
366	MULTI-RELAXATION TIME LATTICE BOLTZMANN MODEL FOR MULTIPHASE FLOWS. *International Journal of Modern Physics C*, **2008**, 19, 875-902	1.1	28
365	Case report: Fibroma of tendon sheath in the distal forearm with associated median nerve neuropathy: US, CT and MR appearances. *Clinical Radiology*, **1996**, 51, 370-2	2.9	28
364	Models of polymer solutions in electrified jets and solution blowing. *Reviews of Modern Physics*, **2020**, 92,	40.5	28
363	Heterogeneous catalysis in pulsed-flow reactors with nanoporous gold hollow spheres. *Chemical Engineering Science*, **2017**, 166, 274-282	4.4	27
362	Hydrodynamics in Porous Media: A Finite Volume Lattice Boltzmann Study. *Journal of Scientific Computing*, **2014**, 59, 80-103	2.3	27
361	Finite-volume lattice Boltzmann modeling of thermal transport in nanofluids. *Computers and Fluids*, **2013**, 77, 56-65	2.8	27
360	Continuum free-energy formulation for a class of lattice Boltzmann multiphase models. *Europhysics Letters*, **2009**, 86, 24005	1.6	27
359	Numerical stability of Entropic versus positivity-enforcing Lattice Boltzmann schemes. *Mathematics and Computers in Simulation*, **2006**, 72, 227-231	3.3	27
358	An Integer Lattice Realization of a Lax Scheme for Transport Processes in Multiple Component Fluid Flows. *Journal of Computational Physics*, **1999**, 152, 493-516	4.1	27
357	Petaflop hydrokinetic simulations of complex flows on massive GPU clusters. *Computer Physics Communications*, **2013**, 184, 329-341	4.2	26
356	Three ways to lattice Boltzmann: a unified time-marching picture. *Physical Review E*, **2010**, 81, 016311	2.4	26

355	Graphics processing unit implementation of lattice Boltzmann models for flowing soft systems. *Physical Review E*, **2009**, 80, 066707	2.4	26
354	Modern lattice Boltzmann methods for multiphase microflows. *IMA Journal of Applied Mathematics*, **2011**, 76, 712-725	1	26
353	Lattice Boltzmann spray-like fluids. *Europhysics Letters*, **2008**, 82, 24005	1.6	26
352	On the Hydrodynamic Behaviour of the Lattice Boltzmann Equation. *Europhysics Letters*, **1990**, 13, 411-416	1.6	26
351	Bridging the gaps at the physics-chemistry-biology interface. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2016**, 374,	3	26
350	Hybrid lattice Boltzmann method on overlapping grids. *Physical Review E*, **2017**, 95, 013309	2.4	25
349	Regularization of the slip length divergence in water nanoflows by inhomogeneities at the Angstrom scale. *Soft Matter*, **2013**, 9, 8526	3.6	25
348	Solving the Fokker-Planck kinetic equation on a lattice. *Physical Review E*, **2006**, 73, 066707	2.4	25
347	Molecular dynamics simulation of ratchet motion in an asymmetric nanochannel. *Physical Review Letters*, **2006**, 97, 144509	7.4	25
346	Boundary Conditions for Thermal Lattice Boltzmann Simulations. *Lecture Notes in Computer Science*, **2003**, 977-986	0.9	25
345	Accelerated Lattice Boltzmann Schemes for Steady-State Flow Simulations. *Journal of Scientific Computing*, **2001**, 16, 135-144	2.3	25
344	Regularized lattice Boltzmann multicomponent models for low capillary and Reynolds microfluidics flows. *Computers and Fluids*, **2018**, 167, 33-39	2.8	24
343	DSMC□IBM mapping scheme for rarefied and non-rarefied gas flows. *Journal of Computational Science*, **2016**, 17, 357-369	3.4	24
342	Mesoscopic simulations at the physics-chemistry-biology interface. *Reviews of Modern Physics*, **2019** , 91,	40.5	23
341	Sub-ms dynamics of the instability onset of electrospinning. *Soft Matter*, **2015**, 11, 3424-31	3.6	23
340	Multiscale Simulation of Cardiovascular flows on the IBM Bluegene/P: Full Heart-Circulation System at Red-Blood Cell Resolution **2010**,		23
339	Herschel-Bulkley rheology from lattice kinetic theory of soft glassy materials. *Europhysics Letters*, **2010**, 91, 14003	1.6	23
338	Equilibria for discrete kinetic equations. *Physical Review E*, **1998**, 58, R4053-R4056	2.4	23

337	Nonlinear Stability of Compressible Thermal Lattice BGK Models. *SIAM Journal of Scientific Computing*, **1999**, 21, 366-377	2.6	23
336	Reassessing the single relaxation time Lattice Boltzmann method for the simulation of Darcy flows. *International Journal of Modern Physics C*, **2016**, 27, 1650037	1.1	22
335	Finite volume formulation of thermal lattice Boltzmann method. *International Journal of Numerical Methods for Heat and Fluid Flow*, **2014**, 24, 270-289	4.5	22
334	Direct evidence of plastic events and dynamic heterogeneities in soft-glasses. *Soft Matter*, **2014**, 10, 4615-24	3.8	22
333	Formal analogy between the Dirac equation in its Majorana form and the discrete-velocity version of the Boltzmann kinetic equation. *Physical Review Letters*, **2013**, 111, 160602	7.4	22
332	Three Routes to the Friction Matrix and Their Application to the Coarse-Graining of Atomic Lattices. *Macromolecular Theory and Simulations*, **2011**, 20, 526-540	1.5	22
331	Isotropy of three-dimensional quantum lattice Boltzmann schemes. *Physical Review E*, **2011**, 83, 046706	2.4	22
330	Polymer dynamics in wall turbulent flow. *Europhysics Letters*, **2002**, 58, 616-622	1.6	22
329	Lattice Boltzmann Method for Irregular Grids. *Physical Review Letters*, **1999**, 82, 5245-5248	7.4	22
328	Turbulence Modelling by Nonhydrodynamic Variables. *Europhysics Letters*, **1990**, 13, 727-732	1.6	22
327	Quantum lattice Boltzmann is a quantum walk. *EPJ Quantum Technology*, **2015**, 2,	6.9	21
326	Lattice differential operators for computational physics. *Europhysics Letters*, **2013**, 101, 50006	1.6	21
325	Lattice Boltzmann Simulation of Cavitating Flows. *Communications in Computational Physics*, **2013**, 13, 685-695	2.4	21
324	Comment on "Numerics of the lattice Boltzmann method: effects of collision models on the lattice Boltzmann simulations". *Physical Review E*, **2011**, 84, 068701	2.4	21
323	Lattice Boltzmann schemes without coordinates. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2004**, 362, 1763-71	3	21
322	Modeling pattern formation in soft flowing crystals. *Physical Review Fluids*, **2019**, 4,	2.8	21
321	Towards Exascale Lattice Boltzmann computing. *Computers and Fluids*, **2019**, 181, 107-115	2.8	21
320	Effect of nanoscale flows on the surface structure of nanoporous catalysts. *Journal of Chemical Physics*, **2017**, 146, 214703	3.9	20

319	Lattice Boltzmann model for ultrarelativistic flows. *Physical Review D*, **2013**, 87,	4.9	20
318	Lattice Boltzmann Simulation of Reactive Microflows over Catalytic Surfaces. *Journal of Statistical Physics*, **2002**, 107, 343-366	1.5	20
317	Computational modeling of the immune response to tumor antigens. *Journal of Theoretical Biology*, **2005**, 237, 390-400	2.3	20
316	The unstructured lattice Boltzmann method for non-Newtonian flows. *Journal of Statistical Mechanics: Theory and Experiment*, **2009**, 2009, P06005	1.9	19
315	Multiscale Simulation of Nanobiological Flows. *Computing in Science and Engineering*, **2008**, 10, 10-19	1.5	19
314	Two-dimensional lattice Boltzmann simulation of colloid migration in rough-walled narrow flow channels. *Physical Review E*, **2008**, 77, 031405	2.4	19
313	Unstructured lattice Boltzmann equation with memory. *Mathematics and Computers in Simulation*, **2006**, 72, 237-241	3.3	19
312	Dynamics of trapped two-component Fermi gas: Temperature dependence of the transition from collisionless to collisional regime. *Physical Review A*, **2003**, 67,	2.6	19
311	Particle-inspired scheme for the Gross–Pitaevski equation: An application to Bose–Einstein condensation. *Computer Physics Communications*, **2000**, 129, 82-90	4.2	19
310	Relativistic lattice Boltzmann method for quark-gluon plasma simulations. *Physical Review D*, **2011**, 84,	4.9	18
309	A LATTICE BOLTZMANN FOR DISORDERED FLUIDS. *International Journal of Modern Physics B*, **2003**, 17, 145-148	1.1	18
308	ACCELERATED LATTICE BOLTZMANN SCHEME FOR STEADY-STATE FLOWS. *International Journal of Modern Physics B*, **2003**, 17, 1-7	1.1	18
307	Energy dissipation and permeability in porous media. *Europhysics Letters*, **2002**, 60, 72-78	1.6	18
306	Elucidating the mechanism of step emulsification. *Physical Review Fluids*, **2018**, 3,	2.8	18
305	Tailoring boundary geometry to optimize heat transport in turbulent convection. *Europhysics Letters*, **2015**, 111, 44005	1.6	17
304	Particle Shape Influences Settling and Sorting Behavior in Microfluidic Domains. *Scientific Reports*, **2018**, 8, 8583	4.9	17
303	Towards a unified lattice kinetic scheme for relativistic hydrodynamics. *Physical Review E*, **2017**, 95, 053304	2.4	17
302	Numerical analysis of the averaged flow field in a turbulent lattice Boltzmann simulation. *Physica A: Statistical Mechanics and Its Applications*, **2006**, 362, 6-10	3.3	17

301	Computational models for wave-particle interactions. *Computer Physics Communications*, **1986**, 40, 137-151	4.1	17
300	Cooperativity flows and shear-bandings: a statistical field theory approach. *Soft Matter*, **2016**, 12, 514-30	3.6	16
299	JETSPIN: A specific-purpose open-source software for simulations of nanofiber electrospinning. *Computer Physics Communications*, **2015**, 197, 227-238	4.2	16
298	Novel nonequilibrium steady states in multiple emulsions. *Physics of Fluids*, **2020**, 32, 017102	4.4	16
297	Entropic lattice Boltzmann model for charged leaky dielectric multiphase fluids in electrified jets. *Physical Review E*, **2018**, 97, 033308	2.4	16
296	Effects of non-linear rheology on electrospinning process: A model study. *Mechanics Research Communications*, **2014**, 61, 41-46	2.2	16
295	The Z-index: A geometric representation of productivity and impact which accounts for information in the entire rank-citation profile. *Journal of Informetrics*, **2013**, 7, 823-832	3.1	16
294	Two- and three-dimensional lattice Boltzmann simulations of particle migration in microchannels. *Microfluidics and Nanofluidics*, **2013**, 15, 785-796	2.8	16
293	Ultrarelativistic transport coefficients in two dimensions. *Journal of Statistical Mechanics: Theory and Experiment*, **2013**, 2013, P02036	1.9	16
292	Flow through randomly curved manifolds. *Scientific Reports*, **2013**, 3, 3106	4.9	16
291	Extended friction elucidates the breakdown of fast water transport in graphene oxide membranes. *Europhysics Letters*, **2016**, 116, 54002	1.6	16
290	A moving-grid approach for fluid□tructure interaction problems with hybrid lattice Boltzmann method. *Computer Physics Communications*, **2019**, 234, 137-145	4.2	15
289	Kinetic approach to relativistic dissipation. *Physical Review E*, **2017**, 96, 023305	2.4	15
288	Quantum Simulator for Transport Phenomena in Fluid Flows. *Scientific Reports*, **2015**, 5, 13153	4.9	15
287	Lattice Boltzmann Simulation of Mixed Convection Heat Transfer in a Driven Cavity with Non-uniform Heating of the Bottom Wall. *Communications in Theoretical Physics*, **2015**, 63, 91-100	2.4	15
286	QUASIEQUILIBRIUM LATTICE BOLTZMANN MODELS WITH TUNABLE PRANDTL NUMBER FOR INCOMPRESSIBLE HYDRODYNAMICS. *International Journal of Modern Physics C*, **2013**, 24, 1340004	1.1	15
285	APPLICATIONS OF FINITE-DIFFERENCE LATTICE BOLTZMANN METHOD TO BREAKUP AND COALESCENCE IN MULTIPHASE FLOWS. *International Journal of Modern Physics C*, **2009**, 20, 1803-1816	1.1	15
284	Three-band decomposition analysis of wall shear stress in pulsatile flows. *Physical Review E*, **2011**, 83, 031902	2.4	15

283	Phase-field model of long-time glasslike relaxation in binary fluid mixtures. *Physical Review Letters*, **2011**, 106, 164501	7.4	15
282	Rupture of a ferrofluid droplet in external magnetic fields using a single-component lattice Boltzmann model for nonideal fluids. *Physical Review E*, **2009**, 79, 056706	2.4	15
281	Hydrokinetic simulations of nanoscopic precursor films in rough channels. *Journal of Statistical Mechanics: Theory and Experiment*, **2009**, 2009, P06007	1.9	15
280	Extended self-similarity in boundary layer turbulence. *Physical Review E*, **1997**, 55, 6985-6988	2.4	15
279	Lattice Boltzmann equation: Failure or success?. *Physica A: Statistical Mechanics and Its Applications*, **1997**, 240, 221-228	3.3	15
278	Output coupling of Bose condensates from atomic tunnel arrays: a numerical study. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **1999**, 260, 86-93	2.3	15
277	Neural network models for the anisotropic Reynolds stress tensor in turbulent channel flow. *Journal of Turbulence*, **2020**, 21, 525-543	2.1	15
276	Mesoscale modelling of soft flowing crystals. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2019**, 377, 20180149	3	14
275	Internal dynamics and activated processes in soft-glassy materials. *Soft Matter*, **2015**, 11, 1271-80	3.6	14
274	Regularized lattice BGK versus highly accurate spectral methods for cavity flow simulations. *International Journal of Modern Physics C*, **2014**, 25, 1441003	1.1	14
273	Rheological properties of soft-glassy flows from hydro-kinetic simulations. *Europhysics Letters*, **2013**, 104, 48006	1.6	14
272	A New Boundary Condition for Three-Dimensional Lattice Boltzmann Simulations of Capillary Filling in Rough Micro-Channels. *Communications in Computational Physics*, **2011**, 9, 1284-1292	2.4	14
271	Lattice-Boltzmann simulations of repulsive particle-particle and particle-wall interactions: coughing and choking. *Journal of Chemical Physics*, **2010**, 132, 134111	3.9	14
270	Nanoflows through disordered media: A joint lattice Boltzmann and molecular dynamics investigation. *Europhysics Letters*, **2010**, 89, 44001	1.6	14
269	Modelling wall shear stress in small arteries using the Lattice Boltzmann method: influence of the endothelial wall profile. *Medical Engineering and Physics*, **2011**, 33, 832-9	2.4	14
268	Optimization Strategies for the Entropic Lattice Boltzmann Method. *Journal of Scientific Computing* , **2007**, 30, 369-387	2.3	14
267	Lattice Boltzmann schemes for quantum applications. *Computer Physics Communications*, **2002**, 146, 317-323	4	14
266	Fluctuation Correlations in Reaction-Diffusion Systems: Reactive Lattice Gas Automata Approach. *Europhysics Letters*, **1992**, 20, 627-632	1.6	14

265	Computing of RF heating and current drive in Tokamaks. *Computer Physics Communications*, **1986**, 43, 125-141	4.2	14
264	Generation of superthermal electrons interacting with waves in lower-hybrid range of frequency revisited. *Plasma Physics and Controlled Fusion*, **1985**, 27, 863-871	2	14
263	Mesoscopic model for soft flowing systems with tunable viscosity ratio. *Physical Review Fluids*, **2018** , 3,	2.8	14
262	Jetting to dripping transition: Critical aspect ratio in step emulsifiers. *Physics of Fluids*, **2019**, 31, 021703	4.4	14
261	Extreme flow simulations reveal skeletal adaptations of deep-sea sponges. *Nature*, **2021**, 595, 537-541	50.4	14
260	Energy dissipation in flows through curved spaces. *Scientific Reports*, **2017**, 7, 42350	4.9	13
259	Effects of orthogonal rotating electric fields on electrospinning process. *Physics of Fluids*, **2017**, 29, 082003	4.4	13
258	Multiscale Hemodynamics Using GPU Clusters. *Communications in Computational Physics*, **2012**, 11, 48-64	2.4	13
257	Transition in the equilibrium distribution function of relativistic particles. *Scientific Reports*, **2012**, 2, 611	4.9	13
256	Capillary filling for multicomponent fluid using the pseudo-potential Lattice Boltzmann method. *European Physical Journal: Special Topics*, **2009**, 171, 223-228	2.3	13
255	EXPLORING DNA TRANSLOCATION THROUGH A NANOPORE VIA A MULTISCALE LATTICE-BOLTZMANN MOLECULAR-DYNAMICS METHODOLOGY. *International Journal of Modern Physics C*, **2007**, 18, 685-692	1.1	13
254	Transition to hydrodynamics in colliding fermion clouds. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2004**, 37, S91-S99	1.3	13
253	Large-scale cellular automata simulations of the immune system response. *Physical Review E*, **2000**, 61, 1851-4	2.4	13
252	Lattice Boltzmann accelerated direct simulation Monte Carlo for dilute gas flow simulations. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2016**, 374,	3	13
251	Relativistic lattice Boltzmann methods: Theory and applications. *Physics Reports*, **2020**, 863, 1-63	27.7	12
250	Kinetic formulation of the Kohn-Sham Equations for ab initio electronic structure calculations. *Physical Review Letters*, **2014**, 113, 096402	7.4	12
249	Rayleigh-Bard instability in graphene. *Physical Review B*, **2015**, 91,	3.3	12
248	Relativistic lattice kinetic theory: Recent developments and future prospects. *European Physical Journal: Special Topics*, **2014**, 223, 2177-2188	2.3	12

247	Mass flux through asymmetric nanopores: Microscopic versus hydrodynamic motion. *Journal of Chemical Physics*, **2008**, 129, 124717	3.9	12
246	Front pinning in capillary filling of chemically coated channels. *Physical Review E*, **2008**, 78, 036305	2.4	12
245	Lattice Boltzmann equation for relativistic quantum mechanics. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2002**, 360, 429-36	3	12
244	Scaling Behaviour of the Velocity and Temperature Correlation Functions in 3D Convective Turbulence. *Europhysics Letters*, **1994**, 28, 231-236	1.6	12
243	On the small-scale dynamical behavior of lattice BGK and lattice Boltzmann schemes. *Journal of Scientific Computing*, **1993**, 8, 219-230	2.3	12
242	Entropy production in thermal phase separation: a kinetic-theory approach. *Soft Matter*, **2019**, 15, 2245-2259	3.6	11
241	Energy Conserving Lattice Boltzmann Models for Incompressible Flow Simulations. *Communications in Computational Physics*, **2013**, 13, 603-613	2.4	11
240	MODELING OF BIFURCATION PHENOMENA IN SUDDENLY EXPANDED FLOWS WITH A NEW FINITE VOLUME LATTICE BOLTZMANN METHOD. *International Journal of Modern Physics C*, **2011**, 22, 977-1003	1.1	11
239	Chemical efficiency of reactive microflows with heterogeneous catalysis: a lattice Boltzmann study. *EPJ Applied Physics*, **2001**, 16, 71-84	1.1	11
238	A high performance simulator of the immune response. *Future Generation Computer Systems*, **1999**, 15, 333-342	7.5	11
237	Preliminary analysis of the scaling exponents in channel flow turbulence. *Fluid Dynamics Research*, **1999**, 24, 201-209	1.2	11
236	Iterative algorithms for the solution of nonsymmetric systems in the modelling of weak plasma turbulence. *Journal of Computational Physics*, **1989**, 80, 489-497	4.1	11
235	Modeling drug delivery from multiple emulsions. *Physical Review E*, **2020**, 102, 023114	2.4	11
234	The vortex-driven dynamics of droplets within droplets. *Nature Communications*, **2021**, 12, 82	17.4	11
233	Prospects for the Detection of Electronic Preturbulence in Graphene. *Physical Review Letters*, **2018**, 121, 236602	7.4	11
232	Different regimes of the uniaxial elongation of electrically charged viscoelastic jets due to dissipative air drag. *Mechanics Research Communications*, **2015**, 69, 97-102	2.2	10
231	Three-Dimensional Model for Electrospinning Processes in Controlled Gas Counterflow. *Journal of Physical Chemistry A*, **2016**, 120, 4884-92	2.8	10
230	Lattice Boltzmann method as a computational framework for multiscale haemodynamics. *Mathematical and Computer Modelling of Dynamical Systems*, **2014**, 20, 470-490	1	10

229	UNSTRUCTURED LATTICE BOLTZMANN METHOD FOR HEMODYNAMIC FLOWS WITH SHEAR-DEPENDENT VISCOSITY. *International Journal of Modern Physics C*, **2010**, 21, 795-811	1.1	10
228	Lattice Boltzmann method for electromagnetic wave propagation. *Europhysics Letters*, **2011**, 96, 14002	1.6	10
227	Corner liquid imbibition during capillary penetration in lithographically made microchannels. *Applied Physics Letters*, **2009**, 94, 171901	3.4	10
226	Bose-Einstein condensates and the numerical solution of the Gross-Pitaevskii equation. *Computing in Science and Engineering*, **2005**, 7, 48-57	1.5	10
225	Probing the energy bands of a Bose-Einstein condensate in an optical lattice. *Physical Review A*, **2001**, 63,	2.6	10
224	COMPUTING STEADY STATE FLOWS WITH AN ACCELERATED LATTICE BOLTZMANN TECHNIQUE. *International Journal of Modern Physics C*, **2002**, 13, 675-687	1.1	10
223	Resummation techniques in the kinetic-theoretical approach to subgrid turbulence modeling. *Physica A: Statistical Mechanics and Its Applications*, **2000**, 280, 92-98	3.3	10
222	Dynamic mesh refinement for discrete models of jet electro-hydrodynamics. *Journal of Computational Science*, **2016**, 17, 325-333	3.4	10
221	Chimaera simulation of complex states of flowing matter. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2016**, 374,	3	10
220	Nonlinear Langevin model for the early-stage dynamics of electrospinning jets. *Molecular Physics*, **2015**, 113, 2435-2441	1.7	9
219	Lattice Boltzmann simulations of vortex entrapment of particles in a microchannel with curved or flat edges. *Microfluidics and Nanofluidics*, **2015**, 18, 1165-1175	2.8	9
218	Lattice Boltzmann model for resistive relativistic magnetohydrodynamics. *Physical Review E*, **2015**, 92, 023309	2.4	9
217	Ultrathin Fibers from Electrospinning Experiments under Driven Fast-Oscillating Perturbations. *Physical Review Applied*, **2014**, 2,	4.3	9
216	A note on equilibrium boundary conditions in lattice Boltzmann fluid dynamic simulations. *European Physical Journal: Special Topics*, **2009**, 171, 213-221	2.3	9
215	Endothelial shear stress from large-scale blood flow simulations. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2011**, 369, 2354-61	3	9
214	LATTICE BOLTZMANN SIMULATION OF DENSE NANOFLOWS: A COMPARISON WITH MOLECULAR DYNAMICS AND NAVIER STOKES SOLUTIONS. *International Journal of Modern Physics C*, **2007**, 18, 667-675	1.1	9
213	A lattice Boltzmann study of reactive microflows. *Computer Physics Communications*, **2002**, 147, 516-521	4.2	9
212	On the generation of superthermal electrons in lower-hybrid current-drive experiments. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **1984**, 106, 137-139	2.3	9

211	Enhanced computational performance of the lattice Boltzmann model for simulating micron- and submicron-size particle flows and non-Newtonian fluid flows. *Computer Physics Communications*, **2017**, 213, 64-71	4.2	8
210	Relativistic dissipation obeys Chapman-Enskog asymptotics: Analytical and numerical evidence as a basis for accurate kinetic simulations. *Physical Review E*, **2019**, 99, 052126	2.4	8
209	Striated populations in disordered environments with advection. *Physica A: Statistical Mechanics and Its Applications*, **2017**, 465, 500-514	3.3	8
208	Fluctuation-dissipation relation from a FLB-BGK model. *Europhysics Letters*, **2012**, 99, 64001	1.6	8
207	KLEIN TUNNELING IN THE PRESENCE OF RANDOM IMPURITIES. *International Journal of Modern Physics C*, **2012**, 23, 1250080	1.1	8
206	Simulation of single-file ion transport with the lattice Fokker-Planck equation. *Physical Review E*, **2006**, 73, 017701	2.4	8
205	Lattice BBGKY scheme for two-phase flows: One-dimensional case. *Mathematics and Computers in Simulation*, **2006**, 72, 249-252	3.3	8
204	Lattice BoltzmannPoisson method for electrorheological nanoflows in ion channels. *Computer Physics Communications*, **2005**, 169, 203-206	4.2	8
203	Dark energy from cosmological fluids obeying a Shan-Chen nonideal equation of state. *Physical Review D*, **2013**, 88,	4.9	7
202	Universal mechanism for saturation of vorticity growth in fully developed fluid turbulence. *Journal of Fluid Mechanics*, **2013**, 728,	3.7	7
201	A NOTE ON THE LATTICE BOLTZMANN VERSUS FINITE-DIFFERENCE METHODS FOR THE NUMERICAL SOLUTION OF THE FISHER'S EQUATION. *International Journal of Modern Physics C*, **2014**, 25, 1340015	1.1	7
200	Lattice kinetic scheme for generalized coordinates and curved spaces. *International Journal of Modern Physics C*, **2014**, 25, 1441001	1.1	7
199	Quantized biopolymer translocation through nanopores: departure from simple scaling. *Physical Review E*, **2009**, 79, 030901	2.4	7
198	Sensitivity of the active fracture model parameter to fracture network orientation and injection scenarios. *Hydrogeology Journal*, **2009**, 17, 1347-1358	3.1	7
197	Collective Dynamics in the Immune System Response. *Physical Review Letters*, **1997**, 79, 4493-4496	7.4	7
196	Analogy between capillary motion and Friedmann-Robertson-Walker cosmology. *Europhysics Letters*, **2008**, 82, 34003	1.6	7
195	LATTICE FOKKERPLANCK EQUATION. *International Journal of Modern Physics C*, **2006**, 17, 459-470	1.1	7
194	The finite volume formulation of the Lattice Boltzmann equation. *Transport Theory and Statistical Physics*, **1994**, 23, 163-171		7

193	Parallel Multiscale Modeling of Biopolymer Dynamics with Hydrodynamic Correlations. *International Journal for Multiscale Computational Engineering*, **2008**, 6, 25-37	2.4	7
192	Shear dynamics of polydisperse double emulsions. *Physics of Fluids*, **2021**, 33, 047105	4.4	7
191	Lattice Boltzmann beyond Navier-Stokes: Where do we stand? **2016**,		7
190	Curvature dynamics and long-range effects on fluid-fluid interfaces with colloids. *Soft Matter*, **2019**, 15, 2848-2862	3.6	7
189	General velocity, pressure, and initial condition for two-dimensional and three-dimensional lattice Boltzmann simulations. *Physical Review E*, **2017**, 95, 033301	2.4	6
188	Combined effects of fluid type and particle shape on particles flow in microfluidic platforms. *Microfluidics and Nanofluidics*, **2019**, 23, 1	2.8	6
187	Nanofluid Heat Transfer in Wavy-Wall Channels with Different Geometries: A Finite-Volume Lattice Boltzmann Study. *Journal of Scientific Computing*, **2020**, 83, 1	2.3	6
186	Poiseuille flow in curved spaces. *Physical Review E*, **2016**, 93, 043316	2.4	6
185	Semi-spectral method for the Wigner equation. *Journal of Computational Physics*, **2016**, 305, 1015-1036	4.1	6
184	On the impact of controlled wall roughness shape on the flow of a soft material. *Europhysics Letters* , **2019**, 127, 34005	1.6	6
183	Lattice Boltzmann modeling of water-like fluids. *Frontiers in Physics*, **2014**, 2,	3.9	6
182	The importance of chemical potential in the determination of water slip in nanochannels. *European Physical Journal E*, **2015**, 38, 127	1.5	6
181	Risk assessment of atherosclerotic plaques based on global biomechanics. *Medical Engineering and Physics*, **2013**, 35, 1290-7; discussion 1290	2.4	6
180	Markovian dissipative coarse grained molecular dynamics for a simple 2D graphene model. *Journal of Chemical Physics*, **2012**, 137, 234103	3.9	6
179	MODELING FLUID FLOWS IN DISTENSIBLE TUBES FOR APPLICATIONS IN HEMODYNAMICS. *International Journal of Modern Physics C*, **2013**, 24, 1350030	1.1	6
178	Matrix lattice Boltzmann reloaded. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2011**, 369, 2202-10	3	6
177	Lattice Boltzmann method for quantum field theory. *Journal of Physics A: Mathematical and Theoretical*, **2007**, 40, F559-F567	2	6
176	Turbulence Effects on Kinetic Equations. *Journal of Scientific Computing*, **2006**, 28, 459-466	2.3	6

175	Energy dissipation measures in three-dimensional disordered porous media. *Physical Review E*, **2005**, 72, 046705	2.4	6
174	Intracellular signal propagation in a two-dimensional autocatalytic reaction model. *Physical Review E*, **2002**, 66, 031905	2.4	6
173	Supersymmetry solution for finitely extensible dumbbell model. *Europhysics Letters*, **2000**, 51, 355-360	1.6	6
172	MULTISCALE LATTICE BOLTZMANN SCHEMES: A PRELIMINARY APPLICATION TO AXIAL TURBOMACHINE FLOW SIMULATIONS. *International Journal of Modern Physics C*, **2000**, 11, 233-245	1.1	6
171	Intermittency and eddy viscosities in dynamical models of turbulence. *Physics of Fluids*, **1999**, 11, 1221-1228	4.1	6
170	A REVIEW OF THE LATTICE BOLTZMANN METHOD. *International Journal of Modern Physics C*, **1993**, 04, 409-415	1.1	6
169	Bifurcations of a lattice gas flow under external forcing. *Journal of Statistical Physics*, **1989**, 56, 69-81	1.5	6
168	Flow through geometrically irregular media with lattice gas automata. *Meccanica*, **1990**, 25, 253-257	2.1	6
167	Similarity solutions of the one-dimensional Fokker-Planck equation. *Physical Review A*, **1986**, 33, 4419-4428	2.8	6
166	Cellular automata modeling on IBM 3090/VF. *Computer Physics Communications*, **1987**, 47, 173-180	4.2	6
165	Concentrated phase emulsion with multicore morphology under shear: A numerical study. *Physical Review Fluids*, **2020**, 5,	2.8	6
164	Beyond moments: relativistic lattice Boltzmann methods for radiative transport in computational astrophysics. *Monthly Notices of the Royal Astronomical Society*, **2020**, 498, 3374-3394	4.3	6
163	LBsoft: A parallel open-source software for simulation of colloidal systems. *Computer Physics Communications*, **2020**, 256, 107455	4.2	6
162	On the effects of surface corrugation on the hydrodynamic performance of cylindrical rigid structures. *European Physical Journal E*, **2018**, 41, 95	1.5	5
161	Turbulent Transport Processes at Rough Surfaces with Geophysical Applications. *Procedia IUTAM*, **2015**, 15, 34-40		5
160	Novel risk predictor for thrombus deposition in abdominal aortic aneurysms. *Europhysics Letters*, **2015**, 112, 28001	1.6	5
159	Relativistic effects on the Richtmyer-Meshkov instability. *Physical Review D*, **2014**, 90,	4.9	5
158	Particle motion in a photon gas: friction matters. *General Relativity and Gravitation*, **2012**, 44, 2669-2680	2.3	5

157	Friction forces in cosmological models. *European Physical Journal C*, **2013**, 73, 1	4.2	5
156	Magnetically driven droplet break-up and vaporization: a lattice Boltzmann study. *Journal of Statistical Mechanics: Theory and Experiment*, **2010**, 2010, P05010	1.9	5
155	Towards a mesoscopic model of water-like fluids with hydrodynamic interactions. *Journal of Chemical Physics*, **2011**, 135, 124902	3.9	5
154	The Lattice Boltzmann Method and Multiscale Hemodynamics: Recent Advances and Perspectives. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2012**, 45, 30-39		5
153	Numerical simulation of conformational variability in biopolymer translocation through wide nanopores. *Journal of Statistical Mechanics: Theory and Experiment*, **2009**, 2009, P06009	1.9	5
152	Mesoscopic modelling of local phase transitions and apparent-slip phenomena in microflows. *Mathematics and Computers in Simulation*, **2006**, 72, 84-88	3.3	5
151	Relaxation approximations and kinetic models of fluid turbulence. *Physica A: Statistical Mechanics and Its Applications*, **2006**, 362, 1-5	3.3	5
150	Explicit Finite-Difference and Particle Method for the Dynamics of Mixed Bose-Condensate and Cold-Atom Clouds. *Journal of Computational Physics*, **2002**, 182, 368-391	4.1	5
149	Numerical Study of Thermal Diffusion and Diffusion Thermo Effects in a Differentially Heated and Salted Driven Cavity Using MRT-Lattice Boltzmann Finite Difference Model. *International Journal of Applied Mechanics*, **2021**, 13, 2150049	2.4	5
148	Mesoscale modelling of droplets' self-assembly in microfluidic channels. *Soft Matter*, **2021**, 17, 2374-2383	3.6	5
147	Integer lattice dynamics for Vlasov–Poisson. *Monthly Notices of the Royal Astronomical Society*, **2017**, 465, 3154-3162	4.3	4
146	Dissipative hydrodynamics of relativistic shock waves in a quark gluon plasma: Comparing and benchmarking alternate numerical methods. *Physical Review C*, **2020**, 101,	2.7	4
145	Numerical evidence of electron hydrodynamic whirlpools in graphene samples. *Computers and Fluids*, **2018**, 172, 644-650	2.8	4
144	Lattice Wigner equation. *Physical Review E*, **2018**, 97, 013308	2.4	4
143	Spread of consensus in self-organized groups of individuals: Hydrodynamics matters. *Europhysics Letters*, **2016**, 113, 18001	1.6	4
142	Scalar field inflation and Shan-Chen fluid models. *Physical Review D*, **2014**, 90,	4.9	4
141	Entropy-Assisted Computing of Low-Dissipative Systems. *Entropy*, **2015**, 17, 8099-8110	2.8	4
140	Particle scattering by a test fluid on a Schwarzschild spacetime: the equation of state matters. *European Physical Journal C*, **2012**, 72, 1	4.2	4

139	Radiation pressure vs. friction effects in the description of the Poynting-Robertson scattering process. *Europhysics Letters*, **2012**, 97, 40007	1.6	4
138	Wetting/dewetting transition of two-phase flows in nano-corrugated channels. *Journal of Computer-Aided Materials Design*, **2007**, 14, 447-456		4
137	Multiscale simulations of complex systems: computation meets reality. *Scientific Modeling and Simulation SMNS*, **2008**, 15, 59-65		4
136	Boundary effects on the onset of nonlinear flow in porous domains. *Europhysics Letters*, **2006**, 73, 858-863	1.6	4
135	Discrete dispersion relations and the breaking of Lorentz invariance. *Classical and Quantum Gravity*, **2006**, 23, 1989-1997	3.3	4
134	A COMPARISON OF SINGLE-TIME RELAXATION LATTICE BOLTZMANN SCHEMES WITH ENHANCED STABILITY. *International Journal of Modern Physics C*, **2006**, 17, 1375-1390	1.1	4
133	Lattice gas modeling of nanowhisker growth. *Physical Review E*, **2007**, 76, 031601	2.4	4
132	Effects of collisions against thermal impurities in the dynamics of a trapped fermion gas. *Physical Review A*, **2004**, 70,	2.6	4
131	Lattice Boltzmann model with hierarchical interactions. *Physica A: Statistical Mechanics and Its Applications*, **2003**, 325, 477-484	3.3	4
130	The Lattice Boltzmann Equation: Theory and Application. *NATO ASI Series Series B: Physics*, **1992**, 187-203		4
129	Wet to dry self-transitions in dense emulsions: From order to disorder and back. *Physical Review Fluids*, **2021**, 6,	2.8	4
128	Computational performance of SequenceL coding of the lattice Boltzmann method for multi-particle flow simulations. *Computer Physics Communications*, **2017**, 213, 92-99	4.2	3
127	Isotropic finite-difference discretization of stochastic conservation laws preserving detailed balance. *Journal of Statistical Mechanics: Theory and Experiment*, **2017**, 2017, 103202	1.9	3
126	Of Naturalness and Complexity. *European Physical Journal Plus*, **2019**, 134, 1	3.1	3
125	Lattice kinetic approach to non-equilibrium flows **2016**,		3
124	Coupled RapidCell and lattice Boltzmann models to simulate hydrodynamics of bacterial transport in response to chemoattractant gradients in confined domains. *Microfluidics and Nanofluidics*, **2016**, 20, 1	2.8	3
123	General curved boundary treatment for two- and three-dimensional stationary and moving walls in flow and nonflow lattice Boltzmann simulations. *Physical Review E*, **2018**, 98, 023304	2.4	3
122	A hydro-kinetic scheme for the dynamics of hydrogen bonds in water-like fluids. *Physical Chemistry Chemical Physics*, **2014**, 16, 15510-8	3.6	3

121	A fluctuating lattice Boltzmann scheme for the one-dimensional KPZ equation. *Physica A: Statistical Mechanics and Its Applications*, **2012**, 391, 4557-4563	3.3	3
120	Markovian equations of motion for non-Markovian coarse-graining and properties for graphene blobs. *New Journal of Physics*, **2013**, 15, 125015	2.9	3
119	Discrete simulation of fluid dynamics: applications. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2011**, 369, 2384-6	3	3
118	Microscopic simulation in biology and medicine. *Current Medicinal Chemistry*, **2007**, 14, 625-37	4.3	3
117	On the use of lattice Fokker-Planck models for hydrodynamics. *Europhysics Letters*, **2006**, 75, 399-405	1.6	3
116	Lattice mesoscopic model of dynamically heterogeneous fluids. *Physical Review Letters*, **2005**, 95, 224502	7.4	3
115	Multi-Representation Techniques for Multi-Scale Simulation: Reactive Microflows in a Catalytic Converter. *Molecular Simulation*, **2000**, 25, 13-26	2	3
114	Lattice Boltzmann method on a cluster of IBM RISC system/6000 workstations. *Concurrency and Computation: Practice and Experience*, **1993**, 5, 359-366		3
113	A four-color parallel algorithm for the solution of a two-dimensional advection-diffusion equation with the finite element method. *Journal of Scientific Computing*, **1989**, 4, 61-70	2.3	3
112	Self-similar evolution of one-dimensional Fokker-Planck systems. *Physical Review A*, **1987**, 36, 5020-5024	2.6	3
111	Lattice Boltzmann simulations capture the multiscale physics of soft flowing crystals. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2020**, 378, 20190406	3	3
110	Discrete fluidization of dense monodisperse emulsions in neutral wetting microchannels. *Soft Matter*, **2020**, 16, 651-658	3.6	3
109	Toward exascale design of soft mesoscale materials. *Journal of Computational Science*, **2020**, 46, 101175	3.4	3
108	Shear dynamics of confined bijels. *AIP Advances*, **2020**, 10, 095304	1.5	3
107	Lattice Boltzmann multicomponent model for direct-writing printing. *Physics of Fluids*, **2021**, 33, 042103	4.4	3
106	Translocation Dynamics of High-Internal Phase Double Emulsions in Narrow Channels. *Langmuir*, **2021**, 37, 9026-9033	4	3
105	A fast and efficient deep learning procedure for tracking droplet motion in dense microfluidic emulsions. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2021**, 379, 20200400	3	3
104	Quantized Alternate Current on Curved Graphene. *Condensed Matter*, **2019**, 4, 39	1.8	2

103	A Multiresolution Mesoscale Approach for Microscale Hydrodynamics. *Advanced Theory and Simulations*, **2020**, 3, 1900250	3.5	2
102	Lattice Boltzmann implementation of the three-dimensional Ben-Naim potential for water-like fluids. *Journal of Chemical Physics*, **2013**, 138, 124105	3.9	2
101	Paradoxical ratcheting in cornstarch. *Physics of Fluids*, **2015**, 27, 103101	4.4	2
100	Short-Lived Lattice Quasiparticles for Strongly Interacting Fluids. *Entropy*, **2015**, 17, 6169-6178	2.8	2
99	ONE-DIMENSIONAL QUANTUM LATTICE BOLTZMANN SCHEME FOR THE NONLINEAR DIRAC EQUATION. *International Journal of Modern Physics C*, **2013**, 24, 1340001	1.1	2
98	Capillary filling with randomly coated walls. *Journal of Statistical Mechanics: Theory and Experiment*, **2009**, 2009, L02001	1.9	2
97	Modeling Elastic Walls in Lattice Boltzmann Simulations of Arterial Blood Flow. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2012**, 45, 936-941		2
96	Clustering Instability in Granular Gases: A Mesoscopic Investigation. *International Journal of Modern Physics C*, **1997**, 08, 999-1008	1.1	2
95	Mass Transfer Improvements in Catalytic Converter Channels: An Hybrid BGK-Finite Volume Numerical Simulation Method **1997**,		2
94	MUPHY: A parallel high performance MUlti PHYsics/Scale code. *Parallel and Distributed Processing Symposium (IPDPS), Proceedings of the International Conference on*, **2008**,		2
93	Density fluctuations in lattice-Boltzmann simulations of multiphase fluids in a closed system. *Physica A: Statistical Mechanics and Its Applications*, **2007**, 374, 691-698	3.3	2
92	MESOSCOPIC MODELLING OF FLUID FLOWS IN MICRO AND NANO CHANNEL. *International Journal of Modern Physics C*, **2007**, 18, 758-765	1.1	2
91	A lattice Boltzmann model with random dynamical constraints. *European Physical Journal B*, **2004**, 39, 241-247	1.2	2
90	A particle-dynamics study of dissipation in colliding clouds of ultracold fermions. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2004**, 362, 1605-12	3	2
89	Kinetic Approach to Lattice Quantum Mechanics. *Lecture Notes in Computer Science*, **2002**, 114-122	0.9	2
88	Hydrodynamic behaviour of the Lattice Boltzmann Equation **1990**, 39-48		2
87	On the Effects of Reactant Flow Rarefaction on Heterogeneous Catalysis: a Regularized Lattice Boltzmann Study. *Communications in Computational Physics*, **2018**, 23,	2.4	2
86	Towards a self-consistent Boltzmann's kinetic model of fluid turbulence. *Journal of Turbulence*, **2020**, 21, 375-385	2.1	2

85	Probing bulk viscosity in relativistic flows. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2020**, 378, 20190409	3	2
84	Optimized Modeling and Design of a PCM-Enhanced H2 Storage. *Energies*, **2021**, 14, 1554	3.1	2
83	Rayleigh-Bénard convection of a model emulsion: anomalous heat-flux fluctuations and finite-size droplet effects. *Soft Matter*, **2021**, 17, 3709-3721	3.6	2
82	Microscale modelling of dielectrophoresis assembly processes. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2021**, 379, 20200407	3	2
81	Deformation and breakup dynamics of droplets within a tapered channel. *Physics of Fluids*, **2021**, 33, 082008	4.4	2
80	Stochastic Jetting and Dripping in Confined Soft Granular Flows.. *Physical Review Letters*, **2022**, 128, 128001	7.4	2
79	LBcuda: A high-performance CUDA port of LBsoft for simulation of colloidal systems. *Computer Physics Communications*, **2022**, 277, 108380	4.2	2
78	Microvorticity fluctuations affect the structure of thin fluid films. *Physical Review E*, **2019**, 100, 042606	2.4	1
77	Simulating blood rheology across scales: A hybrid LB-particle approach. *International Journal of Modern Physics C*, **2019**, 30, 1941003	1.1	1
76	Effects of Advective-Diffusive Transport of Multiple Chemoattractants on Motility of Engineered Chemosensory Particles in Fluidic Environments. *Entropy*, **2019**, 21,	2.8	1
75	Multiparticle collision dynamics for fluid interfaces with near-contact interactions. *Journal of Chemical Physics*, **2020**, 152, 144101	3.9	1
74	Semi-Lagrangian implicit Bhatnagar-Gross-Krook collision model for the finite-volume discrete Boltzmann method. *Physical Review E*, **2020**, 101, 063301	2.4	1
73	A coupled lattice Boltzmann-Multiparticle collision method for multi-resolution hydrodynamics. *Journal of Computational Science*, **2020**, 44, 101160	3.4	1
72	Multicomponent Lattice Boltzmann Models for Biological Applications **2018**, 357-370		1
71	Effects of friction forces on the motion of objects in smoothly matched interior/exterior spacetimes. *Classical and Quantum Gravity*, **2013**, 30, 025009	3.3	1
70	Effects of nanoparticles on the dynamic morphology of electrified jets. *Europhysics Letters*, **2017**, 119, 44001	1.6	1
69	High-order kinetic relaxation schemes as high-accuracy Poisson solvers. *International Journal of Modern Physics C*, **2015**, 26, 1550055	1.1	1
68	Molecular Dynamics Simulations of Nanoparticle Interactions with a Planar Wall: Does Shape Matter?. *Communications in Computational Physics*, **2013**, 13, 900-915	2.4	1

67	Discrete simulation of fluid dynamics: methods. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2011**, 369, 2152-4	3	1
66	Prospective Merger Between Car-Parrinello and Lattice Boltzmann Methods for Quantum Many-Body Simulations. *Communications in Computational Physics*, **2011**, 9, 1137-1151	2.4	1
65	Shear banding from lattice kinetic models with competing interactions. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2011**, 369, 2439-47	3	1
64	Heterogeneous diffuse interfaces: a new mechanism for arrested coarsening in binary mixtures. Heterogeneous diffuse interfaces. *European Physical Journal E*, **2011**, 34, 93	1.5	1
63	A NOTE ON THE ANALOGY BETWEEN KOLMOGOROV TURBULENCE AND QUANTUM GRAVITY. *International Journal of Modern Physics C*, **2010**, 21, 1329-1340	1.1	1
62	NUMERICAL SIMULATION OF QUANTUM STATE REDUCTION IN BOSE–EINSTEIN CONDENSATES WITH ATTRACTIVE INTERACTIONS. *International Journal of Modern Physics C*, **2010**, 21, 629-646	1.1	1
61	Lattice Boltzmann Methods for Multiscale Fluid Problems **2005**, 2475-2486		1
60	A lattice Boltzmann study of non-hydrodynamic effects in shell models of turbulence. *Physica D: Nonlinear Phenomena*, **2004**, 197, 303-312	3.3	1
59	Dissipative Quantum Dynamics from Wigner Distributions. *AIP Conference Proceedings*, **2002**,	0	1
58	Electronic Structure Calculations Using Self-Adaptive Multiscale Voronoi Basis Functions. *Journal of Statistical Physics*, **2002**, 107, 159-171	1.5	1
57	Simulating the G-protein cAMP pathway with a two-compartment reactive lattice gas. *Theory in Biosciences*, **2005**, 123, 413-29	1.3	1
56	A parallel simulator of the immune response. *Lecture Notes in Computer Science*, **1998**, 161-172	0.9	1
55	Reply to "Comment on 'Extended self-similarity in turbulent flows' ". *Physical Review E*, **1995**, 51, 2672-2673	2.4	1
54	The lattice Boltzmann equation for turbulence. *Nuclear Physics, Section B, Proceedings Supplements*, **1990**, 17, 708-711		1
53			1
52	Finite elements applied to plasma waves. *Computer Physics Reports*, **1987**, 6, 335-349		1
51	Effects of anisotropic scattering on the distribution of charged particles in an electric field. *Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods*, **1985**, 85, 208-216		1
50	Integral form of the Boltzmann equation for the forced diffusion of charged particles in anisotropically scattering media. *Meccanica*, **1981**, 16, 67-74	2.1	1

49	Go-with-the-Flow Lattice Boltzmann Methods for Tracer Dynamics. *Lecture Notes in Physics*, **2002**, 267-285	0.58	1
48	Intermittency in channel-flow turbulence **1999**, 313-318		1
47	Microscopic and Mesoscopic Simulations of Complex Flows with Cellular Automata and Related Techniques **1991**, 1031-1054		1
46	Benchmarking the parallel FIRE code on IBM SP1-2 scalable parallel platforms. *Lecture Notes in Computer Science*, **1995**, 640-645	0.9	1
45	Scaling Exponents in Turbulent Channel Flow. *Fluid Mechanics and Its Applications*, **1998**, 159-162	0.2	1
44	A Lattice Boltzmann Method for relativistic rarefied flows in (2+1) dimensions. *Journal of Computational Science*, **2021**, 51, 101320	3.4	1
43	Complex Flow Simulation via Lattice Boltzmann Method **2016**, 38-1-38-30		1
42	Disordered interfaces in soft fluids with suspended colloids. *International Journal of Modern Physics C*, **2019**, 30, 1941004	1.1	1
41	Multilevel Lattice Boltzmann-Particle Dynamics simulations at the Physics-Biology interface. *Journal of Physics: Conference Series*, **2018**, 1136, 012013	0.3	1
40	Tracking droplets in soft granular flows with deep learning techniques. *European Physical Journal Plus*, **2021**, 136, 864	3.1	1
39	Lattice Boltzmann Simulation of Thermal Microflows with Heterogenuous Catalysis. *Lecture Notes in Computer Science*, **2003**, 957-966	0.9	1
38	The Role of Very Low-Reynolds Hydrodynamics on the Transfer of Information Among Active Agents. *Journal of Statistical Physics*, **2015**, 161, 1390-1403	1.5	0
37	Analysis of Carleman Linearization of Lattice Boltzmann. *Fluids*, **2022**, 7, 24	1.6	0
36	Playing with Casimir in the vacuum sandbox. *European Physical Journal C*, **2021**, 81, 1	4.2	0
35	Projecting LBM performance on Exascale class Architectures: a tentative outlook. *Journal of Computational Science*, **2021**, 55, 101447	3.4	0
34	Zero Sales Resistance: The Dark Side of Big Data and Artificial Intelligence.. *Cyberpsychology, Behavior, and Social Networking*, **2022**, 25, 169-173	4.4	0
33	Dynamic symmetry-breaking in mutually annihilating fluids with selective interfaces. *Journal of Statistical Mechanics: Theory and Experiment*, **2019**, 2019, 083215	1.9	
32	The Lattice Boltzmann Method as a General Framework for Blood Flow Modelling and Simulations **2013**, 153-170		

31	Cooling Effect of the Richtmyer-Meshkov Instability. *ESAIM Proceedings and Surveys*, **2015**, 52, 66-75	0.9
30	Lattice Boltzmann Model for Electronic Structure Simulations. *Journal of Physics: Conference Series*, **2015**, 640, 012018	0.3
29	ANALOGY BETWEEN TURBULENCE AND QUANTUM GRAVITY: BEYOND KOLMOGOROV'S 1941 THEORY. *International Journal of Modern Physics C*, **2012**, 23, 1250001	1.1
28	Lattice Boltzmann scheme for fluids with dynamic heterogeneities. *Physical Review E*, **2006**, 73, 066709	2.4
27	Direct Simulation of Fluid Transport at Solid Interfaces with a Multiscale Lattice-Boltzmann Finite-Volume Method. *Applied Rheology*, **2004**, 14, 12-21	1.2
26	Learning cascade in the immune system dynamics: a numerical simulation. *Computer Physics Communications*, **1999**, 121-122, 122-125	4.2
25	Digital Physics Simulations of Reactive Flow in a Catalytic Converter. *Journal of Scientific Computing* , **1999**, 14, 211-222	2.3
24	Internal combustion engine design on IBM platforms. *IBM Systems Journal*, **1992**, 31, 774-787	
23	Finite element modelling of weak plasma turbulence. *Computer Methods in Applied Mechanics and Engineering*, **1989**, 75, 543-556	5.7
22	Lattice-gas hydrodynamics on the IBM 3090 Vector Facility. *IBM Journal of Research and Development*, **1989**, 33, 136-148	2.5
21	Current generation in fusion plasmas by injection of radiofrequency waves: Finite-element models on IBM 3090/VF. *Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics*, **1987**, 9, 517-539	
20	Triangular versus square lattice gas automata for the analysis of two-dimensional vortex fields. *Journal of Physics A*, **1988**, 21, L43-L49	
19	An investigation of fractal dimensions in two-dimensional lattice gas turbulence. *Journal of Physics A*, **1988**, 21, L771-L776	
18	Turbomachine flow simulations with a multiscale Lattice Boltzmann Method **2001**, 383-390	
17	Multiscale Modeling of Biopolymer Translocation Through a Nanopore. *Lecture Notes in Computer Science*, **2007**, 786-793	0.9
16	Multiscale simulations of complex systems: computation meets reality. *Lecture Notes in Computational Science and Engineering*, **2008**, 59-65	0.3
15	Quantum Lattice Boltzmann Study of Random-Mass Dirac Fermions in One Dimension **2018**, 321-330	
14	A Lattice Boltzmann Scheme for the Burger Equation **1990**, 320-321	

13	Introduction to the Lattice Boltzmann Equation for Fluid Dynamics. *NATO ASI Series Series B: Physics* , **1990**, 329-334	
12	Extended Self Similarity and Convective Turbulence. *Fluid Mechanics and Its Applications*, **1995**, 26-30	0.2
11	Mesoscopic particle models of fluid flows. *CISM International Centre for Mechanical Sciences, Courses and Lectures*, **2014**, 137-165	0.6
10	Relativistic anti-fragility. *European Physical Journal Plus*, **2020**, 135, 1	3.1
9	Three-stage multiscale modelling of the NMDA neuroreceptor. *Molecular Physics*,e1928312	1.7
8	Minimal kinetic theory: a mathematical framework for non-equilibrium flowing matter. *Journal of Physics: Conference Series*, **2016**, 681, 012006	0.3
7	Towards a mean-field kinetic model of electroweak baryogenesis. *Journal of Physics: Conference Series*, **2019**, 1354, 012001	0.3
6	Spatial interference between infectious hotspots: Epidemic condensation and optimal windspeed. *International Journal of Modern Physics C*, **2021**, 32, 2150044	1.1
5	Lattice propagators and Haldane-Wu fractional statistics. *Europhysics Letters*, **2018**, 122, 10002	1.6
4	In-silico analysis of airflow dynamics and particle transport within a human nasal cavity. *Journal of Computational Science*, **2021**, 54, 101411	3.4
3	Reply to: Models of flow through sponges must consider the sponge tissue.. *Nature*, **2022**, 603, E26-E28	50.4
2	Dynamics of polydisperse multiple emulsions in microfluidic channels.. *Physical Review E*, **2021**, 104, 065112	2.4
1	Lattice Boltzmann Methods for Multiscale Fluid Problems **2005**, 2475-2486	