

# Petros Koumoutsakos

## List of Publications by Year in descending order

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256  
papers

19,840  
citations

14614

66  
h-index

11899

134  
g-index

287  
all docs

287  
docs citations

287  
times ranked

18339  
citing authors

#	ARTICLE	IF	CITATIONS
1	Nanopumps without Pressure Gradients: Ultrafast Transport of Water in Patterned Nanotubes. <i>Journal of Physical Chemistry B</i> , 2022, 126, 660-669.	1.2	4
2	Korali: Efficient and scalable software framework for Bayesian uncertainty quantification and stochastic optimization. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2022, 389, 114264.	3.4	8
3	Computing foaming flows across scales: From breaking waves to microfluidics. <i>Science Advances</i> , 2022, 8, eabm0590.	4.7	6
4	Scientific multi-agent reinforcement learning for wall-models of turbulent flows. <i>Nature Communications</i> , 2022, 13, 1443.	5.8	48
5	Multiscale simulations of complex systems by learning their effective dynamics. <i>Nature Machine Intelligence</i> , 2022, 4, 359-366.	8.3	39
6	Independent Control and Path Planning of Microswimmers with a Uniform Magnetic Field. <i>Advanced Intelligent Systems</i> , 2022, 4, .	3.3	13
7	Accelerated Simulations of Molecular Systems through Learning of Effective Dynamics. <i>Journal of Chemical Theory and Computation</i> , 2022, 18, 538-549.	2.3	17
8	Modelling glioma progression, mass effect and intracranial pressure in patient anatomy. <i>Journal of the Royal Society Interface</i> , 2022, 19, 20210922.	1.5	5
9	Automating turbulence modelling by multi-agent reinforcement learning. <i>Nature Machine Intelligence</i> , 2021, 3, 87-96.	8.3	81
10	Data-driven prediction and origin identification of epidemics in population networks. <i>Royal Society Open Science</i> , 2021, 8, 200531.	1.1	0
11	Hierarchical Bayesian Uncertainty Quantification for a Model of the Red Blood Cell. <i>Physical Review Applied</i> , 2021, 15, .	1.5	5
12	A computational study of expiratory particle transport and vortex dynamics during breathing with and without face masks. <i>Physics of Fluids</i> , 2021, 33, 066605.	1.6	28
13	Learning swimming escape patterns for larval fish under energy constraints. <i>Physical Review Fluids</i> , 2021, 6, .	1.0	4
14	Tuning the Dielectric Response of Water in Nanoconfinement through Surface Wettability. <i>ACS Nano</i> , 2021, 15, 20311-20318.	7.3	10
15	Learning efficient navigation in vortical flow fields. <i>Nature Communications</i> , 2021, 12, 7143.	5.8	29
16	Machine Learning for Fluid Mechanics. <i>Annual Review of Fluid Mechanics</i> , 2020, 52, 477-508.	10.8	1,324
17	Optimal sensor placement for artificial swimmers. <i>Journal of Fluid Mechanics</i> , 2020, 884, .	1.4	25
18	Bending models of lipid bilayer membranes: Spontaneous curvature and area-difference elasticity. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 359, 112758.	3.4	30

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19	Bubbles in turbulent flows: Data-driven, kinematic models with history terms. <i>International Journal of Multiphase Flow</i> , 2020, 129, 103286.	1.6	4
20	Optimal Flow Sensing for Schooling Swimmers. <i>Biomimetics</i> , 2020, 5, 10.	1.5	13
21	Backpropagation algorithms and Reservoir Computing in Recurrent Neural Networks for the forecasting of complex spatiotemporal dynamics. <i>Neural Networks</i> , 2020, 126, 191-217.	3.3	229
22	A hybrid particle volume-of-fluid method for curvature estimation in multiphase flows. <i>International Journal of Multiphase Flow</i> , 2020, 125, 103209.	1.6	20
23	Bayesian calibration of force fields for molecular simulations. , 2020, , 169-227.		7
24	Mirheo: High-performance mesoscale simulations for microfluidics. <i>Computer Physics Communications</i> , 2020, 254, 107298.	3.0	10
25	Aphros. , 2020, , .		3
26	Data-driven inference of the reproduction number for COVID-19 before and after interventions for 51 European countries. <i>Swiss Medical Weekly</i> , 2020, 150, w20313.	0.8	26
27	Optimal allocation of limited test resources for the quantification of COVID-19 infections. <i>Swiss Medical Weekly</i> , 2020, 150, w20445.	0.8	13
28	Load Balancing in Large Scale Bayesian Inference. , 2020, , .		2
29	Breaking waves: To foam or not to foam?. <i>Physical Review Fluids</i> , 2020, 5, .	1.0	2
30	Hierarchical Stochastic Model in Bayesian Inference for Engineering Applications: Theoretical Implications and Efficient Approximation. <i>ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering</i> , 2019, 5, .	0.7	13
31	S-Leaping: An Adaptive, Accelerated Stochastic Simulation Algorithm, Bridging $\tau_{\text{slow}}$ , -Leaping and R-Leaping. <i>Bulletin of Mathematical Biology</i> , 2019, 81, 3074-3096.	0.9	3
32	( $\hat{1}/4, \hat{1}\rangle$ )-CCMA-ES for Constrained Optimization with an Application in Pharmacodynamics. , 2019, , .		1
33	Bayesian selection for coarse-grained models of liquid water. <i>Scientific Reports</i> , 2019, 9, 99.	1.6	18
34	A High Performance Computing Framework for Multiphase, Turbulent Flows on Structured Grids. , 2019, , .		1
35	Dynamic particle ordering in oscillatory inertial microfluidics. <i>Microfluidics and Nanofluidics</i> , 2019, 23, 1.	1.0	24
36	Ultrafast Propulsion of Water Nanodroplets on Patterned Graphene. <i>ACS Nano</i> , 2019, 13, 5465-5472.	7.3	46

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37	A versatile and membrane-less electrochemical reactor for the electrolysis of water and brine. <i>Energy and Environmental Science</i> , 2019, 12, 1592-1604.	15.6	80
38	Personalized Radiotherapy Design for Glioblastoma: Integrating Mathematical Tumor Models, Multimodal Scans, and Bayesian Inference. <i>IEEE Transactions on Medical Imaging</i> , 2019, 38, 1875-1884.	5.4	96
39	Automated identification and deep classification of cut marks on bones and its paleoanthropological implications. <i>Journal of Computational Science</i> , 2019, 32, 36-43.	1.5	35
40	Detection of arterial wall abnormalities via Bayesian model selection. <i>Royal Society Open Science</i> , 2019, 6, 182229.	1.1	6
41	Computational study of the collapse of a cloud with $12 < \text{mml:mrow} < \text{mml:mn} > 500 < \text{mml:mrow} < \text{mml:math} > \text{gas bubbles in a liquid}$ . <i>Physical Review Fluids</i> , 2019, 4, .	1.0	17
42	Controlled gliding and perching through deep-reinforcement-learning. <i>Physical Review Fluids</i> , 2019, 4, .	1.0	48
43	Petascale simulations of compressible flows with interfaces. <i>Journal of Computational Science</i> , 2018, 26, 217-225.	1.5	11
44	Reference Ranges for Fetal Atrioventricular and Ventriculoatrial Time Intervals and Their Ratios during Normal Pregnancy. <i>Fetal Diagnosis and Therapy</i> , 2018, 44, 228-235.	0.6	6
45	Bayesian Annealed Sequential Importance Sampling: An Unbiased Version of Transitional Markov Chain Monte Carlo. <i>ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering</i> , 2018, 4, .	0.7	19
46	Multilevel Control Variates for Uncertainty Quantification in Simulations of Cloud Cavitation. <i>SIAM Journal of Scientific Computing</i> , 2018, 40, B1361-B1390.	1.3	4
47	Efficient collective swimming by harnessing vortices through deep reinforcement learning. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 5849-5854.	3.3	261
48	Data-driven forecasting of high-dimensional chaotic systems with long short-term memory networks. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2018, 474, 20170844.	1.0	245
49	Langevin Diffusion for Population Based Sampling with an Application in Bayesian Inference for Pharmacodynamics. <i>SIAM Journal of Scientific Computing</i> , 2018, 40, B788-B811.	1.3	2
50	Data-assisted reduced-order modeling of extreme events in complex dynamical systems. <i>PLoS ONE</i> , 2018, 13, e0197704.	1.1	148
51	ContextVP: Fully Context-Aware Video Prediction. <i>Lecture Notes in Computer Science</i> , 2018, , 781-797.	1.0	55
52	Computing the force distribution on the surface of complex, deforming geometries using vortex methods and Brinkman penalization. <i>International Journal for Numerical Methods in Fluids</i> , 2017, 85, 484-501.	0.9	10
53	Synchronisation through learning for two self-propelled swimmers. <i>Bioinspiration and Biomimetics</i> , 2017, 12, 036001.	1.5	98
54	Carbon Nanotubes as Thermally Induced Water Pumps. <i>ACS Nano</i> , 2017, 11, 9997-10002.	7.3	51

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55	Multiscale Modelling and Simulation, 14th International Workshop. Procedia Computer Science, 2017, 108, 1811-1812.	1.2	0
56	The Art of Computational Science, Bridging Gaps – Forming Alloys. Preface for ICCS 2017. Procedia Computer Science, 2017, 108, 1-6.	1.2	2
57	Fast Motion of Heaving Airfoils. Procedia Computer Science, 2017, 108, 235-244.	1.2	2
58	Large Scale Simulation of Cloud Cavitation Collapse. Procedia Computer Science, 2017, 108, 1763-1772.	1.2	25
59	Data driven inference for the repulsive exponent of the Lennard-Jones potential in molecular dynamics simulations. Scientific Reports, 2017, 7, 16576.	1.6	19
60	On phonons and water flow enhancement in carbon nanotubes. Nature Nanotechnology, 2017, 12, 1106-1108.	15.6	19
61	High Order Semi-Lagrangian Particle Methods. Lecture Notes in Computational Science and Engineering, 2017, , 103-117.	0.1	3
62	Multi-objective optimization of artificial swimmers. , 2017, , .		2
63	Pareto Optimal Swimmers. , 2017, , .		2
64	Towards the Virtual Rheometer. , 2017, , .		0
65	Bayesian identification of the tendon fascicle’s structural composition using finite element models for helical geometries. Computer Methods in Applied Mechanics and Engineering, 2017, 313, 744-758.	3.4	20
66	Abstract B04: From modeling to in vivo tracking: a new platform for the design of delivery vectors that exploit tumor microfluidics. , 2017, , .		0
67	Fusing heterogeneous data for the calibration of molecular dynamics force fields using hierarchical Bayesian models. Journal of Chemical Physics, 2016, 145, 244112.	1.2	21
68	Learning to school in the presence of hydrodynamic interactions. Journal of Fluid Mechanics, 2016, 789, 726-749.	1.4	103
69	An Efficient Compressible Multicomponent Flow Solver for Heterogeneous CPU/GPU Architectures. , 2016, , .		6
70	Approximate Bayesian Computation for Granular and Molecular Dynamics Simulations. , 2016, , .		1
71	Ultrafast cooling by covalently bonded graphene-carbon nanotube hybrid immersed in water. Nanotechnology, 2016, 27, 465705.	1.3	27
72	A hierarchical Bayesian framework for force field selection in molecular dynamics simulations. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20150032.	1.6	32

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73	Optimal morphokinematics for undulatory swimmers at intermediate Reynolds numbers. <i>Journal of Fluid Mechanics</i> , 2015, 775, 178-188.	1.4	42
74	Pharmacokinetics of Anti-VEGF Agent Aflibercept in Cancer Predicted by Data-Driven, Molecular-Detailed Model. <i>CPT: Pharmacometrics and Systems Pharmacology</i> , 2015, 4, 641-649.	1.3	19
75	Sustaining dry surfaces under water. <i>Scientific Reports</i> , 2015, 5, 12311.	1.6	56
76	Self-propulsion of a counter-rotating cylinder pair in a viscous fluid. <i>Physics of Fluids</i> , 2015, 27, .	1.6	13
77	Quantitative flow analysis of swimming dynamics with coherent Lagrangian vortices. <i>Chaos</i> , 2015, 25, 087405.	1.0	16
78	Covalently Bonded Graphene-Carbon Nanotube Hybrid for High-Performance Thermal Interfaces. <i>Advanced Functional Materials</i> , 2015, 25, 7539-7545.	7.8	109
79	MorphoGraphX: A platform for quantifying morphogenesis in 4D. <i>ELife</i> , 2015, 4, 05864.	2.8	389
80	The in-silico lab-on-a-chip. , 2015, , .		14
81	Î4U: A high performance computing framework for Bayesian uncertainty quantification of complex models. <i>Journal of Computational Physics</i> , 2015, 284, 1-21.	1.9	89
82	MRAG-I2D: Multi-resolution adapted grids for remeshed vortex methods on multicore architectures. <i>Journal of Computational Physics</i> , 2015, 288, 1-18.	1.9	44
83	X-TMCMC: Adaptive kriging for Bayesian inverse modeling. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2015, 289, 409-428.	3.4	87
84	Placental plasticity in monozygotic twins: Impact on birth weight and placental weight. <i>Placenta</i> , 2015, 36, 1018-1023.	0.7	7
85	Variability and constancy in cellular growth of <i>Arabidopsis</i> sepals. <i>Plant Physiology</i> , 2015, 169, pp.00839.2015.	2.3	34
86	Kapitza Resistance between Few-Layer Graphene and Water: Liquid Layering Effects. <i>Nano Letters</i> , 2015, 15, 5744-5749.	4.5	164
87	Continuum simulations of water flow past fullerene molecules. <i>European Physical Journal: Special Topics</i> , 2015, 224, 2321-2330.	1.2	8
88	A comparative study of penalization and phase field methods for the solution of the diffusion equation in complex geometries. <i>Journal of Computational Physics</i> , 2015, 283, 388-407.	1.9	2
89	Iterative Brinkman penalization for remeshed vortex methods. <i>Journal of Computational Physics</i> , 2015, 280, 547-562.	1.9	23
90	Continuum simulations of water flow in carbon nanotube membranes. <i>New Journal of Physics</i> , 2014, 16, 082001.	1.2	23

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91	Structure and Response to Flow of the Glycocalyx Layer. <i>Biophysical Journal</i> , 2014, 106, 232-243.	0.2	70
92	Strain Engineering of Kapitza Resistance in Few-Layer Graphene. <i>Nano Letters</i> , 2014, 14, 819-825.	4.5	150
93	Reinforcement Learning and Wavelet Adapted Vortex Methods for Simulations of Self-propelled Swimmers. <i>SIAM Journal of Scientific Computing</i> , 2014, 36, B622-B639.	1.3	86
94	Bayesian uncertainty quantification and propagation for discrete element simulations of granular materials. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2014, 282, 218-238.	3.4	24
95	SEM++: A particle model of cellular growth, signaling and migration. <i>Computational Particle Mechanics</i> , 2014, 1, 211-227.	1.5	38
96	Bayesian Hierarchical Models for Uncertainty Quantification in Structural Dynamics. , 2014, , .		14
97	Efficient techniques for Bayesian inverse modeling of large-order computational models. , 2014, , 1937-1944.		0
98	11 PFLOP/s simulations of cloud cavitation collapse. , 2013, , .		38
99	Data Driven, Predictive Molecular Dynamics for Nanoscale Flow Simulations under Uncertainty. <i>Journal of Physical Chemistry B</i> , 2013, 117, 14808-14816.	1.2	40
100	Multiscale stochastic simulations of chemical reactions with regulated scale separation. <i>Journal of Computational Physics</i> , 2013, 244, 290-297.	1.9	3
101	The mouse retina in 3D: quantification of vascular growth and remodeling. <i>Integrative Biology (United Kingdom)</i> , 2013, 5, 1426-1438.	0.6	49
102	Optimal shapes for anguilliform swimmers at intermediate Reynolds numbers. <i>Journal of Fluid Mechanics</i> , 2013, 722, .	1.4	62
103	Barriers to Superfast Water Transport in Carbon Nanotube Membranes. <i>Nano Letters</i> , 2013, 13, 1910-1914.	4.5	220
104	Accelerated endothelial wound healing on microstructured substrates under flow. <i>Biomaterials</i> , 2013, 34, 1488-1497.	5.7	71
105	Coupling Remeshed Particle and Phase Field Methods for the Simulation of Reaction-Diffusion on the Surface and the Interior of Deforming Geometries. <i>SIAM Journal of Scientific Computing</i> , 2013, 35, B1285-B1303.	1.3	4
106	The Fluid Mechanics of Cancer and Its Therapy. <i>Annual Review of Fluid Mechanics</i> , 2013, 45, 325-355.	10.8	117
107	Vortex dynamics in 3D shock-bubble interaction. <i>Physics of Fluids</i> , 2013, 25, .	1.6	15
108	High Performance CPU Kernels for Multiphase Compressible Flows. <i>Lecture Notes in Computer Science</i> , 2013, , 216-225.	1.0	0

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109	Bayesian uncertainty quantification and propagation in molecular dynamics simulations: A high performance computing framework. <i>Journal of Chemical Physics</i> , 2012, 137, 144103.	1.2	154
110	Vortex tube reconnection at $Re = 104$ . <i>Physics of Fluids</i> , 2012, 24, .	1.6	33
111	High throughput software for direct numerical simulations of compressible two-phase flows. , 2012, , .		5
112	Cell Image Velocimetry (CIV): boosting the automated quantification of cell migration in wound healing assays. <i>Integrative Biology (United Kingdom)</i> , 2012, 4, 1437-1447.	0.6	38
113	Towards a living earth simulator. <i>European Physical Journal: Special Topics</i> , 2012, 214, 77-108.	1.2	26
114	Flow mediated interactions between two cylinders at finite Re numbers. <i>Physics of Fluids</i> , 2012, 24, .	1.6	29
115	C-start: optimal start of larval fish. <i>Journal of Fluid Mechanics</i> , 2012, 698, 5-18.	1.4	104
116	GPU and APU computations of Finite Time Lyapunov Exponent fields. <i>Journal of Computational Physics</i> , 2012, 231, 2229-2244.	1.9	33
117	Multiscale simulation of water flow past a C540 fullerene. <i>Journal of Computational Physics</i> , 2012, 231, 2677-2681.	1.9	37
118	Particle Simulations of Growth: Application to Tumorigenesis. , 2012, , 261-303.		1
119	Particle Simulations of Growth: Application to Angiogenesis. , 2012, , 305-334.		0
120	Meshâ€“particle interpolations on graphics processing units and multicore central processing units. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2011, 369, 2164-2175.	1.6	13
121	Antagonistic Growth Regulation by Dpp and Fat Drives Uniform Cell Proliferation. <i>Developmental Cell</i> , 2011, 20, 123-130.	3.1	69
122	Multicore/Multi-GPU Accelerated Simulations of Multiphase Compressible Flows Using Wavelet Adapted Grids. <i>SIAM Journal of Scientific Computing</i> , 2011, 33, 512-540.	1.3	25
123	Simulations of single and multiple swimmers with non-divergence free deforming geometries. <i>Journal of Computational Physics</i> , 2011, 230, 7093-7114.	1.9	132
124	Waveletâ€“adaptive solvers on multiâ€“core architectures for the simulation of complex systems. <i>Concurrency Computation Practice and Experience</i> , 2011, 23, 172-186.	1.4	6
125	Shape optimization for drag reduction in linked bodies using evolution strategies. <i>Computers and Structures</i> , 2011, 89, 1224-1231.	2.4	37
126	Adaptive mesh refinement for stochastic reactionâ€“diffusion processes. <i>Journal of Computational Physics</i> , 2011, 230, 13-26.	1.9	23



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127	A comparison of vortex and pseudo-spectral methods for the simulation of periodic vortical flows at high Reynolds numbers. <i>Journal of Computational Physics</i> , 2011, 230, 2794-2805.	1.9	183
128	PARTICLE SIMULATIONS OF MORPHOGENESIS. <i>Mathematical Models and Methods in Applied Sciences</i> , 2011, 21, 955-1006.	1.7	17
129	Optimization of Aircraft Wake Alleviation Schemes through an Evolution Strategy. <i>Lecture Notes in Computer Science</i> , 2011, , 210-221.	1.0	2
130	A Lagrangian particle method for reaction-diffusion systems on deforming surfaces. <i>Journal of Mathematical Biology</i> , 2010, 61, 649-663.	0.8	33
131	High order finite volume methods on wavelet-adapted grids with local time-stepping on multicore architectures for the simulation of shock-bubble interactions. <i>Journal of Computational Physics</i> , 2010, 229, 8364-8383.	1.9	48
132	Non-periodic Molecular Dynamics simulations of coarse grained lipid bilayer in water. <i>Computers and Mathematics With Applications</i> , 2010, 59, 2370-2373.	1.4	5
133	A Fourier-based elliptic solver for vortical flows with periodic and unbounded directions. <i>Journal of Computational Physics</i> , 2010, 229, 2425-2431.	1.9	52
134	GPU accelerated simulations of bluff body flows using vortex particle methods. <i>Journal of Computational Physics</i> , 2010, 229, 3316-3333.	1.9	73
135	A cutoff phenomenon in accelerated stochastic simulations of chemical kinetics via flow averaging (FLAVOR-SSA). <i>Journal of Chemical Physics</i> , 2010, 133, 244117.	1.2	6
136	Coarse-grained molecular dynamics simulations of shear-induced instabilities of lipid bilayer membranes in water. <i>Physical Review E</i> , 2010, 82, 051602.	0.8	26
137	The fate of the slabs interacting with a density/viscosity hill in the mid-mantle. <i>Physics of the Earth and Planetary Interiors</i> , 2010, 180, 271-282.	0.7	40
138	TScratch: a novel and simple software tool for automated analysis of monolayer wound healing assays. <i>BioTechniques</i> , 2009, 46, 265-274.	0.8	532
139	Control algorithm for multiscale flow simulations of water. <i>Physical Review E</i> , 2009, 79, 045701.	0.8	21
140	A Stochastic Model for Microtubule Motors Describes the In Vivo Cytoplasmic Transport of Human Adenovirus. <i>PLoS Computational Biology</i> , 2009, 5, e1000623.	1.5	51
141	An exact accelerated stochastic simulation algorithm. <i>Journal of Chemical Physics</i> , 2009, 130, 144110.	1.2	14
142	Edge detection in microscopy images using curvelets. <i>BMC Bioinformatics</i> , 2009, 10, 75.	1.2	61
143	A Method for Handling Uncertainty in Evolutionary Optimization With an Application to Feedback Control of Combustion. <i>IEEE Transactions on Evolutionary Computation</i> , 2009, 13, 180-197.	7.5	244
144	ĩ-SHAKE: An extension to SHAKE for the explicit treatment of angular constraints. <i>Computer Physics Communications</i> , 2009, 180, 360-364.	3.0	13

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145	Earth curvature effects on subduction morphology: Modeling subduction in a spherical setting. <i>Acta Geotechnica</i> , 2009, 4, 95-105.	2.9	24
146	D-leaping: Accelerating stochastic simulation algorithms for reactions with delays. <i>Journal of Computational Physics</i> , 2009, 228, 5908-5916.	1.9	16
147	Contrasting Actions of Selective Inhibitors of Angiopoietin-1 and Angiopoietin-2 on the Normalization of Tumor Blood Vessels. <i>American Journal of Pathology</i> , 2009, 175, 2159-2170.	1.9	201
148	Thermophoretic Motion of Water Nanodroplets Confined inside Carbon Nanotubes. <i>Nano Letters</i> , 2009, 9, 66-71.	4.5	127
149	Coupling Atomistic and Continuum Descriptions Using Dynamic Control. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2009, , 157-165.	0.1	0
150	Wavelet-Based Adaptive Solvers on Multi-core Architectures for the Simulation of Complex Systems. <i>Lecture Notes in Computer Science</i> , 2009, , 721-734.	1.0	0
151	Vortex methods for incompressible flow simulations on the GPU. <i>Visual Computer</i> , 2008, 24, 699-708.	2.5	17
152	An immersed boundary lattice-Boltzmann method for the simulation of the flow past an impulsively started cylinder. <i>Journal of Computational Physics</i> , 2008, 227, 4486-4498.	1.9	134
153	A Lagrangian particle method for the simulation of linear and nonlinear elastic models of soft tissue. <i>Journal of Computational Physics</i> , 2008, 227, 9195-9215.	1.9	22
154	An immersed boundary method for smoothed particle hydrodynamics of self-propelled swimmers. <i>Journal of Computational Physics</i> , 2008, 227, 8636-8654.	1.9	57
155	Billion vortex particle direct numerical simulations of aircraft wakes. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2008, 197, 1296-1304.	3.4	111
156	Accelerated stochastic and hybrid methods for spatial simulations of reaction-diffusion systems. <i>Chemical Physics Letters</i> , 2008, 451, 136-140.	1.2	44
157	A Hybrid Model for Three-Dimensional Simulations of Sprouting Angiogenesis. <i>Biophysical Journal</i> , 2008, 95, 3146-3160.	0.2	131
158	Flow simulations using particles. , 2008, , .		9
159	Spatially distributed control for optimal drag reduction of the flow past a circular cylinder. <i>Journal of Fluid Mechanics</i> , 2008, 599, 111-120.	1.4	37
160	Simulations of Electrophoretic RNA Transport Through Transmembrane Carbon Nanotubes. <i>Biophysical Journal</i> , 2008, 94, 2546-2557.	0.2	36
161	Multiresolution stochastic simulations of reaction-diffusion processes. <i>Physical Chemistry Chemical Physics</i> , 2008, 10, 5963.	1.3	3
162	Evolutionary Optimization of Feedback Controllers for Thermoacoustic Instabilities. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2008, , 311-317.	0.1	4

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163	Evolutionary optimization of an anisotropic compliant surface for turbulent friction drag reduction. <i>Journal of Turbulence</i> , 2008, 9, N35.	0.5	55
164	A Hybrid Model of Sprouting Angiogenesis. <i>Lecture Notes in Computer Science</i> , 2008, , 167-176.	1.0	2
165	Modeling, Simulation and Optimization of Anguilliform Swimmers. , 2008, , 167-178.		1
166	A Control Algorithm for Multiscale Simulations of Liquid Water. <i>Lecture Notes in Computer Science</i> , 2008, , 234-241.	1.0	1
167	Vortex Methods for Massively Parallel Computer Architectures. <i>Lecture Notes in Computer Science</i> , 2008, , 479-489.	1.0	0
168	Large Scale, Multiresolution Flow Simulations Using Remeshed Particle Methods. <i>Lecture Notes in Computational Science and Engineering</i> , 2008, , 35-46.	0.1	0
169	EFFECTS OF ATOMISTIC DOMAIN SIZE ON HYBRID LATTICE BOLTZMANN MOLECULAR DYNAMICS SIMULATIONS OF DENSE FLUIDS. <i>International Journal of Modern Physics C</i> , 2007, 18, 644-651.	0.8	4
170	PARTICLE MESH HYDRODYNAMICS FOR ASTROPHYSICS SIMULATIONS. <i>International Journal of Modern Physics C</i> , 2007, 18, 610-618.	0.8	11
171	A numerical study of the stability of helical vortices using vortex methods. <i>Journal of Physics: Conference Series</i> , 2007, 75, 012034.	0.3	24
172	Coupling lattice Boltzmann and molecular dynamics models for dense fluids. <i>Physical Review E</i> , 2007, 75, 046704.	0.8	53
173	Control of density fluctuations in atomistic-continuum simulations of dense liquids. <i>Physical Review E</i> , 2007, 76, 016709.	0.8	39
174	A novel supervised trajectory segmentation algorithm identifies distinct types of human adenovirus motion in host cells. <i>Journal of Structural Biology</i> , 2007, 159, 347-358.	1.3	92
175	Phonon assisted thermophoretic motion of gold nanoparticles inside carbon nanotubes. <i>Applied Physics Letters</i> , 2007, 90, 253116.	1.5	54
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