Maxim A Solovchuk

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/5172473/publications.pdf

Version: 2024-02-01

35	506	840776 11	677142 22
papers	citations	h-index	g-index

37	37	37	317
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Weakly nonlinear stability analysis of salt-finger convection in a longitudinally infinite cavity. Physics of Fluids, 2022, 34, .	4.0	4
2	Energy stable arbitrary Lagrangian Eulerian finite element scheme for simulating flow dynamics of droplets on nonâ€“homogeneous surfaces. Applied Mathematical Modelling, 2022, 108, 66-91.	4.2	6
3	A detailed study of ion transport through the SARS-CoV-2 E protein ion channel. Nanoscale, 2022, 14, 8291-8305.	5.6	3
4	GPU-accelerated study of the inertial cavitation threshold in viscoelastic soft tissue using a dual-frequency driving signal. Ultrasonics Sonochemistry, 2022, 88, 106056.	8.2	7
5	Investigation of the Efficiency of Mask Wearing, Contact Tracing, and Case Isolation during the COVID-19 Outbreak. Journal of Clinical Medicine, 2021, 10, 2761.	2.4	7
6	Lattice Boltzmann method to simulate three-dimensional ion channel flow using fourth order Poissonâ€“Nernstâ€“Planckâ€“Bikerman model. Physics of Fluids, 2021, 33, 081910.	4.0	3
7	Solution of Ion Channel Flow Using Immersed Boundaryâ€“Lattice Boltzmann Methods. Journal of Computational Biology, 2020, 27, 1144-1156.	1.6	4
8	Investigating ion transport inside the pentameric ion channel encoded in COVID-19 E protein. Physical Review E, 2020, 102, 052408.	2.1	12
9	Experimental and Numerical Study on the Temperature Elevation in Tissue during Moxibustion Therapy. Evidence-based Complementary and Alternative Medicine, 2020, 2020, 1-10.	1.2	5
10	Bacterial chemotaxis in thin fluid layers with free surface. Physics of Fluids, 2020, 32, 061902.	4.0	5
11	Elimination of spurious velocities generated by curvature dependent surface force in finite element flow simulation with mesh-fitted interface. Computer Methods in Applied Mechanics and Engineering, 2020, 372, 113356.	6.6	4
12	The free surface effect on a chemotaxisâ€“diffusionâ€“convection coupling system. Computer Methods in Applied Mechanics and Engineering, 2019, 356, 387-406.	6.6	9
13	Arbitrary Lagrangian Eulerian-Type Finite Element Methods Formulation for PDEs on Time-Dependent Domains with Vanishing Discrete Space Conservation Law. SIAM Journal of Scientific Computing, 2019, 41, A1548-A1573.	2.8	8
14	Dynamics of bubble-bubble interactions experiencing viscoelastic drag. Physical Review E, 2019, 99, 023109.	2.1	25
15	Simulation of cavitation enhanced temperature elevation in a soft tissue during high-intensity focused ultrasound thermal therapy. Ultrasonics Sonochemistry, 2019, 53, 11-24.	8.2	12
16	High-performance multi-GPU solver for describing nonlinear acoustic waves in homogeneous thermoviscous media. Computers and Fluids, 2018, 173, 195-205.	2.5	8
17	A conservative numerical scheme for modeling nonlinear acoustic propagation in thermoviscous homogeneous media. Journal of Computational Physics, 2018, 363, 200-230.	3.8	9
18	Bubble dynamics in viscoelastic soft tissue in high-intensity focal ultrasound thermal therapy. Ultrasonics Sonochemistry, 2018, 40, 900-911.	8.2	39

#	Article	IF	Citations
19	Stability and dynamics of a chemotaxis system with deformed free-surface in a shallow chamber. Physics of Fluids, 2018, 30, .	4.0	10
20	Computational study of acoustic streaming and heating during acoustic hemostasis. Applied Thermal Engineering, 2017, 124, 1112-1122.	6.0	18
21	Multiphysics Modeling of Liver Tumor Ablation by High Intensity Focused Ultrasound. Communications in Computational Physics, 2015, 18, 1050-1071.	1.7	18
22	Temperature elevation by HIFU inex vivoporcine muscle: MRI measurement and simulation study. Medical Physics, 2014, 41, 052903.	3.0	37
23	Image-based computational model for focused ultrasound ablation of liver tumor. Journal of Computational Surgery, 2014, 1, .	0.6	9
24	HIFU Treatment of Liver Cancer â€“ Reciprocal Effect of Blood Flow and US Studied from a Patient-Specific Configuration. Lecture Notes in Computer Science, 2014, , 1-11.	1.3	1
25	Computational model for investigating acoustic hemostasis. , 2014, , .		0
26	On a computational study for investigating acoustic streaming and heating during focused ultrasound ablation of liver tumor. Applied Thermal Engineering, 2013, 56, 62-76.	6.0	48
27	Simulation of nonlinear Westervelt equation for the investigation of acoustic streaming and nonlinear propagation effects. Journal of the Acoustical Society of America, 2013, 134, 3931-3942.	1.1	53
28	The effects of acoustic streaming on the temperature distribution during focused ultrasound therapy. AIP Conference Proceedings, 2012, , .	0.4	7
29	Effects of acoustic nonlinearity and blood flow cooling during HIFU treatment. AIP Conference Proceedings, 2012, , .	0.4	6
30	Simulation study on acoustic streaming and convective cooling in blood vessels during a high-intensity focused ultrasound thermal ablation. International Journal of Heat and Mass Transfer, 2012, 55, 1261-1270.	4.8	43
31	Investigation Into the Acoustic Streaming and Convective Cooling Phenomena During a High-Intensity Focused Ultrasound Thermal Ablation. , 2011, , .		0
32	On an acousticsâ€“thermalâ€“fluid coupling model for the prediction of temperature elevation in liver tumor. International Journal of Heat and Mass Transfer, 2011, 54, 4117-4126.	4.8	53
33	Prediction of strong-shock structure using the bimodal distribution function. Physical Review E, 2011, 83, 026301.	2.1	10
34	Prediction of shock structure using the bimodal distribution function. Physical Review E, 2010, 81, 056314.	2.1	13
35	Piecewise continuous distribution function method in the theory of wave disturbances of inhomogeneous gas. Physics Letters, Section A: General, Atomic and Solid State Physics, 2006, 348, 326-334.	2.1	10