Yoichiro Mori

List of Publications by Year
in descending order

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		430874	345221
48	1,457	18	36
papers	citations	h-index	g-index

50	50	50	1206
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Wave-Pinning and Cell Polarity from a Bistable Reaction-Diffusion System. Biophysical Journal, 2008, 94, 3684-3697.	0.5	358
2	Ephaptic conduction in a cardiac strand model with 3D electrodiffusion. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 6463-6468.	7.1	139
3	Implicit second-order immersed boundary methods with boundary mass. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 2049-2067.	6.6	110
4	Asymptotic and Bifurcation Analysis of Wave-Pinning in a Reaction-Diffusion Model for Cell Polarization. SIAM Journal on Applied Mathematics, 2011, 71, 1401-1427.	1.8	108
5	The importance of water and hydraulic pressure in cell dynamics. Journal of Cell Science, 2020, 133, .	2.0	57
6	Immersed Boundary Method for Variable Viscosity and Variable Density Problems Using Fast Constant-Coefficient Linear Solvers I: Numerical Method and Results. SIAM Journal of Scientific Computing, 2013, 35, B1132-B1161.	2.8	51
7	Convergence proof of the velocity field for a stokes flow immersed boundary method. Communications on Pure and Applied Mathematics, 2008, 61, 1213-1263.	3.1	48
8	A numerical method for cellular electrophysiology based on the electrodiffusion equations with internal boundary conditions at membranes. Communications in Applied Mathematics and Computational Science, 2009, 4, 85-134.	1.8	41
9	On the energy efficiency of cell migration in diverse physical environments. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 23894-23900.	7.1	40
10	Properties of Discrete Delta Functions and Local Convergence of the Immersed Boundary Method. SIAM Journal on Numerical Analysis, 2012, 50, 2986-3015.	2.3	39
11	Evolution of prosocial behaviours in multilayer populations. Nature Human Behaviour, 2022, 6, 338-348.	12.0	39
12	A model of electrodiffusion and osmotic water flow and its energetic structure. Physica D: Nonlinear Phenomena, 2011, 240, 1835-1852.	2.8	38
13	Mathematical properties of pump-leak models of cell volume control and electrolyte balance. Journal of Mathematical Biology, 2012, 65, 875-918.	1.9	30
14	A Dynamic Model of Polyelectrolyte Gels. SIAM Journal on Applied Mathematics, 2013, 73, 104-133.	1.8	30
15	A multidomain model for ionic electrodiffusion and osmosis with an application to cortical spreading depression. Physica D: Nonlinear Phenomena, 2015, 308, 94-108.	2.8	29
16	Heart rate variability and alternans formation in the heart: The role of feedback in cardiac dynamics. Journal of Theoretical Biology, 2014, 350, 90-97.	1.7	25
17	From electrodiffusion theory to the electrohydrodynamics of leaky dielectrics through the weak electrolyte limit. Journal of Fluid Mechanics, 2018, 855, 67-130.	3.4	25
18	Flow-Driven Cell Migration under External Electric Fields. Physical Review Letters, 2015, 115, 268101.	7.8	23

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19	The dual effect of ephaptic coupling on cardiac conduction with heterogeneous expression of connexin 43. Journal of Theoretical Biology, 2016, 397, 103-114.	1.7	22
20	A computational study on the role of glutamate and NMDA receptors on cortical spreading depression using a multidomain electrodiffusion model. PLoS Computational Biology, 2019, 15, e1007455.	3.2	18
21	A conservative and monotone mixed-hybridized finite element approximation of transport problems in heterogeneous domains. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 2709-2720.	6.6	17
22	Effects of Glia in a Triphasic Continuum Model of Cortical Spreading Depression. Bulletin of Mathematical Biology, 2016, 78, 1943-1967.	1.9	16
23	Wellâ€Posedness and Global Behavior of the Peskin Problem of an Immersed Elastic Filament in Stokes Flow. Communications on Pure and Applied Mathematics, 2019, 72, 887-980.	3.1	16
24	Strong intracellular signal inactivation produces sharper and more robust signaling from cell membrane to nucleus. PLoS Computational Biology, 2020, 16, e1008356.	3.2	16
25	Theoretical Justification and Error Analysis for Slender Body Theory. Communications on Pure and Applied Mathematics, 2020, 73, 1245-1314.	3.1	13
26	Immersed Boundary Method for Variable Viscosity and Variable Density Problems Using Fast Constant-Coefficient Linear Solvers II: Theory. SIAM Journal of Scientific Computing, 2014, 36, B589-B621.	2.8	12
27	The role of short term memory and conduction velocity restitution in alternans formation. Journal of Theoretical Biology, 2015, 367, 21-28.	1.7	12
28	Theoretical Justification and Error Analysis for Slender Body Theory with Free Ends. Archive for Rational Mechanics and Analysis, 2020, 235, 1905-1978.	2.4	12
29	L^p Convergence of the Immersed Boundary Method for Stationary Stokes Problems. SIAM Journal on Numerical Analysis, 2014, 52, 496-514.	2.3	9
30	Stability of Front Solutions of the Bidomain Equation. Communications on Pure and Applied Mathematics, 2016, 69, 2364-2426.	3.1	9
31	A numerical method for osmotic water flow and solute diffusion with deformable membrane boundaries in two spatial dimension. Journal of Computational Physics, 2017, 350, 728-746.	3.8	9
32	Analysis and simulation of a model of polyelectrolyte gel in one spatial dimension. Nonlinearity, 2014, 27, 1241-1285.	1.4	8
33	Slightly deformable Darcy drop in linear flows. Physical Review Fluids, 2019, 4, .	2.5	7
34	Asymptotic behavior of spreading fronts in the anisotropic Allenâ€“Cahn equation on (R^{n}). Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2019, 36, 585-626.	1.4	6
35	Wellâ€Posed Treatment of Spaceâ€Charge Layers in the Electroneutral Limit of Electrodiffusion. Communications on Pure and Applied Mathematics, 2016, 69, 2221-2249.	3.1	4
36	An error bound for the slender body approximation of a thin, rigid fiber sedimenting in Stokes flow. Research in Mathematical Sciences, 2020, 7, 1.	1.0	4

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37	Accuracy of slender body theory in approximating force exerted by thin fiber on viscous fluid. Studies in Applied Mathematics, 2021, 147, 127-179.	2.4	4
38	Rhythmomimetic Drug Delivery: Modeling, Analysis, and Numerical Simulation. SIAM Journal on Applied Mathematics, 2017, 77, 565-592.	1.8	3
39	Computational and Mathematical Methods in Cardiovascular Diseases. Computational and Mathematical Methods in Medicine, 2017, 2017, 1-2.	1.3	3
40	waveCSD: A method for estimating transmembrane currents originated from propagating neuronal activity in the neocortex: Application to study cortical spreading depression. Journal of Neuroscience Methods, 2018, 307, 106-124.	2.5	2
41	A single-layer based numerical method for the slender body boundary value problem. Journal of Computational Physics, 2022, 450, 110865.	3.8	1
42	Asymptotic Behavior of Fronts and Pulses of the Bidomain Model. SIAM Journal on Applied Dynamical Systems, 2022, 21, 616-649.	1.6	1
43	A Reduced 1D Stochastic Model of Bleb-driven Cell Migration. Biophysical Journal, 2022, , .	0.5	1
44	Well-Posed Treatment of Space-Charge Layers in the Electroneutral Limit of Electrodiffusion. Communications on Pure and Applied Mathematics, 2016, , n/a-n/a.	3.1	0
45	Title is missing!. , 2019, 15, e1007455.		0
46	Title is missing!. , 2019, 15, e1007455.		0
47	Title is missing!. , 2019, 15, e1007455.		0
48	Title is missing!. , 2019, 15, e1007455.		0