

Tatsuo Shibata

List of Publications by Year in descending order

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75
papers

2,208
citations

236925

25
h-index

254184

43
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85
all docs

85
docs citations

85
times ranked

2310
citing authors

#	ARTICLE	IF	CITATIONS
1	Non-monotonic fluidization generated by fluctuating edge tensions in confluent tissues. <i>Soft Matter</i> , 2022, 18, 2168-2175.	2.7	7
2	Tracing the origin of hair follicle stem cells. <i>Nature</i> , 2021, 594, 547-552.	27.8	62
3	A balance between antagonizing PAR proteins specifies the pattern of asymmetric and symmetric divisions in <i>C.Âelegans</i> embryogenesis. <i>Cell Reports</i> , 2021, 36, 109326.	6.4	9
4	Local Membrane Curvature Pins and Guides Excitable Membrane Waves in Chemotactic and Macropinocytic Cells - Biomedical Insights From an Innovative Simple Model. <i>Frontiers in Cell and Developmental Biology</i> , 2021, 9, 670943.	3.7	2
5	Tracheal motile cilia in mice require CAMSAP3 for the formation of central microtubule pair and coordinated beating. <i>Molecular Biology of the Cell</i> , 2021, 32, ar12.	2.1	7
6	Autonomous epithelial folding induced by an intracellular mechanoâ€“polarity feedback loop. <i>PLoS Computational Biology</i> , 2021, 17, e1009614.	3.2	2
7	Tissue-Scale Mechanical Coupling Reduces Morphogenetic Noise to Ensure Precision during Epithelial Folding. <i>Developmental Cell</i> , 2020, 53, 212-228.e12.	7.0	40
8	Mesenchymal-epithelial transition regulates initiation of pluripotency exit before gastrulation. <i>Development (Cambridge)</i> , 2020, 147, .	2.5	20
9	Adherens junction regulates cryptic lamellipodia formation for epithelial cell migration. <i>Journal of Cell Biology</i> , 2020, 219, .	5.2	45
10	Polar pattern formation induced by contact following locomotion in a multicellular system. <i>ELife</i> , 2020, 9, .	6.0	20
11	Collective cell migration of epithelial cells driven by chiral torque generation. <i>Physical Review Research</i> , 2020, 2, .	3.6	8
12	Biomechanical regulation of EMT and epithelial morphogenesis in amniote epiblast. <i>Physical Biology</i> , 2019, 16, 041002.	1.8	6
13	Mathematical Modeling of Tissue Folding and Asymmetric Tissue Flow during Epithelial Morphogenesis. <i>Symmetry</i> , 2019, 11, 113.	2.2	4
14	Three-Dimensional Cell Geometry Controls Excitable Membrane Signaling in <i>Dictyostelium</i> Cells. <i>Biophysical Journal</i> , 2019, 116, 372-382.	0.5	13
15	Reconstruction of Par-dependent polarity in apolar cells reveals a dynamic process of cortical polarization. <i>ELife</i> , 2019, 8, .	6.0	25
16	Synthetic mammalian pattern formation driven by differential diffusivity of Nodal and Lefty. <i>Nature Communications</i> , 2018, 9, 5456.	12.8	66
17	A Switch-like Activation Relay of EGFR-ERK Signaling Regulates a Wave of Cellular Contractility for Epithelial Invagination. <i>Developmental Cell</i> , 2018, 46, 162-172.e5.	7.0	60
18	Propagation of regulatory fluctuations induces coordinated switching of flagellar motors in chemotaxis signaling pathway of single bacteria. <i>Journal of Theoretical Biology</i> , 2018, 454, 367-375.	1.7	6

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19	Epithelial Folding Driven by Apical or Basal-Lateral Modulation: Geometric Features, Mechanical Inference, and Boundary Effects. <i>Biophysical Journal</i> , 2017, 112, 2683-2695.	0.5	31
20	Wave propagation of junctional remodeling in collective cell movement of epithelial tissue. <i>Mechanisms of Development</i> , 2017, 145, S41.	1.7	0
21	Wave Propagation of Junctional Remodeling in Collective Cell Movement of Epithelial Tissue: Numerical Simulation Study. <i>Frontiers in Cell and Developmental Biology</i> , 2017, 5, 66.	3.7	10
22	Differential abilities of nitrogen dioxide and nitrite to nitrate proteins in thylakoid membranes isolated from Arabidopsis leaves. <i>Plant Signaling and Behavior</i> , 2016, 11, e1237329.	2.4	8
23	Cortical Polarity of the RING Protein PAR-2 Is Maintained by Exchange Rate Kinetics at the Cortical-Cytoplasmic Boundary. <i>Cell Reports</i> , 2016, 16, 2156-2168.	6.4	25
24	Cell Chirality Induces Collective Cell Migration in Epithelial Sheets. <i>Physical Review Letters</i> , 2015, 115, 188102.	7.8	41
25	Left-right asymmetric cell intercalation drives directional collective cell movement in epithelial morphogenesis. <i>Nature Communications</i> , 2015, 6, 10074.	12.8	97
26	Bifurcation analysis of a self-organizing signaling system for eukaryotic chemotaxis. <i>Japan Journal of Industrial and Applied Mathematics</i> , 2015, 32, 807-828.	0.9	5
27	Visualization of Ca ²⁺ Filling Mechanisms upon Synaptic Inputs in the Endoplasmic Reticulum of Cerebellar Purkinje Cells. <i>Journal of Neuroscience</i> , 2015, 35, 15837-15846.	3.6	28
28	Self-organization and advective transport in the cell polarity formation for asymmetric cell division. <i>Journal of Theoretical Biology</i> , 2015, 382, 1-14.	1.7	16
29	Adaptive Responses Limited by Intrinsic Noise. <i>PLoS ONE</i> , 2015, 10, e0136095.	2.5	7
30	Developmental Biology of Size. <i>Seibutsu Butsuri</i> , 2014, 54, 140-145.	0.1	0
31	Relevance of intracellular polarity to accuracy of eukaryotic chemotaxis. <i>Physical Biology</i> , 2014, 11, 056002.	1.8	11
32	Excitable Signal Transduction Induces Both Spontaneous and Directional Cell Asymmetries in the Phosphatidylinositol Lipid Signaling System for Eukaryotic Chemotaxis. <i>Biophysical Journal</i> , 2014, 106, 723-734.	0.5	71
33	Intracellular Encoding of Spatiotemporal Guidance Cues in a Self-Organizing Signaling System for Chemotaxis in Dictyostelium Cells. <i>Biophysical Journal</i> , 2013, 105, 2199-2209.	0.5	35
34	Theoretical model for cell migration with gradient sensing and shape deformation. <i>European Physical Journal E</i> , 2013, 36, 9846.	1.6	6
35	Scaling of Dorsal-Ventral Patterning by Embryo Size-Dependent Degradation of Spemann's Organizer Signals. <i>Cell</i> , 2013, 153, 1296-1311.	28.9	108
36	3P211 Time-resolved 3D Quantification and Analysis of Membrane-Lipid Signaling in Dictyostelium(13B.) Tj ETQq0 0,0 rgBT /Qverlock 10		

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37	Asymmetric PTEN Distribution Regulated by Spatial Heterogeneity in Membrane-Binding State Transitions. <i>PLoS Computational Biology</i> , 2013, 9, e1002862.	3.2	20
38	Zinc-finger nuclease-mediated targeted insertion of reporter genes for quantitative imaging of gene expression in sea urchin embryos. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 10915-10920.	7.1	40
39	Directional sensing of deformed cells under faint gradients. <i>Physical Review E</i> , 2012, 86, 060901.	2.1	5
40	Modeling the self-organized phosphatidylinositol lipids signaling system in chemotactic cells based on quantitative image analysis. <i>Journal of Cell Science</i> , 2012, 125, 5138-50.	2.0	47
41	A protein switch with tunable steepness reconstructed in <i>Escherichia coli</i> cells with eukaryotic signaling proteins. <i>Biochemical and Biophysical Research Communications</i> , 2012, 421, 731-735.	2.1	3
42	The Relation of Signal Transduction to the Sensitivity and Dynamic Range of Bacterial Chemotaxis. <i>Biophysical Journal</i> , 2012, 103, 1390-1399.	0.5	9
43	Hierarchical organization of noise generates spontaneous signal in <i>Paramecium</i> cell. <i>Journal of Theoretical Biology</i> , 2011, 283, 1-9.	1.7	6
44	Robust network clocks: Design of genetic oscillators as a complex combinatorial optimization problem. <i>Physical Review E</i> , 2011, 83, 060901.	2.1	15
45	Activation Kinetics of RAF Protein in the Ternary Complex of RAF, RAS-GTP, and Kinase on the Plasma Membrane of Living Cells. <i>Journal of Biological Chemistry</i> , 2011, 286, 36460-36468.	3.4	43
46	Evolutionary design of oscillatory genetic networks. <i>European Physical Journal B</i> , 2010, 76, 167-178.	1.5	23
47	Targeted mutagenesis in the sea urchin embryo using zinc-finger nucleases. <i>Genes To Cells</i> , 2010, 15, 875-885.	1.2	75
48	Self-organization of the phosphatidylinositol lipids signaling system for random cell migration. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 12399-12404.	7.1	182
49	Nonadaptive Fluctuation in an Adaptive Sensory System: Bacterial Chemoreceptor. <i>PLoS ONE</i> , 2010, 5, e11224.	2.5	7
50	A RasGTP-Induced Conformational Change in C-RAF Is Essential for Accurate Molecular Recognition. <i>Biophysical Journal</i> , 2009, 97, 1277-1287.	0.5	35
51	Statistical Analysis of Lateral Diffusion and Multistate Kinetics in Single-Molecule Imaging. <i>Biophysical Journal</i> , 2009, 97, 1115-1124.	0.5	46
52	Noise generation, amplification and propagation in chemotactic signaling systems of living cells. <i>BioSystems</i> , 2008, 93, 126-132.	2.0	22
53	Mutual interaction in network motifs robustly sharpens gene expression in developmental processes. <i>Journal of Theoretical Biology</i> , 2008, 252, 131-144.	1.7	14
54	Fluctuation Analysis of Mechanochemical Coupling Depending on the Type of Biomolecular Motors. <i>Physical Review Letters</i> , 2008, 101, 128103.	7.8	16

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55	2P-217 What limit the accuracy of the bacterial chemotaxis?(The 46th Annual Meeting of the) Tj ETQq1 1 0.784314 rgBT /Overlock 10 T	0.1	0
56	1P-181 Signal controlled noise in response-adaptation reaction(The 46th Annual Meeting of the) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 7	0.1	0
57	DNA variations within the sea urchin <i>Otx</i> gene enhancer. FEBS Letters, 2007, 581, 5234-5240.	2.8	3
58	Stochastic Signal Processing and Transduction in Chemotactic Response of Eukaryotic Cells. Biophysical Journal, 2007, 93, 11-20.	0.5	199
59	Relation between Adaptation and Irreversible Circulation in Bacteria Chemotaxis. Progress of Theoretical Physics Supplement, 2006, 161, 251-254.	0.1	0
60	Nonequilibrium self-organization phenomena in active Langmuir monolayers. Chaos, 2006, 16, 037108.	2.5	7
61	Production, Amplification and Propagation of Noise in Cells. Seibutsu Butsuri, 2006, 46, 194-200.	0.1	2
62	Cross talking of network motifs in gene regulation that generates temporal pulses and spatial stripes. Genes To Cells, 2005, 10, 1025-1038.	1.2	86
63	Noisy signal amplification in ultrasensitive signal transduction. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 331-336.	7.1	155
64	Amplification of noise in a cascade chemical reaction. Physical Review E, 2004, 69, 056218.	2.1	9
65	Coupled map gas: structure formation and dynamics of interacting motile elements with internal dynamics. Physica D: Nonlinear Phenomena, 2003, 181, 197-214.	2.8	30
66	Reducing the master equations for noisy chemical reactions. Journal of Chemical Physics, 2003, 119, 6629-6634.	3.0	16
67	Fluctuating reaction rates and their application to problems of gene expression. Physical Review E, 2003, 67, 061906.	2.1	11
68	Energetics of Open Systems and Chemical Potential From Micro-Dynamics Viewpoints. Journal of the Physical Society of Japan, 2000, 69, 2455-2462.	1.6	5
69	Noiseless Collective Motion out of Noisy Chaos. Physical Review Letters, 1999, 82, 4424-4427.	7.8	45
70	Tongue-like bifurcation structures of the mean-field dynamics in a network of chaotic elements. Physica D: Nonlinear Phenomena, 1998, 124, 177-200.	2.8	28
71	Collective Chaos. Physical Review Letters, 1998, 81, 4116-4119.	7.8	66
72	Equilibrium Chemical Engines. Journal of the Physical Society of Japan, 1998, 67, 2666-2670.	1.6	7

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73	Brownian Motors Driven by Particle Exchange. Journal of the Physical Society of Japan, 1998, 67, 1918-1923.	1.6	5
74	Heterogeneity-induced order in globally coupled chaotic systems. Europhysics Letters, 1997, 38, 417-422.	2.0	21
75	Signal Transduction across the Plasma Membrane. , 0, , 99-116.		0