Tomasz Lipniacki

List of Publications by Year in descending order

80 papers	3,147 citations	201575 27 h-index	175177 52 g-index
93 all docs	93 docs citations	93 times ranked	4537 citing authors

#	Article	IF	Citations
1	The Spread of SARS-CoV-2 Variant Omicron with a Doubling Time of 2.0â€“3.3 Days Can Be Explained by Immune Evasion. Viruses, 2022, 14, 294.	1.5	85
2	Slow nucleosome dynamics set the transcriptional speed limit and induce RNA polymerase II traffic jams and bursts. PLoS Computational Biology, 2022, 18, e1009811.	1.5	7
3	Pareto-based evaluation of national responses to COVID-19 pandemic shows that saving lives and protecting economy are non-trade-off objectives. Scientific Reports, 2021, 11, 2425.	1.6	28
4	SARS-CoV-2 Variant of Concern 202012/01 Has about Twofold Replicative Advantage and Acquires Concerning Mutations. Viruses, 2021, 13, 392.	1.5	92
5	Traveling and standing fronts on curved surfaces. Physica D: Nonlinear Phenomena, 2020, 401, 132215.	1.3	2
6	A shear stress micromodel of urinary tract infection by the Escherichia coli producing Dr adhesin. PLoS Pathogens, 2020, 16, e1008247.	2.1	16
7	Electrochemical Immunosensors Based on Screen-Printed Gold and Glassy Carbon Electrodes: Comparison of Performance for Respiratory Syncytial Virus Detection. Biosensors, 2020, 10, 175.	2.3	16
8	Model-based optimization of combination protocols for irradiation-insensitive cancers. Scientific Reports, 2020, 10, 12652.	1.6	2
9	Super-spreading events initiated the exponential growth phase of COVID-19 with â„› ₀ higher than initially estimated. Royal Society Open Science, 2020, 7, 200786.	1.1	47
10	Coronavirus â€“ Scientific insights and societal aspects. Mathematical Modelling of Natural Phenomena, 2020, 15, E2.	0.9	15
11	Dynamics of COVID-19 pandemic at constant and time-dependent contact rates. Mathematical Modelling of Natural Phenomena, 2020, 15, 28.	0.9	41
12	Modeling and measurement of signaling outcomes affecting decision making in noisy intracellular networks using machine learning methods. Integrative Biology (United Kingdom), 2020, 12, 122-138.	0.6	6
13	A shear stress micromodel of urinary tract infection by the Escherichia coli producing Dr adhesin. , 2020, 16, e1008247.		0
14	A shear stress micromodel of urinary tract infection by the Escherichia coli producing Dr adhesin. , 2020, 16, e1008247.		0
15	A shear stress micromodel of urinary tract infection by the Escherichia coli producing Dr adhesin. , 2020, 16, e1008247.		0
16	Robin-type boundary conditions in transition from reaction-diffusion equations in 3D domains to equations in 2D domains. Journal of Differential Equations, 2019, 268, 239-271.	1.1	6
17	Limits to the rate of information transmission through the MAPK pathway. Journal of the Royal Society Interface, 2019, 16, 20180792.	1.5	10
18	Cell fate in antiviral response arises in the crosstalk of IRF, NF-ÎºB and JAK/STAT pathways. Nature Communications, 2018, 9, 493.	5.8	81

#	Article	IF	Citations
19	Sampling rare events in stochastic reaction-diffusion systems within trajectory looping. Physical Review E, 2018, 98, 022401.	0.8	1
20	Relaxation oscillations and hierarchy of feedbacks in MAPK signaling. Scientific Reports, 2017, 7, 38244.	1.6	47
21	RAF1/BRAF dimerization integrates the signal from RAS to ERK and ROKÎ±. Science Signaling, 2017, 10, .	1.6	40
22	SPATKIN: a simulator for rule-based modeling of biomolecular site dynamics on surfaces. Bioinformatics, 2017, 33, 3667-3669.	1.8	3
23	Information processing in the NF-ÎºB pathway. Scientific Reports, 2017, 7, 15926.	1.6	25
24	Polarization of concave domains by traveling wave pinning. PLoS ONE, 2017, 12, e0190372.	1.1	4
25	Genetic toggle switch controlled by bacterial growth rate. BMC Systems Biology, 2017, 11, 117.	3.0	18
26	Computation and measurement of cell decision making errors using single cell data. PLoS Computational Biology, 2017, 13, e1005436.	1.5	18
27	Importins promote high-frequency NF-ÎºB oscillations increasing information channel capacity. Biology Direct, 2016, 11, 61.	1.9	15
28	Feedbacks, Bifurcations, and Cell Fate Decision-Making in the p53 System. PLoS Computational Biology, 2016, 12, e1004787.	1.5	46
29	Clustering reveals limits of parameter identifiability in multi-parameter models of biochemical dynamics. BMC Systems Biology, 2015, 9, 65.	3.0	17
30	Effective reaction rates for diffusion-limited reaction cycles. Journal of Chemical Physics, 2015, 143, 215102.	1.2	4
31	Computational Analysis of an Autophagy/Translation Switch Based on Mutual Inhibition of MTORC1 and ULK1. PLoS ONE, 2015, 10, e0116550.	1.1	38
32	Effective reaction rates in diffusion-limited phosphorylation-dephosphorylation cycles. Physical Review E, 2015, 91, 022702.	0.8	7
33	Digital signaling decouples activation probability and population heterogeneity. ELife, 2015, 4, e08931.	2.8	60
34	Stability of bacterial toggle switches is enhanced by cell-cycle lengthening by several orders of magnitude. Physical Review E, 2014, 89, 022710.	0.8	8
35	Dynamic Cross Talk Model of the Epithelial Innate Immune Response to Double-Stranded RNA Stimulation: Coordinated Dynamics Emerging from Cell-Level Noise. PLoS ONE, 2014, 9, e93396.	1.1	33
36	A Spatially Extended Model of Kinase-Receptor Interaction. SIAM Journal on Applied Mathematics, 2013, 73, 374-400.	0.8	5

#	Article	IF	Citations
37	Levels of pro-apoptotic regulator Bad and anti-apoptotic regulator Bcl-xL determine the type of the apoptotic logic gate. BMC Systems Biology, 2013, 7, 67.	3.0	29
38	Type of noise defines global attractors in bistable molecular regulatory systems. Journal of Theoretical Biology, 2013, 317, 140-151.	0.8	23
39	Stochastic transitions in a bistable reaction system on the membrane. Journal of the Royal Society Interface, 2013, 10, 20130151.	1.5	14
40	MEK1 and MEK2 differentially control the duration and amplitude of the ERK cascade response. Physical Biology, 2013, 10, 035006.	0.8	11
41	Toggle switch: noise determines the winning gene. Physical Biology, 2013, 10, 035007.	0.8	20
42	Spontaneous NF-ÎºB Activation by Autocrine TNFÎ± Signaling: A Computational Analysis. PLoS ONE, 2013, 8, e78887.	1.1	57
43	A Computational Model for Early Events in B Cell Antigen Receptor Signaling: Analysis of the Roles of Lyn and Fyn. Journal of Immunology, 2012, 189, 646-658.	0.4	46
44	Dynamics of a stochastic spatially extended system predicted by comparing deterministic and stochastic attractors of the corresponding birthâ€“death process. Physical Biology, 2012, 9, 055002.	0.8	13
45	The interplay of double phosphorylation and scaffolding in MAPK pathways. Journal of Theoretical Biology, 2012, 295, 116-124.	0.8	31
46	Guidelines for visualizing and annotating rule-based models. Molecular BioSystems, 2011, 7, 2779.	2.9	36
47	Vortex loops cascade as a channel of quantum turbulence decay. Journal of Physics: Conference Series, 2011, 318, 092028.	0.3	0
48	Cascade of vortex loops initiated by a single reconnection of quantum vortices. Physical Review B, 2011, 83, .	1.1	45
49	Exact solutions to a spatially extended model of kinaseâ€“receptor interaction. Physical Biology, 2011, 8, 055005.	0.8	3
50	B Cell Activation Triggered by the Formation of the Small Receptor Cluster: A Computational Study. PLoS Computational Biology, 2011, 7, e1002197.	1.5	29
51	Spatial gradients in kinase cascade regulation. IET Systems Biology, 2010, 4, 348-355.	0.8	13
52	Single-cell NF-ÎºB dynamics reveal digital activation and analogue information processing. Nature, 2010, 466, 267-271.	13.7	736
53	Exploring mechanisms of oscillations in p53 and nuclear factor-ÎºB systems. IET Systems Biology, 2009, 3, 342-355.	0.8	25
54	Crosstalk between p53 and nuclear factor-ÎºB systems: pro- and anti-apoptotic functions of NF-ÎºB. IET Systems Biology, 2009, 3, 356-367.	0.8	45

#	Article	IF	Citations
55	Regulation of kinase activity by diffusion and feedback. Journal of Theoretical Biology, 2009, 259, 291-296.	0.8	33
56	Stochastic effects and bistability in T cell receptor signaling. Journal of Theoretical Biology, 2008, 254, 110-122.	0.8	86
57	Oscillations and bistability in the stochastic model of p53 regulation. Journal of Theoretical Biology, 2008, 254, 452-465.	0.8	108
58	Deterministic and Stochastic Models of NFÎºB Pathway. Cardiovascular Toxicology, 2007, 7, 215-234.	1.1	23
59	Adjoint Systems for Models of Cell Signaling Pathways and their Application to Parameter Fitting. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2007, 4, 322-335.	1.9	26
60	Single TNFÎ± trimers mediating NF-Îº B activation: stochastic robustness of NF-Îº B signaling. BMC Bioinformatics, 2007, 8, 376.	1.2	60
61	How the Number of Alleles Influences Gene Expression. Journal of Statistical Physics, 2007, 128, 511-533.	0.5	13
62	Asymptotic behavior of distributions of mRNA and protein levels in a model of stochastic gene expression. Journal of Mathematical Analysis and Applications, 2007, 333, 753-769.	0.5	45
63	Stochastic Regulation in Early Immune Response. Biophysical Journal, 2006, 90, 725-742.	0.2	86
64	Dynamics of superfluid 4He: Two-scale approach. European Journal of Mechanics, B/Fluids, 2006, 25, 435-458.	1.2	15
65	Transcriptional stochasticity in gene expression. Journal of Theoretical Biology, 2006, 238, 348-367.	0.8	120
66	Stochastic effects of multiple regulators on expression profiles in eukaryotes. Journal of Theoretical Biology, 2005, 233, 423-433.	0.8	24
67	Mathematical model of NF-ÎºB regulatory module. Journal of Theoretical Biology, 2004, 228, 195-215.	0.8	264
68	Quasi-static solutions for quantum vortex motion under the localized induction approximation. Journal of Fluid Mechanics, 2003, 477, .	1.4	25
69	Shape-preserving solutions for quantum vortex motion under localized induction approximation. Physics of Fluids, 2003, 15, 1381.	1.6	23
70	Homoclinic solutions in mechanical systems with small dissipation. Application to DNA dynamics. Journal of Mathematical Biology, 2002, 44, 309-329.	0.8	4
71	Evolution of the anisotropy of the quantum vortex tangle. , 2002, , 93-98.		0
72	Torsional Travelling Waves in DNA. Journal of Nonlinear Mathematical Physics, 2001, 8, 188.	0.8	0

#	Article	IF	Citations
73	STATICS OF RIGID UNITS CHAIN. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2001, 11, 845-855.	0.7	0
74	Thermodynamics of local DNA openings. Physical Review E, 2001, 64, 051919.	0.8	15
75	Evolution of the line-length density and anisotropy of quantum tangle in4He. Physical Review B, 2001, 64, .	1.1	20
76	From Vortex Reconnections to Quantum Turbulence. , 2001, , 177-183.		2
77	Torsional Travelling Waves in DNA. Journal of Nonlinear Mathematical Physics, 2001, 8, 188.	0.8	0
78	Evolution of quantum vortices following reconnection. European Journal of Mechanics, B/Fluids, 2000, 19, 361-378.	1.2	22
79	Chemically driven traveling waves in DNA. Physical Review E, 1999, 60, 7253-7261.	0.8	21
80	Non-linear mechanical model of DNA dynamics. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1998, 20, 833-843.	0.4	7