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	Single-cell NF-κB dynamics reveal digital activation and analogue information processing. Nature, 2010, 466, 267-271.	13.7	736
2	Mathematical model of NF-κB regulatory module. Journal of Theoretical Biology, 2004, 228, 195-215.	0.8	264
3	Transcriptional stochasticity in gene expression. Journal of Theoretical Biology, 2006, 238, 348-367.	0.8	120
4	Oscillations and bistability in the stochastic model of p53 regulation. Journal of Theoretical Biology, 2008, 254, 452-465.	0.8	108
5	SARS-CoV-2 Variant of Concern 202012/01 Has about Twofold Replicative Advantage and Acquires Concerning Mutations. Viruses, 2021, 13, 392.	1.5	92
6	Stochastic Regulation in Early Immune Response. Biophysical Journal, 2006, 90, 725-742.	0.2	86
7	Stochastic effects and bistability in T cell receptor signaling. Journal of Theoretical Biology, 2008, 254, 110-122.	0.8	86
8	The Spread of SARS-CoV-2 Variant Omicron with a Doubling Time of 2.0–3.3 Days Can Be Explained by Immune Evasion. Viruses, 2022, 14, 294.	1.5	85
9	Cell fate in antiviral response arises in the crosstalk of IRF, NF-κB and JAK/STAT pathways. Nature Communications, 2018, 9, 493.	5.8	81
10	Single TNFα trimers mediating NF-κB activation: stochastic robustness of NF-κB signaling. BMC Bioinformatics, 2007, 8, 376.	1.2	60
11	Digital signaling decouples activation probability and population heterogeneity. ELife, 2015, 4, e08931.	2.8	60
12	Spontaneous NF-κB Activation by Autocrine TNFα Signaling: A Computational Analysis. PLoS ONE, 2013, 8, e78887.	1.1	57
13	Relaxation oscillations and hierarchy of feedbacks in MAPK signaling. Scientific Reports, 2017, 7, 38244.	1.6	47
14	Super-spreading events initiated the exponential growth phase of COVID-19 with $\mathcal{R}_0$ higher than initially estimated. Royal Society Open Science, 2020, 7, 200786.	1.1	47
15	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
16	Feedbacks, Bifurcations, and Cell Fate Decision-Making in the p53 System. PLoS Computational Biology, 2016, 12, e1004787.	1.5	46
17	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
18	Crosstalk between p53 and nuclear factor-κB systems: pro- and anti-apoptotic functions of NF-κB. IET Systems Biology, 2009, 3, 356-367.	0.8	45

#	Article	IF	Citations
19	Cascade of vortex loops initiated by a single reconnection of quantum vortices. Physical Review B, 2011, 83, .	1.1	45
20	Dynamics of COVID-19 pandemic at constant and time-dependent contact rates. Mathematical Modelling of Natural Phenomena, 2020, 15, 28.	0.9	41
21	RAF1/BRAF dimerization integrates the signal from RAS to ERK and ROKÎ±. Science Signaling, 2017, 10, .	1.6	40
22	Computational Analysis of an Autophagy/Translation Switch Based on Mutual Inhibition of MTORC1 and ULK1. PLoS ONE, 2015, 10, e0116550.	1.1	38
23	Guidelines for visualizing and annotating rule-based models. Molecular BioSystems, 2011, 7, 2779.	2.9	36
24	Regulation of kinase activity by diffusion and feedback. Journal of Theoretical Biology, 2009, 259, 291-296.	0.8	33
25	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
26	The interplay of double phosphorylation and scaffolding in MAPK pathways. Journal of Theoretical Biology, 2012, 295, 116-124.	0.8	31
27	B Cell Activation Triggered by the Formation of the Small Receptor Cluster: A Computational Study. PLoS Computational Biology, 2011, 7, e1002197.	1.5	29
28	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
29	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
30	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
31	Quasi-static solutions for quantum vortex motion under the localized induction approximation. Journal of Fluid Mechanics, 2003, 477, .	1.4	25
32	Exploring mechanisms of oscillations in p53 and nuclear factor-ÎºB systems. IET Systems Biology, 2009, 3, 342-355.	0.8	25
33	Information processing in the NF-ÎºB pathway. Scientific Reports, 2017, 7, 15926.	1.6	25
34	Stochastic effects of multiple regulators on expression profiles in eukaryotes. Journal of Theoretical Biology, 2005, 233, 423-433.	0.8	24
35	Shape-preserving solutions for quantum vortex motion under localized induction approximation. Physics of Fluids, 2003, 15, 1381.	1.6	23
36	Deterministic and Stochastic Models of NFÎºB Pathway. Cardiovascular Toxicology, 2007, 7, 215-234.	1.1	23

#	Article	IF	Citations
37	Type of noise defines global attractors in bistable molecular regulatory systems. Journal of Theoretical Biology, 2013, 317, 140-151.	0.8	23
38	Evolution of quantum vortices following reconnection. European Journal of Mechanics, B/Fluids, 2000, 19, 361-378.	1.2	22
39	Chemically driven traveling waves in DNA. Physical Review E, 1999, 60, 7253-7261.	0.8	21
40	Evolution of the line-length density and anisotropy of quantum tangle in4He. Physical Review B, 2001, 64, .	1.1	20
41	Toggle switch: noise determines the winning gene. Physical Biology, 2013, 10, 035007.	0.8	20
42	Genetic toggle switch controlled by bacterial growth rate. BMC Systems Biology, 2017, 11, 117.	3.0	18
43	Computation and measurement of cell decision making errors using single cell data. PLoS Computational Biology, 2017, 13, e1005436.	1.5	18
44	Clustering reveals limits of parameter identifiability in multi-parameter models of biochemical dynamics. BMC Systems Biology, 2015, 9, 65.	3.0	17
45	A shear stress micromodel of urinary tract infection by the Escherichia coli producing Dr adhesin. PLoS Pathogens, 2020, 16, e1008247.	2.1	16
46	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
47	Thermodynamics of local DNA openings. Physical Review E, 2001, 64, 051919.	0.8	15
48	Dynamics of superfluid 4He: Two-scale approach. European Journal of Mechanics, B/Fluids, 2006, 25, 435-458.	1.2	15
49	Importins promote high-frequency NF-κB oscillations increasing information channel capacity. Biology Direct, 2016, 11, 61.	1.9	15
50	Coronavirus â€" Scientific insights and societal aspects. Mathematical Modelling of Natural Phenomena, 2020, 15, E2.	0.9	15
51	Stochastic transitions in a bistable reaction system on the membrane. Journal of the Royal Society Interface, 2013, 10, 20130151.	1.5	14
52	How the Number of Alleles Influences Gene Expression. Journal of Statistical Physics, 2007, 128, 511-533.	0.5	13
53	Spatial gradients in kinase cascade regulation. IET Systems Biology, 2010, 4, 348-355.	0.8	13
54	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

#	Article	IF	Citations
55	MEK1 and MEK2 differentially control the duration and amplitude of the ERK cascade response. Physical Biology, 2013, 10, 035006.	0.8	11
56	Limits to the rate of information transmission through the MAPK pathway. Journal of the Royal Society Interface, 2019, 16, 20180792.	1.5	10
57	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
58	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
59	Effective reaction rates in diffusion-limited phosphorylation-dephosphorylation cycles. Physical Review E, 2015, 91, 022702.	0.8	7
60	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
61	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
62	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
63	A Spatially Extended Model of Kinase-Receptor Interaction. SIAM Journal on Applied Mathematics, 2013, 73, 374-400.	0.8	5
64	Homoclinic solutions in mechanical systems with small dissipation. Application to DNA dynamics. Journal of Mathematical Biology, 2002, 44, 309-329.	0.8	4
65	Effective reaction rates for diffusion-limited reaction cycles. Journal of Chemical Physics, 2015, 143, 215102.	1.2	4
66	Polarization of concave domains by traveling wave pinning. PLoS ONE, 2017, 12, e0190372.	1.1	4
67	Exact solutions to a spatially extended model of kinase–receptor interaction. Physical Biology, 2011, 8, 055005.	0.8	3
68	SPATKIN: a simulator for rule-based modeling of biomolecular site dynamics on surfaces. Bioinformatics, 2017, 33, 3667-3669.	1.8	3
69	Traveling and standing fronts on curved surfaces. Physica D: Nonlinear Phenomena, 2020, 401, 132215.	1.3	2
70	Model-based optimization of combination protocols for irradiation-insensitive cancers. Scientific Reports, 2020, 10, 12652.	1.6	2
71	From Vortex Reconnections to Quantum Turbulence. , 2001, , 177-183.		2
72	Sampling rare events in stochastic reaction-diffusion systems within trajectory looping. Physical Review E, 2018, 98, 022401.	0.8	1

#	Article	IF	Citations
73	Torsional Travelling Waves in DNA. Journal of Nonlinear Mathematical Physics, 2001, 8, 188.	0.8	0
74	STATICS OF RIGID UNITS CHAIN. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2001, 11, 845-855.	0.7	0
75	Vortex loops cascade as a channel of quantum turbulence decay. Journal of Physics: Conference Series, 2011, 318, 092028.	0.3	0
76	Evolution of the anisotropy of the quantum vortex tangle. , 2002, , 93-98.		0
77	Torsional Travelling Waves in DNA. Journal of Nonlinear Mathematical Physics, 2001, 8, 188.	0.8	0
78	A shear stress micromodel of urinary tract infection by the Escherichia coli producing Dr adhesin. , 2020, 16, e1008247.		0
79	A shear stress micromodel of urinary tract infection by the Escherichia coli producing Dr adhesin. , 2020, 16, e1008247.		0
80	A shear stress micromodel of urinary tract infection by the Escherichia coli producing Dr adhesin. , 2020, 16, e1008247.		0