

Alexey Zaikin

List of Publications by Year in descending order

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Version: 2024-02-01

127
papers

3,607
citations

147801

31
h-index

155660

55
g-index

135
all docs

135
docs citations

135
times ranked

4167
citing authors

#	ARTICLE	IF	CITATIONS
1	A proteomic survival predictor for COVID-19 patients in intensive care. , 2022, 1, e0000007.		28
2	Astrocytes mediate analogous memory in a multi-layer neuron-astrocyte network. Neural Computing and Applications, 2022, 34, 9147-9160.	5.6	20
3	A mathematical model of in vitro hepatocellular cholesterol and lipoprotein metabolism for hyperlipidemia therapy. PLoS ONE, 2022, 17, e0264903.	2.5	0
4	Estimating integrated information in bidirectional neuron-astrocyte communication. Physical Review E, 2021, 103, 022410.	2.1	15
5	Venn diagrams and probability in clinical research. SeĀenovskij Vestnik, 2021, 11, 5-14.	0.4	1
6	Impact of modular mitochondrial epistatic interactions on the evolution of human subpopulations. Mitochondrion, 2021, 58, 111-122.	3.4	2
7	Modelling working memory in neuron-astrocyte network. , 2021, , .		1
8	A time-resolved proteomic and prognostic map of COVID-19. Cell Systems, 2021, 12, 780-794.e7.	6.2	125
9	Ensemble of correlation, parenclitic and synolytic graphs as a tool to detect universal changes in complex biological systems. Physics of Life Reviews, 2021, 38, 120-123.	2.8	2
10	Unraveling Ca^{2+} -Mediated Multi-Pathway Calcium Dynamics in Astrocytes: Implications for Alzheimer's Disease Treatment From Simulations. Frontiers in Physiology, 2021, 12, 767892.	2.8	8
11	Parenclitic and Synolytic Networks Revisited. Frontiers in Genetics, 2021, 12, 733783.	2.3	2
12	Development of PancRISK, a urine biomarker-based risk score for stratified screening of pancreatic cancer patients. British Journal of Cancer, 2020, 122, 692-696.	6.4	32
13	Brain aging and garbage cleaning. Seminars in Immunopathology, 2020, 42, 647-665.	6.1	40
14	Short-term memory in neuron-astrocyte network. , 2020, , .		2
15	Integrated Information in the Spiking-ĀBursting Stochastic Model. Entropy, 2020, 22, 1334.	2.2	12
16	Multi-Marker Longitudinal Algorithms Incorporating HE4 and CA125 in Ovarian Cancer Screening of Postmenopausal Women. Cancers, 2020, 12, 1931.	3.7	18
17	The Human Body as a Super Network: Digital Methods to Analyze the Propagation of Aging. Frontiers in Aging Neuroscience, 2020, 12, 136.	3.4	24
18	Expanding TREC and KREC Utility in Primary Immunodeficiency Diseases Diagnosis. Frontiers in Immunology, 2020, 11, 320.	4.8	12

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19	Improved early detection of ovarian cancer using longitudinal multimarker models. British Journal of Cancer, 2020, 122, 847-856.	6.4	60
20	Editorial: Multiscale Modeling of Rhythm, Pattern and Information Generation: from Genome to Physiome. Frontiers in Physiology, 2020, 11, 281.	2.8	0
21	Modelling Neural Activity. , 2020, , 61-66.		0
22	Complex and Surprising Dynamics in Gene Regulatory Networks. , 2020, , 147-187.		0
23	Modelling Complex Phenomena in Physiology. , 2020, , 189-237.		0
24	Constructive Effects of Noise. , 2020, , 87-146.		0
25	Network markers of DNA methylation in neurodegenerative diseases. , 2020, , .		1
26	Astrocyte-induced positive integrated information in neuron-astrocyte ensembles. Physical Review E, 2019, 99, 012418.	2.1	30
27	Integrated Information as a Measure of Cognitive Processes in Coupled Genetic Repressilators. Entropy, 2019, 21, 382.	2.2	6
28	Symmetry in cancer networks identified: Proposal for multicancer biomarkers. Network Science, 2019, 7, 541-555.	1.0	5
29	Current detection rates and time-to-detection of all identifiable <i>BRCA</i> carriers in the Greater London population. Journal of Medical Genetics, 2018, 55, 538-545.	3.2	45
30	Sonographers' self-reported visualization of normal postmenopausal ovaries on transvaginal ultrasound is not reliable: results of expert review of archived images from UKCTOCS. Ultrasound in Obstetrics and Gynecology, 2018, 51, 401-408.	1.7	10
31	Inflammaging 2018: An update and a model. Seminars in Immunology, 2018, 40, 1-5.	5.6	76
32	CalciumCV: Computer Vision Software for Calcium Signaling in Astrocytes. Lecture Notes in Computer Science, 2018, , 168-179.	1.3	6
33	Sensitivity of asymmetric rate-dependent critical systems to initial conditions: Insights into cellular decision making. Physical Review E, 2018, 98, 022317.	2.1	2
34	A quantitative performance study of two automatic methods for the diagnosis of ovarian cancer. Biomedical Signal Processing and Control, 2018, 46, 86-93.	5.7	16
35	Comparison of Longitudinal CA125 Algorithms as a First-Line Screen for Ovarian Cancer in the General Population. Clinical Cancer Research, 2018, 24, 4726-4733.	7.0	39
36	Parentlitic networks for predicting ovarian cancer. Oncotarget, 2018, 9, 22717-22726.	1.8	28

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37	Change-point of multiple biomarkers in women with ovarian cancer. Biomedical Signal Processing and Control, 2017, 33, 169-177.	5.7	13
38	Multiplexing topologies and time scales: The gains and losses of synchrony. Physical Review E, 2017, 96, 052214.	2.1	13
39	Decision Making in an Intracellular Genetic Classifier. Mathematical Modelling of Natural Phenomena, 2017, 12, 30-42.	2.4	2
40	A comparison of Monte Carlo-based Bayesian parameter estimation methods for stochastic models of genetic networks. PLoS ONE, 2017, 12, e0182015.	2.5	6
41	Parentic Network Analysis of Methylation Data for Cancer Identification. PLoS ONE, 2017, 12, e0169661.	2.5	18
42	Mirror node correlations tuning synchronization in multiplex networks. Physical Review E, 2017, 96, 062301.	2.1	8
43	Aberrant regulation of RANKL/OPG in women at high risk of developing breast cancer. Oncotarget, 2017, 8, 3811-3825.	1.8	45
44	Systems Medicine of Cancer: Bringing Together Clinical Data and Nonlinear Dynamics of Genetic Networks. Computational and Mathematical Methods in Medicine, 2016, 2016, 1-2.	1.3	0
45	Synthetic biology routes to bio-artificial intelligence. Essays in Biochemistry, 2016, 60, 381-391.	4.7	34
46	Interplay of degree correlations and cluster synchronization. Physical Review E, 2016, 94, 062202.	2.1	16
47	Sex hormone measurements using mass spectrometry and sensitive extraction radioimmunoassay and risk of estrogen receptor negative and positive breast cancer: Case control study in UK Collaborative Cancer Trial of Ovarian Cancer Screening (UKCTOCS). Steroids, 2016, 110, 62-69.	1.8	16
48	Dynamical decision making in a genetic perceptron. Physica D: Nonlinear Phenomena, 2016, 318-319, 112-115.	2.8	8
49	Solving problems of clustering and classification of cancer diseases based on DNA methylation data. Pattern Recognition and Image Analysis, 2016, 26, 176-180.	1.0	1
50	Detection of epigenomic network community oncomarkers. Annals of Applied Statistics, 2016, 10, .	1.1	5
51	Open source approaches to establishing <i>Roseobacter</i> clade bacteria as synthetic biology chassis for biogeoeengineering. PeerJ, 2016, 4, e2031.	2.0	7
52	Serial Patterns of Ovarian Cancer Biomarkers in a Prediagnosis Longitudinal Dataset. BioMed Research International, 2015, 2015, 1-6.	1.9	22
53	Effect of Noise in Intelligent Cellular Decision Making. PLoS ONE, 2015, 10, e0125079.	2.5	8
54	Multi-Input Distributed Classifiers for Synthetic Genetic Circuits. PLoS ONE, 2015, 10, e0125144.	2.5	13

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55	Variations in the Intragene Methylation Profiles Hallmark Induced Pluripotency. <i>BioMed Research International</i> , 2015, 2015, 1-9.	1.9	0
56	Pattern Selection: The Importance of "How You Get There". <i>Biophysical Journal</i> , 2015, 108, 1307-1308.	0.5	6
57	Serum CA19-9 Is Significantly Upregulated up to 2 Years before Diagnosis with Pancreatic Cancer: Implications for Early Disease Detection. <i>Clinical Cancer Research</i> , 2015, 21, 622-631.	7.0	158
58	Leptin induces upregulation of sphingosine kinase 1 in oestrogen receptor-negative breast cancer via Src family kinase-mediated, janus kinase 2-independent pathway. <i>Breast Cancer Research</i> , 2014, 16, 426.	5.0	68
59	Complex and unexpected dynamics in simple genetic regulatory networks. <i>International Journal of Modern Physics B</i> , 2014, 28, 1430006.	2.0	6
60	Cancer-associated autoantibodies to MUC1 and MUC4: A blinded case-control study of colorectal cancer in UK collaborative trial of ovarian cancer screening. <i>International Journal of Cancer</i> , 2014, 134, 2180-2188.	5.1	49
61	Stochastic resonance in an intracellular genetic perceptron. <i>Physical Review E</i> , 2014, 89, 032716.	2.1	14
62	Fractional calculus model of GATA-switching for regulating the differentiation of a hematopoietic stem cell. <i>Advances in Difference Equations</i> , 2014, 2014, .	3.5	2
63	A DNA Methylation Network Interaction Measure, and Detection of Network Oncomarkers. <i>PLoS ONE</i> , 2014, 9, e84573.	2.5	26
64	The sex hormone system in carriers of BRCA1/2 mutations: a case-control study. <i>Lancet Oncology</i> , The, 2013, 14, 1226-1232.	10.7	98
65	Asymmetry in Erythroid-Myeloid Differentiation Switch and the Role of Timing in a Binary Cell-Fate Decision. <i>Frontiers in Immunology</i> , 2013, 4, 426.	4.8	10
66	Decision making in noisy bistable systems with time-dependent asymmetry. <i>Physical Review E</i> , 2013, 87, 012715.	2.1	7
67	Early detection of cancer in the general population: a blinded case-control study of p53 autoantibodies in colorectal cancer. <i>British Journal of Cancer</i> , 2013, 108, 107-114.	6.4	73
68	Corruption of the Intra-Gene DNA Methylation Architecture Is a Hallmark of Cancer. <i>PLoS ONE</i> , 2013, 8, e68285.	2.5	19
69	Parameter Estimation Methods for Chaotic Intercellular Networks. <i>PLoS ONE</i> , 2013, 8, e79892.	2.5	5
70	Association of serum sex steroid receptor bioactivity and sex steroid hormones with breast cancer risk in postmenopausal women. <i>Endocrine-Related Cancer</i> , 2012, 19, 137-147.	3.1	36
71	NOISE AND OSCILLATIONS IN BIOLOGICAL SYSTEMS: MULTIDISCIPLINARY APPROACH BETWEEN EXPERIMENTAL BIOLOGY, THEORETICAL MODELLING AND SYNTHETIC BIOLOGY. <i>International Journal of Modern Physics B</i> , 2012, 26, 1246009.	2.0	2
72	Speed-Dependent Cellular Decision Making in Nonequilibrium Genetic Circuits. <i>PLoS ONE</i> , 2012, 7, e32779.	2.5	25

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73	Interplay between Path and Speed in Decision Making by High-Dimensional Stochastic Gene Regulatory Networks. PLoS ONE, 2012, 7, e40085.	2.5	13
74	Abstract 3643: Early detection of cancer in the general population - a blinded case control study of p53 auto-antibodies in colorectal cancer in UK Collaborative Trial of Ovarian Cancer Screening (UKCTOCS)., 2012, , .		0
75	Systems Biology and Longevity: An Emerging Approach to Identify Innovative Anti- Aging Targets and Strategies. Current Pharmaceutical Design, 2010, 16, 802-813.	1.9	76
76	In silico analysis of microdomain-mediated trimer formation in the T cell membrane. European Physical Journal: Special Topics, 2010, 187, 21-30.	2.6	0
77	Network, degeneracy and bow tie. Integrating paradigms and architectures to grasp the complexity of the immune system. Theoretical Biology and Medical Modelling, 2010, 7, 32.	2.1	71
78	The 20S Proteasome Splicing Activity Discovered by SpliceMet. PLoS Computational Biology, 2010, 6, e1000830.	3.2	63
79	Timing Cellular Decision Making Under Noise via Cell-Cell Communication. PLoS ONE, 2009, 4, e4872.	2.5	47
80	Towards quantitative prediction of proteasomal digestion patterns of proteins. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P01009.	2.3	5
81	Dynamics of Multicellular Synthetic Gene Networks. World Scientific Lecture Notes in Complex Systems, 2009, , 33-58.	0.1	1
82	Nonlocal electron transport and cross-resistance peak in NSN heterostructures. JETP Letters, 2008, 87, 140-144.	1.4	9
83	Modeling the in Vitro 20S Proteasome Activity: The Effect of PA28 and of the Sequence and Length of Polypeptides on the Degradation Kinetics. Journal of Molecular Biology, 2008, 377, 1607-1617.	4.2	28
84	Effect of Stochastic Resonance on Bone Loss in Osteopenic Conditions. Physical Review Letters, 2008, 100, 128101.	7.8	19
85	Quantized cycling time in artificial gene networks induced by noise and intercell communication. Physical Review E, 2007, 76, 020901.	2.1	10
86	Multistability and Clustering in a Population of Synthetic Genetic Oscillators via Phase-Repulsive Cell-to-Cell Communication. Physical Review Letters, 2007, 99, 148103.	7.8	206
87	Inherent multistability in arrays of autoinducer coupled genetic oscillators. Physical Review E, 2007, 75, 031916.	2.1	82
88	Stochastic suppression of gene expression oscillators under intercell coupling. Physical Review E, 2007, 75, 031917.	2.1	15
89	Noise-memory induced excitability and pattern formation in oscillatory neural models. Physical Review E, 2006, 73, 026216.	2.1	15
90	Optimal Length Transportation Hypothesis to Model Proteasome Product Size Distribution. Journal of Biological Physics, 2006, 32, 231-243.	1.5	5

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91	INFLUENCE OF TRANSPORT RATES ON THE PROTEIN DEGRADATION BY PROTEASOMES. Biophysical Reviews and Letters, 2006, 01, 375-386.	0.8	6
92	Noise-induced inhibitory suppression of frequency-selective stochastic resonance. Physical Review E, 2006, 74, 046220.	2.1	11
93	Peptide-size-dependent active transport in the proteasome. Europhysics Letters, 2005, 69, 725-731.	2.0	8
94	Quantification of spatial structure of human proximal tibial bone biopsies using 3D measures of complexity. Acta Astronautica, 2005, 56, 820-830.	3.2	7
95	Bistability and noise-enhanced velocity of rolling motion. Europhysics Letters, 2005, 69, 371-377.	2.0	7
96	MODELING BONE RESORPTION IN 2D CT AND 3D CT IMAGES. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2005, 15, 2995-3009.	1.7	2
97	Signal propagation in oscillatory media enabled by noise-induced excitability. , 2004, 5471, 102.		0
98	Vibrational resonance and vibrational propagation in excitable systems. Physics Letters, Section A: General, Atomic and Solid State Physics, 2003, 312, 348-354.	2.1	172
99	Microseism oscillations: from deterministic to noise-driven models. Chaos, Solitons and Fractals, 2003, 16, 195-210.	5.1	8
100	Oscillatory amplification of stochastic resonance in excitable systems. Physical Review E, 2003, 68, 026214.	2.1	82
101	Experimental evidence, numerics, and theory of vibrational resonance in bistable systems. Physical Review E, 2003, 67, 066119.	2.1	159
102	Doubly Stochastic Coherence via Noise-Induced Symmetry in Bistable Neural Models. Physical Review Letters, 2003, 90, 030601.	7.8	61
103	Noise-Induced Excitability in Oscillatory Media. Physical Review Letters, 2003, 91, 180601.	7.8	62
104	Coherence resonance and polymodality in inhibitory coupled excitable oscillators. Physical Review E, 2003, 67, 066202.	2.1	17
105	Twofold role of noise in doubly stochastic effects. , 2003, , .		1
106	System Size Resonance in Coupled Noisy Systems and in the Ising Model. Physical Review Letters, 2002, 88, 050601.	7.8	163
107	DOUBLY STOCHASTIC EFFECTS. Fluctuation and Noise Letters, 2002, 02, L157-L168.	1.5	1
108	NOISE-ENHANCED PROPAGATION OF BICHROMATIC SIGNALS. Fluctuation and Noise Letters, 2002, 02, L47-L52.	1.5	9

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109	Vibrational resonance in a noise-induced structure. <i>Physical Review E</i> , 2002, 66, 011106.	2.1	98
110	Fluctuational transport of a Brownian particle in ratchet-like gravitational potential field. <i>Chaos, Solitons and Fractals</i> , 2002, 13, 109-113.	5.1	0
111	Noise-induced effects on the chaotic advection of fluid flow. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2002, 297, 396-401.	2.1	3
112	Additive noise in noise-induced nonequilibrium transitions. <i>Chaos</i> , 2001, 11, 570-580.	2.5	15
113	Effect of the potential shape and of a Brownian particle mass on noise-induced transport. <i>Chaos, Solitons and Fractals</i> , 2001, 12, 1459-1471.	5.1	8
114	Noise Induced Propagation in Monostable Media. <i>Physical Review Letters</i> , 2001, 88, 010601.	7.8	75
115	Simple electronic circuit model for doubly stochastic resonance. <i>Physical Review E</i> , 2001, 63, 020103.	2.1	31
116	Doubly Stochastic Resonance. <i>Physical Review Letters</i> , 2000, 85, 227-231.	7.8	129
117	Influence of additive noise on transitions in nonlinear systems. <i>Physical Review E</i> , 2000, 61, 4809-4820.	2.1	17
118	TURBULENCE AND COHERENT STRUCTURES IN SUBSONIC SUBMERGED JETS: CONTROL OF THE TURBULENCE. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 1999, 09, 397-414.	1.7	12
119	Nonequilibrium first-order phase transition induced by additive noise. <i>Physical Review E</i> , 1999, 60, R6275-R6278.	2.1	49
120	On-off intermittency phenomena in a pendulum with a randomly vibrating suspension axis. <i>Chaos, Solitons and Fractals</i> , 1998, 9, 157-169.	5.1	17
121	Influence of additive noise on noise-induced phase transitions in nonlinear chains. <i>Chaos, Solitons and Fractals</i> , 1998, 9, 1367-1372.	5.1	26
122	Spatial patterns induced by additive noise. <i>Physical Review E</i> , 1998, 58, 4355-4360.	2.1	55
123	Control of noise-induced oscillations of a pendulum with a randomly vibrating suspension axis. <i>Physical Review E</i> , 1997, 56, 1465-1470.	2.1	28
124	Modeling Qualitative Changes in Bimanual Movements. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 1997, 07, 1441-1450.	1.7	5
125	Nonequilibrium noise-induced phase transitions in simple systems. <i>Journal of Experimental and Theoretical Physics</i> , 1997, 84, 197-208.	0.9	17
126	Noise-induced phase transitions in a pendulum with a randomly vibrating suspension axis. <i>Physical Review E</i> , 1996, 54, 3535-3544.	2.1	54

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127	Constructing a Virtual Proteasome. , 0, , 373-400.		0