

Yaroslav Ispolatov

List of Publications by Year in descending order

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Version: 2024-02-01

62
papers

1,877
citations

331670

21
h-index

289244

40
g-index

72
all docs

72
docs citations

72
times ranked

1849
citing authors

#	ARTICLE	IF	CITATIONS
1	Wealth distributions in asset exchange models. <i>European Physical Journal B</i> , 1998, 2, 267-276.	1.5	244
2	Binding properties and evolution of homodimers in protein-protein interaction networks. <i>Nucleic Acids Research</i> , 2005, 33, 3629-3635.	14.5	159
3	Duplication-divergence model of protein interaction network. <i>Physical Review E</i> , 2005, 71, 061911.	2.1	138
4	Complexity and Diversity. <i>Science</i> , 2010, 328, 494-497.	12.6	108
5	On first-order phase transitions in microcanonical and canonical non-extensive systems. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2001, 295, 475-487.	2.6	90
6	Division of labour and the evolution of multicellularity. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2012, 279, 1768-1776.	2.6	87
7	Towards a mechanistic foundation of evolutionary theory. <i>ELife</i> , 2017, 6, .	6.0	87
8	Propagation of large concentration changes in reversible protein-binding networks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 13655-13660.	7.1	76
9	CHAOS AND UNPREDICTABILITY IN EVOLUTION. <i>Evolution; International Journal of Organic Evolution</i> , 2014, 68, 1365-1373.	2.3	56
10	Optimal number of spacers in CRISPR arrays. <i>PLoS Computational Biology</i> , 2017, 13, e1005891.	3.2	48
11	Phase diagram of self-attracting systems. <i>Physical Review E</i> , 2002, 66, 036109.	2.1	46
12	Automatic extraction of gene ontology annotation and its correlation with clusters in protein networks. <i>BMC Bioinformatics</i> , 2007, 8, 243.	2.6	46
13	A convergent theory of Stark broadening of hydrogen lines in dense plasmas. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 1994, 51, 129-138.	2.3	43
14	Cliques and duplication-divergence network growth. <i>New Journal of Physics</i> , 2005, 7, 145-145.	2.9	37
15	Diversity and Coevolutionary Dynamics in High-Dimensional Phenotype Spaces. <i>American Naturalist</i> , 2017, 189, 105-120.	2.1	35
16	Lattice Boltzmann method for viscoelastic fluids. <i>Physical Review E</i> , 2002, 65, 056704.	2.1	33
17	Modeling Strombolian eruptions of Karymsky volcano, Kamchatka, Russia. <i>Journal of Volcanology and Geothermal Research</i> , 2003, 122, 265-280.	2.1	30
18	Chaos in high-dimensional dissipative dynamical systems. <i>Scientific Reports</i> , 2015, 5, 12506.	3.3	29

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19	Spreading out of perturbations in reversible reaction networks. <i>New Journal of Physics</i> , 2007, 9, 273-273.	2.9	27
20	The Influence of Copy-Number of Targeted Extrachromosomal Genetic Elements on the Outcome of CRISPR-Cas Defense. <i>Frontiers in Molecular Biosciences</i> , 2016, 3, 45.	3.5	26
21	War: The dynamics of vicious civilizations. <i>Physical Review E</i> , 1996, 54, 1274-1289.	2.1	25
22	Phase transitions in systems with $1/r^{\pm}$ attractive interactions. <i>Physical Review E</i> , 2001, 64, 056103.	2.1	25
23	Individual-based models for adaptive diversification in high-dimensional phenotype spaces. <i>Journal of Theoretical Biology</i> , 2016, 390, 97-105.	1.7	25
24	Detection of the dominant direction of information flow and feedback links in densely interconnected regulatory networks. <i>BMC Bioinformatics</i> , 2008, 9, 424.	2.6	21
25	Natural diversity of CRISPR spacers of <i>Thermus</i> : evidence of local spacer acquisition and global spacer exchange. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2019, 374, 20180092.	4.0	21
26	Annihilation of charged particles. <i>Physical Review E</i> , 1996, 53, 3154-3159.	2.1	20
27	Cell shape impacts on the positioning of the mitotic spindle with respect to the substratum. <i>Molecular Biology of the Cell</i> , 2015, 26, 1286-1295.	2.1	20
28	Collapse in Systems with Attractive Nonintegrable Potentials. <i>Physical Review Letters</i> , 2001, 87, 210601.	7.8	19
29	Evolution of diversity in metabolic strategies. <i>ELife</i> , 2021, 10, .	6.0	19
30	Collapses and explosions in self-gravitating systems. <i>Physical Review E</i> , 2003, 68, 036117.	2.1	18
31	SPECIATION DUE TO HYBRID NECROSIS IN PLANT-PATHOGEN MODELS. <i>Evolution; International Journal of Organic Evolution</i> , 2009, 63, 3076-3084.	2.3	18
32	A generalized theory of stark broadening of hydrogen-like spectral lines in dense plasmas. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 1995, 54, 307-315.	2.3	15
33	A Model for the Self-Organization of Vesicular Flux and Protein Distributions in the Golgi Apparatus. <i>PLoS Computational Biology</i> , 2013, 9, e1003125.	3.2	14
34	Boom-bust population dynamics increase diversity in evolving competitive communities. <i>Communications Biology</i> , 2021, 4, 502.	4.4	14
35	Anomalously slow phase transitions in self-gravitating systems. <i>Physical Review E</i> , 2004, 70, 026102.	2.1	13
36	Symmetric competition as a general model for single-species adaptive dynamics. <i>Journal of Mathematical Biology</i> , 2013, 67, 169-184.	1.9	12

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37	Anomalous Electric Fields Inside a Dense Plasma of a Current Sheet. Contributions To Plasma Physics, 1996, 36, 667-678.	1.1	11
38	Finding mesoscopic communities in sparse networks. Journal of Statistical Mechanics: Theory and Experiment, 2006, 2006, P09014-P09014.	2.3	11
39	Symmetry effects and equivalences in lattice models of hydrophobic interaction. Physica A: Statistical Mechanics and Its Applications, 2001, 291, 24-38.	2.6	9
40	Continuously stable strategies as evolutionary branching points. Journal of Theoretical Biology, 2010, 266, 529-535.	1.7	9
41	Acculturation drives the evolution of intergroup conflict. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 14089-14097.	7.1	9
42	Unified approach to prewetting and wetting phase transitions. Physica A: Statistical Mechanics and Its Applications, 2000, 279, 203-212.	2.6	8
43	A model for the evolutionary diversification of religions. Journal of Theoretical Biology, 2010, 267, 676-684.	1.7	8
44	Lily Pollen Tubes Pulse According to a Simple Spatial Oscillator. Scientific Reports, 2018, 8, 12135.	3.3	8
45	Omnivory can both enhance and dampen perturbations in food webs. Theoretical Ecology, 2011, 4, 55-67.	1.0	7
46	Molecular weight effects on chain pull-out fracture of reinforced polymeric interfaces. Physical Review E, 1999, 60, 4460-4464.	2.1	6
47	Multi-particle interaction in a model of the hydrophobic interaction. Physica A: Statistical Mechanics and Its Applications, 2001, 291, 39-48.	2.6	6
48	Competition-driven evolution of organismal complexity. PLoS Computational Biology, 2019, 15, e1007388.	3.2	6
49	Evolution to alternative levels of stable diversity leaves areas of niche space unexplored. PLoS Computational Biology, 2021, 17, e1008650.	3.2	6
50	Particle systems with stochastic passing. Physical Review E, 2000, 61, R2163-R2167.	2.1	4
51	Persistence in systems with algebraic interaction. Physical Review E, 1999, 60, R2437-R2440.	2.1	3
52	A note on the complexity of evolutionary dynamics in a classic consumer-resource model. Theoretical Ecology, 2020, 13, 79-84.	1.0	3
53	Ballistic coalescence model. Physica A: Statistical Mechanics and Its Applications, 1998, 252, 165-172.	2.6	2
54	Correlation functions in decorated lattice models. Physica A: Statistical Mechanics and Its Applications, 2001, 291, 49-59.	2.6	2

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55	On the Evolution of Decoys in Plant Immune Systems. <i>Biological Theory</i> , 2010, 5, 256-263.	1.5	2
56	Evolutionary adaptation of high-diversity communities to changing environments. <i>Ecology and Evolution</i> , 2020, 10, 11941-11953.	1.9	2
57	Computing in fish schools. <i>ELife</i> , 2016, 5, e12852.	6.0	2
58	Persistence of plasmids targeted by CRISPR interference in bacterial populations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, e2114905119.	7.1	2
59	Binaries and core-ring structures in self-gravitating systems. <i>Physical Review E</i> , 2005, 72, 026115.	2.1	1
60	SPECIFIC FEATURES OF STARK BROADENING OF HELIUM-LIKE MULTI-CHARGED ION SPECTRAL LINES. <i>Journal De Physique Colloque</i> , 1988, 49, C1-83-C1-86.	0.2	1
61	Convergent approximation for the 2-body correlation function in an interface. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1999, 271, 23-35.	2.6	0
62	Small-scale universality and large-scale diversity. <i>Physics of Life Reviews</i> , 2016, 17, 163-165.	2.8	0