

Ofer Biham

List of Publications by Year in descending order

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86
papers

4,772
citations

109137

35
h-index

95083

68
g-index

86
all docs

86
docs citations

86
times ranked

3627
citing authors

#	ARTICLE	IF	CITATIONS
1	Self-organization and a dynamical transition in traffic-flow models. <i>Physical Review A</i> , 1992, 46, R6124-R6127.	1.0	696
2	APPLIED MATHEMATICS:Is the Geometry of Nature Fractal?. <i>Science</i> , 1998, 279, 39-40.	6.0	384
3	Regulation of phenotypic variability by a threshold-based mechanism underlies bacterial persistence. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 12541-12546.	3.3	313
4	Regulation of gene expression by small non-coding RNAs: a quantitative view. <i>Molecular Systems Biology</i> , 2007, 3, 138.	3.2	284
5	Genetic Toggle Switch without Cooperative Binding. <i>Physical Review Letters</i> , 2006, 96, 188101.	2.9	175
6	Master Equation for Hydrogen Recombination on Grain Surfaces. <i>Astrophysical Journal</i> , 2001, 553, 595-603.	1.6	163
7	Efficiency of Molecular Hydrogen Formation on Silicates. <i>Astrophysical Journal</i> , 1997, 483, L131-L134.	1.6	161
8	The Forbes 400 and the Pareto wealth distribution. <i>Economics Letters</i> , 2006, 90, 290-295.	0.9	144
9	Diffusion of Cu on Cu surfaces. <i>Physical Review B</i> , 1995, 52, 5364-5374.	1.1	143
10	Scaling range and cutoffs in empirical fractals. <i>Physical Review E</i> , 1997, 56, 2817-2828.	0.8	142
11	Characterization of unstable periodic orbits in chaotic attractors and repellers. <i>Physical Review Letters</i> , 1989, 63, 819-822.	2.9	115
12	Universality in sandpile models. <i>Physical Review E</i> , 1996, 53, R1317-R1320.	0.8	112
13	Simulating Ising spin glasses on a quantum computer. <i>Physical Review E</i> , 1997, 56, 3661-3681.	0.8	96
14	Grover's quantum search algorithm for an arbitrary initial amplitude distribution. <i>Physical Review A</i> , 1999, 60, 2742-2745.	1.0	93
15	Molecular Hydrogen Formation on Ice Under Interstellar Conditions. <i>Astrophysical Journal</i> , 2005, 627, 850-860.	1.6	90
16	Stochastic simulations of genetic switch systems. <i>Physical Review E</i> , 2007, 75, 021904.	0.8	76
17	Models for adatom diffusion on fcc (001) metal surfaces. <i>Physical Review B</i> , 1999, 60, 2106-2116.	1.1	71
18	Power-law distributions and Levy-stable intermittent fluctuations in stochastic systems of many autocatalytic elements. <i>Physical Review E</i> , 1999, 60, 1299-1303.	0.8	68

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19	Apparent fractality emerging from models of random distributions. <i>Physical Review E</i> , 1996, 53, 3342-3358.	0.8	65
20	Scaling of island growth in Pb overlayers on Cu(001). <i>Physical Review B</i> , 1993, 48, 8336-8344.	1.1	57
21	Unstable periodic orbits in the stadium billiard. <i>Physical Review A</i> , 1992, 46, 6334-6339.	1.0	56
22	Complete mode locking in models of charge-density waves. <i>Physical Review Letters</i> , 1992, 68, 1586-1589.	2.9	55
23	Analysis of generalized Grover quantum search algorithms using recursion equations. <i>Physical Review A</i> , 2000, 63, .	1.0	54
24	Generic emergence of power law distributions and Lévy-Stable intermittent fluctuations in discrete logistic systems. <i>Physical Review E</i> , 1998, 58, 1352-1358.	0.8	50
25	Stochastic Analysis of the SOS Response in <i>Escherichia coli</i> . <i>PLoS ONE</i> , 2009, 4, e5363.	1.1	46
26	Quantifying the connectivity of a network: The network correlation function method. <i>Physical Review E</i> , 2009, 80, 046104.	0.8	45
27	Characterization of submonolayer growth of Cu islands on Cu(001). <i>Surface Science</i> , 1994, 306, L569-L574.	0.8	44
28	Universality classes in isotropic, Abelian, and non-Abelian sandpile models. <i>Physical Review E</i> , 1998, 58, 303-310.	0.8	41
29	Competition between Small RNAs: A Quantitative View. <i>Biophysical Journal</i> , 2012, 102, 1712-1721.	0.2	41
30	Interactions between Distant ceRNAs in Regulatory Networks. <i>Biophysical Journal</i> , 2014, 106, 2254-2266.	0.2	41
31	Unstable periodic orbits and the symbolic dynamics of the complex Hénon map. <i>Physical Review A</i> , 1990, 42, 4639-4646.	1.0	40
32	Dynamical approach to analytic continuation of quantum Monte Carlo data. <i>Physical Review Letters</i> , 1989, 63, 2504-2507.	2.9	39
33	Electromigration-induced flow of islands and voids on the Cu(001) surface. <i>Physical Review B</i> , 2000, 61, 4975-4982.	1.1	39
34	Exact results for hydrogen recombination on dust grain surfaces. <i>Physical Review E</i> , 2002, 66, 056103.	0.8	39
35	Systematic Computation of the Least Unstable Periodic Orbits in Chaotic Attractors. <i>Physical Review Letters</i> , 1998, 81, 4349-4352.	2.9	37
36	Periodic orbits in the dissipative standard map. <i>Physical Review A</i> , 1991, 43, 6550-6557.	1.0	35

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37	Analytical results for the distribution of shortest path lengths in random networks. Europhysics Letters, 2015, 111, 26006.	0.7	32
38	Symmetry and Stability of Icosahedral and Other Quasicrystalline Phases. Physical Review Letters, 1986, 56, 2191-2194.	2.9	31
39	Epitaxial growth of Cu on Cu(001): Experiments and simulations. Physical Review B, 2000, 62, R10649-R10652.	1.1	31
40	Efficient Simulations of Gas-Grain Chemistry in Interstellar Clouds. Physical Review Letters, 2004, 93, 170601.	2.9	31
41	Enhanced production of HD and D ₂ molecules on small dust grains in diffuse clouds. Monthly Notices of the Royal Astronomical Society, 2004, 348, 1055-1064.	1.6	30
42	Efficient Simulations of Interstellar Gas-Grain Chemistry Using Moment Equations. Astrophysical Journal, 2007, 658, L37-L40.	1.6	29
43	Binomial Moment Equations for Stochastic Reaction Systems. Physical Review Letters, 2011, 106, 150602.	2.9	28
44	Effects of mobility of small islands on growth in molecular-beam epitaxy. Physical Review B, 1997, 55, 7917-7926.	1.1	26
45	Global universality in the Frenkel-Kontorova model. Physical Review A, 1989, 39, 5326-5335.	1.0	23
46	Distance distribution in configuration-model networks. Physical Review E, 2016, 93, 062309.	0.8	23
47	A defense-offense multi-layered regulatory switch in a pathogenic bacterium. Nucleic Acids Research, 2015, 43, 1357-1369.	6.5	22
48	Revealing the microstructure of the giant component in random graph ensembles. Physical Review E, 2018, 97, 042318.	0.8	20
49	Efficient stochastic simulations of complex reaction networks on surfaces. Journal of Chemical Physics, 2007, 127, 144703.	1.2	19
50	Theory and applications of the systematic detection of unstable periodic orbits in dynamical systems. Physical Review E, 2000, 62, 2119-2134.	0.8	18
51	The distribution of path lengths of self avoiding walks on Erdős-Rényi networks. Journal of Physics A: Mathematical and Theoretical, 2016, 49, 285002.	0.7	18
52	Distribution of shortest path lengths in a class of node duplication network models. Physical Review E, 2017, 96, 032301.	0.8	18
53	Distribution of shortest cycle lengths in random networks. Physical Review E, 2017, 96, 062307.	0.8	16
54	Rate equations for the growth of Cu islands on Cu(001). Surface Science, 1995, 324, 47-54.	0.8	15

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55	Distribution of shortest path lengths in subcritical Erdős-Rényi networks. <i>Physical Review E</i> , 2018, 98, 012301.	0.8	15
56	Long-time fluctuations in a dynamical model of stock market indices. <i>Physical Review E</i> , 2001, 64, 026101.	0.8	13
57	Fractality in Nature. <i>Science</i> , 1998, 279, 1611h-1611.	6.0	13
58	Modeling of negative autoregulated genetic networks in single cells. <i>Gene</i> , 2005, 347, 265-271.	1.0	11
59	The distribution of first hitting times of randomwalks on Erdős-Rényi networks. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2017, 50, 115001.	0.7	10
60	Renormalization-Group Treatment of the \hat{l}^2 -Incommensurate Transition in Quartz and Berlinite. <i>Physical Review Letters</i> , 1987, 59, 2439-2442.	2.9	9
61	Reaction Kinetics in a Tight Spot. <i>Small</i> , 2005, 1, 502-504.	5.2	9
62	Statistical analysis of articulation points in configuration model networks. <i>Physical Review E</i> , 2018, 98, .	0.8	9
63	The effect of grain size distribution on H ₂ formation rate in the interstellar medium. <i>Monthly Notices of the Royal Astronomical Society</i> , 2005, 362, 666-670.	1.6	8
64	Analytical results for the distribution of shortest path lengths in directed random networks that grow by node duplication. <i>European Physical Journal B</i> , 2019, 92, 1.	0.6	8
65	Limited range fractality of randomly adsorbed rods. <i>Journal of Chemical Physics</i> , 1997, 106, 10359-10367.	1.2	7
66	Pattern formation and a clustering transition in power-law sequential adsorption. <i>Physical Review E</i> , 1999, 59, R4713-R4716.	0.8	7
67	Entanglement of periodic states, the quantum Fourier transform, and Shor's factoring algorithm. <i>Physical Review A</i> , 2010, 81, .	1.0	7
68	Interaction of Atomic and Molecular Hydrogen with Tholin Surfaces at Low Temperatures. <i>Journal of Physical Chemistry A</i> , 2010, 114, 10575-10583.	1.1	6
69	Stochastic analysis of bistability in coherent mixed feedback loops combining transcriptional and posttranscriptional regulations. <i>Physical Review E</i> , 2015, 91, 052706.	0.8	6
70	Analysis of the Multiplane Method for Stochastic Simulations of Reaction Networks with Fluctuations. <i>Multiscale Modeling and Simulation</i> , 2007, 6, 963-982.	0.6	5
71	Global Regulation of Transcription by a Small RNA: A Quantitative View. <i>Biophysical Journal</i> , 2014, 106, 1205-1214.	0.2	5
72	The distribution of first hitting times of non-backtracking random walks on Erdős-Rényi networks. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2017, 50, 205003.	0.7	5

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73	Analytical results for the distribution of first hitting times of random walks on random regular graphs. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2021, 54, 145002.	0.7	5
74	Spectral function of the Anderson model: A quantum Monte Carlo calculation. <i>Physical Review B</i> , 1990, 41, 2639-2642.	1.1	4
75	Analytical results for the in-degree and out-degree distributions of directed random networks that grow by node duplication. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2019, 2019, 083403.	0.9	4
76	Convergence towards an Erdős-Rényi graph structure in network contraction processes. <i>Physical Review E</i> , 2019, 100, 032314.	0.8	4
77	Statistical analysis of edges and bridges in configuration model networks. <i>Physical Review E</i> , 2020, 102, 012314.	0.8	4
78	Generating random networks that consist of a single connected component with a given degree distribution. <i>Physical Review E</i> , 2019, 99, 042308.	0.8	3
79	Analysis of the convergence of the degree distribution of contracting random networks towards a Poisson distribution using the relative entropy. <i>Physical Review E</i> , 2020, 101, 062308.	0.8	3
80	Fate of articulation points and bridges in percolation. <i>Physical Review E</i> , 2021, 103, 042302.	0.8	3
81	The mean and variance of the distribution of shortest path lengths of random regular graphs. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2022, 55, 265005.	0.7	3
82	Analytical results for the distribution of first return times of random walks on random regular graphs. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2021, 54, 325001.	0.7	2
83	Analytical results for the distribution of cover times of random walks on random regular graphs. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2022, 55, 015003.	0.7	2
84	The Formation of H ₂ and HD with the Master Equation Approach. <i>Proceedings of the International Astronomical Union</i> , 2005, 1, 345.	0.0	1
85	Diffusion-limited reactions on disordered surfaces with continuous distributions of binding energies. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2011, 2011, P10029.	0.9	1
86	Barzel and Biham Reply. <i>Physical Review Letters</i> , 2014, 112, .	2.9	0