

Mario Feingold

List of Publications by Year in descending order

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65
papers

2,193
citations

218677

26
h-index

223800

46
g-index

65
all docs

65
docs citations

65
times ranked

1647
citing authors

#	ARTICLE	IF	CITATIONS
1	Distribution of matrix elements of chaotic systems. <i>Physical Review A</i> , 1986, 34, 591-595.	2.5	195
2	Cell Shape Dynamics in <i>Escherichia coli</i> . <i>Biophysical Journal</i> , 2008, 94, 251-264.	0.5	176
3	Phase-space localization: Topological aspects of quantum chaos. <i>Physical Review Letters</i> , 1990, 65, 3076-3079.	7.8	132
4	Passive scalars, three-dimensional volume-preserving maps, and chaos. <i>Journal of Statistical Physics</i> , 1988, 50, 529-565.	1.2	121
5	RecA polymerization on double-stranded DNA by using single-molecule manipulation: The role of ATP hydrolysis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1999, 96, 7916-7921.	7.1	110
6	Ergodicity and mixing in quantum theory. II. <i>Physical Review A</i> , 1984, 30, 509-511.	2.5	92
7	Treadmilling analysis reveals new insights into dynamic FtsZ ring architecture. <i>PLoS Biology</i> , 2018, 16, e2004845.	5.6	88
8	Chaotic advection in three-dimensional unsteady incompressible laminar flow. <i>Journal of Fluid Mechanics</i> , 1996, 316, 259-284.	3.4	84
9	Spectral statistics in semiclassical random-matrix ensembles. <i>Physical Review Letters</i> , 1991, 66, 986-989.	7.8	72
10	Stochastic resonance in the speed of memory retrieval. <i>Biological Cybernetics</i> , 2000, 83, L011-L016.	1.3	66
11	Timing the start of division in <i>E. coli</i> : a single-cell study. <i>Physical Biology</i> , 2008, 5, 046001.	1.8	64
12	Phase locking, period doubling, and chaotic phenomena in externally driven excitable systems. <i>Physical Review A</i> , 1988, 37, 4060-4063.	2.5	59
13	Statistics of quasi-energy separations in chaotic systems. <i>Physical Review B</i> , 1985, 31, 6852-6855.	3.2	58
14	Rotation of single bacterial cells relative to the optical axis using optical tweezers. <i>Optics Letters</i> , 2011, 36, 40.	3.3	54
15	Localization and spectral statistics in a banded random matrix ensemble. <i>Journal of Physics A</i> , 1991, 24, 175-182.	1.6	52
16	Semiclassical structure of Hamiltonians. <i>Physical Review A</i> , 1989, 39, 6507-6514.	2.5	48
17	Statistical fluctuations of matrix elements in regular and chaotic systems. <i>Physical Review A</i> , 1989, 39, 374-377.	2.5	47
18	Relaxation Dynamics of Semiflexible Polymers. <i>Physical Review Letters</i> , 2004, 92, 098101.	7.8	41

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19	Diffusion in three-dimensional Liouvillian maps. <i>Physical Review Letters</i> , 1988, 61, 1799-1802.	7.8	39
20	Regular and chaotic motion of coupled rotators. <i>Physica D: Nonlinear Phenomena</i> , 1983, 9, 433-438.	2.8	37
21	Scars in billiards: The phase space approach. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1990, 146, 199-203.	2.1	35
22	Topological aspects of quantum chaos. <i>Chaos</i> , 1992, 2, 125-130.	2.5	35
23	Active transport on disordered microtubule networks: The generalized random velocity model. <i>Physical Review E</i> , 2008, 78, 051912.	2.1	35
24	Two-parameter scaling in the Wigner ensemble. <i>Physical Review Letters</i> , 1993, 70, 2936-2939.	7.8	31
25	Classical limit of quantum chaos. <i>Chemical Physics Letters</i> , 1985, 117, 344-346.	2.6	30
26	Global Diffusion in a Realistic Three-Dimensional Time-Dependent Nonturbulent Fluid Flow. <i>Physical Review Letters</i> , 1995, 75, 3669-3672.	7.8	30
27	Energy-Level Statistics of Integrable Quantum Systems. <i>Physical Review Letters</i> , 1985, 55, 2626-2626.	7.8	26
28	Timing of Z-ring localization in <i>Escherichia coli</i> . <i>Physical Biology</i> , 2011, 8, 066003.	1.8	26
29	Statistics of quasienergies in chaotic and random systems. <i>Physica D: Nonlinear Phenomena</i> , 1987, 25, 181-195.	2.8	25
30	Passive scalars and three-dimensional Liouvillian maps. <i>Physica D: Nonlinear Phenomena</i> , 1994, 76, 22-33.	2.8	22
31	Cross sections at asymptotic energies in the \bar{p} collider. <i>Nuclear Physics B</i> , 1982, 198, 13-25.	2.5	18
32	Band Distributions for Quantum Chaos on a Torus. <i>Physical Review Letters</i> , 1998, 81, 3124-3127.	7.8	17
33	DNA-membrane interactions can localize bacterial cell center. <i>Journal of Theoretical Biology</i> , 2003, 225, 493-496.	1.7	16
34	Relaxation dynamics of a single DNA molecule. <i>Physical Review E</i> , 2005, 71, 061920.	2.1	16
35	Shape of nonseptated <i>Escherichia coli</i> is asymmetric. <i>Physical Review E</i> , 2008, 77, 061902.	2.1	15
36	Oriented imaging of 3D subcellular structures in bacterial cells using optical tweezers. <i>Optics Letters</i> , 2012, 37, 440.	3.3	14

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37	Comment on "Quantum Suppression of Irregularity in the Spectral Properties of the Kicked Rotator". Physical Review Letters, 1988, 61, 377-377.	7.8	13
38	Spectral statistics in the lowest Landau band. Physical Review B, 1995, 52, 8400-8406.	3.2	13
39	Band Husimi distributions and the classical-quantum correspondence on the torus. Physical Review E, 1998, 58, 5655-5667.	2.1	13
40	Regular and chaotic propagators in quantum theory. Physical Review A, 1985, 31, 2472-2476.	2.5	11
41	Density of states for band random matrices with electric field. Journal of Physics A, 1993, 26, 7367-7376.	1.6	11
42	Single molecule study of the reaction between DNA and formamide. Talanta, 2001, 55, 943-949.	5.5	10
43	Single-molecule studies of DNA and DNA-protein interactions. Physica E: Low-Dimensional Systems and Nanostructures, 2001, 9, 616-620.	2.7	10
44	Controlled alignment of bacterial cells with oscillating optical tweezers. Journal of Nanophotonics, 2011, 5, 051803.	1.0	10
45	An Introduction to Chaotic Advection. NATO ASI Series Series B: Physics, 1999, , 307-342.	0.2	10
46	Density of States for Banded and Sparse Random Matrices. Europhysics Letters, 1992, 17, 97-102.	2.0	8
47	Three-dimensional structure of the Z-ring as a random network of FtsZ filaments. Environmental Microbiology, 2013, 15, 3252-3258.	3.8	8
48	Chiral Vortex Dynamics on Membranes is an Intrinsic Property of FtsZ Driven by GTP Hydrolysis. Biophysical Journal, 2017, 112, 133a.	0.5	8
49	Optical tweezers assisted imaging of the Z-ring in Escherichia coli: measuring its radial width. New Journal of Physics, 2014, 16, 013043.	2.9	6
50	Z-ring Structure and Constriction Dynamics in E. coli. Frontiers in Microbiology, 2017, 8, 1670.	3.5	6
51	Phase space scars and quantum billiards. European Physical Journal B, 1994, 95, 121-140.	1.5	5
52	Transport of Passive scalars: Kam Surfaces and Diffusion in Three-Dimensional Liouillian Maps. , 1989, , 37-51.		5
53	On the universality class dependence of period doubling indices. Physics Letters, Section A: General, Atomic and Solid State Physics, 1991, 156, 272-276.	2.1	3
54	Localization in Quasi-1D Systems: Perturbation Theory and Scaling. Europhysics Letters, 1994, 28, 329-334.	2.0	3

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55	Stochastic nucleoid segregation dynamics as a source of the phenotypic variability in E. coli. Biophysical Journal, 2021, 120, 5107-5123.	0.5	3
56	Localized states in the chaotic Ce atom. Physical Review A, 1995, 51, 4279-4280.	2.5	2
57	Localization in strongly chaotic systems. Journal of Physics A, 1997, 30, 3603-3612.	1.6	2
58	Discretization errors in particle tracking. Physica A: Statistical Mechanics and Its Applications, 2007, 376, 117-132.	2.6	2
59	Optimal trapping stability of Escherichia coli in oscillating optical tweezers. Physical Review E, 2020, 101, 062402.	2.1	2
60	Localization in quasi-one-dimensional systems with a random magnetic field. Physical Review B, 1996, 53, 9634-9639.	3.2	1
61	Timing the Start of Division in E. coli: a Single-Cell Study. Biophysical Journal, 2009, 96, 631a.	0.5	1
62	Single Molecule Study of the Polymerization of RecA on dsDNA: The Dynamics of Individual Domains. Frontiers in Molecular Biosciences, 2021, 8, 609076.	3.5	1
63	Towards Single Cell Optical Tomography. Biophysical Journal, 2012, 102, 617a.	0.5	0
64	Nucleoid Segregation Dynamics and its Variability in Dividing and Filamentous E. Coli. Biophysical Journal, 2018, 114, 328a.	0.5	0
65	Banded Random Matrix Ensembles. , 1992, , 167-176.		0