

Gemunu H Gunaratne

List of Publications by Year in descending order

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76
papers

3,297
citations

279798

23
h-index

144013

57
g-index

77
all docs

77
docs citations

77
times ranked

1937
citing authors

#	ARTICLE	IF	CITATIONS
1	Scaling of hard thermal turbulence in Rayleigh-Bénard convection. <i>Journal of Fluid Mechanics</i> , 1989, 204, 1.	3.4	929
2	Exploring chaotic motion through periodic orbits. <i>Physical Review Letters</i> , 1987, 58, 2387-2389.	7.8	467
3	Topological and metric properties of Hénon-type strange attractors. <i>Physical Review A</i> , 1988, 38, 1503-1520.	2.5	242
4	Pattern formation in the presence of symmetries. <i>Physical Review E</i> , 1994, 50, 2802-2820.	2.1	173
5	Parity-breaking transitions of modulated patterns in hydrodynamic systems. <i>Physical Review Letters</i> , 1989, 63, 1954-1957.	7.8	128
6	Markov processes, Hurst exponents, and nonlinear diffusion equations: With application to finance. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2006, 369, 343-353.	2.6	96
7	Mouse let-7 miRNA populations exhibit RNA editing that is constrained in the 5'-seed/ cleavage/anchor regions and stabilize predicted mmu-let-7a:mRNA duplexes. <i>Genome Research</i> , 2008, 18, 1571-1581.	5.5	87
8	Organization of chaos. <i>Physical Review Letters</i> , 1987, 59, 1377-1380.	7.8	75
9	Hydrodynamic and interfacial patterns with broken space-time symmetry. <i>Physical Review A</i> , 1991, 43, 6700-6721.	2.5	74
10	Chaos beyond onset: A comparison of theory and experiment. <i>Physical Review Letters</i> , 1989, 63, 1-4.	7.8	71
11	Hurst exponents, Markov processes, and fractional Brownian motion. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2007, 379, 1-9.	2.6	69
12	Nonstationary increments, scaling distributions, and variable diffusion processes in financial markets. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 17287-17290.	7.1	59
13	Deconvolution of reacting-flow dynamics using proper orthogonal and dynamic mode decompositions. <i>Physical Review E</i> , 2015, 91, 013001.	2.1	55
14	Open-field arena boundary is a primary object of exploration for <i>Drosophila</i> . <i>Brain and Behavior</i> , 2012, 2, 97-108.	2.2	53
15	Karhunen-Loève analysis of spatiotemporal flame patterns. <i>Physical Review E</i> , 1998, 57, 5958-5971.	2.1	40
16	An empirical model of volatility of returns and option pricing. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2003, 329, 178-198.	2.6	39
17	Martingales, detrending data, and the efficient market hypothesis. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2008, 387, 202-216.	2.6	35
18	Dynamic-mode decomposition based analysis of shear coaxial jets with and without transverse acoustic driving. <i>Journal of Fluid Mechanics</i> , 2016, 790, 5-32.	3.4	34

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19	$f(\hat{I}\pm)$ curves: Experimental results. Physical Review A, 1988, 37, 523-530.	2.5	28
20	Using dynamic mode decomposition to extract cyclic behavior in the stock market. Physica A: Statistical Mechanics and Its Applications, 2016, 448, 172-180.	2.6	27
21	Complex spatial patterns on planar continua. Physical Review Letters, 1993, 71, 1367-1370.	7.8	26
22	Model for Bone Strength and Osteoporotic Fractures. Physical Review Letters, 2002, 88, 068101.	7.8	26
23	ASYMMETRIC CELLS AND ROTATING RINGS IN CELLULAR FLAMES. Modern Physics Letters B, 1996, 10, 1379-1387.	1.9	24
24	Anomalous scaling of stochastic processes and the Moses effect. Physical Review E, 2017, 95, 042141.	2.1	24
25	An Invariant Measure of Disorder in Patterns. Physical Review Letters, 1995, 75, 3281-3284.	7.8	23
26	An expression relating breaking stress and density of trabecular bone. Journal of Biomechanics, 2004, 37, 1241-1249.	2.1	21
27	High-dimensional time series prediction using kernel-based Koopman mode regression. Nonlinear Dynamics, 2017, 90, 1785-1806.	5.2	21
28	Characterizations of natural patterns. Physical Review E, 1998, 57, 5146-5149.	2.1	20
29	A theory of fluctuations in stock prices. Physica A: Statistical Mechanics and Its Applications, 2006, 363, 383-392.	2.6	19
30	Intraday volatility and scaling in high frequency foreign exchange markets. International Review of Financial Analysis, 2011, 20, 121-126.	6.6	18
31	Modeling novelty habituation during exploratory activity in Drosophila. Behavioural Processes, 2013, 97, 63-75.	1.1	18
32	Defects and traveling-wave states in nonequilibrium patterns with broken parity. Physical Review A, 1990, 41, 5731-5734.	2.5	17
33	Trajectory Scaling Functions at the Onset of Chaos: Experimental Results. Physical Review Letters, 1988, 61, 539-542.	7.8	16
34	Empirically based modeling in financial economics and beyond, and spurious stylized facts. International Review of Financial Analysis, 2008, 17, 767-783.	6.6	15
35	A method to Fourier filter textured images. Chaos, 2000, 10, 240-247.	2.5	14
36	A Study of Age-Related Architectural Changes that Are Most Damaging to Bones. Biophysical Journal, 2004, 87, 3642-3647.	0.5	14

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37	Drosophila increase exploration after visually detecting predators. PLoS ONE, 2017, 12, e0180749.	2.5	14
38	Variable Step Random Walks and Self-Similar Distributions. Journal of Statistical Physics, 2005, 121, 887-899.	1.2	13
39	Testing Two Predictions for Fracture Load Using Computer Models of Trabecular Bone. Biophysical Journal, 2005, 89, 759-767.	0.5	13
40	Ensemble vs. time averages in financial time series analysis. Physica A: Statistical Mechanics and Its Applications, 2012, 391, 6024-6032.	2.6	13
41	Martingales, nonstationary increments, and the efficient market hypothesis. Physica A: Statistical Mechanics and Its Applications, 2008, 387, 3916-3920.	2.6	12
42	Emergence of order in textured patterns. Physical Review E, 1999, 59, 5058-5064.	2.1	10
43	Variable diffusion in stock market fluctuations. Physica A: Statistical Mechanics and Its Applications, 2015, 419, 221-233.	2.6	10
44	Integrating the Kuramoto-Sivashinsky equation in polar coordinates: Application of the distributed approximating functional approach. Physical Review E, 1999, 60, 3353-3360.	2.1	9
45	Distributed approximating functional treatment of noisy signals. Computer Physics Communications, 1999, 120, 1-12.	7.5	9
46	Emergence of order in an oscillated granular layer. Physica A: Statistical Mechanics and Its Applications, 2002, 306, 180-188.	2.6	8
47	Clustering of volatility in variable diffusion processes. Physica A: Statistical Mechanics and Its Applications, 2009, 388, 4424-4430.	2.6	8
48	A Robust Topology-Based Algorithm for Gene Expression Profiling. , 2012, 2012, 1-11.		8
49	Strength reduction in electrical and elastic networks. Physical Review B, 2002, 66, .	3.2	7
50	Stages of relaxation of patterns and the role of stochasticity in the final stage. Nonlinearity, 2004, 17, 1535-1546.	1.4	6
51	Deviations from Taylor's frozen hypothesis and scaling laws in inhomogeneous jet flows. Communications Physics, 2021, 4, .	5.3	6
52	Trajectory scaling function for bifurcations in area-preserving maps on the plane. Physica D: Nonlinear Phenomena, 1985, 17, 295-307.	2.8	5
53	Estimating the strength of bone using linear response. Physical Review E, 2002, 66, 061904.	2.1	4
54	Using Effective Subnetworks to Predict Selected Properties of Gene Networks. PLoS ONE, 2010, 5, e13080.	2.5	4

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55	EFFECTIVE MODELS FOR GENE NETWORKS AND THEIR APPLICATIONS. Biophysical Reviews and Letters, 2012, 07, 41-70.	0.8	4
56	Experimental determination of circuit equations. American Journal of Physics, 2015, 83, 64-71.	0.7	4
57	A theory of patterns. Chaos, Solitons and Fractals, 1995, 5, 1447-1454.	5.1	3
58	A model of trabecular bone and an application to osteoporosis. Physica A: Statistical Mechanics and Its Applications, 2002, 315, 98-104.	2.6	3
59	Nanostructures with long-range order in monolayer self-assembly. Physical Review E, 2008, 78, 025203.	2.1	3
60	Creating perfectly ordered quantum dot arrays via self-assembly. Chaos, 2009, 19, 033141.	2.5	3
61	Effective Models of Periodically Driven Networks. Biophysical Journal, 2011, 101, 2563-2571.	0.5	3
62	Robust-mode analysis of hydrodynamic flows. International Journal of Modern Physics B, 2017, 31, 1742007.	2.0	3
63	Robust Mode Analysis. Mathematics, 2021, 9, 1057.	2.2	3
64	Trajectory scaling for period tripling in near conformal mappings. Physical Review A, 1987, 36, 1834-1839.	2.5	2
65	The trajectory scaling function for period doubling bifurcations in flows. Journal of Statistical Physics, 1990, 58, 1245-1256.	1.2	2
66	Characterization of Labyrinthine Patterns and Their Evolution. Journal of Statistical Physics, 1998, 93, 427-447.	1.2	2
67	On CAPM and Black-Scholes differing risk-return strategies. Physica A: Statistical Mechanics and Its Applications, 2003, 329, 170-177.	2.6	2
68	Universality in chaotic differentiable flows. Physical Review A, 1990, 41, 1823-1829.	2.5	1
69	Dynamics of real financial markets: A reply to Frank's comment. Physica A: Statistical Mechanics and Its Applications, 2008, 387, 3239-3241.	2.6	1
70	Controlling Networks of Nonlinearly-Coupled Nodes using Response Surfaces. Scientific Reports, 2015, 4, 7574.	3.3	1
71	Model-free network control. Physica D: Nonlinear Phenomena, 2020, 408, 132467.	2.8	1
72	Trajectory scaling function for bifurcations in four-dimensional symplectic maps. Physical Review A, 1987, 36, 2418-2421.	2.5	0

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73	Current distribution in fused electrical networks. Brazilian Journal of Physics, 2003, 33, 363-370.	1.4	0
74	Is integration $I(d)$ applicable to observed economics and finance time series?. International Review of Financial Analysis, 2009, 18, 101-108.	6.6	0
75	First-Passage-Time Distribution for Variable-Diffusion Processes. Journal of Statistical Physics, 2017, 167, 878-891.	1.2	0
76	CHARACTERIZATIONS OF FAR FROM EQUILIBRIUM STRUCTURES USING THEIR CONTOURS. World Scientific Series on Nonlinear Science, Series B, 2004, , 319-328.	0.2	0