Gemunu H Gunaratne

List of Publications by Year
in descending order

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	Deviations from Taylor's frozen hypothesis and scaling laws in inhomogeneous jet flows. Communications Physics, 2021, 4, .	5.3	6
2	Robust Mode Analysis. Mathematics, 2021, 9, 1057.	2.2	3
3	Model-free network control. Physica D: Nonlinear Phenomena, 2020, 408, 132467.	2.8	1
4	First-Passage-Time Distribution for Variable-Diffusion Processes. Journal of Statistical Physics, 2017, 167, 878-891.	1.2	0
5	Robust-mode analysis of hydrodynamic flows. International Journal of Modern Physics B, 2017, 31, 1742007.	2.0	3
6	High-dimensional time series prediction using kernel-based Koopman mode regression. Nonlinear Dynamics, 2017, 90, 1785-1806.	5.2	21
7	Anomalous scaling of stochastic processes and the Moses effect. Physical Review E, 2017, 95, 042141.	2.1	24
8	Drosophila increase exploration after visually detecting predators. PLoS ONE, 2017, 12, e0180749.	2.5	14
9	Dynamic-mode decomposition based analysis of shear coaxial jets with and without transverse acoustic driving. Journal of Fluid Mechanics, 2016, 790, 5-32.	3.4	34
10	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
11	Controlling Networks of Nonlinearly-Coupled Nodes using Response Surfaces. Scientific Reports, 2015, 4, 7574.	3.3	1
12	Deconvolution of reacting-flow dynamics using proper orthogonal and dynamic mode decompositions. Physical Review E, 2015, 91, 013001.	2.1	55
13	Experimental determination of circuit equations. American Journal of Physics, 2015, 83, 64-71.	0.7	4
14	Variable diffusion in stock market fluctuations. Physica A: Statistical Mechanics and Its Applications, 2015, 419, 221-233.	2.6	10
15	Modeling novelty habituation during exploratory activity in Drosophila. Behavioural Processes, 2013, 97, 63-75.	1.1	18
16	EFFECTIVE MODELS FOR GENE NETWORKS AND THEIR APPLICATIONS. Biophysical Reviews and Letters, 2012, 07, 41-70.	0.8	4
17	Ensemble vs. time averages in financial time series analysis. Physica A: Statistical Mechanics and Its Applications, 2012, 391, 6024-6032.	2.6	13
18	Open-field arena boundary is a primary object of exploration for *Drosophila*. Brain and Behavior, 2012, 2, 97-108.	2.2	53

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19	A Robust Topology-Based Algorithm for Gene Expression Profiling. , 2012, 2012, 1-11.		8
20	Effective Models of Periodically Driven Networks. Biophysical Journal, 2011, 101, 2563-2571.	0.5	3
21	Intraday volatility and scaling in high frequency foreign exchange markets. International Review of Financial Analysis, 2011, 20, 121-126.	6.6	18
22	Using Effective Subnetworks to Predict Selected Properties of Gene Networks. PLoS ONE, 2010, 5, e13080.	2.5	4
23	Clustering of volatility in variable diffusion processes. Physica A: Statistical Mechanics and Its Applications, 2009, 388, 4424-4430.	2.6	8
24	Creating perfectly ordered quantum dot arrays via self-assembly. Chaos, 2009, 19, 033141.	2.5	3
25	Is integration I(d) applicable to observed economics and finance time series?. International Review of Financial Analysis, 2009, 18, 101-108.	6.6	0
26	Martingales, nonstationary increments, and the efficient market hypothesis. Physica A: Statistical Mechanics and Its Applications, 2008, 387, 3916-3920.	2.6	12
27	Dynamics of real financial markets: A reply to Frankâ€™s comment. Physica A: Statistical Mechanics and Its Applications, 2008, 387, 3239-3241.	2.6	1
28	Martingales, detrending data, and the efficient market hypothesis. Physica A: Statistical Mechanics and Its Applications, 2008, 387, 202-216.	2.6	35
29	Empirically based modeling in financial economics and beyond, and spurious stylized facts. International Review of Financial Analysis, 2008, 17, 767-783.	6.6	15
30	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. Genome Research, 2008, 18, 1571-1581.	5.5	87
31	Nanostructures with long-range order in monolayer self-assembly. Physical Review E, 2008, 78, 025203.	2.1	3
32	Nonstationary increments, scaling distributions, and variable diffusion processes in financial markets. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 17287-17290.	7.1	59
33	Hurst exponents, Markov processes, and fractional Brownian motion. Physica A: Statistical Mechanics and Its Applications, 2007, 379, 1-9.	2.6	69
34	A theory of fluctuations in stock prices. Physica A: Statistical Mechanics and Its Applications, 2006, 363, 383-392.	2.6	19
35	Markov processes, Hurst exponents, and nonlinear diffusion equations: With application to finance. Physica A: Statistical Mechanics and Its Applications, 2006, 369, 343-353.	2.6	96
36	Variable Step Random Walks and Self-Similar Distributions. Journal of Statistical Physics, 2005, 121, 887-899.	1.2	13

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37	Testing Two Predictions for Fracture Load Using Computer Models of Trabecular Bone. Biophysical Journal, 2005, 89, 759-767.	0.5	13
38	Stages of relaxation of patterns and the role of stochasticity in the final stage. Nonlinearity, 2004, 17, 1535-1546.	1.4	6
39	An expression relating breaking stress and density of trabecular bone. Journal of Biomechanics, 2004, 37, 1241-1249.	2.1	21
40	A Study of Age-Related Architectural Changes that Are Most Damaging to Bones. Biophysical Journal, 2004, 87, 3642-3647.	0.5	14
41	CHARACTERIZATIONS OF FAR FROM EQUILIBRIUM STRUCTURES USING THEIR CONTOURS. World Scientific Series on Nonlinear Science, Series B, 2004, , 319-328.	0.2	0
42	On CAPM and Black–Scholes differing risk-return strategies. Physica A: Statistical Mechanics and Its Applications, 2003, 329, 170-177.	2.6	2
43	An empirical model of volatility of returns and option pricing. Physica A: Statistical Mechanics and Its Applications, 2003, 329, 178-198.	2.6	39
44	Current distribution in fused electrical networks. Brazilian Journal of Physics, 2003, 33, 363-370.	1.4	0
45	Model for Bone Strength and Osteoporotic Fractures. Physical Review Letters, 2002, 88, 068101.	7.8	26
46	Strength reduction in electrical and elastic networks. Physical Review B, 2002, 66, .	3.2	7
47	Estimating the strength of bone using linear response. Physical Review E, 2002, 66, 061904.	2.1	4
48	Emergence of order in an oscillated granular layer. Physica A: Statistical Mechanics and Its Applications, 2002, 306, 180-188.	2.6	8
49	A model of trabecular bone and an application to osteoporosis. Physica A: Statistical Mechanics and Its Applications, 2002, 315, 98-104.	2.6	3
50	A method to Fourier filter textured images. Chaos, 2000, 10, 240-247.	2.5	14
51	Emergence of order in textured patterns. Physical Review E, 1999, 59, 5058-5064.	2.1	10
52	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
53	Distributed approximating functional treatment of noisy signals. Computer Physics Communications, 1999, 120, 1-12.	7.5	9
54	Characterization of Labyrinthine Patterns and Their Evolution. Journal of Statistical Physics, 1998, 93, 427-447.	1.2	2

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55	Characterizations of natural patterns. Physical Review E, 1998, 57, 5146-5149.	2.1	20
56	Karhunen-LoÃ¨ve analysis of spatiotemporal flame patterns. Physical Review E, 1998, 57, 5958-5971.	2.1	40
57	ASYMMETRIC CELLS AND ROTATING RINGS IN CELLULAR FLAMES. Modern Physics Letters B, 1996, 10, 1379-1387.	1.9	24
58	A theory of patterns. Chaos, Solitons and Fractals, 1995, 5, 1447-1454.	5.1	3
59	An Invariant Measure of Disorder in Patterns. Physical Review Letters, 1995, 75, 3281-3284.	7.8	23
60	Pattern formation in the presence of symmetries. Physical Review E, 1994, 50, 2802-2820.	2.1	173
61	Complex spatial patterns on planar continua. Physical Review Letters, 1993, 71, 1367-1370.	7.8	26
62	Hydrodynamic and interfacial patterns with broken space-time symmetry. Physical Review A, 1991, 43, 6700-6721.	2.5	74
63	The trajectory scaling function for period doubling bifurcations in flows. Journal of Statistical Physics, 1990, 58, 1245-1256.	1.2	2
64	Defects and traveling-wave states in nonequilibrium patterns with broken parity. Physical Review A, 1990, 41, 5731-5734.	2.5	17
65	Universality in chaotic differentiable flows. Physical Review A, 1990, 41, 1823-1829.	2.5	1
66	Chaos beyond onset: A comparison of theory and experiment. Physical Review Letters, 1989, 63, 1-4.	7.8	71
67	Scaling of hard thermal turbulence in Rayleigh-BÃ©nard convection. Journal of Fluid Mechanics, 1989, 204, 1.	3.4	929
68	Parity-breaking transitions of modulated patterns in hydrodynamic systems. Physical Review Letters, 1989, 63, 1954-1957.	7.8	128
69	Topological and metric properties of HÃ©non-type strange attractors. Physical Review A, 1988, 38, 1503-1520.	2.5	242
70	Trajectory Scaling Functions at the Onset of Chaos: Experimental Results. Physical Review Letters, 1988, 61, 539-542.	7.8	16
71	f(Î±) curves: Experimental results. Physical Review A, 1988, 37, 523-530.	2.5	28
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	Organization of chaos. Physical Review Letters, 1987, 59, 1377-1380.	7.8	75
74	Trajectory scaling for period tripling in near conformal mappings. Physical Review A, 1987, 36, 1834-1839.	2.5	2
75	Exploring chaotic motion through periodic orbits. Physical Review Letters, 1987, 58, 2387-2389.	7.8	467
76	Trajectory scaling function for bifurcations in area-preserving maps on the plane. Physica D: Nonlinear Phenomena, 1985, 17, 295-307.	2.8	5