

Sitabhra Sinha

List of Publications by Year in descending order

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93
papers

1,821
citations

318942

23
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340414

39
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97
all docs

97
docs citations

97
times ranked

1646
citing authors

#	ARTICLE	IF	CITATIONS
1	Morphogen-regulated contact-mediated signaling between cells can drive the transitions underlying body segmentation in vertebrates. <i>Physical Biology</i> , 2022, 19, 016001.	0.8	4
2	Contact-mediated cellular communication supplements positional information to regulate spatial patterning during development. <i>Physical Review E</i> , 2021, 103, 062409.	0.8	4
3	Disorder in cellular packing can alter proliferation dynamics to regulate growth. <i>Physical Review E</i> , 2021, 104, L052401.	0.8	2
4	Developmental trajectory of <i>Caenorhabditis elegans</i> nervous system governs its structural organization. <i>PLoS Computational Biology</i> , 2020, 16, e1007602.	1.5	12
5	Lateral inhibition provides a unifying framework for spatiotemporal pattern formation in media comprising relaxation oscillators. <i>Physical Review E</i> , 2019, 99, 052216.	0.8	3
6	Epidemic prevalence information on social networks can mediate emergent collective outcomes in voluntary vaccine schemes. <i>PLoS Computational Biology</i> , 2019, 15, e1006977.	1.5	12
7	Is Life (or at Least Socioeconomic Aspects of It) Just Spin and Games?. , 2019, , 265-281.		0
8	Emergence of frustration signals systemic risk. <i>Physical Review E</i> , 2019, 99, 052306.	0.8	14
9	Emergent memory in cell signaling: Persistent adaptive dynamics in cascades can arise from the diversity of relaxation time-scales. <i>Scientific Reports</i> , 2018, 8, 13230.	1.6	10
10	Deviations from universality in the fluctuation behavior of a heterogeneous complex system reveal intrinsic properties of components: The case of the international currency market. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2018, 509, 599-610.	1.2	4
11	Emergence of Cooperation as a Non-equilibrium Transition in Noisy Spatial Games. <i>Frontiers in Physics</i> , 2018, 6, .	1.0	11
12	When big data fails: Adaptive agents using coarse-grained information have competitive advantage. <i>Physical Review E</i> , 2018, 98, 020301.	0.8	3
13	The "handedness" of language: Directional symmetry breaking of sign usage in words. <i>PLoS ONE</i> , 2018, 13, e0190735.	1.1	2
14	Emergence of coupling-induced oscillations and broken symmetries in heterogeneously driven nonlinear reaction networks. <i>Scientific Reports</i> , 2017, 7, 1594.	1.6	4
15	Optimal interdependence enhances the dynamical robustness of complex systems. <i>Physical Review E</i> , 2017, 96, 020301.	0.8	4
16	Using Skewness and the First-Digit Phenomenon to Identify Dynamical Transitions in Cardiac Models. <i>Frontiers in Physiology</i> , 2016, 6, 390.	1.3	3
17	When the clock strikes: Modeling the relation between circadian rhythms and cardiac arrhythmias. <i>Journal of Physics: Conference Series</i> , 2016, 759, 012021.	0.3	2
18	"Hits" emerge through self-organized coordination in collective response of free agents. <i>Physical Review E</i> , 2016, 94, 042302.	0.8	3

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19	Complex patterns arise through spontaneous symmetry breaking in dense homogeneous networks of neural oscillators. Scientific Reports, 2016, 6, 22074.	1.6	14
20	Co-action provides rational basis for the evolutionary success of Pavlovian strategies. Scientific Reports, 2016, 6, 30831.	1.6	5
21	What is economics that physicists are mindful of?. European Physical Journal: Special Topics, 2016, 225, 3087-3089.	1.2	4
22	Symmetry warrants rational cooperation by co-action in Social Dilemmas. Scientific Reports, 2015, 5, 13071.	1.6	7
23	Complex ordering in spin networks: Critical role of adaptation rate for dynamically evolving interactions. Journal of Physics: Conference Series, 2015, 638, 012010.	0.3	3
24	The Role of Cellular Coupling in the Spontaneous Generation of Electrical Activity in Uterine Tissue. PLoS ONE, 2015, 10, e0118443.	1.1	17
25	Analysis of core-periphery organization in protein contact networks reveals groups of structurally and functionally critical residues. Journal of Biosciences, 2015, 40, 683-699.	0.5	5
26	Physicists' Approaches to a Few Economic Problems. New Economic Windows, 2015, , 237-286.	1.0	1
27	Long-Term Evolution of the Topological Structure of Interactions Among Stocks in the New York Stock Exchange 1925-2012. New Economic Windows, 2015, , 105-120.	1.0	2
28	Bitcoin Dynamics: The Inverse Square Law of Price Fluctuations and Other Stylized Facts. New Economic Windows, 2015, , 121-128.	1.0	8
29	The Importance of Community. Studies in Microeconomics, 2014, 2, 49-61.	0.4	3
30	Defective logic: Using spatiotemporal patterns in coupled relaxation oscillator arrays for computation. , 2014, , .		1
31	Extreme variability in convergence to structural balance in frustrated dynamical systems. Europhysics Letters, 2014, 105, 10003.	0.7	18
32	Uncovering the Network Structure of the World Currency Market: Cross-Correlations in the Fluctuations of Daily Exchange Rates. New Economic Windows, 2014, , 203-218.	1.0	1
33	Spatiotemporal order, disorder, and propagating defects in homogeneous system of relaxation oscillators. Physical Review E, 2013, 87, 012907.	0.8	21
34	Suppression of cardiac alternans by alternating-period-feedback stimulations. Physical Review E, 2013, 87, 042712.	0.8	14
35	The effect of quenched disorder on dynamical transitions in systems of coupled cells. New Journal of Physics, 2013, 15, 093046.	1.2	4
36	Critical role of pinning defects in scroll-wave breakup in active media. Europhysics Letters, 2013, 103, 50003.	0.7	6

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37	Branched Motifs Enable Long-Range Interactions in Signaling Networks through Retrograde Propagation. PLoS ONE, 2013, 8, e64409.	1.1	7
38	How Unstable Are Complex Financial Systems? Analyzing an Inter-bank Network of Credit Relations. New Economic Windows, 2013, , 59-76.	1.0	2
39	The evolution of interdisciplinarity in physics research. Scientific Reports, 2012, 2, 551.	1.6	48
40	Self-Organized Transition to Coherent Activity in Disordered Media. Physical Review Letters, 2012, 108, 068102.	2.9	21
41	Modeling and Experimental Analyses Reveals Signaling Plasticity in a Bi-Modular Assembly of CD40 Receptor Activated Kinases. PLoS ONE, 2012, 7, e39898.	1.1	17
42	Core-Periphery Organization of Graphemes in Written Sequences: Decreasing Positional Rigidity with Increasing Core Order. Lecture Notes in Computer Science, 2012, , 142-153.	1.0	2
43	Chimera order in spin systems. Europhysics Letters, 2011, 95, 10004.	0.7	14
44	Multiple dynamical time-scales in networks with hierarchically nested modular organization. Pramana - Journal of Physics, 2011, 77, 833-842.	0.9	1
45	Network analysis of a corpus of undeciphered Indus civilization inscriptions indicates syntactic organization. Computer Speech and Language, 2011, 25, 639-654.	2.9	4
46	Modular organization enhances the robustness of attractor network dynamics. Europhysics Letters, 2011, 94, 38004.	0.7	10
47	Emergence of universal scaling in financial markets from mean-field dynamics. Physical Review E, 2011, 83, 016101.	0.8	28
48	Are the Trading Volume and the Number of Trades Distributions Universal?. New Economic Windows, 2011, , 17-30.	1.0	1
49	Mesoscopic Organization Reveals the Constraints Governing Caenorhabditis elegans Nervous System. PLoS ONE, 2010, 5, e9240.	1.1	77
50	Wave-train-induced termination of weakly anchored vortices in excitable media. Physical Review E, 2010, 81, 010901.	0.8	57
51	Response to sub-threshold stimulus is enhanced by spatially heterogeneous activity. Europhysics Letters, 2010, 92, 60006.	0.7	3
52	The statistical laws of popularity: universal properties of the box-office dynamics of motion pictures. New Journal of Physics, 2010, 12, 115004.	1.2	31
53	Anomalous drift of spiral waves in heterogeneous excitable media. Physical Review E, 2010, 82, 051908.	0.8	22
54	A Mean-Field Model of Financial Markets: Reproducing Long Tailed Distributions and Volatility Correlations. New Economic Windows, 2010, , 98-109.	1.0	0

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55	Phase of Ising spins on modular networks analogous to social polarization. <i>Physical Review E</i> , 2009, 80, 025101.	0.8	20
56	Modularity produces small-world networks with dynamical time-scale separation. <i>Europhysics Letters</i> , 2009, 85, 68006.	0.7	51
57	The Mathematical Modelling of Inhomogeneities in Ventricular Tissue. <i>Understanding Complex Systems</i> , 2009, , 51-67.	0.3	2
58	Controlling Spiral Turbulence in Simulated Cardiac Tissue by Low-Amplitude Traveling Wave Stimulation. <i>Understanding Complex Systems</i> , 2009, , 69-87.	0.3	1
59	Modular networks with hierarchical organization: The dynamical implications of complex structure. <i>Pramana - Journal of Physics</i> , 2008, 71, 331-340.	0.9	24
60	Inverse-cubic law of index fluctuation distribution in Indian markets. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2008, 387, 2055-2065.	1.2	44
61	Controlling spatiotemporal chaos in excitable media using an array of control points. <i>Europhysics Letters</i> , 2008, 81, 50002.	0.7	14
62	Modular networks emerge from multiconstraint optimization. <i>Physical Review E</i> , 2007, 76, 045103.	0.8	31
63	Emergence of self-sustained patterns in small-world excitable media. <i>Physical Review E</i> , 2007, 76, 015101.	0.8	75
64	Spiral-wave dynamics depend sensitively on inhomogeneities in mathematical models of ventricular tissue. <i>Physical Review E</i> , 2007, 75, 011929.	0.8	55
65	Self-organization of price fluctuation distribution in evolving markets. <i>Europhysics Letters</i> , 2007, 77, 58004.	0.7	35
66	Collective behavior of stock price movements in an emerging market. <i>Physical Review E</i> , 2007, 76, 046116.	0.8	130
67	Understanding the mind of a worm: hierarchical network structure underlying nervous system function in <i>C. elegans</i> . <i>Progress in Brain Research</i> , 2007, 168, 145-153.	0.9	75
68	Evidence for power-law tail of the wealth distribution in India. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2006, 359, 555-562.	1.2	120
69	Robust emergent activity in dynamical networks. <i>Physical Review E</i> , 2006, 74, 066117.	0.8	18
70	Market Polarization in Presence of Individual Choice Volatility. , 2006, , 177-190.		4
71	Emergence of two-phase behavior in markets through interaction and learning in agents with bounded rationality. , 2006, , 200-204.		7
72	The Power (Law) of Indian Markets: Analysing NSE and BSE Trading Statistics. , 2006, , 24-34.		4

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73	Complexity vs. stability in small-world networks. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2005, 346, 147-153.	1.2	55
74	Death, dynamics and disorder: Terminating reentry in excitable media by dynamically-induced inhomogeneities. <i>Pramana - Journal of Physics</i> , 2005, 64, 553-562.	0.9	8
75	Evidence of universality for the May-Wigner stability theorem for random networks with local dynamics. <i>Physical Review E</i> , 2005, 71, 020902.	0.8	51
76	Blockbusters, Bombs and Sleepers: The Income Distribution of Movies. <i>New Economic Windows</i> , 2005, , 43-47.	1.0	5
77	Hollywood blockbusters and long-tailed distributions. <i>European Physical Journal B</i> , 2004, 42, 293-296.	0.6	24
78	VENTRICULAR FIBRILLATION IN A SIMPLE EXCITABLE MEDIUM MODEL OF CARDIAC TISSUE. <i>International Journal of Modern Physics B</i> , 2003, 17, 5645-5654.	1.0	6
79	Stochastic Maps, Wealth Distribution in Random Asset Exchange Models and the Marginal Utility of Relative Wealth. <i>Physica Scripta</i> , 2003, T106, 59.	1.2	35
80	Termination of reentry in an inhomogeneous ring of model cardiac cells. <i>Physical Review E</i> , 2002, 66, 061903.	0.8	20
81	Dynamical response of an excitatory-inhibitory neural network to external stimulation: An application to image segmentation. <i>Physical Review E</i> , 2002, 65, 046112.	0.8	2
82	Critical role of inhomogeneities in pacing termination of cardiac reentry. <i>Chaos</i> , 2002, 12, 893-902.	1.0	33
83	Examining the effects of species richness on community stability: an assembly model approach. <i>Oikos</i> , 2002, 99, 363-367.	1.2	36
84	Spiral turbulence and spatiotemporal chaos: characterization and control in two excitable media. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2002, 306, 211-219.	1.2	20
85	Defibrillation via the Elimination of Spiral Turbulence in a Model for Ventricular Fibrillation. <i>Physical Review Letters</i> , 2001, 86, 3678-3681.	2.9	103
86	Noise-free stochastic resonance in simple chaotic systems. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1999, 270, 204-214.	1.2	56
87	Chaotic Dynamics in Iterated Map Neural Networks with Piecewise Linear Activation Function. <i>Fundamenta Informaticae</i> , 1999, 37, 31-50.	0.3	3
88	Deterministic stochastic resonance in a piecewise linear chaotic map. <i>Physical Review E</i> , 1998, 58, 8009-8012.	0.8	39
89	Controlled transition from chaos to periodic oscillations in a neural network model. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1996, 224, 433-446.	1.2	8
90	Chaos Control in an Oscillatory Neural Network Model. <i>IETE Journal of Research</i> , 1996, 42, 205-213.	1.8	2

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91	From Coordination to Collapse in Rigged Economies. Physics Magazine, 0, 14, .	0.1	0
92	How "Hit" is Born: The Emergence of Popularity from the Dynamics of Collective Choice. , 0, , 417-447.		15
93	Flags, landscapes and signaling: contact-mediated inter-cellular interactions enable plasticity in fate determination driven by positional information. Indian Journal of Physics, 0, , 1.	0.9	0