Sudeshna Sinha

List of Publications by Year
in descending order

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162	3,828	94433	155660
papers	citations	37	55
		h-index	g-index

165	165	165	1380
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Quenching of oscillations in a liquid metal via attenuated coupling. Physical Review E, 2022, 105, L032201.	2.1	3
2	Machine-learning potential of a single pendulum. Physical Review E, 2022, 105, .	2.1	8
3	Influence of the Allee effect on extreme events in coupled three-species systems. Journal of Biosciences, 2022, 47, .	1.1	4
4	Negotiating the separatrix with machine learning. Nonlinear Theory and Its Applications IEICE, 2021, 12, 134-142.	0.6	3
5	Construction of logic gates exploiting resonance phenomena in nonlinear systems. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200238.	3.4	20
6	Harnessing tipping points for logic operations. European Physical Journal: Special Topics, 2021, 230, 3403-3409.	2.6	5
7	Competitive interplay of repulsive coupling and cross-correlated noises in bistable systems. Chaos, 2021, 31, 061106.	2.5	7
8	Forecasting Hamiltonian dynamics without canonical coordinates. Nonlinear Dynamics, 2021, 103, 1553-1562.	5.2	21
9	Enhancement of extreme events through the Allee effect and its mitigation through noise in a three species system. Scientific Reports, 2021, 11, 20913.	3.3	2
10	Ill-matched timescales in coupled systems can induce oscillation suppression. Chaos, 2021, 31, 103104.	2.5	2
11	Emergent noise-aided logic through synchronization. Physical Review E, 2021, 104, 064207.	2.1	8
12	The scaling of physics-informed machine learning with data and dimensions. Chaos, Solitons and Fractals: X, 2020, 5, 100046.	2.1	11
13	Asymmetry induced suppression of chaos. Scientific Reports, 2020, 10, 15582.	3.3	0
14	Advent of extreme events in predator populations. Scientific Reports, 2020, 10, 10613.	3.3	13
15	Physics-enhanced neural networks learn order and chaos. Physical Review E, 2020, 101, 062207.	2.1	42
16	Echo in complex networks. Physical Review E, 2020, 101, 022216.	2.1	7
17	Synchronized Hopping Induced by Interplay of Coupling and Noise. , 2020, , 325-334.		4
18	Resilience of networks of multi-stable chaotic systems to targetted attacks. European Physical Journal B, 2020, 93, 1.	1.5	7

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19	Explosive death in nonlinear oscillators coupled by quorum sensing. Physical Review E, 2019, 100, 032203.	2.1	18
20	Control of hierarchical networks by coupling to an external chaotic system. Europhysics Letters, 2019, 125, 50006.	2.0	3
21	Emergence of extreme events in networks of parametrically coupled chaotic populations. Chaos, 2019, 29, 023131.	2.5	16
22	Localized spatial distributions of disease phases yield long-term persistence of infection. Scientific Reports, 2019, 9, 20309.	3.3	3
23	Suppression and revival of oscillations through time-varying interaction. Chaos, Solitons and Fractals, 2019, 118, 249-254.	5.1	12
24	Chimera states are fragile under random links. Europhysics Letters, 2019, 128, 40004.	2.0	8
25	Coupling induced logical stochastic resonance. Physics Letters, Section A: General, Atomic and Solid State Physics, 2018, 382, 1581-1585.	2.1	35
26	Revival of oscillations via common environment. Nonlinear Dynamics, 2018, 91, 2219-2225.	5.2	10
27	Chaotic attractor hopping yields logic operations. PLoS ONE, 2018, 13, e0209037.	2.5	17
28	Environment-induced symmetry breaking of the oscillation-death state. Physical Review E, 2018, 98, .	2.1	12
29	Anticipating persistent infection. Europhysics Letters, 2018, 121, 60001.	2.0	2
30	Emergence of synchronization and regularity in firing patterns in time-varying neural hypernetworks. Physical Review E, 2018, 97, 052304.	2.1	55
31	Identifying nodal properties that are crucial for the dynamical robustness of multistable networks. Physical Review E, 2018, 98, 022314.	2.1	6
32	Emergence of Persistent Infection due to Heterogeneity. Scientific Reports, 2017, 7, 41582.	3.3	6
33	Unraveling the phase-amplitude coupling modulation in a delay-coupled diode lasers functionality. , 2017, , .		0
34	Are network properties consistent indicators of synchronization?. Europhysics Letters, 2017, 117, 20003.	2.0	6
35	Multiple-node basin stability in complex dynamical networks. Physical Review E, 2017, 95, 032317.	2.1	74
36	Effect of heterogeneity in a model of El NiÃ±o Southern Oscillations. Chaos, Solitons and Fractals, 2017, 104, 668-679.	5.1	3

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37	Time-varying multiplex network: Intralayer and interlayer synchronization. Physical Review E, 2017, 96, 062308.	2.1	70
38	Small-world networks exhibit pronounced intermittent synchronization. Chaos, 2017, 27, 111101.	2.5	9
39	Suppression of chaos through coupling to an external chaotic system. Nonlinear Dynamics, 2017, 87, 159-167.	5.2	13
40	Threshold-activated transport stabilizes chaotic populations to steady states. PLoS ONE, 2017, 12, e0183251.	2.5	4
41	Chimera States in Star Networks. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2016, 26, 1630023.	1.7	42
42	Balance of Interactions Determines Optimal Survival in Multi-Species Communities. PLoS ONE, 2015, 10, e0145278.	2.5	5
43	Random links enhance the sensitivity of networks to heterogeneity. Europhysics Letters, 2015, 112, 60004.	2.0	2
44	Spatiotemporal regularity in networks with stochastically varying links. European Physical Journal B, 2015, 88, 1.	1.5	2
45	Preventing catastrophes in spatially extended systems through dynamic switching of random interactions. Pramana - Journal of Physics, 2015, 84, 217-228.	1.8	1
46	Dynamic random links enhance diversity-induced coherence in strongly coupled neuronal systems. Pramana - Journal of Physics, 2015, 84, 249-256.	1.8	5
47	Coupling Reduces Noise: Applying Dynamical Coupling to Reduce Local White Additive Noise. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2015, 25, 1550040.	1.7	7
48	Effect of switching links in networks of piecewise linear maps. Nonlinear Dynamics, 2015, 81, 1741-1749.	5.2	6
49	Exploiting chaos for applications. Chaos, 2015, 25, 097615.	2.5	18
50	Emergent patterns in interacting neuronal sub-populations. Communications in Nonlinear Science and Numerical Simulation, 2015, 22, 314-320.	3.3	8
51	Noise tolerant spatiotemporal chaos computing. Chaos, 2014, 24, 043110.	2.5	17
52	Synthetic Computation: Chaos Computing, Logical Stochastic Resonance, and Adaptive Computing. Understanding Complex Systems, 2014, , 51-65.	0.6	4
53	Realization of morphing logic gates in a repressilator with quorum sensing feedback. Physics Letters, Section A: General, Atomic and Solid State Physics, 2014, 378, 1099-1103.	2.1	4
54	Realizing logic gates with time-delayed synthetic genetic networks. Nonlinear Dynamics, 2014, 76, 431-439.	5.2	45

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55	Synchronization in time-varying networks. Physical Review E, 2014, 90, 022812.	2.1	80
56	Noise enhanced activity in a complex network. European Physical Journal B, 2014, 87, 1.	1.5	5
57	Enhanced logical stochastic resonance under periodic forcing. Communications in Nonlinear Science and Numerical Simulation, 2014, 19, 2866-2873.	3.3	49
58	Targeting Temporal Patterns in Time-Delay Chaotic Systems. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2014, 24, 1450014.	1.7	2
59	Taming Explosive Growth through Dynamic Random Links. Scientific Reports, 2014, 4, 4308.	3.3	16
60	Cluster formation in populations of coupled chaotic neurons. European Physical Journal: Special Topics, 2013, 222, 905-915.	2.6	3
61	Emergence of epidemics in rapidly varying networks. Chaos, Solitons and Fractals, 2013, 54, 127-134.	5.1	34
62	Noise-Aided Logic in an Electronic Analog of Synthetic Genetic Networks. PLoS ONE, 2013, 8, e76032.	2.5	39
63	Scalable ultra-sensitive detection of heterogeneity via coupled bistable dynamics. Europhysics Letters, 2012, 98, 60004.	2.0	3
64	Manipulating potential wells in Logical Stochastic Resonance to obtain XOR logic. Physics Letters, Section A: General, Atomic and Solid State Physics, 2012, 376, 930-937.	2.1	36
65	Noise-assisted morphing of memory and logic function. Physics Letters, Section A: General, Atomic and Solid State Physics, 2012, 376, 957-962.	2.1	41
66	Noise-free logical stochastic resonance. Physical Review E, 2011, 84, 055201.	2.1	54
67	Synthetic gene networks as potential flexible parallel logic gates. Europhysics Letters, 2011, 93, 50001.	2.0	56
68	Noise Enhanced Logic Gates. AIP Conference Proceedings, 2011, , .	0.4	2
69	Imbalance of positive and negative links induces regularity. Chaos, Solitons and Fractals, 2011, 44, 71-78.	5.1	4
70	Enhancement of â€œlogicalâ€•responses by noise in a bistable optical system. Physical Review E, 2011, 83, 046219.	2.1	54
71	DESIGN OF TIME DELAYED CHAOTIC CIRCUIT WITH THRESHOLD CONTROLLER. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2011, 21, 725-735.	1.7	19
72	Logical stochastic resonance. Chemical Physics, 2010, 375, 424-434.	1.9	63

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73	Under what kind of parametric fluctuations is spatiotemporal regularity the most robust?. Pramana - Journal of Physics, 2010, 74, 895-906.	1.8	3
74	Chaogates: Morphing logic gates that exploit dynamical patterns. Chaos, 2010, 20, 037107.	2.5	45
75	Introduction to Focus Issue: Intrinsic and Designed Computation: Information Processing in Dynamical Systemsâ€"Beyond the Digital Hegemony. Chaos, 2010, 20, 037101.	2.5	69
76	A coupled map lattice model for rheological chaos in sheared nematic liquid crystals. Chaos, 2010, 20, 043123.	2.5	5
77	DESIGN OF THRESHOLD CONTROLLER BASED CHAOTIC CIRCUITS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2010, 20, 2185-2191.	1.7	16
78	A Noise-Assisted Reprogrammable Nanomechanical Logic Gate. Nano Letters, 2010, 10, 1168-1171.	9.1	160
79	Realization of reliable and flexible logic gates using noisy nonlinear circuits. Applied Physics Letters, 2009, 95, .	3.3	80
80	Construction of a Chaotic Computer Chip. Understanding Complex Systems, 2009, , 3-13.	0.6	1
81	Logic from nonlinear dynamical evolution. Physics Letters, Section A: General, Atomic and Solid State Physics, 2009, 373, 1346-1351.	2.1	28
82	A simple nonlinear dynamical computing device. Chaos, Solitons and Fractals, 2009, 42, 809-819.	5.1	11
83	Reliable Logic Circuit Elements that Exploit Nonlinearity in the Presence of a Noise Floor. Physical Review Letters, 2009, 102, 104101.	7.8	186
84	Exploiting the effect of noise on a chemical system to obtain logic gates. Europhysics Letters, 2009, 86, 60003.	2.0	55
85	Generating multi-scroll chaotic attractors by thresholding. Physics Letters, Section A: General, Atomic and Solid State Physics, 2008, 372, 3234-3239.	2.1	78
86	Asynchronous updating of threshold-coupled chaotic neurons. Pramana - Journal of Physics, 2008, 70, 1127-1134.	1.8	3
87	Emergent organization of oscillator clusters in coupled self-regulatory chaotic maps. Pramana - Journal of Physics, 2008, 70, 1153-1164.	1.8	1
88	Chaos computing: ideas and implementations. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2008, 366, 653-664.	3.4	32
89	EXPLOITING NONLINEAR DYNAMICS TO STORE AND PROCESS INFORMATION. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2008, 18, 1551-1559.	1.7	10
90	Rapidly switched random links enhance spatiotemporal regularity. Physical Review E, 2008, 78, 066209.	2.1	53

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91	Enhancement of spatiotemporal regularity in an optimal window of random coupling. Physical Review E, 2008, 78, 035201.	2.1	27
92	Nonuniversal dependence of spatiotemporal regularity on randomness in coupling connections. Physical Review E, 2008, 78, 066120.	2.1	9
93	Regular and chaotic states in a local map description of sheared nematic liquid crystals. Physical Review E, 2008, 78, 011706.	2.1	1
94	FAULT TOLERANCE AND DETECTION IN CHAOTIC COMPUTERS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2007, 17, 1955-1968.	1.7	20
95	Synchronization in a network of model neurons. Physical Review E, 2007, 75, 026215.	2.1	23
96	Synchronization in coupled cells with activator-inhibitor pathways. Physical Review E, 2007, 75, 011906.	2.1	32
97	Using synchronization to obtain dynamic logic gates. Physical Review E, 2007, 75, 025201.	2.1	41
98	Asynchronous updating induces order in threshold coupled systems. Physical Review E, 2007, 76, 046212.	2.1	6
99	Power-law persistence characterizes traveling waves in coupled circle maps with repulsive coupling. Physical Review E, 2007, 75, 066208.	2.1	12
100	Control and Synchronization of Chaotic Neurons Under Threshold Activated Coupling. Lecture Notes in Computer Science, 2007, , 954-962.	1.3	4
101	Exploiting the controlled responses of chaotic elements to design configurable hardware. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2006, 364, 2483-2494.	3.4	8
102	Reconfigurable Logic Element using a Chaotic Circuit. , 2006, , .		0
103	Exploiting Chaos for Computation. , 2006, , .		0
104	Robust emergent activity in dynamical networks. Physical Review E, 2006, 74, 066117.	2.1	18
105	Spatiotemporal consequences of relaxation time scales in threshold-coupled systems. Physical Review E, 2006, 73, 026215.	2.1	11
106	Exploiting Nonlinear Dynamics to Search for the Existence of Matches in a Database. , 2006, , .		0
107	HOW CRUCIAL IS SMALL WORLD CONNECTIVITY FOR DYNAMICS?. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2006, 16, 2767-2775.	1.7	9
108	A q-deformed nonlinear map. Physics Letters, Section A: General, Atomic and Solid State Physics, 2005, 338, 277-287.	2.1	37

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109	Chaos computing: experimental realization of NOR gate using a simple chaotic circuit. Physics Letters, Section A: General, Atomic and Solid State Physics, 2005, 339, 39-44.	2.1	20
110	Construction of a reconfigurable dynamic logic cell. Pramana - Journal of Physics, 2005, 64, 433-441.	1.8	14
111	Evidence of universality for the May-Wigner stability theorem for random networks with local dynamics. Physical Review E, 2005, 71, 020902.	2.1	51
112	Dynamic transitions in small world networks: Approach to equilibrium limit. Physical Review E, 2005, 72, 052903.	2.1	33
113	Consequences of nonlocal connections in networks of chaotic maps under threshold activated coupling. Physical Review E, 2004, 69, 066209.	2.1	6
114	Realization of the fundamental NOR gate using a chaotic circuit. Physical Review E, 2003, 68, 016205.	2.1	33
115	Experimental realization of chaos control by thresholding. Physical Review E, 2003, 68, 016210.	2.1	43
116	Evidence for directed percolation universality at the onset of spatiotemporal intermittency in coupled circle maps. Physical Review E, 2003, 67, 056218.	2.1	25
117	Implementation of NOR Gate by a Chaotic Chua's Circuit. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2003, 13, 2669-2672.	1.7	68
118	CHAOTIC NETWORKS UNDER THRESHOLDING. International Journal of Modern Physics B, 2003, 17, 5503-5524.	2.0	2
119	Persistence at the onset of spatio-temporal intermittency in coupled map lattices. Europhysics Letters, 2003, 61, 27-33.	2.0	31
120	Random coupling of chaotic maps leads to spatiotemporal synchronization. Physical Review E, 2002, 66, 016209.	2.1	73
121	Flexible parallel implementation of logic gates using chaotic elements. Physical Review E, 2002, 65, 036216.	2.1	44
122	ASYNCHRONOUS UPDATING RESTORES THE LAW OF LARGE NUMBERS IN GLOBALLY COUPLED SYSTEMS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2002, 12, 663-669.	1.7	2
123	Parallel computing with extended dynamical systems. Physical Review E, 2002, 65, 036214.	2.1	35
124	Controlling neuronal spikes. Physical Review E, 2001, 63, 056209.	2.1	20
125	Targeting spatiotemporal patterns in extended systems with multiple coexisting attractors. Physical Review E, 2001, 64, 015203.	2.1	15
126	Using thresholding at varying intervals to obtain different temporal patterns. Physical Review E, 2001, 63, 036212.	2.1	17

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127	Asynchronous updating of coupled maps leads to synchronization. Chaos, 2000, 10, 350-358.	2.5	19
128	Distribution of Husimi zeros in polygonal billiards. Physical Review E, 1999, 60, 408-415.	2.1	14
129	Computing with distributed chaos. Physical Review E, 1999, 60, 363-377.	2.1	86
130	Roughening of spatial profiles in the presence of parametric noise. Physics Letters, Section A: General, Atomic and Solid State Physics, 1998, 245, 393-398.	2.1	4
131	Hierarchical globally coupled systems. Physical Review E, 1998, 57, 5217-5229.	2.1	5
132	Targeting chaos through adaptive control. Physical Review E, 1998, 57, R2507-R2510.	2.1	26
133	Dynamics Based Computation. Physical Review Letters, 1998, 81, 2156-2159.	7.8	178
134	Adaptive control of spatially extended systems: Targeting spatiotemporal patterns and chaos. Physical Review E, 1998, 58, R5221-R5224.	2.1	38
135	Implications of varying communication speeds in â€œgloballyâ€•coupled maps. Physical Review E, 1998, 57, 4041-4045.	2.1	3
136	Lattice dynamical models of adaptive spatio-temporal phenomena. Pramana - Journal of Physics, 1997, 48, 287-302.	1.8	1
137	Nonsimultaneity effects in globally coupled maps. Physical Review E, 1996, 54, 6936-6939.	2.1	6
138	Transient1fnoise. Physical Review E, 1996, 53, 4509-4513.	2.1	8
139	Adaptive dynamics on circle maps. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 199, 365-374.	2.1	22
140	CHAOS AND REGULARITY IN ADAPTIVE LATTICE DYNAMICS. International Journal of Modern Physics B, 1995, 09, 875-931.	2.0	17
141	Unidirectional adaptive dynamics. Physical Review E, 1994, 49, 4832-4842.	2.1	47
142	Fluctuations in the length spectrum of pseudo-integrable billiards. Physics Letters, Section A: General, Atomic and Solid State Physics, 1993, 173, 392-394.	2.1	4
143	Order in the turbulent phase of globally coupled maps. Physica D: Nonlinear Phenomena, 1993, 63, 341-349.	2.8	39
144	Adaptive Dynamics on a Chaotic Lattice. Physical Review Letters, 1993, 71, 3396-3396.	7.8	0

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145	Theory of Fluctuations in Pseudointegrable Systems. Physical Review Letters, 1993, 70, 2823-2823.	7.8	0
146	Adaptive dynamics on a chaotic lattice. Physical Review Letters, 1993, 71, 2010-2013.	7.8	52
147	Classical resonances and an arbitrary trajectory quantization scheme for a chaotic system. Physical Review Letters, 1993, 71, 3790-3793.	7.8	5
148	Theory of fluctuations in pseudointegrable systems. Physical Review Letters, 1993, 70, 916-919.	7.8	22
149	Discrete Hamiltonian symmetries and semiclassical quantization. Molecular Physics, 1993, 80, 1525-1532.	1.7	5
150	Noisy uncoupled chaotic map ensembles violate the law of large numbers. Physical Review Letters, 1992, 69, 3306-3309.	7.8	24
151	Fluctuations in the time periods of a model chaotic system. Physical Review A, 1992, 46, 5257-5259.	2.5	1
152	Local-to-global coupling in chaotic maps. Physical Review A, 1992, 46, 6242-6246.	2.5	38
153	Nonstatistical behavior of higher-dimensional coupled systems. Physical Review A, 1992, 46, 3193-3197.	2.5	23
154	Spurious spectral fluctuations due to missing levels. Physical Review A, 1992, 46, 2649-2652.	2.5	3
155	Nonstatistical behavior of coupled optical systems. Physical Review A, 1992, 45, 5469-5473.	2.5	42
156	An efficient control algorithm for nonlinear systems. Physics Letters, Section A: General, Atomic and Solid State Physics, 1991, 156, 475-478.	2.1	26
157	Nonstandard Farey Sequences in a Realistic Diode Map. Europhysics Letters, 1991, 16, 635-641.	2.0	4
158	Spatiotemporal intermittency on the sandpile. Physical Review Letters, 1991, 66, 2750-2753.	7.8	16
159	Adaptive control in nonlinear dynamics. Physica D: Nonlinear Phenomena, 1990, 43, 118-128.	2.8	142
160	Semiclassical quantization of resonant systems. Molecular Physics, 1989, 67, 335-346.	1.7	5
161	Scaling of moments in rotational inelasticity. Chemical Physics Letters, 1987, 135, 153-158.	2.6	0
162	Absorption spectrum for the transition state H 3 â‰ â€"A quantum mechanical model study. Journal of Chemical Sciences, 1986, 96, 215-221.	1.5	1