Lai-Sang Young

List of Publications by Year
in descending order

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79 papers	3,405 citations	236925 25 h-index	144013 57 g-index
85 all docs	85 docs citations	85 times ranked	965 citing authors

#	Article	IF	Citations
1	A Computational Model of Direction Selectivity in Macaque V1 Cortex Based on Dynamic Differences between On and Off Pathways. Journal of Neuroscience, 2022, 42, 3365-3380.	3.6	4
2	Existence of physical measures in some excitationâ€“inhibition networks*. Nonlinearity, 2022, 35, 889-915.	1.4	2
3	Unraveling the mechanisms of surround suppression in early visual processing. PLoS Computational Biology, 2021, 17, e1008916.	3.2	4
4	Malleability of gamma rhythms enhances population-level correlations. Journal of Computational Neuroscience, 2021, 49, 189-205.	1.0	3
5	Three pre-vaccine responses to Covid-like epidemics. PLoS ONE, 2021, 16, e0251349.	2.5	4
6	A theory of direction selectivity for macaque primary visual cortex. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	9
7	A data-informed mean-field approach to mapping of cortical parameter landscapes. PLoS Computational Biology, 2021, 17, e1009718.	3.2	7
8	Origin of exponential growth in nonlinear reaction networks. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 27795-27804.	7.1	9
9	DNN-assisted statistical analysis of a model of local cortical circuits. Scientific Reports, 2020, 10, 20139.	3.3	4
10	Towards a Mathematical Model of the Brain. Journal of Statistical Physics, 2020, 180, 612-629.	1.2	5
11	Contrast response in a comprehensive network model of macaque V1. Journal of Vision, 2020, 20, 16.	0.3	13
12	A case study in the functional consequences of scaling the sizes of realistic cortical models. PLoS Computational Biology, 2019, 15, e1007198.	3.2	4
13	An SIQ delay differential equations model for disease control via isolation. Journal of Mathematical Biology, 2019, 79, 249-279.	1.9	25
14	Comparing chaotic and random dynamical systems. Journal of Mathematical Physics, 2019, 60, 052701.	1.1	4
15	Equivalence of physical and SRB measures in random dynamical systems. Nonlinearity, 2019, 32, 1494-1524.	1.4	6
16	Consequences of delays and imperfect implementation of isolation in epidemic control. Scientific Reports, 2019, 9, 3505.	3.3	32
17	How well do reduced models capture the dynamics in models of interacting neurons?. Journal of Mathematical Biology, 2019, 78, 83-115.	1.9	6
18	Lyapunov Exponents and Correlation Decay for Random Perturbations of Some Prototypical 2D Maps. Communications in Mathematical Physics, 2018, 359, 347-373.	2.2	9

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19	Rhythm and Synchrony in a Cortical Network Model. Journal of Neuroscience, 2018, 38, 8621-8634.	3.6	50
20	Absolute Continuity of Stable Foliations for Mappings of Banach Spaces. Communications in Mathematical Physics, 2017, 354, 591-619.	2.2	1
21	Generalizations of SRB Measures to Nonautonomous, Random, and Infinite Dimensional Systems. Journal of Statistical Physics, 2017, 166, 494-515.	1.2	18
22	Entropy, volume growth and SRB measures for Banach space mappings. Inventiones Mathematicae, 2017, 207, 833-893.	2.5	20
23	Polynomial convergence to equilibrium for a system of interacting particles. Annals of Applied Probability, 2017, 27, .	1.3	3
24	Lyapunov exponents for random perturbations of some area-preserving maps including the standard map. Annals of Mathematics, 2017, 185, .	4.2	26
25	Unraveling the Dynamics of the Brain through Modeling and Analysis. Springer Proceedings in Mathematics and Statistics, 2017, , 393-408.	0.2	0
26	Orientation Selectivity from Very Sparse LGN Inputs in a Comprehensive Model of Macaque V1 Cortex. Journal of Neuroscience, 2016, 36, 12368-12384.	3.6	72
27	Dynamic Signal Tracking in a Simple V1 Spiking Model. Neural Computation, 2016, 28, 1985-2010.	2.2	1
28	Local Thermal Equilibrium for Certain Stochastic Models of Heat Transport. Journal of Statistical Physics, 2016, 163, 61-91.	1.2	4
29	Control of epidemics on complex networks: Effectiveness of delayed isolation. Physical Review E, 2015, 92, 022822.	2.1	10
30	Emergent spike patterns in neuronal populations. Journal of Computational Neuroscience, 2015, 38, 203-220.	1.0	23
31	Nonequilibrium steady states for a class of particle systems. Nonlinearity, 2014, 27, 607-636.	1.4	7
32	Existence of Nonequilibrium Steady State for a Simple Model of Heat Conduction. Journal of Statistical Physics, 2013, 152, 1170-1193.	1.2	8
33	Dispersing Billiards with Moving Scatterers. Communications in Mathematical Physics, 2013, 322, 909-955.	2.2	20
34	Mathematical theory of Lyapunov exponents. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 254001.	2.1	35
35	Dynamics of spiking neurons: between homogeneity and synchrony. Journal of Computational Neuroscience, 2013, 34, 433-460.	1.0	20
36	Emergent dynamics in a model of visual cortex. Journal of Computational Neuroscience, 2013, 35, 155-167.	1.0	29

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37	Limitations of perturbative techniques in the analysis of rhythms and oscillations. Journal of Mathematical Biology, 2013, 66, 139-161.	1.9	12
38	Absolute continuity of stable foliations for systems on Banach spaces. Journal of Differential Equations, 2013, 254, 283-308.	2.2	6
39	Understanding Chaotic Dynamical Systems. Communications on Pure and Applied Mathematics, 2013, 66, 1439-1463.	3.1	8
40	Dynamical profile of a class of rank-one attractors. Ergodic Theory and Dynamical Systems, 2013, 33, 1221-1264.	0.6	14
41	Lyapunov exponents, periodic orbits, and horseshoes for semiflows on Hilbert spaces. Journal of the American Mathematical Society, 2012, 25, 637-665.	3.9	28
42	Entropy, Lyapunov exponents and escape rates in open systems. Ergodic Theory and Dynamical Systems, 2012, 32, 1270-1301.	0.6	17
43	Horseshoes of periodically kicked van der Pol oscillators. Chaos, 2012, 22, 043140.	2.5	2
44	Nonequilibrium Steady States of Some Simple 1-D Mechanical Chains. Journal of Statistical Physics, 2012, 146, 1089-1103.	1.2	3
45	Strange Attractors for Periodically Forced Parabolic Equations. Memoirs of the American Mathematical Society, 2012, 224, 1.	0.9	13
46	Lyapunov Exponents, Periodic Orbits and Horseshoes for Mappings of Hilbert Spaces. Annales Henri Poincare, 2011, 12, 1081.	1.7	25
47	Rattling and freezing in a 1D transport model. Nonlinearity, 2011, 24, 207-226.	1.4	4
48	Ergodicity and Energy Distributions for Some Boundary Driven Integrable Hamiltonian Chains. Communications in Mathematical Physics, 2010, 294, 199-228.	2.2	8
49	Escape Rates and Physically Relevant Measures for Billiards with Small Holes. Communications in Mathematical Physics, 2010, 294, 353-388.	2.2	36
50	Dynamics of periodically kicked oscillators. Journal of Fixed Point Theory and Applications, 2010, 7, 291-312.	1.1	16
51	Nonequilibrium Steady States for Certain Hamiltonian Models. Journal of Statistical Physics, 2010, 139, 630-657.	1.2	13
52	Self-organization in predominantly feedforward oscillator chains. Chaos, 2009, 19, 043131.	2.5	3
53	Spike-time reliability of layered neural oscillator networks. Journal of Computational Neuroscience, 2009, 27, 135-160.	1.0	16
54	Reliability of Coupled Oscillators. Journal of Nonlinear Science, 2009, 19, 497-545.	2.1	32

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55	Memory loss for time-dependent dynamical systems. Mathematical Research Letters, 2009, 16, 463-475.	0.5	32
56	Shear-induced chaos. Nonlinearity, 2008, 21, 899-922.	1.4	40
57	Chaotic phenomena in three settings: large, noisy and out of equilibrium. Nonlinearity, 2008, 21, T245-T252.	1.4	16
58	Large deviations in non-uniformly hyperbolic dynamical systems. Ergodic Theory and Dynamical Systems, 2008, 28, 587-612.	0.6	75
59	Toward a theory of rank one attractors. Annals of Mathematics, 2008, 167, 349-480.	4.2	76
60	Extended Systems with Deterministic Local Dynamics and Random Jumps. Communications in Mathematical Physics, 2007, 275, 709-720.	2.2	4
61	Correlations in Nonequilibrium Steady States of Random Halves Models. Journal of Statistical Physics, 2007, 128, 607-639.	1.2	10
62	Local Thermodynamic Equilibrium for some Stochastic Models of Hamiltonian Origin. Journal of Statistical Physics, 2007, 128, 641-665.	1.2	9
63	Chaotic attractors of relaxation oscillators. Nonlinearity, 2006, 19, 701-720.	1.4	70
64	Nonuniformly Expanding 1D Maps. Communications in Mathematical Physics, 2006, 264, 255-282.	2.2	25
65	Escape rates and conditionally invariant measures. Nonlinearity, 2006, 19, 377-397.	1.4	116
66	Strange Attractors in Periodically-Kicked Limit Cycles and Hopf Bifurcations. Communications in Mathematical Physics, 2003, 240, 509-529.	2.2	79
67	Ergodic Theory of Infinite Dimensional SystemsÂ¶with Applications to Dissipative Parabolic PDEs. Communications in Mathematical Physics, 2002, 227, 461-481.	2.2	45
68	What Are SRB Measures, and Which Dynamical Systems Have Them?. Journal of Statistical Physics, 2002, 108, 733-754.	1.2	364
69	Strange Attractors with One Direction of Instability. Communications in Mathematical Physics, 2001, 218, 1-97.	2.2	148
70	Recurrence times and rates of mixing. Israel Journal of Mathematics, 1999, 110, 153-188.	0.8	473
71	Statistical Properties of Dynamical Systems with Some Hyperbolicity. Annals of Mathematics, 1998, 147, 585.	4.2	534
72	Ergodic Theory of Differentiable Dynamical Systems. , 1995, , 293-336.		39

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73	Nonexistence of SBR measures for some diffeomorphisms that are â€˜Almost Anosovâ€™. Ergodic Theory and Dynamical Systems, 1995, 15, 67-76.	0.6	62
74	Sinai-Bowen-Ruelle measures for certain Hï¿½non maps. Inventiones Mathematicae, 1993, 112, 541-576.	2.5	184
75	Sinai-Bowen-Ruelle measures for certain HÃ©non maps. , 1993, , 364-399.		3
76	Absolutely continuous invariant measures and random perturbations for certain one-dimensional maps. Ergodic Theory and Dynamical Systems, 1992, 12, 13-37.	0.6	64
77	Large deviations in dynamical systems. Transactions of the American Mathematical Society, 1990, 318, 525-543.	0.9	127
78	Bowen-Ruelle measures for certain piecewise hyperbolic maps. Transactions of the American Mathematical Society, 1985, 287, 41-48.	0.9	55
79	The Use of Reduced Models to Generate Irregular, Broad-Band Signals That Resemble Brain Rhythms. Frontiers in Computational Neuroscience, 0, 16, .	2.1	1