# Lai-Sang Young

List of Publications by Year
in descending order

| 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 | Statistical Properties of Dynamical Systems with Some Hyperbolicity. Annals of Mathematics, 1998, 147, 585. | 4.2 | 534 |
| 2 | Recurrence times and rates of mixing. Israel Journal of Mathematics, 1999, 110, 153-188. | 0.8 | 473 |
| 3 | What Are SRB Measures, and Which Dynamical Systems Have Them?. Journal of Statistical Physics, 2002, 108, 733-754. | 1.2 | 364 |
| 4 | Sinai-Bowen-Ruelle measures for certain Hï¿½non maps. Inventiones Mathematicae, 1993, 112, 541-576. | 2.5 | 184 |
| 5 | Strange Attractors with One Direction of Instability. Communications in Mathematical Physics, 2001, 218, 1-97. | 2.2 | 148 |
| 6 | Large deviations in dynamical systems. Transactions of the American Mathematical Society, 1990, 318, 525-543. | 0.9 | 127 |
| 7 | Escape rates and conditionally invariant measures. Nonlinearity, 2006, 19, 377-397. | 1.4 | 116 |
| 8 | Strange Attractors in Periodically-Kicked Limit Cycles and Hopf Bifurcations. Communications in Mathematical Physics, 2003, 240, 509-529. | 2.2 | 79 |
| 9 | Toward a theory of rank one attractors. Annals of Mathematics, 2008, 167, 349-480. | 4.2 | 76 |
| 10 | Large deviations in non-uniformly hyperbolic dynamical systems. Ergodic Theory and Dynamical Systems, 2008, 28, 587-612. | 0.6 | 75 |
| 11 | 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 |
| 12 | Chaotic attractors of relaxation oscillators. Nonlinearity, 2006, 19, 701-720. | 1.4 | 70 |
| 13 | Absolutely continuous invariant measures and random perturbations for certain one-dimensional maps. Ergodic Theory and Dynamical Systems, 1992, 12, 13-37. | 0.6 | 64 |
| 14 | Nonexistence of SBR measures for some diffeomorphisms that are â€˜Almost Anosovâ€™. Ergodic Theory and Dynamical Systems, 1995, 15, 67-76. | 0.6 | 62 |
| 15 | Bowen-Ruelle measures for certain piecewise hyperbolic maps. Transactions of the American Mathematical Society, 1985, 287, 41-48. | 0.9 | 55 |
| 16 | Rhythm and Synchrony in a Cortical Network Model. Journal of Neuroscience, 2018, 38, 8621-8634. | 3.6 | 50 |
| 17 | Ergodic Theory of Infinite Dimensional SystemsÂ¶with Applications to Dissipative Parabolic PDEs. Communications in Mathematical Physics, 2002, 227, 461-481. | 2.2 | 45 |
| 18 | Shear-induced chaos. Nonlinearity, 2008, 21, 899-922. | 1.4 | 40 |

| # | ARTICLE | IF | CITATIONS |
|---|---------|----|-----------|
| 19 | Ergodic Theory of Differentiable Dynamical Systems. , 1995, , 293-336. | | 39 |
| 20 | Escape Rates and Physically Relevant Measures for Billiards with Small Holes. Communications in Mathematical Physics, 2010, 294, 353-388. | 2.2 | 36 |
| 21 | Mathematical theory of Lyapunov exponents. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 254001. | 2.1 | 35 |
| 22 | Reliability of Coupled Oscillators. Journal of Nonlinear Science, 2009, 19, 497-545. | 2.1 | 32 |
| 23 | Consequences of delays and imperfect implementation of isolation in epidemic control. Scientific Reports, 2019, 9, 3505. | 3.3 | 32 |
| 24 | Memory loss for time-dependent dynamical systems. Mathematical Research Letters, 2009, 16, 463-475. | 0.5 | 32 |
| 25 | Emergent dynamics in a model of visual cortex. Journal of Computational Neuroscience, 2013, 35, 155-167. | 1.0 | 29 |
| 26 | Lyapunov exponents, periodic orbits, and horseshoes for semiflows on Hilbert spaces. Journal of the American Mathematical Society, 2012, 25, 637-665. | 3.9 | 28 |
| 27 | Lyapunov exponents for random perturbations of some area-preserving maps including the standard map. Annals of Mathematics, 2017, 185, . | 4.2 | 26 |
| 28 | Nonuniformly Expanding 1D Maps. Communications in Mathematical Physics, 2006, 264, 255-282. | 2.2 | 25 |
| 29 | Lyapunov Exponents, Periodic Orbits and Horseshoes for Mappings of Hilbert Spaces. Annales Henri Poincare, 2011, 12, 1081. | 1.7 | 25 |
| 30 | An SIQ delay differential equations model for disease control via isolation. Journal of Mathematical Biology, 2019, 79, 249-279. | 1.9 | 25 |
| 31 | Emergent spike patterns in neuronal populations. Journal of Computational Neuroscience, 2015, 38, 203-220. | 1.0 | 23 |
| 32 | Dispersing Billiards with Moving Scatterers. Communications in Mathematical Physics, 2013, 322, 909-955. | 2.2 | 20 |
| 33 | Dynamics of spiking neurons: between homogeneity and synchrony. Journal of Computational Neuroscience, 2013, 34, 433-460. | 1.0 | 20 |
| 34 | Entropy, volume growth and SRB measures for Banach space mappings. Inventiones Mathematicae, 2017, 207, 833-893. | 2.5 | 20 |
| 35 | Generalizations of SRB Measures to Nonautonomous, Random, and Infinite Dimensional Systems. Journal of Statistical Physics, 2017, 166, 494-515. | 1.2 | 18 |
| 36 | Entropy, Lyapunov exponents and escape rates in open systems. Ergodic Theory and Dynamical Systems, 2012, 32, 1270-1301. | 0.6 | 17 |

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|---|---------|----|-----------| 
| 37 | Chaotic phenomena in three settings: large, noisy and out of equilibrium. Nonlinearity, 2008, 21, T245-T252. | 1.4 | 16 |
| 38 | Spike-time reliability of layered neural oscillator networks. Journal of Computational Neuroscience, 2009, 27, 135-160. | 1.0 | 16 |
| 39 | Dynamics of periodically kicked oscillators. Journal of Fixed Point Theory and Applications, 2010, 7, 291-312. | 1.1 | 16 |
| 40 | Dynamical profile of a class of rank-one attractors. Ergodic Theory and Dynamical Systems, 2013, 33, 1221-1264. | 0.6 | 14 |
| 41 | Nonequilibrium Steady States for Certain Hamiltonian Models. Journal of Statistical Physics, 2010, 139, 630-657. | 1.2 | 13 |
| 42 | Contrast response in a comprehensive network model of macaque V1. Journal of Vision, 2020, 20, 16. | 0.3 | 13 |
| 43 | Strange Attractors for Periodically Forced Parabolic Equations. Memoirs of the American Mathematical Society, 2012, 224, 1. | 0.9 | 13 |
| 44 | Limitations of perturbative techniques in the analysis of rhythms and oscillations. Journal of Mathematical Biology, 2013, 66, 139-161. | 1.9 | 12 |
| 45 | Correlations in Nonequilibrium Steady States of Random Halves Models. Journal of Statistical Physics, 2007, 128, 607-639. | 1.2 | 10 |
| 46 | Control of epidemics on complex networks: Effectiveness of delayed isolation. Physical Review E, 2015, 92, 022822. | 2.1 | 10 |
| 47 | Local Thermodynamic Equilibrium for some Stochastic Models of Hamiltonian Origin. Journal of Statistical Physics, 2007, 128, 641-665. | 1.2 | 9 |
| 48 | Lyapunov Exponents and Correlation Decay for Random Perturbations of Some Prototypical 2D Maps. Communications in Mathematical Physics, 2018, 359, 347-373. | 2.2 | 9 |
| 49 | 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 |
| 50 | 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 |
| 51 | Ergodicity and Energy Distributions for Some Boundary Driven Integrable Hamiltonian Chains. Communications in Mathematical Physics, 2010, 294, 199-228. | 2.2 | 8 |
| 52 | Existence of Nonequilibrium Steady State for a Simple Model of Heat Conduction. Journal of Statistical Physics, 2013, 152, 1170-1193. | 1.2 | 8 |
| 53 | Understanding Chaotic Dynamical Systems. Communications on Pure and Applied Mathematics, 2013, 66, 1439-1463. | 3.1 | 8 |
| 54 | Nonequilibrium steady states for a class of particle systems. Nonlinearity, 2014, 27, 607-636. | 1.4 | 7 |

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| 55 | A data-informed mean-field approach to mapping of cortical parameter landscapes. PLoS Computational Biology, 2021, 17, e1009718. | 3.2 | 7 |
| 56 | Absolute continuity of stable foliations for systems on Banach spaces. Journal of Differential Equations, 2013, 254, 283-308. | 2.2 | 6 |
| 57 | Equivalence of physical and SRB measures in random dynamical systems. Nonlinearity, 2019, 32, 1494-1524. | 1.4 | 6 |
| 58 | How well do reduced models capture the dynamics in models of interacting neurons?. Journal of Mathematical Biology, 2019, 78, 83-115. | 1.9 | 6 |
| 59 | Towards a Mathematical Model of the Brain. Journal of Statistical Physics, 2020, 180, 612-629. | 1.2 | 5 |
| 60 | Extended Systems with Deterministic Local Dynamics and Random Jumps. Communications in Mathematical Physics, 2007, 275, 709-720. | 2.2 | 4 |
| 61 | Rattling and freezing in a 1D transport model. Nonlinearity, 2011, 24, 207-226. | 1.4 | 4 |
| 62 | Local Thermal Equilibrium for Certain Stochastic Models of Heat Transport. Journal of Statistical Physics, 2016, 163, 61-91. | 1.2 | 4 |
| 63 | A case study in the functional consequences of scaling the sizes of realistic cortical models. PLoS Computational Biology, 2019, 15, e1007198. | 3.2 | 4 |
| 64 | Comparing chaotic and random dynamical systems. Journal of Mathematical Physics, 2019, 60, 052701. | 1.1 | 4 |
| 65 | DNN-assisted statistical analysis of a model of local cortical circuits. Scientific Reports, 2020, 10, 20139. | 3.3 | 4 |
| 66 | Unraveling the mechanisms of surround suppression in early visual processing. PLoS Computational Biology, 2021, 17, e1008916. | 3.2 | 4 |
| 67 | Three pre-vaccine responses to Covid-like epidemics. PLoS ONE, 2021, 16, e0251349. | 2.5 | 4 |
| 68 | 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 |
| 69 | Self-organization in predominantly feedforward oscillator chains. Chaos, 2009, 19, 043131. | 2.5 | 3 |
| 70 | Nonequilibrium Steady States of Some Simple 1-D Mechanical Chains. Journal of Statistical Physics, 2012, 146, 1089-1103. | 1.2 | 3 |
| 71 | Polynomial convergence to equilibrium for a system of interacting particles. Annals of Applied Probability, 2017, 27, . | 1.3 | 3 |
| 72 | Malleability of gamma rhythms enhances population-level correlations. Journal of Computational Neuroscience, 2021, 49, 189-205. | 1.0 | 3 |

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|---|---------|-----|-----------|
| 73 | Sinai-Bowen-Ruelle measures for certain HÃ©non maps. , 1993, , 364-399. | | 3 |
| 74 | Horseshoes of periodically kicked van der Pol oscillators. Chaos, 2012, 22, 043140. | 2.5 | 2 |
| 75 | Existence of physical measures in some excitationâ€"inhibition networks*. Nonlinearity, 2022, 35, 889-915. | 1.4 | 2 |
| 76 | Dynamic Signal Tracking in a Simple V1 Spiking Model. Neural Computation, 2016, 28, 1985-2010. | 2.2 | 1 |
| 77 | Absolute Continuity of Stable Foliations for Mappings of Banach Spaces. Communications in Mathematical Physics, 2017, 354, 591-619. | 2.2 | 1 |
| 78 | The Use of Reduced Models to Generate Irregular, Broad-Band Signals That Resemble Brain Rhythms. Frontiers in Computational Neuroscience, 0, 16, . | 2.1 | 1 |
| 79 | Unraveling the Dynamics of the Brain through Modeling and Analysis. Springer Proceedings in Mathematics and Statistics, 2017, , 393-408. | 0.2 | 0 |