

Sarang Gopalakrishnan

List of Publications by Year in descending order

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Version: 2024-02-01

91
papers

5,203
citations

76196

40
h-index

85405

71
g-index

91
all docs

91
docs citations

91
times ranked

2637
citing authors

#	ARTICLE	IF	CITATIONS
1	Fisher zeros and persistent temporal oscillations in nonunitary quantum circuits. Physical Review Research, 2022, 4, .	1.3	5
2	Operator Scaling Dimensions and Multifractality at Measurement-Induced Transitions. Physical Review Letters, 2022, 128, 050602.	2.9	55
3	Direct measurement of nonlocal interactions in the many-body localized phase. Physical Review Research, 2022, 4, .	1.3	16
4	Quantum gas microscopy of Kardar-Parisi-Zhang superdiffusion. Science, 2022, 376, 716-720.	6.0	76
5	Integrability breaking in the Rule 54 cellular automaton. Journal of Physics A: Mathematical and Theoretical, 2022, 55, 234005.	0.7	4
6	Onset of many-body quantum chaos due to breaking integrability. Physical Review B, 2022, 105, .	1.1	19
7	Observation of a marginal Fermi glass. Nature Physics, 2021, 17, 627-631.	6.5	29
8	Hydrodynamics of nonintegrable systems from a relaxation-time approximation. Physical Review B, 2021, 103, .	1.1	21
9	Entanglement Phase Transitions in Measurement-Only Dynamics. Physical Review X, 2021, 11, .	2.8	134
10	Lifetimes of local excitations in disordered dipolar quantum systems. Physical Review B, 2021, 103, .	1.1	5
11	Distinguishing localization from chaos: Challenges in finite-size systems. Annals of Physics, 2021, 427, 168415.	1.0	133
12	Entanglement and Purification Transitions in Non-Hermitian Quantum Mechanics. Physical Review Letters, 2021, 126, 170503.	2.9	63
13	Enhancing Associative Memory Recall and Storage Capacity Using Confocal Cavity QED. Physical Review X, 2021, 11, .	2.8	25
14	Logarithmic Entanglement Growth from Disorder-Free Localization in the Two-Leg Compass Ladder. Physical Review Letters, 2021, 126, 227202.	2.9	18
15	Local integrals of motion and the quasiperiodic many-body localization transition. Physical Review B, 2021, 103, .	1.1	17
16	Superuniversality of Superdiffusion. Physical Review X, 2021, 11, .	2.8	40
17	Stability of Superdiffusion in Nearly Integrable Spin Chains. Physical Review Letters, 2021, 127, 057201.	2.9	37
18	Superdiffusion in spin chains. Journal of Statistical Mechanics: Theory and Experiment, 2021, 2021, 084001.	0.9	71

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19	Hydrodynamic nonlinear response of interacting integrable systems. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	21
20	Operator front broadening in chaotic and integrable quantum chains. Physical Review B, 2021, 104, .	1.1	9
21	Topological pumping of a 1D dipolar gas into strongly correlated prethermal states. Science, 2021, 371, 296-300.	6.0	40
22	An optical lattice with sound. Nature, 2021, 599, 211-215.	13.7	29
23	Universality and quantum criticality in quasiperiodic spin chains. Nature Communications, 2020, 11, 2225.	5.8	33
24	Superdiffusion from Emergent Classical Solitons in Quantum Spin Chains. Physical Review Letters, 2020, 125, 070601.	2.9	49
25	Spin crossovers and superdiffusion in the one-dimensional Hubbard model. Physical Review B, 2020, 102, .	1.1	30
26	Asymptotically Exact Theory for Nonlinear Spectroscopy of Random Quantum Magnets. Physical Review Letters, 2020, 125, 237601.	2.9	11
27	Diffusive hydrodynamics from integrability breaking. Physical Review B, 2020, 101, .	1.1	70
28	Anomalous low-frequency conductivity in easy-plane XXZ spin chains. Physical Review B, 2020, 101, .	1.1	20
29	Critical properties of the measurement-induced transition in random quantum circuits. Physical Review B, 2020, 101, .	1.1	177
30	Rare-region onset of superconductivity in niobium nanoislands. Physical Review B, 2020, 101, .	1.1	3
31	Dynamics and transport at the threshold of many-body localization. Physics Reports, 2020, 862, 1-62.	10.3	60
32	Quantum Criticality in the 2D Quasiperiodic Potts Model. Physical Review Letters, 2020, 125, 265702.	2.9	5
33	Quantum criticality in Ising chains with random hyperuniform couplings. Physical Review B, 2019, 100, .	1.1	12
34	Length scales in the many-body localized phase and their spectral signatures. Physical Review B, 2019, 100, .	1.1	16
35	Fractal x-ray edge problem at the critical point of the Aubry-Andr� model. Physical Review B, 2019, 100, .	1.1	3
36	Evolution of Entanglement Spectra under Generic Quantum Dynamics. Physical Review Letters, 2019, 123, 190602.	2.9	19

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37	Integrable Many-Body Quantum Floquet-Thouless Pumps. Physical Review Letters, 2019, 123, 170603.	2.9	34
38	Anomalous relaxation and the high-temperature structure factor of XXZ spin chains. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 16250-16255.	3.3	41
39	Unitary circuits of finite depth and infinite width from quantum channels. Physical Review B, 2019, 100, .	1.1	88
40	Signatures of information scrambling in the dynamics of the entanglement spectrum. Physical Review B, 2019, 100, .	1.1	7
41	Quantum engine based on many-body localization. Physical Review B, 2019, 99, .	1.1	50
42	Generalized hydrodynamics, quasiparticle diffusion, and anomalous local relaxation in random integrable spin chains. Physical Review B, 2019, 99, .	1.1	20
43	Instability of many-body localized systems as a phase transition in a nonstandard thermodynamic limit. Physical Review B, 2019, 99, .	1.1	47
44	Kinetic Theory of Spin Diffusion and Superdiffusion in $\langle X \rangle \langle X \rangle \langle Z \rangle$ Spin Chains. Physical Review Letters, 2019, 122, 127202.	2.9	138
45	Spectral Gaps and Midgap States in Random Quantum Master Equations. Physical Review Letters, 2019, 123, 234103.	2.9	43
46	Thermalization near Integrability in a Dipolar Quantum Newton's Cradle. Physical Review X, 2018, 8, .	2.8	149
47	Facilitated quantum cellular automata as simple models with non-thermal eigenstates and dynamics. Quantum Science and Technology, 2018, 3, 044004.	2.6	55
48	Hydrodynamics of operator spreading and quasiparticle diffusion in interacting integrable systems. Physical Review B, 2018, 98, .	1.1	161
49	Self-consistent Hartree-Fock approach to many-body localization. Physical Review B, 2018, 98, .	1.1	24
50	Publisher's Note: Intertwined and vestigial order with ultracold atoms in multiple cavity modes [Phys. Rev. A 96 , 063828 (2017)]. Physical Review A, 2018, 98, .	1.0	0
51	Weyl Semimetal to Metal Phase Transitions Driven by Quasiperiodic Potentials. Physical Review Letters, 2018, 120, 207604.	2.9	34
52	Operator growth and eigenstate entanglement in an interacting integrable Floquet system. Physical Review B, 2018, 98, .	1.1	62
53	Many body localized systems weakly coupled to baths. Annalen Der Physik, 2017, 529, 1600181.	0.9	52
54	Non-Fermi Glasses: Localized Descendants of Fractionalized Metals. Physical Review Letters, 2017, 119, 146601.	2.9	16

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55	Spin-catalyzed hopping conductivity in disordered strongly interacting quantum wires. Physical Review B, 2017, 95, .	1.1	22
56	Self-dual quasiperiodic systems with power-law hopping. Physical Review B, 2017, 96, .	1.1	47
57	Noise-Induced Subdiffusion in Strongly Localized Quantum Systems. Physical Review Letters, 2017, 119, 046601.	2.9	43
58	Rare-region effects and dynamics near the many-body localization transition. Annalen Der Physik, 2017, 529, 1600326.	0.9	152
59	Intertwined and vestigial order with ultracold atoms in multiple cavity modes. Physical Review A, 2017, 96, .	1.0	14
60	Probing Slow Relaxation and Many-Body Localization in Two-Dimensional Quasiperiodic Systems. Physical Review X, 2017, 7, .	2.8	182
61	Regimes of heating and dynamical response in driven many-body localized systems. Physical Review B, 2016, 94, .	1.1	28
62	Adiabatic Quantum Search in Open Systems. Physical Review Letters, 2016, 117, 150501.	2.9	21
63	Griffiths effects and slow dynamics in nearly many-body localized systems. Physical Review B, 2016, 93, .	1.1	117
64	Weak crystallization theory of metallic alloys. Physical Review B, 2016, 93, .	1.1	5
65	Mobile Magnetic Impurities in a Fermi Superfluid: A Route to Designer Molecules. Physical Review Letters, 2015, 114, 045301.	2.9	7
66	Prethermal Floquet Steady States and Instabilities in the Periodically Driven, Weakly Interacting Bose-Hubbard Model. Physical Review Letters, 2015, 115, 205301.	2.9	112
67	Low-frequency conductivity in many-body localized systems. Physical Review B, 2015, 92, .	1.1	165
68	Anomalous Diffusion and Griffiths Effects Near the Many-Body Localization Transition. Physical Review Letters, 2015, 114, 160401.	2.9	322
69	Limit-cycle phase in driven-dissipative spin systems. Physical Review A, 2015, 91, .	1.0	61
70	Mean-field theory of nearly many-body localized metals. Physical Review B, 2014, 90, .	1.1	58
71	Many-Body Localization in Dipolar Systems. Physical Review Letters, 2014, 113, 243002.	2.9	204
72	Harmonically trapped two-atom systems: Interplay of short-ranges-wave interaction and spin-orbit coupling. Physical Review A, 2014, 89, .	1.0	15

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73	Interferometric Probes of Many-Body Localization. Physical Review Letters, 2014, 113, 147204.	2.9	153
74	Spectral features of a many-body-localized system weakly coupled to a bath. Physical Review B, 2014, 90, .	1.1	143
75	Gopalakrishnan, Martin, and Demler Reply:. Physical Review Letters, 2014, 113, 079603.	2.9	2
76	Quantum Quasicrystals of Spin-Orbit-Coupled Dipolar Bosons. Physical Review Letters, 2013, 111, 185304.	2.9	64
77	Unconventional Magnetism via Optical Pumping of Interacting Spin Systems. Physical Review Letters, 2013, 110, 257204.	2.9	135
78	Dependence of global superconductivity on inter-island coupling in arrays of long SNS junctions. Journal of Physics Condensed Matter, 2013, 25, 445701.	0.7	3
79	Stability of edge states in strained graphene. Physical Review B, 2013, 87, .	1.1	15
80	Controllable quantum spin glasses with magnetic impurities embedded in quantum solids. Physical Review B, 2013, 88, .	1.1	9
81	Disclination Classes, Fractional Excitations, and the Melting of Quantum Liquid Crystals. Physical Review Letters, 2013, 111, 025304.	2.9	26
82	Exploring models of associative memory via cavity quantum electrodynamics. Philosophical Magazine, 2012, 92, 353-361.	0.7	28
83	Designer quantum spin Hall phase transition in molecular graphene. Physical Review B, 2012, 86, .	1.1	27
84	Approaching zero-temperature metallic states in mesoscopic superconductor-normal superconductor arrays. Nature Physics, 2012, 8, 59-62.	6.5	106
85	Non-Abelian $SU(2)$ fields through density wave order and strain in graphene. Physical Review B, 2012, 86, .	1.1	11
86	Universal phase structure of dilute Bose gases with Rashba spin-orbit coupling. Physical Review A, 2011, 84, .	1.0	65
87	Frustration and Glassiness in Spin Models with Cavity-Mediated Interactions. Physical Review Letters, 2011, 107, 277201.	2.9	141
88	Cratered Lorentzian response of driven microwave superconducting nanowire-bridged resonators: Oscillatory and magnetic-field induced stochastic states. Physical Review B, 2011, 83, .	1.1	15
89	Atom-light crystallization of Bose-Einstein condensates in multimode cavities: Nonequilibrium classical and quantum phase transitions, emergent lattices, supersolidity, and frustration. Physical Review A, 2010, 82, .	1.0	92
90	Approaching multichannel Kondo physics using correlated bosons: Quantum phases and how to realize them. Physical Review B, 2010, 81, .	1.1	8

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91	Emergent crystallinity and frustration with Bose-Einstein condensates in multimode cavities. Nature Physics, 2009, 5, 845-850.	6.5	180