Sarang Gopalakrishnan

List of Publications by Year
in descending order

91	5,203	76196 40	85405 71
papers	citations	h-index	g-index

91	91	91	2637
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Anomalous Diffusion and Griffiths Effects Near the Many-Body Localization Transition. Physical Review Letters, 2015, 114, 160401.	2.9	322
2	Many-Body Localization in Dipolar Systems. Physical Review Letters, 2014, 113, 243002.	2.9	204
3	Probing Slow Relaxation and Many-Body Localization in Two-Dimensional Quasiperiodic Systems. Physical Review X, 2017, 7, .	2.8	182
4	Emergent crystallinity and frustration with Boseâ€“Einstein condensates in multimode cavities. Nature Physics, 2009, 5, 845-850.	6.5	180
5	Critical properties of the measurement-induced transition in random quantum circuits. Physical Review B, 2020, 101, .	1.1	177
6	Low-frequency conductivity in many-body localized systems. Physical Review B, 2015, 92, .	1.1	165
7	Hydrodynamics of operator spreading and quasiparticle diffusion in interacting integrable systems. Physical Review B, 2018, 98, .	1.1	161
8	Interferometric Probes of Many-Body Localization. Physical Review Letters, 2014, 113, 147204.	2.9	153
9	Rareâ€region effects and dynamics near the manyâ€body localization transition. Annalen Der Physik, 2017, 529, 1600326.	0.9	152
10	Thermalization near Integrability in a Dipolar Quantum Newtonâ€™s Cradle. Physical Review X, 2018, 8, .	2.8	149
11	Spectral features of a many-body-localized system weakly coupled to a bath. Physical Review B, 2014, 90, .	1.1	143
12	Frustration and Glassiness in Spin Models with Cavity-Mediated Interactions. Physical Review Letters, 2011, 107, 277201.	2.9	141
13	Kinetic Theory of Spin Diffusion and Superdiffusion in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>X</mml:mi><mml:mi>X</mml:mi><mml:mi>Z</mml:mi></mml:math> Spin Chains. Physical Review Letters, 2019, 122, 127202.	2.9	138
14	Unconventional Magnetism via Optical Pumping of Interacting Spin Systems. Physical Review Letters, 2013, 110, 257204.	2.9	135
15	Entanglement Phase Transitions in Measurement-Only Dynamics. Physical Review X, 2021, 11, .	2.8	134
16	Distinguishing localization from chaos: Challenges in finite-size systems. Annals of Physics, 2021, 427, 168415.	1.0	133
17	Griffiths effects and slow dynamics in nearly many-body localized systems. Physical Review B, 2016, 93, .	1.1	117
18	Prethermal Floquet Steady States and Instabilities in the Periodically Driven, Weakly Interacting Bose-Hubbard Model. Physical Review Letters, 2015, 115, 205301.	2.9	112

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19	Approaching zero-temperature metallic states in mesoscopic superconductorâ€“normalâ€“superconductor arrays. Nature Physics, 2012, 8, 59-62.	6.5	106
20	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
21	Unitary circuits of finite depth and infinite width from quantum channels. Physical Review B, 2019, 100, .	1.1	88
22	Quantum gas microscopy of Kardar-Parisi-Zhang superdiffusion. Science, 2022, 376, 716-720.	6.0	76
23	Superdiffusion in spin chains. Journal of Statistical Mechanics: Theory and Experiment, 2021, 2021, 084001.	0.9	71
24	Diffusive hydrodynamics from integrability breaking. Physical Review B, 2020, 101, .	1.1	70
25	Universal phase structure of dilute Bose gases with Rashba spin-orbit coupling. Physical Review A, 2011, 84, .	1.0	65
26	Quantum Quasicrystals of Spin-Orbit-Coupled Dipolar Bosons. Physical Review Letters, 2013, 111, 185304.	2.9	64
27	Entanglement and Purification Transitions in Non-Hermitian Quantum Mechanics. Physical Review Letters, 2021, 126, 170503.	2.9	63
28	Operator growth and eigenstate entanglement in an interacting integrable Floquet system. Physical Review B, 2018, 98, .	1.1	62
29	Limit-cycle phase in driven-dissipative spin systems. Physical Review A, 2015, 91, .	1.0	61
30	Dynamics and transport at the threshold of many-body localization. Physics Reports, 2020, 862, 1-62.	10.3	60
31	Mean-field theory of nearly many-body localized metals. Physical Review B, 2014, 90, .	1.1	58
32	Facilitated quantum cellular automata as simple models with non-thermal eigenstates and dynamics. Quantum Science and Technology, 2018, 3, 044004.	2.6	55
33	Operator Scaling Dimensions and Multifractality at Measurement-Induced Transitions. Physical Review Letters, 2022, 128, 050602.	2.9	55
34	Many body localized systems weakly coupled to baths. Annalen Der Physik, 2017, 529, 1600181.	0.9	52
35	Quantum engine based on many-body localization. Physical Review B, 2019, 99, .	1.1	50
36	Superdiffusion from Emergent Classical Solitons in Quantum Spin Chains. Physical Review Letters, 2020, 125, 070601.	2.9	49

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37	Self-dual quasiperiodic systems with power-law hopping. Physical Review B, 2017, 96, .	1.1	47
38	Instability of many-body localized systems as a phase transition in a nonstandard thermodynamic limit. Physical Review B, 2019, 99, .	1.1	47
39	Noise-Induced Subdiffusion in Strongly Localized Quantum Systems. Physical Review Letters, 2017, 119, 046601.	2.9	43
40	Spectral Gaps and Midgap States in Random Quantum Master Equations. Physical Review Letters, 2019, 123, 234103.	2.9	43
41	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
42	Superuniversality of Superdiffusion. Physical Review X, 2021, 11, .	2.8	40
43	Topological pumping of a 1D dipolar gas into strongly correlated prethermal states. Science, 2021, 371, 296-300.	6.0	40
44	Stability of Superdiffusion in Nearly Integrable Spin Chains. Physical Review Letters, 2021, 127, 057201.	2.9	37
45	Weyl Semimetal to Metal Phase Transitions Driven by Quasiperiodic Potentials. Physical Review Letters, 2018, 120, 207604.	2.9	34
46	Integrable Many-Body Quantum Floquet-Thouless Pumps. Physical Review Letters, 2019, 123, 170603.	2.9	34
47	Universality and quantum criticality in quasiperiodic spin chains. Nature Communications, 2020, 11, 2225.	5.8	33
48	Spin crossovers and superdiffusion in the one-dimensional Hubbard model. Physical Review B, 2020, 102, .	1.1	30
49	Observation of a marginal Fermi glass. Nature Physics, 2021, 17, 627-631.	6.5	29
50	An optical lattice with sound. Nature, 2021, 599, 211-215.	13.7	29
51	Exploring models of associative memory via cavity quantum electrodynamics. Philosophical Magazine, 2012, 92, 353-361.	0.7	28
52	Regimes of heating and dynamical response in driven many-body localized systems. Physical Review B, 2016, 94, .	1.1	28
53	Designer quantum spin Hall phase transition in molecular graphene. Physical Review B, 2012, 86, .	1.1	27
54	Disclination Classes, Fractional Excitations, and the Melting of Quantum Liquid Crystals. Physical Review Letters, 2013, 111, 025304.	2.9	26

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55	Enhancing Associative Memory Recall and Storage Capacity Using Confocal Cavity QED. Physical Review X, 2021, 11, .	2.8	25
56	Self-consistent Hartree-Fock approach to many-body localization. Physical Review B, 2018, 98, .	1.1	24
57	Spin-catalyzed hopping conductivity in disordered strongly interacting quantum wires. Physical Review B, 2017, 95, .	1.1	22
58	Adiabatic Quantum Search in Open Systems. Physical Review Letters, 2016, 117, 150501.	2.9	21
59	Hydrodynamics of nonintegrable systems from a relaxation-time approximation. Physical Review B, 2021, 103, .	1.1	21
60	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
61	Non-Abelian<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>S</mml:mi><mml:mi>U</mml:mi><mml:mo>(</mml:mo><mml:mn>2</mml:mn><mml:mo>) fields through density wave order and strain in graphene. Physical Review B, 2012, 86, .	1.1	20
62	Generalized hydrodynamics, quasiparticle diffusion, and anomalous local relaxation in random integrable spin chains. Physical Review B, 2019, 99, .	1.1	20
63	Anomalous low-frequency conductivity in easy-plane XXZ spin chains. Physical Review B, 2020, 101, .	1.1	20
64	Evolution of Entanglement Spectra under Generic Quantum Dynamics. Physical Review Letters, 2019, 123, 190602.	2.9	19
65	Onset of many-body quantum chaos due to breaking integrability. Physical Review B, 2022, 105, .	1.1	19
66	Logarithmic Entanglement Growth from Disorder-Free Localization in the Two-Leg Compass Ladder. Physical Review Letters, 2021, 126, 227202.	2.9	18
67	Local integrals of motion and the quasiperiodic many-body localization transition. Physical Review B, 2021, 103, .	1.1	17
68	Non-Fermi Glasses: Localized Descendants of Fractionalized Metals. Physical Review Letters, 2017, 119, 146601.	2.9	16
69	Length scales in the many-body localized phase and their spectral signatures. Physical Review B, 2019, 100, .	1.1	16
70	Direct measurement of nonlocal interactions in the many-body localized phase. Physical Review Research, 2022, 4, .	1.3	16
71	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
72	Stability of edge states in strained graphene. Physical Review B, 2013, 87, .	1.1	15

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73	Harmonically trapped two-atom systems: Interplay of short-ranges-wave interaction and spin-orbit coupling. Physical Review A, 2014, 89, .	1.0	15
74	Intertwined and vestigial order with ultracold atoms in multiple cavity modes. Physical Review A, 2017, 96, .	1.0	14
75	Quantum criticality in Ising chains with random hyperuniform couplings. Physical Review B, 2019, 100, .	1.1	12
76	Asymptotically Exact Theory for Nonlinear Spectroscopy of Random Quantum Magnets. Physical Review Letters, 2020, 125, 237601.	2.9	11
77	Controllable quantum spin glasses with magnetic impurities embedded in quantum solids. Physical Review B, 2013, 88, .	1.1	9
78	Operator front broadening in chaotic and integrable quantum chains. Physical Review B, 2021, 104, .	1.1	9
79	Approaching multichannel Kondo physics using correlated bosons: Quantum phases and how to realize them. Physical Review B, 2010, 81, .	1.1	8
80	Mobile Magnetic Impurities in a Fermi Superfluid: A Route to Designer Molecules. Physical Review Letters, 2015, 114, 045301.	2.9	7
81	Signatures of information scrambling in the dynamics of the entanglement spectrum. Physical Review B, 2019, 100, .	1.1	7
82	Weak crystallization theory of metallic alloys. Physical Review B, 2016, 93, .	1.1	5
83	Lifetimes of local excitations in disordered dipolar quantum systems. Physical Review B, 2021, 103, .	1.1	5
84	Quantum Criticality in the 2D Quasiperiodic Potts Model. Physical Review Letters, 2020, 125, 265702.	2.9	5
85	Fisher zeros and persistent temporal oscillations in nonunitary quantum circuits. Physical Review Research, 2022, 4, .	1.3	5
86	Integrability breaking in the Rule 54 cellular automaton. Journal of Physics A: Mathematical and Theoretical, 2022, 55, 234005.	0.7	4
87	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
88	Fractal x-ray edge problem at the critical point of the Aubry-AndrÃ© model. Physical Review B, 2019, 100, .	1.1	3
89	Rare-region onset of superconductivity in niobium nanoislands. Physical Review B, 2020, 101, .	1.1	3
90	Gopalakrishnan, Martin, and Demler Reply:. Physical Review Letters, 2014, 113, 079603.	2.9	2

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91	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