

Sougato Bose

List of Publications by Year in descending order

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Version: 2024-02-01

109
papers

4,398
citations

101543

36
h-index

106344

65
g-index

109
all docs

109
docs citations

109
times ranked

2524
citing authors

#	ARTICLE	IF	CITATIONS
1	Unconditional measurement-based quantum computation with optomechanical continuous variables. <i>Physical Review A</i> , 2022, 105, .	2.5	4
2	Improving resilience of quantum-gravity-induced entanglement of masses to decoherence using three superpositions. <i>Physical Review A</i> , 2022, 105, .	2.5	23
3	Infrared scaling for a graviton condensate. <i>Nuclear Physics B</i> , 2022, 977, 115730.	2.5	2
4	Constructing nano-object quantum superpositions with a Stern-Gerlach interferometer. <i>Physical Review Research</i> , 2022, 4, .	3.6	23
5	Mechanism for the quantum natured gravitons to entangle masses. <i>Physical Review D</i> , 2022, 105, .	4.7	41
6	Information-theoretic memory scaling in the many-body localization transition. <i>Physical Review B</i> , 2022, 105, .	3.2	7
7	Realization of a complete Stern-Gerlach interferometer: Toward a test of quantum gravity. <i>Science Advances</i> , 2021, 7, .	10.3	55
8	Relative acceleration noise mitigation for nanocrystal matter-wave interferometry: Applications to entangling masses via quantum gravity. <i>Physical Review Research</i> , 2021, 3, .	3.6	29
9	Optimal Quantum Spatial Search with One-Dimensional Long-Range Interactions. <i>Physical Review Letters</i> , 2021, 126, 240502.	7.8	6
10	Gravitons in a box. <i>Physical Review D</i> , 2021, 104, .	4.7	4
11	Qudits for witnessing quantum-gravity-induced entanglement of masses under decoherence. <i>Physical Review A</i> , 2021, 104, .	2.5	28
12	Voltage-controlled Hubbard spin transistor. <i>Physical Review Research</i> , 2021, 3, .	3.6	4
13	Quantum gravity witness via entanglement of masses: Casimir screening. <i>Physical Review A</i> , 2020, 102, .	2.5	65
14	Locality and entanglement in table-top testing of the quantum nature of linearized gravity. <i>Physical Review A</i> , 2020, 101, .	2.5	104
15	Certification of spin-based quantum simulators. <i>Physical Review A</i> , 2020, 101, .	2.5	0
16	Mesoscopic interference for metric and curvature & gravitational wave detection. <i>New Journal of Physics</i> , 2020, 22, 083012.	2.9	21
17	Mesoscopic entanglement through centralâ€potential interactions. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2020, 53, 235501.	1.5	27
18	Supervised learning of time-independent Hamiltonians for gate design. <i>New Journal of Physics</i> , 2020, 22, 065001.	2.9	15

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19	Hydrogenic entanglement. <i>New Journal of Physics</i> , 2020, 22, 093062.	2.9	3
20	Entanglement Content of Many-Body States via Concurrence, Negativity and Schmidt Gap. <i>Springer Proceedings in Physics</i> , 2020, , 91-107.	0.2	0
21	Enabling entanglement distillation via optomechanics. <i>Physical Review A</i> , 2019, 100, .	2.5	7
22	Mechanical qubit-light entanglers in hybrid nonlinear qubit optomechanics. <i>Physical Review A</i> , 2019, 100, .	2.5	1
23	Approximate supervised learning of quantum gates via ancillary qubits. <i>International Journal of Quantum Information</i> , 2018, 16, 1840004.	1.1	0
24	Gravimetry through non-linear optomechanics. <i>Nature Communications</i> , 2018, 9, 3690.	12.8	56
25	Machine-Learning-Assisted Many-Body Entanglement Measurement. <i>Physical Review Letters</i> , 2018, 121, 150503.	7.8	69
26	Many-body localization transition: Schmidt gap, entanglement length, and scaling. <i>Physical Review B</i> , 2018, 97, .	3.2	54
27	Measurement Quench in Many-Body Systems. <i>Physical Review Letters</i> , 2018, 121, 030601.	7.8	19
28	Quantum arithmetics via computation with minimized external control: The half-adder. <i>Physical Review A</i> , 2018, 97, .	2.5	2
29	NOON states via a quantum walk of bound particles. <i>Physical Review A</i> , 2017, 95, .	2.5	12
30	From quantum optics to quantum technologies. <i>Progress in Quantum Electronics</i> , 2017, 54, 2-18.	7.0	30
31	Quantum phase transition detected through one-dimensional ballistic conductance. <i>Physical Review B</i> , 2017, 96, .	3.2	3
32	Gating Classical Information Flow via Equilibrium Quantum Phase Transitions. <i>Physical Review Letters</i> , 2017, 118, 147203.	7.8	7
33	Spin Entanglement Witness for Quantum Gravity. <i>Physical Review Letters</i> , 2017, 119, 240401.	7.8	415
34	Photonic simulation of entanglement growth and engineering after a spin chain quench. <i>Nature Communications</i> , 2017, 8, 1569.	12.8	48
35	Quantum simulation of spin chain dynamics via integrated photonics. , 2017, , .		0
36	Entanglement entropy scaling in solid-state spin arrays via capacitance measurements. <i>Physical Review B</i> , 2016, 94, .	3.2	12

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37	Unravelling quantum dot array simulators via singlet-triplet measurements. Physical Review B, 2016, 94, .	3.2	9
38	Quantum gate learning in qubit networks: Toffoli gate without time-dependent control. Npj Quantum Information, 2016, 2, .	6.7	53
39	Quantum state transfer in optomechanical arrays. Physical Review A, 2016, 93, .	2.5	39
40	Entanglement structure of the two-channel Kondo model. Physical Review B, 2016, 93, .	3.2	36
41	Nonequilibrium critical scaling in quantum thermodynamics. Physical Review B, 2016, 93, .	3.2	25
42	Photonic Simulation of Entanglement Generation and Transfer in a Spin Chain. , 2016, , .		0
43	Perfect wave-packet splitting and reconstruction in a one-dimensional lattice. Physical Review A, 2015, 91, .	2.5	25
44	Toolbox for linear optics in a one-dimensional lattice via minimal control. Physical Review A, 2015, 92, .	2.5	5
45	Adiabatic many-body state preparation and information transfer in quantum dot arrays. Physical Review B, 2015, 91, .	3.2	43
46	Universal single-frequency oscillations in a quantum impurity system after a local quench. Physical Review B, 2015, 92, .	3.2	11
47	Self-Assembled Wigner Crystals as Mediators of Spin Currents and Quantum Information. Physical Review Letters, 2015, 115, 216804.	7.8	5
48	Integrated information storage and transfer with a coherent magnetic device. Scientific Reports, 2015, 5, 13665.	3.3	4
49	Quantum dot spin cellular automata for realizing a quantum processor. Semiconductor Science and Technology, 2015, 30, 105025.	2.0	14
50	Optimal quench for distance-independent entanglement and maximal block entropy. Physical Review A, 2014, 90, .	2.5	11
51	Coherently Opening a High-QCavity. Physical Review Letters, 2014, 112, 133605.	7.8	14
52	Nonlinearity-induced entanglement stability in a qubit-oscillator system. Physical Review A, 2014, 90, .	2.5	10
53	An order parameter for impurity systems at quantum criticality. Nature Communications, 2014, 5, 3784.	12.8	60
54	Spin Chains as Data Buses, Logic Buses and Entanglers. , 2014, , 1-37.		5

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55	Quench-induced growth of distant entanglement from product and locally entangled states in spin chains. <i>Physical Review A</i> , 2013, 88, .	2.5	5
56	ENTANGLEMENT FROM THE DYNAMICS OF AN IDEAL BOSE GAS IN A LATTICE. , 2013, , 29-36.		0
57	Reconstructing the quantum state of oscillator networks with a single qubit. <i>Physical Review A</i> , 2012, 85, .	2.5	16
58	ENTANGLEMENT FROM THE DYNAMICS OF AN IDEAL BOSE GAS IN A LATTICE. <i>International Journal of Modern Physics B</i> , 2012, 26, 1243003.	2.0	0
59	Quantum resources for hybrid communication via qubit-oscillator states. <i>Physical Review A</i> , 2012, 86, .	2.5	60
60	Exploiting Kondo spin chains for generating long range distance independent entanglement. <i>Quantum Information Processing</i> , 2012, 11, 89-112.	2.2	3
61	Oscillator state reconstruction via tunable qubit coupling in Markovian environments. <i>Physical Review A</i> , 2011, 83, .	2.5	12
62	Initializing an unmodulated spin chain to operate as a high-quality quantum data bus. <i>Physical Review A</i> , 2011, 83, .	2.5	30
63	Nonperturbative Entangling Gates between Distant Qubits Using Uniform Cold Atom Chains. <i>Physical Review Letters</i> , 2011, 106, 140501.	7.8	102
64	ENGINEERING LONG RANGE DISTANCE INDEPENDENT ENTANGLEMENT VIA LOCAL MANIPULATION OF A KONDO SPIN CHAIN. <i>International Journal of Quantum Information</i> , 2011, 09, 49-62.	1.1	0
65	Entanglement in bipartite pure states of an interacting boson gas obtained by local projective measurements. <i>Physical Review A</i> , 2011, 84, .	2.5	1
66	Entanglement-enhanced information transfer through strongly correlated systems and its application to optical lattices. <i>Physical Review A</i> , 2011, 84, .	2.5	20
67	Spin-state transfer in laterally coupled quantum-dot chains with disorders. <i>Physical Review A</i> , 2010, 82, .	2.5	27
68	Entanglement Transfer through an Antiferromagnetic Spin Chain. <i>Advances in Mathematical Physics</i> , 2010, 2010, 1-11.	0.8	22
69	Kondo cloud mediated long-range entanglement after local quench in a spin chain. <i>Physical Review B</i> , 2010, 81, .	3.2	40
70	Separation-dependent localization in a two-impurity spin-boson model. <i>Physical Review B</i> , 2010, 81, .	3.2	28
71	Global control methods for Greenberger-Horne-Zeilinger-state generation on a one-dimensional Ising chain. <i>Physical Review A</i> , 2010, 82, .	2.5	27
72	Teleportation between distant qudits via scattering of mobile qubits. <i>Physical Review A</i> , 2010, 81, .	2.5	10

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73	Universality of the negativity in the Lipkin-Meshkov-Glick model. <i>Physical Review A</i> , 2010, 81, .	2.5	72
74	Information-transferring ability of the different phases of a finiteXXZspin chain. <i>Physical Review A</i> , 2010, 81, .	2.5	49
75	Negativity as the entanglement measure to probe the Kondo regime in the spin-chain Kondo model. <i>Physical Review B</i> , 2010, 81, .	3.2	89
76	Robust entanglement in antiferromagnetic Heisenberg chains by single-spin optimal control. <i>Physical Review A</i> , 2010, 81, .	2.5	48
77	Five Lectures on Quantum Information Applications of Complex Many-Body Systems. <i>Lecture Notes in Physics</i> , 2010, , 97-124.	0.7	0
78	Exploiting quench dynamics in spin chains for distant entanglement and quantum communication. <i>Physical Review A</i> , 2009, 79, .	2.5	48
79	COMMUNICATION IN XYZ ALL-TO-ALL QUANTUM NETWORKS WITH A MISSING LINK. <i>International Journal of Quantum Information</i> , 2009, 07, 713-723.	1.1	42
80	Local controllability of quantum networks. <i>Physical Review A</i> , 2009, 79, .	2.5	72
81	End-to-end entanglement in Bose-Hubbard chains. <i>Physical Review A</i> , 2009, 80, .	2.5	10
82	Qubit-mediated time-robust entangling of oscillators in thermal environments. <i>Physical Review A</i> , 2009, 80, .	2.5	4
83	Heralded generation of entanglement with coupled cavities. <i>Physical Review A</i> , 2008, 78, .	2.5	71
84	Simulation of high-spin Heisenberg models in coupled cavities. <i>Physical Review A</i> , 2008, 78, .	2.5	47
85	PURE STATE ENTANGLEMENT BETWEEN SEPARATED REGIONS USING IMPENETRABLE BOSONS. <i>International Journal of Quantum Information</i> , 2008, 06, 739-744.	1.1	2
86	Memory effects in spin-chain channels for information transmission. <i>Physical Review A</i> , 2008, 77, .	2.5	43
87	Multilevel multiparty singlets as ground states and their role in entanglement distribution. <i>Physical Review A</i> , 2008, 77, .	2.5	4
88	Optimal quantum-chain communication by end gates. <i>Physical Review A</i> , 2007, 75, .	2.5	68
89	Quantum communication via a continuously monitored dual spin chain. <i>Physical Review A</i> , 2007, 75, .	2.5	15
90	Boundary effects on entropy and two-site entanglement of the spin-1 valence-bond solid. <i>Physical Review B</i> , 2007, 76, .	3.2	14

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91	Photonic phase transitions, spin models, and QIP in coupled cavity arrays. , 2007, , .		1
92	Generation and verification of high-dimensional entanglement from coupled-cavity arrays. Journal of the Optical Society of America B: Optical Physics, 2007, 24, 266.	2.1	15
93	Quantum communication through spin chain dynamics: an introductory overview. Contemporary Physics, 2007, 48, 13-30.	1.8	442
94	Transfer of a polaritonic qubit through a coupled cavity array. Journal of Modern Optics, 2007, 54, 2307-2314.	1.3	39
95	Photon-blockade-induced Mott transitions and $\langle X \rangle \langle Y \rangle$ spin models in coupled cavity arrays. Physical Review A. 2007. 76. .	2.5	497
96	EFFICIENT AND PERFECT STATE TRANSFER IN QUANTUM CHAINS. International Journal of Quantum Information, 2006, 04, 405-414.	1.1	13
97	Qubit Assisted Probing of Coherence between Mesoscopic States of an Apparatus. Physical Review Letters, 2006, 96, 060402.	7.8	13
98	Universal destabilization and slowing of spin-transfer functions by a bath of spins. Physical Review A, 2006, 73, .	2.5	44
99	Entanglement creation and distribution on a graph of exchange-coupled qutrits. Physical Review A, 2005, 72, .	2.5	5
100	Perfect quantum state transfer with randomly coupled quantum chains. New Journal of Physics, 2005, 7, 135-135. .	2.9	138
101	Efficient and perfect state transfer in quantum chains. Journal of Physics A, 2005, 38, 6793-6802.	1.6	59
102	Perfect state transfer, effective gates, and entanglement generation in engineered bosonic and fermionic networks. Physical Review A, 2005, 71, .	2.5	166
103	Conclusive and arbitrarily perfect quantum-state transfer using parallel spin-chain channels. Physical Review A, 2005, 71, .	2.5	216
104	Engineering an interaction and entanglement between distant atoms. Physical Review A, 2004, 70, .	2.5	73
105	Vacuum induced Berry phase: theory and experimental proposal. Journal of Modern Optics, 2003, 50, 1175-1181.	1.3	2
106	Tippe top paradox in relativity. European Journal of Physics, 2002, 23, 295-305.	0.6	2
107	Standard quantum mechanics with environment induced decoherence and wavefunction collapse: Possibility of an empirical discrimination using neutron interferometry. Physics Letters, Section A: General, Atomic and Solid State Physics, 1996, 217, 209-214.	2.1	4
108	Quantum gates between distant qubits via spin-independent scattering. Quantum - the Open Journal for Quantum Science, 0, 1, 36.	0.0	1

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109	Engineering Long Range Distance Independent Entanglement through Kondo Impurities in Spin Chains. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 26, 33-46.	0.8	2