Ilya Sinayskiy

List of Publications by Year in descending order

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58 papers	2,535 citations	257357 24 h-index	197736 49 g-index
62 all docs	62 docs citations	62 times ranked	2116 citing authors

#	Article	IF	Citations
1	An introduction to quantum machine learning. Contemporary Physics, 2015, 56, 172-185.	0.8	592
2	The quest for a Quantum Neural Network. Quantum Information Processing, 2014, 13, 2567-2586.	1.0	337
3	Prediction by linear regression on a quantum computer. Physical Review A, 2016, 94, .	1.0	188
4	The future of quantum biology. Journal of the Royal Society Interface, 2018, 15, 20180640.	1.5	136
5	Simulating a perceptron on a quantum computer. Physics Letters, Section A: General, Atomic and Solid State Physics, 2015, 379, 660-663.	0.9	114
6	Open Quantum Random Walks. Journal of Statistical Physics, 2012, 147, 832-852.	0.5	111
7	Dynamics of nonequilibrium thermal entanglement. Physical Review A, 2008, 78, .	1.0	64
8	Early transmission of SARS-CoV-2 in South Africa: An epidemiological and phylogenetic report. International Journal of Infectious Diseases, 2021, 103, 234-241.	1.5	63
9	Open quantum walks on graphs. Physics Letters, Section A: General, Atomic and Solid State Physics, 2012, 376, 1545-1548.	0.9	54
10	Universal simulation of Markovian open quantum systems. Physical Review A, 2015, 91, .	1.0	46
11	Decoherence-Assisted Transport in a Dimer System. Physical Review Letters, 2012, 108, 020602.	2.9	45
12	Quantum coherence, many-body correlations, and non-thermal effects for autonomous thermal machines. Scientific Reports, 2019, 9, 3191.	1.6	45
13	Quantum Computing for Pattern Classification. Lecture Notes in Computer Science, 2014, , 208-220.	1.0	44
14	Quantum walks on graphs representing the firing patterns of a quantum neural network. Physical Review A, 2014, 89, .	1.0	36
15	Digital quantum simulation of many-body non-Markovian dynamics. Physical Review A, 2016, 94, .	1.0	35
16	Efficiency of open quantum walk implementation of dissipative quantum computing algorithms. Quantum Information Processing, 2012, 11, 1301-1309.	1.0	34
17	Apparent temperature: demystifying the relation between quantum coherence, correlations, and heat flows. Quantum Science and Technology, 2019, 4, 025005.	2.6	33
18	Dissipative preparation of large<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>W</mml:mi></mml:math>states in optical cavities. Physical Review A, 2013, 87, .	1.0	32

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19	Non-Markovian dynamics of an interacting qubit pair coupled to two independent bosonic baths. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 485301.	0.7	30
20	Energetic and entropic effects of bath-induced coherences. Physical Review A, 2019, 99, .	1.0	29
21	A comparison of various classical optimizers for a variational quantum linear solver. Quantum Information Processing, 2021, 20, 1.	1.0	28
22	Initial correlation in a system of a spin coupled to a spin bath through an intermediate spin. Physical Review A, 2012, 86, .	1.0	27
23	Simulation of single-qubit open quantum systems. Physical Review A, 2014, 90, .	1.0	25
24	Collective heat capacity for quantum thermometry and quantum engine enhancements. New Journal of Physics, 2020, 22, 083049.	1.2	25
25	Numerical and analytical approach to the quantum dynamics of two coupled spins in bosonic baths. Physical Review A, 2009, 80, .	1.0	24
26	Roles of quantum coherences in thermal machines. European Physical Journal: Special Topics, 2021, 230, 841-850.	1.2	23
27	Decoherence-assisted transport in quantum networks. New Journal of Physics, 2013, 15, 013038.	1.2	22
28	Non-equilibrium thermal entanglement for a three spin chain. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 3157-3166.	0.9	20
29	Open Quantum Walks: a short introduction. Journal of Physics: Conference Series, 2013, 442, 012003.	0.3	18
30	Heat flow reversals without reversing the arrow of time: The role of internal quantum coherences and correlations. Physical Review Research, 2019, 1, .	1.3	18
31	Thermodynamics from indistinguishability: Mitigating and amplifying the effects of the bath. Physical Review Research, 2019, 1, .	1.3	18
32	A quantum protective mechanism in photosynthesis. Scientific Reports, 2015, 5, 8720.	1.6	17
33	Negative contributions to entropy production induced by quantum coherences. Physical Review A, 2020, 102, .	1.0	16
34	Experimental investigation of Markovian and non-Markovian channel addition. Physical Review A, 2020, 101, .	1.0	15
35	Properties of open quantum walks on $mathbb {Z}$. Physica Scripta, 2012, T151, 014077.	1.2	13
36	Arbitrary spin in a spin bath: Exact dynamics and approximation techniques. Physical Review A, 2014, 89, .	1.0	12

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37	Microscopic derivation of open quantum walks. Physical Review A, 2015, 92, .	1.0	12
38	Open quantum walks. European Physical Journal: Special Topics, 2019, 227, 1869-1883.	1.2	12
39	Quantum optical implementation of open quantum walks. International Journal of Quantum Information, 2014, 12, 1461010.	0.6	11
40	Parallel quantum trajectories via forking for sampling without redundancy. New Journal of Physics, 2019, 21, 083024.	1.2	11
41	Dissipative preparation of generalized Bell states. Journal of Physics B: Atomic, Molecular and Optical Physics, 2013, 46, 104004.	0.6	10
42	Quantum force estimation in arbitrary non-Markovian Gaussian baths. Physical Review A, 2016, 94, .	1.0	10
43	An open quantum system approach to the radical pair mechanism. Scientific Reports, 2018, 8, 15719.	1.6	9
44	Integrating machine learning techniques in quantum communication to characterize the quantum channel. Journal of the Optical Society of America B: Optical Physics, 2019, 36, B116.	0.9	9
45	Dynamics and non-equilibrium steady state in a system of coupled harmonic oscillators. Physics Letters, Section A: General, Atomic and Solid State Physics, 2013, 377, 1682-1692.	0.9	8
46	Dynamics and thermalization in a simple mesoscopic fermionic bath. Physical Review A, 2019, 99, .	1.0	6
47	Microscopic Derivation of Open Quantum Walk on Two-Node Graph. Open Systems and Information Dynamics, 2013, 20, 1340007.	0.5	5
48	Non-equilibrium thermal entanglement in a two-particle system. Physica Scripta, 2012, T151, 014017.	1.2	4
49	Microscopic derivation of open quantum Brownian motion: a particular example. Physica Scripta, 2015, T165, 014017.	1.2	4
50	Lazy open quantum walks. Physical Review A, 2020, 102, .	1.0	4
51	Non-reversal Open Quantum Walks. Open Systems and Information Dynamics, 2018, 25, 1850017.	0.5	3
52	Dissipative quantum computing with open quantum walks. , 2014, , .		2
53	Steadyâ€State control of open Quantum Brownian Motion. Fortschritte Der Physik, 2017, 65, 1600063.	1.5	2
54	Dynamics of nonequilibrium thermal entanglement for simple spin chains. , 2011, , .		0

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55	Nonequilibrium thermal entanglement for simple spin chains. , 2012, , .		0
56	Microscopic derivation of open quantum walks. , 2014, , .		0
57	Open Quantum Walks as a Tool for Dissipative Quantum Computing. , 2012, , .		0
58	Monitoring a free-space quantum communication channel using machine learning techniques. , 2019, , .		0