Xiao Yuan

List of Publications by Year
in descending order

71 papers	5,763 citations	185998 28 h-index	91712 69 g-index
72 all docs	72 docs citations	72 times ranked	3085 citing authors

#	Article	IF	Citations
1	Experimental exploration of five-qubit quantum error-correcting code with superconducting qubits. National Science Review, 2022, 9, nwab011.	4.6	22
2	Efficient Measure for the Expressivity of Variational Quantum Algorithms. Physical Review Letters, 2022, 128, 080506.	2.9	35
3	Experimental Investigation of Quantum Uncertainty Relations With Classical Shadows. Frontiers in Physics, 2022, 10, .	1.0	3
4	An integrated space-to-ground quantum communication network over 4,600 kilometres. Nature, 2021, 589, 214-219.	13.7	415
5	Hybrid Quantum-Classical Algorithms and Quantum Error Mitigation. Journal of the Physical Society of Japan, 2021, 90, 032001.	0.7	263
6	Variational Circuit Compiler for Quantum Error Correction. Physical Review Applied, 2021, 15, .	1.5	16
7	Mitigating Realistic Noise in Practical Noisy Intermediate-Scale Quantum Devices. Physical Review Applied, 2021, 15, .	1.5	53
8	Estimating Coherence Measures with Untrusted Devices. Advanced Quantum Technologies, 2021, 4, 2000153.	1.8	1
9	Efficient estimation of multipartite quantum coherence. Physical Review Research, 2021, 3, .	1.3	7
10	Universal and operational benchmarking of quantum memories. Npj Quantum Information, 2021, 7, .	2.8	18
11	Quantum Simulation with Hybrid Tensor Networks. Physical Review Letters, 2021, 127, 040501.	2.9	47
12	Variational quantum algorithms. Nature Reviews Physics, 2021, 3, 625-644.	11.9	930
13	Detecting entanglement of quantum channels. Communications in Theoretical Physics, 2021, 73, 115101.	1.1	3
14	Implementation of a 46-node quantum metropolitan area network. Npj Quantum Information, 2021, 7, .	2.8	39
15	Variational algorithms for linear algebra. Science Bulletin, 2021, 66, 2181-2188.	4.3	72
16	Single ion qubit with estimated coherence time exceeding one hour. Nature Communications, 2021, 12, 233.	5.8	125
17	Dynamic crotonylation of EB1 by TIP60 ensures accurate spindle positioning in mitosis. Nature Chemical Biology, 2021, 17, 1314-1323.	3.9	29
18	Experimental Quantum State Measurement with Classical Shadows. Physical Review Letters, 2021, 127, 200501.	2.9	23

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19	Low-depth quantum state preparation. Physical Review Research, 2021, 3, .	1.3	33
20	Demonstration of Adiabatic Variational Quantum Computing with a Superconducting Quantum Coprocessor. Physical Review Letters, 2020, 125, 180501.	2.9	33
21	A quantum-computing advantage for chemistry. Science, 2020, 369, 1054-1055.	6.0	17
22	Quantum computational chemistry. Reviews of Modern Physics, 2020, 92, .	16.4	726
23	Variational Quantum Simulation of General Processes. Physical Review Letters, 2020, 125, 010501.	2.9	137
24	Mps1 dimerization and multisite interactions with Ndc80 complex enable responsive spindle assembly checkpoint signaling. Journal of Molecular Cell Biology, 2020, 12, 486-498.	1.5	10
25	Operational resource theory of quantum channels. Physical Review Research, 2020, 2, .	1.3	88
26	Experimental random-party entanglement distillation via weak measurement. Physical Review Research, 2020, 2, .	1.3	2
27	Detecting multipartite entanglement structure with minimal resources. Npj Quantum Information, 2019, 5, .	2.8	29
28	Quantum Coherence and Intrinsic Randomness. Advanced Quantum Technologies, 2019, 2, 1900053.	1.8	13
29	Variational ansatz-based quantum simulation of imaginary time evolution. Npj Quantum Information, 2019, 5, .	2.8	285
30	Operational interpretation of coherence in quantum key distribution. Physical Review A, 2019, 99, .	1.0	27
31	Variational quantum algorithms for discovering Hamiltonian spectra. Physical Review A, 2019, 99, .	1.0	164
32	Efficient and robust detection of multipartite Greenberger-Horne-Zeilinger-like states. Physical Review A, 2019, 99, .	1.0	6
33	Digital quantum simulation of molecular vibrations. Chemical Science, 2019, 10, 5725-5735.	3.7	52
34	Error-Mitigated Digital Quantum Simulation. Physical Review Letters, 2019, 122, 180501.	2.9	157
35	One-Shot Coherence Distillation: Towards Completing the Picture. IEEE Transactions on Information Theory, 2019, 65, 6441-6453.	1.5	40
36	Hypothesis testing and entropies of quantum channels. Physical Review A, 2019, 99, .	1.0	17

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37	Unification of quantum resources in distributed scenarios. Physical Review A, 2019, 99, .	1.0	8
38	Coherence as a resource for source-independent quantum random-number generation. Physical Review A, 2019, 99, .	1.0	20
39	Experimental measurement-dependent local Bell test with human free will. Physical Review A, 2019, 99, .	1.0	2
40	Quantum random number generation with uncharacterized laser and sunlight. Npj Quantum Information, 2019, 5, .	2.8	19
41	High-Threshold Code for Modular Hardware With Asymmetric Noise. Physical Review Applied, 2019, 12, .	1.5	11
42	Mitigating algorithmic errors in a Hamiltonian simulation. Physical Review A, 2019, 99, .	1.0	40
43	LED-based fiber quantum key distribution: toward low-cost applications. Photonics Research, 2019, 7, 1169.	3.4	8
44	Quantum coherence via conditional entropy. Journal of Physics A: Mathematical and Theoretical, 2018, 51, 414018.	0.7	10
45	One-Shot Coherence Dilution. Physical Review Letters, 2018, 120, 070403.	2.9	63
46	Unification of nonclassicality measures in interferometry. Physical Review A, 2018, 97, .	1.0	11
47	High-Speed Device-Independent Quantum Random Number Generation without a Detection Loophole. Physical Review Letters, 2018, 120, 010503.	2.9	85
48	Acetylation of ACAP4 regulates CCL18-elicited breast cancer cell migration and invasion. Journal of Molecular Cell Biology, 2018, 10, 559-572.	1.5	22
49	Device-independent quantum random-number generation. Nature, 2018, 562, 548-551.	13.7	154
50	Entanglement Structure: Entanglement Partitioning in Multipartite Systems and Its Experimental Detection Using Optimizable Witnesses. Physical Review X, 2018, 8, .	2.8	23
51	Challenging local realism with human choices. Nature, 2018, 557, 212-216.	13.7	136
52	Practical round-robin differential-phase-shift quantum key distribution. New Journal of Physics, 2017, 19, 033013.	1.2	20
53	Quantum uncertainty relation using coherence. Physical Review A, 2017, 96, .	1.0	54
54	Polynomial measure of coherence. New Journal of Physics, 2017, 19, 123033.	1.2	6

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55	Observation of ten-photon entanglement using thin BiB_3O_6 crystals. Optica, 2017, 4, 77.	4.8	52
56	Quantum random number generation. Npj Quantum Information, 2016, 2, .	2.8	233
57	Simulating single photons with realistic photon sources. Physical Review A, 2016, 94, .	1.0	20
58	Efficient measurement-device-independent detection of multipartite entanglement structure. Physical Review A, 2016, 94, .	1.0	13
59	Reliable and robust entanglement witness. Physical Review A, 2016, 93, .	1.0	9
60	Experimental Quantum Randomness Processing Using Superconducting Qubits. Physical Review Letters, 2016, 117, 010502.	2.9	18
61	Bridging the gap between general probabilistic theories and the device-independent framework for nonlocality and contextuality. Information and Computation, 2016, 250, 15-49.	0.5	21
62	Source-Independent Quantum Random Number Generation. Physical Review X, 2016, 6, .	2.8	81
63	Randomness generation based on spontaneous emissions of lasers. Physical Review A, 2015, 91, .	1.0	35
64	Clauser-Horne Bell test with imperfect random inputs. Physical Review A, 2015, 92, .	1.0	6
65	Intrinsic randomness as a measure of quantum coherence. Physical Review A, 2015, 92, .	1.0	320
66	Replicating the benefits of Deutschian closed timelike curves without breaking causality. Npj Quantum Information, 2015, 1, .	2.8	13
67	Randomness requirement on the Clauser-Horne-Shimony-Holt Bell test in the multiple-run scenario. Physical Review A, 2015, 91, .	1.0	19
68	Implementation of a Measurement-Device-Independent Entanglement Witness. Physical Review Letters, 2014, 112, 140506.	2.9	44
69	Quantum theory from quantum information: the purification route. Canadian Journal of Physics, 2013, 91, 475-478.	0.4	3
70	Exploiting anticommutation in Hamiltonian simulation. Quantum - the Open Journal for Quantum Science, 0, 5, 534.	0.0	2
71	Theory of variational quantum simulation. Quantum - the Open Journal for Quantum Science, 0, 3, 191.	0.0	245