Dmitri Maslov

List of Publications by Year
in descending order

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26	2,407	394421 19	580821 25
papers	citations	h-index	g-index

26	26	26	1556
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A Meet-in-the-Middle Algorithm for Fast Synthesis of Depth-Optimal Quantum Circuits. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2013, 32, 818-830.	2.7	328
2	Experimental comparison of two quantum computing architectures. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 3305-3310.	7.1	326
3	Toward the first quantum simulation with quantum speedup. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 9456-9461.	7.1	271
4	Ground-state energy estimation of the water molecule on a trapped-ion quantum computer. Npj Quantum Information, 2020, 6, .	6.7	184
5	Quantum Circuit Simplification and Level Compaction. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2008, 27, 436-444.	2.7	174
6	Polynomial-Time T-Depth Optimization of Clifford+T Circuits Via Matroid Partitioning. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2014, 33, 1476-1489.	2.7	165
7	Quantum Computer Systems for Scientific Discovery. PRX Quantum, 2021, 2, .	9.2	142
8	Automated optimization of large quantum circuits with continuous parameters. Npj Quantum Information, 2018, 4, .	6.7	120
9	Advantages of using relative-phase Toffoli gates with an application to multiple control Toffoli optimization. Physical Review A, 2016, 93, .	2.5	108
10	Asymptotically Optimal Approximation of Single Qubit Unitaries by Clifford and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>T</mml:mi></mml:math>Circuits Using a Constant Number of Ancillary Qubits. Physical Review Letters, 2013, 110, 190502.	7.8	88
11	Fast and efficient exact synthesis of single-qubit unitaries generated by Clifford and T gates. Quantum Information and Computation, 2013, 13, 607-630.	0.3	82
12	Basic circuit compilation techniques for an ion-trap quantum machine. New Journal of Physics, 2017, 19, 023035.	2.9	75
13	Quantum Circuit Placement. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2008, 27, 752-763.	2.7	74
14	Approximate quantum Fourier transform with O(n log(n)) T gates. Npj Quantum Information, 2020, 6, .	6.7	39
15	An Outlook for Quantum Computing [Point of View]. Proceedings of the IEEE, 2019, 107, 5-10.	21.3	34
16	Use of global interactions in efficient quantum circuit constructions. New Journal of Physics, 2018, 20, 033018.	2.9	33
17	Shorter Stabilizer Circuits via Bruhat Decomposition and Quantum Circuit Transformations. IEEE Transactions on Information Theory, 2018, 64, 4729-4738.	2.4	32
18	Hadamard-Free Circuits Expose the Structure of the Clifford Group. IEEE Transactions on Information Theory, 2021, 67, 4546-4563.	2.4	32

#	Article	IF	Citations
19	Reversible Circuit Optimization Via Leaving the Boolean Domain. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2011, 30, 806-816.	2.7	28
20	Low-cost quantum circuits for classically intractable instances of the Hamiltonian dynamics simulation problem. Npj Quantum Information, 2019, 5, .	6.7	26
21	Quantum advantage for computations with limited space. Nature Physics, 2021, 17, 894-897.	16.7	15
22	Optimal and asymptotically optimal NCT reversible circuits by the gate types. Quantum Information and Computation, 2016, 16, 1096-1112.	0.3	13
23	Clifford Circuit Optimization with Templates and Symbolic Pauli Gates. Quantum - the Open Journal for Quantum Science, 0, 5, 580.	0.0	8
24	Depth Optimization of CZ, CNOT, and Clifford Circuits. IEEE Transactions on Quantum Engineering, 2022, 3, 1-8.	4.9	6
25	Efficient Ancilla-Free Reversible and Quantum Circuits for the Hidden Weighted Bit Function. IEEE Transactions on Computers, 2022, 71, 1170-1180.	3.4	2
26	6-qubit optimal Clifford circuits. Npj Quantum Information, 2022, 8, .	6.7	2