

Pedram Roushan

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

30 papers	5,153 citations	21 h-index	31 g-index
31 ext. papers	7,461 ext. citations	17.9 avg, IF	4.47 L-index

#	Paper	IF	Citations
30	Quantum supremacy using a programmable superconducting processor. <i>Nature</i> , 2019 , 574, 505-510	50.4	1760
29	Superconducting quantum circuits at the surface code threshold for fault tolerance. <i>Nature</i> , 2014 , 508, 500-3	50.4	961
28	State preservation by repetitive error detection in a superconducting quantum circuit. <i>Nature</i> , 2015 , 519, 66-9	50.4	542
27	Qubit Architecture with High Coherence and Fast Tunable Coupling. <i>Physical Review Letters</i> , 2014 , 113, 220502	7.4	279
26	A blueprint for demonstrating quantum supremacy with superconducting qubits. <i>Science</i> , 2018 , 360, 195-199	33.3	205
25	Fast accurate state measurement with superconducting qubits. <i>Physical Review Letters</i> , 2014 , 112, 190504	7.4	200
24	Spectroscopic signatures of localization with interacting photons in superconducting qubits. <i>Science</i> , 2017 , 358, 1175-1179	33.3	184
23	Ergodic dynamics and thermalization in an isolated quantum system. <i>Nature Physics</i> , 2016 , 12, 1037-1041	16.2	154
22	Observation of topological transitions in interacting quantum circuits. <i>Nature</i> , 2014 , 515, 241-4	50.4	120
21	Optimal quantum control using randomized benchmarking. <i>Physical Review Letters</i> , 2014 , 112, 240504	7.4	118
20	Catching Time-Reversed Microwave Coherent State Photons with 99.4% Absorption Efficiency. <i>Physical Review Letters</i> , 2014 , 112,	7.4	70
19	Characterization and reduction of microfabrication-induced decoherence in superconducting quantum circuits. <i>Applied Physics Letters</i> , 2014 , 105, 062601	3.4	68
18	Fabrication and characterization of aluminum airbridges for superconducting microwave circuits. <i>Applied Physics Letters</i> , 2014 , 104, 052602	3.4	60
17	Demonstrating a Continuous Set of Two-Qubit Gates for Near-Term Quantum Algorithms. <i>Physical Review Letters</i> , 2020 , 125, 120504	7.4	59
16	Design and characterization of a lumped element single-ended superconducting microwave parametric amplifier with on-chip flux bias line. <i>Applied Physics Letters</i> , 2013 , 103, 122602	3.4	57
15	Photonic materials in circuit quantum electrodynamics. <i>Nature Physics</i> , 2020 , 16, 268-279	16.2	46
14	Qubit Metrology of Ultralow Phase Noise Using Randomized Benchmarking. <i>Physical Review Applied</i> , 2015 , 3,	4.3	39

13	Tunable coupler for superconducting Xmon qubits: Perturbative nonlinear model. <i>Physical Review A</i> , 2015 , 92,	2.6	38
12	Diabatic Gates for Frequency-Tunable Superconducting Qubits. <i>Physical Review Letters</i> , 2019 , 123, 2105014	5.1	38
11	Preserving entanglement during weak measurement demonstrated with a violation of the Bell-inequality. <i>Npj Quantum Information</i> , 2016 , 2,	8.6	30
10	Emulating weak localization using a solid-state quantum circuit. <i>Nature Communications</i> , 2014 , 5, 5184	17.4	27
9	Realizing topologically ordered states on a quantum processor. <i>Science</i> , 2021 , 374, 1237-1241	33.3	21
8	Rolling quantum dice with a superconducting qubit. <i>Physical Review A</i> , 2014 , 90,	2.6	20
7	Demonstration of gate control of spin splitting in a high-mobility InAs/AlSb two-dimensional electron gas. <i>Physical Review B</i> , 2016 , 93,	3.3	17
6	Information scrambling in quantum circuits. <i>Science</i> , 2021 , eabg5029	33.3	13
5	High speed flux sampling for tunable superconducting qubits with an embedded cryogenic transducer. <i>Superconductor Science and Technology</i> , 2019 , 32, 015012	3.1	10
4	Time-Crystalline Eigenstate Order on a Quantum Processor. <i>Nature</i> , 2021 ,	50.4	8
3	Creating and Manipulating a Laughlin-Type $\nu=1/3$ Fractional Quantum Hall State on a Quantum Computer with Linear Depth Circuits. <i>PRX Quantum</i> , 2020 , 1,	6.1	4
2	Accurately computing the electronic properties of a quantum ring. <i>Nature</i> , 2021 , 594, 508-512	50.4	4
1	Entanglement and complexity of interacting qubits subject to asymmetric noise. <i>Physical Review Research</i> , 2020 , 2,	3.9	1