

Charles Neill

List of Publications by Year in Descending Order

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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.

41
papers

6,526
citations

30
h-index

42
g-index

42
ext. papers

9,086
ext. citations

15.8
avg, IF

4.63
L-index

#	Paper	IF	Citations
41	Realizing topologically ordered states on a quantum processor. <i>Science</i> , 2021 , 374, 1237-1241	33.3	21
40	Time-Crystalline Eigenstate Order on a Quantum Processor. <i>Nature</i> , 2021 ,	50.4	8
39	Information scrambling in quantum circuits. <i>Science</i> , 2021 , eabg5029	33.3	13
38	Accurately computing the electronic properties of a quantum ring. <i>Nature</i> , 2021 , 594, 508-512	50.4	4
37	Entanglement and complexity of interacting qubits subject to asymmetric noise. <i>Physical Review Research</i> , 2020 , 2,	3.9	1
36	Demonstrating a Continuous Set of Two-Qubit Gates for Near-Term Quantum Algorithms. <i>Physical Review Letters</i> , 2020 , 125, 120504	7.4	59
35	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
34	Diabatic Gates for Frequency-Tunable Superconducting Qubits. <i>Physical Review Letters</i> , 2019 , 123, 210501	7.4	38
33	Quantum supremacy using a programmable superconducting processor. <i>Nature</i> , 2019 , 574, 505-510	50.4	1760
32	A blueprint for demonstrating quantum supremacy with superconducting qubits. <i>Science</i> , 2018 , 360, 195-199	33.3	205
31	A method for building low loss multi-layer wiring for superconducting microwave devices. <i>Applied Physics Letters</i> , 2018 , 112, 063502	3.4	27
30	Observation of Classical-Quantum Crossover of $1/f$ Flux Noise and Its Paramagnetic Temperature Dependence. <i>Physical Review Letters</i> , 2017 , 118, 057702	7.4	56
29	Spectroscopic signatures of localization with interacting photons in superconducting qubits. <i>Science</i> , 2017 , 358, 1175-1179	33.3	184
28	Chiral ground-state currents of interacting photons in a synthetic magnetic field. <i>Nature Physics</i> , 2017 , 13, 146-151	16.2	189
27	Characterization and reduction of capacitive loss induced by sub-micron Josephson junction fabrication in superconducting qubits. <i>Applied Physics Letters</i> , 2017 , 111, 022601	3.4	52
26	Measuring and Suppressing Quantum State Leakage in a Superconducting Qubit. <i>Physical Review Letters</i> , 2016 , 116, 020501	7.4	93
25	Scalable in situ qubit calibration during repetitive error detection. <i>Physical Review A</i> , 2016 , 94,	2.6	21

24	Preserving entanglement during weak measurement demonstrated with a violation of the Bell-eggett-Garg inequality. <i>Npj Quantum Information</i> , 2016 , 2,	8.6	30
23	Measurement-Induced State Transitions in a Superconducting Qubit: Beyond the Rotating Wave Approximation. <i>Physical Review Letters</i> , 2016 , 117, 190503	7.4	59
22	Digitized adiabatic quantum computing with a superconducting circuit. <i>Nature</i> , 2016 , 534, 222-6	50.4	239
21	Ergodic dynamics and thermalization in an isolated quantum system. <i>Nature Physics</i> , 2016 , 12, 1037-1041	16.2	154
20	State preservation by repetitive error detection in a superconducting quantum circuit. <i>Nature</i> , 2015 , 519, 66-9	50.4	542
19	Digital quantum simulation of fermionic models with a superconducting circuit. <i>Nature Communications</i> , 2015 , 6, 7654	17.4	191
18	Tunable coupler for superconducting Xmon qubits: Perturbative nonlinear model. <i>Physical Review A</i> , 2015 , 92,	2.6	38
17	Qubit Metrology of Ultralow Phase Noise Using Randomized Benchmarking. <i>Physical Review Applied</i> , 2015 , 3,	4.3	39
16	Superconducting quantum circuits at the surface code threshold for fault tolerance. <i>Nature</i> , 2014 , 508, 500-3	50.4	961
15	Observation of topological transitions in interacting quantum circuits. <i>Nature</i> , 2014 , 515, 241-4	50.4	120
14	Emulating weak localization using a solid-state quantum circuit. <i>Nature Communications</i> , 2014 , 5, 5184	17.4	27
13	Fast accurate state measurement with superconducting qubits. <i>Physical Review Letters</i> , 2014 , 112, 190504	7.4	200
12	Optimal quantum control using randomized benchmarking. <i>Physical Review Letters</i> , 2014 , 112, 240504	7.4	118
11	Rolling quantum dice with a superconducting qubit. <i>Physical Review A</i> , 2014 , 90,	2.6	20
10	Catching Time-Reversed Microwave Coherent State Photons with 99.4% Absorption Efficiency. <i>Physical Review Letters</i> , 2014 , 112,	7.4	70
9	Qubit Architecture with High Coherence and Fast Tunable Coupling. <i>Physical Review Letters</i> , 2014 , 113, 220502	7.4	279
8	Characterization and reduction of microfabrication-induced decoherence in superconducting quantum circuits. <i>Applied Physics Letters</i> , 2014 , 105, 062601	3.4	68
7	Fabrication and characterization of aluminum airbridges for superconducting microwave circuits. <i>Applied Physics Letters</i> , 2014 , 104, 052602	3.4	60

6	Catch and release of microwave photon states. <i>Physical Review Letters</i> , 2013 , 110, 107001	7-4	125
5	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
4	Fluctuations from edge defects in superconducting resonators. <i>Applied Physics Letters</i> , 2013 , 103, 072603	3-4	34
3	Excitation of superconducting qubits from hot nonequilibrium quasiparticles. <i>Physical Review Letters</i> , 2013 , 110, 150502	7-4	37
2	Planar superconducting resonators with internal quality factors above one million. <i>Applied Physics Letters</i> , 2012 , 100, 113510	3-4	264
1	Multiplexed dispersive readout of superconducting phase qubits. <i>Applied Physics Letters</i> , 2012 , 101, 182601	3-4	53