Andrew Cleland

List of Publications by Year in Descending Order

73 papers	10,723 citations	44 h-index	76 g-index
76 ext. papers	12,713 ext. citations	12.9 avg, IF	5.76 L-index

#	Paper	IF	Citations
73	Entanglement Purification and Protection in a Superconducting Quantum Network.. *Physical Review Letters*, **2022**, 128, 080504	7.4	1
72	Flux-pumped impedance-engineered broadband Josephson parametric amplifier. *Applied Physics Letters*, **2021**, 118, 142601	3.4	5
71	Superconducting qubits in a flip-chip architecture. *Applied Physics Letters*, **2021**, 118, 232602	3.4	2
70	Deterministic multi-qubit entanglement in a quantum network. *Nature*, **2021**, 590, 571-575	50.4	15
69	Proposal for a Nanomechanical Qubit. *Physical Review X*, **2021**, 11,	9.1	5
68	Continuous and Time-Domain Coherent Signal Conversion between Optical and Microwave Frequencies. *Physical Review Applied*, **2020**, 14,	4.3	4
67	Quantum Erasure Using Entangled Surface Acoustic Phonons. *Physical Review X*, **2020**, 10,	9.1	10
66	Remote Entanglement via Adiabatic Passage Using a Tunably Dissipative Quantum Communication System. *Physical Review Letters*, **2020**, 124, 240502	7.4	8
65	Measurements of a quantum bulk acoustic resonator using a superconducting qubit. *Applied Physics Letters*, **2020**, 117, 254001	3.4	1
64	A fast and large bandwidth superconducting variable coupler. *Applied Physics Letters*, **2020**, 117, 244001	3.4	0
63	Unidirectional distributed acoustic reflection transducers for quantum applications. *Applied Physics Letters*, **2019**, 114, 223501	3.4	3
62	Violating Bell's inequality with remotely connected superconducting qubits. *Nature Physics*, **2019**, 15, 741-744	16.2	23
61	Simple non-galvanic flip-chip integration method for hybrid quantum systems. *Applied Physics Letters*, **2019**, 114, 173501	3.4	5
60	Phonon-mediated quantum state transfer and remote qubit entanglement. *Science*, **2019**, 364, 368-371	33.3	88
59	Spin–phonon interactions in silicon carbide addressed by Gaussian acoustics. *Nature Physics*, **2019**, 15, 490-495	16.2	109
58	The 2019 surface acoustic waves roadmap. *Journal Physics D: Applied Physics*, **2019**, 52, 353001	3	112
57	Deterministic bidirectional communication and remote entanglement generation between superconducting qubits. *Npj Quantum Information*, **2019**, 5,	8.6	24

56	Quantum control of surface acoustic-wave phonons. *Nature*, **2018**, 563, 661-665	50.4	142
55	Input-output theory for superconducting and photonic circuits that contain weak retroreflections and other weak pseudocavities. *Physical Review A*, **2018**, 98,	2.6	8
54	A simple microfluidic aggregation analyzer for the specific, sensitive and multiplexed quantification of proteins in a serum environment. *Biosensors and Bioelectronics*, **2016**, 77, 1062-9	11.8	10
53	Bi-directional conversion between microwave and optical frequencies in a piezoelectric optomechanical device. *Applied Physics Letters*, **2016**, 109, 033107	3.4	81
52	State preservation by repetitive error detection in a superconducting quantum circuit. *Nature*, **2015** , 519, 66-9	50.4	542
51	PHYSICS. Pumping up the quantum. *Science*, **2015**, 350, 280	33.3	
50	Qubit Metrology of Ultralow Phase Noise Using Randomized Benchmarking. *Physical Review Applied*, **2015**, 3,	4.3	39
49	Quantum Delayed-Choice Experiment with a Beam Splitter in a Quantum Superposition. *Physical Review Letters*, **2015**, 115, 260403	7.4	23
48	Superconducting quantum circuits at the surface code threshold for fault tolerance. *Nature*, **2014**, 508, 500-3	50.4	961
47	Reducing the impact of intrinsic dissipation in a superconducting circuit by quantum error detection. *Nature Communications*, **2014**, 5, 3135	17.4	19
46	Observation of topological transitions in interacting quantum circuits. *Nature*, **2014**, 515, 241-4	50.4	120
45	Emulating weak localization using a solid-state quantum circuit. *Nature Communications*, **2014**, 5, 5184	17.4	27
44	Fast accurate state measurement with superconducting qubits. *Physical Review Letters*, **2014**, 112, 190504	7.4	200
43	Optimal quantum control using randomized benchmarking. *Physical Review Letters*, **2014**, 112, 240504	7.4	118
42	Strong environmental coupling in a Josephson parametric amplifier. *Applied Physics Letters*, **2014**, 104, 263513	3.4	93
41	Rolling quantum dice with a superconducting qubit. *Physical Review A*, **2014**, 90,	2.6	20
40	Catching Time-Reversed Microwave Coherent State Photons with 99.4% Absorption Efficiency. *Physical Review Letters*, **2014**, 112,	7.4	70
39	Qubit Architecture with High Coherence and Fast Tunable Coupling. *Physical Review Letters*, **2014**, 113, 220502	7.4	279

38	Characterization and reduction of microfabrication-induced decoherence in superconducting quantum circuits. *Applied Physics Letters*, **2014**, 105, 062601	3.4	68
37	Fabrication and characterization of aluminum airbridges for superconducting microwave circuits. *Applied Physics Letters*, **2014**, 104, 052602	3.4	60
36	Coherent Josephson qubit suitable for scalable quantum integrated circuits. *Physical Review Letters* , **2013**, 111, 080502	7.4	401
35	Nanomechanical coupling between microwave and optical photons. *Nature Physics*, **2013**, 9, 712-716	16.2	394
34	Catch and release of microwave photon states. *Physical Review Letters*, **2013**, 110, 107001	7.4	125
33	Design and characterization of a lumped element single-ended superconducting microwave parametric amplifier with on-chip flux bias line. *Applied Physics Letters*, **2013**, 103, 122602	3.4	57
32	Fluctuations from edge defects in superconducting resonators. *Applied Physics Letters*, **2013**, 103, 072601	3.4	34
31	Excitation of superconducting qubits from hot nonequilibrium quasiparticles. *Physical Review Letters*, **2013**, 110, 150502	7.4	37
30	Quantum state characterization of a fast tunable superconducting resonator. *Applied Physics Letters*, **2013**, 102, 163503	3.4	47
29	Surface codes: Towards practical large-scale quantum computation. *Physical Review A*, **2012**, 86,	2.6	968
28	Planar superconducting resonators with internal quality factors above one million. *Applied Physics Letters*, **2012**, 100, 113510	3.4	264
27	Computing prime factors with a Josephson phase qubit quantum processor. *Nature Physics*, **2012**, 8, 719-723	16.2	194
26	Multiplexed dispersive readout of superconducting phase qubits. *Applied Physics Letters*, **2012**, 101, 182601	3.4	53
25	Dynamic quantum Kerr effect in circuit quantum electrodynamics. *Physical Review A*, **2012**, 85,	2.6	10
24	A high-throughput label-free nanoparticle analyser. *Nature Nanotechnology*, **2011**, 6, 308-13	28.7	154
23	Photon shell game in three-resonator circuit quantum electrodynamics. *Nature Physics*, **2011**, 7, 287-293	16.2	103
22	Surface loss simulations of superconducting coplanar waveguide resonators. *Applied Physics Letters* , **2011**, 99, 113513	3.4	95
21	Measurement of energy decay in superconducting qubits from nonequilibrium quasiparticles. *Physical Review B*, **2011**, 84,	3.3	67

20	Minimizing quasiparticle generation from stray infrared light in superconducting quantum circuits. *Applied Physics Letters*, **2011**, 99, 113507	3.4	147
19	Quantum ground state and single-phonon control of a mechanical resonator. *Nature*, **2010**, 464, 697-703	50.4	1368
18	Generation of three-qubit entangled states using superconducting phase qubits. *Nature*, **2010**, 467, 570-3	50.4	293
17	Quantum process tomography of a universal entangling gate implemented with Josephson phase qubits. *Nature Physics*, **2010**, 6, 409-413	16.2	137
16	Quantum process tomography of two-qubit controlled-Z and controlled-NOT gates using superconducting phase qubits. *Physical Review B*, **2010**, 82,	3.3	76
15	Decoherence dynamics of complex photon states in a superconducting circuit. *Physical Review Letters*, **2009**, 103, 200404	7.4	39
14	Improving the coherence time of superconducting coplanar resonators. *Applied Physics Letters*, **2009**, 95, 233508	3.4	121
13	Synthesizing arbitrary quantum states in a superconducting resonator. *Nature*, **2009**, 459, 546-9	50.4	617
12	Violation of Bell's inequality in Josephson phase qubits. *Nature*, **2009**, 461, 504-6	50.4	290
11	Process tomography of quantum memory in a Josephson-phase qubit coupled to a two-level state. *Nature Physics*, **2008**, 4, 523-526	16.2	192
10	Microwave dielectric loss at single photon energies and millikelvin temperatures. *Applied Physics Letters*, **2008**, 92, 112903	3.4	183
9	State tomography of capacitively shunted phase qubits with high fidelity. *Physical Review Letters*, **2006**, 97, 050502	7.4	154
8	Measurement of the entanglement of two superconducting qubits via state tomography. *Science*, **2006**, 313, 1423-5	33.3	366
7	Superconducting qubits coupled to nanoelectromechanical resonators: An architecture for solid-state quantum-information processing. *Physical Review A*, **2005**, 71,	2.6	50
6	Mechanical quantum resonators. *AIP Conference Proceedings*, **2005**,	0	2
5	Hot electrons in low-dimensional phonon systems. *Physical Review B*, **2005**, 72,	3.3	24
4	Superconducting phase qubit coupled to a nanomechanical resonator: Beyond the rotating-wave approximation. *Physical Review A*, **2004**, 70,	2.6	54
3	Superconducting qubit storage and entanglement with nanomechanical resonators. *Physical Review Letters*, **2004**, 93, 070501	7.4	187

2	Nanoscale radio-frequency thermometry. *Applied Physics Letters*, **2003**, 83, 1002-1004	3.4	58
1	Single-electron transistor as a radio-frequency mixer. *Applied Physics Letters*, **2002**, 81, 532-534	3.4	43