Philip Krantz

List of Publications by Citations

26 papers	1,200 citations	15 h-index	27 g-index
27 ext. papers	2,017 ext. citations	9 avg, IF	4.87 L-index

#	Paper	IF	Citations
26	A quantum engineerꞔs guide to superconducting qubits. *Applied Physics Reviews*, **2019**, 6, 021318	17.3	358
25	Superconducting Qubits: Current State of Play. *Annual Review of Condensed Matter Physics*, **2020**, 11, 369-395	19.7	257
24	3D integrated superconducting qubits. *Npj Quantum Information*, **2017**, 3,	8.6	81
23	Coherent control of a hybrid superconducting circuit made with graphene-based van der Waals heterostructures. *Nature Nanotechnology*, **2019**, 14, 120-125	28.7	75
22	Tunable Coupling Scheme for Implementing High-Fidelity Two-Qubit Gates. *Physical Review Applied*, **2018**, 10,	4.3	63
21	Direct observation of the thickness distribution of ultra thin AlOxbarriers in Al/AlOx/Al Josephson junctions. *Journal Physics D: Applied Physics*, **2015**, 48, 395308	3	44
20	Single-shot read-out of a superconducting qubit using a Josephson parametric oscillator. *Nature Communications*, **2016**, 7, 11417	17.4	42
19	Waveguide quantum electrodynamics with superconducting artificial giant atoms. *Nature*, **2020**, 583, 775-779	50.4	40
18	Characterization of a multimode coplanar waveguide parametric amplifier. *Journal of Applied Physics*, **2015**, 118, 154501	2.5	33
17	Coupling of an erbium spin ensemble to a superconducting resonator. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2012**, 45, 124019	1.3	28
16	Distinguishing Coherent and Thermal Photon Noise in a Circuit Quantum Electrodynamical System. *Physical Review Letters*, **2018**, 120, 260504	7.4	27
15	Investigation of nonlinear effects in Josephson parametric oscillators used in circuit quantum electrodynamics. *New Journal of Physics*, **2013**, 15, 105002	2.9	24
14	Improved Success Probability with Greater Circuit Depth for the Quantum Approximate Optimization Algorithm. *Physical Review Applied*, **2020**, 14,	4.3	20
13	Period-tripling subharmonic oscillations in a driven superconducting resonator. *Physical Review B*, **2017**, 96,	3.3	19
12	The pumpistor: A linearized model of a flux-pumped superconducting quantum interference device for use as a negative-resistance parametric amplifier. *Applied Physics Letters*, **2013**, 103, 102603	3.4	15
11	Fabrication of large dimension aluminum air-bridges for superconducting quantum circuits. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2013**, 31, 031601	1.3	12
10	Simplified Josephson-junction fabrication process for reproducibly high-performance superconducting qubits. *Applied Physics Letters*, **2021**, 118, 064002	3.4	11

9	The atomic details of the interfacial interaction between the bottom electrode of Al/AlOx/Al Josephson junctions and HF-treated Si substrates. *Journal of Applied Physics*, **2015**, 117, 163915	2.5	10
8	Generating spatially entangled itinerant photons with waveguide quantum electrodynamics. *Science Advances*, **2020**, 6,	14.3	9
7	Correlation between Al grain size, grain boundary grooves and local variations in oxide barrier thickness of Al/AlOx/Al tunnel junctions by transmission electron microscopy. *SpringerPlus*, **2016**, 5, 1067		9
6	Nondegenerate parametric oscillations in a tunable superconducting resonator. *Physical Review B*, **2018**, 97,	3.3	8
5	Microwave photon generation in a doubly tunable superconducting resonator. *Journal of Physics: Conference Series*, **2018**, 969, 012146	0.3	6
4	Multi-level quantum noise spectroscopy. *Nature Communications*, **2021**, 12, 967	17.4	4
3	An On-Chip Mach-Zehnder Interferometer in the Microwave Regime. *IEEE Transactions on Applied Superconductivity*, **2011**, 21, 448-451	1.8	3
2	Niobium and Aluminum Josephson Junctions Fabricated with a Damascene CMP Process. *Physics Procedia*, **2012**, 36, 211-216		1
1	Microwave calibration of qubit drive line components at millikelvin temperatures. *Applied Physics Letters*, **2022**, 120, 054004	3.4	1