Ioan M Pop

List of Publications by Citations

46 papers	1,635 citations	21 h-index	40 g-index
47 ext. papers	2,121 ext. citations	7.3 avg, IF	4.38 L-index

#	Paper	IF	Citations
46	Quantum engineering. Confining the state of light to a quantum manifold by engineered two-photon loss. *Science*, **2015**, 347, 853-7	33.3	223
45	Coherent suppression of electromagnetic dissipation due to superconducting quasiparticles. *Nature*, **2014**, 508, 369-72	50.4	146
44	Reaching 10 ms single photon lifetimes for superconducting aluminum cavities. *Applied Physics Letters*, **2013**, 102, 192604	3.4	126
43	Microwave characterization of Josephson junction arrays: implementing a low loss superinductance. *Physical Review Letters*, **2012**, 109, 137002	7.4	120
42	Demonstrating a driven reset protocol for a superconducting qubit. *Physical Review Letters*, **2013**, 110, 120501	7.4	118
41	Measurement and control of quasiparticle dynamics in a superconducting qubit. *Nature Communications*, **2014**, 5, 5836	17.4	88
40	Measurement of the effect of quantum phase slips in a Josephson junction chain. *Nature Physics*, **2010**, 6, 589-592	16.2	75
39	Non-Poissonian quantum jumps of a fluxonium qubit due to quasiparticle excitations. *Physical Review Letters*, **2014**, 113, 247001	7.4	71
38	Loss Mechanisms and Quasiparticle Dynamics in Superconducting Microwave Resonators Made of Thin-Film Granular Aluminum. *Physical Review Letters*, **2018**, 121, 117001	7.4	59
37	Junction fabrication by shadow evaporation without a suspended bridge. *Nanotechnology*, **2011**, 22, 315302	3.4	57
36	Quantum phase slips in Josephson junction rings. *Physical Review B*, **2013**, 87,	3.3	46
35	Granular aluminium as a superconducting material for high-impedance quantum circuits. *Nature Materials*, **2019**, 18, 816-819	27	45
34	Circuit quantum electrodynamics of granular aluminum resonators. *Nature Communications*, **2018**, 9, 3889	17.4	45
33	Fabrication of stable and reproducible submicron tunnel junctions. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2012**, 30, 010607	1.3	36
32	Understanding the SR spectra of MnSi without magnetic polarons. *Physical Review B*, **2014**, 89,	3.3	30
31	Planar Multilayer Circuit Quantum Electrodynamics. *Physical Review Applied*, **2016**, 5,	4.3	27
30	Bloch band dynamics of a Josephson junction in an inductive environment. *Physical Review B*, **2015**, 91,	3.3	24

29	Experimental demonstration of Aharonov-Casher interference in a Josephson junction circuit. *Physical Review B*, **2012**, 85,	3.3	23
28	Inductively shunted transmon qubit with tunable transverse and longitudinal coupling. *Physical Review B*, **2017**, 96,	3.3	21
27	Measurement of the current-phase relation in Josephson junction rhombi chains. *Physical Review B*, **2008**, 78,	3.3	21
26	Reducing the impact of radioactivity on quantum circuits in a deep-underground facility. *Nature Communications*, **2021**, 12, 2733	17.4	21
25	Quantization of inductively shunted superconducting circuits. *Physical Review B*, **2016**, 94,	3.3	20
24	Simultaneous Monitoring of Fluxonium Qubits in a Waveguide. *Physical Review Applied*, **2018**, 9,	4.3	19
23	Phonon traps reduce the quasiparticle density in superconducting circuits. *Applied Physics Letters*, **2019**, 115, 212601	3.4	18
22	Electrodynamics of granular aluminum from superconductor to insulator: Observation of collective superconducting modes. *Physical Review B*, **2019**, 99,	3.3	17
21	Driving Forbidden Transitions in the Fluxonium Artificial Atom. *Physical Review Applied*, **2018**, 9,	4.3	14
20	An argon ion beam milling process for native AlOx layers enabling coherent superconducting contacts. *Applied Physics Letters*, **2017**, 111, 072601	3.4	13
19	Bistability in a mesoscopic Josephson junction array resonator. *Physical Review B*, **2018**, 97,	3.3	13
18	Nondegenerate Parametric Amplifiers Based on Dispersion-Engineered Josephson-Junction Arrays. *Physical Review Applied*, **2020**, 13,	4.3	12
17	Interplay Between Kinetic Inductance, Nonlinearity, and Quasiparticle Dynamics in Granular Aluminum Microwave Kinetic Inductance Detectors. *Physical Review Applied*, **2019**, 11,	4.3	12
16	Coherent frequency conversion in a superconducting artificial atom with two internal degrees of freedom. *Physical Review Letters*, **2012**, 108, 107001	7.4	12
15	Planar superconducting whispering gallery mode resonators. *Applied Physics Letters*, **2013**, 103, 142604	3.4	11
14	Tunable ohmic environment using Josephson junction chains. *Physical Review B*, **2018**, 97,	3.3	10
13	Quantum dynamics of superconducting nano-circuits: phase qubit, charge qubit and rhombi chains. *Quantum Information Processing*, **2009**, 8, 155-182	1.6	8
12	State preparation of a fluxonium qubit with feedback from a custom FPGA-based platform **2020**,		7

11	Energy-participation quantization of Josephson circuits. *Npj Quantum Information*, **2021**, 7,	8.6	5
10	Implementation of a Transmon Qubit Using Superconducting Granular Aluminum. *Physical Review X* , **2020**, 10,	9.1	4
9	Fluxon-based quantum simulation in circuit QED. *Physical Review B*, **2018**, 98,	3.3	4
8	Onset of phase diffusion in high kinetic inductance granular aluminum micro-SQUIDs. *Superconductor Science and Technology*, **2019**, 32, 125008	3.1	3
7	Quantum Nondemolition Dispersive Readout of a Superconducting Artificial Atom Using Large Photon Numbers. *Physical Review Applied*, **2021**, 15,	4.3	3
6	Quantum Versus Classical Switching Dynamics of Driven Dissipative Kerr Resonators. *Physical Review Applied*, **2020**, 13,	4.3	2
5	Superconducting granular aluminum resonators resilient to magnetic fields up to 1 Tesla. *Applied Physics Letters*, **2020**, 117, 120502	3.4	2
4	Microscopic charging and in-gap states in superconducting granular aluminum. *Physical Review B*, **2020**, 102,	3.3	2
3	DEMETRA: Suppression of the Relaxation Induced by Radioactivity in Superconducting Qubits. *Journal of Low Temperature Physics*, **2020**, 199, 475-481	1.3	1
2	Minimizing the Discrimination Time for Quantum States of an Artificial Atom. *Physical Review Applied*, **2021**, 15,	4.3	1
1	Operating in a deep underground facility improves the locking of gradiometric fluxonium qubits at the sweet spots. *Applied Physics Letters*, **2022**, 120, 054001	3.4	0