

# Girish Agarwal

## List of Publications by Year in descending order

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138  
papers

6,847  
citations

57719

44  
h-index

66879

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139  
docs citations

139  
times ranked

3899  
citing authors

#	ARTICLE	IF	CITATIONS
1	Vacuum-Field Rabi Splittings in Microwave Absorption by Rydberg Atoms in a Cavity. <i>Physical Review Letters</i> , 1984, 53, 1732-1734.	2.9	363
2	Magnon-Photon-Phonon Entanglement in Cavity Magnomechanics. <i>Physical Review Letters</i> , 2018, 121, 203601.	2.9	339
3	Quantum electrodynamics in the presence of dielectrics and conductors. I. Electromagnetic-field response functions and black-body fluctuations in finite geometries. <i>Physical Review A</i> , 1975, 11, 230-242.	1.0	323
4	Nonclassical character of states exhibiting no squeezing or sub-Poissonian statistics. <i>Physical Review A</i> , 1992, 46, 485-488.	1.0	242
5	Quantum electrodynamics in the presence of dielectrics and conductors. IV. General theory for spontaneous emission in finite geometries. <i>Physical Review A</i> , 1975, 12, 1475-1497.	1.0	212
6	Field-Correlation Effects in Multiphoton Absorption Processes. <i>Physical Review A</i> , 1970, 1, 1445-1459.	1.0	200
7	Metasurfaces for quantum photonics. <i>Nature Photonics</i> , 2021, 15, 327-336.	15.6	198
8	Anisotropic Vacuum-Induced Interference in Decay Channels. <i>Physical Review Letters</i> , 2000, 84, 5500-5503.	2.9	192
9	Atomic Schrödinger cat states. <i>Physical Review A</i> , 1997, 56, 2249-2254.	1.0	189
10	Cooperative behavior of atoms irradiated by broadband squeezed light. <i>Physical Review A</i> , 1990, 41, 3782-3791.	1.0	175
11	Nonclassicality and decoherence of photon-subtracted squeezed states. <i>Physical Review A</i> , 2007, 75, .	1.0	157
12	2022 Roadmap on integrated quantum photonics. <i>JPhys Photonics</i> , 2022, 4, 012501.	2.2	152
13	Squeezed states of magnons and phonons in cavity magnomechanics. <i>Physical Review A</i> , 2019, 99, .	1.0	146
14	Quantum entanglement between two magnon modes via Kerr nonlinearity driven far from equilibrium. <i>Physical Review Research</i> , 2019, 1, .	1.3	139
15	Enhancement of cavity cooling of a micromechanical mirror using parametric interactions. <i>Physical Review A</i> , 2009, 79, .	1.0	130
16	Normal-mode splitting in a coupled system of a nanomechanical oscillator and a parametric amplifier cavity. <i>Physical Review A</i> , 2009, 80, .	1.0	127
17	Coherent-light-boosted, sub-shot noise, quantum interferometry. <i>New Journal of Physics</i> , 2010, 12, 083014.	1.2	127
18	Strong mechanical squeezing and its detection. <i>Physical Review A</i> , 2016, 93, .	1.0	119

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19	Production of Schrödinger macroscopic quantum-superposition states in a Kerr medium. <i>Physical Review A</i> , 1993, 47, 5024-5029.	1.0	118
20	Interaction of electromagnetic waves at rough dielectric surfaces. <i>Physical Review B</i> , 1977, 15, 2371-2383.	1.1	105
21	True photocounting statistics of multiple on-off detectors. <i>Physical Review A</i> , 2012, 85, .	1.0	104
22	Robust stationary mechanical squeezing in a kicked quadratic optomechanical system. <i>Physical Review A</i> , 2014, 89, .	1.0	101
23	Realization of trapping in a two-level system with frequency-modulated fields. <i>Physical Review A</i> , 1994, 50, R4465-R4467.	1.0	83
24	Electromagnetically induced absorption in a three-resonator metasurface system. <i>Scientific Reports</i> , 2015, 5, 10737.	1.6	78
25	Waveguide transport mediated by strong coupling with atoms. <i>Physical Review A</i> , 2017, 95, .	1.0	70
26	Quantum-interference-initiated superradiant and subradiant emission from entangled atoms. <i>Physical Review A</i> , 2011, 84, .	1.0	68
27	Enhancement of electromagnetically induced transparency in metamaterials using long range coupling mediated by a hyperbolic material. <i>Optics Express</i> , 2018, 26, 627.	1.7	66
28	Supersensitive measurement of angular displacements using entangled photons. <i>Physical Review A</i> , 2011, 83, .	1.0	64
29	Deterministic quantum entanglement between macroscopic ferrite samples. <i>Applied Physics Letters</i> , 2020, 117, .	1.5	64
30	Superresolution via structured illumination quantum correlation microscopy. <i>Optica</i> , 2017, 4, 580.	4.8	63
31	Sub-Binomial Light. <i>Physical Review Letters</i> , 2012, 109, 093601.	2.9	62
32	Inducing Disallowed Two-Atom Transitions with Temporally Entangled Photons. <i>Physical Review Letters</i> , 2004, 93, 093002.	2.9	55
33	Entanglement of polarization and orbital angular momentum. <i>Physical Review A</i> , 2015, 91, .	1.0	55
34	Robust force sensing for a free particle in a dissipative optomechanical system with a parametric amplifier. <i>Physical Review A</i> , 2017, 95, .	1.0	55
35	Directional Superradiant Emission from Statistically Independent Incoherent Nonclassical and Classical Sources. <i>Physical Review Letters</i> , 2014, 113, 263606.	2.9	54
36	Observation of giant Goos-Hänchen and angular shifts at designed metasurfaces. <i>Scientific Reports</i> , 2016, 6, 19319.	1.6	53

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37	Collective multiphoton blockade in cavity quantum electrodynamics. <i>Physical Review A</i> , 2017, 95, .	1.0	53
38	Long-Time Memory and Ternary Logic Gate Using a Multistable Cavity Magnonic System. <i>Physical Review Letters</i> , 2021, 127, 183202.	2.9	53
39	Superbunching and Nonclassicality as new Hallmarks of Superradiance. <i>Scientific Reports</i> , 2015, 5, 17335.	1.6	50
40	Long-range dipole-dipole interaction and anomalous Förster energy transfer across a hyperbolic metamaterial. <i>Physical Review B</i> , 2016, 93, .	1.1	50
41	Enhanced Sensing of Weak Anharmonicities through Coherences in Dissipatively Coupled Anti-PT Symmetric Systems. <i>Physical Review Letters</i> , 2021, 126, 180401.	2.9	50
42	Squeezed Light Induced Symmetry Breaking Superradiant Phase Transition. <i>Physical Review Letters</i> , 2020, 124, 073602.	2.9	49
43	Reciprocity relations for reflected amplitudes. <i>Optics Letters</i> , 2002, 27, 1205.	1.7	47
44	Anisotropy-Induced Quantum Interference and Population Trapping between Orthogonal Quantum Dot Exciton States in Semiconductor Cavity Systems. <i>Physical Review Letters</i> , 2017, 118, 063601.	2.9	47
45	Regularization of the spectral singularity in PT-symmetric systems by all-order nonlinearities: Nonreciprocity and optical isolation. <i>Physical Review A</i> , 2014, 89, .	1.0	45
46	Anderson localization with second quantized fields in a coupled array of waveguides. <i>Physical Review A</i> , 2010, 82, .	1.0	43
47	Einstein-Podolsky-Rosen steering using quantum correlations in non-Gaussian entangled states. <i>Physical Review A</i> , 2014, 89, .	1.0	38
48	Long-Range Resonant Energy Transfer Using Optical Topological Transitions in Metamaterials. <i>ACS Photonics</i> , 2018, 5, 2737-2741.	3.2	38
49	Protecting bipartite entanglement by quantum interferences. <i>Physical Review A</i> , 2010, 81, .	1.0	35
50	Interfering pathways for photon blockade in cavity QED with one and two qubits. <i>Physical Review A</i> , 2019, 100, .	1.0	35
51	Hyperradiance from collective behavior of coherently driven atoms. <i>Optica</i> , 2017, 4, 779.	4.8	34
52	Large enhancement of Förster resonance energy transfer on graphene platforms. <i>Applied Physics Letters</i> , 2013, 103, .	1.5	32
53	Squeezed light induced two-photon absorption fluorescence of fluorescein biomarkers. <i>Applied Physics Letters</i> , 2020, 116, 254001.	1.5	32
54	QUANTUM TELEPORTATION WITH PAIR-COHERENT STATES. <i>International Journal of Quantum Information</i> , 2007, 05, 17-22.	0.6	30

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55	Quantum dynamical framework for Brownian heat engines. <i>Physical Review E</i> , 2013, 88, 012130.	0.8	30
56	Superradiance and collective gain in multimode optomechanics. <i>Physical Review A</i> , 2014, 90, .	1.0	30
57	Perfect photon absorption in the nonlinear regime of cavity quantum electrodynamics. <i>Physical Review A</i> , 2016, 93, .	1.0	30
58	Generation and detection of non-Gaussian phonon-added coherent states in optomechanical systems. <i>Physical Review A</i> , 2018, 98, .	1.0	30
59	Coherent perfect absorption of path entangled single photons. <i>Optics Express</i> , 2014, 22, 20936.	1.7	29
60	Partial angular coherence and the angular Schmidt spectrum of entangled two-photon fields. <i>Physical Review A</i> , 2011, 84, .	1.0	28
61	Quantum Fluctuations in the Fröhlich Condensate of Molecular Vibrations Driven Far From Equilibrium. <i>Physical Review Letters</i> , 2019, 122, 158101.	2.9	28
62	Interference control of perfect photon absorption in cavity quantum electrodynamics. <i>Physical Review A</i> , 2017, 95, .	1.0	27
63	Multiple Fano interferences due to waveguide-mediated phase coupling between atoms. <i>Physical Review A</i> , 2019, 100, .	1.0	27
64	Tunable entanglement, antibunching, and saturation effects in dipole blockade. <i>Physical Review A</i> , 2010, 81, .	1.0	26
65	Photon trapping in cavity quantum electrodynamics. <i>Physical Review A</i> , 2015, 92, .	1.0	26
66	Quantum statistics of a single-atom Scovil–Schulz-DuBois heat engine. <i>Physical Review A</i> , 2017, 96, .	1.0	26
67	Vacuum-induced Stark shifts for quantum logic using a collective system in a high-quality dispersive cavity. <i>Physical Review A</i> , 2005, 71, .	1.0	25
68	Simulating superradiance from higher-order-intensity-correlation measurements: Single atoms. <i>Physical Review A</i> , 2015, 92, .	1.0	25
69	Interferences in Parametric Interactions Driven by Quantized Fields. <i>Physical Review Letters</i> , 2006, 97, 023601.	2.9	24
70	Measuring arbitrary-order coherences: Tomography of single-mode multiphoton polarization-entangled states. <i>Physical Review A</i> , 2010, 81, .	1.0	24
71	Nonlocal continuous-variable correlations and violation of Bell's inequality for light beams with topological singularities. <i>Physical Review A</i> , 2013, 88, .	1.0	24
72	Storing entanglement of nuclear spins via Uhrig dynamical decoupling. <i>Physical Review A</i> , 2011, 83, .	1.0	22

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73	The New Phases due to Symmetry Protected Piecewise Berry Phases; Enhanced Pumping and Non-reciprocity in Trimer Lattices. Scientific Reports, 2017, 7, 45015.	1.6	20
74	Qubit entanglement across $\hat{\mu}$ -near-zero media. Physical Review A, 2017, 96, .	1.0	20
75	Phase control of the quantum statistics of collective emission. Physical Review A, 2018, 97, .	1.0	20
76	Transparency in a chain of disparate quantum emitters strongly coupled to a waveguide. Physical Review A, 2020, 101, .	1.0	19
77	Generation of Werner states via collective decay of coherently driven atoms. Physical Review A, 2006, 73, .	1.0	18
78	Quantum interferometry using coherent beam stimulated parametric down-conversion. Optics Express, 2008, 16, 6479.	1.7	18
79	Nonlinear spin currents. Physical Review B, 2020, 102, .	1.1	18
80	Multipartite entanglement criterion from uncertainty relations. Physical Review A, 2008, 78, .	1.0	17
81	Quantum duality: A source point of view. Physical Review Research, 2020, 2, .	1.3	16
82	Absorption spectrum of optically bistable systems. Physical Review A, 1979, 20, 545-549.	1.0	15
83	Quantum correlations between a pair of Raman photons from a single atom under arbitrary excitation condition. Physical Review A, 2005, 72, .	1.0	15
84	Hyperradiance accompanied by nonclassicality. Physical Review A, 2017, 96, .	1.0	15
85	Simultaneous Excitation of Two Noninteracting Atoms with Time-Frequency Correlated Photon Pairs in a Superconducting Circuit. Physical Review Letters, 2020, 125, 133601.	2.9	15
86	Ultralow threshold bistability and generation of long-lived mode in a dissipatively coupled nonlinear system: Application to magnonics. Physical Review B, 2021, 103, .	1.1	15
87	Amplification of maximally-path-entangled number states. Physical Review A, 2010, 81, .	1.0	13
88	Optomechanical Ramsey interferometry. Physical Review A, 2014, 90, .	1.0	13
89	Sub-Rayleigh quantum imaging using single-photon sources. Physical Review A, 2009, 80, .	1.0	12
90	Creation and manipulation of bound states in the continuum with lasers: Applications to cold atoms and molecules. Physical Review A, 2014, 90, .	1.0	12

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91	Probing the spectrum of the Jaynes-Cummings-Rabi model by its isomorphism to an atom inside a parametric amplifier cavity. <i>Physical Review A</i> , 2021, 103, .	1.0	12
92	Room-Temperature Coupling of Single Photon Emitting Quantum Dots to Localized and Delocalized Modes in a Plasmonic Nanocavity Array. <i>ACS Photonics</i> , 2021, 8, 576-584.	3.2	12
93	Quantum Advantage with Seeded Squeezed Light for Absorption Measurement. <i>Physical Review Applied</i> , 2021, 15, .	1.5	12
94	Optical analog of valley Hall effect of 2D excitons in hyperbolic metamaterial. <i>Optica</i> , 2021, 8, 50.	4.8	12
95	Analysis of super-resolution via 3D structured illumination intensity correlation microscopy. <i>Optics Express</i> , 2018, 26, 27492.	1.7	12
96	Quantum sensing of open systems: Estimation of damping constants and temperature. <i>Physical Review Research</i> , 2020, 2, .	1.3	12
97	Measurement of ground-state decoherence via interruption of coherent population trapping. <i>Physical Review A</i> , 2007, 75, .	1.0	11
98	Single-Shot Direct Tomography of the Complete Transverse Amplitude, Phase, and Polarization Structure of a Light Field. <i>Physical Review Applied</i> , 2019, 12, .	1.5	11
99	Photon statistics of quantum light on scattering from rotating ground glass. <i>Physical Review A</i> , 2020, 101, .	1.0	10
100	Cavity-mediated long-range interaction for fast multiqubit quantum logic operations. <i>Physical Review A</i> , 2005, 72, .	1.0	9
101	Measurement-induced spatial modulation of spontaneous decay and photon arrival times. <i>Physical Review A</i> , 2006, 74, .	1.0	9
102	Time-Reversal-Symmetric Single-Photon Wave Packets for Free-Space Quantum Communication. <i>Physical Review Letters</i> , 2015, 114, 173601.	2.9	9
103	Anti-PT symmetry enhanced interconversion between microwave and optical fields. <i>Physical Review B</i> , 2022, 105, .	1.1	9
104	Multiparticle entanglement and the Schrödinger cat state using ground-state coherences. <i>Journal of Modern Optics</i> , 2005, 52, 1397-1404.	0.6	8
105	Quantum interference and non-locality of independent photons from disparate sources. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2011, 44, 055501.	0.6	8
106	Quantifying quantum-amplified metrology via Fisher information. <i>Physical Review Research</i> , 2022, 4, .	1.3	8
107	Operational definition of quantum correlations of light. <i>Physical Review A</i> , 2016, 94, .	1.0	7
108	Chiral emission of electric dipoles coupled to optical hyperbolic materials. <i>Physical Review B</i> , 2019, 100, .	1.1	7

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109	Quantum Fisher information bounds on precision limits of circular dichroism. <i>Physical Review A</i> , 2021, 104, .	1.0	7
110	Cavity-mediated level attraction and repulsion between magnons. <i>Physical Review B</i> , 2022, 105, .	1.1	7
111	Light, the universe and everything – 12 Herculean tasks for quantum cowboys and black diamond skiers. <i>Journal of Modern Optics</i> , 2018, 65, 1261-1308.	0.6	6
112	Dynamic near-field heat transfer between macroscopic bodies for nanometric gaps. <i>Nanophotonics</i> , 2018, 7, 1581-1588.	2.9	6
113	Beyond sub-Rayleigh imaging via high order correlation of speckle illumination. <i>Journal of Optics (United Kingdom)</i> , 2019, 21, 115604.	1.0	6
114	Causality in propagation of a pulse in a nonlinear dispersive medium. <i>Journal of Modern Optics</i> , 2005, 52, 1449-1456.	0.6	5
115	Generation of odd subharmonic Raman resonances from Stokes–anti-Stokes coupling. <i>Physical Review A</i> , 1991, 43, 1523-1527.	1.0	4
116	Coherent population oscillation produced by saturating probe and pump fields on the intercombination line. <i>Physical Review A</i> , 2016, 93, .	1.0	4
117	Experimental study of decoherence of the two-mode squeezed vacuum state via second harmonic generation. <i>Physical Review Research</i> , 2021, 3, .	1.3	4
118	Quantum Fisher information perspective on sensing in anti-PT symmetric systems. <i>Physical Review Research</i> , 2022, 4, .	1.3	4
119	Towards the Heisenberg limit in magnetometry with parametric down-converted photons. <i>Physical Review A</i> , 2006, 74, .	1.0	3
120	Photon statistics as an interference phenomenon. <i>Optics Letters</i> , 2018, 43, 2304.	1.7	3
121	Analysis of intensity correlation enhanced plasmonic structured illumination microscopy. <i>Optics Letters</i> , 2021, 46, 1554.	1.7	3
122	Observation of photonic spin-momentum locking due to coupling of achiral metamaterials and quantum dots. <i>Journal of Physics Condensed Matter</i> , 2021, 33, 015701.	0.7	3
123	Parametric-interaction-induced avoided dressed-state crossings in cavity QED: Generation of quantum coherence and equally weighted superposition of Fock states. <i>Physical Review Research</i> , 2022, 4, .	1.3	2
124	Rotational frequency shifts for electromagnetic fields of arbitrary states of coherence and polarization. <i>Optics Letters</i> , 2006, 31, 3080.	1.7	1
125	Observation of electromagnetically induced absorption in a three-resonator system. , 2014, , .		1
126	Controlling the dark quadrupole modes in Dolmen structures. , 2016, , .		1



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127	Reply to "Comment on "Protecting bipartite entanglement by quantum interferences" Physical Review A, 2018, 97, .	1.0	1
128	Squeezing of spin-1 quantum states via a one-axis twisting Hamiltonian. Physical Review A, 2021, 104, .	1.0	1
129	Controlled-not Gates for Four-Level Atoms in a Bimodal Cavity. European Physical Journal A, 2005, 23, 19-24.	0.2	0
130	Quantum imaging with incoherent photons. , 2007, , .		0
131	Multipartite entanglement in non-equilibrium quantum phase transition in a collective atomic system. , 2007, , .		0
132	Quantum Imaging with Incoherent Photons. , 2007, , .		0
133	Creation of dicke states in distant qubits using linear optics. , 2007, , .		0
134	Nonlocality from $N > 2$ independent single-photon emitters. Physical Review A, 2010, 82, .	1.0	0
135	Generalized fluctuation theorems for classical systems. Physical Review E, 2015, 92, 052139.	0.8	0
136	Cavity QED with Magnons: Entanglement and Squeezing at Macroscopic Scale. , 2019, , .		0
137	Transparency Effects Due To Single-photon Transport In Waveguide QED. , 2020, , .		0
138	Macroscopic Entanglement Between YIG Samples Without Using Intrinsic Nonlinearities. , 2020, , .		0