

# Nicolas Gisin

## List of Publications by Year in descending order

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148  
papers

14,191  
citations

28274

55  
h-index

20358

116  
g-index

150  
all docs

150  
docs citations

150  
times ranked

6434  
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantum repeaters based on atomic ensembles and linear optics. <i>Reviews of Modern Physics</i> , 2011, 83, 33-80.	45.6	1,412
2	Quantum communication. <i>Nature Photonics</i> , 2007, 1, 165-171.	31.4	1,397
3	From Bell's Theorem to Secure Quantum Key Distribution. <i>Physical Review Letters</i> , 2006, 97, 120405.	7.8	520
4	Quantum cloning. <i>Reviews of Modern Physics</i> , 2005, 77, 1225-1256.	45.6	482
5	Multimode quantum memory based on atomic frequency combs. <i>Physical Review A</i> , 2009, 79, .	2.5	453
6	Quantum Repeaters with Photon Pair Sources and Multimode Memories. <i>Physical Review Letters</i> , 2007, 98, 190503.	7.8	447
7	Optimal eavesdropping in quantum cryptography. I. Information bound and optimal strategy. <i>Physical Review A</i> , 1997, 56, 1163-1172.	2.5	396
8	Device-independent quantum key distribution secure against collective attacks. <i>New Journal of Physics</i> , 2009, 11, 045021.	2.9	379
9	Provably secure and practical quantum key distribution over 307 km of optical fibre. <i>Nature Photonics</i> , 2015, 9, 163-168.	31.4	378
10	Information-theoretic security proof for quantum-key-distribution protocols. <i>Physical Review A</i> , 2005, 72, .	2.5	353
11	Open System Dynamics with Non-Markovian Quantum Trajectories. <i>Physical Review Letters</i> , 1999, 82, 1801-1805.	7.8	310
12	Experimental entanglement distillation and "hidden" non-locality. <i>Nature</i> , 2001, 409, 1014-1017.	27.8	290
13	A relevant two qubit Bell inequality inequivalent to the CHSH inequality. <i>Journal of Physics A</i> , 2004, 37, 1775-1787.	1.6	278
14	Proposal for Implementing Device-Independent Quantum Key Distribution Based on a Heralded Qubit Amplifier. <i>Physical Review Letters</i> , 2010, 105, 070501.	7.8	238
15	Fast and simple one-way quantum key distribution. <i>Applied Physics Letters</i> , 2005, 87, 194108.	3.3	229
16	Entangling independent photons by time measurement. <i>Nature Physics</i> , 2007, 3, 692-695.	16.7	221
17	Optical quantum random number generator. <i>Journal of Modern Optics</i> , 2000, 47, 595-598.	1.3	208
18	Testing the Dimension of Hilbert Spaces. <i>Physical Review Letters</i> , 2008, 100, 210503.	7.8	208

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19	Quantum teleportation from a telecom-wavelength photon to a solid-state quantum memory. <i>Nature Photonics</i> , 2014, 8, 775-778.	31.4	208
20	Testing the speed of "spooky action at a distance". <i>Nature</i> , 2008, 454, 861-864.	27.8	192
21	Non-Markovian quantum-state diffusion: Perturbation approach. <i>Physical Review A</i> , 1999, 60, 91-103.	2.5	187
22	Practical private database queries based on a quantum-key-distribution protocol. <i>Physical Review A</i> , 2011, 83, .	2.5	178
23	Mapping multiple photonic qubits into and out of one solid-state atomic ensemble. <i>Nature Communications</i> , 2010, 1, 12.	12.8	177
24	Long-distance entanglement distribution with single-photon sources. <i>Physical Review A</i> , 2007, 76, .	2.5	173
25	Bilocal versus nonbilocal correlations in entanglement-swapping experiments. <i>Physical Review A</i> , 2012, 85, .	2.5	153
26	Security of quantum key distribution with entangled qutrits. <i>Physical Review A</i> , 2003, 67, .	2.5	138
27	Definitions of multipartite nonlocality. <i>Physical Review A</i> , 2013, 88, .	2.5	138
28	Robust and efficient quantum repeaters with atomic ensembles and linear optics. <i>Physical Review A</i> , 2008, 77, .	2.5	135
29	Coherent Spin Control at the Quantum Level in an Ensemble-Based Optical Memory. <i>Physical Review Letters</i> , 2015, 114, 230502.	7.8	135
30	Heralded quantum entanglement between two crystals. <i>Nature Photonics</i> , 2012, 6, 234-237.	31.4	120
31	Macroscopic quantum states: Measures, fragility, and implementations. <i>Reviews of Modern Physics</i> , 2018, 90, .	45.6	110
32	Quantum Solution to the Byzantine Agreement Problem. <i>Physical Review Letters</i> , 2001, 87, 217901.	7.8	109
33	Heralded Single-Phonon Preparation, Storage, and Readout in Cavity Optomechanics. <i>Physical Review Letters</i> , 2014, 112, 143602.	7.8	109
34	Genuine Quantum Nonlocality in the Triangle Network. <i>Physical Review Letters</i> , 2019, 123, 140401.	7.8	106
35	Nonlinear Bell Inequalities Tailored for Quantum Networks. <i>Physical Review Letters</i> , 2016, 116, 010403.	7.8	101
36	Security of two quantum cryptography protocols using the same four qubit states. <i>Physical Review A</i> , 2005, 72, .	2.5	98

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37	Multiple Observers Can Share the Nonlocality of Half of an Entangled Pair by Using Optimal Weak Measurements. <i>Physical Review Letters</i> , 2015, 114, 250401.	7.8	98
38	Entanglement and non-locality are different resources. <i>New Journal of Physics</i> , 2005, 7, 88-88.	2.9	97
39	Quantum Correlations with Spacelike Separated Beam Splitters in Motion: Experimental Test of Multisimultaneity. <i>Physical Review Letters</i> , 2002, 88, 120404.	7.8	93
40	Quantifying Photonic High-Dimensional Entanglement. <i>Physical Review Letters</i> , 2017, 118, 110501.	7.8	90
41	Photon counting at telecom wavelengths with commercial InGaAs/InP avalanche photodiodes: Current performance. <i>Journal of Modern Optics</i> , 2004, 51, 1381-1398.	1.3	86
42	Non-realism: Deep Thought or a Soft Option?. <i>Foundations of Physics</i> , 2012, 42, 80-85.	1.3	81
43	Testing quantum correlations versus single-particle properties within Leggett's model and beyond. <i>Nature Physics</i> , 2008, 4, 681-685.	16.7	80
44	Towards highly multimode optical quantum memory for quantum repeaters. <i>Physical Review A</i> , 2016, 93, .	2.5	80
45	Multimode and Long-Lived Quantum Correlations Between Photons and Spins in a Crystal. <i>Physical Review Letters</i> , 2017, 118, 210501.	7.8	78
46	Two independent photon pairs versus four-photon entangled states in parametric down conversion. <i>Journal of Modern Optics</i> , 2004, 51, 1637-1649.	1.3	75
47	Quantum approach to coupling classical and quantum dynamics. <i>Physical Review A</i> , 2000, 61, .	2.5	74
48	Quantum Trajectories for Brownian Motion. <i>Physical Review Letters</i> , 1999, 83, 4909-4913.	7.8	70
49	Quantum theory based on real numbers can be experimentally falsified. <i>Nature</i> , 2021, 600, 625-629.	27.8	70
50	All entangled pure quantum states violate the bilocality inequality. <i>Physical Review A</i> , 2017, 96, .	2.5	67
51	Arbitrarily Small Amount of Measurement Independence Is Sufficient to Manifest Quantum Nonlocality. <i>Physical Review Letters</i> , 2014, 113, 190402.	7.8	65
52	Partial list of bipartite Bell inequalities with four binary settings. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2008, 372, 3162-3167.	2.1	62
53	Demonstration of genuine multipartite entanglement with device-independent witnesses. <i>Nature Physics</i> , 2013, 9, 559-562.	16.7	60
54	The speed of quantum information and the preferred frame: analysis of experimental data. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2000, 276, 1-7.	2.1	59

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55	Comprehensive Characterization of InGaAs-InP Avalanche Photodiodes at 1550 nm With an Active Quenching ASIC. IEEE Journal of Quantum Electronics, 2009, 45, 792-799.	1.9	59
56	Quantum teleportation over the Swisscom telecommunication network. Journal of the Optical Society of America B: Optical Physics, 2007, 24, 398.	2.1	57
57	Family of Bell-like Inequalities as Device-Independent Witnesses for Entanglement Depth. Physical Review Letters, 2015, 114, 190401.	7.8	56
58	Proposal for exploring macroscopic entanglement with a single photon and coherent states. Physical Review A, 2012, 86, .	2.5	52
59	Device-Independent Quantum Key Distribution with Local Bell Test. Physical Review X, 2013, 3, .	8.9	52
60	Faint laser quantum key distribution: Eavesdropping exploiting multiphoton pulses. Journal of Modern Optics, 2001, 48, 2009-2021.	1.3	47
61	Sine gating detector with simple filtering for low-noise infra-red single photon detection at room temperature. Journal of Applied Physics, 2012, 112, 063106.	2.5	47
62	Entanglement 25 Years after Quantum Teleportation: Testing Joint Measurements in Quantum Networks. Entropy, 2019, 21, 325.	2.2	46
63	Constraints on nonlocality in networks from no-signaling and independence. Nature Communications, 2020, 11, 2378.	12.8	45
64	Quantum Nonlocality: How Does Nature Do It?. Science, 2009, 326, 1357-1358.	12.6	43
65	Cloning a qutrit. Journal of Modern Optics, 2002, 49, 1355-1373.	1.3	42
66	Simulating Quantum Systems Using Real Hilbert Spaces. Physical Review Letters, 2009, 102, 020505.	7.8	40
67	Exploring the Limits of Quantum Nonlocality with Entangled Photons. Physical Review X, 2015, 5, .	8.9	40
68	Testing Real Quantum Theory in an Optical Quantum Network. Physical Review Letters, 2022, 128, 040402.	7.8	39
69	Correlations in star networks: from Bell inequalities to network inequalities. New Journal of Physics, 2017, 19, 073003.	2.9	38
70	Bilocal Bell Inequalities Violated by the Quantum Elegant Joint Measurement. Physical Review Letters, 2021, 126, 220401.	7.8	38
71	Purification of single-photon entanglement with linear optics. Physical Review A, 2008, 78, .	2.5	37
72	Optical storage for 0.53 s in a solid-state atomic frequency comb memory using dynamical decoupling. New Journal of Physics, 2020, 22, 063009.	2.9	37

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73	Random Variation of Detector Efficiency: A Countermeasure Against Detector Blinding Attacks for Quantum Key Distribution. IEEE Journal of Selected Topics in Quantum Electronics, 2015, 21, 192-196.	2.9	36
74	Full Network Nonlocality. Physical Review Letters, 2022, 128, 010403.	7.8	36
75	How Difficult Is It to Prove the Quantumness of Macroscopic States?. Physical Review Letters, 2014, 113, 090403.	7.8	35
76	Limits on Correlations in Networks for Quantum and No-Signaling Resources. Physical Review Letters, 2019, 123, 070403.	7.8	35
77	Physics without determinism: Alternative interpretations of classical physics. Physical Review A, 2019, 100, .	2.5	34
78	A neural network oracle for quantum nonlocality problems in networks. Npj Quantum Information, 2020, 6, .	6.7	33
79	Cloning entangled photons to scales one can see. Physical Review A, 2010, 82, .	2.5	32
80	Quantification of multidimensional entanglement stored in a crystal. Physical Review A, 2017, 96, .	2.5	32
81	Photon-number-splitting versus cloning attacks in practical implementations of the Bennett-Brassard 1984 protocol for quantum cryptography. Physical Review A, 2005, 71, .	2.5	31
82	Impossibility of faithfully storing single photons with the three-pulse photon echo. Physical Review A, 2010, 81, .	2.5	30
83	BELL'S INEQUALITIES DETECT EFFICIENT ENTANGLEMENT. International Journal of Quantum Information, 2004, 02, 23-31.	1.1	29
84	Equivalence between Two-Qubit Entanglement and Secure Key Distribution. Physical Review Letters, 2003, 91, 167901.	7.8	27
85	Tripartite quantum state violating the hidden-influence constraints. Physical Review A, 2013, 88, .	2.5	27
86	Experimental certification of millions of genuinely entangled atoms in a solid. Nature Communications, 2017, 8, 907.	12.8	27
87	Mathematical languages shape our understanding of time in physics. Nature Physics, 2020, 16, 114-116.	16.7	27
88	Quantum entanglement with acousto-optic modulators: Two-photon beats and Bell experiments with moving beam splitters. Physical Review A, 2003, 67, .	2.5	26
89	Bell Inequalities: Many Questions, a Few Answers. The Western Ontario Series in Philosophy of Science, 2009, , 125-138.	0.2	26
90	A Fabry-Pérot-like two-photon interferometer for high-dimensional time-bin entanglement. Journal of Modern Optics, 2005, 52, 2637-2648.	1.3	25

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91	Simulation of partial entanglement with nonsignaling resources. <i>Physical Review A</i> , 2008, 78, .	2.5	24
92	Photon-pair source with controllable delay based on shaped inhomogeneous broadening of rare-earth-metal-doped solids. <i>Physical Review A</i> , 2011, 83, .	2.5	24
93	Storage and retrieval of time-bin qubits with photon-echo-based quantum memories. <i>Physical Review A</i> , 2007, 76, .	2.5	23
94	Tighter quantum uncertainty relations following from a general probabilistic bound. <i>Physical Review A</i> , 2015, 92, .	2.5	23
95	How far can one send a photon?. <i>Frontiers of Physics</i> , 2015, 10, 1.	5.0	22
96	Indeterminism in Physics, Classical Chaos and Bohmian Mechanics: Are Real Numbers Really Real?. <i>Erkenntnis</i> , 2021, 86, 1469-1481.	0.9	22
97	Nonlocality of Wigner states subject to losses. <i>Physical Review A</i> , 2015, 91, .	2.5	21
98	Quantifying multipartite nonlocality via the size of the resource. <i>Physical Review A</i> , 2015, 91, .	2.5	21
99	Improved implementation of the Alicki-Van Ryn nonclassicality test for a single particle using detectors. <i>Physical Review A</i> , 2009, 79, .	2.5	20
100	Why Bohmian Mechanics? One- and Two-Time Position Measurements, Bell Inequalities, Philosophy, and Physics. <i>Entropy</i> , 2018, 20, 105.	2.2	20
101	Nonlocal multipartite correlations from local marginal probabilities. <i>Physical Review A</i> , 2012, 86, .	2.5	19
102	Demonstration of Quantum Nonlocality in the Presence of Measurement Dependence. <i>Physical Review Letters</i> , 2015, 114, 220404.	7.8	19
103	The Physics of No-Bit-Commitment: Generalized Quantum Non-Locality Versus Oblivious Transfer. <i>Quantum Information Processing</i> , 2006, 5, 131-138.	2.2	18
104	Bell inequalities for three systems and arbitrarily many measurement outcomes. <i>Physical Review A</i> , 2012, 85, .	2.5	18
105	Does large quantum Fisher information imply Bell correlations?. <i>Physical Review A</i> , 2019, 99, .	2.5	18
106	Semi-device-independent characterization of multipartite entanglement of states and measurements. <i>Physical Review A</i> , 2018, 98, .	2.5	17
107	Demonstrating the power of quantum computers, certification of highly entangled measurements and scalable quantum nonlocality. <i>Npj Quantum Information</i> , 2021, 7, .	6.7	16
108	Entanglement Swapping and Quantum Correlations via Symmetric Joint Measurements. <i>Physical Review Letters</i> , 2022, 129, .	7.8	16

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109	PSEUDO-TELEPATHY: INPUT CARDINALITY AND BELL-TYPE INEQUALITIES. <i>International Journal of Quantum Information</i> , 2007, 05, 525-534.	1.1	15
110	Testing a Bell inequality in multipair scenarios. <i>Physical Review A</i> , 2008, 78, .	2.5	15
111	Local content of all pure two-qubit states. <i>Physical Review A</i> , 2012, 86, .	2.5	14
112	Anonymous Quantum Nonlocality. <i>Physical Review Letters</i> , 2014, 113, 130401.	7.8	14
113	Characterization of the hyperfine interaction of the excited D05 state of Eu <sup>3+</sup> :Y <sub>2</sub> SiO <sub>5</sub> . <i>Physical Review B</i> , 2018, 97, .	3.2	14
114	The Platonic solids and fundamental tests of quantum mechanics. <i>Quantum - the Open Journal for Quantum Science</i> , 0, 4, 293.	0.0	14
115	Indeterminism in physics and intuitionistic mathematics. <i>Synthese</i> , 2021, 199, 13345-13371.	1.1	13
116	Nonlocal boxes for networks. <i>Physical Review A</i> , 2021, 104, .	2.5	13
117	Creating single collective atomic excitations via spontaneous Raman emission in inhomogeneously broadened systems: Beyond the adiabatic approximation. <i>Physical Review A</i> , 2009, 79, .	2.5	12
118	Quantum Chance. , 2014, , .		11
119	Two independent photon pairs versus four-photon entangled states in parametric down conversion. <i>Journal of Modern Optics</i> , 2004, 51, 1637-1649.	1.3	11
120	Local content of bipartite qubit correlations. <i>Physical Review A</i> , 2010, 81, .	2.5	10
121	Demonstration of Light-Matter Micro-Macro Quantum Correlations. <i>Physical Review Letters</i> , 2016, 116, 190502.	7.8	10
122	Real numbers are the hidden variables of classical mechanics. <i>Quantum Studies: Mathematics and Foundations</i> , 2020, 7, 197-201.	0.9	10
123	Distributed Temperature Sensor Interrogator Based on Polarization-Sensitive Reflectometry. <i>IEEE Sensors Journal</i> , 2009, 9, 1125-1129.	4.7	9
124	Strong Constraints on Models that Explain the Violation of Bell Inequalities with Hidden Superluminal Influences. <i>Foundations of Physics</i> , 2014, 44, 523-531.	1.3	9
125	Are There Quantum Effects Coming from Outside Space-Time? Nonlocality, Free Will and "No Many-Worlds", 2013, , 23-39.		9
126	Bell-type inequalities for nonlocal resources. <i>Journal of Mathematical Physics</i> , 2006, 47, 112101.	1.1	8



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127	Quantum Nonlocality with Arbitrary Limited Detection Efficiency. Physical Review Letters, 2016, 116, 010401.	7.8	8
128	Insufficiency of avoided crossings for witnessing large-scale quantum coherence in flux qubits. Physical Review A, 2018, 97, .	2.5	8
129	Bell Inequalities with One Bit of Communication. Entropy, 2019, 21, 171.	2.2	8
130	Time Really Passes, Science Can't Deny That. Tutorials, Schools, and Workshops in the Mathematical Sciences, 2017, , 1-15.	0.3	8
131	Universal bound on the cardinality of local hidden variables in networks. Quantum Information and Computation, 2018, 18, 910-926.	0.3	8
132	The Relativity of Indeterminacy. Entropy, 2021, 23, 1326.	2.2	8
133	Quantum state diffusion and time correlation functions. Journal of Modern Optics, 1996, 43, 2289-2300.	1.3	7
134	Quantum Measurements, Energy Conservation and Quantum Clocks. Annalen Der Physik, 2018, 530, 1700388.	2.4	7
135	Compounds of symmetric informationally complete measurements and their application in quantum key distribution. Physical Review Research, 2020, 2, .	3.6	7
136	PHYSICS: New Additions to the Schrodinger Cat Family. Science, 2006, 312, 63-64.	12.6	6
137	From quantum foundations to applications and back. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170326.	3.4	6
138	Oblivious transfer and quantum channels as communication resources. Natural Computing, 2013, 12, 13-17.	3.0	4
139	Macroscopic quantum measurements of noncommuting observables. Physical Review A, 2017, 96, .	2.5	4
140	Quantum Correlations in Newtonian Space and Time.: , 2014, , 185-203.		4
141	Quantum correlation with moving beamsplitters in relativistic configuration. Pramana - Journal of Physics, 2002, 59, 181-188.	1.8	2
142	Can Relativity be Considered Complete? From Newtonian Nonlocality to Quantum Nonlocality and Beyond. Lecture Notes in Physics, 2015, , 195-217.	0.7	2
143	A long-lived solid-state quantum memory. , 2013, , .		1
144	Robust Macroscopic Quantum Measurements in the Presence of Limited Control and Knowledge. Entropy, 2018, 20, 39.	2.2	1

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145	Reply to "Comment on "Physics without determinism: Alternative interpretations of classical physics"â€™. Physical Review A, 2020, 102, .	2.5	1
146	Quantum state diffusion and time correlation functions. Journal of Modern Optics, 1996, 43, 2289-2300.	1.3	1
147	PMD & PDL. Journal of Optical and Fiber Communications Research, 2004, 1, 1-13.	0.5	0
148	Quantum Communications. , 2018, , .		0