

# 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	Full Network Nonlocality. <i>Physical Review Letters</i> , 2022, 128, 010403.	7.8	36
2	Testing Real Quantum Theory in an Optical Quantum Network. <i>Physical Review Letters</i> , 2022, 128, 040402.	7.8	39
3	Entanglement Swapping and Quantum Correlations via Symmetric Joint Measurements. <i>Physical Review Letters</i> , 2022, 129, .	7.8	16
4	Indeterminism in Physics, Classical Chaos and Bohmian Mechanics: Are Real Numbers Really Real?. <i>Erkenntnis</i> , 2021, 86, 1469-1481.	0.9	22
5	Bilocal Bell Inequalities Violated by the Quantum Elegant Joint Measurement. <i>Physical Review Letters</i> , 2021, 126, 220401.	7.8	38
6	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
7	Indeterminism in physics and intuitionistic mathematics. <i>Synthese</i> , 2021, 199, 13345-13371.	1.1	13
8	The Relativity of Indeterminacy. <i>Entropy</i> , 2021, 23, 1326.	2.2	8
9	Nonlocal boxes for networks. <i>Physical Review A</i> , 2021, 104, .	2.5	13
10	Quantum theory based on real numbers can be experimentally falsified. <i>Nature</i> , 2021, 600, 625-629.	27.8	70
11	Real numbers are the hidden variables of classical mechanics. <i>Quantum Studies: Mathematics and Foundations</i> , 2020, 7, 197-201.	0.9	10
12	Mathematical languages shape our understanding of time in physics. <i>Nature Physics</i> , 2020, 16, 114-116.	16.7	27
13	Reply to "Comment on "Physics without determinism: Alternative interpretations of classical physics". <i>Physical Review A</i> , 2020, 102, .	2.5	1
14	A neural network oracle for quantum nonlocality problems in networks. <i>Npj Quantum Information</i> , 2020, 6, .	6.7	33
15	Constraints on nonlocality in networks from no-signaling and independence. <i>Nature Communications</i> , 2020, 11, 2378.	12.8	45
16	Optical storage for 0.53 s in a solid-state atomic frequency comb memory using dynamical decoupling. <i>New Journal of Physics</i> , 2020, 22, 063009.	2.9	37
17	Compounds of symmetric informationally complete measurements and their application in quantum key distribution. <i>Physical Review Research</i> , 2020, 2, .	3.6	7
18	Limits on Correlations in Networks for Quantum and No-Signaling Resources. <i>Physical Review Letters</i> , 2019, 123, 070403.	7.8	35

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19	Genuine Quantum Nonlocality in the Triangle Network. <i>Physical Review Letters</i> , 2019, 123, 140401.	7.8	106
20	Bell Inequalities with One Bit of Communication. <i>Entropy</i> , 2019, 21, 171.	2.2	8
21	Does large quantum Fisher information imply Bell correlations?. <i>Physical Review A</i> , 2019, 99, .	2.5	18
22	Entanglement 25 Years after Quantum Teleportation: Testing Joint Measurements in Quantum Networks. <i>Entropy</i> , 2019, 21, 325.	2.2	46
23	Physics without determinism: Alternative interpretations of classical physics. <i>Physical Review A</i> , 2019, 100, .	2.5	34
24	Insufficiency of avoided crossings for witnessing large-scale quantum coherence in flux qubits. <i>Physical Review A</i> , 2018, 97, .	2.5	8
25	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
26	Robust Macroscopic Quantum Measurements in the Presence of Limited Control and Knowledge. <i>Entropy</i> , 2018, 20, 39.	2.2	1
27	Semi-device-independent characterization of multipartite entanglement of states and measurements. <i>Physical Review A</i> , 2018, 98, .	2.5	17
28	From quantum foundations to applications and back. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2018, 376, 20170326.	3.4	6
29	Macroscopic quantum states: Measures, fragility, and implementations. <i>Reviews of Modern Physics</i> , 2018, 90, .	45.6	110
30	Quantum Measurements, Energy Conservation and Quantum Clocks. <i>Annalen Der Physik</i> , 2018, 530, 1700388.	2.4	7
31	Why Bohmian Mechanics? One- and Two-Time Position Measurements, Bell Inequalities, Philosophy, and Physics. <i>Entropy</i> , 2018, 20, 105.	2.2	20
32	Universal bound on the cardinality of local hidden variables in networks. <i>Quantum Information and Computation</i> , 2018, 18, 910-926.	0.3	8
33	Quantum Communications. , 2018, , .		0
34	Quantifying Photonic High-Dimensional Entanglement. <i>Physical Review Letters</i> , 2017, 118, 110501.	7.8	90
35	Quantification of multidimensional entanglement stored in a crystal. <i>Physical Review A</i> , 2017, 96, .	2.5	32
36	Experimental certification of millions of genuinely entangled atoms in a solid. <i>Nature Communications</i> , 2017, 8, 907.	12.8	27

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37	All entangled pure quantum states violate the bilocality inequality. <i>Physical Review A</i> , 2017, 96, .	2.5	67
38	Correlations in star networks: from Bell inequalities to network inequalities. <i>New Journal of Physics</i> , 2017, 19, 073003.	2.9	38
39	Macroscopic quantum measurements of noncommuting observables. <i>Physical Review A</i> , 2017, 96, .	2.5	4
40	Multimode and Long-Lived Quantum Correlations Between Photons and Spins in a Crystal. <i>Physical Review Letters</i> , 2017, 118, 210501.	7.8	78
41	Time Really Passes, Science Can't Deny That. <i>Tutorials, Schools, and Workshops in the Mathematical Sciences</i> , 2017, , 1-15.	0.3	8
42	Towards highly multimode optical quantum memory for quantum repeaters. <i>Physical Review A</i> , 2016, 93, .	2.5	80
43	Quantum Nonlocality with Arbitrary Limited Detection Efficiency. <i>Physical Review Letters</i> , 2016, 116, 010401.	7.8	8
44	Nonlinear Bell Inequalities Tailored for Quantum Networks. <i>Physical Review Letters</i> , 2016, 116, 010403.	7.8	101
45	Demonstration of Light-Matter Micro-Macro Quantum Correlations. <i>Physical Review Letters</i> , 2016, 116, 190502.	7.8	10
46	Tighter quantum uncertainty relations following from a general probabilistic bound. <i>Physical Review A</i> , 2015, 92, .	2.5	23
47	Demonstration of Quantum Nonlocality in the Presence of Measurement Dependence. <i>Physical Review Letters</i> , 2015, 114, 220404.	7.8	19
48	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
49	Exploring the Limits of Quantum Nonlocality with Entangled Photons. <i>Physical Review X</i> , 2015, 5, .	8.9	40
50	How far can one send a photon?. <i>Frontiers of Physics</i> , 2015, 10, 1.	5.0	22
51	Nonlocality of Wigner-Dicke states subject to losses. <i>Physical Review A</i> , 2015, 91, .	2.5	21
52	Random Variation of Detector Efficiency: A Countermeasure Against Detector Blinding Attacks for Quantum Key Distribution. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2015, 21, 192-196.	2.9	36
53	Provably secure and practical quantum key distribution over 307 km of optical fibre. <i>Nature Photonics</i> , 2015, 9, 163-168.	31.4	378
54	Quantifying multipartite nonlocality via the size of the resource. <i>Physical Review A</i> , 2015, 91, .	2.5	21

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55	Coherent Spin Control at the Quantum Level in an Ensemble-Based Optical Memory. Physical Review Letters, 2015, 114, 230502.	7.8	135
56	Family of Bell-like Inequalities as Device-Independent Witnesses for Entanglement Depth. Physical Review Letters, 2015, 114, 190401.	7.8	56
57	Can Relativity be Considered Complete? From Newtonian Nonlocality to Quantum Nonlocality and Beyond. Lecture Notes in Physics, 2015, , 195-217.	0.7	2
58	Arbitrarily Small Amount of Measurement Independence Is Sufficient to Manifest Quantum Nonlocality. Physical Review Letters, 2014, 113, 190402.	7.8	65
59	Anonymous Quantum Nonlocality. Physical Review Letters, 2014, 113, 130401.	7.8	14
60	How Difficult Is It to Prove the Quantumness of Macroscopic States?. Physical Review Letters, 2014, 113, 090403.	7.8	35
61	Quantum teleportation from a telecom-wavelength photon to a solid-state quantum memory. Nature Photonics, 2014, 8, 775-778.	31.4	208
62	Heralded Single-Phonon Preparation, Storage, and Readout in Cavity Optomechanics. Physical Review Letters, 2014, 112, 143602.	7.8	109
63	Strong Constraints on Models that Explain the Violation of Bell Inequalities with Hidden Superluminal Influences. Foundations of Physics, 2014, 44, 523-531.	1.3	9
64	Quantum Chance. , 2014, , .		11
65	Quantum Correlations in Newtonian Space and Time:. , 2014, , 185-203.		4
66	Oblivious transfer and quantum channels as communication resources. Natural Computing, 2013, 12, 13-17.	3.0	4
67	Definitions of multipartite nonlocality. Physical Review A, 2013, 88, .	2.5	138
68	Demonstration of genuine multipartite entanglement with device-independent witnesses. Nature Physics, 2013, 9, 559-562.	16.7	60
69	Device-Independent Quantum Key Distribution with Local Bell Test. Physical Review X, 2013, 3, .	8.9	52
70	A long-lived solid-state quantum memory. , 2013, , .		1
71	Tripartite quantum state violating the hidden-influence constraints. Physical Review A, 2013, 88, .	2.5	27
72	Are There Quantum Effects Coming from Outside Space-Time? Nonlocality, Free Will and "No Many-Worlds", 2013, , 23-39.		9

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73	Sine gating detector with simple filtering for low-noise infra-red single photon detection at room temperature. <i>Journal of Applied Physics</i> , 2012, 112, 063106.	2.5	47
74	Local content of all pure two-qubit states. <i>Physical Review A</i> , 2012, 86, .	2.5	14
75	Bell inequalities for three systems and arbitrarily many measurement outcomes. <i>Physical Review A</i> , 2012, 85, .	2.5	18
76	Bilocal versus nonbilocal correlations in entanglement-swapping experiments. <i>Physical Review A</i> , 2012, 85, .	2.5	153
77	Nonlocal multipartite correlations from local marginal probabilities. <i>Physical Review A</i> , 2012, 86, .	2.5	19
78	Proposal for exploring macroscopic entanglement with a single photon and coherent states. <i>Physical Review A</i> , 2012, 86, .	2.5	52
79	Heralded quantum entanglement between two crystals. <i>Nature Photonics</i> , 2012, 6, 234-237.	31.4	120
80	Non-realism: Deep Thought or a Soft Option?. <i>Foundations of Physics</i> , 2012, 42, 80-85.	1.3	81
81	Quantum repeaters based on atomic ensembles and linear optics. <i>Reviews of Modern Physics</i> , 2011, 83, 33-80.	45.6	1,412
82	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
83	Practical private database queries based on a quantum-key-distribution protocol. <i>Physical Review A</i> , 2011, 83, .	2.5	178
84	Cloning entangled photons to scales one can see. <i>Physical Review A</i> , 2010, 82, .	2.5	32
85	Impossibility of faithfully storing single photons with the three-pulse photon echo. <i>Physical Review A</i> , 2010, 81, .	2.5	30
86	Local content of bipartite qubit correlations. <i>Physical Review A</i> , 2010, 81, .	2.5	10
87	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
88	Mapping multiple photonic qubits into and out of one solid-state atomic ensemble. <i>Nature Communications</i> , 2010, 1, 12.	12.8	177
89	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
90	Simulating Quantum Systems Using Real Hilbert Spaces. <i>Physical Review Letters</i> , 2009, 102, 020505.	7.8	40

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91	Improved implementation of the Alicki–Van Ryn nonclassicality test for a single particle using single-photon detectors. <i>Physical Review A</i> , 2009, 79, .	2.5	20
92	Bell Inequalities: Many Questions, a Few Answers. <i>The Western Ontario Series in Philosophy of Science</i> , 2009, , 125-138.	0.2	26
93	Quantum Nonlocality: How Does Nature Do It?. <i>Science</i> , 2009, 326, 1357-1358.	12.6	43
94	Device-independent quantum key distribution secure against collective attacks. <i>New Journal of Physics</i> , 2009, 11, 045021.	2.9	379
95	Multimode quantum memory based on atomic frequency combs. <i>Physical Review A</i> , 2009, 79, .	2.5	453
96	Distributed Temperature Sensor Interrogator Based on Polarization-Sensitive Reflectometry. <i>IEEE Sensors Journal</i> , 2009, 9, 1125-1129.	4.7	9
97	Comprehensive Characterization of InGaAs–InP Avalanche Photodiodes at 1550 nm With an Active Quenching ASIC. <i>IEEE Journal of Quantum Electronics</i> , 2009, 45, 792-799.	1.9	59
98	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
99	Testing the speed of “spooky action at a distance”. <i>Nature</i> , 2008, 454, 861-864.	27.8	192
100	Testing quantum correlations versus single-particle properties within Leggett’s model and beyond. <i>Nature Physics</i> , 2008, 4, 681-685.	16.7	80
101	Testing the Dimension of Hilbert Spaces. <i>Physical Review Letters</i> , 2008, 100, 210503.	7.8	208
102	Purification of single-photon entanglement with linear optics. <i>Physical Review A</i> , 2008, 78, .	2.5	37
103	Simulation of partial entanglement with nonsignaling resources. <i>Physical Review A</i> , 2008, 78, .	2.5	24
104	Testing a Bell inequality in multipair scenarios. <i>Physical Review A</i> , 2008, 78, .	2.5	15
105	Robust and efficient quantum repeaters with atomic ensembles and linear optics. <i>Physical Review A</i> , 2008, 77, .	2.5	135
106	PSEUDO-TELEPATHY: INPUT CARDINALITY AND BELL-TYPE INEQUALITIES. <i>International Journal of Quantum Information</i> , 2007, 05, 525-534.	1.1	15
107	Quantum Repeaters with Photon Pair Sources and Multimode Memories. <i>Physical Review Letters</i> , 2007, 98, 190503.	7.8	447
108	Quantum teleportation over the Swisscom telecommunication network. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2007, 24, 398.	2.1	57

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109	Long-distance entanglement distribution with single-photon sources. <i>Physical Review A</i> , 2007, 76, .	2.5	173
110	Storage and retrieval of time-bin qubits with photon-echo-based quantum memories. <i>Physical Review A</i> , 2007, 76, .	2.5	23
111	Quantum communication. <i>Nature Photonics</i> , 2007, 1, 165-171.	31.4	1,397
112	Entangling independent photons by time-measurement. <i>Nature Physics</i> , 2007, 3, 692-695.	16.7	221
113	Bell-type inequalities for nonlocal resources. <i>Journal of Mathematical Physics</i> , 2006, 47, 112101.	1.1	8
114	PHYSICS: New Additions to the Schrodinger Cat Family. <i>Science</i> , 2006, 312, 63-64.	12.6	6
115	From Bell's Theorem to Secure Quantum Key Distribution. <i>Physical Review Letters</i> , 2006, 97, 120405.	7.8	520
116	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
117	Information-theoretic security proof for quantum-key-distribution protocols. <i>Physical Review A</i> , 2005, 72, .	2.5	353
118	Photon-number-splitting versus cloning attacks in practical implementations of the Bennett-Brassard 1984 protocol for quantum cryptography. <i>Physical Review A</i> , 2005, 71, .	2.5	31
119	Entanglement and non-locality are different resources. <i>New Journal of Physics</i> , 2005, 7, 88-88.	2.9	97
120	Fast and simple one-way quantum key distribution. <i>Applied Physics Letters</i> , 2005, 87, 194108.	3.3	229
121	A Fabry-Perot-like two-photon interferometer for high-dimensional time-bin entanglement. <i>Journal of Modern Optics</i> , 2005, 52, 2637-2648.	1.3	25
122	Security of two quantum cryptography protocols using the same four qubit states. <i>Physical Review A</i> , 2005, 72, .	2.5	98
123	Quantum cloning. <i>Reviews of Modern Physics</i> , 2005, 77, 1225-1256.	45.6	482
124	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
125	A relevant two qubit Bell inequality inequivalent to the CHSH inequality. <i>Journal of Physics A</i> , 2004, 37, 1775-1787.	1.6	278
126	BELL'S INEQUALITIES DETECT EFFICIENT ENTANGLEMENT. <i>International Journal of Quantum Information</i> , 2004, 02, 23-31.	1.1	29



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127	PMD & PDL. Journal of Optical and Fiber Communications Research, 2004, 1, 1-13.	0.5	0
128	Photon counting at telecom wavelengths with commercial InGaAs/InP avalanche photodiodes: Current performance. Journal of Modern Optics, 2004, 51, 1381-1398.	1.3	86
129	Two independent photon pairs versus four-photon entangled states in parametric down conversion. Journal of Modern Optics, 2004, 51, 1637-1649.	1.3	11
130	Security of quantum key distribution with entangled qutrits. Physical Review A, 2003, 67, .	2.5	138
131	Equivalence between Two-Qubit Entanglement and Secure Key Distribution. Physical Review Letters, 2003, 91, 167901.	7.8	27
132	Quantum entanglement with acousto-optic modulators: Two-photon beats and Bell experiments with moving beam splitters. Physical Review A, 2003, 67, .	2.5	26
133	Quantum Correlations with Spacelike Separated Beam Splitters in Motion: Experimental Test of Multisimultaneity. Physical Review Letters, 2002, 88, 120404.	7.8	93
134	Cloning a qutrit. Journal of Modern Optics, 2002, 49, 1355-1373.	1.3	42
135	Quantum correlation with moving beamsplitters in relativistic configuration. Pramana - Journal of Physics, 2002, 59, 181-188.	1.8	2
136	Faint laser quantum key distribution: Eavesdropping exploiting multiphoton pulses. Journal of Modern Optics, 2001, 48, 2009-2021.	1.3	47
137	Experimental entanglement distillation and "hidden" non-locality. Nature, 2001, 409, 1014-1017.	27.8	290
138	Quantum Solution to the Byzantine Agreement Problem. Physical Review Letters, 2001, 87, 217901.	7.8	109
139	The speed of quantum information and the preferred frame: analysis of experimental data. Physics Letters, Section A: General, Atomic and Solid State Physics, 2000, 276, 1-7.	2.1	59
140	Optical quantum random number generator. Journal of Modern Optics, 2000, 47, 595-598.	1.3	208
141	Quantum approach to coupling classical and quantum dynamics. Physical Review A, 2000, 61, .	2.5	74
142	Quantum Trajectories for Brownian Motion. Physical Review Letters, 1999, 83, 4909-4913.	7.8	70
143	Non-Markovian quantum-state diffusion: Perturbation approach. Physical Review A, 1999, 60, 91-103.	2.5	187
144	Open System Dynamics with Non-Markovian Quantum Trajectories. Physical Review Letters, 1999, 82, 1801-1805.	7.8	310

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145	Optimal eavesdropping in quantum cryptography. I. Information bound and optimal strategy. Physical Review A, 1997, 56, 1163-1172.	2.5	396
146	Quantum state diffusion and time correlation functions. Journal of Modern Optics, 1996, 43, 2289-2300.	1.3	7
147	Quantum state diffusion and time correlation functions. Journal of Modern Optics, 1996, 43, 2289-2300.	1.3	1
148	The Platonic solids and fundamental tests of quantum mechanics. Quantum - the Open Journal for Quantum Science, 0, 4, 293.	0.0	14