

# Stefano Pirandola

## List of Publications by Year in descending order

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160  
papers

12,859  
citations

46984

47  
h-index

23514

111  
g-index

166  
all docs

166  
docs citations

166  
times ranked

4941  
citing authors

#	ARTICLE	IF	CITATIONS
1	Secure Quantum Pattern Communication. PRX Quantum, 2022, 3, .	3.5	3
2	Quantum channel-position finding using single photons. Physical Review A, 2022, 105, .	1.0	1
3	Composably secure data processing for Gaussian-modulated continuous-variable quantum key distribution. Physical Review Research, 2022, 4, .	1.3	9
4	Quantum communications in a moderate-to-strong turbulent space. Communications Physics, 2022, 5, .	2.0	7
5	Analytical Methods for High-Rate Global Quantum Networks. PRX Quantum, 2022, 3, .	3.5	10
6	Scalable Authentication and Optimal Flooding in a Quantum Network. PRX Quantum, 2022, 3, .	3.5	6
7	Rate limits in quantum networks with lossy repeaters. Physical Review Research, 2022, 4, .	1.3	4
8	Noiseless linear amplification in quantum target detection using Gaussian states. Quantum Science and Technology, 2022, 7, 035026.	2.6	5
9	End-To-End Capacities of Hybrid Quantum Networks. Physical Review Applied, 2022, 18, .	1.5	4
10	Entanglement-Assisted Absorption Spectroscopy. , 2021, , .		0
11	Homodyne-based quantum random number generator at 2.9 Gbps secure against quantum side-information. Nature Communications, 2021, 12, 605.	5.8	33
12	Bounds on amplitude-damping-channel discrimination. Physical Review A, 2021, 103, .	1.0	11
13	On quantum reading, quantum illumination, and other notions. IOP SciNotes, 2021, 2, 015203.	0.4	3
14	Limits and security of free-space quantum communications. Physical Review Research, 2021, 3, .	1.3	63
15	Idler-free channel position finding. Physical Review A, 2021, 103, .	1.0	7
16	An optomechanical platform for quantum hypothesis testing for collapse models. New Journal of Physics, 2021, 23, 043022.	1.2	5
17	Characterising port-based teleportation as universal simulator of qubit channels. Journal of Physics A: Mathematical and Theoretical, 2021, 54, 205301.	0.7	11
18	Energetic Considerations in Quantum Target Ranging. , 2021, , .		3

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19	Ultimate limits of thermal pattern recognition. <i>Physical Review A</i> , 2021, 103, .	1.0	9
20	Environment-assisted bosonic quantum communications. <i>Npj Quantum Information</i> , 2021, 7, .	2.8	4
21	Satellite quantum communications: Fundamental bounds and practical security. <i>Physical Review Research</i> , 2021, 3, .	1.3	50
22	Mixed state entanglement classification using artificial neural networks. <i>New Journal of Physics</i> , 2021, 23, 063033.	1.2	9
23	Advances in space quantum communications. <i>IET Quantum Communication</i> , 2021, 2, 182-217.	2.2	91
24	Analytical bounds for dynamic multichannel discrimination. <i>Physical Review A</i> , 2021, 104, .	1.0	3
25	Experimental quantum reading with photon counting. <i>Science Advances</i> , 2021, 7, .	4.7	20
26	Continuous-variable quantum cryptography with discrete alphabets: Composable security under collective Gaussian attacks. <i>Physical Review Research</i> , 2021, 3, .	1.3	26
27	Bounding the Benefit of Adaptivity in Quantum Metrology Using the Relative Fidelity. <i>Physical Review Letters</i> , 2021, 127, 150501.	2.9	3
28	Composable security for continuous variable quantum key distribution: Trust levels and practical key rates in wired and wireless networks. <i>Physical Review Research</i> , 2021, 3, .	1.3	33
29	Idler-free multi-channel discrimination via multipartite probe states. <i>Npj Quantum Information</i> , 2021, 7, .	2.8	2
30	Generalization in Quantum Machine Learning: A Quantum Information Standpoint. <i>PRX Quantum</i> , 2021, 2, .	3.5	55
31	Symplectic decomposition from submatrix determinants. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2021, 477, .	1.0	2
32	Classical benchmarking for microwave quantum illumination. <i>IET Quantum Communication</i> , 2021, 2, 246-257.	2.2	5
33	Optimal squeezing for quantum target detection. <i>Physical Review Research</i> , 2021, 3, .	1.3	1
34	Entanglement-enhanced testing of multiple quantum hypotheses. <i>Communications Physics</i> , 2020, 3, .	2.0	32
35	Entanglement-Assisted Absorption Spectroscopy. <i>Physical Review Letters</i> , 2020, 125, 180502.	2.9	36
36	Ultimate Limits for Multiple Quantum Channel Discrimination. <i>Physical Review Letters</i> , 2020, 125, 080505.	2.9	29

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37	Noise-resilient variational hybrid quantum-classical optimization. <i>Physical Review A</i> , 2020, 102, .	1.0	26
38	Microwave quantum illumination using a digital receiver. <i>Science Advances</i> , 2020, 6, eabb0451.	4.7	151
39	Entanglement classification via neural network quantum states. <i>New Journal of Physics</i> , 2020, 22, 045001.	1.2	31
40	Long-Distance Continuous-Variable Quantum Key Distribution over 202.81Åkm of Fiber. <i>Physical Review Letters</i> , 2020, 125, 010502.	2.9	207
41	Enhanced energy-constrained quantum communication over bosonic Gaussian channels. <i>Nature Communications</i> , 2020, 11, 457.	5.8	15
42	Exploring the Limitations of Quantum Networking through Butterfly-Based Networks. <i>Advanced Quantum Technologies</i> , 2020, 3, 1900103.	1.8	1
43	Long-Distance Continuous-Variable Quantum Key Distribution With Quantum Scissors. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2020, 26, 1-12.	1.9	32
44	Discrete-Modulation Continuous-Variable Quantum Key Distribution Enhanced by Quantum Scissors. <i>IEEE Journal on Selected Areas in Communications</i> , 2020, 38, 506-516.	9.7	28
45	Terahertz Quantum Cryptography. <i>IEEE Journal on Selected Areas in Communications</i> , 2020, 38, 483-495.	9.7	30
46	Convex optimization of programmable quantum computers. <i>Npj Quantum Information</i> , 2020, 6, .	2.8	27
47	General upper bound for conferencing keys in arbitrary quantum networks. <i>IET Quantum Communication</i> , 2020, 1, 22-25.	2.2	12
48	Quantum-Enhanced Barcode Decoding and Pattern Recognition. <i>Physical Review Applied</i> , 2020, 14, .	1.5	21
49	Dense coding capacity of a quantum channel. <i>Physical Review Research</i> , 2020, 2, .	1.3	14
50	Quantum illumination with a generic Gaussian source. <i>Physical Review Research</i> , 2020, 2, .	1.3	41
51	Long-distance continuous-variable measurement-device-independent quantum key distribution with postselection. <i>Physical Review Research</i> , 2020, 2, .	1.3	7
52	Optimal environment localization. <i>Physical Review Research</i> , 2020, 2, .	1.3	6
53	Detecting and tracking bacteria with quantum light. <i>Physical Review Research</i> , 2020, 2, .	1.3	8
54	Advances in quantum cryptography. <i>Advances in Optics and Photonics</i> , 2020, 12, 1012.	12.1	848

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55	Capacity-approaching quantum repeaters for quantum communications. <i>Physical Review A</i> , 2020, 102, .	1.0	14
56	Entanglement-enhanced testing of multiple quantum hypotheses. , 2020, , .		0
57	CV-MDI-QKD with coherent state: beyond one-mode Gaussian attacks. <i>IOP SciNotes</i> , 2020, 1, 025202.	0.4	0
58	Fundamental limits to quantum channel discrimination. <i>Npj Quantum Information</i> , 2019, 5, .	2.8	87
59	Bounds for multi-end communication over quantum networks. <i>Quantum Science and Technology</i> , 2019, 4, 045006.	2.6	42
60	Modular network for high-rate quantum conferencing. <i>Communications Physics</i> , 2019, 2, .	2.0	25
61	Tight bounds for private communication over bosonic Gaussian channels based on teleportation simulation with optimal finite resources. <i>Physical Review A</i> , 2019, 100, .	1.0	9
62	Improving the lower bound to the secret-key capacity of the thermal amplifier channel. <i>European Physical Journal D</i> , 2019, 73, 1.	0.6	4
63	End-to-end capacities of a quantum communication network. <i>Communications Physics</i> , 2019, 2, .	2.0	181
64	Multipartite entanglement swapping and mechanical cluster states. <i>Physical Review A</i> , 2019, 99, .	1.0	8
65	Thermal quantum metrology in memoryless and correlated environments. <i>Quantum Science and Technology</i> , 2019, 4, 015008.	2.6	9
66	Conditional channel simulation. <i>Annals of Physics</i> , 2019, 400, 289-302.	1.0	10
67	Continuous-variable quantum key distribution in uniform fast-fading channels. <i>Physical Review A</i> , 2018, 97, .	1.0	37
68	Converse bounds for quantum and private communication over Holevoâ€™Werner channels. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2018, 51, 494001.	0.7	8
69	Advances in photonic quantum sensing. <i>Nature Photonics</i> , 2018, 12, 724-733.	15.6	422
70	Symmetric and asymmetric discrimination of bosonic loss: Toy applications to biological samples and photodegradable materials. <i>Physical Review A</i> , 2018, 98, .	1.0	2
71	Hacking Alice's box in continuous-variable quantum key distribution. <i>Physical Review A</i> , 2018, 98, .	1.0	12
72	Teleportation simulation of bosonic Gaussian channels: strong and uniform convergence. <i>European Physical Journal D</i> , 2018, 72, 1.	0.6	12

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73	Finite-resource teleportation stretching for continuous-variable systems. <i>Scientific Reports</i> , 2018, 8, 15267.	1.6	13
74	Quantum-enhanced measurements without entanglement. <i>Reviews of Modern Physics</i> , 2018, 90, .	16.4	257
75	Gaussian one-way thermal quantum cryptography with finite-size effects. <i>Physical Review A</i> , 2018, 98, .	1.0	14
76	Channel Simulation in Quantum Metrology. <i>Quantum Measurements and Quantum Metrology</i> , 2018, 5, 1-12.	3.3	30
77	Quantum information versus black hole physics: deep firewalls from narrow assumptions. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2018, 376, 20170324.	1.6	1
78	Continuous-variable measurement-device-independent quantum key distribution: Composable security against coherent attacks. <i>Physical Review A</i> , 2018, 97, .	1.0	70
79	Parameter Estimation with Almost No Public Communication for Continuous-Variable Quantum Key Distribution. <i>Physical Review Letters</i> , 2018, 120, 220505.	2.9	33
80	Quantum key distribution with phase-encoded coherent states: Asymptotic security analysis in thermal-loss channels. <i>Physical Review A</i> , 2018, 98, .	1.0	24
81	Theory of channel simulation and bounds for private communication. <i>Quantum Science and Technology</i> , 2018, 3, 035009.	2.6	111
82	Discrimination of discord in separable Gaussian states. , 2018, , .		0
83	Ultimate Precision of Adaptive Noise Estimation. <i>Physical Review Letters</i> , 2017, 118, 100502.	2.9	81
84	Fundamental limits of repeaterless quantum communications. <i>Nature Communications</i> , 2017, 8, 15043.	5.8	827
85	Finite-size analysis of measurement-device-independent quantum cryptography with continuous variables. <i>Physical Review A</i> , 2017, 96, .	1.0	58
86	Simulation of non-Pauli channels. <i>Physical Review A</i> , 2017, 96, .	1.0	19
87	General bounds for sender-receiver capacities in multipoint quantum communications. <i>Physical Review A</i> , 2017, 96, .	1.0	73
88	Gaussian two-mode attacks in one-way quantum cryptography. <i>Physical Review A</i> , 2017, 95, .	1.0	12
89	Adaptive estimation and discrimination of Holevo-Werner channels. <i>Quantum Measurements and Quantum Metrology</i> , 2017, 4, .	3.3	7
90	Discord, Quantum Knowledge and Private Communications. <i>Quantum Science and Technology</i> , 2017, , 231-239.	1.5	1

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91	Physics: Unite to build a quantum Internet. Nature, 2016, 532, 169-171.	13.7	168
92	Ultimate Precision Bound of Quantum and Subwavelength Imaging. Physical Review Letters, 2016, 117, 190802.	2.9	122
93	Secret key capacity of the thermal-loss channel: improving the lower bound. , 2016, , .		9
94	General immunity and superadditivity of two-way Gaussian quantum cryptography. Scientific Reports, 2016, 6, 22225.	1.6	34
95	How discord underlies the noise resilience of quantum illumination. New Journal of Physics, 2016, 18, 043027.	1.2	65
96	Quantum Fidelity for Arbitrary Gaussian States. Physical Review Letters, 2015, 115, 260501.	2.9	152
97	Two-way Gaussian quantum cryptography against coherent attacks in direct reconciliation. Physical Review A, 2015, 92, .	1.0	36
98	Noiseless Linear Amplifiers in Entanglement-Based Continuous-Variable Quantum Key Distribution. Entropy, 2015, 17, 4547-4562.	1.1	24
99	High-rate measurement-device-independent quantum cryptography. Nature Photonics, 2015, 9, 397-402.	15.6	334
100	Restoring broken entanglement by separable correlations. , 2015, , .		0
101	Microwave Quantum Illumination. Physical Review Letters, 2015, 114, 080503.	2.9	348
102	Discriminating quantum field theories in non-inertial frames. Classical and Quantum Gravity, 2015, 32, 035013.	1.5	3
103	Continuous-variable quantum cryptography with an untrusted relay: Detailed security analysis of the symmetric configuration. Physical Review A, 2015, 91, .	1.0	53
104	Advances in quantum teleportation. Nature Photonics, 2015, 9, 641-652.	15.6	511
105	Quantum cryptography with an ideal local relay. , 2015, , .		4
106	Reply to 'Discrete and continuous variables for measurement-device-independent quantum cryptography'. Nature Photonics, 2015, 9, 773-775.	15.6	37
107	Two-way quantum cryptography with continuous variables: unconditional security and performances at different wavelengths. , 2014, , .		0
108	Continuous-variable-entanglement swapping and its local certification: Entangling distant mechanical modes. Physical Review A, 2014, 89, .	1.0	28

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109	Two-way quantum cryptography at different wavelengths. <i>Physical Review A</i> , 2014, 89, .	1.0	55
110	Optimality of Gaussian Discord. <i>Physical Review Letters</i> , 2014, 113, 140405.	2.9	67
111	Quantum discord as a resource for quantum cryptography. <i>Scientific Reports</i> , 2014, 4, 6956.	1.6	123
112	Better Late than Never: Information Retrieval from Black Holes. <i>Physical Review Letters</i> , 2013, 110, 101301.	2.9	350
113	Entanglement reactivation in separable environments. <i>New Journal of Physics</i> , 2013, 15, 113046.	1.2	41
114	A limit formula for the quantum fidelity. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2013, 46, 025304.	0.7	21
115	Continuous-variable dense coding by optomechanical cavities. <i>Physical Review A</i> , 2013, 88, .	1.0	34
116	Quantum reading capacity under thermal and correlated noise. <i>Physical Review A</i> , 2013, 87, .	1.0	17
117	Covariance Matrices under Bell-like Detections. <i>Open Systems and Information Dynamics</i> , 2013, 20, 1350011.	0.5	26
118	Entanglement swapping with local certification: Application to remote micromechanical resonators. , 2013, , .		0
119	Side-Channel-Free Quantum Key Distribution. <i>Physical Review Letters</i> , 2012, 108, 130502.	2.9	508
120	Capacities of linear quantum optical systems. <i>Physical Review A</i> , 2012, 85, .	1.0	7
121	Quantum reading under a local energy constraint. <i>Physical Review A</i> , 2012, 86, .	1.0	24
122	Continuous-variable quantum key distribution using thermal states. <i>Physical Review A</i> , 2012, 86, .	1.0	93
123	Quantum M-ary phase shift keying. , 2012, , .		0
124	Symmetric $M$ -ary phase discrimination using quantum-optical probe states. <i>Physical Review A</i> , 2012, 86, .	1.0	20
125	Entanglement Swapping with Local Certification: Application to Remote Micromechanical Resonators. <i>Physical Review Letters</i> , 2012, 109, 143601.	2.9	62
126	Gaussian quantum information. <i>Reviews of Modern Physics</i> , 2012, 84, 621-669.	16.4	2,430



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127	Quantum Reading of a Classical Digital Memory. <i>Physical Review Letters</i> , 2011, 106, 090504.	2.9	153
128	On the classical capacity of quantum Gaussian channels. <i>Physica Scripta</i> , 2011, T143, 014016.	1.2	17
129	Closed Timelike Curves via Postselection: Theory and Experimental Test of Consistency. <i>Physical Review Letters</i> , 2011, 106, 040403.	2.9	104
130	Quantum reading capacity. <i>New Journal of Physics</i> , 2011, 13, 113012.	1.2	60
131	Optimal detection of losses by thermal probes. <i>Physical Review A</i> , 2011, 84, .	1.0	36
132	Enhanced quantum communication via optical refocusing. <i>Physical Review A</i> , 2011, 84, .	1.0	8
133	Quantum Cryptography Approaching the Classical Limit. <i>Physical Review Letters</i> , 2010, 105, 110501.	2.9	110
134	Correlation matrices of two-mode bosonic systems. <i>Physical Review A</i> , 2009, 79, .	1.0	115
135	Eavesdropping of Two-Way Coherent-State Quantum Cryptography via Gaussian Quantum Cloning Machines. , 2009, , .		1
136	Reverse Coherent Information. <i>Physical Review Letters</i> , 2009, 102, 210501.	2.9	78
137	Direct and Reverse Secret-Key Capacities of a Quantum Channel. <i>Physical Review Letters</i> , 2009, 102, 050503.	2.9	182
138	Reverse Coherent Information. , 2009, , .		1
139	Confidential Direct Communications: A Quantum Approach Using Continuous Variables. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2009, 15, 1570-1580.	1.9	20
140	On the Security and Degradability of Gaussian Channels. <i>Lecture Notes in Computer Science</i> , 2009, , 47-55.	1.0	3
141	Continuous-variable quantum cryptography using two-way quantum communication. <i>Nature Physics</i> , 2008, 4, 726-730.	6.5	198
142	Quantum Illumination with Gaussian States. <i>Physical Review Letters</i> , 2008, 101, 253601.	2.9	495
143	Minimal qudit code for a qubit in the phase-damping channel. <i>Physical Review A</i> , 2008, 77, .	1.0	35
144	SYMMETRIC COLLECTIVE ATTACKS FOR THE EAVESDROPPING OF SYMMETRIC QUANTUM KEY DISTRIBUTION. <i>International Journal of Quantum Information</i> , 2008, 06, 765-771.	0.6	8

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145	Quantum direct communication with continuous variables. Europhysics Letters, 2008, 84, 20013.	0.7	24
146	Characterization of Collective Gaussian Attacks and Security of Coherent-State Quantum Cryptography. Physical Review Letters, 2008, 101, 200504.	2.9	167
147	Computable bounds for the discrimination of Gaussian states. Physical Review A, 2008, 78, .	1.0	115
148	Quantum teleportation with continuous variables: A survey. Laser Physics, 2006, 16, 1418-1438.	0.6	73
149	Continuous variable encoding by ponderomotive interaction. European Physical Journal D, 2006, 37, 283-290.	0.6	31
150	Generating continuous variable quantum codewords in the near-field atomic lithography. Journal of Physics B: Atomic, Molecular and Optical Physics, 2006, 39, 997-1009.	0.6	24
151	Macroscopic Entanglement by Entanglement Swapping. Physical Review Letters, 2006, 97, 150403.	2.9	152
152	Conditioning two-party quantum teleportation within a three-party quantum channel. Physical Review A, 2005, 71, .	1.0	20
153	A QUANTUM TELEPORTATION GAME. International Journal of Quantum Information, 2005, 03, 239-243.	0.6	13
154	Constructing finite-dimensional codes with optical continuous variables. Europhysics Letters, 2004, 68, 323-329.	0.7	54
155	Light reflection upon a movable mirror as a paradigm for continuous variable teleportation network. Journal of Modern Optics, 2004, 51, 901-912.	0.6	26
156	Continuous variable entanglement by radiation pressure. Journal of Optics B: Quantum and Semiclassical Optics, 2003, 5, S523-S529.	1.4	14
157	Trapping and cooling single atoms with far-off-resonance intracavity doughnut modes. Physical Review A, 2003, 67, .	1.0	4
158	Continuous-variable entanglement and quantum-state teleportation between optical and macroscopic vibrational modes through radiation pressure. Physical Review A, 2003, 68, .	1.0	93
159	Performance of coherent-state quantum target detection in the context of asymmetric hypothesis testing. IET Quantum Communication, 0, , .	2.2	1
160	End-to-end capacities of imperfect-repeater quantum networks. Quantum Science and Technology, 0, , .	2.6	0