Hoi-Kwong Lo

List of Publications by Year
in descending order

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124 papers	15,960 citations	34100 52 h-index	34984 98 g-index
125 all docs	125 docs citations	125 times ranked	4613 citing authors

#	Article	IF	Citations
1	Decoy State Quantum Key Distribution. Physical Review Letters, 2005, 94, 230504.	7.8	1,658
2	Measurement-Device-Independent Quantum Key Distribution. Physical Review Letters, 2012, 108, 130503.	7.8	1,510
3	How to Share a Quantum Secret. Physical Review Letters, 1999, 83, 648-651.	7.8	1,082
4	Secure quantum key distribution. Nature Photonics, 2014, 8, 595-604.	31.4	880
5	Practical decoy state for quantum key distribution. Physical Review A, 2005, 72, .	2.5	785
6	Secure quantum key distribution with realistic devices. Reviews of Modern Physics, 2020, 92, .	45.6	733
7	Classical-communication cost in distributed quantum-information processing: A generalization of quantum-communication complexity. Physical Review A, 2000, 62, .	2.5	564
8	Practical challenges in quantum key distribution. Npj Quantum Information, 2016, 2, .	6.7	489
9	Is Quantum Bit Commitment Really Possible?. Physical Review Letters, 1997, 78, 3410-3413.	7.8	431
10	Quantum hacking: Experimental demonstration of time-shift attack against practical quantum-key-distribution systems. Physical Review A, 2008, 78, .	2.5	428
11	Efficient Quantum Key Distribution Scheme and a Proof of Its Unconditional Security. Journal of Cryptology, 2005, 18, 133-165.	2.8	423
12	All-photonic quantum repeaters. Nature Communications, 2015, 6, 6787.	12.8	345
13	Insecurity of quantum secure computations. Physical Review A, 1997, 56, 1154-1162.	2.5	340
14	Finite-key analysis for measurement-device-independent quantum key distribution. Nature Communications, 2014, 5, 3732.	12.8	303
15	Experimental Quantum Key Distribution with Decoy States. Physical Review Letters, 2006, 96, 070502.	7.8	292
16	Experimental Demonstration of Polarization Encoding Measurement-Device-Independent Quantum Key Distribution. Physical Review Letters, 2014, 112, 190503.	7.8	272
17	Proof of security of quantum key distribution with two-way classical communications. IEEE Transactions on Information Theory, 2003, 49, 457-475.	2.4	260
18	Experimental demonstration of phase-remapping attack in a practical quantum key distribution system. New Journal of Physics, 2010, 12, 113026.	2.9	247

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19	Concentrating entanglement by local actions:â€ƒBeyond mean values. Physical Review A, 2001, 63, .	2.5	212
20	High-speed quantum random number generation by measuring phase noise of a single-mode laser. Optics Letters, 2010, 35, 312.	3.3	206
21	Experimental study on the Gaussian-modulated coherent-state quantum key distribution over standard telecommunication fibers. Physical Review A, 2007, 76, .	2.5	192
22	Quantum key distribution with entangled photon sources. Physical Review A, 2007, 76, .	2.5	185
23	Phase-remapping attack in practical quantum-key-distribution systems. Physical Review A, 2007, 75, .	2.5	178
24	Protocol choice and parameter optimization in decoy-state measurement-device-independent quantum key distribution. Physical Review A, 2014, 89, .	2.5	159
25	Ultrafast quantum random number generation based on quantum phase fluctuations. Optics Express, 2012, 20, 12366.	3.4	158
26	Postprocessing for quantum random-number generators: Entropy evaluation and randomness extraction. Physical Review A, 2013, 87, .	2.5	153
27	Simple security proof of twin-field type quantum key distribution protocol. Npj Quantum Information, 2019, 5, .	6.7	145
28	Proof-of-Principle Experimental Demonstration of Twin-Field Type Quantum Key Distribution. Physical Review Letters, 2019, 123, 100506.	7.8	142
29	Loss-tolerant quantum cryptography with imperfect sources. Physical Review A, 2014, 90, .	2.5	136
30	Feasibility of quantum key distribution through a dense wavelength division multiplexing network. New Journal of Physics, 2010, 12, 103042.	2.9	135
31	Why quantum bit commitment and ideal quantum coin tossing are impossible. Physica D: Nonlinear Phenomena, 1998, 120, 177-187.	2.8	134
32	Phase encoding schemes for measurement-device-independent quantum key distribution with basis-dependent flaw. Physical Review A, 2012, 85, .	2.5	132
33	Practical aspects of measurement-device-independent quantum key distribution. New Journal of Physics, 2013, 15, 113007.	2.9	128
34	Absolute maximal entanglement and quantum secret sharing. Physical Review A, 2012, 86, .	2.5	117
35	Silicon photonic transmitter for polarization-encoded quantum key distribution. Optica, 2016, 3, 1274.	9.3	110
36	Quantum key distribution with an unknown and untrusted source. Physical Review A, 2008, 77, .	2.5	97

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37	A balanced homodyne detector for high-rate Gaussian-modulated coherent-state quantum key distribution. New Journal of Physics, 2011, 13, 013003.	2.9	95
38	Proof of unconditional security of six-state quantum key distribution scheme. Quantum Information and Computation, 2001, 1, 81-94.	0.3	77
39	Experimental Demonstration of High-Rate Measurement-Device-Independent Quantum Key Distribution over Asymmetric Channels. Physical Review Letters, 2019, 122, 160501.	7.8	72
40	Experimental measurement-device-independent quantum key distribution with imperfect sources. Physical Review A, 2016, 93, .	2.5	70
41	Performance of two quantum-key-distribution protocols. Physical Review A, 2006, 73, .	2.5	69
42	Experimental quantum key distribution with source flaws. Physical Review A, 2015, 92, .	2.5	69
43	Discrete-phase-randomized coherent state source and its application in quantum key distribution. New Journal of Physics, 2015, 17, 053014.	2.9	67
44	Classical Communication Cost of Entanglement Manipulation: Is Entanglement an Interconvertible Resource?. Physical Review Letters, 1999, 83, 1459-1462.	7.8	65
45	Experimental quantum fingerprinting with weak coherent pulses. Nature Communications, 2015, 6, 8735.	12.8	65
46	Unconditionally secure key distillation from multiphotons. Physical Review A, 2006, 73, .	2.5	61
47	Fundamental rate-loss trade-off for the quantum internet. Nature Communications, 2016, 7, 13523.	12.8	61
48	Quantum key distribution with triggering parametric down-conversion sources. New Journal of Physics, 2008, 10, 073018.	2.9	59
49	Non-Abelian vortices and non-Abelian statistics. Physical Review D, 1993, 48, 4821-4834.	4.7	57
50	Long distance measurement-device-independent quantum key distribution with entangled photon sources. Applied Physics Letters, 2013, 103, .	3.3	56
51	Decoy-state quantum key distribution with two-way classical postprocessing. Physical Review A, 2006, 74, .	2.5	55
52	Effect of source tampering in the security of quantum cryptography. Physical Review A, 2015, 92, .	2.5	53
53	Experimental quantum key distribution with active phase randomization. Applied Physics Letters, 2007, 90, 044106.	3.3	50
54	Measurement-Device-Independent Quantum Cryptography. IEEE Journal of Selected Topics in Quantum Electronics, 2015, 21, 148-158.	2.9	45

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55	Random Bipartite Entanglement fromWandW-Like States. Physical Review Letters, 2007, 98, 260501.	7.8	44
56	Possibility, impossibility, and cheat sensitivity of quantum-bit string commitment. Physical Review A, 2008, 78, .	2.5	44
57	Discrete and continuous variables for measurement-device-independent quantum cryptography. Nature Photonics, 2015, 9, 772-773.	31.4	44
58	Topological approach to Alice electrodynamics. Nuclear Physics B, 1992, 386, 3-26.	2.5	42
59	A simple proof of the unconditional security of quantum key distribution. Journal of Physics A, 2001, 34, 6957-6967.	1.6	42
60	Security proof of a three-state quantum-key-distribution protocol without rotational symmetry. Physical Review A, 2006, 74, .	2.5	42
61	Insecurity of position-based quantum-cryptography protocols against entanglement attacks. Physical Review A, 2011, 83, .	2.5	42
62	Increasing Entanglement Monotones by Separable Operations. Physical Review Letters, 2012, 108, 240504.	7.8	41
63	Asymmetric Protocols for Scalable High-Rate Measurement-Device-Independent Quantum Key Distribution Networks. Physical Review X, 2019, 9, .	8.9	41
64	High-resolution, large dynamic range fiber length measurement based on a frequency-shifted asymmetric Sagnac interferometer. Optics Letters, 2005, 30, 3287.	3.3	38
65	Implementation of two-party protocols in the noisy-storage model. Physical Review A, 2010, 81, .	2.5	38
66	Security analysis of an untrusted source for quantum key distribution: passive approach. New Journal of Physics, 2010, 12, 023024.	2.9	36
67	Machine learning for optimal parameter prediction in quantum key distribution. Physical Review A, 2019, 100, .	2.5	34
68	Quantum key distribution with dual detectors. Physical Review A, 2007, 75, .	2.5	32
69	Security of Quantum Bit String Commitment Depends on the Information Measure. Physical Review Letters, 2006, 97, 250501.	7.8	30
70	Prefixed-threshold real-time selection method in free-space quantum key distribution. Physical Review A, 2018, 97, .	2.5	29
71	Quantum key distribution with setting-choice-independently correlated light sources. Npj Quantum Information, 2019, 5, .	6.7	29
72	Proof-of-principle experimental demonstration of twin-field quantum key distribution over optical channels with asymmetric losses. Npj Quantum Information, 2021, 7, .	6.7	26

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73	Universal squash model for optical communications using linear optics and threshold detectors. Physical Review A, 2011, 84, .	2.5	25
74	Simple method for asymmetric twin-field quantum key distribution. New Journal of Physics, 2020, 22, 013020.	2.9	25
75	Method for decoupling error correction from privacy amplification. New Journal of Physics, 2003, 5, 36-36.	2.9	24
76	Simulation and Implementation of Decoy State Quantum Key Distribution over 60km Telecom Fiber. , 2006, , .		22
77	Foiling covert channels and malicious classical post-processing units in quantum key distribution. Npj Quantum Information, 2019, 5, .	6.7	20
78	Frequency-shifted Mach-Zehnder interferometer for locating multiple weak reflections along a fiber link. IEEE Photonics Technology Letters, 2006, 18, 295-297.	2.5	19
79	Polarization insensitive phase modulator for quantum cryptosystems. Optics Express, 2006, 14, 4264.	3.4	19
80	Random-party entanglement distillation in multiparty states. Physical Review A, 2008, 78, .	2.5	18
81	Passive sources for the Bennett-Brassard 1984 quantum-key-distribution protocol with practical signals. Physical Review A, 2010, 82, .	2.5	17
82	Remote Blind State Preparation with Weak Coherent Pulses in the Field. Physical Review Letters, 2019, 123, 100503.	7.8	17
83	Quantum Key Distribution Based on Arbitrarily Weak Distillable Entangled States. Physical Review Letters, 2006, 96, 070501.	7.8	14
84	Investigations of afterpulsing and detection efficiency recovery in superconducting nanowire single-photon detectors. Journal of Applied Physics, 2013, 113, 213102.	2.5	14
85	Reflectometry based on a frequency-shifted interferometer using sideband interference. Optics Letters, 2013, 38, 1083.	3.3	13
86	Secure quantum communication in the presence of phase- and polarization-dependent loss. Physical Review A, 2018, 98, .	2.5	11
87	Quantum Cryptography. , 2009, , 7265-7289.		11
88	Entanglement monotones for$W$-type states. Physical Review A, 2012, 85, .	2.5	10
89	Simple Multiuser Twin-Field Quantum Key Distribution Network. Physical Review Applied, 2022, 17, .	3.8	9
90	Randomly distilling<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>W</mml:mi></mml:math>-class states into general configurations of two-party entanglement. Physical Review A, 2011, 84, .	2.5	8

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91	A quantum leap in security. Physics Today, 2021, 74, 36-41.	0.3	8
92	DECOY STATE QUANTUM KEY DISTRIBUTION. , 2005, , .		7
93	Upper bounds for the secure key rate of the decoy-state quantum key distribution. Physical Review A, 2009, 79, .	2.5	7
94	Loss-tolerant quantum key distribution with mixed signal states. Physical Review A, 2020, 102, .	2.5	7
95	Simple security proofs for continuous variable quantum key distribution with intensity fluctuating sources. Npj Quantum Information, 2021, 7, .	6.7	7
96	Security of quantum key distribution with iterative sifting. Quantum Science and Technology, 2018, 3, 014002.	5.8	6
97	Quantum Cryptography. , 2012, , 2453-2477.		5
98	Exact wave functions for non-Abelian Chern-Simons particles. Physical Review D, 1993, 48, 4999-5005.	4.7	4
99	Conference key agreement and quantum sharing of classical secrets with noisy GHZ states. , 2005, , .		4
100	Inefficiency and classical communication bounds for conversion between partially entangled pure bipartite states. Physical Review A, 2005, 72, .	2.5	4
101	Aharonov-Bohm order parameters for non-Abelian gauge theories. Physical Review D, 1995, 52, 7247-7264.	4.7	3
102	Quantum key distribution with vacua or dim pulses as decoy states. , 0, , .		3
103	Quantum key distribution based on a Sagnac loop interferometer and polarization-insensitive phase modulators. , 2006, , .		3
104	A Survey on Quantum Cryptographic Protocols and Their Security. , 2007, , .		3
105	Free-space reconfigurable quantum key distribution network. , 2015, , .		3
106	Efficient experimental quantum fingerprinting with channel multiplexing and simultaneous detection. Nature Communications, 2021, 12, 4464.	12.8	3
107	Passive preparation of BB84 signal states with coherent light. Progress in Informatics, 2011, , 57.	0.2	2
108	A high-speed quantum random number generator prototype. , 2013, , .		1

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109	Proof-of-principle experimental demonstration of twin-field quantum key distribution over asymmetric channels. , 2020, , .		1
110	Scalable Measurement-Device-Independent Quantum Key Distribution Networks with Untrusted Relays. , 2020, , .		1
111	Inefficiency and classical communication bounds for conversion between partially entangled pure bipartite quantum states. , 2005, , .		0
112	Sagnac Quantum Key Distribution Using Novel Polarization-Insensitive Phase Modulators Based On Frequency Shift. , 0, , .		0
113	Interrogation of multiplexed fiber grating sensors using frequency-shifted interferometer. , 2006, , .		0
114	Decoy state protocols for quantum cryptography with parametric down conversion sources. , 2007, , .		0
115	Quantum hacking: attacking practical quantum key distribution systems. Proceedings of SPIE, 2007, , .	0.8	0
116	Foiling Quantum Hackers. Physics Magazine, 2013, 6, .	0.1	0
117	Bridging the gap between theory and practice in quantum cryptography. , 2015, , .		0
118	Time-dependent Side Channels in Quantum Key Distribution. , 2021, , .		0
119	Managing backscattering noise in Sagnac-loop twin-field quantum key distribution. , 2021, , .		0
120	Resource-efficient real-time polarization compensation for MDI-QKD with rejected data. , 2021, , .		0
121	Broadband multipoint sensing with single-arm frequency-shifted interferometry. , 2013, , .		0
122	Practical Measurement Device Independent Quantum Key Distribution. , 2013, , .		0
123	Quantum cryptography with malicious devices. , 2018, , .		0
124	Measurement-device-independent QKD over asymmetric channels. , 2019, , .		0