

# Hoi-Kwong Lo

## List of Publications by Year in descending order

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124  
papers

15,960  
citations

39113

52  
h-index

39744

98  
g-index

125  
all docs

125  
docs citations

125  
times ranked

5235  
citing authors

#	ARTICLE	IF	CITATIONS
1	Simple Multiuser Twin-Field Quantum Key Distribution Network. <i>Physical Review Applied</i> , 2022, 17, .	1.5	9
2	Time-dependent Side Channels in Quantum Key Distribution. , 2021, , .		0
3	Managing backscattering noise in Sagnac-loop twin-field quantum key distribution. , 2021, , .		0
4	Resource-efficient real-time polarization compensation for MDI-QKD with rejected data. , 2021, , .		0
5	A quantum leap in security. <i>Physics Today</i> , 2021, 74, 36-41.	0.3	8
6	Efficient experimental quantum fingerprinting with channel multiplexing and simultaneous detection. <i>Nature Communications</i> , 2021, 12, 4464.	5.8	3
7	Proof-of-principle experimental demonstration of twin-field quantum key distribution over optical channels with asymmetric losses. <i>Npj Quantum Information</i> , 2021, 7, .	2.8	26
8	Simple security proofs for continuous variable quantum key distribution with intensity fluctuating sources. <i>Npj Quantum Information</i> , 2021, 7, .	2.8	7
9	Loss-tolerant quantum key distribution with mixed signal states. <i>Physical Review A</i> , 2020, 102, .	1.0	7
10	Simple method for asymmetric twin-field quantum key distribution. <i>New Journal of Physics</i> , 2020, 22, 013020.	1.2	25
11	Secure quantum key distribution with realistic devices. <i>Reviews of Modern Physics</i> , 2020, 92, .	16.4	733
12	Proof-of-principle experimental demonstration of twin-field quantum key distribution over asymmetric channels. , 2020, , .		1
13	Scalable Measurement-Device-Independent Quantum Key Distribution Networks with Untrusted Relays. , 2020, , .		1
14	Simple security proof of twin-field type quantum key distribution protocol. <i>Npj Quantum Information</i> , 2019, 5, .	2.8	145
15	Asymmetric Protocols for Scalable High-Rate Measurement-Device-Independent Quantum Key Distribution Networks. <i>Physical Review X</i> , 2019, 9, .	2.8	41
16	Proof-of-Principle Experimental Demonstration of Twin-Field Type Quantum Key Distribution. <i>Physical Review Letters</i> , 2019, 123, 100506.	2.9	142
17	Remote Blind State Preparation with Weak Coherent Pulses in the Field. <i>Physical Review Letters</i> , 2019, 123, 100503.	2.9	17
18	Experimental Demonstration of High-Rate Measurement-Device-Independent Quantum Key Distribution over Asymmetric Channels. <i>Physical Review Letters</i> , 2019, 122, 160501.	2.9	72

#	ARTICLE	IF	CITATIONS
19	Quantum key distribution with setting-choice-independently correlated light sources. Npj Quantum Information, 2019, 5, .	2.8	29
20	Foiling covert channels and malicious classical post-processing units in quantum key distribution. Npj Quantum Information, 2019, 5, .	2.8	20
21	Machine learning for optimal parameter prediction in quantum key distribution. Physical Review A, 2019, 100, .	1.0	34
22	Measurement-device-independent QKD over asymmetric channels. , 2019, , .		0
23	Security of quantum key distribution with iterative sifting. Quantum Science and Technology, 2018, 3, 014002.	2.6	6
24	Prefix-threshold real-time selection method in free-space quantum key distribution. Physical Review A, 2018, 97, .	1.0	29
25	Secure quantum communication in the presence of phase- and polarization-dependent loss. Physical Review A, 2018, 98, .	1.0	11
26	Quantum cryptography with malicious devices. , 2018, , .		0
27	Fundamental rate-loss trade-off for the quantum internet. Nature Communications, 2016, 7, 13523.	5.8	61
28	Experimental measurement-device-independent quantum key distribution with imperfect sources. Physical Review A, 2016, 93, .	1.0	70
29	Silicon photonic transmitter for polarization-encoded quantum key distribution. Optica, 2016, 3, 1274.	4.8	110
30	Practical challenges in quantum key distribution. Npj Quantum Information, 2016, 2, .	2.8	489
31	Free-space reconfigurable quantum key distribution network. , 2015, , .		3
32	Effect of source tampering in the security of quantum cryptography. Physical Review A, 2015, 92, .	1.0	53
33	Experimental quantum key distribution with source flaws. Physical Review A, 2015, 92, .	1.0	69
34	Discrete-phase-randomized coherent state source and its application in quantum key distribution. New Journal of Physics, 2015, 17, 053014.	1.2	67
35	All-photonic quantum repeaters. Nature Communications, 2015, 6, 6787.	5.8	345
36	Experimental quantum fingerprinting with weak coherent pulses. Nature Communications, 2015, 6, 8735.	5.8	65

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37	Bridging the gap between theory and practice in quantum cryptography. , 2015, , .		0
38	Discrete and continuous variables for measurement-device-independent quantum cryptography. Nature Photonics, 2015, 9, 772-773.	15.6	44
39	Measurement-Device-Independent Quantum Cryptography. IEEE Journal of Selected Topics in Quantum Electronics, 2015, 21, 148-158.	1.9	45
40	Experimental Demonstration of Polarization Encoding Measurement-Device-Independent Quantum Key Distribution. Physical Review Letters, 2014, 112, 190503.	2.9	272
41	Loss-tolerant quantum cryptography with imperfect sources. Physical Review A, 2014, 90, .	1.0	136
42	Finite-key analysis for measurement-device-independent quantum key distribution. Nature Communications, 2014, 5, 3732.	5.8	303
43	Secure quantum key distribution. Nature Photonics, 2014, 8, 595-604.	15.6	880
44	Protocol choice and parameter optimization in decoy-state measurement-device-independent quantum key distribution. Physical Review A, 2014, 89, .	1.0	159
45	Long distance measurement-device-independent quantum key distribution with entangled photon sources. Applied Physics Letters, 2013, 103, .	1.5	56
46	Investigations of afterpulsing and detection efficiency recovery in superconducting nanowire single-photon detectors. Journal of Applied Physics, 2013, 113, 213102.	1.1	14
47	Postprocessing for quantum random-number generators: Entropy evaluation and randomness extraction. Physical Review A, 2013, 87, .	1.0	153
48	Reflectometry based on a frequency-shifted interferometer using sideband interference. Optics Letters, 2013, 38, 1083.	1.7	13
49	Practical aspects of measurement-device-independent quantum key distribution. New Journal of Physics, 2013, 15, 113007.	1.2	128
50	Foiling Quantum Hackers. Physics Magazine, 2013, 6, .	0.1	0
51	Broadband multipoint sensing with single-arm frequency-shifted interferometry. , 2013, , .		0
52	Practical Measurement Device Independent Quantum Key Distribution. , 2013, , .		0
53	A high-speed quantum random number generator prototype. , 2013, , .		1
54	Ultrafast quantum random number generation based on quantum phase fluctuations. Optics Express, 2012, 20, 12366.	1.7	158

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55	Phase encoding schemes for measurement-device-independent quantum key distribution with basis-dependent flaw. Physical Review A, 2012, 85, .	1.0	132
56	Increasing Entanglement Monotones by Separable Operations. Physical Review Letters, 2012, 108, 240504.	2.9	41
57	Entanglement monotones for $W$ -type states. Physical Review A, 2012, 85, .	1.0	10
58	Absolute maximal entanglement and quantum secret sharing. Physical Review A, 2012, 86, .	1.0	117
59	Measurement-Device-Independent Quantum Key Distribution. Physical Review Letters, 2012, 108, 130503.	2.9	1,510
60	Quantum Cryptography. , 2012, , 2453-2477.		5
61	A balanced homodyne detector for high-rate Gaussian-modulated coherent-state quantum key distribution. New Journal of Physics, 2011, 13, 013003.	1.2	95
62	Randomly distilling $W$ -class states into general configurations of two-party entanglement. Physical Review A, 2011, 84, .	1.0	8
63	Universal squash model for optical communications using linear optics and threshold detectors. Physical Review A, 2011, 84, .	1.0	25
64	Insecurity of position-based quantum-cryptography protocols against entanglement attacks. Physical Review A, 2011, 83, .	1.0	42
65	Passive preparation of BB84 signal states with coherent light. Progress in Informatics, 2011, , 57.	0.2	2
66	Passive sources for the Bennett-Brassard 1984 quantum-key-distribution protocol with practical signals. Physical Review A, 2010, 82, .	1.0	17
67	Experimental demonstration of phase-remapping attack in a practical quantum key distribution system. New Journal of Physics, 2010, 12, 113026.	1.2	247
68	Implementation of two-party protocols in the noisy-storage model. Physical Review A, 2010, 81, .	1.0	38
69	Security analysis of an untrusted source for quantum key distribution: passive approach. New Journal of Physics, 2010, 12, 023024.	1.2	36
70	Feasibility of quantum key distribution through a dense wavelength division multiplexing network. New Journal of Physics, 2010, 12, 103042.	1.2	135
71	High-speed quantum random number generation by measuring phase noise of a single-mode laser. Optics Letters, 2010, 35, 312.	1.7	206
72	Upper bounds for the secure key rate of the decoy-state quantum key distribution. Physical Review A, 2009, 79, .	1.0	7

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73	Quantum Cryptography. , 2009, , 7265-7289.		11
74	Possibility, impossibility, and cheat sensitivity of quantum-bit string commitment. Physical Review A, 2008, 78, .	1.0	44
75	Quantum key distribution with triggering parametric down-conversion sources. New Journal of Physics, 2008, 10, 073018.	1.2	59
76	Random-party entanglement distillation in multiparty states. Physical Review A, 2008, 78, .	1.0	18
77	Quantum hacking: Experimental demonstration of time-shift attack against practical quantum-key-distribution systems. Physical Review A, 2008, 78, .	1.0	428
78	Quantum key distribution with an unknown and untrusted source. Physical Review A, 2008, 77, .	1.0	97
79	Decoy state protocols for quantum cryptography with parametric down conversion sources. , 2007, , .		0
80	Experimental study on the Gaussian-modulated coherent-state quantum key distribution over standard telecommunication fibers. Physical Review A, 2007, 76, .	1.0	192
81	Phase-remapping attack in practical quantum-key-distribution systems. Physical Review A, 2007, 75, .	1.0	178
82	Experimental quantum key distribution with active phase randomization. Applied Physics Letters, 2007, 90, 044106.	1.5	50
83	Quantum key distribution with dual detectors. Physical Review A, 2007, 75, .	1.0	32
84	Quantum hacking: attacking practical quantum key distribution systems. Proceedings of SPIE, 2007, , .	0.8	0
85	Quantum key distribution with entangled photon sources. Physical Review A, 2007, 76, .	1.0	185
86	Random Bipartite Entanglement fromWandW-Like States. Physical Review Letters, 2007, 98, 260501.	2.9	44
87	A Survey on Quantum Cryptographic Protocols and Their Security. , 2007, , .		3
88	Simulation and Implementation of Decoy State Quantum Key Distribution over 60km Telecom Fiber. , 2006, , .		22
89	Frequency-shifted Mach-Zehnder interferometer for locating multiple weak reflections along a fiber link. IEEE Photonics Technology Letters, 2006, 18, 295-297.	1.3	19
90	Experimental Quantum Key Distribution with Decoy States. Physical Review Letters, 2006, 96, 070502.	2.9	292

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91	Polarization insensitive phase modulator for quantum cryptosystems. Optics Express, 2006, 14, 4264.	1.7	19
92	Unconditionally secure key distillation from multiphotons. Physical Review A, 2006, 73, .	1.0	61
93	Interrogation of multiplexed fiber grating sensors using frequency-shifted interferometer. , 2006, , .		0
94	Quantum key distribution based on a Sagnac loop interferometer and polarization-insensitive phase modulators. , 2006, , .		3
95	Quantum Key Distribution Based on Arbitrarily Weak Distillable Entangled States. Physical Review Letters, 2006, 96, 070501.	2.9	14
96	Security proof of a three-state quantum-key-distribution protocol without rotational symmetry. Physical Review A, 2006, 74, .	1.0	42
97	Decoy-state quantum key distribution with two-way classical postprocessing. Physical Review A, 2006, 74, .	1.0	55
98	Security of Quantum Bit String Commitment Depends on the Information Measure. Physical Review Letters, 2006, 97, 250501.	2.9	30
99	Performance of two quantum-key-distribution protocols. Physical Review A, 2006, 73, .	1.0	69
100	Efficient Quantum Key Distribution Scheme and a Proof of Its Unconditional Security. Journal of Cryptology, 2005, 18, 133-165.	2.1	423
101	Conference key agreement and quantum sharing of classical secrets with noisy GHZ states. , 2005, , .		4
102	Inefficiency and classical communication bounds for conversion between partially entangled pure bipartite states. Physical Review A, 2005, 72, .	1.0	4
103	Inefficiency and classical communication bounds for conversion between partially entangled pure bipartite quantum states. , 2005, , .		0
104	DECOY STATE QUANTUM KEY DISTRIBUTION. , 2005, , .		7
105	High-resolution, large dynamic range fiber length measurement based on a frequency-shifted asymmetric Sagnac interferometer. Optics Letters, 2005, 30, 3287.	1.7	38
106	Decoy State Quantum Key Distribution. Physical Review Letters, 2005, 94, 230504.	2.9	1,658
107	Practical decoy state for quantum key distribution. Physical Review A, 2005, 72, .	1.0	785
108	Proof of security of quantum key distribution with two-way classical communications. IEEE Transactions on Information Theory, 2003, 49, 457-475.	1.5	260

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109	Method for decoupling error correction from privacy amplification. <i>New Journal of Physics</i> , 2003, 5, 36-36.	1.2	24
110	A simple proof of the unconditional security of quantum key distribution. <i>Journal of Physics A</i> , 2001, 34, 6957-6967.	1.6	42
111	Concentrating entanglement by local actions: Beyond mean values. <i>Physical Review A</i> , 2001, 63, .	1.0	212
112	Proof of unconditional security of six-state quantum key distribution scheme. <i>Quantum Information and Computation</i> , 2001, 1, 81-94.	0.1	77
113	Classical-communication cost in distributed quantum-information processing: A generalization of quantum-communication complexity. <i>Physical Review A</i> , 2000, 62, .	1.0	564
114	Classical Communication Cost of Entanglement Manipulation: Is Entanglement an Interconvertible Resource?. <i>Physical Review Letters</i> , 1999, 83, 1459-1462.	2.9	65
115	How to Share a Quantum Secret. <i>Physical Review Letters</i> , 1999, 83, 648-651.	2.9	1,082
116	Why quantum bit commitment and ideal quantum coin tossing are impossible. <i>Physica D: Nonlinear Phenomena</i> , 1998, 120, 177-187.	1.3	134
117	Insecurity of quantum secure computations. <i>Physical Review A</i> , 1997, 56, 1154-1162.	1.0	340
118	Is Quantum Bit Commitment Really Possible?. <i>Physical Review Letters</i> , 1997, 78, 3410-3413.	2.9	431
119	Aharonov-Bohm order parameters for non-Abelian gauge theories. <i>Physical Review D</i> , 1995, 52, 7247-7264.	1.6	3
120	Exact wave functions for non-Abelian Chern-Simons particles. <i>Physical Review D</i> , 1993, 48, 4999-5005.	1.6	4
121	Non-Abelian vortices and non-Abelian statistics. <i>Physical Review D</i> , 1993, 48, 4821-4834.	1.6	57
122	Topological approach to Alice electrodynamics. <i>Nuclear Physics B</i> , 1992, 386, 3-26.	0.9	42
123	Quantum key distribution with vacua or dim pulses as decoy states. , 0, , .		3
124	Sagnac Quantum Key Distribution Using Novel Polarization-Insensitive Phase Modulators Based On Frequency Shift. , 0, , .		0