

Jaromír Šťávek

List of Publications by Year in descending order

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166
papers

5,578
citations

81743

39
h-index

88477

70
g-index

168
all docs

168
docs citations

168
times ranked

2737
citing authors

#	ARTICLE	IF	CITATIONS
1	Experimental demonstration of quantum memory for light. Nature, 2004, 432, 482-486.	13.7	727
2	Gaussian Transformations and Distillation of Entangled Gaussian States. Physical Review Letters, 2002, 89, 137904.	2.9	323
3	Proposal for a Loophole-Free Bell Test Using Homodyne Detection. Physical Review Letters, 2004, 93, 130409.	2.9	250
4	No-Go Theorem for Gaussian Quantum Error Correction. Physical Review Letters, 2009, 102, 120501.	2.9	231
5	A high-fidelity noiseless amplifier for quantum light states. Nature Photonics, 2011, 5, 52-56.	15.6	214
6	Quantum inference of states and processes. Physical Review A, 2003, 68, .	1.0	130
7	Conditional generation of N-photon entangled states of light. Physical Review A, 2002, 65, .	1.0	122
8	Maximum-likelihood estimation of quantum measurement. Physical Review A, 2001, 64, .	1.0	121
9	Engineering quantum operations on traveling light beams by multiple photon addition and subtraction. Physical Review A, 2009, 80, .	1.0	104
10	Conditional generation of arbitrary single-mode quantum states of light by repeated photon subtractions. Physical Review A, 2005, 72, .	1.0	101
11	Optimal discrimination of mixed quantum states involving inconclusive results. Physical Review A, 2003, 67, .	1.0	97
12	Optical implementations of the optimal phase-covariant quantum cloning machine. Physical Review A, 2003, 67, .	1.0	96
13	Linear-optics quantum Toffoli and Fredkin gates. Physical Review A, 2006, 73, .	1.0	93
14	Optical Implementation of Continuous-Variable Quantum Cloning Machines. Physical Review Letters, 2001, 86, 4942-4945.	2.9	92
15	Gaussian postselection and virtual noiseless amplification in continuous-variable quantum key distribution. Physical Review A, 2012, 86, .	1.0	90
16	Preparation of distilled and purified continuous-variable entangled states. Nature Physics, 2008, 4, 915-918.	6.5	88
17	Noiseless Loss Suppression in Quantum Optical Communication. Physical Review Letters, 2012, 109, 180503.	2.9	74
18	Experimental Test of the Quantum Non-Gaussian Character of a Heralded Single-Photon State. Physical Review Letters, 2011, 107, 213602.	2.9	73

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19	Maximum-likelihood estimation of quantum processes. <i>Physical Review A</i> , 2001, 63, .	1.0	72
20	3 Maximum-Likelihood Methods in Quantum Mechanics. <i>Lecture Notes in Physics</i> , 0, , 59-112.	0.3	68
21	Experimental Demonstration of Continuous Variable Purification of Squeezed States. <i>Physical Review Letters</i> , 2006, 97, 150505.	2.9	66
22	Elementary gates for quantum information with superposed coherent states. <i>Physical Review A</i> , 2010, 82, .	1.0	65
23	Multipartite asymmetric quantum cloning. <i>Physical Review A</i> , 2005, 72, .	1.0	61
24	Quantum Up-Conversion of Squeezed Vacuum States from 1550 to 532Ånm. <i>Physical Review Letters</i> , 2014, 112, 073602.	2.9	60
25	Improving the fidelity of continuous-variable teleportation via local operations. <i>Physical Review A</i> , 2002, 66, .	1.0	58
26	How to Measure Squeezing and Entanglement of Gaussian States without Homodyning. <i>Physical Review Letters</i> , 2004, 93, 063601.	2.9	56
27	Experimental Entanglement Distribution by Separable States. <i>Physical Review Letters</i> , 2013, 111, 230505.	2.9	56
28	Efficient Experimental Estimation of Fidelity of Linear Optical Quantum Toffoli Gate. <i>Physical Review Letters</i> , 2013, 111, 160407.	2.9	55
29	Universal Measurement Apparatus Controlled by Quantum Software. <i>Physical Review Letters</i> , 2002, 89, 190401.	2.9	54
30	Optimal probabilistic cloning and purification of quantum states. <i>Physical Review A</i> , 2004, 70, .	1.0	54
31	Entanglement concentration of continuous-variable quantum states. <i>Physical Review A</i> , 2003, 67, .	1.0	49
32	Economical quantum cloning in any dimension. <i>Physical Review A</i> , 2005, 72, .	1.0	47
33	Experimental phase-covariant cloning of polarization states of single photons. <i>Physical Review A</i> , 2006, 74, .	1.0	47
34	Continuous-variable Werner state: Separability, nonlocality, squeezing, and teleportation. <i>Physical Review A</i> , 2002, 65, .	1.0	46
35	Linear optical Fredkin gate based on partial-SWAP gate. <i>Physical Review A</i> , 2008, 78, .	1.0	46
36	Experimental Realization of Linear-Optical Partial swap Gates. <i>Physical Review Letters</i> , 2008, 100, 180501.	2.9	45

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37	Loophole-free test of quantum nonlocality using high-efficiency homodyne detectors. Physical Review A, 2005, 71, .	1.0	44
38	Fiber-Optics Implementation of an Asymmetric Phase-Covariant Quantum Cloner. Physical Review Letters, 2007, 99, 120505.	2.9	40
39	Quantum-phase properties of the Kerr couplers. Optics Communications, 1999, 167, 115-124.	1.0	39
40	Light qubit storage and retrieval using macroscopic atomic ensembles. Physical Review A, 2006, 74, .	1.0	39
41	Experimental characterization of Gaussian quantum-communication channels. Physical Review A, 2007, 76, .	1.0	39
42	Experimental Purification of Single Qubits. Physical Review Letters, 2004, 93, 170501.	2.9	37
43	Optical quantum cloning. Progress in Optics, 2006, , 455-545.	0.4	35
44	Extremal equation for optimal completely positive maps. Physical Review A, 2001, 64, .	1.0	34
45	Simple optical measurement of the overlap and fidelity of quantum states. Physics Letters, Section A: General, Atomic and Solid State Physics, 2003, 310, 95-100.	0.9	34
46	Distillation and purification of symmetric entangled Gaussian states. Physical Review A, 2010, 82, .	1.0	34
47	Improving entanglement concentration of Gaussian states by local displacements. Physical Review A, 2011, 84, .	1.0	34
48	Heralded noiseless amplification and attenuation of non-Gaussian states of light. Physical Review A, 2014, 89, .	1.0	34
49	Pulsed squeezed vacuum measurements without homodyning. Physical Review A, 2004, 70, .	1.0	32
50	Gaussian localizable entanglement. Physical Review A, 2007, 75, .	1.0	32
51	Measurement-Induced Strong Kerr Nonlinearity for Weak Quantum States of Light. Physical Review Letters, 2017, 119, 013601.	2.9	30
52	Cloning the entanglement of a pair of quantum bits. Physical Review A, 2004, 69, .	1.0	27
53	Experimental purification of coherent states. Physical Review A, 2005, 72, .	1.0	26
54	Optimal partial estimation of multiple phases. Physical Review A, 2005, 72, .	1.0	26

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55	Several experimental realizations of symmetric phase-covariant quantum cloners of single-photon qubits. <i>Physical Review A</i> , 2007, 76, .	1.0	26
56	Experimentally feasible purification of continuous-variable entanglement. <i>Physical Review A</i> , 2007, 75, .	1.0	25
57	Quantum Cloning of a Coherent Light State into an Atomic Quantum Memory. <i>Physical Review Letters</i> , 2004, 93, 180501.	2.9	24
58	On the distillation and purification of phase-diffused squeezed states. <i>New Journal of Physics</i> , 2007, 9, 227-227.	1.2	24
59	Structural physical approximations of unphysical maps and generalized quantum measurements. <i>Physical Review A</i> , 2002, 66, .	1.0	23
60	Probabilistic quantum multimeters. <i>Physical Review A</i> , 2004, 69, .	1.0	22
61	Intramolecular Hamiltonian logic gates. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2004, 24, 161-172.	1.3	21
62	Experimental asymmetric phase-covariant quantum cloning of polarization qubits. <i>Physical Review A</i> , 2008, 78, .	1.0	21
63	Increasing efficiency of a linear-optical quantum gate using electronic feed-forward. <i>Physical Review A</i> , 2012, 85, .	1.0	21
64	Unitary-gate synthesis for continuous-variable systems. <i>Physical Review A</i> , 2003, 68, .	1.0	20
65	Entanglement generation in continuously coupled parametric generators. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2003, 5, 419-426.	1.4	20
66	Optimal probabilistic estimation of quantum states. <i>New Journal of Physics</i> , 2006, 8, 192-192.	1.2	20
67	Experimental realization of SWAP operation on hyper-encoded qubits. <i>Optics Express</i> , 2018, 26, 8443.	1.7	20
68	Experimental realization of a programmable quantum-state discriminator and a phase-covariant quantum multimeter. <i>Physical Review A</i> , 2004, 69, .	1.0	19
69	Single-passage readout of atomic quantum memory. <i>Physical Review A</i> , 2006, 73, .	1.0	19
70	Optical implementation of the encoding of two qubits to a single qutrit. <i>Physical Review A</i> , 2006, 74, .	1.0	19
71	Highly stable polarization independent Mach-Zehnder interferometer. <i>Review of Scientific Instruments</i> , 2014, 85, 083103.	0.6	19
72	Experimental realization of a programmable quantum gate. <i>Physical Review A</i> , 2008, 78, .	1.0	18

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73	Substituting scheme for nonlinear couplers: A group approach. Physical Review A, 2000, 62, .	1.0	17
74	Conditional generation of arbitrary multimode entangled states of light with linear optics. Physical Review A, 2003, 68, .	1.0	16
75	Nonunity gain minimal-disturbance measurement. Physical Review A, 2007, 76, .	1.0	16
76	Preparation of entangled states of two photons in several spatial modes. Physical Review A, 2008, 77, .	1.0	16
77	Strongly squeezed states at 532 nm based on frequency up-conversion. Optics Express, 2015, 23, 16035.	1.7	16
78	Experimental preparation of two-photon Knill-Laflamme-Milburn states. Physical Review A, 2010, 81, .	1.0	15
79	Quantum non-Gaussianity of frequency up-converted single photons. Optics Express, 2014, 22, 22808.	1.7	15
80	Weak-signal conversion from 1550 to 532 nm with 84% efficiency. Optics Letters, 2014, 39, 2979.	1.7	14
81	Slow-light pulses in moving media. Physical Review A, 2001, 65, .	1.0	13
82	Designing optimum completely positive maps for quantum teleportation. Physical Review A, 2001, 64, .	1.0	13
83	Bell-inequality violation with thermal radiation. Physical Review A, 2002, 65, .	1.0	13
84	Tomographic characterization of a linear optical quantum Toffoli gate. Physical Review A, 2015, 92, .	1.0	13
85	Experimental investigation of a four-qubit linear-optical quantum logic circuit. Scientific Reports, 2016, 6, 33475.	1.6	13
86	Enhancing the Capacity and Performance of Collective Atomic Quantum Memory. Physical Review Letters, 2005, 95, 053602.	2.9	12
87	Quantum cloning of a pair of orthogonally polarized photons with linear optics. Physical Review A, 2008, 77, .	1.0	12
88	Experimental Realization of Programmable Quantum Gate Array for Directly Probing Commutation Relations of Pauli Operators. Physical Review Letters, 2010, 105, 120402.	2.9	11
89	Optimal partial estimation of quantum states from several copies. Physical Review A, 2006, 74, .	1.0	10
90	Optimal multicopy asymmetric Gaussian cloning of coherent states. Physical Review A, 2007, 75, .	1.0	10

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91	Experimental demonstration of a teleportation-based programmable quantum gate. <i>Physical Review A</i> , 2009, 79, .	1.0	10
92	Resources for universal quantum-state manipulation and engineering. <i>Physical Review A</i> , 2009, 79, .	1.0	10
93	Conditional preparation of arbitrary superpositions of atomic Dicke states. <i>Physical Review A</i> , 2009, 79, .	1.0	10
94	Displacement-enhanced continuous-variable entanglement concentration. <i>Physical Review A</i> , 2012, 86, .	1.0	10
95	Negative Wigner function at telecommunication wavelength from homodyne detection. <i>Physical Review A</i> , 2017, 95, .	1.0	10
96	Direct Experimental Certification of Quantum Non-Gaussian Character and Wigner Function Negativity of Single-Photon Detectors. <i>Physical Review Letters</i> , 2021, 126, 043601.	2.9	10
97	Coherent light scattering and resonant energy transfer in an apertureless scanning near-field optical microscope. <i>Physical Review B</i> , 2001, 63, .	1.1	9
98	Competition between electron and hole stimulated Raman passage. <i>Physical Review A</i> , 2001, 64, .	1.0	9
99	Efficient entanglement distillation without quantum memory. <i>Nature Communications</i> , 2016, 7, 11720.	5.8	9
100	Nondestructive detector for exchange symmetry of photonic qubits. <i>Npj Quantum Information</i> , 2018, 4, .	2.8	9
101	Teleportation-based noiseless quantum amplification of coherent states of light. <i>Optics Express</i> , 2022, 30, 1466.	1.7	9
102	Reversibility of continuous-variable quantum cloning. <i>Physical Review A</i> , 2004, 69, .	1.0	8
103	Optimal two-copy discrimination of quantum measurements. <i>Physical Review A</i> , 2009, 80, .	1.0	8
104	Iterative Entanglement Distillation: Approaching the Elimination of Decoherence. <i>Physical Review Letters</i> , 2010, 105, 230502.	2.9	8
105	Optimal entanglement-assisted discrimination of quantum measurements. <i>Physical Review A</i> , 2014, 90, .	1.0	8
106	Orthogonalization of partly unknown quantum states. <i>Physical Review A</i> , 2014, 89, .	1.0	8
107	Unconditional entanglement interface for quantum networks. <i>Physical Review A</i> , 2016, 93, .	1.0	8
108	Sampling functions for multimode homodyne tomography with a single local oscillator. <i>Physical Review A</i> , 2001, 63, .	1.0	7

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109	Mixed-state localizable entanglement for continuous variables. <i>Physical Review A</i> , 2008, 78, .	1.0	7
110	Conditional generation of sub-Poissonian light from two-mode squeezed vacuum via balanced homodyne detection on idler mode. <i>Physical Review A</i> , 2001, 64, .	1.0	6
111	Multiple-copy distillation and purification of phase-diffused squeezed states. <i>Physical Review A</i> , 2007, 76, .	1.0	6
112	Optimal linear-optical noiseless quantum amplifiers driven by auxiliary multiphoton Fock states. <i>Physical Review A</i> , 2022, 105, .	1.0	6
113	Raman and Brillouin couplers with losses and phase mismatch. <i>Journal of Modern Optics</i> , 1999, 46, 1255-1276.	0.6	5
114	Two-mode squeezing in Raman couplers. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2000, 2, 10-20.	1.4	5
115	Experimental demonstration of optimal universal asymmetric quantum cloning of polarization states of single photons by partial symmetrization. <i>Physical Review A</i> , 2009, 80, .	1.0	5
116	Markov chain Monte Carlo estimation of quantum states. <i>Physical Review A</i> , 2009, 79, .	1.0	5
117	Witnessing negativity of Wigner function by estimating fidelities of catlike states from homodyne measurements. <i>Physical Review A</i> , 2013, 87, .	1.0	5
118	Process-fidelity estimation of a linear optical quantum-controlled-Zgate: A comparative study. <i>Physical Review A</i> , 2014, 89, .	1.0	5
119	Interconversion between single-rail and dual-rail photonic qubits. <i>Physical Review A</i> , 2017, 95, .	1.0	5
120	Feedforward-enhanced Fock state conversion with linear optics. <i>Optics Express</i> , 2020, 28, 11634.	1.7	5
121	Experimental entanglement-assisted weak measurement of phase shift. <i>Optics Express</i> , 2020, 28, 34639.	1.7	5
122	Continuously induced coherence without induced emission. <i>Physical Review A</i> , 2002, 65, .	1.0	4
123	HAMILTONIAN LOGIC GATES: COMPUTING INSIDE A MOLECULE. <i>International Journal of Nanoscience</i> , 2005, 04, 107-118.	0.4	4
124	Three-qubit quantum gates and filters for linear optical quantum-information processing. <i>Physical Review A</i> , 2009, 79, .	1.0	4
125	Experimental implementation of partial symmetrization and anti-symmetrization of two-qubit states. <i>New Journal of Physics</i> , 2009, 11, 023005.	1.2	4
126	Quantum controlled-Zgate for weakly interacting qubits. <i>Physical Review A</i> , 2015, 92, .	1.0	4

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127	Analysis of counting measurements on narrowband frequency up-converted single photons and the influence of heralding detector dead time. <i>Physical Review A</i> , 2015, 91, .	1.0	4
128	Control and enhancement of interferometric coupling between two photonic qubits. <i>Physical Review A</i> , 2016, 93, .	1.0	4
129	Quantum non-Gaussianity criteria based on vacuum probabilities of original and attenuated state. <i>New Journal of Physics</i> , 2021, 23, 073005.	1.2	4
130	Phase properties of two-mode gaussian light fields with application to Raman scattering. <i>Journal of Modern Optics</i> , 2000, 47, 1399-1417.	0.6	3
131	Continuous-variable quantum process tomography with squeezed-state probes. <i>Physical Review A</i> , 2015, 92, .	1.0	3
132	Generalized Hofmann quantum process fidelity bounds for quantum filters. <i>Physical Review A</i> , 2016, 93, .	1.0	3
133	Optimal implementation of two-qubit linear-optical quantum filters. <i>Physical Review A</i> , 2021, 103, .	1.0	3
134	Experimental demonstration of optimal probabilistic enhancement of quantum coherence. <i>Quantum Science and Technology</i> , 2021, 6, 045010.	2.6	3
135	Experimental quantum decoherence control by dark states of the environment. <i>New Journal of Physics</i> , 2020, 22, 093058.	1.2	3
136	Sampling the canonical phase from phase-space functions. <i>Physical Review A</i> , 2000, 62, .	1.0	2
137	Direct sampling of exponential phase moments of smoothed Wigner functions. <i>Physical Review A</i> , 2000, 62, .	1.0	2
138	Optical Implementation of Two Programmable Quantum Measurement Devices. <i>European Physical Journal A</i> , 2005, 23, 11-18.	0.2	2
139	Full symmetrization of two-mode entangled Gaussian states by local operations. <i>Physical Review A</i> , 2012, 86, .	1.0	2
140	Efficient representation of purity-preserving Gaussian quantum filters. <i>Physical Review A</i> , 2013, 87, .	1.0	2
141	Transformations of symmetric multipartite Gaussian states by Gaussian local operations and classical communication. <i>Physical Review A</i> , 2014, 89, .	1.0	2
142	Bounds on quantum process fidelity from minimum required number of quantum state fidelity measurements. <i>Physical Review A</i> , 2014, 89, .	1.0	2
143	Experimental replication of single-qubit quantum phase gates. <i>Physical Review A</i> , 2016, 93, .	1.0	2
144	Faithful conditional quantum state transfer between weakly coupled qubits. <i>Scientific Reports</i> , 2016, 6, 32125.	1.6	2

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145	Raman and Brillouin couplers with losses and phase mismatch. , 0, .		2
146	Nonlinear Phenomena in Quantum Optics. , 0, , 491-601.		1
147	Determination of Multimode Moments of Creation and Annihilation Operators via Multimode Balanced Homodyning with a Single Homodyne Detector. Fortschritte Der Physik, 2001, 49, 955.	1.5	1
148	Encoding the quantum state of cavity mode into an atomic beam. Physical Review A, 2002, 66, .	1.0	1
149	Gaussification of quantum states of traveling light beams in atomic memory. Physical Review A, 2010, 82, .	1.0	1
150	Decoherence-Resilient Linear Optical Two-Qubit Quantum Gate. Physical Review Applied, 2020, 14, .	1.5	1
151	<title>Quantum statistics of light in Raman scattering and Brillouin couplers with losses</title>. , 1999, , .		0
152	<title>Quantum phase properties of Raman scattering</title>. , 2001, 4356, 32.		0
153	<title>Substituting scheme for nonlinear couplers</title>. , 2001, 4356, 25.		0
154	<title>Continuous-variable quantum teleportation of squeezed coherent states</title>. , 2002, , .		0
155	<title>Optimum teleportation with imperfect Bell-state measurements</title>. , 2002, 4888, 16.		0
156	<title>Entanglement generation in two coupled second-harmonic generators</title>. , 2005, 5945, 35.		0
157	Quantum memory for light. , 0, , .		0
158	Experimental purification of coherent states. , 0, , .		0
159	Encoding Two Qubits into a Single Qutrit: An Experiment. Acta Physica Hungarica A Heavy Ion Physics, 2006, 26, 269-276.	0.4	0
160	Quantum Interface Between Light and Atomic Ensembles. , 0, , 515-535.		0
161	Optimal estimation of the magnetic field in atomic magnetometry with arbitrary shape of the probe light beam. Physical Review A, 2008, 77, .	1.0	0
162	Universal linear-optical quantum device: experimental implementation. Journal of Russian Laser Research, 2009, 30, 533-539.	0.3	0

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163	Optimal unambiguous discrimination of two incompatible quantum measurements. , 2013, , .		0
164	Experimental test of robust quantum detection and restoration of a qubit. Physical Review A, 2015, 92, .	1.0	0
165	Loophole-Free Test of Quantum Nonlocality with Continuous Variables of Light. , 2007, , 121-139.		0
166	Distillation of Continuous-Variable Entanglement. , 2007, , 101-120.		0