

# Serge Massar

## List of Publications by Year in descending order

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77  
papers

6,522  
citations

126907

33  
h-index

91884

69  
g-index

78  
all docs

78  
docs citations

78  
times ranked

4403  
citing authors

#	ARTICLE	IF	CITATIONS
1	Device-Independent Security of Quantum Cryptography against Collective Attacks. Physical Review Letters, 2007, 98, 230501.	7.8	1,221
2	Z-scan measurement of the nonlinear refractive index of graphene. Optics Letters, 2012, 37, 1856.	3.3	589
3	Nonlocal correlations as an information-theoretic resource. Physical Review A, 2005, 71, .	2.5	434
4	Nonlocality and communication complexity. Reviews of Modern Physics, 2010, 82, 665-698.	45.6	396
5	Device-independent quantum key distribution secure against collective attacks. New Journal of Physics, 2009, 11, 045021.	2.9	379
6	All-optical reservoir computing. Optics Express, 2012, 20, 22783.	3.4	340
7	A primer for black hole quantum physics. Physics Reports, 1995, 260, 329-446.	25.6	264
8	Information Processing Capacity of Dynamical Systems. Scientific Reports, 2012, 2, 514.	3.3	242
9	State estimation for large ensembles. Physical Review A, 2000, 61, .	2.5	205
10	Randomness versus Nonlocality and Entanglement. Physical Review Letters, 2012, 108, 100402.	7.8	183
11	High-performance photonic reservoir computer based on a coherently driven passive cavity. Optica, 2015, 2, 438.	9.3	182
12	Fully analogue photonic reservoir computer. Scientific Reports, 2016, 6, 22381.	3.3	133
13	All-optical reservoir computer based on saturation of absorption. Optics Express, 2014, 22, 10868.	3.4	132
14	Optimal Cloning of Coherent States with a Linear Amplifier and Beam Splitters. Physical Review Letters, 2001, 86, 4938-4941.	7.8	131
15	Continuous-variable quantum games. Physics Letters, Section A: General, Atomic and Solid State Physics, 2002, 306, 73-78.	2.1	113
16	How the change in horizon area drives black hole evaporation. Nuclear Physics B, 2000, 575, 333-356.	2.5	110
17	Efficient quantum key distribution secure against no-signalling eavesdroppers. New Journal of Physics, 2006, 8, 126-126.	2.9	102
18	On-chip parametric amplification with 265â€‰dB gain at telecommunication wavelengths using CMOS-compatible hydrogenated amorphous silicon waveguides. Optics Letters, 2011, 36, 552.	3.3	94

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19	Measuring the nonlinear refractive index of graphene using the optical Kerr effect method. Optics Letters, 2016, 41, 3281.	3.3	92
20	Security of practical private randomness generation. Physical Review A, 2013, 87, .	2.5	88
21	Exponential Lower Bounds for Polytopes in Combinatorial Optimization. Journal of the ACM, 2015, 62, 1-23.	2.2	84
22	The first peptides: The evolutionary transition between prebiotic amino acids and early proteins. Journal of Theoretical Biology, 2009, 261, 531-539.	1.7	74
23	Using a reservoir computer to learn chaotic attractors, with applications to chaos synchronization and cryptography. Physical Review E, 2018, 98, 012215.	2.1	65
24	Optimal Entanglement Enhancement for Mixed States. Physical Review Letters, 1999, 83, 2656-2659.	7.8	60
25	Online Training of an Opto-Electronic Reservoir Computer Applied to Real-Time Channel Equalization. IEEE Transactions on Neural Networks and Learning Systems, 2017, 28, 2686-2698.	11.3	59
26	Classical simulation of quantum entanglement without local hidden variables. Physical Review A, 2001, 63, .	2.5	51
27	Violation of local realism versus detection efficiency. Physical Review A, 2003, 68, .	2.5	48
28	Silicon-on-insulator integrated source of polarization-entangled photons. Optics Letters, 2013, 38, 1960.	3.3	48
29	On the problem of the uniformly accelerated oscillator. Classical and Quantum Gravity, 1993, 10, 385-395.	4.0	47
30	Brain-Inspired Photonic Signal Processor for Generating Periodic Patterns and Emulating Chaotic Systems. Physical Review Applied, 2017, 7, .	3.8	47
31	Uncertainty Relation for the Discrete Fourier Transform. Physical Review Letters, 2008, 100, 190401.	7.8	45
32	Fiber-Optics Implementation of the Deutsch-Jozsa and Bernstein-Vazirani Quantum Algorithms with Three Qubits. Physical Review Letters, 2003, 90, 157902.	7.8	44
33	Supercontinuum generation in hydrogenated amorphous silicon waveguides at telecommunication wavelengths. Optics Express, 2014, 22, 3089.	3.4	38
34	Combinatorics and Quantum Nonlocality. Physical Review Letters, 2003, 91, 047903.	7.8	28
35	Implementing two-photon interference in the frequency domain with electro-optic phase modulators. New Journal of Physics, 2012, 14, 043015.	2.9	25
36	Quantum coin tossing and bit-string generation in the presence of noise. Physical Review A, 2004, 69, .	2.5	23

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37	Creating and manipulating entangled optical qubits in the frequency domain. Physical Review A, 2014, 89, .	2.5	22
38	Embodiment of Learning in Electro-Optical Signal Processors. Physical Review Letters, 2016, 117, 128301.	7.8	22
39	Virtualization of a Photonic Reservoir Computer. Journal of Lightwave Technology, 2016, 34, 2085-2091.	4.6	22
40	Photon pair source based on parametric fluorescence in periodically poled twin-hole silica fiber. Optics Express, 2007, 15, 4419.	3.4	20
41	Nonlinear optical interactions in silicon waveguides. Nanophotonics, 2017, 6, 377-392.	6.0	18
42	Towards pattern generation and chaotic series prediction with photonic reservoir computers. Proceedings of SPIE, 2016, , .	0.8	16
43	Photonic extreme learning machine based on frequency multiplexing. Optics Express, 2021, 29, 28257.	3.4	15
44	Enhanced cross phase modulation instability in birefringent photonic crystal fibers in the anomalous dispersion regime. Optics Express, 2006, 14, 8290.	3.4	12
45	Information and communication in polygon theories. Physical Review A, 2014, 89, .	2.5	12
46	Device-independent randomness generation with sublinear shared quantum resources. Quantum - the Open Journal for Quantum Science, 0, 2, 86.	0.0	12
47	Online Training for High-Performance Analogue Readout Layers in Photonic Reservoir Computers. Cognitive Computation, 2017, 9, 297-306.	5.2	11
48	Photonic reservoir computer based on frequency multiplexing. Optics Letters, 2022, 47, 782.	3.3	11
49	Low-power inelastic light scattering at small detunings in silicon wire waveguides at telecom wavelengths. Journal of the Optical Society of America B: Optical Physics, 2012, 29, 1977.	2.1	10
50	Distributed Kerr Non-linearity in a Coherent All-Optical Fiber-Ring Reservoir Computer. Frontiers in Physics, 2019, 7, .	2.1	10
51	Spontaneous growth of Raman Stokes and anti-Stokes waves in fibers. Optics Letters, 2007, 32, 2819.	3.3	9
52	Hyperdense coding and superadditivity of classical capacities in hypersphere theories. New Journal of Physics, 2015, 17, 113002.	2.9	9
53	Investigating the emergence of time in stationary states with trapped ions. Physical Review A, 2015, 92, .	2.5	8
54	Minimum number of photons needed to distinguish two transparencies. Physical Review A, 2002, 65, .	2.5	7

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55	Propagation and survival of frequency-bin entangled photons in metallic nanostructures. Nanophotonics, 2015, 4, 324-331.	6.0	6
56	Phase Noise Robustness of a Coherent Spatially Parallel Optical Reservoir. IEEE Journal of Selected Topics in Quantum Electronics, 2020, 26, 1-10.	2.9	6
57	Weak Coin Flipping in a Device-Independent Setting. Lecture Notes in Computer Science, 2014, , 1-12.	1.3	6
58	Autonomous all-photon processor based on reservoir computing paradigm. , 2016, , .		6
59	Comment on "Ultra-short pulse generation by a topological insulator based saturable absorber" [Appl. Phys. Lett. 101, 211106 (2012)]. Applied Physics Letters, 2013, 103, 106101.	3.3	4
60	Spying on chaos-based cryptosystems with reservoir computing. , 2018, , .		4
61	Photonic Reservoir Computer with Output Expansion for Unsupervised Parameter Drift Compensation. Entropy, 2021, 23, 955.	2.2	4
62	Towards Adjustable Signal Generation with Photonic Reservoir Computers. Lecture Notes in Computer Science, 2016, , 374-381.	1.3	3
63	Pattern and Frequency Generation Using an Opto-Electronic Reservoir Computer with Output Feedback. Lecture Notes in Computer Science, 2016, , 318-325.	1.3	3
64	Random Pattern and Frequency Generation Using a Photonic Reservoir Computer with Output Feedback. Neural Processing Letters, 2018, 47, 1041-1054.	3.2	3
65	Lower Bound on the Number of Toffoli Gates in a Classical Reversible Circuit through Quantum Information Concepts. Physical Review Letters, 2005, 95, 120503.	7.8	2
66	Fiber Optics Protocols for Quantum Communication. Quantum Information Processing, 2006, 5, 441-449.	2.2	2
67	Secure and Robust Transmission and Verification of Unknown Quantum States in Minkowski Space. Scientific Reports, 2015, 4, 3901.	3.3	2
68	Towards autonomous photonic reservoir computer based on frequency parallelism of neurons. , 2017, , .		2
69	Photonic reservoir computer with output feedback for chaotic time series prediction. , 2017, , .		2
70	A Closer Connection Between Entanglement and Nonlocality. Physics Magazine, 2012, 5, .	0.1	1
71	Z-scan measurement of the refractive index of graphene: erratum. Optics Letters, 2013, 38, 1566.	3.3	1
72	Total functions in QMA. Quantum Information Processing, 2021, 20, 1.	2.2	1

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73	Resource efficient single photon source based on active frequency multiplexing. Optics Letters, 2021, 46, 2832-2835.	3.3	1
74	Parallel Extreme Learning Machines Based on Frequency Multiplexing. Applied Sciences (Switzerland), 2022, 12, 214.	2.5	1
75	Bad randomness comes good. Nature Physics, 2012, 8, 447-448.	16.7	0
76	Manipulating Frequency Entangled Photons. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2010, , 58-65.	0.3	0
77	Characterising the intersection of QMA and coQMA. Quantum Information Processing, 2021, 20, 1.	2.2	0