

# Paolo Villoresi

## List of Publications by Year in descending order

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160  
papers

8,329  
citations

61857

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161  
all docs

161  
docs citations

161  
times ranked

5021  
citing authors

#	ARTICLE	IF	CITATIONS
1	Deployment-Ready Quantum Key Distribution Over a Classical Network Infrastructure in Padua. Journal of Lightwave Technology, 2022, 40, 1658-1663.	2.7	7
2	Security bounds for decoy-state quantum key distribution with arbitrary photon-number statistics. Physical Review A, 2022, 105, .	1.0	8
3	Versatile and Concurrent FPGA-Based Architecture for Practical Quantum Communication Systems. IEEE Transactions on Quantum Engineering, 2022, 3, 1-8.	2.9	11
4	QKD field-trial in Padua: a resource-effective implementation with the iPOGNAC encoder. , 2022, , .		0
5	Time-bin Quantum Key Distribution exploiting the iPOGNAC polarization moulator and Qubit4Sync temporal synchronization. , 2022, , .		0
6	Feasibility of satellite-to-ground continuous-variable quantum key distribution. Npj Quantum Information, 2021, 7, .	2.8	58
7	Practical Semi-Device-Independent Quantum Random Number Generators. , 2021, , .		1
8	100 kHz satellite laser ranging demonstration at Matera Laser Ranging Observatory. Journal of Geodesy, 2021, 95, 1.	1.6	6
9	Semi-Device-Independent Heterodyne-Based Quantum Random-Number Generator. Physical Review Applied, 2021, 15, .	1.5	19
10	Resource-effective quantum key distribution: a field trial in Padua city center. Optics Letters, 2021, 46, 2848.	1.7	18
11	Full daylight quantum-key-distribution at 1550 nm enabled by integrated silicon photonics. Npj Quantum Information, 2021, 7, .	2.8	54
12	Experimental test of sequential weak measurements for certified quantum randomness extraction. Physical Review A, 2021, 103, .	1.0	18
13	Quantum technologies in space. Experimental Astronomy, 2021, 51, 1677-1694.	1.6	23
14	Advances in space quantum communications. IET Quantum Communication, 2021, 2, 182-217.	2.2	91
15	Certification of the efficient random number generation technique based on single-photon detector arrays and time-to-digital converters. IET Quantum Communication, 2021, 2, 74-79.	2.2	1
16	Semi-device independent randomness generation based on quantum stateâ€™s indistinguishability. Quantum Science and Technology, 2021, 6, 045026.	2.6	15
17	A resource-effective QKD field-trial in Padua with the iPOGNAC encoder. , 2021, , .		0
18	Simulating satellite quantum key distribution links: analytical model and software tool. , 2021, , .		0

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19	Semi-device-independent randomness from $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"> \langle \text{mml:mi> d</mml:mi> \langle \text{mml:math> -outcome continuous-variable detection. Physical Review A, 2021, 104, .$	1.0	8
20	Large-scale optical interferometry in general spacetimes. Physical Review D, 2020, 101, .	1.6	4
21	Fast and Simple Qubit-Based Synchronization for Quantum Key Distribution. Physical Review Applied, 2020, 13, .	1.5	39
22	Experimental Certification of Sustained Entanglement and Nonlocality after Sequential Measurements. Physical Review Applied, 2020, 13, .	1.5	31
23	LaserCube optical communication terminal for nano and micro satellites. Acta Astronautica, 2020, 173, 310-319.	1.7	14
24	Efficient random number generation techniques for CMOS single-photon avalanche diode array exploiting fast time tagging units. Physical Review Research, 2020, 2, .	1.3	10
25	Experimental demonstration of sequential quantum random access codes. Physical Review Research, 2020, 2, .	1.3	28
26	Advances in quantum cryptography. Advances in Optics and Photonics, 2020, 12, 1012.	12.1	848
27	Stable, low-error, and calibration-free polarization encoder for free-space quantum communication. Optics Letters, 2020, 45, 4706.	1.7	24
28	Simple quantum key distribution with qubit-based synchronization and a self-compensating polarization encoder. Optica, 2020, 7, 284.	4.8	44
29	Quantum random number generation with efficient processing of single photon detections. , 2020, , .		0
30	Qubit4Sync: a qubit-based synchronization system for quantum key distribution. , 2020, , .		1
31	Semi-Device-Independent Quantum Random Number Generator based on heterodyne detection and bounded energy. , 2020, , .		0
32	Real-Time Source-Independent Quantum Random-Number Generator with Squeezed States. Physical Review Applied, 2019, 12, .	1.5	28
33	SAGE: A proposal for a space atomic gravity explorer. European Physical Journal D, 2019, 73, 1.	0.6	75
34	Towards quantum communication from global navigation satellite system. Quantum Science and Technology, 2019, 4, 015012.	2.6	46
35	QCoSOne: a chip-based prototype for daylight free-space QKD at telecom wavelength. , 2019, , .		2
36	Sub-ns timing accuracy for satellite quantum communications. Journal of the Optical Society of America B: Optical Physics, 2019, 36, B59.	0.9	18

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37	Hongâ€“Ouâ€“Mandel interference between independent IIIâ€“V on silicon waveguide integrated lasers. Optics Letters, 2019, 44, 271.	1.7	31
38	All-fiber self-compensating polarization encoder for quantum key distribution. Optics Letters, 2019, 44, 2398.	1.7	42
39	Space Quantum Communication with higher Orbits. , 2019, , .		1
40	Postselection-Loophole-Free Time-Bin Entanglement Bell Test. , 2019, , .		0
41	Postselection-Loophole-Free Bell Violation with Genuine Time-Bin Entanglement. Physical Review Letters, 2018, 121, 190401.	2.9	32
42	Source-device-independent heterodyne-based quantum random number generator at 17 Gbps. Nature Communications, 2018, 9, 5365.	5.8	86
43	Direct Reconstruction of the Quantum Density Matrix by Strong Measurements. Physical Review Letters, 2018, 121, 230501.	2.9	44
44	Exploring the boundaries of quantum mechanics: advances in satellite quantum communications. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170461.	1.6	19
45	Space QUEST mission proposal: experimentally testing decoherence due to gravity. New Journal of Physics, 2018, 20, 063016.	1.2	36
46	Generation of mutually unbiased bases for 4D-QKD with structured photons via LNOI photonic wire. Journal of Optics (United Kingdom), 2018, 20, 095802.	1.0	2
47	Source-Device-Independent Ultrafast Quantum Random Number Generation. Physical Review Letters, 2017, 118, 060503.	2.9	99
48	CubeSat quantum communications mission. EPJ Quantum Technology, 2017, 4, .	2.9	86
49	Extending Wheelerâ€™s delayed-choice experiment to space. Science Advances, 2017, 3, e1701180.	4.7	38
50	High-visibility time-bin entanglement for testing chained Bell inequalities. Physical Review A, 2017, 95, .	1.0	6
51	Integrated optical modulator manipulating the polarization and rotation handedness of Orbital Angular Momentum states. Scientific Reports, 2017, 7, 3835.	1.6	7
52	Free-Space Quantum Communication with a Portable Quantum Memory. Physical Review Applied, 2017, 8, .	1.5	8
53	Three-observer Bell inequality violation on a two-qubit entangled state. Quantum Science and Technology, 2017, 2, 015010.	2.6	51
54	Enhanced security for multi-detector quantum random number generators. Quantum Science and Technology, 2016, 1, 015005.	2.6	4

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55	Satellite quantum communication towards GEO distances. Proceedings of SPIE, 2016, , .	0.8	4
56	Birth and evolution of an optical vortex. Optics Express, 2016, 24, 16390.	1.7	16
57	General theorem on the divergence of vortex beams. Physical Review A, 2016, 94, .	1.0	19
58	Experimental single-photon exchange along a space link of 7000 km. Physical Review A, 2016, 93, .	1.0	55
59	Reply to "Comment on "Device-independent entanglement-based Bennett 1992 protocol"™". Physical Review A, 2016, 93, .	1.0	0
60	Interference at the Single Photon Level Along Satellite-Ground Channels. Physical Review Letters, 2016, 116, 253601.	2.9	67
61	Free-space optical channel estimation for physical layer security. Optics Express, 2016, 24, 8940.	1.7	43
62	Free Space Quantum Communication with Quantum Memory. , 2016, , .		0
63	Interference for Quantum Time-Bin States in Satellite Channels. , 2016, , .		0
64	Ablation model for semiconductors and dielectrics under ultrafast laser pulses for solar cells micromachining. European Physical Journal Plus, 2015, 130, 1.	1.2	7
65	Experimental Satellite Quantum Communications. Physical Review Letters, 2015, 115, 040502.	2.9	216
66	Adaptive real time selection for quantum key distribution in lossy and turbulent free-space channels. Physical Review A, 2015, 91, .	1.0	58
67	Turbulent single-photon propagation in the Canary optical link. , 2014, , .		0
68	Bi-photon generation with optimized wavefront by means of adaptive optics. , 2014, , .		1
69	Exploiting Strong Turbulence in Quantum Communications. , 2014, , .		0
70	Quantum randomness certified by the uncertainty principle. Physical Review A, 2014, 90, .	1.0	125
71	Free-Space Quantum Key Distribution by Rotation-Invariant Twisted Photons. Physical Review Letters, 2014, 113, 060503.	2.9	331
72	Loss tolerant device-independent quantum key distribution: a proof of principle. New Journal of Physics, 2014, 16, 063064.	1.2	4

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73	Random bits, true and unbiased, from atmospheric turbulence. Scientific Reports, 2014, 4, 5490.	1.6	26
74	Asymmetric architecture for heralded single-photon sources. Physical Review A, 2013, 88, .	1.0	31
75	Experimental quantum key distribution with finite-key security analysis for noisy channels. Nature Communications, 2013, 4, 2363.	5.8	44
76	Design optimization for quantum communications in a GNSS intersatellite network. , 2013, , .		4
77	Optimization of two-photon wave function in parametric down conversion by adaptive optics control of the pump radiation. Optics Letters, 2013, 38, 489.	1.7	13
78	Layer separation driven by laser-induced strain in semiconductor thin film. Optical Materials Express, 2013, 3, 1925.	1.6	3
79	Experimental evaluation of a new system for laser tissue welding applied on damaged lungs. Interactive Cardiovascular and Thoracic Surgery, 2013, 16, 577-582.	0.5	6
80	Quantum Communications along the Canary Strongly-Turbulent Optical Link. , 2013, , .		0
81	Impact of Turbulence in Long Range Quantum and Classical Communications. Physical Review Letters, 2012, 109, 200502.	2.9	75
82	Single-grating monochromator for extreme-ultraviolet ultrashort pulses. Optics Express, 2011, 19, 19169.	1.7	137
83	Compression methods for XUV attosecond pulses. Optics Express, 2011, 19, 23420.	1.7	20
84	Gating of high-order harmonics generated by incommensurate two-color mid-IR laser pulses. Laser Physics Letters, 2011, 8, 875-879.	0.6	32
85	Link budget and background noise for satellite quantum key distribution. Advances in Space Research, 2011, 47, 802-810.	1.2	54
86	Phase control of a path-entangled photon state by a deformable membrane mirror. , 2011, , .		1
87	Intersatellite quantum communication feasibility study. Proceedings of SPIE, 2011, , .	0.8	5
88	High order harmonics driven by a self-phase-stabilized IR parametric source. Laser Physics, 2010, 20, 1019-1027.	0.6	17
89	Ultrabroadband pulse shaping with a push-pull deformable mirror. Optics Express, 2010, 18, 23147.	1.7	18
90	Interplay between group-delay-dispersion-induced polarization gating and ionization to generate isolated attosecond pulses from multicycle lasers. Optics Letters, 2010, 35, 2798.	1.7	36

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91	High-order harmonics generated by 1.5 $\mu\text{m}$ parametric source. Journal of Modern Optics, 2010, 57, 1008-1013.	0.6	5
92	High harmonic generation spectroscopy of hydrocarbons. Applied Physics Letters, 2010, 97, .	1.5	47
93	Time-delay compensated monochromator for the spectral selection of extreme-ultraviolet high-order laser harmonics. Review of Scientific Instruments, 2009, 80, 123109.	0.6	62
94	Multiparameter entangled-state engineering using adaptive optics. Physical Review A, 2009, 79, .	1.0	12
95	Light's Orbital Angular Momentum and Optical Vortices for Astronomical Coronagraphy from Ground and Space Telescopes. Earth, Moon and Planets, 2009, 105, 283-288.	0.3	8
96	Efficient continuum generation exceeding 200 eV by intense ultrashort two-color driver. Optics Letters, 2009, 34, 3125.	1.7	73
97	Generation of 85-fs pulses at 13 $\mu\text{m}$ for ultrabroadband pump-probe spectroscopy. Optics Express, 2009, 17, 12510.	1.7	39
98	Feasibility of satellite quantum key distribution. New Journal of Physics, 2009, 11, 045017.	1.2	171
99	Space-quest, experiments with quantum entanglement in space. Europhysics News, 2009, 40, 26-29.	0.1	77
100	The XUV monochromator for ultrashort pulses at ARTEMIS. , 2009, , .		1
101	Two-photon spectral coherence matrix and characterization of multi-parameter entangled states. Physics Letters, Section A: General, Atomic and Solid State Physics, 2008, 372, 3109-3117.	0.9	1
102	Experimental verification of the feasibility of a quantum channel between space and Earth. New Journal of Physics, 2008, 10, 033038.	1.2	177
103	Intense femtosecond extreme ultraviolet pulses by using a time-delay-compensated monochromator: erratum. Optics Letters, 2008, 33, 140.	1.7	5
104	Sub-two-cycle light pulses at 16 $\mu\text{m}$ from an optical parametric amplifier. Optics Letters, 2008, 33, 741.	1.7	117
105	Beam separator for high-order harmonic radiation in the 3-10 nm spectral region. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2008, 25, 1104.	0.8	19
106	Design of an extreme-ultraviolet attosecond compressor. Journal of the Optical Society of America B: Optical Physics, 2008, 25, B133.	0.9	17
107	Temporal characterization of a time-compensated monochromator for high-efficiency selection of extreme-ultraviolet pulses generated by high-order harmonics. Journal of the Optical Society of America B: Optical Physics, 2008, 25, B44.	0.9	14
108	Optical concept of a compressor for XUV pulses in the attosecond domain. Optics Express, 2008, 16, 6652.	1.7	32

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109	Even-Order Aberration Cancellation in Quantum Interferometry. Physical Review Letters, 2008, 101, 233603.	2.9	34
110	Polarization transformation induced on qubits in a Space-to-Earth quantum communication link. , 2007, , .		0
111	Spectral Entanglement and Precise Measurement of Optical Dispersion. , 2007, , .		0
112	Realization of a time-compensated monochromator exploiting conical diffraction for few-femtosecond XUV pulses. Laser and Particle Beams, 2007, 25, 391-396.	0.4	3
113	X-ray spectroscopy observation of fast ions generation in plasma produced by short low-contrast laser pulse irradiation of solid targets. Laser and Particle Beams, 2007, 25, 267-275.	0.4	58
114	Elemental sensitivity in soft x-ray imaging with a laser-plasma source and a color center detector. Optics Letters, 2007, 32, 2593.	1.7	20
115	Intense femtosecond extreme ultraviolet pulses by using a time-delay-compensated monochromator. Optics Letters, 2007, 32, 2897.	1.7	88
116	Attosecond pulse compression in the extreme ultraviolet region by conical diffraction. , 2007, , .		0
117	Isolated Single-Cycle Attosecond Pulses. Science, 2006, 314, 443-446.	6.0	1,496
118	Imaging of recombination events in high-order harmonic generation by phase-stabilized few-optical-cycle pulses. Journal of Modern Optics, 2006, 53, 67-74.	0.6	7
119	XUV monochromator for novel application of ultrafast pulses. , 2006, , .		0
120	Wave front active control by a digital-signal-processor-driven deformable membrane mirror. Review of Scientific Instruments, 2006, 77, 093102.	0.6	22
121	Influence of satellite motion on polarization qubits in a Space-Earth quantum communication link. Optics Express, 2006, 14, 10050.	1.7	49
122	Time-delay compensated monochromator in the off-plane mount for extreme-ultraviolet ultrashort pulses. Applied Optics, 2006, 45, 8577.	2.1	47
123	Controlling attosecond electron dynamics by phase-stabilized polarization gating. Nature Physics, 2006, 2, 319-322.	6.5	399
124	Real-time thermal control in laser diode microprocessing. , 2006, , .		0
125	Table-top soft x-ray imaging of nanometric films. Applied Physics Letters, 2006, 89, 111122.	1.5	15
126	Molecular orbital dependence of high-order harmonic generation. Journal of Modern Optics, 2006, 53, 97-111.	0.6	6



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127	Measurement of Harmonic Phase Differences by Interference of Attosecond Light Pulses. Physical Review Letters, 2005, 94, 193903.	2.9	29
128	Cluster effects in high-order harmonics generated by ultrashort light pulses. Applied Physics Letters, 2005, 86, 111121.	1.5	111
129	Instrumentation for analysis and utilization of extreme-ultraviolet and soft x-ray high-order harmonics. Review of Scientific Instruments, 2004, 75, 4413-4418.	0.6	57
130	Space-to-ground quantum communication using an optical ground station: a feasibility study. , 2004, 5551, 113.		16
131	Single-atom effects in high-order harmonic generation: role of carrier-envelope phase in the few-optical-cycle regime. Applied Physics B: Lasers and Optics, 2004, 78, 873-877.	1.1	3
132	Observation of Carrier-Envelope Phase Phenomena in the Multi-Optical-Cycle Regime. Physical Review Letters, 2004, 92, 113904.	2.9	66
133	Optimization of high-order harmonic generation by adaptive control of a sub-10-fs pulse wave front. Optics Letters, 2004, 29, 207.	1.7	66
134	Toward the single-cycle regime in the generation of high-order laser harmonics. Laser and Particle Beams, 2004, 22, 335-339.	0.4	1
135	Above-Threshold Ionization at the Few-Cycle Limit. Physical Review Letters, 2003, 91, 173003.	2.9	89
136	Optical design of a spectrometerâ€“monochromator for the extreme-ultraviolet and soft-x-ray emission of high-order harmonics. Applied Optics, 2003, 42, 6367.	2.1	21
137	Effects of Carrier-Envelope Phase Differences of Few-Optical-Cycle Light Pulses in Single-Shot High-Order-Harmonic Spectra. Physical Review Letters, 2003, 91, 213905.	2.9	134
138	The role of beam profile in high-order harmonic generation by few-optical-cycle pulses. Applied Physics B: Lasers and Optics, 2002, 74, s11-s15.	1.1	6
139	Study of few-optical-cycles generation of high-order harmonics. Laser and Particle Beams, 2001, 19, 41-45.	0.4	5
140	Advanced instrumentation for spectral and spatial investigations of high-order laser harmonics. Laser and Particle Beams, 2001, 19, 201-204.	0.4	0
141	Absolute-phase phenomena in photoionization with few-cycle laser pulses. Nature, 2001, 414, 182-184.	13.7	653
142	Silicon Carbide Films by Laser Pyrolysis of Polycarbosilane. Journal of the American Ceramic Society, 2001, 84, 224-226.	1.9	34
143	Experimental Evidence for Detuning Induced Pattern Selection in Nonlinear Optics. Physical Review Letters, 2001, 87, 274102.	2.9	20
144	High-order laser harmonics detection in the EUV and soft x-ray spectral regions. Review of Scientific Instruments, 2001, 72, 2868-2874.	0.6	50

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145	2Pand4PC II photoabsorption spectra. Physical Review A, 2001, 64, .	1.0	6
146	Gas medium ionization and harmonic wavelength tunability in high-order harmonic generation with ultrashort laser pulses. Laser and Particle Beams, 2000, 18, 477-482.	0.4	3
147	On the optical analysis of the ray path-lengths in the diffraction of femtosecond XUV and soft X-ray pulses. Laser and Particle Beams, 2000, 18, 529-534.	0.4	6
148	Spectral analysis of high-order harmonics generated by 30-fs and sub-10-fs laser pulses. Applied Physics B: Lasers and Optics, 2000, 70, S215-S220.	1.1	1
149	Ultra-fast spectroscopy and extreme nonlinear optics by few-optical-cycle laser pulses. Applied Physics B: Lasers and Optics, 2000, 71, 779-786.	1.1	10
150	Spectral Features and Modeling of High-Order Harmonics Generated by Sub-10-fs Pulses. Physical Review Letters, 2000, 85, 2494-2497.	2.9	51
151	Design and experimental characterization of a high-resolution instrument for measuring the extreme-UV absorption of laser plasmas. Applied Optics, 2000, 39, 85.	2.1	7
152	Surface damage of extreme-ultraviolet gratings exposed to high-energy 20-fs laser pulses. Applied Optics, 1999, 38, 4720.	2.1	6
153	Compensation of optical path lengths in extreme-ultraviolet and soft-x-ray monochromators for ultrafast pulses. Applied Optics, 1999, 38, 6040.	2.1	72
154	C+ and C++ ion densities scaling in laser plasmas by ultraviolet photoabsorption spectroscopy. , 1998, 114, 213-216.		2
155	Experimental measurement of the C III-shell photoabsorption spectrum. Physical Review A, 1998, 58, 4985-4988.	1.0	15
156	Laser-produced plasma stigmatic observations in the extreme ultraviolet by means of a CCD detector. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1997, 19, 759-777.	0.4	2
157	Absorption spectra and oscillator strength ratio measurements for $\hat{l}^n = 1$ transitions from excited levels of Be I and Be II. Journal of Quantitative Spectroscopy and Radiative Transfer, 1997, 57, 847-857.	1.1	4
158	Measurement of the K-shell photoionization cross section of C iv through the L-shell photoabsorption spectra. Physical Review A, 1995, 51, 314-323.	1.0	19
159	Stigmatic spectrograph with a CCD detector for soft x-ray observations of laser produced plasmas. Review of Scientific Instruments, 1994, 65, 2049-2055.	0.6	2
160	K-shell photoabsorption spectrum of C ii. Physical Review A, 1993, 47, 4033-4041.	1.0	29