Vincenzo Pierro

List of Publications by Year
in descending order

143 papers	18,371 citations	36303 51 h-index	17105 122 g-index
145 all docs	145 docs citations	145 times ranked	12379 citing authors

#	Article	IF	Citations
1	Bimodal Approach for Noise Figures of Merit Evaluation in Quantum-Limited Josephson Traveling Wave Parametric Amplifiers. IEEE Transactions on Applied Superconductivity, 2022, 32, 1-6.	1.7	8
2	First joint observation by the underground gravitational-wave detector KAGRA with GEO 600. Progress of Theoretical and Experimental Physics, 2022, 2022, .	6.6	20
3	Analysis of Josephson junctions switching time distributions for the detection of single microwave photons. Chaos, Solitons and Fractals, 2021, 142, 110496.	5.1	16
4	A Gravitational-wave Measurement of the Hubble Constant Following the Second Observing Run of Advanced LIGO and Virgo. Astrophysical Journal, 2021, 909, 218.	4.5	144
5	Emergence and Evolution of Crystallization in TiO2 Thin Films: A Structural and Morphological Study. Nanomaterials, 2021, 11, 1409.	4.1	20
6	Ternary quarter wavelength coatings for gravitational wave detector mirrors: Design optimization via exhaustive search. Physical Review Research, 2021, 3, .	3.6	7
7	Optimal Design of Coatings for Mirrors of Gravitational Wave Detectors: Analytic Turbo Solution via Herpin Equivalent Layers. Applied Sciences (Switzerland), 2021, 11, 11669.	2.5	2
8	Detection of signals in presence of noise through Josephson junction switching currents. Physical Review E, 2020, 101, 052205.	2.1	14
9	Voltage drop across Josephson junctions for LÃ©vy noise detection. Physical Review Research, 2020, 2, .	3.6	24
10	Search for Subsolar Mass Ultracompact Binaries in Advanced LIGOâ€™s Second Observing Run. Physical Review Letters, 2019, 123, 161102.	7.8	119
11	On the performance limits of coatings for gravitational wave detectors made of alternating layers of two materials. Optical Materials, 2019, 96, 109269.	3.6	10
12	Josephson-based Threshold Detector for LÃ©vy-Distributed Current Fluctuations. Physical Review Applied, 2019, 11, .	3.8	66
13	Search for Gravitational Waves from a Long-lived Remnant of the Binary Neutron Star Merger GW170817. Astrophysical Journal, 2019, 875, 160.	4.5	97
14	Improving astrophysical parameter estimation via offline noise subtraction for Advanced LIGO. Physical Review D, 2019, 99, .	4.7	77
15	Increasing the Astrophysical Reach of the Advanced Virgo Detector via the Application of Squeezed Vacuum States of Light. Physical Review Letters, 2019, 123, 231108.	7.8	254
16	Stochastic first passage time accelerated with CUDA. Journal of Computational Physics, 2018, 361, 136-149.	3.8	11
17	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. Living Reviews in Relativity, 2018, 21, 3.	26.7	808
18	Identification and mitigation of narrow spectral artifacts that degrade searches for persistent gravitational waves in the first two observing runs of Advanced LIGO. Physical Review D, 2018, 97, .	4.7	104

#	Article	IF	Citations
19	Localization of Gravitational Sources from Time-Frequency Maps. , 2018, , .		1
20	Search for Subsolar-Mass Ultracompact Binaries in Advanced LIGOâ€™s First Observing Run. Physical Review Letters, 2018, 121, 231103.	7.8	77
21	GW170817: Measurements of Neutron Star Radii and Equation of State. Physical Review Letters, 2018, 121, 161101.	7.8	1,473
22	Search for Tensor, Vector, and Scalar Polarizations in the Stochastic Gravitational-Wave Background. Physical Review Letters, 2018, 120, 201102.	7.8	85
23	Parallel Simulation of Josephson Junctions With Multiplicative Noise. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-4.	1.7	0
24	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. , 2018, 21, 1.		2
25	Anomalous transport effects on switching currents of graphene-based Josephson junctions. Nanotechnology, 2017, 28, 134001.	2.6	98
26	Effects of waveform model systematics on the interpretation of GW150914. Classical and Quantum Gravity, 2017, 34, 104002.	4.0	98
27	Upper Limits on the Stochastic Gravitational-Wave Background from Advanced LIGOâ€™s First Observing Run. Physical Review Letters, 2017, 118, 121101.	7.8	194
28	Directional Limits on Persistent Gravitational Waves from Advanced LIGOâ€™s First Observing Run. Physical Review Letters, 2017, 118, 121102.	7.8	84
29	First Search for Gravitational Waves from Known Pulsars with Advanced LIGO. Astrophysical Journal, 2017, 839, 12.	4.5	131
30	The basic physics of the binary black hole merger GW150914. Annalen Der Physik, 2017, 529, 1600209.	2.4	69
31	GW170814: A Three-Detector Observation of Gravitational Waves from a Binary Black Hole Coalescence. Physical Review Letters, 2017, 119, 141101.	7.8	1,600
32	Gravitational Waves and Gamma-Rays from a Binary Neutron Star Merger: GW170817 and GRB 170817A. Astrophysical Journal Letters, 2017, 848, L13.	8.3	2,314
33	Quantum correlation measurements in interferometric gravitational-wave detectors. Physical Review A, 2017, 95, .	2.5	16
34	Search for Gravitational Waves Associated with Gamma-Ray Bursts during the First Advanced LIGO Observing Run and Implications for the Origin of GRB 150906B. Astrophysical Journal, 2017, 841, 89.	4.5	52
35	First Demonstration of Electrostatic Damping of Parametric Instability at Advanced LIGO. Physical Review Letters, 2017, 118, 151102.	7.8	24
36	Search for Post-merger Gravitational Waves from the Remnant of the Binary Neutron Star Merger GW170817. Astrophysical Journal Letters, 2017, 851, L16.	8.3	189

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37	Estimating the Contribution of Dynamical Ejecta in the Kilonova Associated withÂGW170817. Astrophysical Journal Letters, 2017, 850, L39.	8.3	156
38	Effects of transients in LIGO suspensions on searches for gravitational waves. Review of Scientific Instruments, 2017, 88, 124501.	1.3	6
39	GW170608: Observation of a 19 Solar-mass Binary Black Hole Coalescence. Astrophysical Journal Letters, 2017, 851, L35.	8.3	968
40	Characterization of transient noise in Advanced LIGO relevant to gravitational wave signal GW150914. Classical and Quantum Gravity, 2016, 33, 134001.	4.0	225
41	Prospects for Observing and Localizing Gravitational-Wave Transients with Advanced LIGO and Advanced Virgo. Living Reviews in Relativity, 2016, 19, 1.	26.7	427
42	THE RATE OF BINARY BLACK HOLE MERGERS INFERRED FROM ADVANCED LIGO OBSERVATIONS SURROUNDING GW150914. Astrophysical Journal Letters, 2016, 833, L1.	8.3	230
43	Accurate switching currents measurements in quantum washboard potential. , 2016, , .		0
44	LOCALIZATION AND BROADBAND FOLLOW-UP OF THE GRAVITATIONAL-WAVE TRANSIENT GW150914. Astrophysical Journal Letters, 2016, 826, L13.	8.3	210
45	UPPER LIMITS ON THE RATES OF BINARY NEUTRON STAR AND NEUTRON STARâ€“BLACK HOLE MERGERS FROM ADVANCED LIGOâ€™S FIRST OBSERVING RUN. Astrophysical Journal Letters, 2016, 832, L21.	8.3	146
46	Sensitivity of the Advanced LIGO detectors at the beginning of gravitational wave astronomy. Physical Review D, 2016, 93, .	4.7	286
47	GW150914: Implications for the Stochastic Gravitational-Wave Background from Binary Black Holes. Physical Review Letters, 2016, 116, 131102.	7.8	269
48	GW150914: The Advanced LIGO Detectors in the Era of First Discoveries. Physical Review Letters, 2016, 116, 131103.	7.8	466
49	Tests of General Relativity with GW150914. Physical Review Letters, 2016, 116, 221101.	7.8	1,224
50	Properties of the Binary Black Hole Merger GW150914. Physical Review Letters, 2016, 116, 241102.	7.8	673
51	Nonideal quantum measurement effects on the switching-current distribution of Josephson junctions. Physical Review A, 2016, 94, .	2.5	3
52	ASTROPHYSICAL IMPLICATIONS OF THE BINARY BLACK HOLE MERGER GW150914. Astrophysical Journal Letters, 2016, 818, L22.	8.3	633
53	Interplay between detection strategies and stochastic resonance properties. Communications in Nonlinear Science and Numerical Simulation, 2016, 30, 15-31.	3.3	19
54	Sequential nonideal measurements of quantum oscillators: Statistical characterization with and without environmental coupling. Physical Review A, 2015, 92, .	2.5	4

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55	Fabryâ€“Perot filters with tunable Josephson junction defects. Physica C: Superconductivity and Its Applications, 2015, 517, 37-40.	1.2	8
56	Material loss angles from direct measurements of broadband thermal noise. Physical Review D, 2015, 91, .	4.7	24
57	Characterization of the LIGO detectors during their sixth science run. Classical and Quantum Gravity, 2015, 32, 115012.	4.0	1,029
58	Switching times in Fabry-Perot measurements. , 2015, , .		0
59	SEARCHES FOR CONTINUOUS GRAVITATIONAL WAVES FROM NINE YOUNG SUPERNOVA REMNANTS. Astrophysical Journal, 2015, 813, 39.	4.5	66
60	FIRST SEARCHES FOR OPTICAL COUNTERPARTS TO GRAVITATIONAL-WAVE CANDIDATE EVENTS. Astrophysical Journal, Supplement Series, 2014, 211, 7.	7.7	57
61	Constraints on Cosmic Strings from the LIGO-Virgo Gravitational-Wave Detectors. Physical Review Letters, 2014, 112, 131101.	7.8	68
62	Improved Upper Limits on the Stochastic Gravitational-Wave Background from 2009â€“2010 LIGO and Virgo Data. Physical Review Letters, 2014, 113, 231101.	7.8	86
63	Negative differential resistance in Josephson junctions coupled to a cavity. Physica C: Superconductivity and Its Applications, 2014, 503, 178-182.	1.2	5
64	Negative Differential Resistance due to Nonlinearities in Single and Stacked Josephson Junctions. IEEE Transactions on Applied Superconductivity, 2014, 24, 1-7.	1.7	6
65	Noise estimate of pendular Fabry-Perot through reflectivity change. , 2014, , .		1
66	GRAVITATIONAL WAVES FROM KNOWN PULSARS: RESULTS FROM THE INITIAL DETECTOR ERA. Astrophysical Journal, 2014, 785, 119.	4.5	125
67	Membrane Heating in Living Tissues Exposed to Nonthermal Pulsed EM Fields. IEEE Transactions on Plasma Science, 2014, 42, 2236-2244.	1.3	11
68	NEURAL NETWORK AIDED GLITCH-BURST DISCRIMINATION AND GLITCH CLASSIFICATION. International Journal of Modern Physics C, 2013, 24, 1350084.	1.7	29
69	Escape time characterization of pendular Fabry-Perot. Europhysics Letters, 2013, 101, 20005.	2.0	11
70	Enhanced sensitivity of the LIGO gravitational wave detector by using squeezed states of light. Nature Photonics, 2013, 7, 613-619.	31.4	825
71	Robust gravitational wave burst detection and source localization in a network of interferometers using cross-Wigner spectra. Classical and Quantum Gravity, 2012, 29, 045001.	4.0	2
72	The characterization of Virgo data and its impact on gravitational-wave searches. Classical and Quantum Gravity, 2012, 29, 155002.	4.0	73

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73	Escape Time of Josephson Junctions for Signal Detection. Progress in Optical Science and Photonics, 2012, , 657-678.	0.5	1
74	Characterization of escape times of Josephson junctions for signal detection. Physical Review E, 2012, 85, 016708.	2.1	45
75	Blind source separation and Wigner-Ville transform as tools for the extraction of the gravitational wave signal. Physical Review D, 2011, 83, .	4.7	3
76	SEARCH FOR GRAVITATIONAL-WAVE BURSTS ASSOCIATED WITH GAMMA-RAY BURSTS USING DATA FROM LIGO SCIENCE RUN 5 AND VIRGO SCIENCE RUN 1. Astrophysical Journal, 2010, 715, 1438-1452.	4.5	60
77	A Thermal Model for Pulsed EM Field Exposure Effects in Cells at Nonthermal Levels. IEEE Transactions on Plasma Science, 2010, 38, 149-155.	1.3	23
78	SEARCHES FOR GRAVITATIONAL WAVES FROM KNOWN PULSARS WITH SCIENCE RUN 5 LIGO DATA. Astrophysical Journal, 2010, 713, 671-685.	4.5	155
79	Detection of noise-corrupted sinusoidal signals with Josephson junctions. Physical Review E, 2010, 82, 046712.	2.1	31
80	Measurement of thermal noise in multilayer coatings with optimized layer thickness. Physical Review D, 2010, 81, .	4.7	55
81	Directive emission from defect-free dodecagonal photonic quasicrystals: A leaky wave characterization. Physical Review B, 2009, 79, .	3.2	19
82	An upper limit on the stochastic gravitational-wave background of cosmological origin. Nature, 2009, 460, 990-994.	27.8	303
83	STACKED SEARCH FOR GRAVITATIONAL WAVES FROM THE 2006 SGR 1900+14 STORM. Astrophysical Journal, 2009, 701, L68-L74.	4.5	45
84	A parametric study of the lensing properties of dodecagonal photonic quasicrystals. Photonics and Nanostructures - Fundamentals and Applications, 2008, 6, 60-68.	2.0	15
85	Mode confinement in photonic quasicrystal point-defect cavities for particle accelerators. Applied Physics Letters, 2008, 93, 164102.	3.3	18
86	Aperiodic-Tiling-Based Mushroom-Type High-Impedance Surfaces. IEEE Antennas and Wireless Propagation Letters, 2008, 7, 54-57.	4.0	2
87	Photonic Quasicrystals, Some Properties and Applications. , 2008, , .		0
88	Genetically Optimized Metasurface Pairs for Wideband Out-of-Phase Mutual Response. IEEE Antennas and Wireless Propagation Letters, 2008, 7, 788-791.	4.0	7
89	Evidence of local effects in anomalous refraction and focusing properties of dodecagonal photonic quasicrystals. Physical Review B, 2008, 77, .	3.2	34
90	A comparative study of directive emission from photonic quasicrystals. Proceedings of SPIE, 2008, , .	0.8	0

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91	Implications for the Origin of GRB 070201 from LIGO Observations. Astrophysical Journal, 2008, 681, 1419-1430.	4.5	143
92	Radiation from Fibonacci-type Quasiperiodic Arrays on Dielectric Substrates. Journal of Electromagnetic Waves and Applications, 2007, 21, 1231-1245.	1.6	3
93	Search for gravitational-wave bursts in LIGO data from the fourth science run. Classical and Quantum Gravity, 2007, 24, 5343-5369.	4.0	78
94	Perspectives on beam-shaping optimization for thermal-noise reduction in advanced gravitational-wave interferometric detectors: Bounds, profiles, and critical parameters. Physical Review D, 2007, 76, .	4.7	4
95	Scattering Properties of One-Dimensional Aperiodically-Ordered Strip Arrays Based on Two-Symbol Substitutional Sequences. IEEE Transactions on Antennas and Propagation, 2007, 55, 1554-1563.	5.1	3
96	High-Impedance Surfaces with Aperiodically-Ordered Textures. , 2007, , .		0
97	Analytic Properties of a Class of Hyperboloidal Beams in Nearly-Spheroidal Fabry-Perot Optical Cavities. , 2007, , .		0
98	Analytic structure of a family of hyperboloidal beams of potential interest for advanced LIGO. Physical Review D, 2006, 73, .	4.7	10
99	Localized modes in photonic quasicrystals with Penrose-type lattice. Optics Express, 2006, 14, 10021.	3.4	53
100	Optimized multilayer dielectric mirror coatings for gravitational wave interferometers. , 2006, , .		22
101	A Comparative Study of Representative Categories of EBG Dielectric Quasi-Crystals. IEEE Antennas and Wireless Propagation Letters, 2006, 5, 331-334.	4.0	23
102	Metamaterial inclusions based on grid-graph Hamiltonian paths. Microwave and Optical Technology Letters, 2006, 48, 2520-2524.	1.4	5
103	Parameterizing wave interactions with aperiodic order: threads in a tapestry. , 2006, , .		0
104	Band Gap Formation and Multiple Scattering in Photonic Quasicrystals with a Penrose-Type Lattice. Physical Review Letters, 2005, 94, 183903.	7.8	100
105	Ray-chaotic footprints in deterministic wave dynamics: a test model with coupled Floquet-type and ducted-type mode characteristics. IEEE Transactions on Antennas and Propagation, 2005, 53, 753-765.	5.1	7
106	Radiation properties of planar antenna arrays based on certain categories of aperiodic tilings. IEEE Transactions on Antennas and Propagation, 2005, 53, 635-644.	5.1	91
107	Parameterizing quasi-periodicity: generalized Poisson summation and its application to modified-Fibonacci antenna arrays. IEEE Transactions on Antennas and Propagation, 2005, 53, 2044-2053.	5.1	11
108	Radiation properties of one-dimensional random-like antenna arrays based on Rudin-Shapiro sequences. IEEE Transactions on Antennas and Propagation, 2005, 53, 3568-3575.	5.1	10

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109	How many templates for GW chirp detection? The minimal-match issue revisited. Classical and Quantum Gravity, 2004, 21, 4955-4961.	4.0	3
110	Correlator bank detection of gravitational wave chirpsâ€"False-alarm probability, template density, and thresholds: Behind and beyond the minimal-match issue. Physical Review D, 2004, 70, .	4.7	4
111	Rejection properties of stochastic-resonance-based detectors of weak harmonic signals. Physical Review E, 2004, 69, 062104.	2.1	6
112	A procedure to measure electromagnetic skin depth in microwave heating. Infrared Physics and Technology, 2004, 46, 49-55.	2.9	7
113	Gravitational wave chirp search: no-signal cumulative distribution of the maximum likelihood detection statistic. Classical and Quantum Gravity, 2003, 20, S803-S813.	4.0	3
114	Optimum placement of post-1PN gravitational wave chirp templates made simple at any match level via Tanaka-Tagoshi coordinates. Physical Review D, 2002, 65, .	4.7	6
115	<title>Dielectric constant measurements by IR thermography in microwave heating</title>. , 2002, 4710, 558.		2
116	IR temperature measurements in microwave heating. Infrared Physics and Technology, 2002, 43, 145-150.	2.9	24
117	Computation of hyperngeometric functions for gravitationally radiating binary stars. Monthly Notices of the Royal Astronomical Society, 2002, 334, 855-858.	4.4	7
118	Fast and accurate computational tools for gravitational waveforms from binary stars with any orbital eccentricity. Monthly Notices of the Royal Astronomical Society, 2001, 325, 358-372.	4.4	36
119	Tanaka-Tagoshi parametrization of post-first-post-Newtonian spin-free gravitational wave chirps: Equispaced and cardinal interpolated lattices for first generation interferometric antennas. Physical Review D, 2001, 64, .	4.7	5
120	More on the Tanaka-Tagoshi parametrization of post-1PN spin-free gravitational wave chirps: Equispaced and cardinal interpolated lattices. Physical Review D, 2001, 64, .	4.7	1
121	Analytical approximations for fundamental-mode field and dispersion equation of planar waveguides through the Stevenson-Padï¿½ approach. Microwave and Optical Technology Letters, 2000, 27, 158-162.	1.4	8
122	Efficient Faulty Element Diagnostics of Large Antenna Arrays by Discrete Mean Field Neural Nets. Progress in Electromagnetics Research, 2000, 25, 53-76.	4.4	10
123	Gravitational wave chirp search: Economization of post-Newtonian matched filter bank via cardinal interpolation. Physical Review D, 2000, 62, .	4.7	8
124	Nearly minimum redundant correlator interpolation formula for gravitational wave chirp detection. Physical Review D, 2000, 62, .	4.7	8
125	Efficient Faulty Element Diagnostics of Large Antenna Arrays By Discrete Mean Field Neural Nets - Abstract *. Journal of Electromagnetic Waves and Applications, 1999, 13, 1685-1686.	1.6	3
126	A model-based parameter estimation approach for numerical analysis of single-mode optical fibers. Journal of Lightwave Technology, 1999, 17, 684-689.	4.6	2

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127	Electromagnetic chaos in mode-stirred reverberation enclosures. IEEE Transactions on Electromagnetic Compatibility, 1998, 40, 185-192.	2.2	33
128	A Generalized Donsker-kaÄ•Formula to Compute the Fundamental Modes in Complex Loaded Waveguides. Electromagnetics, 1998, 18, 367-382.	0.7	0
129	Evaluation of stochastic-resonance-based detectors of weak harmonic signals in additive white Gaussian noise. Physical Review E, 1998, 57, 6470-6479.	2.1	91
130	Single-mode optical fibers using Pade approximants. , 1998, 8, 305-307.		5
131	Cut-off Frequency and Dominant Eigenfunction Computation in Complex Dielectric Geometries via Donsker-KaÄ•Formula and Monte Carlo Method. Electromagnetics, 1997, 17, 1-14.	0.7	5
132	Wiener Integral Monte Carlo Approach to Analyze the Fundamental Mode in Complex Transmission Lines. Electromagnetics, 1997, 17, 437-448.	0.7	0
133	Path integral computation of lowest order modes in arbitrary-shaped inhomogeneous waveguides. , 1997, 7, 402-404.		2
134	Exact solution of Peters-Mathews equations for any orbital eccentricity. Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods, 1996, 111, 631-644.	0.2	9
135	Gravitational-wave chirps: accumulating phase errors due to residual orbital eccentricity. Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods, 1996, 111, 1517-1525.	0.2	5
136	Steady State Population Statistics of Compact Binary Stars. Astrophysical Journal, 1996, 469, 272.	4.5	4
137	Radiation-pressure induced chaos in multipendular Fabry-Perot resonators. Physics Letters, Section A: General, Atomic and Solid State Physics, 1994, 185, 14-20.	2.1	7
138	SNR degradation in matched-filter detection of GW chirps from coalescing binaries due to neglect of the relativistic periastron advance. Physics Letters, Section A: General, Atomic and Solid State Physics, 1993, 173, 121-125.	2.1	2
139	A flexible simulation code for microwave curing of polymers. Makromolekulare Chemie Macromolecular Symposia, 1993, 68, 193-201.	0.6	0
140	Neural net aided fault diagnostics of large antenna arrays. , 0, , .		1
141	Bouncing-ray chaos for smart media. , 0, , .		3
142	Radiation and Scattering from One-Dimensional Aperiodically-Ordered Structures Based on Two-Letter Substitutional Sequences. , 0, , .		1
143	Wave-oriented data-processing of fields scattered by one-dimensional aperiodically-ordered structures. , 0, , .		1