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	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
2	GW170814: A Three-Detector Observation of Gravitational Waves from a Binary Black Hole Coalescence. Physical Review Letters, 2017, 119, 141101.	7.8	1,600
3	GW170817: Measurements of Neutron Star Radii and Equation of State. Physical Review Letters, 2018, 121, 161101.	7.8	1,473
4	Tests of General Relativity with GW150914. Physical Review Letters, 2016, 116, 221101.	7.8	1,224
5	Characterization of the LIGO detectors during their sixth science run. Classical and Quantum Gravity, 2015, 32, 115012.	4.0	1,029
6	GW170608: Observation of a 19 Solar-mass Binary Black Hole Coalescence. Astrophysical Journal Letters, 2017, 851, L35.	8.3	968
7	Enhanced sensitivity of the LIGO gravitational wave detector by using squeezed states of light. Nature Photonics, 2013, 7, 613-619.	31.4	825
8	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
9	Properties of the Binary Black Hole Merger GW150914. Physical Review Letters, 2016, 116, 241102.	7.8	673
10	ASTROPHYSICAL IMPLICATIONS OF THE BINARY BLACK HOLE MERGER GW150914. Astrophysical Journal Letters, 2016, 818, L22.	8.3	633
11	GW150914: The Advanced LIGO Detectors in the Era of First Discoveries. Physical Review Letters, 2016, 116, 131103.	7.8	466
12	Prospects for Observing and Localizing Gravitational-Wave Transients with Advanced LIGO and Advanced Virgo. Living Reviews in Relativity, 2016, 19, 1.	26.7	427
13	An upper limit on the stochastic gravitational-wave background of cosmological origin. Nature, 2009, 460, 990-994.	27.8	303
14	Sensitivity of the Advanced LIGO detectors at the beginning of gravitational wave astronomy. Physical Review D, 2016, 93, .	4.7	286
15	GW150914: Implications for the Stochastic Gravitational-Wave Background from Binary Black Holes. Physical Review Letters, 2016, 116, 131102.	7.8	269
16	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
17	THE RATE OF BINARY BLACK HOLE MERGERS INFERRED FROM ADVANCED LIGO OBSERVATIONS SURROUNDING GW150914. Astrophysical Journal Letters, 2016, 833, L1.	8.3	230
18	Characterization of transient noise in Advanced LIGO relevant to gravitational wave signal GW150914. Classical and Quantum Gravity, 2016, 33, 134001.	4.0	225

#	Article	IF	Citations
19	LOCALIZATION AND BROADBAND FOLLOW-UP OF THE GRAVITATIONAL-WAVE TRANSIENT GW150914. Astrophysical Journal Letters, 2016, 826, L13.	8.3	210
20	Upper Limits on the Stochastic Gravitational-Wave Background from Advanced LIGOâ€™s First Observing Run. Physical Review Letters, 2017, 118, 121101.	7.8	194
21	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
22	Estimating the Contribution of Dynamical Ejecta in the Kilonova Associated withÂGW170817. Astrophysical Journal Letters, 2017, 850, L39.	8.3	156
23	SEARCHES FOR GRAVITATIONAL WAVES FROM KNOWN PULSARS WITH SCIENCE RUN 5 LIGO DATA. Astrophysical Journal, 2010, 713, 671-685.	4.5	155
24	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
25	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
26	Implications for the Origin of GRB 070201 from LIGO Observations. Astrophysical Journal, 2008, 681, 1419-1430.	4.5	143
27	First Search for Gravitational Waves from Known Pulsars with Advanced LIGO. Astrophysical Journal, 2017, 839, 12.	4.5	131
28	GRAVITATIONAL WAVES FROM KNOWN PULSARS: RESULTS FROM THE INITIAL DETECTOR ERA. Astrophysical Journal, 2014, 785, 119.	4.5	125
29	Search for Subsolar Mass Ultracompact Binaries in Advanced LIGOâ€™s Second Observing Run. Physical Review Letters, 2019, 123, 161102.	7.8	119
30	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
31	Band Gap Formation and Multiple Scattering in Photonic Quasicrystals with a Penrose-Type Lattice. Physical Review Letters, 2005, 94, 183903.	7.8	100
32	Anomalous transport effects on switching currents of graphene-based Josephson junctions. Nanotechnology, 2017, 28, 134001.	2.6	98
33	Effects of waveform model systematics on the interpretation of GW150914. Classical and Quantum Gravity, 2017, 34, 104002.	4.0	98
34	Search for Gravitational Waves from a Long-lived Remnant of the Binary Neutron Star Merger GW170817. Astrophysical Journal, 2019, 875, 160.	4.5	97
35	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
36	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

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37	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
38	Search for Tensor, Vector, and Scalar Polarizations in the Stochastic Gravitational-Wave Background. Physical Review Letters, 2018, 120, 201102.	7.8	85
39	Directional Limits on Persistent Gravitational Waves from Advanced LIGOâ€™s First Observing Run. Physical Review Letters, 2017, 118, 121102.	7.8	84
40	Search for gravitational-wave bursts in LIGO data from the fourth science run. Classical and Quantum Gravity, 2007, 24, 5343-5369.	4.0	78
41	Search for Subsolar-Mass Ultracompact Binaries in Advanced LIGOâ€™s First Observing Run. Physical Review Letters, 2018, 121, 231103.	7.8	77
42	Improving astrophysical parameter estimation via offline noise subtraction for Advanced LIGO. Physical Review D, 2019, 99, .	4.7	77
43	The characterization of Virgo data and its impact on gravitational-wave searches. Classical and Quantum Gravity, 2012, 29, 155002.	4.0	73
44	The basic physics of the binary black hole merger GW150914. Annalen Der Physik, 2017, 529, 1600209.	2.4	69
45	Constraints on Cosmic Strings from the LIGO-Virgo Gravitational-Wave Detectors. Physical Review Letters, 2014, 112, 131101.	7.8	68
46	SEARCHES FOR CONTINUOUS GRAVITATIONAL WAVES FROM NINE YOUNG SUPERNOVA REMNANTS. Astrophysical Journal, 2015, 813, 39.	4.5	66
47	Josephson-based Threshold Detector for LÃ©vy-Distributed Current Fluctuations. Physical Review Applied, 2019, 11, .	3.8	66
48	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
49	FIRST SEARCHES FOR OPTICAL COUNTERPARTS TO GRAVITATIONAL-WAVE CANDIDATE EVENTS. Astrophysical Journal, Supplement Series, 2014, 211, 7.	7.7	57
50	Measurement of thermal noise in multilayer coatings with optimized layer thickness. Physical Review D, 2010, 81, .	4.7	55
51	Localized modes in photonic quasicrystals with Penrose-type lattice. Optics Express, 2006, 14, 10021.	3.4	53
52	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
53	STACKED SEARCH FOR GRAVITATIONAL WAVES FROM THE 2006 SGR 1900+14 STORM. Astrophysical Journal, 2009, 701, L68-L74.	4.5	45
54	Characterization of escape times of Josephson junctions for signal detection. Physical Review E, 2012, 85, 016708.	2.1	45

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55	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
56	Evidence of local effects in anomalous refraction and focusing properties of dodecagonal photonic quasicrystals. Physical Review B, 2008, 77, .	3.2	34
57	Electromagnetic chaos in mode-stirred reverberation enclosures. IEEE Transactions on Electromagnetic Compatibility, 1998, 40, 185-192.	2.2	33
58	Detection of noise-corrupted sinusoidal signals with Josephson junctions. Physical Review E, 2010, 82, 046712.	2.1	31
59	NEURAL NETWORK AIDED GLITCH-BURST DISCRIMINATION AND GLITCH CLASSIFICATION. International Journal of Modern Physics C, 2013, 24, 1350084.	1.7	29
60	IR temperature measurements in microwave heating. Infrared Physics and Technology, 2002, 43, 145-150.	2.9	24
61	Material loss angles from direct measurements of broadband thermal noise. Physical Review D, 2015, 91, .	4.7	24
62	First Demonstration of Electrostatic Damping of Parametric Instability at Advanced LIGO. Physical Review Letters, 2017, 118, 151102.	7.8	24
63	Voltage drop across Josephson junctions for LÃ©vy noise detection. Physical Review Research, 2020, 2, .	3.6	24
64	A Comparative Study of Representative Categories of EBG Dielectric Quasi-Crystals. IEEE Antennas and Wireless Propagation Letters, 2006, 5, 331-334.	4.0	23
65	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
66	Optimized multilayer dielectric mirror coatings for gravitational wave interferometers. , 2006, , .		22
67	Emergence and Evolution of Crystallization in TiO2 Thin Films: A Structural and Morphological Study. Nanomaterials, 2021, 11, 1409.	4.1	20
68	First joint observation by the underground gravitational-wave detector KAGRA with GEO 600. Progress of Theoretical and Experimental Physics, 2022, 2022, .	6.6	20
69	Directive emission from defect-free dodecagonal photonic quasicrystals: A leaky wave characterization. Physical Review B, 2009, 79, .	3.2	19
70	Interplay between detection strategies and stochastic resonance properties. Communications in Nonlinear Science and Numerical Simulation, 2016, 30, 15-31.	3.3	19
71	Mode confinement in photonic quasicrystal point-defect cavities for particle accelerators. Applied Physics Letters, 2008, 93, 164102.	3.3	18
72	Quantum correlation measurements in interferometric gravitational-wave detectors. Physical Review A, 2017, 95, .	2.5	16

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73	Analysis of Josephson junctions switching time distributions for the detection of single microwave photons. Chaos, Solitons and Fractals, 2021, 142, 110496.	5.1	16
74	A parametric study of the lensing properties of dodecagonal photonic quasicrystals. Photonics and Nanostructures - Fundamentals and Applications, 2008, 6, 60-68.	2.0	15
75	Detection of signals in presence of noise through Josephson junction switching currents. Physical Review E, 2020, 101, 052205.	2.1	14
76	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
77	Escape time characterization of pendular Fabry-Perot. Europhysics Letters, 2013, 101, 20005.	2.0	11
78	Membrane Heating in Living Tissues Exposed to Nonthermal Pulsed EM Fields. IEEE Transactions on Plasma Science, 2014, 42, 2236-2244.	1.3	11
79	Stochastic first passage time accelerated with CUDA. Journal of Computational Physics, 2018, 361, 136-149.	3.8	11
80	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
81	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
82	Analytic structure of a family of hyperboloidal beams of potential interest for advanced LIGO. Physical Review D, 2006, 73, .	4.7	10
83	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
84	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
85	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
86	Gravitational wave chirp search: Economization of post-Newtonian matched filter bank via cardinal interpolation. Physical Review D, 2000, 62, .	4.7	8
87	Nearly minimum redundant correlator interpolation formula for gravitational wave chirp detection. Physical Review D, 2000, 62, .	4.7	8
88	Fabryâ€“Perot filters with tunable Josephson junction defects. Physica C: Superconductivity and Its Applications, 2015, 517, 37-40.	1.2	8
89	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
90	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

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91	Computation of hyperngeometric functions for gravitationally radiating binary stars. Monthly Notices of the Royal Astronomical Society, 2002, 334, 855-858.	4.4	7
92	A procedure to measure electromagnetic skin depth in microwave heating. Infrared Physics and Technology, 2004, 46, 49-55.	2.9	7
93	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
94	Genetically Optimized Metasurface Pairs for Wideband Out-of-Phase Mutual Response. IEEE Antennas and Wireless Propagation Letters, 2008, 7, 788-791.	4.0	7
95	Ternary quarter wavelength coatings for gravitational wave detector mirrors: Design optimization via exhaustive search. Physical Review Research, 2021, 3, .	3.6	7
96	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
97	Rejection properties of stochastic-resonance-based detectors of weak harmonic signals. Physical Review E, 2004, 69, 062104.	2.1	6
98	Negative Differential Resistance due to Nonlinearities in Single and Stacked Josephson Junctions. IEEE Transactions on Applied Superconductivity, 2014, 24, 1-7.	1.7	6
99	Effects of transients in LIGO suspensions on searches for gravitational waves. Review of Scientific Instruments, 2017, 88, 124501.	1.3	6
100	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
101	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
102	Single-mode optical fibers using Pade approximants. , 1998, 8, 305-307.		5
103	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
104	Metamaterial inclusions based on grid-graph Hamiltonian paths. Microwave and Optical Technology Letters, 2006, 48, 2520-2524.	1.4	5
105	Negative differential resistance in Josephson junctions coupled to a cavity. Physica C: Superconductivity and Its Applications, 2014, 503, 178-182.	1.2	5
106	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
107	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
108	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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109	Steady State Population Statistics of Compact Binary Stars. Astrophysical Journal, 1996, 469, 272.	4.5	4
110	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
111	Bouncing-ray chaos for smart media. , 0, , .		3
112	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
113	How many templates for GW chirp detection? The minimal-match issue revisited. Classical and Quantum Gravity, 2004, 21, 4955-4961.	4.0	3
114	Radiation from Fibonacci-type Quasiperiodic Arrays on Dielectric Substrates. Journal of Electromagnetic Waves and Applications, 2007, 21, 1231-1245.	1.6	3
115	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
116	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
117	Nonideal quantum measurement effects on the switching-current distribution of Josephson junctions. Physical Review A, 2016, 94, .	2.5	3
118	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
119	Path integral computation of lowest order modes in arbitrary-shaped inhomogeneous waveguides. , 1997, 7, 402-404.		2
120	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
121	<title>Dielectric constant measurements by IR thermography in microwave heating</title>. , 2002, 4710, 558.		2
122	Aperiodic-Tiling-Based Mushroom-Type High-Impedance Surfaces. IEEE Antennas and Wireless Propagation Letters, 2008, 7, 54-57.	4.0	2
123	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
124	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. , 2018, 21, 1.		2
125	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
126	Neural net aided fault diagnostics of large antenna arrays. , 0, , .		1

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127	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
128	Radiation and Scattering from One-Dimensional Aperiodically-Ordered Structures Based on Two-Letter Substitutional Sequences. , 0, , .		1
129	Wave-oriented data-processing of fields scattered by one-dimensional aperiodically-ordered structures. , 0, , .		1
130	Escape Time of Josephson Junctions for Signal Detection. Progress in Optical Science and Photonics, 2012, , 657-678.	0.5	1
131	Noise estimate of pendular Fabry-Perot through reflectivity change. , 2014, , .		1
132	Localization of Gravitational Sources from Time-Frequency Maps. , 2018, , .		1
133	A flexible simulation code for microwave curing of polymers. Makromolekulare Chemie Macromolecular Symposia, 1993, 68, 193-201.	0.6	0
134	Wiener Integral Monte Carlo Approach to Analyze the Fundamental Mode in Complex Transmission Lines. Electromagnetics, 1997, 17, 437-448.	0.7	0
135	A Generalized Donsker-kaÄ•Formula to Compute the Fundamental Modes in Complex Loaded Waveguides. Electromagnetics, 1998, 18, 367-382.	0.7	0
136	Parameterizing wave interactions with aperiodic order: threads in a tapestry. , 2006, , .		0
137	High-Impedance Surfaces with Aperiodically-Ordered Textures. , 2007, , .		0
138	Analytic Properties of a Class of Hyperboloidal Beams in Nearly-Spheroidal Fabry-Perot Optical Cavities. , 2007, , .		0
139	Photonic Quasicrystals, Some Properties and Applications. , 2008, , .		0
140	A comparative study of directive emission from photonic quasicrystals. Proceedings of SPIE, 2008, , .	0.8	0
141	Switching times in Fabry-Perot measurements. , 2015, , .		0
142	Accurate switching currents measurements in quantum washboard potential. , 2016, , .		0
143	Parallel Simulation of Josephson Junctions With Multiplicative Noise. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-4.	1.7	0