

# Matteo Leonardi

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

125  
papers

33,039  
citations

54  
h-index

130  
g-index

130  
ext. papers

40,531  
ext. citations

6.4  
avg, IF

5.48  
L-index

#	Paper	IF	Citations
125	The Current Status and Future Prospects of KAGRA, the Large-Scale Cryogenic Gravitational Wave Telescope Built in the Kamioka Underground. <i>Galaxies</i> , <b>2022</b> , 10, 63	2	0
124	Searches for Continuous Gravitational Waves from Young Supernova Remnants in the Early Third Observing Run of Advanced LIGO and Virgo. <i>Astrophysical Journal</i> , <b>2021</b> , 921, 80	4.7	10
123	All-sky search for long-duration gravitational-wave bursts in the third Advanced LIGO and Advanced Virgo run. <i>Physical Review D</i> , <b>2021</b> , 104,	4.9	1
122	All-sky search for continuous gravitational waves from isolated neutron stars in the early O3 LIGO data. <i>Physical Review D</i> , <b>2021</b> , 104,	4.9	15
121	Vibration isolation systems for the beam splitter and signal recycling mirrors of the KAGRA gravitational wave detector. <i>Classical and Quantum Gravity</i> , <b>2021</b> , 38, 065011	3.3	3
120	Radiative Cooling of the Thermally Isolated System in KAGRA Gravitational Wave Telescope. <i>Journal of Physics: Conference Series</i> , <b>2021</b> , 1857, 012002	0.3	
119	Automated source of squeezed vacuum states driven by finite state machine based software. <i>Review of Scientific Instruments</i> , <b>2021</b> , 92, 054504	1.7	1
118	Diving below the Spin-down Limit: Constraints on Gravitational Waves from the Energetic Young Pulsar PSR J0537-6910. <i>Astrophysical Journal Letters</i> , <b>2021</b> , 913, L27	7.9	13
117	Observation of Gravitational Waves from Two Neutron Star-Black Hole Coalescences. <i>Astrophysical Journal Letters</i> , <b>2021</b> , 915, L5	7.9	142
116	Constraints on Cosmic Strings Using Data from the Third Advanced LIGO-Virgo Observing Run. <i>Physical Review Letters</i> , <b>2021</b> , 126, 241102	7.4	21
115	Upper limits on the isotropic gravitational-wave background from Advanced LIGO and Advanced Virgo's third observing run. <i>Physical Review D</i> , <b>2021</b> , 104,	4.9	33
114	Search for anisotropic gravitational-wave backgrounds using data from Advanced LIGO and Advanced Virgo's first three observing runs. <i>Physical Review D</i> , <b>2021</b> , 104,	4.9	12
113	Overview of KAGRA: Detector design and construction history. <i>Progress of Theoretical and Experimental Physics</i> , <b>2021</b> , 2021,	5.4	34
112	Overview of KAGRA: KAGRA science. <i>Progress of Theoretical and Experimental Physics</i> , <b>2021</b> , 2021,	5.4	5
111	Overview of KAGRA: Calibration, detector characterization, physical environmental monitors, and the geophysics interferometer. <i>Progress of Theoretical and Experimental Physics</i> , <b>2021</b> , 2021,	5.4	8
110	3D characterization of low optical absorption structures in large crystalline sapphire substrates for gravitational wave detectors. <i>Scientific Reports</i> , <b>2021</b> , 11, 2654	4.9	1
109	Prospects for improving the sensitivity of the cryogenic gravitational wave detector KAGRA. <i>Physical Review D</i> , <b>2020</b> , 102,	4.9	5

108	Control of a filter cavity with coherent control sidebands. <i>Physical Review D</i> , <b>2020</b> , 102,	4.9	3
107	Advanced Virgo Status. <i>Journal of Physics: Conference Series</i> , <b>2020</b> , 1342, 012010	0.3	8
106	An arm length stabilization system for KAGRA and future gravitational-wave detectors. <i>Classical and Quantum Gravity</i> , <b>2020</b> , 37, 035004	3.3	5
105	Frequency-Dependent Squeezed Vacuum Source for Broadband Quantum Noise Reduction in Advanced Gravitational-Wave Detectors. <i>Physical Review Letters</i> , <b>2020</b> , 124, 171101	7.4	31
104	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. <i>Living Reviews in Relativity</i> , <b>2020</b> , 23, 3	32.5	144
103	Application of independent component analysis to the iKAGRA data. <i>Progress of Theoretical and Experimental Physics</i> , <b>2020</b> , 2020,	5.4	5
102	A Fermi Gamma-Ray Burst Monitor Search for Electromagnetic Signals Coincident with Gravitational-wave Candidates in Advanced LIGO's First Observing Run. <i>Astrophysical Journal</i> , <b>2019</b> , 871, 90	4.7	22
101	Search for Gravitational Waves from a Long-lived Remnant of the Binary Neutron Star Merger GW170817. <i>Astrophysical Journal</i> , <b>2019</b> , 875, 160	4.7	60
100	Vibration isolation system with a compact damping system for power recycling mirrors of KAGRA. <i>Classical and Quantum Gravity</i> , <b>2019</b> , 36, 095015	3.3	6
99	First cryogenic test operation of underground km-scale gravitational-wave observatory KAGRA. <i>Classical and Quantum Gravity</i> , <b>2019</b> , 36, 165008	3.3	34
98	Tests of General Relativity with GW170817. <i>Physical Review Letters</i> , <b>2019</b> , 123, 011102	7.4	204
97	Constraining the p-Mode-g-Mode Tidal Instability with GW170817. <i>Physical Review Letters</i> , <b>2019</b> , 122, 061104	7.4	22
96	Properties of the Binary Neutron Star Merger GW170817. <i>Physical Review X</i> , <b>2019</b> , 9,	9.1	423
95	KAGRA: 2.5 generation interferometric gravitational wave detector. <i>Nature Astronomy</i> , <b>2019</b> , 3, 35-40	12.1	164
94	Effects of data quality vetoes on a search for compact binary coalescences in Advanced LIGO's first observing run. <i>Classical and Quantum Gravity</i> , <b>2018</b> , 35, 065010	3.3	62
93	GW170817: Implications for the Stochastic Gravitational-Wave Background from Compact Binary Coalescences. <i>Physical Review Letters</i> , <b>2018</b> , 120, 091101	7.4	120
92	All-sky search for long-duration gravitational wave transients in the first Advanced LIGO observing run. <i>Classical and Quantum Gravity</i> , <b>2018</b> , 35, 065009	3.3	12
91	First Search for Nontensorial Gravitational Waves from Known Pulsars. <i>Physical Review Letters</i> , <b>2018</b> , 120, 031104	7.4	50

90	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. <i>Living Reviews in Relativity</i> , <b>2018</b> , 21, 3	32.5	543
89	Full band all-sky search for periodic gravitational waves in the O1 LIGO data. <i>Physical Review D</i> , <b>2018</b> , 97,	4.9	37
88	Constraints on cosmic strings using data from the first Advanced LIGO observing run. <i>Physical Review D</i> , <b>2018</b> , 97,	4.9	60
87	Efficient second harmonic generation with compact design: double-pass and cavity configurations. <i>Laser Physics</i> , <b>2018</b> , 28, 115401	1.2	1
86	Measurement of optical losses in a high-finesse 300 m filter cavity for broadband quantum noise reduction in gravitational-wave detectors. <i>Physical Review D</i> , <b>2018</b> , 98,	4.9	8
85	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA <b>2018</b> , 21, 1		2
84	Search for Substellar-Mass Ultracompact Binaries in Advanced LIGO's First Observing Run. <i>Physical Review Letters</i> , <b>2018</b> , 121, 231103	7.4	49
83	GW170817: Measurements of Neutron Star Radii and Equation of State. <i>Physical Review Letters</i> , <b>2018</b> , 121, 161101	7.4	867
82	Calibration of advanced Virgo and reconstruction of the gravitational wave signal $h(t)$ during the observing run O2. <i>Classical and Quantum Gravity</i> , <b>2018</b> , 35, 205004	3.3	35
81	Status of Advanced Virgo. <i>EPJ Web of Conferences</i> , <b>2018</b> , 182, 02003	0.3	4
80	Search for Tensor, Vector, and Scalar Polarizations in the Stochastic Gravitational-Wave Background. <i>Physical Review Letters</i> , <b>2018</b> , 120, 201102	7.4	60
79	All-sky search for short gravitational-wave bursts in the first Advanced LIGO run. <i>Physical Review D</i> , <b>2017</b> , 95,	4.9	54
78	Effects of waveform model systematics on the interpretation of GW150914. <i>Classical and Quantum Gravity</i> , <b>2017</b> , 34, 104002	3.3	74
77	Upper Limits on the Stochastic Gravitational-Wave Background from Advanced LIGO's First Observing Run. <i>Physical Review Letters</i> , <b>2017</b> , 118, 121101	7.4	137
76	Directional Limits on Persistent Gravitational Waves from Advanced LIGO's First Observing Run. <i>Physical Review Letters</i> , <b>2017</b> , 118, 121102	7.4	65
75	First Search for Gravitational Waves from Known Pulsars with Advanced LIGO. <i>Astrophysical Journal</i> , <b>2017</b> , 839, 12	4.7	107
74	The basic physics of the binary black hole merger GW150914. <i>Annalen Der Physik</i> , <b>2017</b> , 529, 1600209	2.6	45
73	GW170814: A Three-Detector Observation of Gravitational Waves from a Binary Black Hole Coalescence. <i>Physical Review Letters</i> , <b>2017</b> , 119, 141101	7.4	1270

72	Upper Limits on Gravitational Waves from Scorpius X-1 from a Model-based Cross-correlation Search in Advanced LIGO Data. <i>Astrophysical Journal</i> , <b>2017</b> , 847, 47	4.7	35
71	A gravitational-wave standard siren measurement of the Hubble constant. <i>Nature</i> , <b>2017</b> , 551, 85-88	50.4	413
70	GW170817: Observation of Gravitational Waves from a Binary Neutron Star Inspiral. <i>Physical Review Letters</i> , <b>2017</b> , 119, 161101	7.4	4272
69	Multi-messenger Observations of a Binary Neutron Star Merger. <i>Astrophysical Journal Letters</i> , <b>2017</b> , 848, L12	7.9	1935
68	Gravitational Waves and Gamma-Rays from a Binary Neutron Star Merger: GW170817 and GRB 170817A. <i>Astrophysical Journal Letters</i> , <b>2017</b> , 848, L13	7.9	1614
67	Search for intermediate mass black hole binaries in the first observing run of Advanced LIGO. <i>Physical Review D</i> , <b>2017</b> , 96,	4.9	64
66	All-sky search for periodic gravitational waves in the O1 LIGO data. <i>Physical Review D</i> , <b>2017</b> , 96,	4.9	54
65	Search for Gravitational Waves Associated with Gamma-Ray Bursts during the First Advanced LIGO Observing Run and Implications for the Origin of GRB 150906B. <i>Astrophysical Journal</i> , <b>2017</b> , 841, 89	4.7	42
64	Search for high-energy neutrinos from gravitational wave event GW151226 and candidate LVT151012 with ANTARES and IceCube. <i>Physical Review D</i> , <b>2017</b> , 96,	4.9	32
63	Search for Post-merger Gravitational Waves from the Remnant of the Binary Neutron Star Merger GW170817. <i>Astrophysical Journal Letters</i> , <b>2017</b> , 851, L16	7.9	133
62	Estimating the Contribution of Dynamical Ejecta in the Kilonova Associated with GW170817. <i>Astrophysical Journal Letters</i> , <b>2017</b> , 850, L39	7.9	127
61	Search for High-energy Neutrinos from Binary Neutron Star Merger GW170817 with ANTARES, IceCube, and the Pierre Auger Observatory. <i>Astrophysical Journal Letters</i> , <b>2017</b> , 850, L35	7.9	104
60	GW170104: Observation of a 50-Solar-Mass Binary Black Hole Coalescence at Redshift 0.2. <i>Physical Review Letters</i> , <b>2017</b> , 118, 221101	7.4	1609
59	Search for continuous gravitational waves from neutron stars in globular cluster NGC 6544. <i>Physical Review D</i> , <b>2017</b> , 95,	4.9	14
58	Search for gravitational waves from Scorpius X-1 in the first Advanced LIGO observing run with a hidden Markov model. <i>Physical Review D</i> , <b>2017</b> , 95,	4.9	47
57	Status of the Advanced Virgo gravitational wave detector. <i>International Journal of Modern Physics A</i> , <b>2017</b> , 32, 1744003	1.2	5
56	First narrow-band search for continuous gravitational waves from known pulsars in advanced detector data. <i>Physical Review D</i> , <b>2017</b> , 96,	4.9	39
55	First low-frequency Einstein@Home all-sky search for continuous gravitational waves in Advanced LIGO data. <i>Physical Review D</i> , <b>2017</b> , 96,	4.9	54

54	On the Progenitor of Binary Neutron Star Merger GW170817. <i>Astrophysical Journal Letters</i> , <b>2017</b> , 850, L40	7.9	50
53	GW170608: Observation of a 19 Solar-mass Binary Black Hole Coalescence. <i>Astrophysical Journal Letters</i> , <b>2017</b> , 851, L35	7.9	809
52	LOCALIZATION AND BROADBAND FOLLOW-UP OF THE GRAVITATIONAL-WAVE TRANSIENT GW150914. <i>Astrophysical Journal Letters</i> , <b>2016</b> , 826, L13	7.9	183
51	Comprehensive all-sky search for periodic gravitational waves in the sixth science run LIGO data. <i>Physical Review D</i> , <b>2016</b> , 94,	4.9	28
50	First targeted search for gravitational-wave bursts from core-collapse supernovae in data of first-generation laser interferometer detectors. <i>Physical Review D</i> , <b>2016</b> , 94,	4.9	43
49	UPPER LIMITS ON THE RATES OF BINARY NEUTRON STAR AND NEUTRON STARBLACK HOLE MERGERS FROM ADVANCED LIGO'S FIRST OBSERVING RUN. <i>Astrophysical Journal Letters</i> , <b>2016</b> , 832, L21	7.9	130
48	Directly comparing GW150914 with numerical solutions of Einstein's equations for binary black hole coalescence. <i>Physical Review D</i> , <b>2016</b> , 94,	4.9	76
47	All-sky search for long-duration gravitational wave transients with initial LIGO. <i>Physical Review D</i> , <b>2016</b> , 93,	4.9	27
46	Search of the Orion spur for continuous gravitational waves using a loosely coherent algorithm on data from LIGO interferometers. <i>Physical Review D</i> , <b>2016</b> , 93,	4.9	14
45	First low frequency all-sky search for continuous gravitational wave signals. <i>Physical Review D</i> , <b>2016</b> , 93,	4.9	29
44	GW150914: First results from the search for binary black hole coalescence with Advanced LIGO. <i>Physical Review D</i> , <b>2016</b> , 93,	4.9	253
43	Search for transient gravitational waves in coincidence with short-duration radio transients during 2007-2013. <i>Physical Review D</i> , <b>2016</b> , 93,	4.9	10
42	High-energy neutrino follow-up search of gravitational wave event GW150914 with ANTARES and IceCube. <i>Physical Review D</i> , <b>2016</b> , 93,	4.9	80
41	GW150914: Implications for the Stochastic Gravitational-Wave Background from Binary Black Holes. <i>Physical Review Letters</i> , <b>2016</b> , 116, 131102	7.4	188
40	GW150914: The Advanced LIGO Detectors in the Era of First Discoveries. <i>Physical Review Letters</i> , <b>2016</b> , 116, 131103	7.4	328
39	SUPPLEMENT: LOCALIZATION AND BROADBAND FOLLOW-UP OF THE GRAVITATIONAL-WAVE TRANSIENT GW150914 (2016, ApJL, 826, L13). <i>Astrophysical Journal, Supplement Series</i> , <b>2016</b> , 225, 8	8	38
38	Observing gravitational-wave transient GW150914 with minimal assumptions. <i>Physical Review D</i> , <b>2016</b> , 93,	4.9	94
37	Tests of General Relativity with GW150914. <i>Physical Review Letters</i> , <b>2016</b> , 116, 221101	7.4	837

36	Properties of the Binary Black Hole Merger GW150914. <i>Physical Review Letters</i> , <b>2016</b> , 116, 241102	7.4	515
35	GW151226: Observation of Gravitational Waves from a 22-Solar-Mass Binary Black Hole Coalescence. <i>Physical Review Letters</i> , <b>2016</b> , 116, 241103	7.4	2136
34	Binary Black Hole Mergers in the First Advanced LIGO Observing Run. <i>Physical Review X</i> , <b>2016</b> , 6,	9.1	723
33	ASTROPHYSICAL IMPLICATIONS OF THE BINARY BLACK HOLE MERGER GW150914. <i>Astrophysical Journal Letters</i> , <b>2016</b> , 818, L22	7.9	512
32	Observation of Gravitational Waves from a Binary Black Hole Merger. <i>Physical Review Letters</i> , <b>2016</b> , 116, 061102	7.4	6108
31	Characterization of transient noise in Advanced LIGO relevant to gravitational wave signal GW150914. <i>Classical and Quantum Gravity</i> , <b>2016</b> , 33,	3.3	155
30	SUPPLEMENT: THE RATE OF BINARY BLACK HOLE MERGERS INFERRED FROM ADVANCED LIGO OBSERVATIONS SURROUNDING GW150914(2016, ApJL, 833, L1). <i>Astrophysical Journal, Supplement Series</i> , <b>2016</b> , 227, 14	8	52
29	Prospects for Observing and Localizing Gravitational-Wave Transients with Advanced LIGO and Advanced Virgo. <i>Living Reviews in Relativity</i> , <b>2016</b> , 19, 1	32.5	393
28	Improved Analysis of GW150914 Using a Fully Spin-Precessing Waveform Model. <i>Physical Review X</i> , <b>2016</b> , 6,	9.1	89
27	Results of the deepest all-sky survey for continuous gravitational waves on LIGO S6 data running on the Einstein@Home volunteer distributed computing project. <i>Physical Review D</i> , <b>2016</b> , 94,	4.9	29
26	THE RATE OF BINARY BLACK HOLE MERGERS INFERRED FROM ADVANCED LIGO OBSERVATIONS SURROUNDING GW150914. <i>Astrophysical Journal Letters</i> , <b>2016</b> , 833, L1	7.9	209
25			
24	Searching for stochastic gravitational waves using data from the two colocated LIGO Hanford detectors. <i>Physical Review D</i> , <b>2015</b> , 91,	4.9	26
23	Directed search for gravitational waves from Scorpius X-1 with initial LIGO data. <i>Physical Review D</i> , <b>2015</b> , 91,	4.9	38
22	Characterization of the LIGO detectors during their sixth science run. <i>Classical and Quantum Gravity</i> , <b>2015</b> , 32, 115012	3.3	790
21	The Advanced Virgo detector. <i>Journal of Physics: Conference Series</i> , <b>2015</b> , 610, 012014	0.3	18
20	SEARCHES FOR CONTINUOUS GRAVITATIONAL WAVES FROM NINE YOUNG SUPERNOVA REMNANTS. <i>Astrophysical Journal</i> , <b>2015</b> , 813, 39	4.7	58
19	Advanced Virgo: a second-generation interferometric gravitational wave detector. <i>Classical and Quantum Gravity</i> , <b>2015</b> , 32, 024001	3.3	1567

18	Narrow-band search of continuous gravitational-wave signals from Crab and Vela pulsars in Virgo VSR4 data. <i>Physical Review D</i> , <b>2015</b> , 91,	4.9	32
17	Progress and challenges in advanced ground-based gravitational-wave detectors. <i>General Relativity and Gravitation</i> , <b>2014</b> , 46, 1	2.3	2
16	Implementation of an $\mathcal{F}$ -statistic all-sky search for continuous gravitational waves in Virgo VSR1 data. <i>Classical and Quantum Gravity</i> , <b>2014</b> , 31, 165014	3.3	27
15	GRAVITATIONAL WAVES FROM KNOWN PULSARS: RESULTS FROM THE INITIAL DETECTOR ERA. <i>Astrophysical Journal</i> , <b>2014</b> , 785, 119	4.7	109
14	Application of a Hough search for continuous gravitational waves on data from the fifth LIGO science run. <i>Classical and Quantum Gravity</i> , <b>2014</b> , 31, 085014	3.3	18
13	The NINJA-2 project: detecting and characterizing gravitational waveforms modelled using numerical binary black hole simulations. <i>Classical and Quantum Gravity</i> , <b>2014</b> , 31, 115004	3.3	34
12	Search for gravitational wave ringdowns from perturbed intermediate mass black holes in LIGO-Virgo data from 2005–2010. <i>Physical Review D</i> , <b>2014</b> , 89,	4.9	26
11	Search for gravitational waves associated with $\Gamma$ -ray bursts detected by the interplanetary network. <i>Physical Review Letters</i> , <b>2014</b> , 113, 011102	7.4	30
10	Search for gravitational radiation from intermediate mass black hole binaries in data from the second LIGO-Virgo joint science run. <i>Physical Review D</i> , <b>2014</b> , 89,	4.9	32
9	Methods and results of a search for gravitational waves associated with gamma-ray bursts using the GEO 600, LIGO, and Virgo detectors. <i>Physical Review D</i> , <b>2014</b> , 89,	4.9	25
8	Reconstruction of the gravitational wave signal $h(t)$ during the Virgo science runs and independent validation with a photon calibrator. <i>Classical and Quantum Gravity</i> , <b>2014</b> , 31, 165013	3.3	8
7	FIRST SEARCHES FOR OPTICAL COUNTERPARTS TO GRAVITATIONAL-WAVE CANDIDATE EVENTS. <i>Astrophysical Journal, Supplement Series</i> , <b>2014</b> , 211, 7	8	51
6	First all-sky search for continuous gravitational waves from unknown sources in binary systems. <i>Physical Review D</i> , <b>2014</b> , 90,	4.9	54
5	Constraints on cosmic strings from the LIGO-Virgo gravitational-wave detectors. <i>Physical Review Letters</i> , <b>2014</b> , 112, 131101	7.4	59
4	Improved upper limits on the stochastic gravitational-wave background from 2009-2010 LIGO and Virgo data. <i>Physical Review Letters</i> , <b>2014</b> , 113, 231101	7.4	74
3	Multimessenger search for sources of gravitational waves and high-energy neutrinos: Initial results for LIGO-Virgo and IceCube. <i>Physical Review D</i> , <b>2014</b> , 90,	4.9	25
2	Search for long-lived gravitational-wave transients coincident with long gamma-ray bursts. <i>Physical Review D</i> , <b>2013</b> , 88,	4.9	30
1	Directed search for continuous gravitational waves from the Galactic center. <i>Physical Review D</i> , <b>2013</b> , 88,	4.9	57



