Lisa Barsotti

List of Publications by Year
in descending order

70 papers	41,705 citations	46984 47 h-index	95218 68 g-index
70 all docs	70 docs citations	70 times ranked	16937 citing authors

#	Article	IF	Citations
1	First joint observation by the underground gravitational-wave detector KAGRA with GEO 600. Progress of Theoretical and Experimental Physics, 2022, 2022, .	1.8	20
2	Search of the early O3 LIGO data for continuous gravitational waves from the Cassiopeia A and Vela Jr. supernova remnants. Physical Review D, 2022, 105, .	1.6	21
3	Probing squeezing for gravitational-wave detectors with an audio-band field. Physical Review D, 2022, 105, .	1.6	3
4	Tuning Advanced LIGO to kilohertz signals from neutron-star collisions. Physical Review D, 2021, 103, .	1.6	14
5	LIGO detector characterization in the second and third observing runs. Classical and Quantum Gravity, 2021, 38, 135014.	1.5	128
6	Approaching the motional ground state of a 10-kg object. Science, 2021, 372, 1333-1336.	6.0	59
7	Environmental noise in advanced LIGO detectors. Classical and Quantum Gravity, 2021, 38, 145001.	1.5	38
8	Gravitational-wave physics with Cosmic Explorer: Limits to low-frequency sensitivity. Physical Review D, 2021, 103, .	1.6	37
9	GWTC-2: Compact Binary Coalescences Observed by LIGO and Virgo during the First Half of the Third Observing Run. Physical Review X, 2021, 11, .	2.8	1,097
10	LIGOâ€™s quantum response to squeezed states. Physical Review D, 2021, 104, .	1.6	19
11	All-sky search for continuous gravitational waves from isolated neutron stars in the early O3 LIGO data. Physical Review D, 2021, 104, .	1.6	42
12	Point Absorber Limits to Future Gravitational-Wave Detectors. Physical Review Letters, 2021, 127, 241102.	2.9	3
13	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. Living Reviews in Relativity, 2020, 23, 3.	8.2	447
14	GW190412: Observation of a binary-black-hole coalescence with asymmetric masses. Physical Review D, 2020, 102, .	1.6	394
15	Demonstration of an amplitude filter cavity at gravitational-wave frequencies. Physical Review D, 2020, 102, .	1.6	5
16	Sensitivity and performance of the Advanced LIGO detectors in the third observing run. Physical Review D, 2020, 102, .	1.6	196
17	GW190425: Observation of a Compact Binary Coalescence with Total MassÂâˆ¼Â3.4 M_{âŠ™}. Astrophysical Journal Letters, 2020, 892, L3.	3.0	1,049
18	Quantum correlations between light and the kilogram-mass mirrors of LIGO. Nature, 2020, 583, 43-47.	13.7	102

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19	Frequency-Dependent Squeezing for Advanced LIGO. Physical Review Letters, 2020, 124, 171102.	2.9	99
20	A cryogenic silicon interferometer for gravitational-wave detection. Classical and Quantum Gravity, 2020, 37, 165003.	1.5	120
21	Low phase noise squeezed vacuum for future generation gravitational wave detectors. Classical and Quantum Gravity, 2020, 37, 185014.	1.5	5
22	Optimal detuning for quantum filter cavities. Physical Review D, 2020, 102, .	1.6	7
23	Properties and Astrophysical Implications of the 150 M_{âŠ™} Binary Black Hole Merger GW190521. Astrophysical Journal Letters, 2020, 900, L13.	3.0	406
24	Gravitational-wave Constraints on the Equatorial Ellipticity of Millisecond Pulsars. Astrophysical Journal Letters, 2020, 902, L21.	3.0	65
25	Advanced LIGO squeezer platform for backscattered light and optical loss reduction. Classical and Quantum Gravity, 2020, 37, 215015.	1.5	2
26	GWTC-1: A Gravitational-Wave Transient Catalog of Compact Binary Mergers Observed by LIGO and Virgo during the First and Second Observing Runs. Physical Review X, 2019, 9, .	2.8	2,022
27	Low-latency Gravitational-wave Alerts for Multimessenger Astronomy during the Second Advanced LIGO and Virgo Observing Run. Astrophysical Journal, 2019, 875, 161.	1.6	71
28	Quantum-Enhanced Advanced LIGO Detectors in the Era of Gravitational-Wave Astronomy. Physical Review Letters, 2019, 123, 231107.	2.9	359
29	Squeezed vacuum states of light for gravitational wave detectors. Reports on Progress in Physics, 2019, 82, 016905.	8.1	74
30	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. Living Reviews in Relativity, 2018, 21, 3.	8.2	808
31	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. , 2018, 21, 1.		2
32	Exploring the sensitivity of next generation gravitational wave detectors. Classical and Quantum Gravity, 2017, 34, 044001.	1.5	735
33	Calibration of the Advanced LIGO detectors for the discovery of the binary black-hole merger GW150914. Physical Review D, 2017, 95, .	1.6	72
34	GW170814: A Three-Detector Observation of Gravitational Waves from a Binary Black Hole Coalescence. Physical Review Letters, 2017, 119, 141101.	2.9	1,600
35	GW170817: Observation of Gravitational Waves from a Binary Neutron Star Inspiral. Physical Review Letters, 2017, 119, 161101.	2.9	6,413
36	Multi-messenger Observations of a Binary Neutron Star Merger[*]. Astrophysical Journal Letters, 2017, 848, L12.	3.0	2,805

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37	Quantum correlation measurements in interferometric gravitational-wave detectors. Physical Review A, 2017, 95, .	1.0	16
38	GW170104: Observation of a 50-Solar-Mass Binary Black Hole Coalescence at Redshift 0.2. Physical Review Letters, 2017, 118, 221101.	2.9	1,987
39	GW170608: Observation of a 19 Solar-mass Binary Black Hole Coalescence. Astrophysical Journal Letters, 2017, 851, L35.	3.0	968
40	Sensitivity of the Advanced LIGO detectors at the beginning of gravitational wave astronomy. Physical Review D, 2016, 93, .	1.6	286
41	GW150914: The Advanced LIGO Detectors in the Era of First Discoveries. Physical Review Letters, 2016, 116, 131103.	2.9	466
42	Audio-Band Frequency-Dependent Squeezing for Gravitational-Wave Detectors. Physical Review Letters, 2016, 116, 041102.	2.9	77
43	GW151226: Observation of Gravitational Waves from a 22-Solar-Mass Binary Black Hole Coalescence. Physical Review Letters, 2016, 116, 241103.	2.9	2,701
44	Binary Black Hole Mergers in the First Advanced LIGO Observing Run. Physical Review X, 2016, 6, .	2.8	898
45	Ultra-low phase noise squeezed vacuum source for gravitational wave detectors. Optica, 2016, 3, 682.	4.8	52
46	Observation of Gravitational Waves from a Binary Black Hole Merger. Physical Review Letters, 2016, 116, 061102.	2.9	8,753
47	Gravitational wave detector with cosmological reach. Physical Review D, 2015, 91, .	1.6	137
48	Prospects for doubling the range of Advanced LIGO. Physical Review D, 2015, 91, .	1.6	126
49	Effect of squeezing on parameter estimation of gravitational waves emitted by compact binary systems. Physical Review D, 2015, 91, .	1.6	11
50	Observation of Parametric Instability in Advanced LIGO. Physical Review Letters, 2015, 114, 161102.	2.9	87
51	Characterization of the LIGO detectors during their sixth science run. Classical and Quantum Gravity, 2015, 32, 115012.	1.5	1,029
52	Advanced LIGO. Classical and Quantum Gravity, 2015, 32, 074001.	1.5	1,929
53	Impact of backscattered light in a squeezing-enhanced interferometric gravitational-wave detector. Classical and Quantum Gravity, 2014, 31, 035017.	1.5	21
54	Quantum Noise Reduction in the LIGO Gravitational Wave Interferometer with Squeezed States of Light. , 2014, , .		0

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55	Squeezed light for advanced gravitational wave detectors and beyond. Optics Express, 2014, 22, 21106.	1.7	56
56	Decoherence and degradation of squeezed states in quantum filter cavities. Physical Review D, 2014, 90, .	1.6	66
57	Progress and challenges in advanced ground-based gravitational-wave detectors. General Relativity and Gravitation, 2014, 46, 1.	0.7	2
58	Enhanced sensitivity of the LIGO gravitational wave detector by using squeezed states of light. Nature Photonics, 2013, 7, 613-619.	15.6	825
59	Angular control of optical cavities in a radiation-pressure-dominated regime: the Enhanced LIGO case. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2013, 30, 2618.	0.8	33
60	Squeezed quadrature fluctuations in a gravitational wave detector using squeezed light. Optics Express, 2013, 21, 19047.	1.7	61
61	Loss in long-storage-time optical cavities. Optics Express, 2013, 21, 30114.	1.7	52
62	Realistic filter cavities for advanced gravitational wave detectors. Physical Review D, 2013, 88, .	1.6	86
63	Design and development of the advanced LIGO monolithic fused silica suspension. Classical and Quantum Gravity, 2012, 29, 035003.	1.5	88
64	Search for gravitational waves from low mass compact binary coalescence in LIGOâ€™s sixth science run and Virgoâ€™s science runs 2 and 3. Physical Review D, 2012, 85, .	1.6	185
65	A general approach to optomechanical parametric instabilities. Physics Letters, Section A: General, Atomic and Solid State Physics, 2010, 374, 665-671.	0.9	47
66	SEARCHES FOR GRAVITATIONAL WAVES FROM KNOWN PULSARS WITH SCIENCE RUN 5 LIGO DATA. Astrophysical Journal, 2010, 713, 671-685.	1.6	155
67	Alignment sensing and control in advanced LIGO. Classical and Quantum Gravity, 2010, 27, 084026.	1.5	49
68	LIGO: the Laser Interferometer Gravitational-Wave Observatory. Reports on Progress in Physics, 2009, 72, 076901.	8.1	971
69	Virgo status. Classical and Quantum Gravity, 2008, 25, 184001.	1.5	116
70	The VIRGO large mirrors: a challenge for low loss coatings. Classical and Quantum Gravity, 2004, 21, S935-S945.	1.5	30