Robert L Ward

List of Publications by Year
in descending order

#	Article	IF	Citations
1	GW170817: Observation of Gravitational Waves from a Binary Neutron Star Inspiral. Physical Review Letters, 2017, 119, 161101.	2.9	6,413
2	GW151226: Observation of Gravitational Waves from a 22-Solar-Mass Binary Black Hole Coalescence. Physical Review Letters, 2016, 116, 241103.	2.9	2,701
3	Gravitational Waves and Gamma-Rays from a Binary Neutron Star Merger: GW170817 and GRB 170817A. Astrophysical Journal Letters, 2017, 848, L13.	3.0	2,314
4	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
5	GW170814: A Three-Detector Observation of Gravitational Waves from a Binary Black Hole Coalescence. Physical Review Letters, 2017, 119, 141101.	2.9	1,600
6	GW170817: Measurements of Neutron Star Radii and Equation of State. Physical Review Letters, 2018, 121, 161101.	2.9	1,473
7	Tests of General Relativity with GW150914. Physical Review Letters, 2016, 116, 221101.	2.9	1,224
8	GW190814: Gravitational Waves from the Coalescence of a 23 Solar Mass Black Hole with a 2.6 Solar Mass Compact Object. Astrophysical Journal Letters, 2020, 896, L44.	3.0	1,090
9	GW190425: Observation of a Compact Binary Coalescence with Total MassÂâˆ¼Â3.4 M_{âŠ™}. Astrophysical Journal Letters, 2020, 892, L3.	3.0	1,049
10	Characterization of the LIGO detectors during their sixth science run. Classical and Quantum Gravity, 2015, 32, 115012.	1.5	1,029
11	GW170608: Observation of a 19 Solar-mass Binary Black Hole Coalescence. Astrophysical Journal Letters, 2017, 851, L35.	3.0	968
12	Predictions for the rates of compact binary coalescences observable by ground-based gravitational-wave detectors. Classical and Quantum Gravity, 2010, 27, 173001.	1.5	956
13	GW190521: A Binary Black Hole Merger with a Total Mass of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>150</mml:mn><mml:mtext>â€‰</mml:mtext><mml:mtext>â€‰</mml:mtext><mml:msub> stretchy="false">âŠ™</mml:mo></mml:mrow></mml:msub></mml:mrow></mml:math>. Physical Review Letters, 2020, 125, 101102.	2.9	836
14	Enhanced sensitivity of the LIGO gravitational wave detector by using squeezed states of light. Nature Photonics, 2013, 7, 613-619.	15.6	825
15	A gravitational wave observatory operating beyond the quantum shot-noise limit. Nature Physics, 2011, 7, 962-965.	6.5	716
16	A gravitational-wave standard siren measurement of the Hubble constant. Nature, 2017, 551, 85-88.	13.7	674
17	Properties of the Binary Black Hole Merger GW150914. Physical Review Letters, 2016, 116, 241102.	2.9	673
18	Binary Black Hole Population Properties Inferred from the First and Second Observing Runs of Advanced LIGO and Advanced Virgo. Astrophysical Journal Letters, 2019, 882, L24.	3.0	566

#	Article	IF	Citations
19	GW150914: The Advanced LIGO Detectors in the Era of First Discoveries. Physical Review Letters, 2016, 116, 131103.	2.9	466
20	Properties and Astrophysical Implications of the 150 M_{âŠ™} Binary Black Hole Merger GW190521. Astrophysical Journal Letters, 2020, 900, L13.	3.0	406
21	Quantum-Enhanced Advanced LIGO Detectors in the Era of Gravitational-Wave Astronomy. Physical Review Letters, 2019, 123, 231107.	2.9	359
22	An upper limit on the stochastic gravitational-wave background of cosmological origin. Nature, 2009, 460, 990-994.	13.7	303
23	Sensitivity of the Advanced LIGO detectors at the beginning of gravitational wave astronomy. Physical Review D, 2016, 93, .	1.6	286
24	A quantum-enhanced prototype gravitational-wave detector. Nature Physics, 2008, 4, 472-476.	6.5	280
25	GW150914: Implications for the Stochastic Gravitational-Wave Background from Binary Black Holes. Physical Review Letters, 2016, 116, 131102.	2.9	269
26	THE RATE OF BINARY BLACK HOLE MERGERS INFERRED FROM ADVANCED LIGO OBSERVATIONS SURROUNDING GW150914. Astrophysical Journal Letters, 2016, 833, L1.	3.0	230
27	Sensitivity and performance of the Advanced LIGO detectors in the third observing run. Physical Review D, 2020, 102, .	1.6	196
28	Upper Limits on the Stochastic Gravitational-Wave Background from Advanced LIGOâ€™s First Observing Run. Physical Review Letters, 2017, 118, 121101.	2.9	194
29	Search for Post-merger Gravitational Waves from the Remnant of the Binary Neutron Star Merger GW170817. Astrophysical Journal Letters, 2017, 851, L16.	3.0	189
30	First Measurement of the Hubble Constant from a Dark Standard Siren using the Dark Energy Survey Galaxies and the LIGO/Virgo Binaryâ€“Black-hole Merger GW170814. Astrophysical Journal Letters, 2019, 876, L7.	3.0	179
31	Status of the Virgo project. Classical and Quantum Gravity, 2011, 28, 114002.	1.5	171
32	Estimating the Contribution of Dynamical Ejecta in the Kilonova Associated withÂGW170817. Astrophysical Journal Letters, 2017, 850, L39.	3.0	156
33	SEARCHES FOR GRAVITATIONAL WAVES FROM KNOWN PULSARS WITH SCIENCE RUN 5 LIGO DATA. Astrophysical Journal, 2010, 713, 671-685.	1.6	155
34	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.	3.0	146
35	Implications for the Origin of GRB 070201 from LIGO Observations. Astrophysical Journal, 2008, 681, 1419-1430.	1.6	143
36	First Search for Gravitational Waves from Known Pulsars with Advanced LIGO. Astrophysical Journal, 2017, 839, 12.	1.6	131

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37	GRAVITATIONAL WAVES FROM KNOWN PULSARS: RESULTS FROM THE INITIAL DETECTOR ERA. Astrophysical Journal, 2014, 785, 119.	1.6	125
38	Searching for a Stochastic Background of Gravitational Waves with the Laser Interferometer Gravitational-Wave Observatory. Astrophysical Journal, 2007, 659, 918-930.	1.6	120
39	A cryogenic silicon interferometer for gravitational-wave detection. Classical and Quantum Gravity, 2020, 37, 165003.	1.5	120
40	Search for Subsolar Mass Ultracompact Binaries in Advanced LIGOâ€™s Second Observing Run. Physical Review Letters, 2019, 123, 161102.	2.9	119
41	FIRST SEARCH FOR GRAVITATIONAL WAVES FROM THE YOUNGEST KNOWN NEUTRON STAR. Astrophysical Journal, 2010, 722, 1504-1513.	1.6	104
42	SEARCH FOR GRAVITATIONAL WAVES ASSOCIATED WITH GAMMA-RAY BURSTS DURING LIGO SCIENCE RUN 6 AND VIRGO SCIENCE RUNS 2 AND 3. Astrophysical Journal, 2012, 760, 12.	1.6	104
43	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, .	1.6	104
44	Effects of waveform model systematics on the interpretation of GW150914. Classical and Quantum Gravity, 2017, 34, 104002.	1.5	98
45	Search for Gravitational Waves from a Long-lived Remnant of the Binary Neutron Star Merger GW170817. Astrophysical Journal, 2019, 875, 160.	1.6	97
46	SEARCH FOR GRAVITATIONAL-WAVE INSPIRAL SIGNALS ASSOCIATED WITH SHORT GAMMA-RAY BURSTS DURING LIGO'S FIFTH AND VIRGO'S FIRST SCIENCE RUN. Astrophysical Journal, 2010, 715, 1453-1461.	1.6	90
47	Upper Limits on a Stochastic Background of Gravitational Waves. Physical Review Letters, 2005, 95, 221101.	2.9	89
48	Searches for Gravitational Waves from Known Pulsars at Two Harmonics in 2015â€“2017 LIGO Data. Astrophysical Journal, 2019, 879, 10.	1.6	88
49	Observation of Parametric Instability in Advanced LIGO. Physical Review Letters, 2015, 114, 161102.	2.9	87
50	Improved Upper Limits on the Stochastic Gravitational-Wave Background from 2009â€“2010 LIGO and Virgo Data. Physical Review Letters, 2014, 113, 231101.	2.9	86
51	Search for Tensor, Vector, and Scalar Polarizations in the Stochastic Gravitational-Wave Background. Physical Review Letters, 2018, 120, 201102.	2.9	85
52	Directional Limits on Persistent Gravitational Waves from Advanced LIGOâ€™s First Observing Run. Physical Review Letters, 2017, 118, 121102.	2.9	84
53	All-Sky LIGO Search for Periodic Gravitational Waves in the Early Fifth-Science-Run Data. Physical Review Letters, 2009, 102, 111102.	2.9	83
54	Search for gravitational-wave bursts in LIGO data from the fourth science run. Classical and Quantum Gravity, 2007, 24, 5343-5369.	1.5	78

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55	Search for Subsolar-Mass Ultracompact Binaries in Advanced LIGOâ€™s First Observing Run. Physical Review Letters, 2018, 121, 231103.	2.9	77
56	Improving astrophysical parameter estimation via offline noise subtraction for Advanced LIGO. Physical Review D, 2019, 99, .	1.6	77
57	Higher-Order Laguerre-Gauss Mode Generation and Interferometry for Gravitational Wave Detectors. Physical Review Letters, 2010, 105, 231102.	2.9	73
58	The characterization of Virgo data and its impact on gravitational-wave searches. Classical and Quantum Gravity, 2012, 29, 155002.	1.5	73
59	On the Progenitor of Binary Neutron Star Merger GW170817. Astrophysical Journal Letters, 2017, 850, L40.	3.0	73
60	Search for Eccentric Binary Black Hole Mergers with Advanced LIGO and Advanced Virgo during Their First and Second Observing Runs. Astrophysical Journal, 2019, 883, 149.	1.6	72
61	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
62	Search for Gravitational-Wave Bursts from Soft Gamma Repeaters. Physical Review Letters, 2008, 101, 211102.	2.9	69
63	The basic physics of the binary black hole merger GW150914. Annalen Der Physik, 2017, 529, 1600209.	0.9	69
64	Constraints on Cosmic Strings from the LIGO-Virgo Gravitational-Wave Detectors. Physical Review Letters, 2014, 112, 131101.	2.9	68
65	SEARCHES FOR CONTINUOUS GRAVITATIONAL WAVES FROM NINE YOUNG SUPERNOVA REMNANTS. Astrophysical Journal, 2015, 813, 39.	1.6	66
66	Gravitational-wave Constraints on the Equatorial Ellipticity of Millisecond Pulsars. Astrophysical Journal Letters, 2020, 902, L21.	3.0	65
67	SWIFT FOLLOW-UP OBSERVATIONS OF CANDIDATE GRAVITATIONAL-WAVE TRANSIENT EVENTS. Astrophysical Journal, Supplement Series, 2012, 203, 28.	3.0	62
68	Searches for Continuous Gravitational Waves from 15 Supernova Remnants and Fomalhaut b with Advanced LIGO[*]. Astrophysical Journal, 2019, 875, 122.	1.6	61
69	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.	1.6	60
70	IMPLICATIONS FOR THE ORIGIN OF GRB 051103 FROM LIGO OBSERVATIONS. Astrophysical Journal, 2012, 755, 2.	1.6	60
71	FIRST SEARCHES FOR OPTICAL COUNTERPARTS TO GRAVITATIONAL-WAVE CANDIDATE EVENTS. Astrophysical Journal, Supplement Series, 2014, 211, 7.	3.0	57
72	SEARCH FOR GRAVITATIONAL WAVE BURSTS FROM SIX MAGNETARS. Astrophysical Journal Letters, 2011, 734, L35.	3.0	55

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73	Achieving resonance in the Advanced LIGO gravitational-wave interferometer. Classical and Quantum Gravity, 2014, 31, 245010.	1.5	55
74	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.	1.6	52
75	Narrowing the Filter-Cavity Bandwidth in Gravitational-Wave Detectors via Optomechanical Interaction. Physical Review Letters, 2014, 113, 151102.	2.9	51
76	Measurement of optical response of a detuned resonant sideband extraction gravitational wave detector. Physical Review D, 2006, 74, .	1.6	48
77	Upper Limits on Gravitational Waves from Scorpius X-1 from a Model-based Cross-correlation Search in Advanced LIGO Data. Astrophysical Journal, 2017, 847, 47.	1.6	46
78	STACKED SEARCH FOR GRAVITATIONAL WAVES FROM THE 2006 SGR 1900+14 STORM. Astrophysical Journal, 2009, 701, L68-L74.	1.6	45
79	SUPPLEMENT: â€œLOCALIZATION AND BROADBAND FOLLOW-UP OF THE GRAVITATIONAL-WAVE TRANSIENT GW150914â€• (2016, ApJL, 826, L13). Astrophysical Journal, Supplement Series, 2016, 225, 8.	3.0	44
80	The NINJA-2 project: detecting and characterizing gravitational waveforms modelled using numerical binary black hole simulations. Classical and Quantum Gravity, 2014, 31, 115004.	1.5	42
81	Search for gravitational-wave bursts in LIGO's third science run. Classical and Quantum Gravity, 2006, 23, S29-S39.	1.5	40
82	Broadband reduction of quantum radiation pressure noise via squeezed light injection. Nature Photonics, 2020, 14, 19-23.	15.6	37
83	Laser link acquisition demonstration for the GRACE Follow-On mission. Optics Express, 2014, 22, 11351.	1.7	35
84	Implementation of an $mathcal{F}$-statistic all-sky search for continuous gravitational waves in Virgo VSR1 data. Classical and Quantum Gravity, 2014, 31, 165014.	1.5	34
85	dc readout experiment at the Caltech 40m prototype interferometer. Classical and Quantum Gravity, 2008, 25, 114030.	1.5	32
86	Search for Multimessenger Sources of Gravitational Waves and High-energy Neutrinos with Advanced LIGO during Its First Observing Run, ANTARES, and IceCube. Astrophysical Journal, 2019, 870, 134.	1.6	32
87	A Fermi Gamma-Ray Burst Monitor Search for Electromagnetic Signals Coincident with Gravitational-wave Candidates in Advanced LIGO's First Observing Run. Astrophysical Journal, 2019, 871, 90.	1.6	30
88	Observation of Squeezed Light in the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>2</mml:mn><mml:mtext>â€‰</mml:mtext><mml:mtext>â€‰</mml:mtext><mml:mi>Î¼</m mathvariant="normal">m</mml:mi></mml:mrow></mml:math> Region. Physical Review Letters, 2018, 120, 203603.	2.9	29
89	Search for Gravitational-wave Signals Associated with Gamma-Ray Bursts during the Second Observing Run of Advanced LIGO and Advanced Virgo. Astrophysical Journal, 2019, 886, 75.	1.6	29
90	High power compatible internally sensed optical phased array. Optics Express, 2016, 24, 13467.	1.7	28

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91	Weak-light phase tracking with a low cycle slip rate. Optics Letters, 2014, 39, 5251.	1.7	27
92	Tunable narrow-linewidth laser at 2â€…Î¼m wavelength for gravitational wave detector research. Optics Express, 2020, 28, 3280.	1.7	27
93	Interferometers for Displacement-Noise-Free Gravitational-Wave Detection. Physical Review Letters, 2006, 97, 151103.	2.9	26
94	Astrophysically triggered searches for gravitational waves: status and prospects. Classical and Quantum Gravity, 2008, 25, 114051.	1.5	26
95	Search for Transient Gravitational-wave Signals Associated with Magnetar Bursts during Advanced LIGOâ€™s Second Observing Run. Astrophysical Journal, 2019, 874, 163.	1.6	26
96	First Demonstration of Electrostatic Damping of Parametric Instability at Advanced LIGO. Physical Review Letters, 2017, 118, 151102.	2.9	24
97	First joint search for gravitational-wave bursts in LIGO and GEO 600 data. Classical and Quantum Gravity, 2008, 25, 245008.	1.5	22
98	Generation and control of frequency-dependent squeezing via Einsteinâ€“Podolskyâ€“Rosen entanglement. Nature Photonics, 2020, 14, 223-226.	15.6	22
99	Mechanical characterisation of the TorPeDO: a low frequency gravitational force sensor. Classical and Quantum Gravity, 2017, 34, 135002.	1.5	20
100	LIGOâ€™s quantum response to squeezed states. Physical Review D, 2021, 104, .	1.6	19
101	Crosstalk reduction for multi-channel optical phase metrology. Optics Express, 2020, 28, 10400.	1.7	19
102	A squeezed light source operated under high vacuum. Scientific Reports, 2016, 5, 18052.	1.6	18
103	A neural network model of spiralâ€“planar motion tuning in MSTd. Vision Research, 2003, 43, 577-595.	0.7	15
104	Demonstration of Displacement- and Frequency-Noise-Free Laser Interferometry Using Bidirectional Mach-Zehnder Interferometers. Physical Review Letters, 2007, 98, 141101.	2.9	14
105	Performance of the Virgo interferometer longitudinal control system during the second science run. Astroparticle Physics, 2011, 34, 521-527.	1.9	13
106	Internally sensed optical phased array. Optics Letters, 2013, 38, 1137.	1.7	13
107	Quantum enhanced kHz gravitational wave detector with internal squeezing. Classical and Quantum Gravity, 2020, 37, 07LT02.	1.5	13
108	Photonic solution to phase sensing and control for light-based interstellar propulsion. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 1477.	0.9	13

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109	A Joint Fermi-GBM and LIGO/Virgo Analysis of Compact Binary Mergers from the First and Second Gravitational-wave Observing Runs. Astrophysical Journal, 2020, 893, 100.	1.6	12
110	Improving the robustness of the advanced LIGO detectors to earthquakes. Classical and Quantum Gravity, 2020, 37, 235007.	1.5	11
111	Coherent beam combining using a 2D internally sensed optical phased array. Applied Optics, 2014, 53, 4881.	0.9	10
112	High stability laser locking to an optical cavity using tilt locking. Optics Letters, 2021, 46, 3199.	1.7	10
113	Squeezed vacuum phase control at 2â€‰â€‰Î¼m. Optics Letters, 2019, 44, 5386.	1.7	7
114	Sensing and control of the advanced LIGO optical configuration. , 2004, , .		6
115	Automatic Alignment system during the second science run of the Virgo interferometer. Astroparticle Physics, 2011, 34, 327-332.	1.9	6
116	Effects of transients in LIGO suspensions on searches for gravitational waves. Review of Scientific Instruments, 2017, 88, 124501.	0.6	6
117	Coherent Beam Combining Using an Internally Sensed Optical Phased Array of Frequency-Offset Phase Locked Lasers. Photonics, 2020, 7, 118.	0.9	6
118	Practical test mass and suspension configuration for a cryogenic kilohertz gravitational wave detector. Physical Review D, 2020, 102, .	1.6	6
119	Testing the GRACE follow-on triple mirror assembly. Classical and Quantum Gravity, 2014, 31, 195004.	1.5	5
120	Lock Acquisition Scheme For The Advanced LIGO Optical configuration. Journal of Physics: Conference Series, 2006, 32, 265-269.	0.3	4
121	Point Absorber Limits to Future Gravitational-Wave Detectors. Physical Review Letters, 2021, 127, 241102.	2.9	3
122	Control sideband generation for dual-recycled laser interferometric gravitational wave detectors. Classical and Quantum Gravity, 2006, 23, 5661-5666.	1.5	2
123	Matched template analysis of continuous wave laser for space debris ranging application. Advances in Space Research, 2022, 70, 1979-1987.	1.2	2
124	Optimal quantum noise cancellation with an entangled witness channel. Physical Review Research, 2021, 3, .	1.3	1
125	Demonstration of displacement-noise-free interferometry using bi-directional Machâ€“Zehnder interferometers. Classical and Quantum Gravity, 2008, 25, 114031.	1.5	0
126	Hierarchical optical phased array for large scale beam combining and atmospheric correction. , 2021, , .		0

#	Article	IF	Citations
127	Research and Development for Third-Generation Gravitational Wave Detectors. , 2022, , 301-360.		0