

Robert L Ward

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

25,272
citations

58
h-index

131
g-index

131
ext. papers

30,553
ext. citations

6.7
avg, IF

5.53
L-index

#	Paper	IF	Citations
125	Research and Development for Third-Generation Gravitational Wave Detectors 2022 , 301-360		
124	Research and Development for Third-Generation Gravitational Wave Detectors 2021 , 1-60		
123	Photonic solution to phase sensing and control for light-based interstellar propulsion. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2021 , 38, 1477	1.7	6
122	High stability laser locking to an optical cavity using tilt locking. <i>Optics Letters</i> , 2021 , 46, 3199-3202	3	1
121	LIGO quantum response to squeezed states. <i>Physical Review D</i> , 2021 , 104,	4.9	5
120	Point Absorber Limits to Future Gravitational-Wave Detectors.. <i>Physical Review Letters</i> , 2021 , 127, 2411024	7.4	0
119	Sensitivity and performance of the Advanced LIGO detectors in the third observing run. <i>Physical Review D</i> , 2020 , 102,	4.9	84
118	GW190814: Gravitational Waves from the Coalescence of a 23 Solar Mass Black Hole with a 2.6 Solar Mass Compact Object. <i>Astrophysical Journal Letters</i> , 2020 , 896, L44	7.9	571
117	GW190425: Observation of a Compact Binary Coalescence with Total Mass $\sim 3.4 M_{\odot}$. <i>Astrophysical Journal Letters</i> , 2020 , 892, L3	7.9	591
116	Quantum enhanced kHz gravitational wave detector with internal squeezing. <i>Classical and Quantum Gravity</i> , 2020 , 37, 07LT02	3.3	6
115	Generation and control of frequency-dependent squeezing via Einstein-Podolsky-Rosen entanglement. <i>Nature Photonics</i> , 2020 , 14, 223-226	33.9	13
114	Tunable narrow-linewidth laser at 2 μm wavelength for gravitational wave detector research. <i>Optics Express</i> , 2020 , 28, 3280-3288	3.3	11
113	Crosstalk reduction for multi-channel optical phase metrology. <i>Optics Express</i> , 2020 , 28, 10400-10424	3.3	10
112	Properties and Astrophysical Implications of the 150 M_{\odot} Binary Black Hole Merger GW190521. <i>Astrophysical Journal Letters</i> , 2020 , 900, L13	7.9	207
111	Gravitational-wave Constraints on the Equatorial Ellipticity of Millisecond Pulsars. <i>Astrophysical Journal Letters</i> , 2020 , 902, L21	7.9	32
110	Practical test mass and suspension configuration for a cryogenic kilohertz gravitational wave detector. <i>Physical Review D</i> , 2020 , 102,	4.9	2
109	A cryogenic silicon interferometer for gravitational-wave detection. <i>Classical and Quantum Gravity</i> , 2020 , 37, 165003	3.3	50

108	Improving the robustness of the advanced LIGO detectors to earthquakes. <i>Classical and Quantum Gravity</i> , 2020 , 37, 235007	3.3	4
107	A Joint Fermi-GBM and LIGO/Virgo Analysis of Compact Binary Mergers from the First and Second Gravitational-wave Observing Runs. <i>Astrophysical Journal</i> , 2020 , 893, 100	4.7	9
106	Coherent Beam Combining Using an Internally Sensed Optical Phased Array of Frequency-Offset Phase Locked Lasers. <i>Photonics</i> , 2020 , 7, 118	2.2	4
105	GW190521: A Binary Black Hole Merger with a Total Mass of $150 M_{\odot}$. <i>Physical Review Letters</i> , 2020 , 125, 101102	7.4	420
104	Broadband reduction of quantum radiation pressure noise via squeezed light injection. <i>Nature Photonics</i> , 2020 , 14, 19-23	33.9	18
103	Binary Black Hole Population Properties Inferred from the First and Second Observing Runs of Advanced LIGO and Advanced Virgo. <i>Astrophysical Journal Letters</i> , 2019 , 882, L24	7.9	381
102	Search for Multimessenger Sources of Gravitational Waves and High-energy Neutrinos with Advanced LIGO during Its First Observing Run, ANTARES, and IceCube. <i>Astrophysical Journal</i> , 2019 , 870, 134	4.7	23
101	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> , 2019 , 871, 90	4.7	22
100	Searches for Continuous Gravitational Waves from 15 Supernova Remnants and Fomalhaut b with Advanced LIGO. <i>Astrophysical Journal</i> , 2019 , 875, 122	4.7	45
99	Search for Gravitational Waves from a Long-lived Remnant of the Binary Neutron Star Merger GW170817. <i>Astrophysical Journal</i> , 2019 , 875, 160	4.7	60
98	First Measurement of the Hubble Constant from a Dark Standard Siren using the Dark Energy Survey Galaxies and the LIGO/Virgo Binary Black-hole Merger GW170814. <i>Astrophysical Journal Letters</i> , 2019 , 876, L7	7.9	91
97	Low-latency Gravitational-wave Alerts for Multimessenger Astronomy during the Second Advanced LIGO and Virgo Observing Run. <i>Astrophysical Journal</i> , 2019 , 875, 161	4.7	49
96	Search for Transient Gravitational-wave Signals Associated with Magnetar Bursts during Advanced LIGO's Second Observing Run. <i>Astrophysical Journal</i> , 2019 , 874, 163	4.7	17
95	Improving astrophysical parameter estimation via offline noise subtraction for Advanced LIGO. <i>Physical Review D</i> , 2019 , 99,	4.9	58
94	Searches for Gravitational Waves from Known Pulsars at Two Harmonics in 2015-2017 LIGO Data. <i>Astrophysical Journal</i> , 2019 , 879, 10	4.7	63
93	Search for Eccentric Binary Black Hole Mergers with Advanced LIGO and Advanced Virgo during Their First and Second Observing Runs. <i>Astrophysical Journal</i> , 2019 , 883, 149	4.7	36
92	Search for Substellar Mass Ultracompact Binaries in Advanced LIGO's Second Observing Run. <i>Physical Review Letters</i> , 2019 , 123, 161102	7.4	68
91	Squeezed vacuum phase control at 2 μ m. <i>Optics Letters</i> , 2019 , 44, 5386-5389	3	6

90	Quantum-Enhanced Advanced LIGO Detectors in the Era of Gravitational-Wave Astronomy. <i>Physical Review Letters</i> , 2019 , 123, 231107	7.4	182
89	Search for Gravitational-wave Signals Associated with Gamma-Ray Bursts during the Second Observing Run of Advanced LIGO and Advanced Virgo. <i>Astrophysical Journal</i> , 2019 , 886, 75	4.7	21
88	Identification and mitigation of narrow spectral artifacts that degrade searches for persistent gravitational waves in the first two observing runs of Advanced LIGO. <i>Physical Review D</i> , 2018 , 97,	4.9	77
87	Search for Substellar-Mass Ultracompact Binaries in Advanced LIGO's First Observing Run. <i>Physical Review Letters</i> , 2018 , 121, 231103	7.4	49
86	GW170817: Measurements of Neutron Star Radii and Equation of State. <i>Physical Review Letters</i> , 2018 , 121, 161101	7.4	867
85	Search for Tensor, Vector, and Scalar Polarizations in the Stochastic Gravitational-Wave Background. <i>Physical Review Letters</i> , 2018 , 120, 201102	7.4	60
84	Observation of Squeezed Light in the 2 nd Region. <i>Physical Review Letters</i> , 2018 , 120, 203603	7.4	17
83	Effects of waveform model systematics on the interpretation of GW150914. <i>Classical and Quantum Gravity</i> , 2017 , 34, 104002	3.3	74
82	Upper Limits on the Stochastic Gravitational-Wave Background from Advanced LIGO's First Observing Run. <i>Physical Review Letters</i> , 2017 , 118, 121101	7.4	137
81	Directional Limits on Persistent Gravitational Waves from Advanced LIGO's First Observing Run. <i>Physical Review Letters</i> , 2017 , 118, 121102	7.4	65
80	First Search for Gravitational Waves from Known Pulsars with Advanced LIGO. <i>Astrophysical Journal</i> , 2017 , 839, 12	4.7	107
79	The basic physics of the binary black hole merger GW150914. <i>Annalen Der Physik</i> , 2017 , 529, 1600209	2.6	45
78	GW170814: A Three-Detector Observation of Gravitational Waves from a Binary Black Hole Coalescence. <i>Physical Review Letters</i> , 2017 , 119, 141101	7.4	1270
77	Upper Limits on Gravitational Waves from Scorpius X-1 from a Model-based Cross-correlation Search in Advanced LIGO Data. <i>Astrophysical Journal</i> , 2017 , 847, 47	4.7	35
76	A gravitational-wave standard siren measurement of the Hubble constant. <i>Nature</i> , 2017 , 551, 85-88	50.4	413
75	GW170817: Observation of Gravitational Waves from a Binary Neutron Star Inspiral. <i>Physical Review Letters</i> , 2017 , 119, 161101	7.4	4272
74	Gravitational Waves and Gamma-Rays from a Binary Neutron Star Merger: GW170817 and GRB 170817A. <i>Astrophysical Journal Letters</i> , 2017 , 848, L13	7.9	1614
73	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> , 2017 , 841, 89	4.7	42

72	First Demonstration of Electrostatic Damping of Parametric Instability at Advanced LIGO. <i>Physical Review Letters</i> , 2017 , 118, 151102	7.4	18
71	Search for Post-merger Gravitational Waves from the Remnant of the Binary Neutron Star Merger GW170817. <i>Astrophysical Journal Letters</i> , 2017 , 851, L16	7.9	133
70	Estimating the Contribution of Dynamical Ejecta in the Kilonova Associated with GW170817. <i>Astrophysical Journal Letters</i> , 2017 , 850, L39	7.9	127
69	Effects of transients in LIGO suspensions on searches for gravitational waves. <i>Review of Scientific Instruments</i> , 2017 , 88, 124501	1.7	4
68	GW170104: Observation of a 50-Solar-Mass Binary Black Hole Coalescence at Redshift 0.2. <i>Physical Review Letters</i> , 2017 , 118, 221101	7.4	1609
67	On the Progenitor of Binary Neutron Star Merger GW170817. <i>Astrophysical Journal Letters</i> , 2017 , 850, L40	7.9	50
66	GW170608: Observation of a 19 Solar-mass Binary Black Hole Coalescence. <i>Astrophysical Journal Letters</i> , 2017 , 851, L35	7.9	809
65	Mechanical characterisation of the TorPeDO: a low frequency gravitational force sensor. <i>Classical and Quantum Gravity</i> , 2017 , 34, 135002	3.3	16
64	High power compatible internally sensed optical phased array. <i>Optics Express</i> , 2016 , 24, 13467-79	3.3	19
63	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> , 2016 , 832, L21	7.9	130
62	Sensitivity of the Advanced LIGO detectors at the beginning of gravitational wave astronomy. <i>Physical Review D</i> , 2016 , 93,	4.9	208
61	GW150914: Implications for the Stochastic Gravitational-Wave Background from Binary Black Holes. <i>Physical Review Letters</i> , 2016 , 116, 131102	7.4	188
60	GW150914: The Advanced LIGO Detectors in the Era of First Discoveries. <i>Physical Review Letters</i> , 2016 , 116, 131103	7.4	328
59	SUPPLEMENT: LOCALIZATION AND BROADBAND FOLLOW-UP OF THE GRAVITATIONAL-WAVE TRANSIENT GW150914[(2016, ApJL, 826, L13). <i>Astrophysical Journal, Supplement Series</i> , 2016 , 225, 8	8	38
58	Tests of General Relativity with GW150914. <i>Physical Review Letters</i> , 2016 , 116, 221101	7.4	837
57	Properties of the Binary Black Hole Merger GW150914. <i>Physical Review Letters</i> , 2016 , 116, 241102	7.4	515
56	GW151226: Observation of Gravitational Waves from a 22-Solar-Mass Binary Black Hole Coalescence. <i>Physical Review Letters</i> , 2016 , 116, 241103	7.4	2136
55	THE RATE OF BINARY BLACK HOLE MERGERS INFERRED FROM ADVANCED LIGO OBSERVATIONS SURROUNDING GW150914. <i>Astrophysical Journal Letters</i> , 2016 , 833, L1	7.9	209

54	Observation of Parametric Instability in Advanced LIGO. <i>Physical Review Letters</i> , 2015 , 114, 161102	7.4	63
53	Characterization of the LIGO detectors during their sixth science run. <i>Classical and Quantum Gravity</i> , 2015 , 32, 115012	3.3	79 ^o
52	SEARCHES FOR CONTINUOUS GRAVITATIONAL WAVES FROM NINE YOUNG SUPERNOVA REMNANTS. <i>Astrophysical Journal</i> , 2015 , 813, 39	4.7	58
51	A squeezed light source operated under high vacuum. <i>Scientific Reports</i> , 2015 , 5, 18052	4.9	14
5 ^o	Implementation of an F -statistic all-sky search for continuous gravitational waves in Virgo VSR1 data. <i>Classical and Quantum Gravity</i> , 2014 , 31, 165014	3.3	27
49	GRAVITATIONAL WAVES FROM KNOWN PULSARS: RESULTS FROM THE INITIAL DETECTOR ERA. <i>Astrophysical Journal</i> , 2014 , 785, 119	4.7	109
48	The NINJA-2 project: detecting and characterizing gravitational waveforms modelled using numerical binary black hole simulations. <i>Classical and Quantum Gravity</i> , 2014 , 31, 115004	3.3	34
47	Coherent beam combining using a 2D internally sensed optical phased array. <i>Applied Optics</i> , 2014 , 53, 4881-5	1.7	8
46	Testing the GRACE follow-on triple mirror assembly. <i>Classical and Quantum Gravity</i> , 2014 , 31, 195004	3.3	4
45	FIRST SEARCHES FOR OPTICAL COUNTERPARTS TO GRAVITATIONAL-WAVE CANDIDATE EVENTS. <i>Astrophysical Journal, Supplement Series</i> , 2014 , 211, 7	8	51
44	Weak-light phase tracking with a low cycle slip rate. <i>Optics Letters</i> , 2014 , 39, 5251-4	3	17
43	Laser link acquisition demonstration for the GRACE Follow-On mission. <i>Optics Express</i> , 2014 , 22, 11351-663	3.3	23
42	Constraints on cosmic strings from the LIGO-Virgo gravitational-wave detectors. <i>Physical Review Letters</i> , 2014 , 112, 131101	7.4	59
41	Improved upper limits on the stochastic gravitational-wave background from 2009-2010 LIGO and Virgo data. <i>Physical Review Letters</i> , 2014 , 113, 231101	7.4	74
4 ^o	Achieving resonance in the Advanced LIGO gravitational-wave interferometer. <i>Classical and Quantum Gravity</i> , 2014 , 31, 245010	3.3	41
39	Narrowing the filter-cavity bandwidth in gravitational-wave detectors via optomechanical interaction. <i>Physical Review Letters</i> , 2014 , 113, 151102	7.4	39
38	Enhanced sensitivity of the LIGO gravitational wave detector by using squeezed states of light. <i>Nature Photonics</i> , 2013 , 7, 613-619	33.9	572
37	Internally sensed optical phased array. <i>Optics Letters</i> , 2013 , 38, 1137-9	3	10

36	IMPLICATIONS FOR THE ORIGIN OF GRB 051103 FROM LIGO OBSERVATIONS. <i>Astrophysical Journal</i> , 2012 , 755, 2	4.7	53
35	SWIFT FOLLOW-UP OBSERVATIONS OF CANDIDATE GRAVITATIONAL-WAVE TRANSIENT EVENTS. <i>Astrophysical Journal, Supplement Series</i> , 2012 , 203, 28	8	57
34	The characterization of Virgo data and its impact on gravitational-wave searches. <i>Classical and Quantum Gravity</i> , 2012 , 29, 155002	3.3	59
33	SEARCH FOR GRAVITATIONAL WAVES ASSOCIATED WITH GAMMA-RAY BURSTS DURING LIGO SCIENCE RUN 6 AND VIRGO SCIENCE RUNS 2 AND 3. <i>Astrophysical Journal</i> , 2012 , 760, 12	4.7	94
32	SEARCH FOR GRAVITATIONAL WAVE BURSTS FROM SIX MAGNETARS. <i>Astrophysical Journal Letters</i> , 2011 , 734, L35	7.9	47
31	Automatic Alignment system during the second science run of the Virgo interferometer. <i>Astroparticle Physics</i> , 2011 , 34, 327-332	2.4	5
30	Performance of the Virgo interferometer longitudinal control system during the second science run. <i>Astroparticle Physics</i> , 2011 , 34, 521-527	2.4	10
29	Status of the Virgo project. <i>Classical and Quantum Gravity</i> , 2011 , 28, 114002	3.3	140
28	A gravitational wave observatory operating beyond the quantum shot-noise limit. <i>Nature Physics</i> , 2011 , 7, 962-965	16.2	554
27	Higher-order Laguerre-Gauss mode generation and interferometry for gravitational wave detectors. <i>Physical Review Letters</i> , 2010 , 105, 231102	7.4	59
26	SEARCHES FOR GRAVITATIONAL WAVES FROM KNOWN PULSARS WITH SCIENCE RUN 5 LIGO DATA. <i>Astrophysical Journal</i> , 2010 , 713, 671-685	4.7	140
25	Predictions for the rates of compact binary coalescences observable by ground-based gravitational-wave detectors. <i>Classical and Quantum Gravity</i> , 2010 , 27, 173001	3.3	869
24	SEARCH FOR GRAVITATIONAL-WAVE INSPIRAL SIGNALS ASSOCIATED WITH SHORT GAMMA-RAY BURSTS DURING LIGO'S FIFTH AND VIRGO'S FIRST SCIENCE RUN. <i>Astrophysical Journal</i> , 2010 , 715, 1453-1461	4.7	79
23	SEARCH FOR GRAVITATIONAL-WAVE BURSTS ASSOCIATED WITH GAMMA-RAY BURSTS USING DATA FROM LIGO SCIENCE RUN 5 AND VIRGO SCIENCE RUN 1. <i>Astrophysical Journal</i> , 2010 , 715, 1438-1452	4.7	54
22	FIRST SEARCH FOR GRAVITATIONAL WAVES FROM THE YOUNGEST KNOWN NEUTRON STAR. <i>Astrophysical Journal</i> , 2010 , 722, 1504-1513	4.7	95
21	All-sky LIGO search for periodic gravitational waves in the early fifth-science-run data. <i>Physical Review Letters</i> , 2009 , 102, 111102	7.4	77
20	An upper limit on the stochastic gravitational-wave background of cosmological origin. <i>Nature</i> , 2009 , 460, 990-4	50.4	267
19	STACKED SEARCH FOR GRAVITATIONAL WAVES FROM THE 2006 SGR 1900+14 STORM. <i>Astrophysical Journal</i> , 2009 , 701, L68-L74	4.7	40

18	A quantum-enhanced prototype gravitational-wave detector. <i>Nature Physics</i> , 2008 , 4, 472-476	16.2	223
17	dc readout experiment at the Caltech 40m prototype interferometer. <i>Classical and Quantum Gravity</i> , 2008 , 25, 114030	3.3	27
16	Demonstration of displacement-noise-free interferometry using bi-directional Mach-Zehnder interferometers. <i>Classical and Quantum Gravity</i> , 2008 , 25, 114031	3.3	
15	Astrophysically triggered searches for gravitational waves: status and prospects. <i>Classical and Quantum Gravity</i> , 2008 , 25, 114051	3.3	24
14	First joint search for gravitational-wave bursts in LIGO and GEO 600 data. <i>Classical and Quantum Gravity</i> , 2008 , 25, 245008	3.3	19
13	Search for gravitational-wave bursts from soft gamma repeaters. <i>Physical Review Letters</i> , 2008 , 101, 211102	7.4	64
12	Implications for the Origin of GRB 070201 from LIGO Observations. <i>Astrophysical Journal</i> , 2008 , 681, 1419-1430	4.7	126
11	Search for gravitational-wave bursts in LIGO data from the fourth science run. <i>Classical and Quantum Gravity</i> , 2007 , 24, 5343-5369	3.3	70
10	Demonstration of displacement- and frequency-noise-free laser interferometry using bidirectional Mach-Zehnder interferometers. <i>Physical Review Letters</i> , 2007 , 98, 141101	7.4	11
9	Searching for a Stochastic Background of Gravitational Waves with the Laser Interferometer Gravitational-Wave Observatory. <i>Astrophysical Journal</i> , 2007 , 659, 918-930	4.7	107
8	Control sideband generation for dual-recycled laser interferometric gravitational wave detectors. <i>Classical and Quantum Gravity</i> , 2006 , 23, 5661-5666	3.3	2
7	Search for gravitational-wave bursts in LIGO's third science run. <i>Classical and Quantum Gravity</i> , 2006 , 23, S29-S39	3.3	36
6	Interferometers for displacement-noise-free gravitational-wave detection. <i>Physical Review Letters</i> , 2006 , 97, 151103	7.4	19
5	Measurement of optical response of a detuned resonant sideband extraction gravitational wave detector. <i>Physical Review D</i> , 2006 , 74,	4.9	43
4	Lock Acquisition Scheme For The Advanced LIGO Optical configuration. <i>Journal of Physics: Conference Series</i> , 2006 , 32, 265-269	0.3	4
3	Upper limits on a stochastic background of gravitational waves. <i>Physical Review Letters</i> , 2005 , 95, 221101	7.4	69
2	Sensing and control of the advanced LIGO optical configuration 2004 ,		5
1	A neural network model of spiral-planar motion tuning in MSTd. <i>Vision Research</i> , 2003 , 43, 577-95	2.1	13

