

Thomas Corbitt

List of Publications by Year in descending order

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Version: 2024-02-01

89
papers

43,669
citations

19608

61
h-index

42291

92
g-index

93
all docs

93
docs citations

93
times ranked

16801
citing authors

#	ARTICLE	IF	CITATIONS
1	Observation of Gravitational Waves from a Binary Black Hole Merger. Physical Review Letters, 2016, 116, 061102.	2.9	8,753
2	GW170817: Observation of Gravitational Waves from a Binary Neutron Star Inspiral. Physical Review Letters, 2017, 119, 161101.	2.9	6,413
3	GW151226: Observation of Gravitational Waves from a 22-Solar-Mass Binary Black Hole Coalescence. Physical Review Letters, 2016, 116, 241103.	2.9	2,701
4	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
5	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
6	Advanced LIGO. Classical and Quantum Gravity, 2015, 32, 074001.	1.5	1,929
7	GW170814: A Three-Detector Observation of Gravitational Waves from a Binary Black Hole Coalescence. Physical Review Letters, 2017, 119, 141101.	2.9	1,600
8	GW170817: Measurements of Neutron Star Radii and Equation of State. Physical Review Letters, 2018, 121, 161101.	2.9	1,473
9	Tests of General Relativity with GW150914. Physical Review Letters, 2016, 116, 221101.	2.9	1,224
10	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
11	GW190425: Observation of a Compact Binary Coalescence with Total Mass $\hat{A}^{\sim} \frac{1}{4} \hat{A}^{\sim} 3.4 M_{\odot}$. Astrophysical Journal Letters, 2020, 892, L3.	3.0	1,049
12	Characterization of the LIGO detectors during their sixth science run. Classical and Quantum Gravity, 2015, 32, 115012.	1.5	1,029
13	GW170608: Observation of a 19 Solar-mass Binary Black Hole Coalescence. Astrophysical Journal Letters, 2017, 851, L35.	3.0	968
14	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
15	GW190521: A Binary Black Hole Merger with a Total Mass of $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"> \langle \text{mml:mrow} \langle \text{mml:mn} \rangle 150 \langle \text{mml:mn} \rangle \langle \text{mml:mtext} \rangle \hat{A}^{\sim} \% \langle \text{mml:mtext} \rangle \hat{A}^{\sim} \% \langle \text{mml:mtext} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:stretchy}="false" \rangle \hat{A}^{\sim} \langle \text{mml:mo} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle .$ Physical Review Letters, 2020, 125, 161102.	2.9	886
16	Enhanced sensitivity of the LIGO gravitational wave detector by using squeezed states of light. Nature Photonics, 2013, 7, 613-619.	15.6	825
17	Properties of the Binary Black Hole Merger GW150914. Physical Review Letters, 2016, 116, 241102.	2.9	673
18	ASTROPHYSICAL IMPLICATIONS OF THE BINARY BLACK HOLE MERGER GW150914. Astrophysical Journal Letters, 2016, 818, L22.	3.0	633

#	ARTICLE	IF	CITATIONS
19	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.	3.0	566
20	Population Properties of Compact Objects from the Second LIGO–Virgo Gravitational-Wave Transient Catalog. <i>Astrophysical Journal Letters</i> , 2021, 913, L7.	3.0	514
21	GW150914: The Advanced LIGO Detectors in the Era of First Discoveries. <i>Physical Review Letters</i> , 2016, 116, 131103.	2.9	466
22	Properties and Astrophysical Implications of the 150 M_{\odot} Binary Black Hole Merger GW190521. <i>Astrophysical Journal Letters</i> , 2020, 900, L13.	3.0	406
23	An All-Optical Trap for a Gram-Scale Mirror. <i>Physical Review Letters</i> , 2007, 98, 150802.	2.9	318
24	GW150914: Implications for the Stochastic Gravitational-Wave Background from Binary Black Holes. <i>Physical Review Letters</i> , 2016, 116, 131102.	2.9	269
25	THE RATE OF BINARY BLACK HOLE MERGERS INFERRED FROM ADVANCED LIGO OBSERVATIONS SURROUNDING GW150914. <i>Astrophysical Journal Letters</i> , 2016, 833, L1.	3.0	230
26	Upper Limits on the Stochastic Gravitational-Wave Background from Advanced LIGO’s First Observing Run. <i>Physical Review Letters</i> , 2017, 118, 121101.	2.9	194
27	Optical Dilution and Feedback Cooling of a Gram-Scale Oscillator to 6.9 μ K. <i>Physical Review Letters</i> , 2007, 99, 160801.	2.9	193
28	Search for Post-merger Gravitational Waves from the Remnant of the Binary Neutron Star Merger GW170817. <i>Astrophysical Journal Letters</i> , 2017, 851, L16.	3.0	189
29	Estimating the Contribution of Dynamical Ejecta in the Kilonova Associated with GW170817. <i>Astrophysical Journal Letters</i> , 2017, 850, L39.	3.0	156
30	UPPER LIMITS ON THE RATES OF BINARY NEUTRON STAR AND NEUTRON STAR–BLACK HOLE MERGERS FROM ADVANCED LIGO’S FIRST OBSERVING RUN. <i>Astrophysical Journal Letters</i> , 2016, 832, L21.	3.0	146
31	A Gravitational-wave Measurement of the Hubble Constant Following the Second Observing Run of Advanced LIGO and Virgo. <i>Astrophysical Journal</i> , 2021, 909, 218.	1.6	144
32	Measurement of radiation-pressure-induced optomechanical dynamics in a suspended Fabry-Perot cavity. <i>Physical Review A</i> , 2006, 74, .	1.0	136
33	First Search for Gravitational Waves from Known Pulsars with Advanced LIGO. <i>Astrophysical Journal</i> , 2017, 839, 12.	1.6	131
34	GRAVITATIONAL WAVES FROM KNOWN PULSARS: RESULTS FROM THE INITIAL DETECTOR ERA. <i>Astrophysical Journal</i> , 2014, 785, 119.	1.6	125
35	Search for Substellar Mass Ultracompact Binaries in Advanced LIGO’s Second Observing Run. <i>Physical Review Letters</i> , 2019, 123, 161102.	2.9	119
36	FIRST SEARCH FOR GRAVITATIONAL WAVES FROM THE YOUNGEST KNOWN NEUTRON STAR. <i>Astrophysical Journal</i> , 2010, 722, 1504-1513.	1.6	104

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37	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.	1.6	104
38	Quantum correlations between light and the kilogram-mass mirrors of LIGO. <i>Nature</i> , 2020, 583, 43-47.	13.7	102
39	Effects of waveform model systematics on the interpretation of GW150914. <i>Classical and Quantum Gravity</i> , 2017, 34, 104002.	1.5	98
40	Search for Gravitational Waves from a Long-lived Remnant of the Binary Neutron Star Merger GW170817. <i>Astrophysical Journal</i> , 2019, 875, 160.	1.6	97
41	Directional Limits on Persistent Gravitational Waves Using LIGO S5 Science Data. <i>Physical Review Letters</i> , 2011, 107, 271102.	2.9	94
42	Squeezed-state source using radiation-pressure-induced rigidity. <i>Physical Review A</i> , 2006, 73, .	1.0	92
43	BEATING THE SPIN-DOWN LIMIT ON GRAVITATIONAL WAVE EMISSION FROM THE VELA PULSAR. <i>Astrophysical Journal</i> , 2011, 737, 93.	1.6	89
44	Standard Quantum Limit for Probing Mechanical Energy Quantization. <i>Physical Review Letters</i> , 2009, 103, 100402.	2.9	88
45	Searches for Gravitational Waves from Known Pulsars at Two Harmonics in 2015â€“2017 LIGO Data. <i>Astrophysical Journal</i> , 2019, 879, 10.	1.6	88
46	Improved Upper Limits on the Stochastic Gravitational-Wave Background from 2009â€“2010 LIGO and Virgo Data. <i>Physical Review Letters</i> , 2014, 113, 231101.	2.9	86
47	Search for Tensor, Vector, and Scalar Polarizations in the Stochastic Gravitational-Wave Background. <i>Physical Review Letters</i> , 2018, 120, 201102.	2.9	85
48	Directional Limits on Persistent Gravitational Waves from Advanced LIGOâ€™s First Observing Run. <i>Physical Review Letters</i> , 2017, 118, 121102.	2.9	84
49	Exploring the sensitivity of gravitational wave detectors to neutron star physics. <i>Physical Review D</i> , 2019, 99, .	1.6	78
50	Search for Subsolar-Mass Ultracompact Binaries in Advanced LIGOâ€™s First Observing Run. <i>Physical Review Letters</i> , 2018, 121, 231103.	2.9	77
51	The characterization of Virgo data and its impact on gravitational-wave searches. <i>Classical and Quantum Gravity</i> , 2012, 29, 155002.	1.5	73
52	On the Progenitor of Binary Neutron Star Merger GW170817. <i>Astrophysical Journal Letters</i> , 2017, 850, L40.	3.0	73
53	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.	1.6	72
54	Low-latency Gravitational-wave Alerts for Multimessenger Astronomy during the Second Advanced LIGO and Virgo Observing Run. <i>Astrophysical Journal</i> , 2019, 875, 161.	1.6	71

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55	The basic physics of the binary black hole merger GW150914. <i>Annalen Der Physik</i> , 2017, 529, 1600209.	0.9	69
56	Measurement of quantum back action in the audio band at room temperature. <i>Nature</i> , 2019, 568, 364-367.	13.7	69
57	Review: Quantum noise in gravitational-wave interferometers. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2004, 6, S675-S683.	1.4	68
58	Constraints on Cosmic Strings from the LIGO-Virgo Gravitational-Wave Detectors. <i>Physical Review Letters</i> , 2014, 112, 131101.	2.9	68
59	SEARCHES FOR CONTINUOUS GRAVITATIONAL WAVES FROM NINE YOUNG SUPERNOVA REMNANTS. <i>Astrophysical Journal</i> , 2015, 813, 39.	1.6	66
60	Gravitational-wave Constraints on the Equatorial Ellipticity of Millisecond Pulsars. <i>Astrophysical Journal Letters</i> , 2020, 902, L21.	3.0	65
61	SWIFT FOLLOW-UP OBSERVATIONS OF CANDIDATE GRAVITATIONAL-WAVE TRANSIENT EVENTS. <i>Astrophysical Journal, Supplement Series</i> , 2012, 203, 28.	3.0	62
62	Searches for Continuous Gravitational Waves from 15 Supernova Remnants and Fomalhaut b with Advanced LIGO. <i>Astrophysical Journal</i> , 2019, 875, 122.	1.6	61
63	FIRST SEARCHES FOR OPTICAL COUNTERPARTS TO GRAVITATIONAL-WAVE CANDIDATE EVENTS. <i>Astrophysical Journal, Supplement Series</i> , 2014, 211, 7.	3.0	57
64	SEARCH FOR GRAVITATIONAL WAVE BURSTS FROM SIX MAGNETARS. <i>Astrophysical Journal Letters</i> , 2011, 734, L35.	3.0	55
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> , 2017, 841, 89.	1.6	52
66	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.	1.6	46
67	Room-temperature optomechanical squeezing. <i>Nature Physics</i> , 2020, 16, 784-788.	6.5	45
68	SUPPLEMENT: LOCALIZATION AND BROADBAND FOLLOW-UP OF THE GRAVITATIONAL-WAVE TRANSIENT GW150914. (2016, <i>ApJL</i> , 826, L13). <i>Astrophysical Journal, Supplement Series</i> , 2016, 225, 8.	3.0	44
69	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.	1.5	42
70	Broadband reduction of quantum radiation pressure noise via squeezed light injection. <i>Nature Photonics</i> , 2020, 14, 19-23.	15.6	37
71	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.	1.5	34
72	Mathematical framework for simulation of quantum fields in complex interferometers using the two-photon formalism. <i>Physical Review A</i> , 2005, 72, .	1.0	31

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73	Route to ponderomotive entanglement of light via optically trapped mirrors. <i>New Journal of Physics</i> , 2008, 10, 095017.	1.2	30
74	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.	1.6	30
75	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.	1.6	29
76	Search for Transient Gravitational-wave Signals Associated with Magnetar Bursts during Advanced LIGO's Second Observing Run. <i>Astrophysical Journal</i> , 2019, 874, 163.	1.6	26
77	Radiation-pressure-mediated control of an optomechanical cavity. <i>Physical Review A</i> , 2018, 97, .	1.0	22
78	Stable Optical Trap from a Single Optical Field Utilizing Birefringence. <i>Physical Review Letters</i> , 2016, 117, 213604.	2.9	20
79	Search for Gravitational Waves Associated with Gamma-Ray Bursts Detected by Fermi and Swift during the LIGO's "Virgo Run O3a. <i>Astrophysical Journal</i> , 2021, 915, 86.	1.6	20
80	First joint observation by the underground gravitational-wave detector KAGRA with GEO 600. <i>Progress of Theoretical and Experimental Physics</i> , 2022, 2022, .	1.8	20
81	Suppression of quantum-radiation-pressure noise in an optical spring. <i>Physical Review A</i> , 2013, 88, .	1.0	15
82	Structural thermal noise in gram-scale mirror oscillators. <i>New Journal of Physics</i> , 2012, 14, 115008.	1.2	13
83	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.	1.6	12
84	Quantum Backaction Cancellation in the Audio Band. <i>Physical Review X</i> , 2020, 10, .	2.8	7
85	Optomechanical entanglement at room temperature: A simulation study with realistic conditions. <i>Physical Review A</i> , 2020, 102, .	1.0	5
86	Observation of an optical spring with a beam splitter. <i>Optics Letters</i> , 2018, 43, 2193.	1.7	4
87	Laser power stabilization via radiation pressure. <i>Optics Letters</i> , 2021, 46, 1946.	1.7	3
88	Passive laser power stabilization via an optical spring. <i>Optics Letters</i> , 2022, 47, 2746.	1.7	2
89	Numerical Evaluation of Ponderomotive Entanglement in Realistic Experimental Conditions. , 2020, , .		0