

Pep Covas

List of Publications by Year in descending order

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Version: 2024-02-01

79
papers

31,479
citations

30070

54
h-index

64796

79
g-index

80
all docs

80
docs citations

80
times ranked

13201
citing authors

#	ARTICLE	IF	CITATIONS
1	GW170817: Observation of Gravitational Waves from a Binary Neutron Star Inspiral. Physical Review Letters, 2017, 119, 161101.	7.8	6,413
2	Multi-messenger Observations of a Binary Neutron Star Merger [*] . Astrophysical Journal Letters, 2017, 848, L12.	8.3	2,805
3	Gravitational Waves and Gamma-Rays from a Binary Neutron Star Merger: GW170817 and GRB 170817A. Astrophysical Journal Letters, 2017, 848, L13.	8.3	2,314
4	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, .	8.9	2,022
5	GW170104: Observation of a 50-Solar-Mass Binary Black Hole Coalescence at Redshift 0.2. Physical Review Letters, 2017, 118, 221101.	7.8	1,987
6	GW170814: A Three-Detector Observation of Gravitational Waves from a Binary Black Hole Coalescence. Physical Review Letters, 2017, 119, 141101.	7.8	1,600
7	GW170817: Measurements of Neutron Star Radii and Equation of State. Physical Review Letters, 2018, 121, 161101.	7.8	1,473
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.	8.3	1,090
9	GW190425: Observation of a Compact Binary Coalescence with Total Mass $\hat{A}^{\sim} 3.4 M_{\odot}$. Astrophysical Journal Letters, 2020, 892, L3.	8.3	1,049
10	GW170608: Observation of a 19 Solar-mass Binary Black Hole Coalescence. Astrophysical Journal Letters, 2017, 851, L35.	8.3	968
11	GW190521: A Binary Black Hole Merger with a Total Mass of $150 M_{\odot}$. Physical Review Letters, 2020, 125, 101102.	7.8	856
12	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. Living Reviews in Relativity, 2018, 21, 3.	26.7	808
13	Properties of the Binary Neutron Star Merger GW170817. Physical Review X, 2019, 9, .	8.9	728
14	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.	8.3	566
15	Tests of general relativity with the binary black hole signals from the LIGO-Virgo catalog GWTC-1. Physical Review D, 2019, 100, .	4.7	470
16	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. Living Reviews in Relativity, 2020, 23, 3.	26.7	447
17	Properties and Astrophysical Implications of the $150 M_{\odot}$ Binary Black Hole Merger GW190521. Astrophysical Journal Letters, 2020, 900, L13.	8.3	406
18	GW190412: Observation of a binary-black-hole coalescence with asymmetric masses. Physical Review D, 2020, 102, .	4.7	394

#	ARTICLE	IF	CITATIONS
19	Tests of General Relativity with GW170817. <i>Physical Review Letters</i> , 2019, 123, 011102.	7.8	370
20	Quantum-Enhanced Advanced LIGO Detectors in the Era of Gravitational-Wave Astronomy. <i>Physical Review Letters</i> , 2019, 123, 231107.	7.8	359
21	Search for the isotropic stochastic background using data from Advanced LIGO's second observing run. <i>Physical Review D</i> , 2019, 100, .	4.7	200
22	Sensitivity and performance of the Advanced LIGO detectors in the third observing run. <i>Physical Review D</i> , 2020, 102, .	4.7	196
23	Upper Limits on the Stochastic Gravitational-Wave Background from Advanced LIGO's First Observing Run. <i>Physical Review Letters</i> , 2017, 118, 121101.	7.8	194
24	Search for Post-merger Gravitational Waves from the Remnant of the Binary Neutron Star Merger GW170817. <i>Astrophysical Journal Letters</i> , 2017, 851, L16.	8.3	189
25	A guide to LIGO's Virgo detector noise and extraction of transient gravitational-wave signals. <i>Classical and Quantum Gravity</i> , 2020, 37, 055002.	4.0	188
26	GW170817: Implications for the Stochastic Gravitational-Wave Background from Compact Binary Coalescences. <i>Physical Review Letters</i> , 2018, 120, 091101.	7.8	166
27	Estimating the Contribution of Dynamical Ejecta in the Kilonova Associated with GW170817. <i>Astrophysical Journal Letters</i> , 2017, 850, L39.	8.3	156
28	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.	4.5	144
29	First Search for Gravitational Waves from Known Pulsars with Advanced LIGO. <i>Astrophysical Journal</i> , 2017, 839, 12.	4.5	131
30	LIGO detector characterization in the second and third observing runs. <i>Classical and Quantum Gravity</i> , 2021, 38, 135014.	4.0	128
31	Search for Substellar Mass Ultracompact Binaries in Advanced LIGO's Second Observing Run. <i>Physical Review Letters</i> , 2019, 123, 161102.	7.8	119
32	Model comparison from LIGO's Virgo data on GW170817's binary components and consequences for the merger remnant. <i>Classical and Quantum Gravity</i> , 2020, 37, 045006.	4.0	109
33	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, .	4.7	104
34	All-sky search for continuous gravitational waves from isolated neutron stars using Advanced LIGO O2 data. <i>Physical Review D</i> , 2019, 100, .	4.7	102
35	Effects of waveform model systematics on the interpretation of GW150914. <i>Classical and Quantum Gravity</i> , 2017, 34, 104002.	4.0	98
36	Search for Gravitational Waves from a Long-lived Remnant of the Binary Neutron Star Merger GW170817. <i>Astrophysical Journal</i> , 2019, 875, 160.	4.5	97

#	ARTICLE	IF	CITATIONS
37	Constraints on cosmic strings using data from the first Advanced LIGO observing run. <i>Physical Review D</i> , 2018, 97, .	4.7	88
38	Searches for Gravitational Waves from Known Pulsars at Two Harmonics in 2015â€“2017 LIGO Data. <i>Astrophysical Journal</i> , 2019, 879, 10.	4.5	88
39	Search for Tensor, Vector, and Scalar Polarizations in the Stochastic Gravitational-Wave Background. <i>Physical Review Letters</i> , 2018, 120, 201102.	7.8	85
40	Directional Limits on Persistent Gravitational Waves from Advanced LIGOâ€™s First Observing Run. <i>Physical Review Letters</i> , 2017, 118, 121102.	7.8	84
41	Search for Substellar-Mass Ultracompact Binaries in Advanced LIGOâ€™s First Observing Run. <i>Physical Review Letters</i> , 2018, 121, 231103.	7.8	77
42	Improving astrophysical parameter estimation via offline noise subtraction for Advanced LIGO. <i>Physical Review D</i> , 2019, 99, .	4.7	77
43	Search for intermediate mass black hole binaries in the first observing run of Advanced LIGO. <i>Physical Review D</i> , 2017, 96, .	4.7	73
44	On the Progenitor of Binary Neutron Star Merger GW170817. <i>Astrophysical Journal Letters</i> , 2017, 850, L40.	8.3	73
45	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.	4.5	72
46	Low-latency Gravitational-wave Alerts for Multimessenger Astronomy during the Second Advanced LIGO and Virgo Observing Run. <i>Astrophysical Journal</i> , 2019, 875, 161.	4.5	71
47	All-sky search for short gravitational-wave bursts in the first Advanced LIGO run. <i>Physical Review D</i> , 2017, 95, .	4.7	69
48	Optically targeted search for gravitational waves emitted by core-collapse supernovae during the first and second observing runs of advanced LIGO and advanced Virgo. <i>Physical Review D</i> , 2020, 101, .	4.7	69
49	First Search for Nontensorial Gravitational Waves from Known Pulsars. <i>Physical Review Letters</i> , 2018, 120, 031104.	7.8	68
50	All-sky search for periodic gravitational waves in the O1 LIGO data. <i>Physical Review D</i> , 2017, 96, .	4.7	64
51	Searches for Continuous Gravitational Waves from 15 Supernova Remnants and Fomalhaut b with Advanced LIGO[*]. <i>Astrophysical Journal</i> , 2019, 875, 122.	4.5	61
52	First low-frequency Einstein@Home all-sky search for continuous gravitational waves in Advanced LIGO data. <i>Physical Review D</i> , 2017, 96, .	4.7	60
53	Narrow-band search for gravitational waves from known pulsars using the second LIGO observing run. <i>Physical Review D</i> , 2019, 99, .	4.7	60
54	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> , 2017, 95, .	4.7	59

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55	Approaching the motional ground state of a 10-kg object. <i>Science</i> , 2021, 372, 1333-1336.	12.6	59
56	All-sky search for short gravitational-wave bursts in the second Advanced LIGO and Advanced Virgo run. <i>Physical Review D</i> , 2019, 100, .	4.7	54
57	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.	4.5	52
58	Search for intermediate mass black hole binaries in the first and second observing runs of the Advanced LIGO and Virgo network. <i>Physical Review D</i> , 2019, 100, .	4.7	52
59	Directional limits on persistent gravitational waves using data from Advanced LIGO's first two observing runs. <i>Physical Review D</i> , 2019, 100, .	4.7	52
60	First narrow-band search for continuous gravitational waves from known pulsars in advanced detector data. <i>Physical Review D</i> , 2017, 96, .	4.7	47
61	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.	4.5	46
62	Full band all-sky search for periodic gravitational waves in the O1 LIGO data. <i>Physical Review D</i> , 2018, 97, .	4.7	46
63	Search for gravitational waves from Scorpius X-1 in the second Advanced LIGO observing run with an improved hidden Markov model. <i>Physical Review D</i> , 2019, 100, .	4.7	46
64	Environmental noise in advanced LIGO detectors. <i>Classical and Quantum Gravity</i> , 2021, 38, 145001.	4.0	38
65	Constraining the $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \langle \text{mml:mi} \rangle \text{p} \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle -\text{Mode} \langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \langle \text{mml:mi} \rangle \text{g} \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle -\text{Mode}$ Tidal Instability with GW170817. <i>Physical Review Letters</i> , 2019, 122, 061104.	7.8	36
66	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.	4.5	29
67	Search for Transient Gravitational-wave Signals Associated with Magnetar Bursts during Advanced LIGO's Second Observing Run. <i>Astrophysical Journal</i> , 2019, 874, 163.	4.5	26
68	First All-Sky Search for Continuous Gravitational-Wave Signals from Unknown Neutron Stars in Binary Systems Using Advanced LIGO Data. <i>Physical Review Letters</i> , 2020, 124, 191102.	7.8	26
69	All-sky search for long-duration gravitational-wave transients in the second Advanced LIGO observing run. <i>Physical Review D</i> , 2019, 99, .	4.7	22
70	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.	4.5	20
71	LIGO's quantum response to squeezed states. <i>Physical Review D</i> , 2021, 104, .	4.7	19
72	All-sky search for long-duration gravitational wave transients in the first Advanced LIGO observing run. <i>Classical and Quantum Gravity</i> , 2018, 35, 065009.	4.0	18

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73	Constraints on r-modes and Mountains on Millisecond Neutron Stars in Binary Systems. <i>Astrophysical Journal Letters</i> , 2022, 929, L19.	8.3	18
74	New method to search for continuous gravitational waves from unknown neutron stars in binary systems. <i>Physical Review D</i> , 2019, 99, .	4.7	15
75	Improving the robustness of the advanced LIGO detectors to earthquakes. <i>Classical and Quantum Gravity</i> , 2020, 37, 235007.	4.0	11
76	Effects of proper motion of neutron stars on continuous gravitational-wave searches. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 500, 5167-5176.	4.4	7
77	Improved short-segment detection statistic for continuous gravitational waves. <i>Physical Review D</i> , 2022, 105, .	4.7	5
78	Point Absorber Limits to Future Gravitational-Wave Detectors. <i>Physical Review Letters</i> , 2021, 127, 241102.	7.8	3
79	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. , 2018, 21, 1.		2