Aaron Zimmerman

List of Publications by Year
in descending order

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41 papers	7,483 citations	186265 28 h-index	289244 40 g-index
41 all docs	41 docs citations	41 times ranked	4497 citing authors

#	Article	IF	Citations
1	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
2	GW190425: Observation of a Compact Binary Coalescence with Total MassÂâˆ¼Â3.4 M_{âŠ™}. Astrophysical Journal Letters, 2020, 892, L3.	8.3	1,049
3	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><mml:mi></mml:mi><mml:mrow><mml:mo stretchy="false">âŠ™</mml:mo></mml:mrow></mml:msub></mml:mrow></mml:math>. Physical Review Letters, 2020, 125, 101102.	7.8	838
4	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
5	Population Properties of Compact Objects from the Second LIGOâ€“Virgo Gravitational-Wave Transient Catalog. Astrophysical Journal Letters, 2021, 913, L7.	8.3	514
6	Observation of Gravitational Waves from Two Neutron Starâ€“Black Hole Coalescences. Astrophysical Journal Letters, 2021, 915, L5.	8.3	453
7	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
8	Properties and Astrophysical Implications of the 150 M_{âŠ™} Binary Black Hole Merger GW190521. Astrophysical Journal Letters, 2020, 900, L13.	8.3	406
9	Open data from the first and second observing runs of Advanced LIGO and Advanced Virgo. SoftwareX, 2021, 13, 100658.	2.6	275
10	The SXS collaboration catalog of binary black hole simulations. Classical and Quantum Gravity, 2019, 36, 195006.	4.0	217
11	A recipe for echoes from exotic compact objects. Physical Review D, 2017, 96, .	4.7	145
12	A Gravitational-wave Measurement of the Hubble Constant Following the Second Observing Run of Advanced LIGO and Virgo. Astrophysical Journal, 2021, 909, 218.	4.5	144
13	Quasinormal-mode spectrum of Kerr black holes and its geometric interpretation. Physical Review D, 2012, 86, .	4.7	137
14	Search for Subsolar Mass Ultracompact Binaries in Advanced LIGOâ€™s Second Observing Run. Physical Review Letters, 2019, 123, 161102.	7.8	119
15	Measuring the neutron star tidal deformability with equation-of-state-independent relations and gravitational waves. Physical Review D, 2018, 97, .	4.7	99
16	Quasinormal modes of nearly extremal Kerr spacetimes: Spectrum bifurcation and power-law ringdown. Physical Review D, 2013, 88, .	4.7	92
17	Gravitational-wave astrophysics with effective-spin measurements: Asymmetries and selection biases. Physical Review D, 2018, 98, .	4.7	81
18	Mitigation of the instrumental noise transient in gravitational-wave data surrounding GW170817. Physical Review D, 2018, 98, .	4.7	75

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19	Low-latency Gravitational-wave Alerts for Multimessenger Astronomy during the Second Advanced LIGO and Virgo Observing Run. Astrophysical Journal, 2019, 875, 161.	4.5	71
20	Frame-Dragging Vortexes and Tidal Tendexes Attached to Colliding Black Holes: Visualizing the Curvature of Spacetime. Physical Review Letters, 2011, 106, 151101.	7.8	66
21	Branching of quasinormal modes for nearly extremal Kerr black holes. Physical Review D, 2013, 87, .	4.7	66
22	Impact of Bayesian Priors on the Characterization of Binary Black Hole Coalescences. Physical Review Letters, 2017, 119, 251103.	7.8	66
23	Visualizing spacetime curvature via frame-drag vortexes and tidal tendexes: General theory and weak-gravity applications. Physical Review D, 2011, 84, .	4.7	64
24	Turbulent Black Holes. Physical Review Letters, 2015, 114, 081101.	7.8	56
25	Quasinormal modes of weakly charged Kerr-Newman spacetimes. Physical Review D, 2015, 91, .	4.7	43
26	Transient instability of rapidly rotating black holes. Physical Review D, 2016, 94, .	4.7	32
27	Visualizing spacetime curvature via frame-drag vortexes and tidal tendexes. III. Quasinormal pulsations of Schwarzschild and Kerr black holes. Physical Review D, 2012, 86, .	4.7	29
28	Probing the nature of black holes: Deep in the mHz gravitational-wave sky. Experimental Astronomy, 2021, 51, 1385-1416.	3.7	29
29	Redshift Factor and the First Law of Binary Black Hole Mechanics in Numerical Simulations. Physical Review Letters, 2016, 117, 191101.	7.8	26
30	Visualizing spacetime curvature via frame-drag vortexes and tidal tendexes. II. Stationary black holes. Physical Review D, 2012, 86, .	4.7	25
31	On combining information from multiple gravitational wave sources. Physical Review D, 2019, 99, .	4.7	25
32	The effect of mission duration on LISA science objectives. General Relativity and Gravitation, 2022, 54, 3.	2.0	24
33	Fundamental frequencies and resonances from eccentric and precessing binary black hole inspirals. Classical and Quantum Gravity, 2017, 34, 124001.	4.0	22
34	First joint observation by the underground gravitational-wave detector KAGRA with GEO 600. Progress of Theoretical and Experimental Physics, 2022, 2022, .	6.6	20
35	Source properties of the lowest signal-to-noise-ratio binary black hole detections. Physical Review D, 2020, 102, .	4.7	18
36	Scalar Green function of the Kerr spacetime. Physical Review D, 2014, 89, .	4.7	17

#	Article	IF	Citations
37	Classifying the isolated zeros of asymptotic gravitational radiation by tendex and vortex lines. Physical Review D, 2011, 84, .	4.7	16
38	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.	4.5	12
39	Gravitational wave timing array. Physical Review D, 2022, 105, .	4.7	9
40	Reanalysis of LIGO black-hole coalescences with alternative prior assumptions. Proceedings of the International Astronomical Union, 2017, 13, 22-28.	0.0	2
41	Development and testing of novel stripixel detectors for the silicon vertex tracker at PHENIX. European Physical Journal D, 2005, 55, 1645-1648.	0.4	0