

Mateusz Bawaj

List of Publications by Year in descending order

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110
papers

34,320
citations

22153

59
h-index

26613

107
g-index

113
all docs

113
docs citations

113
times ranked

13523
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	GWTC-2: Compact Binary Coalescences Observed by LIGO and Virgo during the First Half of the Third Observing Run. Physical Review X, 2021, 11, .	8.9	1,097
9	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
10	GW190425: Observation of a Compact Binary Coalescence with Total Mass $\hat{A}^{\hat{A}} \hat{A}^{\hat{A}} 3.4 \text{ M}_{\text{Sun}}$. Astrophysical Journal Letters, 2020, 892, L3.	8.3	1,049
11	GW170608: Observation of a 19 Solar-mass Binary Black Hole Coalescence. Astrophysical Journal Letters, 2017, 851, L35.	8.3	968
12	GW190521: A Binary Black Hole Merger with a Total Mass of $150 \text{ M}_{\text{Sun}}$. Physical Review Letters, 2020, 125, 101102.	8.3	836
13	Properties of the Binary Neutron Star Merger GW170817. Physical Review X, 2019, 9, .	8.9	728
14	A gravitational-wave standard siren measurement of the Hubble constant. Nature, 2017, 551, 85-88.	27.8	674
15	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
16	Population Properties of Compact Objects from the Second LIGO-Virgo Gravitational-Wave Transient Catalog. Astrophysical Journal Letters, 2021, 913, L7.	8.3	514
17	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
18	Observation of Gravitational Waves from Two Neutron Star-Black Hole Coalescences. Astrophysical Journal Letters, 2021, 915, L5.	8.3	453

#	ARTICLE	IF	CITATIONS
19	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. <i>Living Reviews in Relativity</i> , 2020, 23, 3.	26.7	447
20	Properties and Astrophysical Implications of the 150 M_{\odot} Binary Black Hole Merger GW190521. <i>Astrophysical Journal Letters</i> , 2020, 900, L13.	8.3	406
21	GW190412: Observation of a binary-black-hole coalescence with asymmetric masses. <i>Physical Review D</i> , 2020, 102, .	4.7	394
22	Tests of General Relativity with GW170817. <i>Physical Review Letters</i> , 2019, 123, 011102.	7.8	370
23	Tests of general relativity with binary black holes from the second LIGO-Virgo gravitational-wave transient catalog. <i>Physical Review D</i> , 2021, 103, .	4.7	338
24	Increasing the Astrophysical Reach of the Advanced Virgo Detector via the Application of Squeezed Vacuum States of Light. <i>Physical Review Letters</i> , 2019, 123, 231108.	7.8	254
25	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
26	Optomechanically induced transparency in a membrane-in-the-middle setup at room temperature. <i>Physical Review A</i> , 2013, 88, .	2.5	194
27	Upper limits on the isotropic gravitational-wave background from Advanced LIGO and Advanced Virgo's third observing run. <i>Physical Review D</i> , 2021, 104, .	4.7	192
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.	8.3	189
29	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
30	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.	8.3	179
31	GW170817: Implications for the Stochastic Gravitational-Wave Background from Compact Binary Coalescences. <i>Physical Review Letters</i> , 2018, 120, 091101.	7.8	166
32	Estimating the Contribution of Dynamical Ejecta in the Kilonova Associated with GW170817. <i>Astrophysical Journal Letters</i> , 2017, 850, L39.	8.3	156
33	A Standard Siren Measurement of the Hubble Constant from GW170817 without the Electromagnetic Counterpart. <i>Astrophysical Journal Letters</i> , 2019, 871, L13.	8.3	145
34	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
35	Search for High-energy Neutrinos from Binary Neutron Star Merger GW170817 with ANTARES, IceCube, and the Pierre Auger Observatory. <i>Astrophysical Journal Letters</i> , 2017, 850, L35.	8.3	135
36	Search for Substellar Mass Ultracompact Binaries in Advanced LIGO's Second Observing Run. <i>Physical Review Letters</i> , 2019, 123, 161102.	7.8	119

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37	Probing deformed commutators with macroscopic harmonic oscillators. <i>Nature Communications</i> , 2015, 6, 7503.	12.8	116
38	Model comparison from LIGOâ€“Virgo data on GW170817â€™s binary components and consequences for the merger remnant. <i>Classical and Quantum Gravity</i> , 2020, 37, 045006.	4.0	109
39	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
40	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
41	Constraints on cosmic strings using data from the first Advanced LIGO observing run. <i>Physical Review D</i> , 2018, 97, .	4.7	88
42	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
43	Constraints on Cosmic Strings Using Data from the Third Advanced LIGOâ€“Virgo Observing Run. <i>Physical Review Letters</i> , 2021, 126, 241102.	7.8	87
44	Search for Tensor, Vector, and Scalar Polarizations in the Stochastic Gravitational-Wave Background. <i>Physical Review Letters</i> , 2018, 120, 201102.	7.8	85
45	Search for Substellar-Mass Ultracompact Binaries in Advanced LIGOâ€™s First Observing Run. <i>Physical Review Letters</i> , 2018, 121, 231103.	7.8	77
46	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
47	On the Progenitor of Binary Neutron Star Merger GW170817. <i>Astrophysical Journal Letters</i> , 2017, 850, L40.	8.3	73
48	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
49	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
50	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
51	First Search for Nontensorial Gravitational Waves from Known Pulsars. <i>Physical Review Letters</i> , 2018, 120, 031104.	7.8	68
52	Gravitational-wave Constraints on the Equatorial Ellipticity of Millisecond Pulsars. <i>Astrophysical Journal Letters</i> , 2020, 902, L21.	8.3	65
53	All-sky search for periodic gravitational waves in the O1 LIGO data. <i>Physical Review D</i> , 2017, 96, .	4.7	64
54	Two-membrane cavity optomechanics. <i>New Journal of Physics</i> , 2018, 20, 083024.	2.9	63

#	ARTICLE	IF	CITATIONS
55	Search for anisotropic gravitational-wave backgrounds using data from Advanced LIGO and Advanced Virgo's first three observing runs. <i>Physical Review D</i> , 2021, 104, .	4.7	62
56	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
57	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
58	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
59	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
60	Search for Lensing Signatures in the Gravitational-Wave Observations from the First Half of LIGO's Virgo's Third Observing Run. <i>Astrophysical Journal</i> , 2021, 923, 14.	4.5	59
61	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
62	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
63	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
64	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
65	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
66	Full band all-sky search for periodic gravitational waves in the O1 LIGO data. <i>Physical Review D</i> , 2018, 97, .	4.7	46
67	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
68	All-sky search in early O3 LIGO data for continuous gravitational-wave signals from unknown neutron stars in binary systems. <i>Physical Review D</i> , 2021, 103, .	4.7	43
69	All-sky search for continuous gravitational waves from isolated neutron stars in the early O3 LIGO data. <i>Physical Review D</i> , 2021, 104, .	4.7	42
70	Microfabrication of large-area circular high-stress silicon nitride membranes for optomechanical applications. <i>AIP Advances</i> , 2016, 6, 065004.	1.3	41
71	Calibration of advanced Virgo and reconstruction of the gravitational wave signal $h(t)$ ($h(t)$) Tj ETQq1 1 0.784314 rgBT /Overdo	4.0	41
72	All-sky search for gravitational wave emission from scalar boson clouds around spinning black holes in LIGO O3 data. <i>Physical Review D</i> , 2022, 105, .	4.7	40

#	ARTICLE	IF	CITATIONS
73	Searches for Continuous Gravitational Waves from Young Supernova Remnants in the Early Third Observing Run of Advanced LIGO and Virgo. <i>Astrophysical Journal</i> , 2021, 921, 80.	4.5	39
74	Constraining the $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \langle \text{mml:mi} \rangle \text{p} \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle -\text{Mode} \hat{\epsilon} \langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \langle \text{mml:mi} \rangle \text{g} \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle -\text{Mode}$ Tidal Instability with GW170817. <i>Physical Review Letters</i> , 2019, 122, 061104.	7.8	36
75	Quantum Backaction on Kg-Scale Mirrors: Observation of Radiation Pressure Noise in the Advanced Virgo Detector. <i>Physical Review Letters</i> , 2020, 125, 131101.	7.8	35
76	All-sky search for short gravitational-wave bursts in the third Advanced LIGO and Advanced Virgo run. <i>Physical Review D</i> , 2021, 104, .	4.7	33
77	Narrowband Searches for Continuous and Long-duration Transient Gravitational Waves from Known Pulsars in the LIGO-Virgo Third Observing Run. <i>Astrophysical Journal</i> , 2022, 932, 133.	4.5	33
78	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.	4.5	32
79	Diving below the Spin-down Limit: Constraints on Gravitational Waves from the Energetic Young Pulsar PSR J0537-6910. <i>Astrophysical Journal Letters</i> , 2021, 913, L27.	8.3	32
80	Search for intermediate-mass black hole binaries in the third observing run of Advanced LIGO and Advanced Virgo. <i>Astronomy and Astrophysics</i> , 2022, 659, A84.	5.1	32
81	Search for continuous gravitational waves from 20 accreting millisecond x-ray pulsars in O3 LIGO data. <i>Physical Review D</i> , 2022, 105, .	4.7	31
82	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.	4.5	30
83	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
84	Constraints from LIGO O3 Data on Gravitational-wave Emission Due to R-modes in the Glitching Pulsar PSR J0537-6910. <i>Astrophysical Journal</i> , 2021, 922, 71.	4.5	29
85	Constraints on dark photon dark matter using data from LIGO's and Virgo's third observing run. <i>Physical Review D</i> , 2022, 105, .	4.7	27
86	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
87	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
88	Search of the early O3 LIGO data for continuous gravitational waves from the Cassiopeia A and Vela Jr. supernova remnants. <i>Physical Review D</i> , 2022, 105, .	4.7	21
89	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
90	Calibration of advanced Virgo and reconstruction of the detector strain $h(t)$ during the observing run O3. <i>Classical and Quantum Gravity</i> , 2022, 39, 045006.	4.0	20

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91	First joint observation by the underground gravitational-wave detector KAGRA with GEO 600. Progress of Theoretical and Experimental Physics, 2022, 2022, .	6.6	20
92	All-sky search for long-duration gravitational-wave bursts in the third Advanced LIGO and Advanced Virgo run. Physical Review D, 2021, 104, .	4.7	19
93	All-sky, all-frequency directional search for persistent gravitational waves from Advanced LIGO™s and Advanced Virgo™s first three observing runs. Physical Review D, 2022, 105, .	4.7	18
94	Search for Gravitational Waves Associated with Gamma-Ray Bursts Detected by Fermi and Swift during the LIGO™Virgo Run O3b. Astrophysical Journal, 2022, 928, 186.	4.5	15
95	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
96	Status of Advanced Virgo. EPJ Web of Conferences, 2018, 182, 02003.	0.3	9
97	The advanced Virgo longitudinal control system for the O2 observing run. Astroparticle Physics, 2020, 116, 102386.	4.3	9
98	Advanced Virgo Status. Journal of Physics: Conference Series, 2020, 1342, 012010.	0.4	9
99	Status of the Advanced Virgo gravitational wave detector. International Journal of Modern Physics A, 2017, 32, 1744003.	1.5	6
100	Multimode Cavity Optomechanics. Proceedings (mdpi), 2019, 12, 54.	0.2	3
101	Automated source of squeezed vacuum states driven by finite state machine based software. Review of Scientific Instruments, 2021, 92, 054504.	1.3	3
102	Towards ponderomotive squeezing with SIPS experiment. Physica Scripta, 2021, 96, 114007.	2.5	3
103	Status of the Advanced Virgo Gravitational Wave Detector. , 2018, , .		1
104	Quantum fluctuations have been shown to affect macroscopic objects. Nature, 2020, 583, 31-32.	27.8	1
105	Multi Order Coverage data structure to plan multi-messenger observations. Astronomy and Computing, 2022, 39, 100547.	1.7	1
106	Sandwich in the Middle: Enhancing the Optomechanical Coupling. , 2019, , .		0
107	Study and experiment on the alternative technique of frequency-dependent squeezing generation with EPR entanglement for Virgo. Journal of Physics: Conference Series, 2020, 1468, 012215.	0.4	0
108	Frequency-dependent squeezing generation with EPR entanglement. Journal of Physics: Conference Series, 2020, 1548, 012013.	0.4	0

#	ARTICLE	IF	CITATIONS
109	Probing deformed commutators with micro- and nano-oscillators. , 2017, , .		0
110	Two-membrane cavity optomechanics. , 2019, , .		0