Bala R Iyer

List of Publications by Year
in descending order

144 papers	37,118 citations	12303 69 h-index	8138 148 g-index
158 all docs	158 docs citations	158 times ranked	15492 citing authors

#	Article	IF	Citations
1	First joint observation by the underground gravitational-wave detector KAGRA with GEO 600. Progress of Theoretical and Experimental Physics, 2022, 2022, .	1.8	20
2	A Gravitational-wave Measurement of the Hubble Constant Following the Second Observing Run of Advanced LIGO and Virgo. Astrophysical Journal, 2021, 909, 218.	1.6	144
3	Gravitational-wave physics and astronomy in the 2020s and 2030s. Nature Reviews Physics, 2021, 3, 344-366.	11.9	96
4	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. Living Reviews in Relativity, 2020, 23, 3.	8.2	447
5	Gravitational-wave amplitudes for compact binaries in eccentric orbits at the third post-Newtonian order: Tail contributions and postadiabatic corrections. Physical Review D, 2019, 100, .	1.6	21
6	Gravitational-wave amplitudes for compact binaries in eccentric orbits at the third post-Newtonian order: Memory contributions. Physical Review D, 2019, 100, .	1.6	19
7	Search for Multimessenger Sources of Gravitational Waves and High-energy Neutrinos with Advanced LIGO during Its First Observing Run, ANTARES, and IceCube. Astrophysical Journal, 2019, 870, 134.	1.6	32
8	A Fermi Gamma-Ray Burst Monitor Search for Electromagnetic Signals Coincident with Gravitational-wave Candidates in Advanced LIGO's First Observing Run. Astrophysical Journal, 2019, 871, 90.	1.6	30
9	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. Living Reviews in Relativity, 2018, 21, 3.	8.2	808
10	Search for Subsolar-Mass Ultracompact Binaries in Advanced LIGOâ€™s First Observing Run. Physical Review Letters, 2018, 121, 231103.	2.9	77
11	GW170817: Measurements of Neutron Star Radii and Equation of State. Physical Review Letters, 2018, 121, 161101.	2.9	1,473
12	Search for Tensor, Vector, and Scalar Polarizations in the Stochastic Gravitational-Wave Background. Physical Review Letters, 2018, 120, 201102.	2.9	85
13	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. , 2018, 21, 1.		2
14	Effects of waveform model systematics on the interpretation of GW150914. Classical and Quantum Gravity, 2017, 34, 104002.	1.5	98
15	Upper Limits on the Stochastic Gravitational-Wave Background from Advanced LIGOâ€™s First Observing Run. Physical Review Letters, 2017, 118, 121101.	2.9	194
16	Directional Limits on Persistent Gravitational Waves from Advanced LIGOâ€™s First Observing Run. Physical Review Letters, 2017, 118, 121102.	2.9	84
17	First Search for Gravitational Waves from Known Pulsars with Advanced LIGO. Astrophysical Journal, 2017, 839, 12.	1.6	131
18	The basic physics of the binary black hole merger GW150914. Annalen Der Physik, 2017, 529, 1600209.	0.9	69

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19	GW170814: A Three-Detector Observation of Gravitational Waves from a Binary Black Hole Coalescence. Physical Review Letters, 2017, 119, 141101.	2.9	1,600
20	Upper Limits on Gravitational Waves from Scorpius X-1 from a Model-based Cross-correlation Search in Advanced LIGO Data. Astrophysical Journal, 2017, 847, 47.	1.6	46
21	A gravitational-wave standard siren measurement of the Hubble constant. Nature, 2017, 551, 85-88.	13.7	674
22	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
23	Search for Gravitational Waves Associated with Gamma-Ray Bursts during the First Advanced LIGO Observing Run and Implications for the Origin of GRB 150906B. Astrophysical Journal, 2017, 841, 89.	1.6	52
24	Search for Post-merger Gravitational Waves from the Remnant of the Binary Neutron Star Merger GW170817. Astrophysical Journal Letters, 2017, 851, L16.	3.0	189
25	Estimating the Contribution of Dynamical Ejecta in the Kilonova Associated withÂGW170817. Astrophysical Journal Letters, 2017, 850, L39.	3.0	156
26	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
27	On the Progenitor of Binary Neutron Star Merger GW170817. Astrophysical Journal Letters, 2017, 850, L40.	3.0	73
28	GW170608: Observation of a 19 Solar-mass Binary Black Hole Coalescence. Astrophysical Journal Letters, 2017, 851, L35.	3.0	968
29	Characterization of transient noise in Advanced LIGO relevant to gravitational wave signal GW150914. Classical and Quantum Gravity, 2016, 33, 134001.	1.5	225
30	Prospects for Observing and Localizing Gravitational-Wave Transients with Advanced LIGO and Advanced Virgo. Living Reviews in Relativity, 2016, 19, 1.	8.2	427
31	THE RATE OF BINARY BLACK HOLE MERGERS INFERRED FROM ADVANCED LIGO OBSERVATIONS SURROUNDING GW150914. Astrophysical Journal Letters, 2016, 833, L1.	3.0	230
32	GW150914: Implications for the Stochastic Gravitational-Wave Background from Binary Black Holes. Physical Review Letters, 2016, 116, 131102.	2.9	269
33	GW150914: The Advanced LIGO Detectors in the Era of First Discoveries. Physical Review Letters, 2016, 116, 131103.	2.9	466
34	SUPPLEMENT: â€œLOCALIZATION AND BROADBAND FOLLOW-UP OF THE GRAVITATIONAL-WAVE TRANSIENT GW150914â€•(2016, ApJL, 826, L13). Astrophysical Journal, Supplement Series, 2016, 225, 8.	3.0	44
35	Tests of General Relativity with GW150914. Physical Review Letters, 2016, 116, 221101.	2.9	1,224
36	Properties of the Binary Black Hole Merger GW150914. Physical Review Letters, 2016, 116, 241102.	2.9	673

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37	GW151226: Observation of Gravitational Waves from a 22-Solar-Mass Binary Black Hole Coalescence. Physical Review Letters, 2016, 116, 241103.	2.9	2,701
38	ASTROPHYSICAL IMPLICATIONS OF THE BINARY BLACK HOLE MERGER GW150914. Astrophysical Journal Letters, 2016, 818, L22.	3.0	633
39	Observation of Gravitational Waves from a Binary Black Hole Merger. Physical Review Letters, 2016, 116, 061102.	2.9	8,753
40	Prospects for Observing and Localizing Gravitational-Wave Transients with Advanced LIGO and Advanced Virgo. , 2016, 19, 1.		1
41	Third post-Newtonian gravitational waveforms for compact binary systems in general orbits: Instantaneous terms. Physical Review D, 2015, 91, .	1.6	39
42	Non-linear multipole interactions and gravitational-wave octupole modes for inspiralling compact binaries to third-and-a-half post-Newtonian order. Classical and Quantum Gravity, 2015, 32, 045016.	1.5	50
43	Characterization of the LIGO detectors during their sixth science run. Classical and Quantum Gravity, 2015, 32, 115012.	1.5	1,029
44	SEARCHES FOR CONTINUOUS GRAVITATIONAL WAVES FROM NINE YOUNG SUPERNOVA REMNANTS. Astrophysical Journal, 2015, 813, 39.	1.6	66
45	Advances in Classical General Relativity. Current Science, 2015, 109, 2230.	0.4	0
46	FIRST SEARCHES FOR OPTICAL COUNTERPARTS TO GRAVITATIONAL-WAVE CANDIDATE EVENTS. Astrophysical Journal, Supplement Series, 2014, 211, 7.	3.0	57
47	First all-sky search for continuous gravitational waves from unknown sources in binary systems. Physical Review D, 2014, 90, .	1.6	60
48	Constraints on Cosmic Strings from the LIGO-Virgo Gravitational-Wave Detectors. Physical Review Letters, 2014, 112, 131101.	2.9	68
49	Improved Upper Limits on the Stochastic Gravitational-Wave Background from 2009â€“2010 LIGO and Virgo Data. Physical Review Letters, 2014, 113, 231101.	2.9	86
50	Implementation of an $mathcal{F}$-statistic all-sky search for continuous gravitational waves in Virgo VSR1 data. Classical and Quantum Gravity, 2014, 31, 165014.	1.5	34
51	GRAVITATIONAL WAVES FROM KNOWN PULSARS: RESULTS FROM THE INITIAL DETECTOR ERA. Astrophysical Journal, 2014, 785, 119.	1.6	125
52	Application of a Hough search for continuous gravitational waves on data from the fifth LIGO science run. Classical and Quantum Gravity, 2014, 31, 085014.	1.5	21
53	The NINJA-2 project: detecting and characterizing gravitational waveforms modelled using numerical binary black hole simulations. Classical and Quantum Gravity, 2014, 31, 115004.	1.5	42
54	Search for gravitational wave ringdowns from perturbed intermediate mass black holes in LIGO-Virgo data from 2005â€“2010. Physical Review D, 2014, 89, .	1.6	28

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55	Search for Gravitational Waves Associated with<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î³</mml:mi></mml:math>-ray Bursts Detected by the Interplanetary Network. Physical Review Letters, 2014, 113, 011102.	2.9	32
56	Search for gravitational radiation from intermediate mass black hole binaries in data from the second LIGO-Virgo joint science run. Physical Review D, 2014, 89, .	1.6	35
57	Methods and results of a search for gravitational waves associated with gamma-ray bursts using the GEO 600, LIGO, and Virgo detectors. Physical Review D, 2014, 89, .	1.6	29
58	2.5PN Kick from Black-Hole Binaries in Circular Orbit: Nonspinning Case. Springer Proceedings in Physics, 2014, , 169-175.	0.1	2
59	Search for long-lived gravitational-wave transients coincident with long gamma-ray bursts. Physical Review D, 2013, 88, .	1.6	31
60	Enhanced sensitivity of the LIGO gravitational wave detector by using squeezed states of light. Nature Photonics, 2013, 7, 613-619.	15.6	825
61	Comparison of post-Newtonian templates for extreme mass ratio inspirals. Physical Review D, 2013, 88, .	1.6	9
62	Directed search for continuous gravitational waves from the Galactic center. Physical Review D, 2013, 88, .	1.6	65
63	The third and a half-post-Newtonian gravitational wave quadrupole mode for quasi-circular inspiralling compact binaries. Classical and Quantum Gravity, 2012, 29, 175004.	1.5	86
64	2.5PN linear momentum flux from inspiralling compact binaries in quasicircular orbits and associated recoil: Nonspinning case. Physical Review D, 2012, 85, .	1.6	7
65	Scientific objectives of Einstein Telescope. Classical and Quantum Gravity, 2012, 29, 124013.	1.5	355
66	Gravitational waves from binary black holes. Pramana - Journal of Physics, 2011, 77, 119-133.	0.9	1
67	GRAVITATIONAL WAVEFORMS FOR BINARY BLACK HOLES. International Journal of Modern Physics D, 2011, 20, 2081-2086.	0.9	1
68	AIGO: a southern hemisphere detector for the worldwide array of ground-based interferometric gravitational wave detectors. Classical and Quantum Gravity, 2010, 27, 084005.	1.5	20
69	Head-on infall of two compact objects: Third post-Newtonian energy flux. Physical Review D, 2010, 82, .	1.6	2
70	Spherical harmonic modes of 5.5 post-Newtonian gravitational wave polarizations and associated factorized resummed waveforms for a particle in circular orbit around a Schwarzschild black hole. Physical Review D, 2010, 82, .	1.6	40
71	Parametrized tests of post-Newtonian theory using Advanced LIGO and Einstein Telescope. Physical Review D, 2010, 82, .	1.6	165
72	Massive black-hole binary inspirals: results from the LISA parameter estimation taskforce. Classical and Quantum Gravity, 2009, 26, 094027.	1.5	93

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73	LISA as a dark energy probe. Classical and Quantum Gravity, 2009, 26, 094021.	1.5	26
74	Improved resummation of post-Newtonian multipolar waveforms from circularized compact binaries. Physical Review D, 2009, 79, .	1.6	191
75	Comparison of post-Newtonian templates for compact binary inspiral signals in gravitational-wave detectors. Physical Review D, 2009, 80, .	1.6	450
76	Inspiralling compact binaries in quasi-elliptical orbits: The complete third post-Newtonian energy flux. Physical Review D, 2008, 77, .	1.6	89
77	Summary of session B3: analytic approximations, perturbation methods and their applications. Classical and Quantum Gravity, 2008, 25, 114020.	1.5	3
78	The third post-Newtonian gravitational wave polarizations and associated spherical harmonic modes for inspiralling compact binaries in quasi-circular orbits. Classical and Quantum Gravity, 2008, 25, 165003.	1.5	192
79	Tail effects in the third post-Newtonian gravitational wave energy flux of compact binaries in quasi-elliptical orbits. Physical Review D, 2008, 77, .	1.6	73
80	A note on the radiation reaction in the 2.5PN waveform from inspiralling binaries in quasi-circular orbits. Classical and Quantum Gravity, 2007, 24, 5307-5312.	1.5	25
81	Publisherâ€™s Note: Higher signal harmonics, LISAâ€™s angular resolution, and dark energy [Phys. Rev. D76, 104016 (2007)]. Physical Review D, 2007, 76, .	1.6	19
82	Higher harmonics increase LISAâ€™s mass reach for supermassive black holes. Physical Review D, 2007, 75, .	1.6	40
83	Higher signal harmonics, LISAâ€™s angular resolution, and dark energy. Physical Review D, 2007, 76, .	1.6	101
84	Probing the nonlinear structure of general relativity with black hole binaries. Physical Review D, 2006, 74, .	1.6	121
85	Testing post-Newtonian theory with gravitational wave observations. Classical and Quantum Gravity, 2006, 23, L37-L43.	1.5	119
86	The 2.5PN gravitational wave polarizations from inspiralling compact binaries in circular orbits. Classical and Quantum Gravity, 2005, 22, 3115-3117.	1.5	83
87	Phasing of gravitational waves from inspiralling eccentric binaries. Classical and Quantum Gravity, 2005, 22, S381-S386.	1.5	1
88	Surface-integral expressions for the multipole moments of post-Newtonian sources and the boosted Schwarzschild solution. Classical and Quantum Gravity, 2005, 22, 155-181.	1.5	25
89	Complete adiabatic waveform templates for a test mass in the Schwarzschild spacetime: VIRGO and advanced LIGO studies. Classical and Quantum Gravity, 2005, 22, S1179-S1188.	1.5	3
90	Dimensional regularization of the third post-Newtonian gravitational wave generation from two point masses. Physical Review D, 2005, 71, .	1.6	124

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91	Hadamard regularization of the third post-Newtonian gravitational wave generation of two point masses. Physical Review D, 2005, 71, .	1.6	75
92	New class of post-Newtonian approximants to the waveform templates of inspiralling compact binaries: Test mass in the Schwarzschild spacetime. Physical Review D, 2005, 71, .	1.6	13
93	Parameter estimation of inspiralling compact binaries using 3.5 post-Newtonian gravitational wave phasing: The nonspinning case. Physical Review D, 2005, 71, .	1.6	148
94	The 2.5PN gravitational wave polarizations from inspiralling compact binaries in circular orbits. Classical and Quantum Gravity, 2004, 21, 3771-3801.	1.5	138
95	Gravitational Radiation from Inspiralling Compact Binaries Completed at the Third Post-Newtonian Order. Physical Review Letters, 2004, 93, 091101.	2.9	304
96	Phasing of gravitational waves from inspiralling eccentric binaries. Physical Review D, 2004, 70, .	1.6	138
97	Third post-Newtonian dynamics of compact binaries: equations of motion in the centre-of-mass frame. Classical and Quantum Gravity, 2003, 20, 755-776.	1.5	147
98	Gravitational waves from black hole binary inspiral and merger: The span of third post-Newtonian effective-one-body templates. Physical Review D, 2003, 67, .	1.6	54
99	Second post-Newtonian gravitational wave polarizations for compact binaries in elliptical orbits. Physical Review D, 2002, 65, .	1.6	61
100	Comparison of search templates for gravitational waves from binary inspiral: 3.5PN update. Physical Review D, 2002, 66, .	1.6	73
101	Gravitational waves from inspiraling compact binaries: Energy flux to third post-Newtonian order. Physical Review D, 2002, 65, .	1.6	144
102	Gravitational-wave inspiral of compact binary systems to 7/2 post-Newtonian order. Physical Review D, 2002, 65, .	1.6	229
103	Comparison of search templates for gravitational waves from binary inspiral. Physical Review D, 2001, 63, .	1.6	229
104	PadÃ© approximants for truncated post-Newtonian neutron star models. Physical Review D, 2000, 62, .	1.6	4
105	Frequency-domainP-approximant filters for time-truncated inspiral gravitational wave signals from compact binaries. Physical Review D, 2000, 62, .	1.6	113
106	Radiation Reaction in Electrodynamics and General Relativity. Astrophysics and Space Science Library, 2000, , 145-160.	1.0	0
107	Publications of C. V. Vishveshwara. , 1999, , 559-565.		0
108	Gravitational Radiation from Inspiralling Compact Binaries. , 1999, , 437-460.		0

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109	Improved filters for gravitational waves from inspiraling compact binaries. Physical Review D, 1998, 57, 885-907.	1.6	268
110	Second post-Newtonian gravitational radiation reaction for two-body systems: Nonspinning bodies. Physical Review D, 1997, 55, 6030-6053.	1.6	58
111	Gravitational waves from inspiraling compact binaries: Angular momentum flux, evolution of the orbital elements, and the waveform to the second post-Newtonian order. Physical Review D, 1997, 56, 7708-7731.	1.6	74
112	Report on the Workshop on Gravitational Waves. Astrophysics and Space Science Library, 1997, , 261-278.	1.0	0
113	Gravitational waveforms from inspiralling compact binaries to second-post-Newtonian order. Classical and Quantum Gravity, 1996, 13, 575-584.	1.5	314
114	Gravitational waves from inspiralling compact binaries: Energy loss and waveform to second-post-Newtonian order. Physical Review D, 1995, 51, 5360-5386.	1.6	224
115	Gravitational-Radiation Damping of Compact Binary Systems to Second Post-Newtonian Order. Physical Review Letters, 1995, 74, 3515-3518.	2.9	438
116	Post-Newtonian gravitational radiation reaction for two-body systems: Nonspinning bodies. Physical Review D, 1995, 52, 6882-6893.	1.6	99
117	Generation of gravitational waves: the post-Newtonian spin octupole moment. Classical and Quantum Gravity, 1994, 11, 1353-1357.	1.5	7
118	Frenet-Serret description of gyroscopic precession. Physical Review D, 1993, 48, 5706-5720.	1.6	59
119	Post-Newtonian gravitational radiation reaction for two-body systems. Physical Review Letters, 1993, 70, 113-116.	2.9	97
120	Separation of variables for the Dirac equation in an extended class of Lorentzian metrics with local rotational symmetry. Journal of Mathematical Physics, 1991, 32, 2497-2502.	0.5	3
121	Multipole analysis for electromagnetism and linearized gravity with irreducible Cartesian tensors. Physical Review D, 1991, 43, 3259-3272.	1.6	115
122	Scalar waves in the Boulware-Deser black-hole background. Classical and Quantum Gravity, 1989, 6, 1627-1639.	1.5	15
123	The Vaidya solution in higher dimensions. Pramana - Journal of Physics, 1989, 32, 749-752.	0.9	44
124	Quantum Field Theory in Curved Spacetime: Canonical Quantization. , 1989, , 297-314.		0
125	The Frenet-Serret formalism and black holes in higher dimensions. Classical and Quantum Gravity, 1988, 5, 961-970.	1.5	13
126	Comment on â€˜â€˜Spinning cosmic strings and quantization of energyâ€™â€™. Physical Review Letters, 1987, 59, 2379-2379.	2.9	12

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127	Exact solutions for spaceâ€¢times with local rotational symmetry in which the Dirac equation separates. Journal of Mathematical Physics, 1987, 28, 1377-1381.	0.5	13
128	Comment on "Gravitomagnetic Pole and Mass Quantization". Physical Review Letters, 1986, 57, 1089-1089.	2.9	5
129	Dirac equation in Kasner spacetime with local rotational symmetry. Physics Letters, Section A: General, Atomic and Solid State Physics, 1985, 112, 313-315.	0.9	7
130	Accretion onto a Kerr black hole in the presence of a dipole magnetic field. Pramana - Journal of Physics, 1985, 25, 135-148.	0.9	6
131	Ultracompact (R<3 M) objects in general relativity. Classical and Quantum Gravity, 1985, 2, 219-228.	1.5	28
132	Separability of the Dirac equation in a class of perfect fluid spaceâ€¢times with local rotational symmetry. Journal of Mathematical Physics, 1985, 26, 1034-1039.	0.5	14
133	Comment on â€œthe question of an upper bound on entropyâ€• Physics Letters, Section A: General, Atomic and Solid State Physics, 1983, 97, 99.	0.9	0
134	Magnetic fields and accretion discs around Kerr black holes. Journal of Physics A, 1983, 16, 2077-2086.	1.6	8
135	Magnetization of all stationary cylindrically symmetric vacuum metrics. Journal of Mathematical Physics, 1983, 24, 1568-1573.	0.5	2
136	Dirac field theory in rotating coordinates. Physical Review D, 1982, 26, 1900-1905.	1.6	60
137	Neutrinos in gravitational collapse: The Dirac formalism. Physical Review D, 1982, 25, 2053-2064.	1.6	4
138	Detection of Dirac quanta in Rindler and black hole space-times and the Î¾ quantisation scheme. Journal of Physics A, 1980, 13, 469-478.	1.6	15
139	The Kerr black hole in thermal equilibrium and the Î½vacuum. Journal of Physics A, 1979, 12, 1795-1803.	1.6	4
140	Hawking radiation of scalar and Dirac quanta from a Kerr black hole. Pramana - Journal of Physics, 1979, 12, 103-120.	0.9	7
141	Spontaneous creation of massive spin half particles by a rotating block hole. Pramana - Journal of Physics, 1978, 11, 171-185.	0.9	5
142	Note on the absence of massive fermion superradiance from a Kerr black hole. Physical Review D, 1978, 18, 4799-4801.	1.6	19
143	Greenâ€™s functions for spin half field theory in Rindler space. Pramana - Journal of Physics, 1977, 9, 441-456.	0.9	5
144	Dirac equation in Kerr space-time. Pramana - Journal of Physics, 1977, 8, 500-511.	0.9	11