

Carlos Lousto

List of Publications by Year in descending order

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131
papers

7,659
citations

47006

47
h-index

53230

85
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134
all docs

134
docs citations

134
times ranked

2506
citing authors

#	ARTICLE	IF	CITATIONS
1	Accurate Evolutions of Orbiting Black-Hole Binaries without Excision. <i>Physical Review Letters</i> , 2006, 96, 111101.	7.8	1,068
2	Large Merger Recoils and Spin Flips from Generic Black Hole Binaries. <i>Astrophysical Journal</i> , 2007, 659, L5-L8.	4.5	416
3	Maximum Gravitational Recoil. <i>Physical Review Letters</i> , 2007, 98, 231102.	7.8	371
4	Spinning-black-hole binaries: The orbital hang-up. <i>Physical Review D</i> , 2006, 74, .	4.7	274
5	Hangup Kicks: Still Larger Recoils by Partial Spin-Orbit Alignment of Black-Hole Binaries. <i>Physical Review Letters</i> , 2011, 107, 231102.	7.8	161
6	Spin flips and precession in black-hole-binary mergers. <i>Physical Review D</i> , 2007, 75, .	4.7	159
7	Second order gauge invariant gravitational perturbations of a Kerr black hole. <i>Physical Review D</i> , 1999, 59, .	4.7	148
8	Accurate black hole evolutions by fourth-order numerical relativity. <i>Physical Review D</i> , 2005, 72, .	4.7	148
9	Repulsive gravitational effects of global monopoles. <i>Physical Review D</i> , 1990, 42, 2626-2631.	4.7	142
10	Modeling gravitational radiation from coalescing binary black holes. <i>Physical Review D</i> , 2002, 65, .	4.7	134
11	Last orbit of binary black holes. <i>Physical Review D</i> , 2006, 73, .	4.7	132
12	Remnant masses, spins and recoils from the merger of generic black hole binaries. <i>Classical and Quantum Gravity</i> , 2010, 27, 114006.	4.0	132
13	The Lazarus project: A pragmatic approach to binary black hole evolutions. <i>Physical Review D</i> , 2002, 65, .	4.7	129
14	Gravitational recoil from accretion-aligned black-hole binaries. <i>Physical Review D</i> , 2012, 85, .	4.7	126
15	Error-analysis and comparison to analytical models of numerical waveforms produced by the NRAR Collaboration. <i>Classical and Quantum Gravity</i> , 2013, 31, 025012.	4.0	123
16	Remnant mass, spin, and recoil from spin aligned black-hole binaries. <i>Physical Review D</i> , 2014, 90, .	4.7	119
17	Testing gravitational-wave searches with numerical relativity waveforms: results from the first Numerical INjection Analysis (NINJA) project. <i>Classical and Quantum Gravity</i> , 2009, 26, 165008.	4.0	110
18	The NINJA-2 catalog of hybrid post-Newtonian/numerical-relativity waveforms for non-precessing black-hole binaries. <i>Classical and Quantum Gravity</i> , 2012, 29, 124001.	4.0	106

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19	Spin-orbit interactions in black-hole binaries. <i>Physical Review D</i> , 2006, 74, .	4.7	105
20	Further insight into gravitational recoil. <i>Physical Review D</i> , 2008, 77, .	4.7	101
21	Comparison of numerical and post-Newtonian waveforms for generic precessing black-hole binaries. <i>Physical Review D</i> , 2009, 79, .	4.7	96
22	Orbital Evolution of Extreme-Mass-Ratio Black-Hole Binaries with Numerical Relativity. <i>Physical Review Letters</i> , 2011, 106, 041101.	7.8	89
23	Eccentricity estimate for black hole mergers with numerical relativity simulations. <i>Nature Astronomy</i> , 2022, 6, 344-349.	10.1	89
24	Plunge Waveforms from Inspiralling Binary Black Holes. <i>Physical Review Letters</i> , 2001, 87, 121103.	7.8	84
25	On the properties of the massive binary black hole merger GW170729. <i>Physical Review D</i> , 2019, 100, .	4.7	82
26	Perturbations of Schwarzschild black holes in the Lorenz gauge: Formulation and numerical implementation. <i>Physical Review D</i> , 2005, 72, .	4.7	80
27	Foundations of multiple-black-hole evolutions. <i>Physical Review D</i> , 2008, 77, .	4.7	79
28	Extra-large remnant recoil velocities and spins from near-extremal-Bowen-York-spin black-hole binaries. <i>Physical Review D</i> , 2008, 78, .	4.7	76
29	Modeling gravitational recoil from precessing highly spinning unequal-mass black-hole binaries. <i>Physical Review D</i> , 2009, 79, .	4.7	76
30	Computing the gravitational self-force on a compact object plunging into a Schwarzschild black hole. <i>Physical Review D</i> , 2002, 66, .	4.7	71
31	Remnant of binary black-hole mergers: New simulations and peak luminosity studies. <i>Physical Review D</i> , 2017, 95, .	4.7	71
32	Head-on collisions of black holes: The particle limit. <i>Physical Review D</i> , 1997, 55, 2124-2138.	4.7	70
33	Emergence of an effective two-dimensional quantum description from the study of critical phenomena in black holes. <i>Physical Review D</i> , 1995, 51, 1733-1740.	4.7	68
34	Pragmatic Approach to Gravitational Radiation Reaction in Binary Black Holes. <i>Physical Review Letters</i> , 2000, 84, 5251-5254.	7.8	68
35	Intermediate-mass-ratio black hole binaries: Intertwining numerical and perturbative techniques. <i>Physical Review D</i> , 2010, 82, .	4.7	67
36	Modeling the source of GW150914 with targeted numerical-relativity simulations. <i>Classical and Quantum Gravity</i> , 2016, 33, 244002.	4.0	67

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37	The RIT binary black hole simulations catalog. <i>Classical and Quantum Gravity</i> , 2017, 34, 224001.	4.0	67
38	Understanding initial data for black hole collisions. <i>Physical Review D</i> , 1997, 56, 6439-6457.	4.7	65
39	Nonlinear gravitational recoil from the mergers of precessing black-hole binaries. <i>Physical Review D</i> , 2013, 87, .	4.7	61
40	Gravitational waves from black hole collisions via an eclectic approach. <i>Classical and Quantum Gravity</i> , 2000, 17, L149-L156.	4.0	60
41	New conformally flat initial data for spinning black holes. <i>Physical Review D</i> , 2002, 65, .	4.7	60
42	Practical formula for the radiated angular momentum. <i>Physical Review D</i> , 2007, 76, .	4.7	54
43	Reconstruction of black hole metric perturbations from the Weyl curvature. <i>Physical Review D</i> , 2002, 66, .	4.7	53
44	Intermediate-Mass-Ratio Black-Hole Binaries: Numerical Relativity Meets Perturbation Theory. <i>Physical Review Letters</i> , 2010, 104, 211101.	7.8	50
45	NR/HEP: roadmap for the future. <i>Classical and Quantum Gravity</i> , 2012, 29, 244001.	4.0	50
46	Second RIT binary black hole simulations catalog and its application to gravitational waves parameter estimation. <i>Physical Review D</i> , 2019, 100, .	4.7	50
47	Vacuum-polarization effects in global monopole space-times. <i>Physical Review D</i> , 1991, 43, 468-475.	4.7	49
48	Entanglement entropy in curved spacetimes with event horizons. <i>Physical Review D</i> , 1995, 52, 4512-4517.	4.7	48
49	The Lazarus project. II. Spacelike extraction with the quasi-Kinnersley tetrad. <i>Physical Review D</i> , 2006, 73, .	4.7	45
50	Statistical studies of spinning black-hole binaries. <i>Physical Review D</i> , 2010, 81, .	4.7	45
51	Perturbative extraction of gravitational waveforms generated with numerical relativity. <i>Physical Review D</i> , 2015, 91, .	4.7	44
52	Coalescence remnant of spinning binary black holes. <i>Physical Review D</i> , 2004, 69, .	4.7	43
53	Modeling the remnant mass, spin, and recoil from unequal-mass, precessing black-hole binaries: The intermediate mass ratio regime. <i>Physical Review D</i> , 2015, 92, .	4.7	43
54	Spin flips in generic black hole binaries. <i>Physical Review D</i> , 2016, 93, .	4.7	42

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55	Black hole binary remnant mass and spin: A new phenomenological formula. <i>Physical Review D</i> , 2014, 89, .	4.7	40
56	Status of NINJA: the Numerical INjection Analysis project. <i>Classical and Quantum Gravity</i> , 2009, 26, 114008.	4.0	39
57	Three-body equations of motion in successive post-Newtonian approximations. <i>Classical and Quantum Gravity</i> , 2008, 25, 195019.	4.0	38
58	A time-domain fourth-order-convergent numerical algorithm to integrate black hole perturbations in the extreme-mass-ratio limit. <i>Classical and Quantum Gravity</i> , 2005, 22, S543-S568.	4.0	36
59	Close encounters of three black holes. <i>Physical Review D</i> , 2008, 77, .	4.7	36
60	Flip-Flopping Binary Black Holes. <i>Physical Review Letters</i> , 2015, 114, 141101.	7.8	36
61	Intermediate-mass-ratio black hole binaries. II. Modeling trajectories and gravitational waveforms. <i>Physical Review D</i> , 2011, 84, .	4.7	35
62	Hangup effect in unequal mass binary black hole mergers and further studies of their gravitational radiation and remnant properties. <i>Physical Review D</i> , 2018, 97, .	4.7	35
63	Quasilocal linear momentum in black-hole binaries. <i>Physical Review D</i> , 2007, 76, .	4.7	34
64	Modeling maximum astrophysical gravitational recoil velocities. <i>Physical Review D</i> , 2011, 83, .	4.7	33
65	Numerical integration of the Teukolsky equation in the time domain. <i>Physical Review D</i> , 2005, 72, .	4.7	32
66	Third RIT binary black hole simulations catalog. <i>Physical Review D</i> , 2020, 102, .	4.7	32
67	Accuracy issues for numerical waveforms. <i>Physical Review D</i> , 2012, 86, .	4.7	29
68	Addendum to "The NINJA-2 catalog of hybrid post-Newtonian/numerical-relativity waveforms for non-precessing black-hole binaries"™. <i>Classical and Quantum Gravity</i> , 2013, 30, 199401.	4.0	28
69	Perturbative method to solve fourth-order gravity field equations. <i>Physical Review D</i> , 1994, 49, 5188-5193.	4.7	27
70	Nonlinear and perturbative evolution of distorted black holes: Odd-parity modes. <i>Physical Review D</i> , 2000, 62, .	4.7	27
71	Unstable flip-flopping spinning binary black holes. <i>Physical Review D</i> , 2016, 93, .	4.7	27
72	Puncture initial data for black-hole binaries with high spins and high boosts. <i>Physical Review D</i> , 2017, 95, .	4.7	26

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73	GUTs in curved spacetime: Running gravitational constants, Newtonian potential, and the quantum-corrected gravitational equations. <i>Physical Review D</i> , 1995, 52, 2202-2213.	4.7	25
74	Exploring the Small Mass Ratio Binary Black Hole Merger via Zeno's Dichotomy Approach. <i>Physical Review Letters</i> , 2020, 125, 191102.	7.8	25
75	Algebraic classification of numerical spacetimes and black-hole-binary remnants. <i>Physical Review D</i> , 2009, 79, .	4.7	24
76	Fourth RIT binary black hole simulations catalog: Extension to eccentric orbits. <i>Physical Review D</i> , 2022, 105, .	4.7	24
77	High energy collisions of black holes numerically revisited. <i>Physical Review D</i> , 2016, 94, .	4.7	23
78	Improved initial data for black hole collisions. <i>Physical Review D</i> , 1998, 57, 1073-1083.	4.7	22
79	Exploring the outer limits of numerical relativity. <i>Physical Review D</i> , 2013, 88, .	4.7	22
80	Post-Newtonian quasicircular initial orbits for numerical relativity. <i>Classical and Quantum Gravity</i> , 2017, 34, 145011.	4.0	22
81	Modeling gravitational recoil from black-hole binaries using numerical relativity. <i>Classical and Quantum Gravity</i> , 2011, 28, 114015.	4.0	21
82	Nonspinning binary black hole merger scenario revisited. <i>Physical Review D</i> , 2017, 96, .	4.7	21
83	First joint observation by the underground gravitational-wave detector KAGRA with GEO 600. <i>Progress of Theoretical and Experimental Physics</i> , 2022, 2022, .	6.6	20
84	Imposition of Cauchy data to the Teukolsky equation. III. The rotating case. <i>Physical Review D</i> , 1998, 58, .	4.7	19
85	Imposition of Cauchy data to the Teukolsky equation. I. The nonrotating case. <i>Physical Review D</i> , 1998, 58, .	4.7	19
86	Reconstruction of black hole metric perturbations from Weyl curvature: II. The Regge-Wheeler gauge. <i>Classical and Quantum Gravity</i> , 2005, 22, S569-S587.	4.0	19
87	Kicking gravitational wave detectors with recoiling black holes. <i>Physical Review D</i> , 2019, 100, .	4.7	19
88	Relativistic three-body effects in black hole coalescence. <i>Physical Review D</i> , 2006, 74, .	4.7	16
89	Measuring the Hubble Constant with GW190521 as an Eccentric black hole Merger and Its Potential Electromagnetic Counterpart. <i>Astrophysical Journal Letters</i> , 2021, 908, L34.	8.3	16
90	Study of conformally flat initial data for highly spinning black holes and their early evolutions. <i>Physical Review D</i> , 2012, 85, .	4.7	15

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91	Where angular momentum goes in a precessing black-hole binary. <i>Physical Review D</i> , 2014, 89, .	4.7	15
92	Evolutions of nearly maximally spinning black hole binaries using the moving puncture approach. <i>Physical Review D</i> , 2017, 96, .	4.7	15
93	Imposition of Cauchy data to the Teukolsky equation. II. Numerical comparison with the Zerilli-Moncrief approach to black hole perturbations. <i>Physical Review D</i> , 1998, 58, .	4.7	14
94	Charged black holes in quadratic theories. <i>Physical Review D</i> , 1994, 49, 5278-5285.	4.7	13
95	Radiation content of conformally flat initial data. <i>Physical Review D</i> , 2004, 69, .	4.7	13
96	Advances in simulations of generic black-hole binaries. <i>Classical and Quantum Gravity</i> , 2010, 27, 084034.	4.0	13
97	Curved-spacetime metric generated by Planckian energy string collisions. <i>Physical Review D</i> , 1992, 46, 4520-4525.	4.7	12
98	Gravitational wave beacons. <i>Physical Review D</i> , 2019, 99, .	4.7	12
99	Topological defects in gravitational theories with nonlinear Lagrangians. <i>Physical Review D</i> , 1993, 47, 3303-3311.	4.7	11
100	Exact gravitational shock wave solution of higher order theories. <i>Physical Review D</i> , 1996, 54, 3854-3860.	4.7	11
101	A new method to integrate (2+1)-wave equations with Dirac's delta functions as sources. <i>Classical and Quantum Gravity</i> , 2008, 25, 145018.	4.0	11
102	Modeling the Black Hole Merger of QSO 3C 186. <i>Astrophysical Journal Letters</i> , 2017, 841, L28.	8.3	11
103	Numerical-relativity validation of effective-one-body waveforms in the intermediate-mass-ratio regime. <i>Physical Review D</i> , 2022, 105, .	4.7	11
104	Effective two-dimensional description from critical phenomena in black holes. <i>General Relativity and Gravitation</i> , 1995, 27, 121-127.	2.0	10
105	Regular second-order perturbations of binary black holes in the extreme mass ratio regime. <i>Classical and Quantum Gravity</i> , 2009, 26, 015007.	4.0	10
106	Seeking for toroidal event horizons from initially stationary BH configurations. <i>Classical and Quantum Gravity</i> , 2011, 28, 145027.	4.0	10
107	Upgraded antennas for pulsar observations in the Argentine Institute of Radio astronomy. <i>Astronomy and Astrophysics</i> , 2020, 633, A84.	5.1	10
108	Recovery of information from black hole radiation by considering stimulated emission. <i>Physical Review D</i> , 1994, 49, 1922-1928.	4.7	9

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109	Towards the solution of the relativistic gravitational radiation reaction problem for binary black holes. <i>Classical and Quantum Gravity</i> , 2001, 18, 3989-3994.	4.0	9
110	Perturbative evolution of nonlinear initial data for binary black holes: Zerilli versus Teukolsky equation. <i>Physical Review D</i> , 2001, 63, .	4.7	9
111	Gravitational waves from binary black holes in the extreme mass ratio regime: self-force calculations. <i>Classical and Quantum Gravity</i> , 2005, 22, S369-S374.	4.0	9
112	PARTICLE PRODUCTION BY THE FORMATION OF A GLOBAL MONOPOLE. <i>International Journal of Modern Physics A</i> , 1991, 06, 3613-3623.	1.5	8
113	Perturbative metric of charged black holes in quadratic gravity. <i>Physical Review D</i> , 1995, 51, 6810-6815.	4.7	8
114	Evolutions of unequal mass, highly spinning black hole binaries. <i>Physical Review D</i> , 2018, 97, .	4.7	8
115	Adapted gauge to small mass ratio binary black hole evolutions. <i>Physical Review D</i> , 2021, 103, .	4.7	8
116	Regularization of the Teukolsky equation for rotating black holes. <i>Physical Review D</i> , 1997, 56, 6363-6369.	4.7	7
117	Application of the third RIT binary black hole simulations catalog to parameter estimation of gravitational-wave signals from the LIGO-Virgo O1 and O2 observational runs. <i>Physical Review D</i> , 2020, 102, .	4.7	7
118	Perturbative effects of spinning black holes in the extreme mass-ratio limit. <i>Classical and Quantum Gravity</i> , 2011, 28, 134005.	4.0	5
119	Adapted gauge to a quasilocal measure of the black holes recoil. <i>Physical Review D</i> , 2020, 102, .	4.7	5
120	PSR J0437-4715: The Argentine Institute of Radioastronomy 2019â€“2020 Observational Campaign. <i>Astrophysical Journal</i> , 2021, 908, 158.	4.5	5
121	Study of multi-black-hole and ring-singularity apparent horizons. <i>Physical Review D</i> , 2011, 84, .	4.7	4
122	Gravitational Radiation from Binary Black Holes: Advances in the Perturbative Approach. <i>Classical and Quantum Gravity</i> , 2005, 22, .	4.0	3
123	Classical and quantum scattering from global monopoles. <i>Classical and Quantum Gravity</i> , 1992, 9, 2417-2427.	4.0	2
124	On neutron stars and gravitation. <i>Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods</i> , 1987, 99, 123-132.	0.2	1
125	On Brans-Dicke Black Holes. , 1993, , 123-130.		1
126	Vela pulsar: single pulses analysis with machine learning techniques. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 509, 5790-5808.	4.4	1

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127	A comment on spiral motions in projective relativity. General Relativity and Gravitation, 1985, 17, 875-878.	2.0	0
128	Maximum mass of a Neutron star in metric theories of gravitation. General Relativity and Gravitation, 1987, 19, 637-642.	2.0	0
129	Local and approximate classification of spacetimes in the transverse frames. Physical Review D, 2021, 104, .	4.7	0
130	Quantization of the Metric Created by Ultrarelativistic Particles. , 1994, , 193-199.		0
131	Critical Phenomena in Black Holes and the Emergence of a Two Dimensional Quantum Description. , 1994, , 183-192.		0