Harald P Pfeiffer

List of Publications by Year
in descending order

110 papers	9,781 citations	34016 52 h-index	33814 99 g-index
110 all docs	110 docs citations	110 times ranked	4014 citing authors

#	Article	IF	Citations
1	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
2	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
3	Improved effective-one-body model of spinning, nonprecessing binary black holes for the era of gravitational-wave astrophysics with advanced detectors. Physical Review D, 2017, 95, .	1.6	401
4	Effective-one-body model for black-hole binaries with generic mass ratios and spins. Physical Review D, 2014, 89, .	1.6	360
5	Catalog of 174 Binary Black Hole Simulations for Gravitational Wave Astronomy. Physical Review Letters, 2013, 111, 241104.	2.9	325
6	High-accuracy comparison of numerical relativity simulations with post-Newtonian expansions. Physical Review D, 2007, 76, .	1.6	305
7	Inspiral-merger-ringdown waveforms of spinning, precessing black-hole binaries in the effective-one-body formalism. Physical Review D, 2014, 89, .	1.6	265
8	The SXS collaboration catalog of binary black hole simulations. Classical and Quantum Gravity, 2019, 36, 195006.	1.5	217
9	Surrogate models for precessing binary black hole simulations with unequal masses. Physical Review Research, 2019, 1, .	1.3	213
10	Inspiral-merger-ringdown multipolar waveforms of nonspinning black-hole binaries using the effective-one-body formalism. Physical Review D, 2011, 84, .	1.6	209
11	Effects of Neutron-Star Dynamic Tides on Gravitational Waveforms within the Effective-One-Body Approach. Physical Review Letters, 2016, 116, 181101.	2.9	204
12	High-accuracy waveforms for binary black hole inspiral, merger, and ringdown. Physical Review D, 2009, 79, .	1.6	201
13	A multidomain spectral method for solving elliptic equations. Computer Physics Communications, 2003, 152, 253-273.	3.0	196
14	Prototype effective-one-body model for nonprecessing spinning inspiral-merger-ringdown waveforms. Physical Review D, 2012, 86, .	1.6	192
15	Multipolar effective-one-body waveforms for precessing binary black holes: Construction and validation. Physical Review D, 2020, 102, .	1.6	182
16	Solving Einsteinâ€™s equations with dual coordinate frames. Physical Review D, 2006, 74, .	1.6	171
17	Reducing orbital eccentricity in binary black hole simulations. Classical and Quantum Gravity, 2007, 24, S59-S81.	1.5	170
18	Extrinsic curvature and the Einstein constraints. Physical Review D, 2003, 67, .	1.6	168

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19	Low mass binary neutron star mergers: Gravitational waves and neutrino emission. Physical Review D, 2016, 93, .	1.6	157
20	Surrogate model of hybridized numerical relativity binary black hole waveforms. Physical Review D, 2019, 99, .	1.6	153
21	Binary-black-hole initial data with nearly extremal spins. Physical Review D, 2008, 78, .	1.6	150
22	Effective-one-body waveforms calibrated to numerical relativity simulations: Coalescence of nonspinning, equal-mass black holes. Physical Review D, 2009, 79, .	1.6	149
23	Excision boundary conditions for black-hole initial data. Physical Review D, 2004, 70, .	1.6	145
24	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
25	Black-holeâ€“neutron-star mergers at realistic mass ratios: Equation of state and spin orientation effects. Physical Review D, 2013, 87, .	1.6	134
26	Numerical relativity waveform surrogate model for generically precessing binary black hole mergers. Physical Review D, 2017, 96, .	1.6	134
27	Evolving black hole-neutron star binaries in general relativity using pseudospectral and finite difference methods. Physical Review D, 2008, 78, .	1.6	133
28	Neutron star-black hole mergers with a nuclear equation of state and neutrino cooling: Dependence in the binary parameters. Physical Review D, 2014, 90, .	1.6	132
29	Post-merger evolution of a neutron star-black hole binary with neutrino transport. Physical Review D, 2015, 91, .	1.6	124
30	Effective-one-body waveforms calibrated to numerical relativity simulations: Coalescence of nonprecessing, spinning, equal-mass black holes. Physical Review D, 2010, 81, .	1.6	123
31	High-accuracy numerical simulation of black-hole binaries: Computation of the gravitational-wave energy flux and comparisons with post-Newtonian approximants. Physical Review D, 2008, 78, .	1.6	115
32	Impact of an improved neutrino energy estimate on outflows in neutron star merger simulations. Physical Review D, 2016, 94, .	1.6	113
33	Periastron Advance in Black-Hole Binaries. Physical Review Letters, 2011, 107, 141101.	2.9	110
34	Circular orbits and spin in black-hole initial data. Physical Review D, 2006, 74, .	1.6	107
35	The NINJA-2 catalog of hybrid post-Newtonian/numerical-relativity waveforms for non-precessing black-hole binaries. Classical and Quantum Gravity, 2012, 29, 124001.	1.5	106
36	Eccentric, nonspinning, inspiral, Gaussian-process merger approximant for the detection and characterization of eccentric binary black hole mergers. Physical Review D, 2018, 97, .	1.6	100

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37	Simulations of unequal-mass black hole binaries with spectral methods. Physical Review D, 2012, 86, .	1.6	91
38	Geometric approach to the precession of compact binaries. Physical Review D, 2011, 84, .	1.6	89
39	Complete waveform model for compact binaries on eccentric orbits. Physical Review D, 2017, 95, .	1.6	88
40	Reducing orbital eccentricity of precessing black-hole binaries. Physical Review D, 2011, 83, .	1.6	82
41	Initial data for black holeâ€“neutron star binaries: A flexible, high-accuracy spectral method. Physical Review D, 2008, 77, .	1.6	77
42	Approaching the Post-Newtonian Regime with Numerical Relativity: A Compact-Object Binary Simulation Spanning 350 Gravitational-Wave Cycles. Physical Review Letters, 2015, 115, 031102.	2.9	68
43	Samurai project: Verifying the consistency of black-hole-binary waveforms for gravitational-wave detection. Physical Review D, 2009, 79, .	1.6	67
44	Modeling the source of GW150914 with targeted numerical-relativity simulations. Classical and Quantum Gravity, 2016, 33, 244002.	1.5	67
45	Accretion disks around binary black holes of unequal mass: General relativistic MHD simulations of postdecoupling and merger. Physical Review D, 2014, 90, .	1.6	64
46	Boundary conditions for the Einstein evolution system. Physical Review D, 2005, 71, .	1.6	59
47	High accuracy simulations of black hole binaries: Spins anti-aligned with the orbital angular momentum. Physical Review D, 2009, 80, .	1.6	59
48	Suitability of post-Newtonian/numerical-relativity hybrid waveforms for gravitational wave detectors. Classical and Quantum Gravity, 2011, 28, 134002.	1.5	58
49	Measuring orbital eccentricity and periastron advance in quasicircular black hole simulations. Physical Review D, 2010, 82, .	1.6	56
50	First direct comparison of nondisrupting neutron star-black hole and binary black hole merger simulations. Physical Review D, 2013, 88, .	1.6	56
51	Periastron advance in spinning black hole binaries: Gravitational self-force from numerical relativity. Physical Review D, 2013, 88, .	1.6	54
52	Distinguishing the nature of comparable-mass neutron star binary systems with multimessenger observations: GW170817 case study. Physical Review D, 2019, 100, .	1.6	54
53	Eccentric binary black hole surrogate models for the gravitational waveform and remnant properties: Comparable mass, nonspinning case. Physical Review D, 2021, 103, .	1.6	53
54	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

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55	Aligned-spin neutron-starâ€“black-hole waveform model based on the effective-one-body approach and numerical-relativity simulations. Physical Review D, 2020, 102, .	1.6	51
56	Periastron advance in spinning black hole binaries: comparing effective-one-body and numerical relativity. Physical Review D, 2013, 88, .	1.6	50
57	Optimal constraint projection for hyperbolic evolution systems. Physical Review D, 2004, 70, .	1.6	49
58	Uniqueness and Nonuniqueness in the Einstein Constraints. Physical Review Letters, 2005, 95, 091101.	2.9	45
59	Binary neutron stars with arbitrary spins in numerical relativity. Physical Review D, 2015, 92, .	1.6	41
60	Suitability of hybrid gravitational waveforms for unequal-mass binaries. Physical Review D, 2013, 87, .	1.6	39
61	Simulations of inspiraling and merging double neutron stars using the Spectral Einstein Code. Physical Review D, 2016, 93, .	1.6	39
62	Unequal mass binary neutron star simulations with neutrino transport: Ejecta and neutrino emission. Physical Review D, 2020, 101, .	1.6	38
63	Comparing post-Newtonian and numerical relativity precession dynamics. Physical Review D, 2015, 92, .	1.6	37
64	Accuracy of binary black hole waveform models for aligned-spin binaries. Physical Review D, 2016, 93, .	1.6	37
65	Adding gravitational memory to waveform catalogs using BMS balance laws. Physical Review D, 2021, 103, .	1.6	35
66	Testing the accuracy and stability of spectral methods in numerical relativity. Physical Review D, 2007, 75, .	1.6	34
67	Nearly extremal apparent horizons in simulations of merging black holes. Classical and Quantum Gravity, 2015, 32, 065007.	1.5	33
68	Intermediate Mass-Ratio Black Hole Binaries: Applicability of Small Mass-Ratio Perturbation Theory. Physical Review Letters, 2020, 125, 181101.	2.9	33
69	Constraining the parameters of GW150914 and GW170104 with numerical relativity surrogates. Physical Review D, 2019, 99, .	1.6	32
70	Controlling the growth of constraints in hyperbolic evolution systems. Physical Review D, 2004, 69, .	1.6	31
71	Improvements to the construction of binary black hole initial data. Classical and Quantum Gravity, 2015, 32, 245010.	1.5	28
72	Impact of subdominant modes on the interpretation of gravitational-wave signals from heavy binary black hole systems. Physical Review D, 2020, 101, .	1.6	28

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73	Einstein constraints: Uniqueness and nonuniqueness in the conformal thin sandwich approach. Physical Review D, 2007, 75, .	1.6	27
74	Stability of nonspinning effective-one-body model in approximating two-body dynamics and gravitational-wave emission. Physical Review D, 2014, 89, .	1.6	27
75	Evolution of the magnetized, neutrino-cooled accretion disk in the aftermath of a black hole-neutron star binary merger. Physical Review D, 2018, 97, .	1.6	27
76	Black hole initial data on hyperboloidal slices. Physical Review D, 2009, 80, .	1.6	26
77	Redshift Factor and the First Law of Binary Black Hole Mechanics in Numerical Simulations. Physical Review Letters, 2016, 117, 191101.	2.9	26
78	Precession-tracking coordinates for simulations of compact-object binaries. Physical Review D, 2013, 88, .	1.6	25
79	Measuring neutron star tidal deformability with Advanced LIGO: A Bayesian analysis of neutron star-black hole binary observations. Physical Review D, 2017, 95, .	1.6	25
80	Horizon dynamics of distorted rotating black holes. Physical Review D, 2011, 83, .	1.6	22
81	Black hole-neutron star mergers using a survey of finite-temperature equations of state. Physical Review D, 2018, 98, .	1.6	22
82	High precision ringdown modeling: Multimode fits and BMS frames. Physical Review D, 2022, 105, .	1.6	21
83	First joint observation by the underground gravitational-wave detector KAGRA with GEO 600. Progress of Theoretical and Experimental Physics, 2022, 2022, .	1.8	20
84	Interpolation in waveform space: Enhancing the accuracy of gravitational waveform families using numerical relativity. Physical Review D, 2013, 87, .	1.6	19
85	Comparison of post-Newtonian mode amplitudes with numerical relativity simulations of binary black holes. Classical and Quantum Gravity, 2020, 37, 065006.	1.5	18
86	Compact binary waveform center-of-mass corrections. Physical Review D, 2019, 100, .	1.6	17
87	Initial data for Einstein's equations with superposed gravitational waves. Physical Review D, 2005, 71, .	1.6	16
88	Template banks for binary black hole searches with numerical relativity waveforms. Physical Review D, 2014, 89, .	1.6	16
89	Measuring the properties of nearly extremal black holes with gravitational waves. Physical Review D, 2018, 98, .	1.6	16
90	Extending gravitational wave extraction using Weyl characteristic fields. Physical Review D, 2021, 103, .	1.6	16

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91	Comparison of binary black hole initial data sets. Physical Review D, 2018, 98, .	1.6	15
92	Fixing the BMS frame of numerical relativity waveforms. Physical Review D, 2021, 104, .	1.6	15
93	Stability of exact force-free electrodynamic solutions and scattering from spacetime curvature. Physical Review D, 2015, 92, .	1.6	14
94	THE INITIAL VALUE PROBLEM IN NUMERICAL RELATIVITY. Journal of Hyperbolic Differential Equations, 2005, 02, 497-520.	0.3	13
95	Detection and characterization of spin-orbit resonances in the advanced gravitational wave detectors era. Physical Review D, 2018, 98, .	1.6	13
96	Comparing remnant properties from horizon data and asymptotic data in numerical relativity. Physical Review D, 2021, 103, .	1.6	13
97	Implicit-explicit evolution of single black holes. Physical Review D, 2011, 84, .	1.6	10
98	Initial data for black holeâ€“neutron star binaries, with rotating stars. Classical and Quantum Gravity, 2016, 33, 225012.	1.5	10
99	High-accuracy waveforms for black hole-neutron star systems with spinning black holes. Physical Review D, 2021, 103, .	1.6	10
100	hp-adaptive discontinuous Galerkin solver for elliptic equations in numerical relativity. Physical Review D, 2019, 100, .	1.6	8
101	Systematic effects from black hole-neutron star waveform model uncertainties on the neutron star equation of state. Physical Review D, 2019, 99, .	1.6	8
102	Up-down instability of binary black holes in numerical relativity. Physical Review D, 2021, 103, .	1.6	8
103	Gravitational waveforms for high spin and high mass-ratio binary black holes: A synergistic use of numerical-relativity codes. Physical Review D, 2019, 99, .	1.6	7
104	GPU-accelerated simulations of isolated black holes. Classical and Quantum Gravity, 2018, 35, 095017.	1.5	5
105	Unified discontinuous Galerkin scheme for a large class of elliptic equations. Physical Review D, 2022, 105, .	1.6	3
106	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. , 2018, 21, 1.		2
107	Worldtube excision method for intermediate-mass-ratio inspirals: Scalar-field toy model. Physical Review D, 2021, 104, .	1.6	2
108	A scalable elliptic solver with task-based parallelism for the SpECTRE numerical relativity code. Physical Review D, 2022, 105, .	1.6	2

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109	Mining for Observables: A New Challenge in Numerical Relativity. AIP Conference Proceedings, 2006, , .	0.3	0
110	REDUCING ORBITAL ECCENTRICITY IN BINARY BLACK HOLE SIMULATIONS. , 2008, , .		0