

# Bernd BrÄ¼gmann

## List of Publications by Year in descending order

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59  
papers

4,559  
citations

117625

34  
h-index

149698

56  
g-index

59  
all docs

59  
docs citations

59  
times ranked

1574  
citing authors

#	ARTICLE	IF	CITATIONS
1	Gauge conditions for long-term numerical black hole evolutions without excision. <i>Physical Review D</i> , 2003, 67, .	4.7	427
2	A Simple Construction of Initial Data for Multiple Black Holes. <i>Physical Review Letters</i> , 1997, 78, 3606-3609.	7.8	398
3	Calibration of moving puncture simulations. <i>Physical Review D</i> , 2008, 77, .	4.7	285
4	Single-domain spectral method for black hole puncture data. <i>Physical Review D</i> , 2004, 70, .	4.7	279
5	Numerical Simulation of Orbiting Black Holes. <i>Physical Review Letters</i> , 2004, 92, 211101.	7.8	164
6	High-spin binary black hole mergers. <i>Physical Review D</i> , 2008, 77, .	4.7	144
7	Tidal effects in binary neutron star coalescence. <i>Physical Review D</i> , 2012, 86, .	4.7	143
8	Gravitational waves and mass ejecta from binary neutron star mergers: Effect of the mass ratio. <i>Physical Review D</i> , 2017, 95, .	4.7	138
9	Where post-Newtonian and numerical-relativity waveforms meet. <i>Physical Review D</i> , 2008, 77, .	4.7	129
10	Accurate effective-one-body waveforms of inspiralling and coalescing black-hole binaries. <i>Physical Review D</i> , 2008, 78, .	4.7	124
11	Compact binary evolutions with the Z4c formulation. <i>Physical Review D</i> , 2013, 88, .	4.7	124
12	SYMMETRY WITHOUT SYMMETRY: NUMERICAL SIMULATION OF AXISYMMETRIC SYSTEMS USING CARTESIAN GRIDS. <i>International Journal of Modern Physics D</i> , 2001, 10, 273-289.	2.1	121
13	Exploring black hole superkicks. <i>Physical Review D</i> , 2008, 77, .	4.7	118
14	Simple excision of a black hole in 3+1 numerical relativity. <i>Physical Review D</i> , 2001, 63, .	4.7	112
15	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
16	A pseudospectral matrix method for time-dependent tensor fields on a spherical shell. <i>Journal of Computational Physics</i> , 2013, 235, 216-240.	3.8	107
17	Numerical relativity simulations of binary neutron stars. <i>Physical Review D</i> , 2011, 84, .	4.7	106
18	Numerical relativity simulations of neutron star merger remnants using conservative mesh refinement. <i>Physical Review D</i> , 2015, 91, .	4.7	105

#	ARTICLE	IF	CITATIONS
19	Mergers of binary neutron stars with realistic spin. <i>Physical Review D</i> , 2014, 89, .	4.7	99
20	BINARY BLACK HOLE MERGERS IN 3d NUMERICAL RELATIVITY. <i>International Journal of Modern Physics D</i> , 1999, 08, 85-100.	2.1	96
21	Comparison between numerical-relativity and post-Newtonian waveforms from spinning binaries: The orbital hang-up case. <i>Physical Review D</i> , 2008, 78, .	4.7	94
22	Binary neutron stars with generic spin, eccentricity, mass ratio, and compactness: Quasi-equilibrium sequences and first evolutions. <i>Physical Review D</i> , 2015, 92, .	4.7	85
23	Wormholes and trumpets: Schwarzschild spacetime for the moving-puncture generation. <i>Physical Review D</i> , 2008, 78, .	4.7	82
24	<tt>CoRe</tt> database of binary neutron star merger waveforms. <i>Classical and Quantum Gravity</i> , 2018, 35, 24LT01.	4.0	81
25	3D Grazing Collision of Two Black Holes. <i>Physical Review Letters</i> , 2001, 87, 271103.	7.8	72
26	Samurai project: Verifying the consistency of black-hole-binary waveforms for gravitational-wave detection. <i>Physical Review D</i> , 2009, 79, .	4.7	67
27	Simulations of black-hole binaries with unequal masses or nonprecessing spins: Accuracy, physical properties, and comparison with post-Newtonian results. <i>Physical Review D</i> , 2010, 82, .	4.7	59
28	Binary black hole initial data from matched asymptotic expansions. <i>Physical Review D</i> , 2006, 74, .	4.7	52
29	Dynamical evolution of quasicircular binary black hole data. <i>Physical Review D</i> , 2005, 72, .	4.7	46
30	Relevance of tidal effects and post-merger dynamics for binary neutron star parameter estimation. <i>Physical Review D</i> , 2018, 98, .	4.7	46
31	Symplectic integration of post-Newtonian equations of motion with spin. <i>Physical Review D</i> , 2010, 81, .	4.7	42
32	Numerical solution of the 2 + 1 Teukolsky equation on a hyperboloidal and horizon penetrating foliation of Kerr and application to late-time decays. <i>Classical and Quantum Gravity</i> , 2013, 30, 115013.	4.0	41
33	Eccentric black hole mergers and zoom-whirl behavior from elliptic inspirals to hyperbolic encounters. <i>Physical Review D</i> , 2013, 88, .	4.7	38
34	Gravitational waves and mass ejecta from binary neutron star mergers: Effect of large eccentricities. <i>Physical Review D</i> , 2018, 98, .	4.7	36
35	Characterization of the gravitational wave emission of three black holes. <i>Physical Review D</i> , 2011, 83, .	4.7	32
36	Trumpet solution from spherical gravitational collapse with puncture gauges. <i>Physical Review D</i> , 2011, 83, .	4.7	32

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37	Pseudospectral method for gravitational wave collapse. <i>Physical Review D</i> , 2016, 93, .	4.7	32
38	Numerical evolution of multiple black holes with accurate initial data. <i>Physical Review D</i> , 2010, 82, .	4.7	31
39	Initial data for binary neutron stars with adjustable eccentricity. <i>Physical Review D</i> , 2014, 90, .	4.7	31
40	Solving 3D relativistic hydrodynamical problems with weighted essentially nonoscillatory discontinuous Galerkin methods. <i>Physical Review D</i> , 2016, 94, .	4.7	29
41	Numerical relativity simulations of precessing binary neutron star mergers. <i>Physical Review D</i> , 2018, 97, .	4.7	29
42	Schwarzschild black hole as moving puncture in isotropic coordinates. <i>General Relativity and Gravitation</i> , 2009, 41, 2131-2151.	2.0	27
43	Constructing binary neutron star initial data with high spins, high compactnesses, and high mass ratios. <i>Physical Review D</i> , 2019, 100, .	4.7	23
44	The evolution of hyperboloidal data with the dual foliation formalism: mathematical analysis and wave equation tests. <i>Classical and Quantum Gravity</i> , 2018, 35, 055003.	4.0	20
45	Evolutions of centered Brill waves with a pseudospectral method. <i>Physical Review D</i> , 2017, 96, .	4.7	19
46	Training strategies for deep learning gravitational-wave searches. <i>Physical Review D</i> , 2022, 105, .	4.7	14
47	Hyperbolic relaxation method for elliptic equations. <i>Physical Review D</i> , 2018, 98, .	4.7	12
48	Fundamentals of numerical relativity for gravitational wave sources. <i>Science</i> , 2018, 361, 366-371.	12.6	12
49	Gravitational waves and mass ejecta from binary neutron star mergers: Effect of the spin orientation. <i>Physical Review D</i> , 2020, 102, .	4.7	12
50	Increasing the accuracy of binary neutron star simulations with an improved vacuum treatment. <i>Physical Review D</i> , 2020, 102, .	4.7	9
51	Spinning black hole in the puncture method: Numerical experiments. <i>Journal of Physics: Conference Series</i> , 2014, 490, 012155.	0.4	7
52	Implementation of the dual foliation generalized harmonic gauge formulation with application to spherical black hole excision. <i>Physical Review D</i> , 2021, 103, .	4.7	5
53	Analytical and numerical treatment of perturbed black holes in horizon-penetrating coordinates. <i>Physical Review D</i> , 2020, 102, .	4.7	4
54	New pseudospectral code for the construction of initial data. <i>Physical Review D</i> , 2022, 105, .	4.7	4

#	ARTICLE	IF	CITATIONS
55	Entropy-limited higher-order central scheme for neutron star merger simulations. Physical Review D, 2022, 106, .	4.7	3
56	High-accuracy simulations of highly spinning binary neutron star systems. Physical Review D, 2022, 105, .	4.7	2
57	A5: NUMERICAL RELATIVITY AND ALGEBRAIC COMPUTING. , 2005, , .		0
58	HEAD-ON COLLISIONS OF DIFFERENT INITIAL DATA. , 2008, , .		0
59	NON-OVERLAPPING MARGINALLY TRAPPED SURFACES. , 2012, , .		0