Ulrich Sperhake

List of Publications by Year
in descending order

78	5,701	87888 38	74163 75
papers	citations	h-index	g-index

78	78	78	2809
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Testing general relativity with present and future astrophysical observations. Classical and Quantum Gravity, 2015, 32, 243001.	4.0	943
2	Black holes, gravitational waves and fundamental physics: a roadmap. Classical and Quantum Gravity, 2019, 36, 143001.	4.0	451
3	Maximum Kick from Nonspinning Black-Hole Binary Inspiral. Physical Review Letters, 2007, 98, 091101.	7.8	349
4	Inspiral, merger, and ringdown of unequal mass black hole binaries: A multipolar analysis. Physical Review D, 2007, 76, .	4.7	294
5	Calibration of moving puncture simulations. Physical Review D, 2008, 77, .	4.7	285
6	Supermassive Recoil Velocities for Binary Black-Hole Mergers with Antialigned Spins. Physical Review Letters, 2007, 98, 231101.	7.8	281
7	High-spin binary black hole mergers. Physical Review D, 2008, 77, .	4.7	144
8	Binary black-hole evolutions of excision and puncture data. Physical Review D, 2007, 76, .	4.7	137
9	High-Energy Collision of Two Black Holes. Physical Review Letters, 2008, 101, 161101.	7.8	137
10	Where post-Newtonian and numerical-relativity waveforms meet. Physical Review D, 2008, 77, .	4.7	129
11	Exploring black hole superkicks. Physical Review D, 2008, 77, .	4.7	118
12	Cross Section, Final Spin, and Zoom-Whirl Behavior in High-Energy Black-Hole Collisions. Physical Review Letters, 2009, 103, 131102.	7.8	113
13	Testing gravitational-wave searches with numerical relativity waveforms: results from the first Numerical INJection Analysis (NINJA) project. Classical and Quantum Gravity, 2009, 26, 165008.	4.0	110
14	The NINJA-2 catalog of hybrid post-Newtonian/numerical-relativity waveforms for non-precessing black-hole binaries. Classical and Quantum Gravity, 2012, 29, 124001.	4.0	106
15	Resonant-plane locking and spin alignment in stellar-mass black-hole binaries: A diagnostic of compact-binary formation. Physical Review D, 2013, 87, .	4.7	106
16	Reducing phase error in long numerical binary black hole evolutions with sixth-order finite differencing. Classical and Quantum Gravity, 2008, 25, 105006.	4.0	103
17	Multi-timescale analysis of phase transitions in precessing black-hole binaries. Physical Review D, 2015, 92, .	4.7	99
18	Effective Potentials and Morphological Transitions for Binary Black Hole Spin Precession. Physical Review Letters, 2015, 114, 081103.	7.8	91

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19	Numerical simulations of single and binary black holes in scalar-tensor theories: Circumventing the no-hair theorem. Physical Review D, 2013, 87, .	4.7	87
20	Eccentric binary black-hole mergers: The transition from inspiral to plunge in general relativity. Physical Review D, 2008, 78, .	4.7	81
21	RELATIVISTIC SUPPRESSION OF BLACK HOLE RECOILS. Astrophysical Journal, 2010, 715, 1006-1011.	4.5	70
22	Exploring New Physics Frontiers Through Numerical Relativity. Living Reviews in Relativity, 2015, 18, 1.	26.7	64
23	Final spins from the merger of precessing binary black holes. Physical Review D, 2010, 81, .	4.7	62
24	Tensor-multi-scalar theories: relativistic stars and 3 + 1 decomposition. Classical and Quantum Gravity, 2015, 32, 204001.	4.0	58
25	Collisions of unequal mass black holes and the point particle limit. Physical Review D, 2011, 84, .	4.7	55
26	Numerical relativity forDdimensional space-times: Head-on collisions of black holes and gravitational wave extraction. Physical Review D, 2010, 82, .	4.7	51
27	Numerical relativity for<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>D</mml:mi></mml:math>dimensional axially symmetric space-times: Formalism and code tests. Physical Review D, 2010, 81, .	4.7	51
28	NR/HEP: roadmap for the future. Classical and Quantum Gravity, 2012, 29, 244001.	4.0	50
29	Black hole head-on collisions and gravitational waves with fixed mesh-refinement and dynamic singularity excision. Physical Review D, 2005, 71, .	4.7	46
30	Semianalytical estimates of scattering thresholds and gravitational radiation in ultrarelativistic black hole encounters. Physical Review D, 2010, 81, .	4.7	46
31	Binary black holes on a budget: simulations using workstations. Classical and Quantum Gravity, 2007, 24, S43-S58.	4.0	45
32	Numerical simulations of stellar collapse in scalar-tensor theories of gravity. Classical and Quantum Gravity, 2016, 33, 135002.	4.0	43
33	Beyond the Bowenâ€“York extrinsic curvature for spinning black holes. Classical and Quantum Gravity, 2007, 24, S15-S24.	4.0	42
34	Precessional Instability in Binary Black Holes with Aligned Spins. Physical Review Letters, 2015, 115, 141102.	7.8	41
35	The transient gravitational-wave sky. Classical and Quantum Gravity, 2013, 30, 193002.	4.0	40
36	Status of NINJA: the Numerical INJection Analysis project. Classical and Quantum Gravity, 2009, 26, 114008.	4.0	39

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37	Distinguishing black-hole spin-orbit resonances by their gravitational-wave signatures. Physical Review D, 2014, 89, .	4.7	39
38	Effects of post-Newtonian spin alignment on the distribution of black-hole recoils. Physical Review D, 2012, 85, .	4.7	38
39	Universality, Maximum Radiation, and Absorption in High-Energy Collisions of Black Holes with Spin. Physical Review Letters, 2013, 111, 041101.	7.8	38
40	The numerical relativity breakthrough for binary black holes. Classical and Quantum Gravity, 2015, 32, 124011.	4.0	37
41	Collisions of oppositely charged black holes. Physical Review D, 2014, 89, .	4.7	36
42	Black holes in a box: Toward the numerical evolution of black holes in AdS space-times. Physical Review D, 2010, 82, .	4.7	35
43	Long-Lived Inverse Chirp Signals from Core-Collapse in Massive Scalar-Tensor Gravity. Physical Review Letters, 2017, 119, 201103.	7.8	35
44	Moving black holes via singularity excision. Classical and Quantum Gravity, 2003, 20, 3729-3743.	4.0	34
45	GRChombo: An adaptable numerical relativity code for fundamental physics. Journal of Open Source Software, 2021, 6, 3703.	4.6	34
46	Head-on collisions of unequal mass black holes inD=5dimensions. Physical Review D, 2011, 83, .	4.7	32
47	Superkicks in ultrarelativistic encounters of spinning black holes. Physical Review D, 2011, 83, .	4.7	29
48	Addendum to â€˜The NINJA-2 catalog of hybrid post-Newtonian/numerical-relativity waveforms for non-precessing black-hole binariesâ€™. Classical and Quantum Gravity, 2013, 30, 199401.	4.0	28
49	Testing the nonlinear stability of Kerr-Newman black holes. Physical Review D, 2014, 90, .	4.7	27
50	Distinguishing black-hole spin-orbit resonances by their gravitational wave signatures. II. Full parameter estimation. Physical Review D, 2016, 93, .	4.7	27
51	Core collapse in massive scalar-tensor gravity. Physical Review D, 2020, 102, .	4.7	21
52	Gravitational Waves from Binary Black Hole Mergers inside Stars. Physical Review Letters, 2017, 119, 171103.	7.8	19
53	Malaise and remedy of binary boson-star initial data. Classical and Quantum Gravity, 2022, 39, 074001.	4.0	18
54	Structure of Neutron Stars in Massive Scalar-Tensor Gravity. Symmetry, 2020, 12, 1384.	2.2	17

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55	Higher-dimensional puncture initial data. Physical Review D, 2011, 84, .	4.7	15
56	On the equal-mass limit of precessing black-hole binaries. Classical and Quantum Gravity, 2017, 34, 064004.	4.0	15
57	Lessons for adaptive mesh refinement in numerical relativity. Classical and Quantum Gravity, 2022, 39, 135006.	4.0	15
58	Inverse-chirp signals and spontaneous scalarisation with self-interacting potentials in stellar collapse. Classical and Quantum Gravity, 2019, 36, 134003.	4.0	14
59	Wide nutation: binary black-hole spins repeatedly oscillating from full alignment to full anti-alignment. Classical and Quantum Gravity, 2019, 36, 105003.	4.0	14
60	Gravity-dominated unequal-mass black hole collisions. Physical Review D, 2016, 93, .	4.7	13
61	Hydro-without-hydro framework for simulations of black holeâ€“neutron star binaries. Classical and Quantum Gravity, 2006, 23, S579-S598.	4.0	12
62	Dimensional reduction in numerical relativity: Modified Cartoon formalism and regularization. International Journal of Modern Physics D, 2016, 25, 1641013.	2.1	11
63	Higher dimensional numerical relativity: Code comparison. Physical Review D, 2014, 90, .	4.7	10
64	Amplification of superkicks in black-hole binaries through orbital eccentricity. Physical Review D, 2020, 101, .	4.7	9
65	Evidence for violations of Weak Cosmic Censorship in black hole collisions in higher dimensions. Journal of High Energy Physics, 2022, 2022, 1.	4.7	9
66	Numerical relativity and high energy physics: Recent developments. International Journal of Modern Physics D, 2016, 25, 1641022.	2.1	8
67	Black-hole head-on collisions in higher dimensions. Physical Review D, 2017, 96, .	4.7	8
68	NUMERICAL RELATIVITY IN HIGHER DIMENSIONS. International Journal of Modern Physics D, 2013, 22, 1330005.	2.1	7
69	High-energy collision of black holes in higher dimensions. Physical Review D, 2019, 100, .	4.7	7
70	Anomalies in the gravitational recoil of eccentric black-hole mergers with unequal mass ratios. Physical Review D, 2021, 103, .	4.7	7
71	Extraction of gravitational-wave energy in higher dimensional numerical relativity using the Weyl tensor. Classical and Quantum Gravity, 2017, 34, 035010.	4.0	5
72	Orbiting black-hole binaries and apparent horizons in higher dimensions. Classical and Quantum Gravity, 2018, 35, 235008.	4.0	4

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73	Numerical relativity: the role of black holes in gravitational wave physics, astrophysics and high-energy physics. General Relativity and Gravitation, 2014, 46, 1.	2.0	3
74	Gravitational Recoil and Astrophysical Impact. Thirty Years of Astronomical Discovery With UKIRT, 2015, , 185-202.	0.3	3
75	Preface by the Editors. International Journal of Modern Physics D, 2016, 25, 1602002.	2.1	1
76	HEAD-ON COLLISIONS OF DIFFERENT INITIAL DATA. , 2008, , .		0
77	PREFACE â€" NR/HEP2: Spring School on Numerical Relativity and High Energy Physics. International Journal of Modern Physics A, 2013, 28, 1302003.	1.5	0
78	NUMERICAL RELATIVITY IN HIGHER DIMENSIONS. , 2015, , .		0