

# Ulrich Sperhake

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3896495/publications.pdf>

Version: 2024-02-01

78  
papers

5,701  
citations

87888

38  
h-index

74163

75  
g-index

78  
all docs

78  
docs citations

78  
times ranked

2809  
citing authors

#	ARTICLE	IF	CITATIONS
1	Malaise and remedy of binary boson-star initial data. <i>Classical and Quantum Gravity</i> , 2022, 39, 074001.	4.0	18
2	Evidence for violations of Weak Cosmic Censorship in black hole collisions in higher dimensions. <i>Journal of High Energy Physics</i> , 2022, 2022, 1.	4.7	9
3	Lessons for adaptive mesh refinement in numerical relativity. <i>Classical and Quantum Gravity</i> , 2022, 39, 135006.	4.0	15
4	Anomalies in the gravitational recoil of eccentric black-hole mergers with unequal mass ratios. <i>Physical Review D</i> , 2021, 103, .	4.7	7
5	GRChombo: An adaptable numerical relativity code for fundamental physics. <i>Journal of Open Source Software</i> , 2021, 6, 3703.	4.6	34
6	Core collapse in massive scalar-tensor gravity. <i>Physical Review D</i> , 2020, 102, .	4.7	21
7	Structure of Neutron Stars in Massive Scalar-Tensor Gravity. <i>Symmetry</i> , 2020, 12, 1384.	2.2	17
8	Amplification of superkicks in black-hole binaries through orbital eccentricity. <i>Physical Review D</i> , 2020, 101, .	4.7	9
9	Inverse-chirp signals and spontaneous scalarisation with self-interacting potentials in stellar collapse. <i>Classical and Quantum Gravity</i> , 2019, 36, 134003.	4.0	14
10	Black holes, gravitational waves and fundamental physics: a roadmap. <i>Classical and Quantum Gravity</i> , 2019, 36, 143001.	4.0	451
11	Wide nutation: binary black-hole spins repeatedly oscillating from full alignment to full anti-alignment. <i>Classical and Quantum Gravity</i> , 2019, 36, 105003.	4.0	14
12	High-energy collision of black holes in higher dimensions. <i>Physical Review D</i> , 2019, 100, .	4.7	7
13	Orbiting black-hole binaries and apparent horizons in higher dimensions. <i>Classical and Quantum Gravity</i> , 2018, 35, 235008.	4.0	4
14	Extraction of gravitational-wave energy in higher dimensional numerical relativity using the Weyl tensor. <i>Classical and Quantum Gravity</i> , 2017, 34, 035010.	4.0	5
15	Black-hole head-on collisions in higher dimensions. <i>Physical Review D</i> , 2017, 96, .	4.7	8
16	Long-Lived Inverse Chirp Signals from Core-Collapse in Massive Scalar-Tensor Gravity. <i>Physical Review Letters</i> , 2017, 119, 201103.	7.8	35
17	Gravitational Waves from Binary Black Hole Mergers inside Stars. <i>Physical Review Letters</i> , 2017, 119, 171103.	7.8	19
18	On the equal-mass limit of precessing black-hole binaries. <i>Classical and Quantum Gravity</i> , 2017, 34, 064004.	4.0	15

#	ARTICLE	IF	CITATIONS
19	Dimensional reduction in numerical relativity: Modified Cartoon formalism and regularization. International Journal of Modern Physics D, 2016, 25, 1641013.	2.1	11
20	Preface by the Editors. International Journal of Modern Physics D, 2016, 25, 1602002.	2.1	1
21	Numerical relativity and high energy physics: Recent developments. International Journal of Modern Physics D, 2016, 25, 1641022.	2.1	8
22	Gravity-dominated unequal-mass black hole collisions. Physical Review D, 2016, 93, .	4.7	13
23	Distinguishing black-hole spin-orbit resonances by their gravitational wave signatures. II. Full parameter estimation. Physical Review D, 2016, 93, .	4.7	27
24	Numerical simulations of stellar collapse in scalar-tensor theories of gravity. Classical and Quantum Gravity, 2016, 33, 135002.	4.0	43
25	Multi-timescale analysis of phase transitions in precessing black-hole binaries. Physical Review D, 2015, 92, .	4.7	99
26	Precessional Instability in Binary Black Holes with Aligned Spins. Physical Review Letters, 2015, 115, 141102.	7.8	41
27	Exploring New Physics Frontiers Through Numerical Relativity. Living Reviews in Relativity, 2015, 18, 1.	26.7	64
28	Tensor-multi-scalar theories: relativistic stars and 3 + 1 decomposition. Classical and Quantum Gravity, 2015, 32, 204001.	4.0	58
29	Testing general relativity with present and future astrophysical observations. Classical and Quantum Gravity, 2015, 32, 243001.	4.0	943
30	NUMERICAL RELATIVITY IN HIGHER DIMENSIONS. , 2015, , .		0
31	Effective Potentials and Morphological Transitions for Binary Black Hole Spin Precession. Physical Review Letters, 2015, 114, 081103.	7.8	91
32	The numerical relativity breakthrough for binary black holes. Classical and Quantum Gravity, 2015, 32, 124011.	4.0	37
33	Gravitational Recoil and Astrophysical Impact. Thirty Years of Astronomical Discovery With UKIRT, 2015, , 185-202.	0.3	3
34	Testing the nonlinear stability of Kerr-Newman black holes. Physical Review D, 2014, 90, .	4.7	27
35	Higher dimensional numerical relativity: Code comparison. Physical Review D, 2014, 90, .	4.7	10
36	Collisions of oppositely charged black holes. Physical Review D, 2014, 89, .	4.7	36

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37	Numerical relativity: the role of black holes in gravitational wave physics, astrophysics and high-energy physics. <i>General Relativity and Gravitation</i> , 2014, 46, 1.	2.0	3
38	Distinguishing black-hole spin-orbit resonances by their gravitational-wave signatures. <i>Physical Review D</i> , 2014, 89, .	4.7	39
39	PREFACE " NR/HEP2: Spring School on Numerical Relativity and High Energy Physics. <i>International Journal of Modern Physics A</i> , 2013, 28, 1302003.	1.5	0
40	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
41	The transient gravitational-wave sky. <i>Classical and Quantum Gravity</i> , 2013, 30, 193002.	4.0	40
42	Resonant-plane locking and spin alignment in stellar-mass black-hole binaries: A diagnostic of compact-binary formation. <i>Physical Review D</i> , 2013, 87, .	4.7	106
43	Universality, Maximum Radiation, and Absorption in High-Energy Collisions of Black Holes with Spin. <i>Physical Review Letters</i> , 2013, 111, 041101.	7.8	38
44	Numerical simulations of single and binary black holes in scalar-tensor theories: Circumventing the no-hair theorem. <i>Physical Review D</i> , 2013, 87, .	4.7	87
45	NUMERICAL RELATIVITY IN HIGHER DIMENSIONS. <i>International Journal of Modern Physics D</i> , 2013, 22, 1330005.	2.1	7
46	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
47	Effects of post-Newtonian spin alignment on the distribution of black-hole recoils. <i>Physical Review D</i> , 2012, 85, .	4.7	38
48	NR/HEP: roadmap for the future. <i>Classical and Quantum Gravity</i> , 2012, 29, 244001.	4.0	50
49	Superkicks in ultrarelativistic encounters of spinning black holes. <i>Physical Review D</i> , 2011, 83, .	4.7	29
50	Collisions of unequal mass black holes and the point particle limit. <i>Physical Review D</i> , 2011, 84, .	4.7	55
51	Higher-dimensional puncture initial data. <i>Physical Review D</i> , 2011, 84, .	4.7	15
52	Head-on collisions of unequal mass black holes in $D=5$ dimensions. <i>Physical Review D</i> , 2011, 83, .	4.7	32
53	RELATIVISTIC SUPPRESSION OF BLACK HOLE RECOILS. <i>Astrophysical Journal</i> , 2010, 715, 1006-1011.	4.5	70
54	Semianalytical estimates of scattering thresholds and gravitational radiation in ultrarelativistic black hole encounters. <i>Physical Review D</i> , 2010, 81, .	4.7	46

#	ARTICLE	IF	CITATIONS
55	Black holes in a box: Toward the numerical evolution of black holes in AdS space-times. Physical Review D, 2010, 82, .	4.7	35
56	Numerical relativity for D-dimensional space-times: Head-on collisions of black holes and gravitational wave extraction. Physical Review D, 2010, 82, .	4.7	51
57	Numerical relativity for $D$ -dimensional axially symmetric space-times: Formalism and code tests. Physical Review D, 2010, 81, .	4.7	51
58	Final spins from the merger of precessing binary black holes. Physical Review D, 2010, 81, .	4.7	62
59	Cross Section, Final Spin, and Zoom-Whirl Behavior in High-Energy Black-Hole Collisions. Physical Review Letters, 2009, 103, 131102.	7.8	113
60	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
61	Status of NINJA: the Numerical INjection Analysis project. Classical and Quantum Gravity, 2009, 26, 114008.	4.0	39
62	High-Energy Collision of Two Black Holes. Physical Review Letters, 2008, 101, 161101.	7.8	137
63	Exploring black hole superkicks. Physical Review D, 2008, 77, .	4.7	118
64	High-spin binary black hole mergers. Physical Review D, 2008, 77, .	4.7	144
65	Calibration of moving puncture simulations. Physical Review D, 2008, 77, .	4.7	285
66	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
67	Where post-Newtonian and numerical-relativity waveforms meet. Physical Review D, 2008, 77, .	4.7	129
68	Eccentric binary black-hole mergers: The transition from inspiral to plunge in general relativity. Physical Review D, 2008, 78, .	4.7	81
69	HEAD-ON COLLISIONS OF DIFFERENT INITIAL DATA. , 2008, , .		0
70	Binary black holes on a budget: simulations using workstations. Classical and Quantum Gravity, 2007, 24, S43-S58.	4.0	45
71	Beyond the Bowen-York extrinsic curvature for spinning black holes. Classical and Quantum Gravity, 2007, 24, S15-S24.	4.0	42
72	Maximum Kick from Nonspinning Black-Hole Binary Inspiral. Physical Review Letters, 2007, 98, 091101.	7.8	349

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73	Supermassive Recoil Velocities for Binary Black-Hole Mergers with Antialigned Spins. Physical Review Letters, 2007, 98, 231101.	7.8	281
74	Binary black-hole evolutions of excision and puncture data. Physical Review D, 2007, 76, .	4.7	137
75	Inspiral, merger, and ringdown of unequal mass black hole binaries: A multipolar analysis. Physical Review D, 2007, 76, .	4.7	294
76	Hydro-without-hydro framework for simulations of black hole–neutron star binaries. Classical and Quantum Gravity, 2006, 23, S579-S598.	4.0	12
77	Black hole head-on collisions and gravitational waves with fixed mesh-refinement and dynamic singularity excision. Physical Review D, 2005, 71, .	4.7	46
78	Moving black holes via singularity excision. Classical and Quantum Gravity, 2003, 20, 3729-3743.	4.0	34