JÃ¶rg Frauendiener

List of Publications by Year
in descending order

77	1,215	516710 16	414414 32
papers	citations	h-index	g-index
79	79	79	739
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Prospects for fundamental physics with LISA. General Relativity and Gravitation, 2020, 52, 1.	2.0	198
2	Conformal Infinity. Living Reviews in Relativity, 2004, 7, 1.	26.7	164
3	A shell around a black hole. Classical and Quantum Gravity, 1990, 7, 585-587.	4.0	53
4	Numerical treatment of the hyperboloidal initial value problem for the vacuum Einstein equations. II. The evolution equations. Physical Review D, 1998, 58, .	4.7	46
5	Triads and the Witten equation. Classical and Quantum Gravity, 1991, 8, 1881-1887.	4.0	43
6	Note on the memory effect. Classical and Quantum Gravity, 1992, 9, 1639-1641.	4.0	40
7	Geometric description of energy-momentum pseudotensors. Classical and Quantum Gravity, 1989, 6, L237-L241.	4.0	32
8	Numerical treatment of the hyperboloidal initial value problem for the vacuum Einstein equations. I. The conformal field equations. Physical Review D, 1998, 58, .	4.7	31
9	Exact relativistic treatment of stationary counterrotating dust disks: Physical properties. Physical Review D, 2001, 63, .	4.7	30
10	Dielectric analog space-times. Physical Review D, 2010, 82, .	4.7	28
11	Hyperelliptic Theta-Functions and Spectral Methods: KdV and KP Solutions. Letters in Mathematical Physics, 2006, 76, 249-267.	1.1	27
12	On the Penrose Inequality. Physical Review Letters, 2001, 87, 101101.	7.8	26
13	Hyperelliptic theta-functions and spectral methods. Journal of Computational and Applied Mathematics, 2004, 167, 193-218.	2.0	23
14	Interactive visualization of a thin disc around a Schwarzschild black hole. European Journal of Physics, 2012, 33, 955-963.	0.6	23
15	Numerical treatment of the hyperboloidal initial value problem for the vacuum Einstein equations: III. On the determination of radiation. Classical and Quantum Gravity, 2000, 17, 373-387.	4.0	21
16	Calculating initial data for the conformal Einstein equations by pseudo-spectral methods. Journal of Computational and Applied Mathematics, 1999, 109, 475-491.	2.0	20
17	Applying Methods from Differential Geometry to Devise Stable and Persistent Air Layers Attached to Objects Immersed in Water. Journal of Bionic Engineering, 2009, 6, 350-356.	5.0	18
18	A note on the relativistic Euler equations. Classical and Quantum Gravity, 2003, 20, L193-L196.	4.0	16

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19	Discrete differential forms in general relativity. Classical and Quantum Gravity, 2006, 23, S369-S385.	4.0	16
20	Numerical evolution of axisymmetric, isolated systems in general relativity. Physical Review D, 2002, 66, .	4.7	15
21	Quadratic hamiltonians on the unit sphere. Mechanics Research Communications, 1995, 22, 313-317.	1.8	14
22	Numerical space-times near space-like and null infinity. The spin-2 system on Minkowski space. Classical and Quantum Gravity, 2012, 29, 245013.	4.0	14
23	Numerical evolutions of fields on the 2-sphere using a spectral method based on spin-weighted spherical harmonics. Classical and Quantum Gravity, 2014, 31, 075019.	4.0	14
24	Global simulations of Minkowski spacetime including spacelike infinity. Physical Review D, 2017, 95, .	4.7	14
25	The second order spin-2 system in flat space near space-like and null-infinity. General Relativity and Gravitation, 2013, 45, 1365-1385.	2.0	13
26	On crossing dust shells. Journal of Mathematical Physics, 1995, 36, 3632-3643.	1.1	11
27	Algebraic stability analysis of constraint propagation. Classical and Quantum Gravity, 2005, 22, 1769-1793.	4.0	11
28	Fully pseudospectral solution of the conformally invariant wave equation near the cylinder at spacelike infinity. Classical and Quantum Gravity, 2014, 31, 085010.	4.0	11
29	Computational Approach to Hyperelliptic Riemann Surfaces. Letters in Mathematical Physics, 2015, 105, 379-400.	1.1	11
30	A spectral method for half-integer spin fields based on spin-weighted spherical harmonics. Classical and Quantum Gravity, 2015, 32, 175013.	4.0	11
31	Efficient computation of multidimensional theta functions. Journal of Geometry and Physics, 2019, 141, 147-158.	1.4	11
32	Discretizations of axisymmetric systems. Physical Review D, 2002, 66, .	4.7	10
33	The static spherically symmetric body in relativistic elasticity. Classical and Quantum Gravity, 2007, 24, 4817-4837.	4.0	10
34	Numerical solutions of Einsteinâ€™s equations for cosmological spacetimes with spatial topology $\mathbb{S}^3$ symmetry group U(1). Physical Review D, 2016, 93, .	4.7	10
35	On an integral formula on hypersurfaces in general relativity. Classical and Quantum Gravity, 1997, 14, 3413-3423.	4.0	9
36	The kernel of the edth operators on higher-genus spacelike 2-surfaces. Classical and Quantum Gravity, 2001, 18, 1003-1014.	4.0	9

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37	A model for linear dragging. Classical and Quantum Gravity, 2005, 22, 4743-4761.	4.0	9
38	Numerical initial boundary value problem for the generalized conformal field equations. Physical Review D, 2017, 96, .	4.7	9
39	Fully pseudospectral solution of the conformally invariant wave equation near the cylinder at spacelike infinity. II: Schwarzschild background. Classical and Quantum Gravity, 2017, 34, 045005.	4.0	8
40	Local twistors and the conformal field equations. Journal of Mathematical Physics, 2000, 41, 437-443.	1.1	7
41	Studying null and time-like geodesics in the classroom. European Journal of Physics, 2011, 32, 747-759.	0.6	7
42	Computational approach to compact Riemann surfaces. Nonlinearity, 2017, 30, 138-172.	1.4	7
43	Asymptotics of solutions of a hyperbolic formulation of the constraint equations. Classical and Quantum Gravity, 2017, 34, 205014.	4.0	7
44	Non-existence of stationary, axisymmetric dust solutions of Einstein's equations on spatially compact manifolds. Physics Letters, Section A: General, Atomic and Solid State Physics, 1987, 120, 119-123.	2.1	6
45	Notes on the Sagnac effect in general relativity. General Relativity and Gravitation, 2018, 50, 1.	2.0	6
46	Numerical construction of initial data sets of binary black hole type using a parabolic-hyperbolic formulation of the vacuum constraint equations. Classical and Quantum Gravity, 2019, 36, 175005.	4.0	6
47	Gravitational waves and the Sagnac effect. Classical and Quantum Gravity, 2020, 37, 05LT01.	4.0	6
48	The non-linear perturbation of a black hole by gravitational waves. I. The Bondiâ€"Sachs mass loss. Classical and Quantum Gravity, 2021, 38, 194002.	4.0	6
49	Linearized Gravitational Waves Near Space-Like and Null Infinity. Springer Proceedings in Mathematics and Statistics, 2014, , 3-17.	0.2	6
50	On a class of consistent linear higher spin equations on curved manifolds. Journal of Geometry and Physics, 1999, 30, 54-101.	1.4	5
51	Fully pseudospectral solution of the conformally invariant wave equation near the cylinder at spacelike infinity. III: nonspherical Schwarzschild waves and singularities at null infinity. Classical and Quantum Gravity, 2018, 35, 065015.	4.0	5
52	COFFEEâ€"An MPI-parallelized Python package for the numerical evolution of differential equations. SoftwareX, 2019, 10, 100283.	2.6	5
53	A new look at the Bondiâ€"Sachs energyâ€"momentum*. Classical and Quantum Gravity, 2022, 39, 025007.	4.0	5
54	Twistors and the asymptotic behaviour of massless spin- fields. Classical and Quantum Gravity, 1996, 13, 461-480.	4.0	4

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55	The applicability of constrained symplectic integrators in general relativity. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 382005.	2.1	4
56	Numerical evolution of plane gravitational waves in the Friedrich-Nagy gauge. Physical Review D, 2014, 89, .	4.7	4
57	Criticality of inhomogeneous Nariai-like cosmological models. Physical Review D, 2017, 95, .	4.7	4
58	The Spin-2 Equation on Minkowski Background. Springer Proceedings in Mathematics and Statistics, 2014, , 465-468.	0.2	4
59	The sparling form and its relationship to the spin-coefficient formalism. General Relativity and Gravitation, 1990, 22, 1423-1432.	2.0	3
60	On spinâ€‘(3/2) systems in Ricci flat spaceâ€"times. Journal of Mathematical Physics, 1995, 36, 3012-3022.	1.1	3
61	A note on the post-Newtonian limit of quasi-local energy expressions. Classical and Quantum Gravity, 2011, 28, 235009.	4.0	3
62	Explorations of the infinite regions of spacetime. International Journal of Modern Physics D, 2020, 29, 2030007.	2.1	3
63	Asymptotically flat vacuum initial data sets from a modified parabolic-hyperbolic formulation of the Einstein vacuum constraint equations. Physical Review D, 2020, 101, .	4.7	3
64	Discrete Differential Forms for $(1+1)$-Dimensional Cosmological Space-Times. SIAM Journal of Scientific Computing, 2010, 32, 1140-1158.	2.8	2
65	BLOW-UP OF THE NONEQUIVARIANT ()-DIMENSIONAL WAVE MAP. ANZIAM Journal, 2013, 55, 151-161.	0.2	2
66	Numerical initial data deformation exploiting a gluing construction: I. Exterior asymptotic Schwarzschild. Classical and Quantum Gravity, 2019, 36, 185008.	4.0	2
67	On biâ€‘Hamiltonian structures. Journal of Mathematical Physics, 1990, 31, 331-337.	1.1	1
68	Numerical evolution, linear and nonlinear, of spherically symmetric deviations from an isotropic universe. General Relativity and Gravitation, 1993, 25, 373-397.	2.0	1
69	Witten spinors on maximal, conformally flat hypersurfaces. Classical and Quantum Gravity, 2011, 28, 185004.	4.0	1
70	Efficient Computation of the Branching Structure of an Algebraic Curve. Computational Methods and Function Theory, 2012, 11, 527-546.	1.5	1
71	Numerical study of Daveyâ€"Stewartson I systems. Studies in Applied Mathematics, 2022, 149, 76-94.	2.4	1
72	Preface: Ann. Phys. 1-2/2006. Annalen Der Physik, 2006, 15, 3-3.	2.4	0

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73	German undergraduate mathematics enrolment numbers: background and change. International Journal of Mathematical Education in Science and Technology, 2010, 41, 435-449.	1.4	0
74	Can Gravitational Waves Halt the Expansion of the Universe?. Universe, 2021, 7, 228.	2.5	0
75	COMPATIBLE DISCRETISATIONS IN GENERAL RELATIVITY. , 2012, , .		0
76	THE SPHERICALLY SYMMETRIC BODY IN RELATIVISTIC ELASTICITY. , 2012, , .		0
77	Ripples in the fabric of space-time. Papers and Proceedings - Royal Society of Tasmania, 2016, 150, 9-14.	0.2	0