

Jörg Frauendiener

List of Publications by Year in descending order

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79
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79
docs citations

79
times ranked

739
citing authors

#	ARTICLE	IF	CITATIONS
1	A new look at the Bondiâ€“Sachs energyâ€“momentum*. Classical and Quantum Gravity, 2022, 39, 025007.	4.0	5
2	Numerical study of Daveyâ€“Stewartson I systems. Studies in Applied Mathematics, 2022, 149, 76-94.	2.4	1
3	Can Gravitational Waves Halt the Expansion of the Universe?. Universe, 2021, 7, 228.	2.5	0
4	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
5	Explorations of the infinite regions of spacetime. International Journal of Modern Physics D, 2020, 29, 2030007.	2.1	3
6	Prospects for fundamental physics with LISA. General Relativity and Gravitation, 2020, 52, 1.	2.0	198
7	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
8	Gravitational waves and the Sagnac effect. Classical and Quantum Gravity, 2020, 37, 05LT01.	4.0	6
9	COFFEEâ€“An MPI-parallelized Python package for the numerical evolution of differential equations. SoftwareX, 2019, 10, 100283.	2.6	5
10	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
11	Numerical initial data deformation exploiting a gluing construction: I. Exterior asymptotic Schwarzschild. Classical and Quantum Gravity, 2019, 36, 185008.	4.0	2
12	Efficient computation of multidimensional theta functions. Journal of Geometry and Physics, 2019, 141, 147-158.	1.4	11
13	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
14	Notes on the Sagnac effect in general relativity. General Relativity and Gravitation, 2018, 50, 1.	2.0	6
15	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
16	Computational approach to compact Riemann surfaces. Nonlinearity, 2017, 30, 138-172.	1.4	7
17	Numerical initial boundary value problem for the generalized conformal field equations. Physical Review D, 2017, 96, .	4.7	9
18	Asymptotics of solutions of a hyperbolic formulation of the constraint equations. Classical and Quantum Gravity, 2017, 34, 205014.	4.0	7

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19	Global simulations of Minkowski spacetime including spacelike infinity. Physical Review D, 2017, 95, .	4.7	14
20	Criticality of inhomogeneous Nariai-like cosmological models. Physical Review D, 2017, 95, .	4.7	4
21	Numerical solutions of Einstein's equations for cosmological spacetimes with spatial topology $S^2 \times S^1$ and symmetry group $U(1)$. Physical Review D, 2016, 93, .	4.7	10
22	Ripples in the fabric of space-time. Papers and Proceedings - Royal Society of Tasmania, 2016, 150, 9-14.	0.2	0
23	Computational Approach to Hyperelliptic Riemann Surfaces. Letters in Mathematical Physics, 2015, 105, 379-400.	1.1	11
24	A spectral method for half-integer spin fields based on spin-weighted spherical harmonics. Classical and Quantum Gravity, 2015, 32, 175013.	4.0	11
25	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
26	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
27	Numerical evolution of plane gravitational waves in the Friedrich-Nagy gauge. Physical Review D, 2014, 89, .	4.7	4
28	Linearized Gravitational Waves Near Space-Like and Null Infinity. Springer Proceedings in Mathematics and Statistics, 2014, , 3-17.	0.2	6
29	The Spin-2 Equation on Minkowski Background. Springer Proceedings in Mathematics and Statistics, 2014, , 465-468.	0.2	4
30	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
31	BLOW-UP OF THE NONEQUIVARIANT (S^2)-DIMENSIONAL WAVE MAP. ANZIAM Journal, 2013, 55, 151-161.	0.2	2
32	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
33	Interactive visualization of a thin disc around a Schwarzschild black hole. European Journal of Physics, 2012, 33, 955-963.	0.6	23
34	Efficient Computation of the Branching Structure of an Algebraic Curve. Computational Methods and Function Theory, 2012, 11, 527-546.	1.5	1
35	COMPATIBLE DISCRETISATIONS IN GENERAL RELATIVITY. , 2012, , .		0
36	THE SPHERICALLY SYMMETRIC BODY IN RELATIVISTIC ELASTICITY. , 2012, , .		0

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37	Witten spinors on maximal, conformally flat hypersurfaces. <i>Classical and Quantum Gravity</i> , 2011, 28, 185004.	4.0	1
38	A note on the post-Newtonian limit of quasi-local energy expressions. <i>Classical and Quantum Gravity</i> , 2011, 28, 235009.	4.0	3
39	Studying null and time-like geodesics in the classroom. <i>European Journal of Physics</i> , 2011, 32, 747-759.	0.6	7
40	German undergraduate mathematics enrolment numbers: background and change. <i>International Journal of Mathematical Education in Science and Technology</i> , 2010, 41, 435-449.	1.4	0
41	Discrete Differential Forms for $(1+1)$ -Dimensional Cosmological Space-Times. <i>SIAM Journal of Scientific Computing</i> , 2010, 32, 1140-1158.	2.8	2
42	Dielectric analog space-times. <i>Physical Review D</i> , 2010, 82, .	4.7	28
43	Applying Methods from Differential Geometry to Devise Stable and Persistent Air Layers Attached to Objects Immersed in Water. <i>Journal of Bionic Engineering</i> , 2009, 6, 350-356.	5.0	18
44	The applicability of constrained symplectic integrators in general relativity. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2008, 41, 382005.	2.1	4
45	The static spherically symmetric body in relativistic elasticity. <i>Classical and Quantum Gravity</i> , 2007, 24, 4817-4837.	4.0	10
46	Hyperelliptic Theta-Functions and Spectral Methods: KdV and KP Solutions. <i>Letters in Mathematical Physics</i> , 2006, 76, 249-267.	1.1	27
47	Preface: Ann. Phys. 1-2/2006. <i>Annalen Der Physik</i> , 2006, 15, 3-3.	2.4	0
48	Discrete differential forms in general relativity. <i>Classical and Quantum Gravity</i> , 2006, 23, S369-S385.	4.0	16
49	Algebraic stability analysis of constraint propagation. <i>Classical and Quantum Gravity</i> , 2005, 22, 1769-1793.	4.0	11
50	A model for linear dragging. <i>Classical and Quantum Gravity</i> , 2005, 22, 4743-4761.	4.0	9
51	Hyperelliptic theta-functions and spectral methods. <i>Journal of Computational and Applied Mathematics</i> , 2004, 167, 193-218.	2.0	23
52	Conformal Infinity. <i>Living Reviews in Relativity</i> , 2004, 7, 1.	26.7	164
53	A note on the relativistic Euler equations. <i>Classical and Quantum Gravity</i> , 2003, 20, L193-L196.	4.0	16
54	Discretizations of axisymmetric systems. <i>Physical Review D</i> , 2002, 66, .	4.7	10

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55	Numerical evolution of axisymmetric, isolated systems in general relativity. <i>Physical Review D</i> , 2002, 66, .	4.7	15
56	The kernel of the edth operators on higher-genus spacelike 2-surfaces. <i>Classical and Quantum Gravity</i> , 2001, 18, 1003-1014.	4.0	9
57	On the Penrose Inequality. <i>Physical Review Letters</i> , 2001, 87, 101101.	7.8	26
58	Exact relativistic treatment of stationary counterrotating dust disks: Physical properties. <i>Physical Review D</i> , 2001, 63, .	4.7	30
59	Numerical treatment of the hyperboloidal initial value problem for the vacuum Einstein equations: III. On the determination of radiation. <i>Classical and Quantum Gravity</i> , 2000, 17, 373-387.	4.0	21
60	Local twistors and the conformal field equations. <i>Journal of Mathematical Physics</i> , 2000, 41, 437-443.	1.1	7
61	Calculating initial data for the conformal Einstein equations by pseudo-spectral methods. <i>Journal of Computational and Applied Mathematics</i> , 1999, 109, 475-491.	2.0	20
62	On a class of consistent linear higher spin equations on curved manifolds. <i>Journal of Geometry and Physics</i> , 1999, 30, 54-101.	1.4	5
63	Numerical treatment of the hyperboloidal initial value problem for the vacuum Einstein equations. I. The conformal field equations. <i>Physical Review D</i> , 1998, 58, .	4.7	31
64	Numerical treatment of the hyperboloidal initial value problem for the vacuum Einstein equations. II. The evolution equations. <i>Physical Review D</i> , 1998, 58, .	4.7	46
65	On an integral formula on hypersurfaces in general relativity. <i>Classical and Quantum Gravity</i> , 1997, 14, 3413-3423.	4.0	9
66	Twistors and the asymptotic behaviour of massless spin- fields. <i>Classical and Quantum Gravity</i> , 1996, 13, 461-480.	4.0	4
67	On spin $\frac{3}{2}$ systems in Ricci flat space \times time. <i>Journal of Mathematical Physics</i> , 1995, 36, 3012-3022.	1.1	3
68	On crossing dust shells. <i>Journal of Mathematical Physics</i> , 1995, 36, 3632-3643.	1.1	11
69	Quadratic hamiltonians on the unit sphere. <i>Mechanics Research Communications</i> , 1995, 22, 313-317.	1.8	14
70	Numerical evolution, linear and nonlinear, of spherically symmetric deviations from an isotropic universe. <i>General Relativity and Gravitation</i> , 1993, 25, 373-397.	2.0	1
71	Note on the memory effect. <i>Classical and Quantum Gravity</i> , 1992, 9, 1639-1641.	4.0	40
72	Triads and the Witten equation. <i>Classical and Quantum Gravity</i> , 1991, 8, 1881-1887.	4.0	43

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73	On bi-Hamiltonian structures. <i>Journal of Mathematical Physics</i> , 1990, 31, 331-337.	1.1	1
74	The spalling form and its relationship to the spin-coefficient formalism. <i>General Relativity and Gravitation</i> , 1990, 22, 1423-1432.	2.0	3
75	A shell around a black hole. <i>Classical and Quantum Gravity</i> , 1990, 7, 585-587.	4.0	53
76	Geometric description of energy-momentum pseudotensors. <i>Classical and Quantum Gravity</i> , 1989, 6, L237-L241.	4.0	32
77	Non-existence of stationary, axisymmetric dust solutions of Einstein's equations on spatially compact manifolds. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1987, 120, 119-123.	2.1	6