

Reinhard Meinel

List of Publications by Year in descending order

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70
papers

1,420
citations

394421

19
h-index

345221

36
g-index

77
all docs

77
docs citations

77
times ranked

332
citing authors

#	ARTICLE	IF	CITATIONS
1	General N-soliton solution of the AKNS class on arbitrary background. Physics Letters, Section A: General, Atomic and Solid State Physics, 1984, 100, 467-470.	2.1	180
2	General Relativistic Gravitational Field of a Rigidly Rotating Disk of Dust: Solution in Terms of Ultraelliptic Functions. Physical Review Letters, 1995, 75, 3046-3047.	7.8	152
3	The Einsteinian gravitational field of the rigidly rotating disk of dust. Astrophysical Journal, 1993, 414, L97.	4.5	112
4	General Relativistic Gravitational Field of a Rigidly Rotating Disk of Dust: Axis Potential, Disk Metric, and Surface Mass Density. Physical Review Letters, 1994, 73, 2166-2168.	7.8	69
5	Progress in relativistic gravitational theory using the inverse scattering method. Journal of Mathematical Physics, 2003, 44, 3407-3429.	1.1	67
6	Stability of simple nonlinear $\hat{\pm}2$ - dynamos. Geophysical and Astrophysical Fluid Dynamics, 1988, 43, 95-117.	1.2	58
7	Highly accurate calculation of rotating neutron stars. Astronomy and Astrophysics, 2003, 405, 711-721.	5.1	57
8	Highly accurate calculation of rotating neutron stars. Astronomy and Astrophysics, 2002, 381, L49-L52.	5.1	45
9	Generation of chirped pulses in optical fibers suitable for an effective pulse compression. Optics Communications, 1983, 47, 343-346.	2.1	44
10	Uniformly rotating axisymmetric fluid configurations bifurcating from highly flattened Maclaurin spheroids. Monthly Notices of the Royal Astronomical Society, 2003, 339, 515-523.	4.4	37
11	Constructive proof of the Kerr-Newman black hole uniqueness including the extreme case. Classical and Quantum Gravity, 2012, 29, 035004.	4.0	36
12	Galactic dynamo models without sharp boundaries. Geophysical and Astrophysical Fluid Dynamics, 1990, 50, 85-94.	1.2	33
13	Relativistic Dyson Rings and Their Black Hole Limit. Astrophysical Journal, 2003, 582, L87-L90.	4.5	31
14	Asymptotically flat solutions to the Ernst equation with reflection symmetry. Classical and Quantum Gravity, 1995, 12, 2045-2050.	4.0	30
15	A new nonlinear Schrödinger equation, its hierarchy and N-soliton solutions. Physics Letters, Section A: General, Atomic and Solid State Physics, 1984, 102, 1-6.	2.1	28
16	Bäcklund transformation and N-soliton solutions for stimulated Raman scattering and resonant two-photon propagation. Optics Communications, 1984, 49, 224-228.	2.1	26
17	Vandermonde-like determinants and N-fold Darboux/Bäcklund transformations. Journal of Mathematical Physics, 1997, 38, 4692-4695.	1.1	25
18	On the black hole limit of rotating fluid bodies in equilibrium. Classical and Quantum Gravity, 2006, 23, 1359-1363.	4.0	19

#	ARTICLE	IF	CITATIONS
19	Black holes: a physical route to the Kerr metric. <i>Annalen Der Physik</i> , 2002, 11, 509-521.	2.4	17
20	Solitons for the rotating reduced Maxwell-Bloch equations with anisotropy. <i>Physical Review E</i> , 2005, 72, 056608.	2.1	17
21	Solutions of Einstein's field equations related to Jacobi's inversion problem. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1996, 210, 160-162.	2.1	15
22	Equilibrium configurations of homogeneous fluids in general relativity. <i>Monthly Notices of the Royal Astronomical Society</i> , 2004, 355, 682-688.	4.4	14
23	On the black hole limit of electrically counterpoised dust configurations. <i>Classical and Quantum Gravity</i> , 2011, 28, 225010.	4.0	14
24	Ward identities for invariant group integrals. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2007, 40, 4367-4389.	2.1	13
25	Differentially Rotating Disks of Dust. <i>General Relativity and Gravitation</i> , 2000, 32, 1365-1380.	2.0	11
26	Quasistationary collapse to the extreme Kerr black hole. <i>Annalen Der Physik</i> , 2004, 13, 600-603.	2.4	11
27	A note on circular geodesics in the equatorial plane of an extreme Kerr-Newman black hole. <i>Classical and Quantum Gravity</i> , 2015, 32, 147001.	4.0	11
28	Post-Newtonian approximation of the rigidly rotating disc of dust to arbitrary order. <i>Physical Review D</i> , 2001, 63, .	4.7	10
29	Generation of localized magnetic fields by dynamos with conducting surroundings. <i>Astronomische Nachrichten</i> , 1989, 310, 1-6.	1.2	9
30	The multipole moments of the rigidly rotating disk of dust in general relativity. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1995, 200, 82-86.	2.1	9
31	Solutions of degenerate two-photon propagation from Bäcklund transformations. <i>Journal of Modern Optics</i> , 1997, 44, 287-303.	1.3	8
32	Dirichlet boundary value problems of the Ernst equation. <i>Physical Review D</i> , 2002, 65, .	4.7	8
33	On the black hole limit of rotating discs and rings. <i>General Relativity and Gravitation</i> , 2011, 43, 1469-1486.	2.0	8
34	Reply to "Some remarks on finite-gap solutions of the Ernst equation" by Korotkin. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1997, 229, 200-202.	2.1	7
35	Darboux transformations for "W-problems". <i>Physica D: Nonlinear Phenomena</i> , 1995, 87, 127-133.	2.8	6
36	The Ernst equation and ergosurfaces. <i>Classical and Quantum Gravity</i> , 2006, 23, 4399-4414.	4.0	6

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37	On the black hole limit of rotating discs of charged dust. <i>Classical and Quantum Gravity</i> , 2015, 32, 135022.	4.0	6
38	Self-Modulation and Envelope Solitons of Spiral Density Waves. <i>Astronomische Nachrichten</i> , 1983, 304, 65-68.	1.2	5
39	Periodic solutions generated by Bäcklund transformations. <i>Physica D: Nonlinear Phenomena</i> , 1986, 21, 155-162.	2.8	5
40	An exactly solvable global Ω -disk dynamo model. <i>Geophysical and Astrophysical Fluid Dynamics</i> , 1990, 50, 79-84.	1.2	5
41	Gravitational fields of rotating disks and black holes. <i>Annalen Der Physik</i> , 2000, 9, 335-341.	2.4	4
42	Post-Newtonian expansion of a rigidly rotating disc of dust with a constant specific charge. <i>Classical and Quantum Gravity</i> , 2013, 30, 085010.	4.0	4
43	Gyromagnetic factor of rotating disks of electrically charged dust in general relativity. <i>Physical Review D</i> , 2016, 94, .	4.7	2
44	A continuous Riemann-Hilbert problem for colliding plane gravitational waves. <i>Classical and Quantum Gravity</i> , 2017, 34, 195011.	4.0	2
45	BLACK HOLES AND QUASIBLACK HOLES IN EINSTEIN-MAXWELL THEORY. , 2015, , .		2
46	Spiral structure as a standing density-wave packet. <i>Astrophysics and Space Science</i> , 1987, 138, 147-154.	1.4	1
47	Intergalactic extinction and the deceleration parameter. <i>Astronomische Nachrichten</i> , 1981, 302, 177-179.	1.2	0
48	Rotating Equilibrium Configurations in Einstein's Theory of Gravitation. , 2002, , 69-75.		0
49	CONSTRUCTIVE PROOF OF THE KERR-NEWMAN BLACK HOLE UNIQUENESS: DERIVATION OF THE FULL SOLUTION FROM SCRATCH. , 2015, , .		0
50	Die Schwarzschild-Lösung. , 2016, , 143-152.		0
51	Spezielle und allgemeine Relativitätstheorie für Bachelorstudenten. , 2016, , .		0
52	Bäcklund transforms of the extreme Kerr near-horizon geometry. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2020, 384, 126572.	2.1	0
53	QUASI-STATIONARY ROUTES TO THE KERR BLACK HOLE. , 2008, , .		0
54	RELATIVISTIC FIGURES OF EQUILIBRIUM: FROM MACLAURIN SPHEROIDS TO KERR BLACK HOLES. , 2012, , .		0

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55	Andere Teilgebiete der Physik im Rahmen der SRT. , 2016, , 67-80.		0
56	Vierervektoren und Vierertensoren. , 2016, , 41-52.		0
57	Das Wirkungsprinzip der ART. , 2016, , 197-208.		0
58	Relativistische Punktmechanik. , 2016, , 53-66.		0
59	Kugelsymmetrische Sternmodelle. , 2016, , 171-184.		0
60	Die Schwarzschild-Lösung als Schwarzes Loch. , 2016, , 185-195.		0
61	Der Minkowski-Raum als die Raumzeit der SRT. , 2016, , 11-25.		0
62	Lorentz-Transformationen. , 2016, , 27-39.		0
63	Die klassischen Effekte der ART. , 2016, , 153-169.		0
64	Die rotierende Staubscheibe. , 2016, , 295-306.		0
65	Rotierende und elektrisch geladene Schwarze Löcher. , 2016, , 259-294.		0
66	Mathematische Methoden. , 2016, , 219-257.		0
67	Der Newtonsche Grenzfall. , 2016, , 135-142.		0
68	Grundideen. , 2016, , 83-89.		0
69	Geometrie der Raumzeit. , 2016, , 91-106.		0
70	Relativistic Equilibrium Figures. Encyclopedia of Earth Sciences Series, 2019, , 1-5.	0.1	0