Piotr ChruÅ›ciel

List of Publications by Year
in descending order

161 papers	4,636 citations	87888 38 h-index	118850 62 g-index
170 all docs	170 docs citations	170 times ranked	1770 citing authors

#	Article	IF	Citations
1	Asymptotic flatness in higher dimensions. Journal of Mathematical Physics, 2022, 63, 032501.	1.1	1
2	Asymptotically flat Einstein–Maxwell fields are inheriting. Communications in Analysis and Geometry, 2021, 29, 579-627.	0.4	0
3	Energy of weak gravitational waves in spacetimes with a positive cosmological constant. Physical Review D, 2021, 103, .	4.7	7
4	The electromagnetic field in gravitational wave interferometers [*]. Classical and Quantum Gravity, 2021, 38, 215004.	4.0	1
5	On the canonical energy of weak gravitational fields with a cosmological constant $$\varLambda \in \mathbb{R}$$. European Physical Journal C, 2021, 81, 696.	3.9	7
6	Remarks on the energy of asymptotically Horowitz-Myers metrics. Physical Review D, 2020, 101, .	4.7	6
7	Structure of the singular ring in Kerr-like metrics. Physical Review D, 2020, 101, .	4.7	3
8	Uniqueness and energy bounds for static AdS metrics. Physical Review D, 2020, 101, .	4.7	4
9	On linearised vacuum constraint equations on Einstein manifolds. Classical and Quantum Gravity, 2020, 37, 215012.	4.0	6
10	Black holes, gravitational waves and fundamental physics: a roadmap. Classical and Quantum Gravity, 2019, 36, 143001.	4.0	451
11	On the total mass of asymptotically hyperbolic manifolds. Pure and Applied Mathematics Quarterly, 2019, 15, 683-706.	0.4	2
12	On non-degeneracy of Riemannian Schwarzschild-antiÂdeÂSitter metrics. Advances in Theoretical and Mathematical Physics, 2019, 23, 1215-1269.	0.6	2
13	Exotic hyperbolic gluings. Journal of Differential Geometry, 2018, 108, .	1.1	9
14	On the mass aspect function and positive energy theorems for asymptotically hyperbolic manifolds. Classical and Quantum Gravity, 2018, 35, 115015.	4.0	14
15	Towards a classification of vacuum near-horizons geometries. Classical and Quantum Gravity, 2018, 35, 015002.	4.0	7
16	The annoying null boundaries. Journal of Physics: Conference Series, 2018, 968, 012003.	0.4	6
17	Non-singular spacetimes with a negative cosmological constant: IV. Stationary black hole solutions with matter fields. Classical and Quantum Gravity, 2018, 35, 035007.	4.0	1
18	Weakly gravitating isotropic waveguides. Classical and Quantum Gravity, 2018, 35, 244001.	4.0	8

#	Article	IF	Citations
19	Non-singular space-times with a negative cosmological constant: V. Boson stars. Letters in Mathematical Physics, 2018, 108, 2009-2030.	1.1	4
20	Weakly trapped surfaces in asymptotically de Sitter spacetimes. Classical and Quantum Gravity, 2018, 35, 135001.	4.0	3
21	Bifurcating Solutions of the Lichnerowicz Equation. Annales Henri Poincare, 2017, 18, 643-679.	1.7	9
22	Shielding linearized gravity. Physical Review D, 2017, 95, .	4.7	5
23	Gravitationally induced phase shift on a single photon. New Journal of Physics, 2017, 19, 033028.	2.9	16
24	Nonsingular spacetimes with a negative cosmological constant: Stationary solutions with matter fields. Physical Review D, 2017, 95, .	4.7	3
25	Energy in higher-dimensional spacetimes. Physical Review D, 2017, 96, .	4.7	5
26	Non-singular space-times with a negative cosmological constant: II. Static solutions of the Einstein–Maxwell equations. Letters in Mathematical Physics, 2017, 107, 1391-1407.	1.1	8
27	Long time existence from interior gluing. Classical and Quantum Gravity, 2017, 34, 145016.	4.0	3
28	Compact singularity-free Kerr–Newman–de Sitter instantons. Physical Review D, 2017, 95, .	4.7	2
29	The cosmological constant and the energy of gravitational radiation. Physical Review D, 2016, 93, .	4.7	24
30	On Differentiability of Volume Time Functions. Annales Henri Poincare, 2016, 17, 2801-2824.	1.7	16
31	The Euclidean quantisation of Kerr-Newman-de Sitter black holes. Journal of High Energy Physics, 2016, 2016, 1-37.	4.7	2
32	Vacuum spacetimes with controlled singularities and without symmetries. Physical Review D, 2015, 92, .	4.7	6
33	Hamiltonian dynamics in the space of asymptotically Kerr–de Sitter spacetimes. Physical Review D, 2015, 92, .	4.7	7
34	Characteristic Initial Data and Smoothness of Scri. I. Framework and Results. Annales Henri Poincare, 2015, 16, 2131-2162.	1.7	15
35	Initial Data Sets with Ends of Cylindrical Type: I. The Lichnerowicz Equation. Annales Henri Poincare, 2015, 16, 1231-1266.	1.7	11
36	THE EXISTENCE THEOREM FOR THE GENERAL RELATIVISTIC CAUCHY PROBLEM ON THE LIGHT-CONE. Forum of Mathematics, Sigma, 2014, 2, .	0.7	14

#	Article	IF	Citations
37	Outer trapped surfaces are dense near MOTSs. Classical and Quantum Gravity, 2014, 31, 045013.	4.0	1
38	A2: Mathematical relativity and other progress in classical gravity theory—a session report. General Relativity and Gravitation, 2014, 46, 1.	2.0	0
39	The mass of light-cones. Classical and Quantum Gravity, 2014, 31, 102001.	4.0	6
40	On maximal globally hyperbolic vacuum space-times. Journal of Fixed Point Theory and Applications, 2013, 14, 325-353.	1.1	7
41	Solutions of the vacuum Einstein equations with initial data on past null infinity. Classical and Quantum Gravity, 2013, 30, 235037.	4.0	16
42	Hamiltonian mass of asymptotically Schwarzschild—de Sitter space-times. Physical Review D, 2013, 87, .	4.7	16
43	KIDs like cones. Classical and Quantum Gravity, 2013, 30, 235036.	4.0	8
44	Initial data sets with ends of cylindrical type: II. The vector constraint equation.. Advances in Theoretical and Mathematical Physics, 2013, 17, 829-865.	0.6	9
45	The many ways of the characteristic Cauchy problem. Classical and Quantum Gravity, 2012, 29, 145006.	4.0	32
46	On Lorentzian causality with continuous metrics. Classical and Quantum Gravity, 2012, 29, 145001.	4.0	48
47	Stationary Black Holes: Uniqueness and Beyond. Living Reviews in Relativity, 2012, 15, 7.	26.7	384
48	Space-time diagrammatics. Physical Review D, 2012, 86, .	4.7	20
49	On free general relativistic initial data on the light cone. Journal of Geometry and Physics, 2012, 62, 578-593.	1.4	11
50	Ghost points in inverse scattering constructions of stationary Einstein metrics. General Relativity and Gravitation, 2011, 43, 1615-1624.	2.0	2
51	The Cauchy Problem on a Characteristic Cone for the Einstein Equations in Arbitrary Dimensions. Annales Henri Poincare, 2011, 12, 419-482.	1.7	41
52	Construction of N-Body Initial Data Sets in General Relativity. Communications in Mathematical Physics, 2011, 304, 637-647.	2.2	23
53	Unique continuation and extensions of Killing vectors at boundaries for stationary vacuum space-times. Journal of Geometry and Physics, 2011, 61, 1249-1257.	1.4	7
54	A lower bound for the mass of axisymmetric connected black hole data sets. Classical and Quantum Gravity, 2011, 28, 125001.	4.0	5

#	Article	IF	Citations
55	Existence of singularities in two-Kerr black holes. Classical and Quantum Gravity, 2011, 28, 245017.	4.0	20
56	SOLUTIONS OF QUASI-LINEAR WAVE EQUATIONS POLYHOMOGENEOUS AT NULL INFINITY IN HIGH DIMENSIONS. Journal of Hyperbolic Differential Equations, 2011, 08, 269-346.	0.5	6
57	Stable causality of the Pomeransky–Senkov black holes. Advances in Theoretical and Mathematical Physics, 2011, 15, 175-178.	0.6	2
58	Uniqueness of static black holes without analyticity. Classical and Quantum Gravity, 2010, 27, 152001.	4.0	5
59	Initial data for the relativistic gravitational N-body problem. Classical and Quantum Gravity, 2010, 27, 222002.	4.0	1
60	Maximal analytic extensions of the Emparan-Reall black ring. Journal of Physics: Conference Series, 2010, 229, 012030.	0.4	0
61	On smoothness of black saturns. Journal of High Energy Physics, 2010, 2010, 1.	4.7	8
62	A Uniqueness Theorem for Degenerate Kerr–Newman Black Holes. Annales Henri Poincare, 2010, 11, 585-609.	1.7	23
63	Conformal boundary extensions of Lorentzian manifolds. Journal of Differential Geometry, 2010, 84, .	1.1	9
64	Mathematical general relativity: A sampler. Bulletin of the American Mathematical Society, 2010, 47, 567-567.	1.5	50
65	On the global structure of the Pomeransky–Senkov black holes. Advances in Theoretical and Mathematical Physics, 2010, 14, 1779-1856.	0.6	6
66	Maximal analytic extensions of the Emparan-Reall black ring. Journal of Differential Geometry, 2010, 85, .	1.1	4
67	Mathematical Aspects of General Relativity. Oberwolfach Reports, 2010, 6, 2585-2646.	0.0	0
68	EINSTEIN CONSTRAINTS ON A CHARACTERISTIC CONE. , 2010, , .		0
69	On higher dimensional black holes with Abelian isometry group. Journal of Mathematical Physics, 2009, 50, 052501.	1.1	16
70	The light-cone theorem. Classical and Quantum Gravity, 2009, 26, 135011.	4.0	15
71	Mass, angular-momentum and charge inequalities for axisymmetric initial data. Classical and Quantum Gravity, 2009, 26, 235013.	4.0	31
72	On Mason's Rigidity Theorem. Communications in Mathematical Physics, 2009, 285, 1-29.	2.2	2

#	Article	IF	Citations
73	Topological Censorship for Kaluza–Klein Space-Times. Annales Henri Poincare, 2009, 10, 893-912.	1.7	34
74	A property of light-cones in Einstein's gravity. Comptes Rendus Mathematique, 2009, 347, 971-977.	0.3	1
75	An angular momentum bound at null infinity. Advances in Theoretical and Mathematical Physics, 2009, 13, 1317-1334.	0.6	2
76	Gluing constructions for asymptotically hyperbolic manifolds with constant scalar curvature. Communications in Analysis and Geometry, 2009, 17, 343-381.	0.4	22
77	Singular Yamabe Metrics and Initial Data with Exactly Kottler–Schwarzschild–de Sitter Ends. Annales Henri Poincare, 2008, 9, 639-654.	1.7	18
78	Mass and angular-momentum inequalities for axi-symmetric initial data sets I. Positivity of mass. Annals of Physics, 2008, 323, 2566-2590.	2.8	44
79	Mass and angular-momentum inequalities for axi-symmetric initial data sets. II. Angular momentum. Annals of Physics, 2008, 323, 2591-2613.	2.8	45
80	The asymptotics of stationary electro-vacuum metrics in odd spacetime dimensions. Classical and Quantum Gravity, 2007, 24, 867-874.	4.0	6
81	The Classification of Static Electro–Vacuum Space–Times Containing an Asymptotically Flat Spacelike Hypersurface with Compact Interior. Communications in Mathematical Physics, 2007, 271, 577-589.	2.2	35
82	Non-Singular, Vacuum, Stationary Space-Times with a Negative Cosmological Constant. Annales Henri Poincare, 2007, 8, 219-239.	1.7	12
83	Killing vectors in asymptotically flat space-times. II. Asymptotically translational Killing vectors and the rigid positive energy theorem in higher dimensions. Journal of Mathematical Physics, 2006, 47, 022502.	1.1	22
84	On Israel–Wilson–Perjés black holes. Classical and Quantum Gravity, 2006, 23, 2519-2540.	4.0	33
85	On non-existence of static vacuum black holes with degenerate components of the event horizon. Classical and Quantum Gravity, 2006, 23, 549-554.	4.0	60
86	The Ernst equation and ergosurfaces. Classical and Quantum Gravity, 2006, 23, 4399-4414.	4.0	6
87	Rigid upper bounds for the angular momentum and centre of mass of non-singular asymptotically anti-de Sitter space-times. Journal of High Energy Physics, 2006, 2006, 084-084.	4.7	28
88	Global solutions of the Einstein–Maxwell equations in higher dimensions. Classical and Quantum Gravity, 2006, 23, 7383-7394.	4.0	23
89	POLYHOMOGENEOUS SOLUTIONS OF NONLINEAR WAVE EQUATIONS WITHOUT CORNER CONDITIONS. Journal of Hyperbolic Differential Equations, 2006, 03, 81-141.	0.5	8
90	A Brief Review of Initial Data Engineering. , 2006, , .		0

#	Article	IF	Citations
91	Initial Data Engineering. Communications in Mathematical Physics, 2005, 257, 29-42.	2.2	50
92	Asymptotically Simple Solutions of the Vacuum Einstein Equations in Even Dimensions. Communications in Mathematical Physics, 2005, 260, 557-577.	2.2	28
93	KIDs are Non-Generic. Annales Henri Poincare, 2005, 6, 155-194.	1.7	50
94	Some potentials for the curvature tensor on three-dimensional manifolds. General Relativity and Gravitation, 2005, 37, 891-905.	2.0	2
95	Boundary value problems for Dirac-type equations. Journal Fur Die Reine Und Angewandte Mathematik, 2005, 2005, 13-73.	0.9	55
96	RECENT RESULTS IN MATHEMATICAL RELATIVITY. , 2005, , .		1
97	BLACK HOLES â€" AN INTRODUCTION. , 2005, , 93-123.		0
98	Radiation fields. Bulletin De La Societe Mathematique De France, 2005, 133, 1-72.	0.2	5
99	Boundary regularity of conformally compact Einstein metrics. Journal of Differential Geometry, 2005, 69, .	1.1	57
100	A poor man's positive energy theorem: II. Null geodesics. Classical and Quantum Gravity, 2004, 21, 4399-4415.	4.0	5
101	Cauchy horizons in Gowdy spacetimes. Classical and Quantum Gravity, 2004, 21, S153-S169.	4.0	12
102	A poor man's positive energy theorem. Classical and Quantum Gravity, 2004, 21, L59-L63.	4.0	10
103	Gluing Initial Data Sets for General Relativity. Physical Review Letters, 2004, 93, 081101.	7.8	21
104	On the dynamics of Gowdy space-times. Communications on Pure and Applied Mathematics, 2004, 57, 1015-1074.	3.1	11
105	Manifold structures for sets of solutions of the general relativistic constraint equations. Journal of Geometry and Physics, 2004, 51, 442-472.	1.4	9
106	The Penrose Inequality. , 2004, , 39-70.		26
107	The Trautman-Bondi mass of hyperboloidal initial data sets. Advances in Theoretical and Mathematical Physics, 2004, 8, 83-139.	0.6	32
108	On Âmany-black-holeÂ vacuum spacetimes. Classical and Quantum Gravity, 2003, 20, 729-754.	4.0	16

#	ARTICLE	IF	CITATIONS
109	The mass of asymptotically hyperbolic Riemannian manifolds. Pacific Journal of Mathematics, 2003, 212, 231-264.	0.5	138
110	On mapping properties of the general relativistic constraints operator in weighted function spaces, with applications. MÃ©moires De La SociÃ©tÃ© MathÃ©matique De France, 2003, 1, 1-103.	0.4	39
111	Non-trivial, static, geodesically complete, vacuum space-times with a negative cosmological constant. Journal of High Energy Physics, 2002, 2002, 063-063.	4.7	46
112	Existence of non-trivial, vacuum, asymptotically simple spacetimes. Classical and Quantum Gravity, 2002, 19, L71-L79.	4.0	91
113	The Hamiltonian Mass and Asymptotically Anti-de Sitter Space-times. Fortschritte Der Physik, 2002, 50, 624-629.	4.4	0
114	On fine differentiability properties of horizons and applications to Riemannian geometry. Journal of Geometry and Physics, 2002, 41, 1-12.	1.4	16
115	Editor's Note: Lectures on General Relativity by Andrzej Trautman. General Relativity and Gravitation, 2002, 34, 715-719.	2.0	2
116	Regularity of Horizons and the Area Theorem. Annales Henri Poincare, 2001, 2, 109-178.	1.7	71
117	The Hamiltonian mass of asymptotically anti-de Sitter space-times. Classical and Quantum Gravity, 2001, 18, L61-L68.	4.0	15
118	Towards the classification of static vacuum spacetimes with negative cosmological constant. Journal of Mathematical Physics, 2001, 42, 1779-1817.	1.1	61
119	The mass of spacelike hypersurfaces in asymptotically anti-de Sitter space-times. Advances in Theoretical and Mathematical Physics, 2001, 5, 697-754.	0.6	42
120	Towards a classification of static electrovacuum spacetimes containing an asymptotically flat spacelike hypersurface with compact interior. Classical and Quantum Gravity, 1999, 16, 689-704.	4.0	31
121	The classification of static vacuum spacetimes containing an asymptotically flat spacelike hypersurface with compact interior. Classical and Quantum Gravity, 1999, 16, 661-687.	4.0	53
122	Horizons Non-Differentiable on a Dense Set. Communications in Mathematical Physics, 1998, 193, 449-470.	2.2	34
123	A remark on differentiability of Cauchy horizons. Classical and Quantum Gravity, 1998, 15, 3845-3848.	4.0	12
124	Uniqueness of the Trautman-Bondi mass. Physical Review D, 1998, 58, .	4.7	27
125	Uniqueness of Scalar Field Energy and Gravitational Energy in the Radiating Regime. Physical Review Letters, 1998, 80, 5052-5055.	7.8	4
126	Killing initial data. Classical and Quantum Gravity, 1997, 14, A83-A92.	4.0	60

#	Article	IF	Citations
127	The Isometry Groups of Asymptotically Flat, Asymptotically Empty Space-Times with Timelike ADM Four-Momentum. Communications in Mathematical Physics, 1997, 188, 585-597.	2.2	11
128	On Rigidity of Analytic Black Holes. Communications in Mathematical Physics, 1997, 189, 1-7.	2.2	35
129	Global Foliations of Vacuum Spacetimes withT2Isometry. Annals of Physics, 1997, 260, 117-148.	2.8	55
130	Killing vectors in asymptotically flat space–times. I. Asymptotically translational Killing vectors and the rigid positive energy theorem. Journal of Mathematical Physics, 1996, 37, 1939-1961.	1.1	58
131	On "Asymptotically Flat" Space-Times with G2-Invariant Cauchy Surfaces. Annals of Physics, 1995, 237, 322-354.	2.8	69
132	Strong Cosmic Censorship in Vacuum Space-Times with Compact, Locally Homogeneous Cauchy Surfaces. Annals of Physics, 1995, 242, 349-385.	2.8	29
133	All electrovacuum Majumdar-Papapetrou spacetimes with non-singular black holes. Classical and Quantum Gravity, 1995, 12, L17-L23.	4.0	21
134	Gravitational waves in general relativity XIV. Bondi expansions and the 'polyhomogeneity' of â„• Philosophical Transactions of the Royal Society: Physical and Engineering Sciences, 1995, 350, 113-141.	1.0	71
135	On the topology of stationary black holes. Classical and Quantum Gravity, 1994, 11, L147-L152.	4.0	91
136	Maximal hypersurfaces in stationary asymptotically flat spacetimes. Communications in Mathematical Physics, 1994, 163, 561-604.	2.2	64
137	On "hyperboloidal"Cauchy data for vacuum einstein equations and obstructions to smoothness of Scri. Communications in Mathematical Physics, 1994, 161, 533-568.	2.2	60
138	On the Dynamics of Generators of Cauchy Horizons. NATO ASI Series Series B: Physics, 1994, , 113-125.	0.2	4
139	On completeness of orbits of Killing vector fields. Classical and Quantum Gravity, 1993, 10, 2091-2101.	4.0	25
140	Hyperboloidal Cauchy data for vacuum Einstein equations and obstructions to smoothness of null infinity. Physical Review Letters, 1993, 70, 2829-2832.	7.8	39
141	Nonisometric vacuum extensions of vacuum maximal globally hyperbolic spacetimes. Physical Review D, 1993, 48, 1616-1628.	4.7	40
142	On the global Structure of Robinson–Trautman space-times. Proceedings of the Royal Society A, 1992, 436, 299-316.	0.9	68
143	On the regularity of solutions to the Yamabe equation and the existence of smooth hyperboloidal initial data for Einstein's field equations. Communications in Mathematical Physics, 1992, 149, 587-612.	2.2	158
144	Non-smoothness of event horizons of Robinson-Trautman black holes. Communications in Mathematical Physics, 1992, 147, 137-162.	2.2	45

#	Article	IF	Citations
145	Semi-global existence and convergence of solutions of the Robinson-Trautman (2-dimensional Calabi) equation. Communications in Mathematical Physics, 1991, 137, 289-313.	2.2	104
146	On maximal surfaces in asymptotically flat space-times. Communications in Mathematical Physics, 1990, 130, 95-109.	2.2	26
147	On space-times with U(1) Ã— U(1) symmetric compact Cauchy surfaces. Annals of Physics, 1990, 202, 100-150.	2.8	102
148	Strong cosmic censorship in polarised Gowdy spacetimes. Classical and Quantum Gravity, 1990, 7, 1671-1680.	4.0	92
149	Asymptotic estimates in Weighted HÃ¶lder spaces for a class of elliptic scale-covariant second order operators. Annales De La FacultÃ© Des Sciences De Toulouse, 1990, 11, 21-37.	0.3	10
150	On the structure of spatial infinity. I. The Geroch structure. Journal of Mathematical Physics, 1989, 30, 2090-2093.	1.1	6
151	On the structure of spatial infinity. II. Geodesically regular Ashtekarâ€"Hansen structures. Journal of Mathematical Physics, 1989, 30, 2094-2100.	1.1	12
152	On the invariant mass conjecture in general relativity. Communications in Mathematical Physics, 1988, 120, 233-248.	2.2	43
153	On angular momentum at spatial infinity. Classical and Quantum Gravity, 1987, 4, L205-L210.	4.0	10
154	Some global charges in classical Yang-Mills theory. Physical Review D, 1987, 36, 1874-1881.	4.7	28
155	A remark on the positive-energy theorem. Classical and Quantum Gravity, 1987, 4, 1049-1049.	4.0	2
156	A remark on the positive-energy theorem. Classical and Quantum Gravity, 1986, 3, L115-L121.	4.0	43
157	Boundary Conditions at Spatial Infinity. , 1986, , 49-59.		47
158	The isometry group and killing spinors for the pp wave space-time in D = 11 supergravity. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1984, 149, 107-110.	4.1	25
159	Positive mass theorems for asymptotically hyperbolic Riemannian manifolds with boundary. Classical and Quantum Gravity, 0, , .	4.0	4
160	Stationary Black Holes: Uniqueness and Beyond. , 0, .		1
161	On the characteristic initial value problem for nonlinear symmetric hyperbolic systems, including Einstein equations. Dissertationes Mathematicae, 0, , 1-72.	1.0	5