

Luis Herrera

List of Publications by Year in descending order

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96
papers

6,179
citations

76326

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69250

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97
all docs

97
docs citations

97
times ranked

591
citing authors

#	ARTICLE	IF	CITATIONS
1	Non-Static Fluid Spheres Admitting a Conformal Killing Vector: Exact Solutions. <i>Universe</i> , 2022, 8, 296.	2.5	11
2	Hyperbolically symmetric static fluids: A general study. <i>Physical Review D</i> , 2021, 103, .	4.7	34
3	Deconstructing Frame-Dragging. <i>Universe</i> , 2021, 7, 27.	2.5	2
4	Complexity of Self-Gravitating Systems. <i>Entropy</i> , 2021, 23, 802.	2.2	10
5	Dynamics of Hyperbolically Symmetric Fluids. <i>Symmetry</i> , 2021, 13, 1568.	2.2	13
6	Hyperbolically Symmetric Versions of Lemaitreâ€“Tolmanâ€“Bondi Spacetimes. <i>Entropy</i> , 2021, 23, 1219.	2.2	14
7	Quasi-homologous evolution of self-gravitating systems with vanishing complexity factor. <i>European Physical Journal C</i> , 2020, 80, 1.	3.9	56
8	Stability of the isotropic pressure condition. <i>Physical Review D</i> , 2020, 101, .	4.7	109
9	The general relativistic double polytrope for anisotropic matter. <i>Physics of the Dark Universe</i> , 2020, 30, 100632.	4.9	21
10	Landauer Principle and General Relativity. <i>Entropy</i> , 2020, 22, 340.	2.2	15
11	Geodesics of the hyperbolically symmetric black hole. <i>Physical Review D</i> , 2020, 101, .	4.7	17
12	The double polytrope for anisotropic matter: Newtonian case. <i>Physics of the Dark Universe</i> , 2020, 28, 100549.	4.9	17
13	Gravitational Radiation, Vorticity And Superâ€“Energy: A Conspicuous Threesome. <i>Universe</i> , 2019, 5, 164.	2.5	3
14	Complexity of the Bondi Metric. <i>Physical Review D</i> , 2019, 99, .	4.7	32
15	Complexity factors for axially symmetric static sources. <i>Physical Review D</i> , 2019, 99, .	4.7	67
16	Causal Heat Conduction Contravening the Fading Memory Paradigm. <i>Entropy</i> , 2019, 21, 950.	2.2	11
17	The transition of a gravitationally radiating, dissipative fluid to equilibrium. <i>Canadian Journal of Physics</i> , 2018, 96, 1010-1015.	1.1	4
18	New definition of complexity for self-gravitating fluid distributions: The spherically symmetric, static case. <i>Physical Review D</i> , 2018, 97, .	4.7	167

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19	Self-similarity in static axially symmetric relativistic fluids. International Journal of Modern Physics D, 2018, 27, 1750176.	2.1	7
20	Definition of complexity for dynamical spherically symmetric dissipative self-gravitating fluid distributions. Physical Review D, 2018, 98, .	4.7	118
21	An Alternative Approach to the Static Spherically Symmetric, Vacuum Global Solution to the Einstein Equations. Advances in High Energy Physics, 2018, 2018, 1-5.	1.1	16
22	Maxwell's Demon and the Problem of Observers in General Relativity. Entropy, 2018, 20, 391.	2.2	1
23	Tilted shear-free axially symmetric fluids. Physical Review D, 2018, 97, .	4.7	13
24	Interior solution for the Kerr metric. Physical Review D, 2017, 95, .	4.7	17
25	The Theory of Gravitation: A Tale of Many Questions and Few Answers. Journal of Physics: Conference Series, 2017, 831, 012001.	0.4	10
26	The Gibbs Paradox, the Landauer Principle and the Irreversibility Associated with Tilted Observers. Entropy, 2017, 19, 110.	2.2	33
27	Maxwell's Demon and Comoving Observers in General Relativity: What Do They Have in Common?. Proceedings (mdpi), 2017, 2, .	0.2	0
28	Physical properties of a source of the Kerr metric: Bound on the surface gravitational potential and conditions for the fragmentation. Physical Review D, 2017, 96, .	4.7	3
29	The space-time outside a source of gravitational radiation: the axially symmetric null fluid. European Physical Journal C, 2016, 76, 1.	3.9	9
30	Earliest stages of the nonequilibrium in axially symmetric, self-gravitating, dissipative fluids. Physical Review D, 2016, 94, .	4.7	16
31	Cracking of general relativistic anisotropic polytropes. Physical Review D, 2016, 93, .	4.7	46
32	Axially symmetric static sources of gravitational field. Classical and Quantum Gravity, 2016, 33, 235005.	4.0	25
33	Physical infeasibility of geodesic dissipative dust as a source of gravitational radiation. Physical Review D, 2015, 91, .	4.7	8
34	Shearing and geodesic axially symmetric perfect fluids that do not produce gravitational radiation. Physical Review D, 2015, 91, .	4.7	16
35	THE MASS OF A BIT OF INFORMATION AND THE BRILLOUIN'S PRINCIPLE. Fluctuation and Noise Letters, 2014, 13, 1450002.	1.5	11
36	Shear-free axially symmetric dissipative fluids. Physical Review D, 2014, 89, .	4.7	39

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37	Dissipative collapse of axially symmetric, general relativistic sources: A general framework and some applications. <i>Physical Review D</i> , 2014, 89, .	4.7	73
38	Radiation and vorticity: the missing link. <i>General Relativity and Gravitation</i> , 2014, 46, 1.	2.0	14
39	Conformally flat polytropes for anisotropic matter. <i>General Relativity and Gravitation</i> , 2014, 46, 1.	2.0	92
40	Newtonian polytropes for anisotropic matter: General framework and applications. <i>Physical Review D</i> , 2013, 87, .	4.7	96
41	General relativistic polytropes for anisotropic matter: The general formalism and applications. <i>Physical Review D</i> , 2013, 88, .	4.7	166
42	Axially symmetric static sources: A general framework and some analytical solutions. <i>Physical Review D</i> , 2013, 87, .	4.7	51
43	Vorticity and entropy production in tilted Szekeres spacetimes. <i>Physical Review D</i> , 2012, 86, .	4.7	28
44	Electromagnetic radiation produces frame dragging. <i>Physical Review D</i> , 2012, 86, .	4.7	9
45	Reversible dissipative processes, conformal motions and Landau damping. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2012, 376, 899-900.	2.1	10
46	Role of electric charge and cosmological constant in structure scalars. <i>Physical Review D</i> , 2011, 84, .	4.7	121
47	Tilted Lemaitre-Tolman-Bondi spacetimes: Hydrodynamic and thermodynamic properties. <i>Physical Review D</i> , 2011, 84, .	4.7	85
48	PHYSICAL CAUSES OF ENERGY DENSITY INHOMOGENIZATION AND STABILITY OF ENERGY DENSITY HOMOGENEITY IN RELATIVISTIC SELF-GRAVITATING FLUIDS. <i>International Journal of Modern Physics D</i> , 2011, 20, 1689-1703.	2.1	83
49	On the stability of the shear-free condition. <i>General Relativity and Gravitation</i> , 2010, 42, 1585-1599.	2.0	117
50	Cavity evolution in relativistic self-gravitating fluids. <i>Classical and Quantum Gravity</i> , 2010, 27, 135017.	4.0	53
51	Lemaitre-Tolman-Bondi dust spacetimes: Symmetry properties and some extensions to the dissipative case. <i>Physical Review D</i> , 2010, 82, .	4.7	62
52	Structure and evolution of self-gravitating objects and the orthogonal splitting of the Riemann tensor. <i>Physical Review D</i> , 2009, 79, .	4.7	219
53	Energetics of the Einstein-Rosen Spacetime. <i>International Journal of Theoretical Physics</i> , 2008, 47, 380-392.	1.2	9
54	Shearing expansion-free spherical anisotropic fluid evolution. <i>Physical Review D</i> , 2008, 78, .	4.7	144

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55	All static spherically symmetric anisotropic solutions of Einstein's equations. <i>Physical Review D</i> , 2008, 77, .	4.7	288
56	THE ISRAEL THEOREM: WHAT IS NATURE TRYING TO TELL US?. <i>International Journal of Modern Physics D</i> , 2008, 17, 557-561.	2.1	17
57	POSSIBLE WAY OUT OF THE HAWKING PARADOX: ERASING THE INFORMATION AT THE HORIZON. <i>International Journal of Modern Physics D</i> , 2008, 17, 2507-2514.	2.1	11
58	Why does gravitational radiation produce vorticity?. <i>Classical and Quantum Gravity</i> , 2007, 24, 2645-2651.	4.0	36
59	Frame dragging and superenergy. <i>Physical Review D</i> , 2007, 76, .	4.7	28
60	Gravitational radiation, vorticity and the electric and magnetic part of Weyl tensor. <i>Journal of Mathematical Physics</i> , 2006, 47, 052502.	1.1	18
61	Some analytical models of radiating collapsing spheres. <i>Physical Review D</i> , 2006, 74, .	4.7	72
62	Frame dragging, vorticity and electromagnetic fields in axially symmetric stationary spacetimes. <i>Classical and Quantum Gravity</i> , 2006, 23, 2395-2408.	4.0	31
63	THE INERTIA OF HEAT AND ITS ROLE IN THE DYNAMICS OF DISSIPATIVE COLLAPSE. <i>International Journal of Modern Physics D</i> , 2006, 15, 2197-2202.	2.1	65
64	Geodesics in a Quasi-Spherical Spacetime: A Case of Gravitational Repulsion. <i>Foundations of Physics Letters</i> , 2005, 18, 21-36.	0.6	25
65	A source of a quasi-spherical space-time: The case for the M^2Q solution. <i>General Relativity and Gravitation</i> , 2005, 37, 873-890.	2.0	13
66	Non-spherical sources of static gravitational fields: Investigating the boundaries of the no-hair theorem. <i>General Relativity and Gravitation</i> , 2005, 37, 1371-1383.	2.0	40
67	Cylindrical collapse and gravitational waves. <i>Classical and Quantum Gravity</i> , 2005, 22, 2407-2413.	4.0	40
68	SHEAR-FREE RADIATING COLLAPSE AND CONFORMAL FLATNESS. <i>International Journal of Modern Physics D</i> , 2004, 13, 583-592.	2.1	74
69	Shear-free and homology conditions for self-gravitating dissipative fluids. <i>Monthly Notices of the Royal Astronomical Society</i> , 2003, 343, 1207-1212.	4.4	59
70	Hyperbolic theories of dissipation: Why and when do we need them?. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2002, 307, 121-130.	2.6	60
71	Conformally flat anisotropic spheres in general relativity. <i>Journal of Mathematical Physics</i> , 2001, 42, 2129.	1.1	101
72	On the influence of gravitational radiation on a gyroscope. <i>Classical and Quantum Gravity</i> , 2000, 17, 3617-3625.	4.0	22

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73	On the role of density inhomogeneity and local anisotropy in the fate of spherical collapse. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1998, 237, 113-118.	2.1	152
74	Geodesics in Lewis space-time. <i>Journal of Mathematical Physics</i> , 1998, 39, 3817-3827.	1.1	19
75	Thermal conduction in systems out of hydrostatic equilibrium. <i>Classical and Quantum Gravity</i> , 1997, 14, 2239-2247.	4.0	57
76	Thermal evolution of compact objects and relaxation time. <i>Monthly Notices of the Royal Astronomical Society</i> , 1997, 287, 161-164.	4.4	74
77	Pre-relaxation Processes in a Radiating Relativistic Sphere. <i>General Relativity and Gravitation</i> , 1997, 29, 1391-1405.	2.0	28
78	Local anisotropy in self-gravitating systems. <i>Physics Reports</i> , 1997, 286, 53-130.	25.6	851
79	Heat waves and thermohaline instability in a fluid. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1995, 201, 33-37.	2.1	29
80	Energy content of a slowly collapsing gravitating sphere. <i>General Relativity and Gravitation</i> , 1995, 27, 1071-1088.	2.0	33
81	Secular stability behaviour of nuclear burning before relaxation. <i>Astrophysics and Space Science</i> , 1995, 229, 105-115.	1.4	12
82	Negative energy density and classical electron models. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1994, 189, 11-14.	2.1	42
83	Time evolution of self-similar scalar soliton stars: A general study. <i>Physical Review D</i> , 1992, 46, 2723-2725.	4.7	5
84	Cracking of self-gravitating compact objects. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1992, 165, 206-210.	2.1	626
85	Self-similar scalar soliton stars in the thin-wall approximation. <i>Physical Review D</i> , 1991, 44, 2286-2294.	4.7	8
86	The Bondi metric and conformal motions. <i>Journal of Mathematical Physics</i> , 1987, 28, 2692-2696.	1.1	5
87	Conformally symmetric radiating spheres in general relativity. <i>Journal of Mathematical Physics</i> , 1986, 27, 2087-2096.	1.1	13
88	Anisotropic spheres admitting a one-parameter group of conformal motions. <i>Journal of Mathematical Physics</i> , 1985, 26, 2018-2023.	1.1	84
89	Confined gravitational fields produced by anisotropic fluids. <i>Journal of Mathematical Physics</i> , 1985, 26, 2847-2849.	1.1	25
90	Perfect fluid spheres admitting a one-parameter group of conformal motions. <i>Journal of Mathematical Physics</i> , 1985, 26, 778-784.	1.1	74

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91	Isotropic and anisotropic charged spheres admitting a one-parameter group of conformal motions. Journal of Mathematical Physics, 1985, 26, 2302-2307.	1.1	169
92	Anisotropic fluids and conformal motions in general relativity. Journal of Mathematical Physics, 1984, 25, 3274-3278.	1.1	134
93	The complexification of a nonrotating sphere: An extension of the Newman-Janis algorithm. Journal of Mathematical Physics, 1982, 23, 2339-2345.	1.1	32
94	An interior solution for the gamma metric. General Relativity and Gravitation, 1982, 14, 97-103.	2.0	33
95	Some models of anisotropic spheres in general relativity. Journal of Mathematical Physics, 1981, 22, 118-125.	1.1	169
96	Adiabatic contraction of anisotropic spheres in general relativity. Astrophysical Journal, 1979, 234, 1094.	4.5	82