

Valerio Faraoni

List of Publications by Year in descending order

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178
papers

9,593
citations

76196

40
h-index

42291

92
g-index

180
all docs

180
docs citations

180
times ranked

3052
citing authors

#	ARTICLE	IF	CITATIONS
1	$f(R)$ of gravity. Reviews of Modern Physics, 2010, 82, 451-497.	1.6	513
2	Cosmology in Scalar-Tensor Gravity. , 2004, , .		513
3	Black Holes in Scalar-Tensor Gravity. Physical Review Letters, 2012, 108, 081103.	2.9	303
4	Inflation and quintessence with nonminimal coupling. Physical Review D, 2000, 62, .	1.6	233
5	Matter instability in modified gravity. Physical Review D, 2006, 74, .	1.6	209
6	Reconstructing the universe history, from inflation to acceleration, with phantom and canonical scalar fields. Physical Review D, 2008, 77, .	1.6	183
7	SUPERQUINTESSENCE. International Journal of Modern Physics D, 2002, 11, 471-481.	0.9	179
8	de Sitter space and the equivalence between $f(R)$ and scalar-tensor gravity. Physical Review D, 2007, 75, .	1.6	174
9	(Pseudo)issue of the conformal frame revisited. Physical Review D, 2007, 75, .	1.6	173
10	Stability of modified gravity models. Physical Review D, 2005, 72, .	1.6	172
11	Einstein Frame or Jordan Frame?. International Journal of Theoretical Physics, 1999, 38, 217-225.	0.5	170
12	Solar system experiments do not yet veto modified gravity models. Physical Review D, 2006, 74, .	1.6	166
13	Modified gravity with $f(R)$ "matter couplings and (non-)geodesic motion. Classical and Quantum Gravity, 2008, 25, 205002.	1.5	162
14	Nonminimal coupling of the scalar field and inflation. Physical Review D, 1996, 53, 6813-6821.	1.6	161
15	Lagrangian description of perfect fluids and modified gravity with an extra force. Physical Review D, 2009, 80, .	1.6	141
16	Beyond Einstein Gravity. , 2011, , .		128
17	Cosmological expansion and local physics. Physical Review D, 2007, 76, .	1.6	119
18	Viability criterion for modified gravity with an extra force. Physical Review D, 2007, 76, .	1.6	119

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19	Cosmological and Black Hole Apparent Horizons. Lecture Notes in Physics, 2015, , .	0.3	101
20	The phase-space view of $f(R)$ gravity. Classical and Quantum Gravity, 2007, 24, 3637-3648.	1.5	97
21	Illusions of general relativity in Brans-Dicke gravity. Physical Review D, 1999, 59, .	1.6	96
22	Phantom cosmology with general potentials. Classical and Quantum Gravity, 2005, 22, 3235-3246.	1.5	93
23	THEORY OF GRAVITATION THEORIES: A NO-PROGRESS REPORT. International Journal of Modern Physics D, 2008, 17, 399-423.	0.9	89
24	Modified gravity and the stability of de Sitter space. Physical Review D, 2005, 72, .	1.6	82
25	Does the mass of a black hole decrease due to the accretion of phantom energy?. Physical Review D, 2008, 78, .	1.6	79
26	The Cauchy problem of $f(R)$ gravity. Classical and Quantum Gravity, 2007, 24, 5667-5679.	1.5	66
27	Covariantizing the interaction between dark energy and dark matter. Physical Review D, 2014, 90, .	1.6	61
28	From nonextensive statistics and black hole entropy to the holographic dark universe. Physical Review D, 2022, 105, .	1.6	60
29	de Sitter attractors in generalized gravity. Physical Review D, 2004, 70, .	1.6	58
30	The $\omega \rightarrow -1$ limit of Brans-Dicke theory. Physics Letters, Section A: General, Atomic and Solid State Physics, 1998, 245, 26-30.	0.9	56
31	Black Hole Entropy in Scalar-Tensor and $f(R)$ Gravity: An Overview. Entropy, 2010, 12, 1246-1263.	1.1	56
32	A Crucial Ingredient of Inflation. International Journal of Theoretical Physics, 2001, 40, 2259-2294.	0.5	55
33	Jebsen-Birkhoff theorem in alternative gravity. Physical Review D, 2010, 81, .	1.6	53
34	Possible end of the universe in a finite future from dark energy with $w < -1$. Physical Review D, 2003, 68, .	1.6	52
35	Correspondence between a scalar field and an effective perfect fluid. Physical Review D, 2012, 85, .	1.6	51
36	Phase space geometry in scalar-tensor cosmology. Annals of Physics, 2005, 317, 366-382.	1.0	50

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37	Cosmological apparent and trapping horizons. <i>Physical Review D</i> , 2011, 84, .	1.6	50
38	Turnaround radius in an accelerated universe with quasi-local mass. <i>Journal of Cosmology and Astroparticle Physics</i> , 2015, 2015, 013-013.	1.9	47
39	Evolving Black Hole Horizons in General Relativity and Alternative Gravity. <i>Galaxies</i> , 2013, 1, 114-179.	1.1	46
40	Making sense of the bizarre behavior of horizons in the McVittie spacetime. <i>Physical Review D</i> , 2012, 85, .	1.6	45
41	Foliation dependence of black hole apparent horizons in spherical symmetry. <i>Physical Review D</i> , 2017, 95, .	1.6	43
42	Turnaround radius in modified gravity. <i>Physics of the Dark Universe</i> , 2016, 11, 11-15.	1.8	42
43	Imperfect fluid description of modified gravities. <i>Physical Review D</i> , 2018, 98, .	1.6	40
44	A Bird's Eye View of $f(R)$ -Gravity. <i>The Open Astronomy Journal</i> , 2010, 3, 49-72.	1.6	39
45	Solving for the dynamics of the universe. <i>American Journal of Physics</i> , 1999, 67, 732-734.	0.3	36
46	Coupled oscillators as models of phantom and scalar field cosmologies. <i>Physical Review D</i> , 2004, 69, .	1.6	36
47	What is the fate of a black hole embedded in an expanding universe?. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2009, 671, 7-9.	1.5	36
48	Hawking temperature of expanding cosmological black holes. <i>Physical Review D</i> , 2007, 76, .	1.6	35
49	Area-law versus $R\ddot{\alpha}$ nyi and Tsallis black hole entropies. <i>Physical Review D</i> , 2021, 104, .	1.6	33
50	Extended quintessence, inflation and stable de Sitter spaces. <i>Classical and Quantum Gravity</i> , 2006, 23, 3005-3015.	1.5	30
51	Scalar field mass in generalized gravity. <i>Classical and Quantum Gravity</i> , 2009, 26, 145014.	1.5	30
52	Position and frequency shifts induced by massive modes of the gravitational wave background in alternative gravity. <i>Physical Review D</i> , 2009, 79, .	1.6	28
53	Comment on "Solar System constraints to general $f(R)$ gravity". <i>Physical Review D</i> , 2008, 77, .	1.6	26
54	Analysis of the Sultana-Dyer cosmological black hole solution of the Einstein equations. <i>Physical Review D</i> , 2009, 80, .	1.6	26

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55	Black holes in the Universe: Generalized Lemaître-Tolman-Bondi solutions. <i>Physical Review D</i> , 2011, 84, .	1.6	26
56	Generalized slow-roll inflation. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2000, 269, 209-213.	0.9	25
57	Are quantization rules for horizon areas universal?. <i>Physical Review D</i> , 2013, 88, .	1.6	25
58	Jordan frame no-hair for spherical scalar-tensor black holes. <i>Physical Review D</i> , 2017, 95, .	1.6	25
59	Spherical inhomogeneous solutions of Einstein and scalar-tensor gravity: A map of the land. <i>Physics Reports</i> , 2021, 925, 1-58.	10.3	25
60	On the tail problem in cosmology. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1992, 170, 413-420.	0.9	24
61	New inhomogeneous universes in scalar-tensor and gravity. <i>Physical Review D</i> , 2017, 96, .	1.6	24
62	Unsettling Physics in the Quantum-Corrected Schwarzschild Black Hole. <i>Symmetry</i> , 2020, 12, 1264.	1.1	24
63	Revisiting the Brans solutions of scalar-tensor gravity. <i>Physical Review D</i> , 2016, 94, .	1.6	23
64	gravity and the chameleon. <i>Physical Review D</i> , 2011, 83, .	1.6	22
65	Horizon thermodynamics and spacetime mappings. <i>Physical Review D</i> , 2014, 89, .	1.6	22
66	Charged McVittie spacetime. <i>Physical Review D</i> , 2014, 89, .	1.6	22
67	TALES OF TAILS IN COSMOLOGY. <i>International Journal of Modern Physics D</i> , 1999, 08, 177-188.	0.9	21
68	On the Total Energy of Open Friedmann-Robertson-Walker Universes. <i>Astrophysical Journal</i> , 2003, 587, 483-486.	1.6	21
69	Campanelli-Lousto and veiled spacetimes. <i>Physical Review D</i> , 2012, 86, .	1.6	21
70	Beyond lensing by the cosmological constant. <i>Physical Review D</i> , 2017, 95, .	1.6	21
71	Palatini gravity as a fixed point. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2008, 665, 135-138.	1.5	20
72	Breakdown of the initial value formulation of scalar-tensor gravity and its physical meaning. <i>Physical Review D</i> , 2008, 78, .	1.6	20

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73	Clifton's spherical solution in $f(R)$ vacuum harbours a naked singularity. <i>Classical and Quantum Gravity</i> , 2009, 26, 195013.	1.5	20
74	Embedding Black Holes and Other Inhomogeneities in the Universe in Various Theories of Gravity: A Short Review. <i>Universe</i> , 2018, 4, 109.	0.9	20
75	When Painlevé-Gullstrand coordinates fail. <i>European Physical Journal C</i> , 2020, 80, 771.	1.4	20
76	Hawking-Hayward quasi-local energy under conformal transformations. <i>Classical and Quantum Gravity</i> , 2016, 33, 145008.	1.5	19
77	Symmetry of Brans-Dicke gravity as a novel solution-generating technique. <i>Physical Review D</i> , 2018, 97, .	1.6	19
78	Thermodynamics of scalar-tensor gravity. <i>Physical Review D</i> , 2021, 103, .	1.6	19
79	Nonstationary gravitational lenses and the Fermat principle. <i>Astrophysical Journal</i> , 1992, 398, 425.	1.6	19
80	Negative energy and stability in scalar-tensor gravity. <i>Physical Review D</i> , 2004, 70, .	1.6	18
81	The horizon-entropy increase law for causal and quasi-local horizons and conformal field redefinitions. <i>Classical and Quantum Gravity</i> , 2011, 28, 175008.	1.5	18
82	The rotation of polarization by gravitational waves. <i>New Astronomy</i> , 2008, 13, 178-181.	0.8	17
83	Lemaître-Tolman-Bondi cosmological wormhole. <i>Physical Review D</i> , 2010, 82, .	1.6	17
84	Scalar field cosmology in phase space. <i>General Relativity and Gravitation</i> , 2013, 45, 103-123.	0.7	17
85	Revisiting the analogue of the Jebsen-Birkhoff theorem in Brans-Dicke gravity. <i>Physical Review D</i> , 2018, 97, .	1.6	16
86	Effects of modified gravity on the turnaround radius in cosmology. <i>Physical Review D</i> , 2018, 98, .	1.6	16
87	Effects of the gravivector and graviscalar fields in $N = 2, 8$ supergravity. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1996, 377, 55-59.	1.5	15
88	Dynamical apparent horizons in inhomogeneous Brans-Dicke universes. <i>Physical Review D</i> , 2012, 86, .	1.6	15
89	Quasilocal energy in modified gravity. <i>Classical and Quantum Gravity</i> , 2016, 33, 015007.	1.5	15
90	New approach to the thermodynamics of scalar-tensor gravity. <i>Physical Review D</i> , 2021, 104, .	1.6	15

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91	First-order thermodynamics of Horndeski gravity. <i>Physical Review D</i> , 2022, 105, .	1.6	15
92	A new solution for inflation. <i>American Journal of Physics</i> , 2001, 69, 372-376.	0.3	14
93	Black holes and wormholes subject to conformal mappings. <i>Physical Review D</i> , 2016, 93, .	1.6	14
94	Conformally Coupled Inflation. <i>Galaxies</i> , 2013, 1, 96-106.	1.1	13
95	Do Newtonian large-scale structure simulations fail to include relativistic effects?. <i>Physical Review D</i> , 2015, 92, .	1.6	13
96	Searching for dynamical black holes in various theories of gravity. <i>Physical Review D</i> , 2021, 103, .	1.6	13
97	First-order thermodynamics of scalar-tensor cosmology. <i>Journal of Cosmology and Astroparticle Physics</i> , 2022, 2022, 053.	1.9	13
98	Equivalence principle, CP violations, and the Higgs-like boson mass. <i>Physical Review D</i> , 1994, 49, 2922-2925.	1.6	12
99	Reply to "A comment on "The Cauchy problem of $f(R)$ gravity". <i>Classical and Quantum Gravity</i> , 2009, 26, 168002.	1.5	12
100	Singularities in scalar-tensor gravity. <i>Physical Review D</i> , 2004, 70, .	1.6	11
101	Are stealth scalar fields stable?. <i>Physical Review D</i> , 2010, 81, .	1.6	11
102	Is the Hawking Quasilocal Energy "Newtonian"? <i>Symmetry</i> , 2015, 7, 2038-2046.	1.1	11
103	Maximum force and cosmic censorship. <i>Physical Review D</i> , 2021, 103, .	1.6	11
104	Turnaround size of non-spherical structures. <i>Physics of the Dark Universe</i> , 2019, 26, 100353.	1.8	10
105	Wyman's other scalar field solution, Sultana's generalization, and their Brans-Dicke and R^2 relatives. <i>Physical Review D</i> , 2019, 100, .	1.6	10
106	A Symmetry of the Einstein-Friedmann Equations for Spatially Flat, Perfect Fluid, Universes. <i>Symmetry</i> , 2020, 12, 147.	1.1	10
107	Stealth metastable state of scalar-tensor thermodynamics. <i>Physical Review D</i> , 2022, 105, .	1.6	10
108	A symmetry of the spatially flat Friedmann equations with barotropic fluids. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2011, 703, 228-231.	1.5	9

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109	No "big trips" for the universe. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2007, 647, 309-312.	1.5	8
110	A common misconception about LIGO detectors of gravitational waves. General Relativity and Gravitation, 2007, 39, 677-684.	0.7	8
111	Interpreting the conformal cousin of the Husain-Martinez-Nuñez spacetime. Physical Review D, 2012, 86, .	1.6	8
112	Cosmological applications of the Brown-York quasilocal mass. Physical Review D, 2017, 96, .	1.6	8
113	A new symmetry of the spatially flat Einstein-Friedmann equations. European Physical Journal C, 2020, 80, 1.	1.4	8
114	Do solar system experiments constrain scalar-tensor gravity?. European Physical Journal C, 2020, 80, 132.	1.4	8
115	Disformal mappings of spherical DHOST geometries. Journal of Cosmology and Astroparticle Physics, 2021, 2021, 037.	1.9	8
116	Analogy between equilibrium beach profiles and closed universes. Physical Review Research, 2019, 1, .	1.3	8
117	Lagrangian formulation of Omori's law and analogy with the cosmic Big Rip. European Physical Journal C, 2020, 80, 445.	1.4	8
118	MULTIPLE IMAGING BY GRAVITATIONAL WAVES. International Journal of Modern Physics D, 1998, 07, 409-429.	0.9	7
119	Averaging inhomogeneities in scalar-tensor cosmology. Classical and Quantum Gravity, 2009, 26, 215005.	1.5	7
120	Paczynski-Wiita-like potential for any static spherical black hole in metric theories of gravity. Physical Review D, 2016, 93, .	1.6	7
121	Revisiting the conformal invariance of Maxwell's equations in curved spacetime. General Relativity and Gravitation, 2019, 51, 1.	0.7	7
122	Two new approaches to the anomalous limit of Brans-Dicke theory to Einstein gravity. Physical Review D, 2019, 99, .	1.6	7
123	Turning a Newtonian analogy for FLRW cosmology into a relativistic problem. Physical Review D, 2020, 102, .	1.6	7
124	Asymptotic flatness and Hawking quasilocal mass. Physical Review D, 2021, 103, .	1.6	7
125	Quasi-geodesics in relativistic gravity. European Physical Journal C, 2021, 81, 22.	1.4	7
126	Three new roads to the Planck scale. American Journal of Physics, 2017, 85, 865-869.	0.3	6

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127	Reply to "Comment on "Maximum force and cosmic censorship"™. Physical Review D, 2021, 104, .	1.6	6
128	Quasilocal mass in scalar-tensor gravity: spherical symmetry. Classical and Quantum Gravity, 2020, 37, 195005.	1.5	6
129	Analogues of glacial valley profiles in particle mechanics and in cosmology. Facets, 2017, 2, 286-300.	1.1	6
130	Multi-fluid cosmology in Einstein gravity: analytical solutions. General Relativity and Gravitation, 2021, 53, 1.	0.7	6
131	Harrison's interpretation of the cosmological redshift revisited. General Relativity and Gravitation, 2010, 42, 851-860.	0.7	5
132	The thickness of glaciers. European Journal of Physics, 2015, 36, 055031.	0.3	5
133	Conformal cosmological black holes: Towards restoring determinism to Einstein theory. European Physical Journal Plus, 2019, 134, 1.	1.2	5
134	Scalar field as a null dust. European Physical Journal C, 2019, 79, 1.	1.4	5
135	Analogy between freezing lakes and the cosmic radiation era. Physical Review Research, 2020, 2, .	1.3	5
136	Generalized McVittie geometry in Horndeski gravity with matter. Physical Review D, 2022, 105, .	1.6	5
137	Cosmological expansion and local systems: a Lemaître-Tolman-Bondi model. General Relativity and Gravitation, 2012, 44, 1479-1487.	0.7	4
138	Volume/area scaling of glaciers and ice caps and their longitudinal profiles. Journal of Glaciology, 2016, 62, 928-932.	1.1	4
139	Simultaneous baldness and cosmic baldness and the Kottler spacetime. Physical Review D, 2018, 97, .	1.6	4
140	Perfect fluid solutions of Brans-Dicke and f(R) cosmology. Annals of Physics, 2018, 391, 65-82.	1.0	4
141	Massive Spin Zero Fields in Cosmology and the Tail-Free Property. Symmetry, 2019, 11, 36.	1.1	4
142	Generalized Fibonacci Numbers, Cosmological Analogies, and an Invariant. Symmetry, 2021, 13, 200.	1.1	4
143	Turnaround physics beyond spherical symmetry. Physical Review D, 2021, 103, .	1.6	4
144	Vaidya geometries and scalar fields with null gradients. European Physical Journal C, 2021, 81, 232.	1.4	4

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145	Nine Years of $f(R)$ Gravity and Cosmology. Thirty Years of Astronomical Discovery With UKIRT, 2014, , 19-32.	0.3	4
146	Geometry of static $w=-1/5$ perfect fluid spheres in general relativity. European Physical Journal C, 2022, 82, 364.	1.4	4
147	Title is missing!. Foundations of Physics, 2002, 32, 773-788.	0.6	3
148	Lemaître model and cosmic mass. General Relativity and Gravitation, 2015, 47, 1.	0.7	3
149	Solving the Vialov Equation of Glaciology in Terms of Elementary Functions. Mathematical Geosciences, 2017, 49, 1057-1067.	1.4	3
150	Modelling the shapes of glaciers: an introduction. European Journal of Physics, 2019, 40, 025802.	0.3	3
151	Cosmological analogies, Lagrangians, and symmetries for convective-radiative heat transfer. European Physical Journal C, 2020, 80, 706.	1.4	3
152	Horizons and Singularity in Clifton's Spherical Solution of $f(R)$ vacuum. Springer Proceedings in Physics, 2011, , 173-181.	0.1	3
153	Helmoltz problem for the Riccati equation from an analogous Friedmann equation. European Physical Journal C, 2022, 82, 13.	1.4	3
154	Pulsation of black holes. General Relativity and Gravitation, 2018, 50, 1.	0.7	2
155	Quasilocal mass and multipole expansion in scalar-tensor gravity. Physical Review D, 2019, 100, .	1.6	2
156	Spacetime mappings of the Brown-York quasilocal energy. European Physical Journal C, 2019, 79, 1.	1.4	2
157	On the extremization of wave energy dissipation rates in equilibrium beach profiles. Journal of Oceanography, 2020, 76, 459-463.	0.7	2
158	Turnaround radius in scalar-tensor gravity with quasilocal mass. Physical Review D, 2020, 102, .	1.6	2
159	Natural phenomena described by the same equation. European Journal of Physics, 2020, 41, 054002.	0.3	2
160	Cosmic Analogues of Classic Variational Problems. Universe, 2020, 6, 71.	0.9	2
161	Revisiting geodesic observers in cosmology. European Physical Journal C, 2021, 81, 1.	1.4	2
162	Gauge-invariant gravitational wave modes in pre-big bang cosmology. European Physical Journal C, 2010, 70, 363-366.	1.4	1

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163	A simplified climate model and maximum entropy production. European Physical Journal Plus, 2020, 135, 1.	1.2	1
164	Maximizing friction in the erosion of glacial valleys. Journal of Glaciology, 2020, 66, 876-879.	1.1	1
165	Lagrangian formulation, a general relativity analogue, and a symmetry of the Vialov equation of glaciology. European Physical Journal Plus, 2020, 135, 1.	1.2	1
166	Analogies between Logistic Equation and Relativistic Cosmology. Symmetry, 2021, 13, 704.	1.1	1
167	Brans-Dicke analogue of the Roberts geometry. Physical Review D, 2021, 103, .	1.6	1
168	Curious case of the Buchdahl-Land-Sultana-Wyman-Ibañez-Sanz spacetime. Physical Review D, 2022, 105, .	1.6	1
169	Turnaround physics beyond spherical symmetry. Journal of Physics: Conference Series, 2021, 2156, 012017.	0.3	1
170	Friedmann-Lemaître-Robertson-Walker cosmology through the lens of gravitoelectromagnetism. Physical Review D, 2022, 105, .	1.6	1
171	When can we compute analytically lookback time, age of the universe, and luminosity distance?. European Physical Journal C, 2022, 82, .	1.4	1
172	Groundwater flow in anisotropic aquifers reduced to the isotropic case. Hydrological Processes, 2004, 18, 1735-1743.	1.1	0
173	ABSENCE OF SCALAR HAIR IN SCALAR-TENSOR GRAVITY. , 2015, , .		0
174	APPARENT HORIZONS FOR BLACK HOLES EMBEDDED IN COSMOLOGICAL BACKGROUNDS. , 2015, , .		0
175	Cosmological Horizons. Lecture Notes in Physics, 2015, , 59-104.	0.3	0
176	Inhomogeneities in Cosmological "Backgrounds" in Einstein Theory. Lecture Notes in Physics, 2015, , 105-165.	0.3	0
177	Basic Physics and the Shape of Glaciers. The Physics Educator, 2020, 02, 2050009.	0.1	0
178	Conceptual Pitfalls in Teaching the Linearized Approximation in Introductory General Relativity. The Physics Educator, 2020, 02, 2020005.	0.1	0