George F R Ellis

List of Publications by Year
in descending order

147 papers	6,000 citations	76196 40 h-index	85405 71 g-index
169 all docs	169 docs citations	169 times ranked	2129 citing authors

#	Article	IF	Citations
1	The emergent universe: inflationary cosmology with no singularity. Classical and Quantum Gravity, 2004, 21, 223-232.	1.5	368
2	The emergent universe: an explicit construction. Classical and Quantum Gravity, 2004, 21, 233-249.	1.5	257
3	Republication of: Relativistic cosmology. General Relativity and Gravitation, 2009, 41, 581-660.	0.7	238
4	Cosmological perturbations and the physical meaning of gauge-invariant variables. Astrophysical Journal, 1992, 395, 34.	1.6	204
5	An emergent universe from a loop. Physical Review D, 2005, 71, .	1.6	186
6	Does the growth of structure affect our dynamical models of the Universe? The averaging, backreaction, and fitting problems in cosmology. Reports on Progress in Physics, 2011, 74, 112901.	8.1	161
7	Scientific method: Defend the integrity of physics. Nature, 2014, 516, 321-323.	13.7	156
8	On the trace-free Einstein equations as a viable alternative to general relativity. Classical and Quantum Gravity, 2011, 28, 225007.	1.5	154
9	Time Drift of Cosmological Redshifts as a Test of the Copernican Principle. Physical Review Letters, 2008, 100, 191303.	2.9	145
10	On the stability of the Einstein static universe. Classical and Quantum Gravity, 2003, 20, L155-L164.	1.5	133
11	Cosmological Models. , 1999, , 1-116.		129
12	Top-down causation and emergence: some comments on mechanisms. Interface Focus, 2012, 2, 126-140.	1.5	128
13	Physics, complexity and causality. Nature, 2005, 435, 743-743.	13.7	119
14	c is the speed of light, isnâ€™t it?. American Journal of Physics, 2005, 73, 240-247.	0.3	118
15	The covariant approach to LRS perfect fluid spacetime geometries. Classical and Quantum Gravity, 1996, 13, 1099-1127.	1.5	115
16	On the definition of distance in general relativity: I. M. H. Etherington (Philosophical Magazine ser. 7,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	0.7	114
17	Covariant perturbations in a multifluid cosmological medium. Astrophysical Journal, 1992, 395, 54.	1.6	109
18	Past attractor in inhomogeneous cosmology. Physical Review D, 2003, 68, .	1.6	100

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19	(Mis)interpreting supernovae observations in a lumpy universe. Monthly Notices of the Royal Astronomical Society, 2012, 426, 1121-1136.	1.6	94
20	On the nature of causation in complex systems. Transactions of the Royal Society of South Africa, 2008, 63, 69-84.	0.8	89
21	Covariant analysis of gravitational waves in a cosmological context. Classical and Quantum Gravity, 1997, 14, 1215-1222.	1.5	88
22	The trace-free Einstein equations and inflation. General Relativity and Gravitation, 2014, 46, 1.	0.7	88
23	Wilkinson Microwave Anisotropy Probe data and the curvature of space. Monthly Notices of the Royal Astronomical Society, 2003, 344, L65-L68.	1.6	87
24	Cosmic microwave background anisotropies: Nonlinear dynamics. Physical Review D, 1999, 59, .	1.6	86
25	Integrability of irrotational silent cosmological models. Classical and Quantum Gravity, 1997, 14, 1151-1162.	1.5	82
26	Causality and the speed of sound. General Relativity and Gravitation, 2007, 39, 1651-1660.	0.7	82
27	Inhomogeneity effects in cosmology. Classical and Quantum Gravity, 2011, 28, 164001.	1.5	79
28	Limits on anisotropy and inhomogeneity from the cosmic background radiation. Physical Review D, 1995, 51, 1525-1535.	1.6	72
29	Top-down causation: an integrating theme within and across the sciences?. Interface Focus, 2012, 2, 1-3.	1.5	66
30	The case for an open Universe. Nature, 1994, 370, 609-615.	13.7	60
31	A gravitational entropy proposal. Classical and Quantum Gravity, 2013, 30, 125009.	1.5	58
32	Relativistic effects in superluminal jets and neutron star winds. Astrophysical Journal, 1990, 361, 470.	1.6	55
33	Physics and the Real World. Physics Today, 2005, 58, 49-54.	0.3	53
34	Blackness of the cosmic microwave background spectrum as a probe of the distance-duality relation. Physical Review D, 2013, 87, .	1.6	51
35	Evolution of the density parameter in inflationary cosmology reexamined. Physical Review D, 1992, 46, 1399-1415.	1.6	50
36	Quasi-Newtonian dust cosmologies. Classical and Quantum Gravity, 1998, 15, 3545-3573.	1.5	48

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37	ISSUES IN THE PHILOSOPHY OF COSMOLOGY. , 2007, , 1183-1285.		48
38	Bounce behaviour in Kantowskiâ€“Sachs and Bianchi cosmologies. Classical and Quantum Gravity, 2006, 23, 6585-6597.	1.5	44
39	Newtonian-like and anti-Newtonian universes. Classical and Quantum Gravity, 1998, 15, 1005-1017.	1.5	43
40	Physics in the real universe: time and spacetime. General Relativity and Gravitation, 2006, 38, 1797-1824.	0.7	43
41	Local freedom in the gravitational field. Classical and Quantum Gravity, 1997, 14, 1927-1936.	1.5	42
42	The physics of infinity. Nature Physics, 2018, 14, 770-772.	6.5	42
43	Disgust: Sensory affect or primary emotional system?. Cognition and Emotion, 2007, 21, 1799-1818.	1.2	37
44	Gravity and Signature Change. General Relativity and Gravitation, 1997, 29, 591-597.	0.7	34
45	83 years of general relativity and cosmology: progress and problems. Classical and Quantum Gravity, 1999, 16, A37-A75.	1.5	34
46	Note on varying speed of light cosmologies. General Relativity and Gravitation, 2007, 39, 511-520.	0.7	33
47	â€œGolden Oldieâ€• The Bianchi Classification in the SchÃ¼cking-Behr Approach. General Relativity and Gravitation, 2003, 35, 475-489.	0.7	32
48	The Dynamical Emergence of Biology From Physics: Branching Causation via Biomolecules. Frontiers in Physiology, 2019, 9, 1966.	1.3	32
49	A two-mass expanding exact space-time solution. General Relativity and Gravitation, 2011, 43, 191-205.	0.7	28
50	Editorial note to: Brandon Carter, Large number coincidences and the anthropic principle in cosmology. General Relativity and Gravitation, 2011, 43, 3213-3223.	0.7	28
51	Contextual Wavefunction collapse: an integrated theory of quantum measurement. New Journal of Physics, 2018, 20, 113025.	1.2	28
52	On general and restricted covariance in general relativity. General Relativity and Gravitation, 1996, 28, 1251-1267.	0.7	27
53	Holonomy in the Schwarzschild-Droste geometry. Classical and Quantum Gravity, 2001, 18, 1217-1233.	1.5	26
54	Patchy solutions. Nature, 2008, 452, 159-161.	13.7	26

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55	Geometrical order-of-magnitude estimates for spatial curvature in realistic models of the Universe. General Relativity and Gravitation, 2009, 41, 2017-2030.	0.7	26
56	Shear free solutions in general relativity theory. General Relativity and Gravitation, 2011, 43, 3253-3268.	0.7	26
57	Consistency of dust solutions with divH=0. Physical Review D, 1997, 55, 5219-5221.	1.6	25
58	Universe or multiverse?. Astronomy and Geophysics, 2008, 49, 2.29-2.33.	0.1	25
59	Time and Spacetime: The Crystallizing Block Universe. International Journal of Theoretical Physics, 2010, 49, 988-1003.	0.5	25
60	How Can Physics Underlie the Mind?. The Frontiers Collection, 2016, , .	0.1	23
61	Affective Neuronal Selection: The Nature of the Primordial Emotion Systems. Frontiers in Psychology, 2012, 3, 589.	1.1	22
62	The evolving block universe and the meshing together of times. Annals of the New York Academy of Sciences, 2014, 1326, 26-41.	1.8	22
63	Cosmic matter flux may turn Hawking radiation off. General Relativity and Gravitation, 2015, 47, 1.	0.7	22
64	On the Raychaudhuri equation. Pramana - Journal of Physics, 2007, 69, 15-22.	0.9	21
65	Almost Birkhoff theorem in general relativity. General Relativity and Gravitation, 2011, 43, 2157-2170.	0.7	21
66	Static trace free Einstein equations and stellar distributions. Physical Review D, 2017, 96, .	1.6	21
67	A theory of everything?. Nature, 2005, 433, 257-259.	13.7	20
68	Discrete Newtonian cosmology. Classical and Quantum Gravity, 2014, 31, 025003.	1.5	19
69	General relativistic analysis of peculiar velocities. Classical and Quantum Gravity, 2001, 18, 5115-5123.	1.5	18
70	Geodesic instability and isotropy of CMWBR. Classical and Quantum Gravity, 1994, 11, 675-688.	1.5	16
71	THE GEOMETRY OF CLASSICAL CHANGE OF SIGNATURE. International Journal of Modern Physics D, 1995, 04, 175-187.	0.9	16
72	Partially locally rotationally symmetric perfect fluid cosmologies. Classical and Quantum Gravity, 2000, 17, 3135-3156.	1.5	16

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73	The shape of the Universe. Nature, 2003, 425, 566-567.	13.7	16
74	Criteria for basic emotions: Seeking DISGUST?. Cognition and Emotion, 2007, 21, 1829-1832.	1.2	16
75	Birkhoff theorem and matter. General Relativity and Gravitation, 2012, 44, 2037-2050.	0.7	16
76	The Causal Closure of Physics in Real World Contexts. Foundations of Physics, 2020, 50, 1057-1097.	0.6	16
77	Causal propagation of geometrical fields in relativistic cosmology. Physical Review D, 1998, 59, .	1.6	15
78	Closed Trapped Surfaces in Cosmology. General Relativity and Gravitation, 2003, 35, 1309-1319.	0.7	15
79	Emergence in Solid State Physics and Biology. Foundations of Physics, 2020, 50, 1098-1139.	0.6	15
80	Note on Signature Change and Colombeau Theory. General Relativity and Gravitation, 2001, 33, 1041-1046.	0.7	14
81	Nonperturbative gravitomagnetic fields. Physical Review D, 1999, 60, .	1.6	13
82	Physics and the Real World. Foundations of Physics, 2006, 36, 227-262.	0.6	13
83	How Downwards Causation Occurs in Digital Computers. Foundations of Physics, 2019, 49, 1253-1277.	0.6	13
84	COSMOLOGY AND LOCAL PHYSICS. International Journal of Modern Physics A, 2002, 17, 2667-2671.	0.5	12
85	Variations on Birkhoffâ€™s theorem. General Relativity and Gravitation, 2013, 45, 2123-2142.	0.7	11
86	The elusive anthropic principle. Nature, 1989, 337, 411-412.	13.7	10
87	Relativistic Cosmology 1999: Issues and Problems. General Relativity and Gravitation, 2000, 32, 1135-1158.	0.7	10
88	Commentary on â€œAn Evolutionarily Informed Education Scienceâ€•by David C. Geary. Educational Psychologist, 2008, 43, 206-213.	4.7	10
89	Top-down effects in the brain. Physics of Life Reviews, 2019, 31, 11-27.	1.5	10
90	Contextual Emergence of Physical Properties. Foundations of Physics, 2020, 50, 481-510.	0.6	10

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91	Tidal forces are gravitational waves. Classical and Quantum Gravity, 2021, 38, 085023.	1.5	10
92	Propagation of jump discontinuities in relativistic cosmology. Physical Review D, 2000, 62, .	1.6	9
93	Particle creation rate for dynamical black holes. European Physical Journal C, 2016, 76, 1.	1.4	9
94	Emergence of Time. Foundations of Physics, 2020, 50, 161-190.	0.6	9
95	Shear-free perturbations of Friedmann-LemaÃ®tre-Robertson-Walker universes. Physical Review D, 2011, 84, .	1.6	8
96	A note on infinities in eternal inflation. General Relativity and Gravitation, 2009, 41, 1475-1484.	0.7	7
97	The data-hypothesis relationship. Genome Biology, 2021, 22, 57.	3.8	7
98	Comment on â€˜â€˜Entropy and the second law: A pedagogical alternative,â€™â€™ by Ralph Baierlein [Am. J. Phys. 62 (1), 15â€“26 (1994)]. American Journal of Physics, 1995, 63, 472-472.	0.3	6
99	Editorial on the GRG special issue on dark energy. General Relativity and Gravitation, 2008, 40, 219-220.	0.7	6
100	Top-down causation and quantum physics. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 11661-11663.	3.3	6
101	The Standard Cosmological Model: Achievements and Issues. Foundations of Physics, 2018, 48, 1226-1245.	0.6	6
102	Transferring energy in general relativity. Classical and Quantum Gravity, 2018, 35, 165007.	1.5	5
103	Data bias. Genome Biology, 2021, 22, 59.	3.8	5
104	On horizons and the Cosmic Landscape. General Relativity and Gravitation, 2006, 38, 1209-1213.	0.7	4
105	Editorial note to: Pascual Jordan, JÃ¼rgen Ehlers and Wolfgang Kundt, Exact solutions of the field equations of the general theory of relativity. General Relativity and Gravitation, 2009, 41, 2179-2189.	0.7	4
106	Editorial note to: E. Lifshitz, On the gravitational stability of the expanding universe. General Relativity and Gravitation, 2017, 49, 1.	0.7	4
107	The myth of a purely rational life. Theology and Science, 2007, 5, 87-100.	0.2	3
108	Editorial note: The issue of plagiarism. General Relativity and Gravitation, 2007, 39, 1969-1970.	0.7	3

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109	Editorial note to: H. P. Robertson, Relativistic cosmology. General Relativity and Gravitation, 2012, 44, 2099-2114.	0.7	2
110	Revenge and forgiveness in the New South Africa. Behavioral and Brain Sciences, 2013, 36, 37-38.	0.4	2
111	Ricci time in the LemaÃ®treâ€“Tolman model and the block universe. General Relativity and Gravitation, 2015, 47, 1.	0.7	2
112	The Domain of Cosmology and the Testing of Cosmological Theories. , 0, , 3-39.		2
113	Can Science Bridge the Is-Ought gap? A Response to Michael Shermer. Theology and Science, 2018, 16, 1-5.	0.2	2
114	A Mathematical Cosmologist Reflects on Deep Ethics: Reflections on Values, Ethics, and Morality. Theology and Science, 2020, 18, 175-189.	0.2	2
115	Teaching of special relativity. American Journal of Physics, 1994, 62, 775-775.	0.3	1
116	Cosmology in South Africa. Astrophysics and Space Science, 1995, 230, 237-262.	0.5	1
117	DYNAMICAL PROPERTIES OF COSMOLOGICAL SOLUTIONS. Journal of Hyperbolic Differential Equations, 2005, 02, 381-395.	0.3	1
118	Group classification of the characteristic initial value equations for a radiating axisymmetric, non-rotating, vacuum spacetime. Classical and Quantum Gravity, 2007, 24, 6007-6017.	1.5	1
119	Preface to the GRG special issue on quantum gravity. General Relativity and Gravitation, 2009, 41, 673-673.	0.7	1
120	Editorial note to: Jerome Kristian and Rainer K. Sachs, Observations in cosmology. General Relativity and Gravitation, 2011, 43, 331-336.	0.7	1
121	Almost Birkhoff theorem. , 2012, , .		1
122	Celebrate the scientific hierarchy. Nature Physics, 2017, 13, 1034-1034.	6.5	1
123	Stephen William Hawking CH CBE. 8 January 1942â€”14 March 2018. Biographical Memoirs of Fellows of the Royal Society, 2019, 66, 267-308.	0.1	1
124	Neuroscience and literacy: an integrative view. Transactions of the Royal Society of South Africa, 2021, 76, 157-188.	0.8	1
125	Fundamental Issues and Problems of Cosmology. Issues in Agroecology, 2011, , 309-320.	0.1	1
126	Mixed bag of 10 big ideas. Physics World, 2003, 16, 40-41.	0.0	1

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127	Commentary on â€œNew Project for a Scientific Psychology: General Schemeâ€•by Mark Solms. Neuropsychoanalysis, 2020, 22, 53-56.	0.1	1
128	PRIORITIES IN SOUTH AFRICAN SCIENCE POLICY IN A CHANGING ECONOMIC AND POLITICAL CONTEXT. Transactions of the Royal Society of South Africa, 1993, 48, 351-373.	0.8	0
129	Confronting the meaning of racism. Ecquid Novi: African Journalism Studies, 2000, 21, 269-271.	0.6	0
130	THE STATE OF COSMOLOGY 2001: TWO VIEWS AND A MIDDLE WAY. , 2002, , .		0
131	Maintaining the standard. Nature, 2002, 416, 132-133.	13.7	0
132	COMMENTS ON COSMOLOGY 2001. , 2003, , .		0
133	THE SPACE OF COSMOLOGICAL SPACEâ€“TIMES. Journal of Hyperbolic Differential Equations, 2005, 02, 331-379.	0.3	0
134	Editorial: The GRG Journal. General Relativity and Gravitation, 2006, 38, 395-396.	0.7	0
135	Alternative explanations of â€œdark energyâ€•in cosmology. , 2010, , .		0
136	A New Dawn for Science in Africa. Science, 2012, 337, 889-889.	6.0	0
137	Lectures on cosmology. , 2014, , .		0
138	The Foundations: Physics and Top-Down Causation. The Frontiers Collection, 2016, , 243-290.	0.1	0
139	Why Reductionism does not Work. , 2021, , 51-92.		0
140	Physics on Edge. Inference, 2017, 3, .	0.0	0
141	Business as Usual. Inference, 2017, 3, .	0.0	0
142	On Testability in Science. Inference, 2017, 3, .	0.0	0
143	Constructing black hole entropy from gravitational collapse. , 2017, , .		0
144	Non-Empirical But Scientific. Inference, 2017, 3, .	0.0	0

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145	Theorists Without a Theory. Inference, 2017, 3, .	0.0	0
146	On the Essence of Discovery. Inference, 2017, 3, .	0.0	0
147	An Interesting Scientific Question. Inference, 2017, 3, .	0.0	0