Stephen Fairhurst

List of Publications by Year in Descending Order

125 papers	19,697 citations	64 h-index	130 g-index
130 ext. papers	22,527 ext. citations	5.9 avg, IF	6.14 L-index

#	Paper	IF	Citations
125	Understanding How Fast Black Holes Spin by Analyzing Data from the Second Gravitational-wave Catalogue. *Astrophysical Journal*, **2022**, 928, 75	4.7	1
124	The Emergence of Structure in the Binary Black Hole Mass Distribution. *Astrophysical Journal Letters*, **2021**, 913, L19	7.9	18
123	Identifying when precession can be measured in gravitational waveforms. *Physical Review D*, **2021**, 103,	4.9	5
122	Measuring gravitational-wave higher-order multipoles. *Physical Review D*, **2021**, 103,	4.9	9
121	Unveiling early black hole growth with multifrequency gravitational wave observations. *Monthly Notices of the Royal Astronomical Society*, **2020**, 500, 4095-4109	4.3	8
120	Two-harmonic approximation for gravitational waveforms from precessing binaries. *Physical Review D*, **2020**, 102,	4.9	15
119	When will we observe binary black holes precessing?. *Physical Review D*, **2020**, 102,	4.9	15
118	Constraining the Inclinations of Binary Mergers from Gravitational-wave Observations. *Astrophysical Journal*, **2019**, 877, 82	4.7	18
117	Localization of transient gravitational wave sources: beyond triangulation. *Classical and Quantum Gravity*, **2018**, 35, 105002	3.3	12
116	Constraining Black Hole Spins with Gravitational-wave Observations. *Astrophysical Journal*, **2018**, 868, 140	4.7	31
115	Localization of binary neutron star mergers with second and third generation gravitational-wave detectors. *Physical Review D*, **2018**, 97,	4.9	19
114	Effects of waveform model systematics on the interpretation of GW150914. *Classical and Quantum Gravity*, **2017**, 34, 104002	3.3	74
113	Upper Limits on the Stochastic Gravitational-Wave Background from Advanced LIGO's First Observing Run. *Physical Review Letters*, **2017**, 118, 121101	7.4	137
112	Directional Limits on Persistent Gravitational Waves from Advanced LIGO's First Observing Run. *Physical Review Letters*, **2017**, 118, 121102	7.4	65
111	First Search for Gravitational Waves from Known Pulsars with Advanced LIGO. *Astrophysical Journal* , **2017**, 839, 12	4.7	107
110	The basic physics of the binary black hole merger GW150914. *Annalen Der Physik*, **2017**, 529, 1600209	2.6	45
109	Upper Limits on Gravitational Waves from Scorpius X-1 from a Model-based Cross-correlation Search in Advanced LIGO Data. *Astrophysical Journal*, **2017**, 847, 47	4.7	35

108	A gravitational-wave standard siren measurement of the Hubble constant. *Nature*, **2017**, 551, 85-88	50.4	413
107	The Emergence of a Lanthanide-rich Kilonova Following the Merger of Two Neutron Stars. *Astrophysical Journal Letters*, **2017**, 848, L27	7.9	353
106	Gravitational Waves and Gamma-Rays from a Binary Neutron Star Merger: GW170817 and GRB 170817A. *Astrophysical Journal Letters*, **2017**, 848, L13	7.9	1614
105	The Environment of the Binary Neutron Star Merger GW170817. *Astrophysical Journal Letters*, **2017**, 848, L28	7.9	89
104	Search for Gravitational Waves Associated with Gamma-Ray Bursts during the First Advanced LIGO Observing Run and Implications for the Origin of GRB 150906B. *Astrophysical Journal*, **2017**, 841, 89	4.7	42
103	Search for Post-merger Gravitational Waves from the Remnant of the Binary Neutron Star Merger GW170817. *Astrophysical Journal Letters*, **2017**, 851, L16	7.9	133
102	Estimating the Contribution of Dynamical Ejecta in the Kilonova Associated with GW170817. *Astrophysical Journal Letters*, **2017**, 850, L39	7.9	127
101	GW170104: Observation of a 50-Solar-Mass Binary Black Hole Coalescence at Redshift 0.2. *Physical Review Letters*, **2017**, 118, 221101	7.4	1609
100	On the Progenitor of Binary Neutron Star Merger GW170817. *Astrophysical Journal Letters*, **2017**, 850, L40	7.9	50
99	GW170608: Observation of a 19 Solar-mass Binary Black Hole Coalescence. *Astrophysical Journal Letters*, **2017**, 851, L35	7.9	809
98	Detecting Binary Compact-object Mergers with Gravitational Waves: Understanding and Improving the Sensitivity of the PyCBC Search. *Astrophysical Journal*, **2017**, 849, 118	4.7	93
97	UPPER LIMITS ON THE RATES OF BINARY NEUTRON STAR AND NEUTRON STAR–BLACK HOLE MERGERS FROM ADVANCED LIGO'S FIRST OBSERVING RUN. *Astrophysical Journal Letters*, **2016**, 832, L21	7.9	130
96	GW150914: Implications for the Stochastic Gravitational-Wave Background from Binary Black Holes. *Physical Review Letters*, **2016**, 116, 131102	7.4	188
95	GW150914: The Advanced LIGO Detectors in the Era of First Discoveries. *Physical Review Letters*, **2016**, 116, 131103	7.4	328
94	SUPPLEMENT: "LOCALIZATION AND BROADBAND FOLLOW-UP OF THE GRAVITATIONAL-WAVE TRANSIENT GW150914" (2016, ApJL, 826, L13). *Astrophysical Journal, Supplement Series*, **2016**, 225, 8	8	38
93	Tests of General Relativity with GW150914. *Physical Review Letters*, **2016**, 116, 221101	7.4	837
92	Properties of the Binary Black Hole Merger GW150914. *Physical Review Letters*, **2016**, 116, 241102	7.4	515
91	GW151226: Observation of Gravitational Waves from a 22-Solar-Mass Binary Black Hole Coalescence. *Physical Review Letters*, **2016**, 116, 241103	7.4	2136

90	ASTROPHYSICAL IMPLICATIONS OF THE BINARY BLACK HOLE MERGER GW150914. *Astrophysical Journal Letters*, **2016**, 818, L22	7.9	512
89	A DARK ENERGY CAMERA SEARCH FOR AN OPTICAL COUNTERPART TO THE FIRST ADVANCED LIGO GRAVITATIONAL WAVE EVENT GW150914. *Astrophysical Journal Letters*, **2016**, 823, L33	7.9	53
88	The PyCBC search for gravitational waves from compact binary coalescence. *Classical and Quantum Gravity*, **2016**, 33, 215004	3.3	263
87	Characterization of the LIGO detectors during their sixth science run. *Classical and Quantum Gravity* , **2015**, 32, 115012	3.3	790
86	PROSPECTS FOR JOINT GRAVITATIONAL WAVE AND SHORT GAMMA-RAY BURST OBSERVATIONS. *Astrophysical Journal*, **2015**, 809, 53	4.7	33
85	DISTINGUISHING COMPACT BINARY POPULATION SYNTHESIS MODELS USING GRAVITATIONAL WAVE OBSERVATIONS OF COALESCING BINARY BLACK HOLES. *Astrophysical Journal*, **2015**, 810, 58	4.7	74
84	SEARCHES FOR CONTINUOUS GRAVITATIONAL WAVES FROM NINE YOUNG SUPERNOVA REMNANTS. *Astrophysical Journal*, **2015**, 813, 39	4.7	58
83	Implementation of an $mathcal{F}$-statistic all-sky search for continuous gravitational waves in Virgo VSR1 data. *Classical and Quantum Gravity*, **2014**, 31, 165014	3.3	27
82	GRAVITATIONAL WAVES FROM KNOWN PULSARS: RESULTS FROM THE INITIAL DETECTOR ERA. *Astrophysical Journal*, **2014**, 785, 119	4.7	109
81	The NINJA-2 project: detecting and characterizing gravitational waveforms modelled using numerical binary black hole simulations. *Classical and Quantum Gravity*, **2014**, 31, 115004	3.3	34
80	Relativistic astrophysics at GR20. *General Relativity and Gravitation*, **2014**, 46, 1	2.3	
79	Parameter estimation on compact binary coalescences with abruptly terminating gravitational waveforms. *Classical and Quantum Gravity*, **2014**, 31, 155005	3.3	41
78	FIRST SEARCHES FOR OPTICAL COUNTERPARTS TO GRAVITATIONAL-WAVE CANDIDATE EVENTS. *Astrophysical Journal, Supplement Series*, **2014**, 211, 7	8	51
77	Constraints on cosmic strings from the LIGO-Virgo gravitational-wave detectors. *Physical Review Letters*, **2014**, 112, 131101	7.4	59
76	Improved upper limits on the stochastic gravitational-wave background from 2009-2010 LIGO and Virgo data. *Physical Review Letters*, **2014**, 113, 231101	7.4	74
75	Enhanced sensitivity of the LIGO gravitational wave detector by using squeezed states of light. *Nature Photonics*, **2013**, 7, 613-619	33.9	572
74	Addendum to The NINJA-2 catalog of hybrid post-Newtonian/numerical-relativity waveforms for non-precessing black-hole binaries *Classical and Quantum Gravity*, **2013**, 30, 199401	3.3	21
73	WHEN CAN GRAVITATIONAL-WAVE OBSERVATIONS DISTINGUISH BETWEEN BLACK HOLES AND NEUTRON STARS?. *Astrophysical Journal Letters*, **2013**, 766, L14	7.9	98

72	Degeneracy between mass and spin in black-hole-binary waveforms. *Physical Review D*, **2013**, 87,	4.9	91
71	IMPLICATIONS FOR THE ORIGIN OF GRB 051103 FROM LIGO OBSERVATIONS. *Astrophysical Journal* , **2012**, 755, 2	4.7	53
70	Scientific objectives of Einstein Telescope. *Classical and Quantum Gravity*, **2012**, 29, 124013	3.3	256
69	The NINJA-2 catalog of hybrid post-Newtonian/numerical-relativity waveforms for non-precessing black-hole binaries. *Classical and Quantum Gravity*, **2012**, 29, 124001	3.3	94
68	Conditioned [corrected] stimulus informativeness governs conditioned stimulus-unconditioned stimulus associability. *Journal of Experimental Psychology*, **2012**, 38, 217-32		32
67	SWIFT FOLLOW-UP OBSERVATIONS OF CANDIDATE GRAVITATIONAL-WAVE TRANSIENT EVENTS. *Astrophysical Journal, Supplement Series*, **2012**, 203, 28	8	57
66	The characterization of Virgo data and its impact on gravitational-wave searches. *Classical and Quantum Gravity*, **2012**, 29, 155002	3.3	59
65	SEARCH FOR GRAVITATIONAL WAVES ASSOCIATED WITH GAMMA-RAY BURSTS DURING LIGO SCIENCE RUN 6 AND VIRGO SCIENCE RUNS 2 AND 3. *Astrophysical Journal*, **2012**, 760, 12	4.7	94
64	Pharmacologic rescue of motivational deficit in an animal model of the negative symptoms of schizophrenia. *Biological Psychiatry*, **2011**, 69, 928-35	7.9	68
63	SEARCH FOR GRAVITATIONAL WAVE BURSTS FROM SIX MAGNETARS. *Astrophysical Journal Letters*, **2011**, 734, L35	7.9	47
62	BEATING THE SPIN-DOWN LIMIT ON GRAVITATIONAL WAVE EMISSION FROM THE VELA PULSAR. *Astrophysical Journal*, **2011**, 737, 93	4.7	75
61	Current status of gravitational wave observations. *General Relativity and Gravitation*, **2011**, 43, 387-407	2.3	4
60	A coherent triggered search for single-spin compact binary coalescences in gravitational wave data. *Classical and Quantum Gravity*, **2011**, 28, 134008	3.3	12
59	Directional limits on persistent gravitational waves using LIGO S5 science data. *Physical Review Letters*, **2011**, 107, 271102	7.4	85
58	Source localization with an advanced gravitational wave detector network. *Classical and Quantum Gravity*, **2011**, 28, 105021	3.3	126
57	A gravitational wave observatory operating beyond the quantum shot-noise limit. *Nature Physics*, **2011**, 7, 962-965	16.2	554
56	SEARCHES FOR GRAVITATIONAL WAVES FROM KNOWN PULSARS WITH SCIENCE RUN 5 LIGO DATA. *Astrophysical Journal*, **2010**, 713, 671-685	4.7	140
55	Predictions for the rates of compact binary coalescences observable by ground-based gravitational-wave detectors. *Classical and Quantum Gravity*, **2010**, 27, 173001	3.3	869

54	SEARCH FOR GRAVITATIONAL-WAVE INSPIRAL SIGNALS ASSOCIATED WITH SHORT GAMMA-RAY BURSTS DURING LIGO'S FIFTH AND VIRGO'S FIRST SCIENCE RUN. *Astrophysical Journal*, **2010**, 715, 1453-1461	4.7	79
53	SEARCH FOR GRAVITATIONAL-WAVE BURSTS ASSOCIATED WITH GAMMA-RAY BURSTS USING DATA FROM LIGO SCIENCE RUN 5 AND VIRGO SCIENCE RUN 1. *Astrophysical Journal*, **2010**, 715, 1438-1452	4.7	54
52	FIRST SEARCH FOR GRAVITATIONAL WAVES FROM THE YOUNGEST KNOWN NEUTRON STAR. *Astrophysical Journal*, **2010**, 722, 1504-1513	4.7	95
51	All-sky LIGO search for periodic gravitational waves in the early fifth-science-run data. *Physical Review Letters*, **2009**, 102, 111102	7.4	77
50	Glutaminase-deficient mice display hippocampal hypoactivity, insensitivity to pro-psychotic drugs and potentiated latent inhibition: relevance to schizophrenia. *Neuropsychopharmacology*, **2009**, 34, 2305-22	8.7	65
49	Testing gravitational-wave searches with numerical relativity waveforms: results from the first Numerical INJection Analysis (NINJA) project. *Classical and Quantum Gravity*, **2009**, 26, 165008	3.3	98
48	Searching for binary coalescences with inspiral templates: detection and parameter estimation. *Classical and Quantum Gravity*, **2009**, 26, 114009	3.3	10
47	The loudest event statistic: general formulation, properties and applications. *Classical and Quantum Gravity*, **2009**, 26, 175009	3.3	39
46	Status of NINJA: the Numerical INJection Analysis project. *Classical and Quantum Gravity*, **2009**, 26, 114008	3.3	36
45	Triangulation of gravitational wave sources with a network of detectors. *New Journal of Physics*, **2009**, 11, 123006	2.9	122
44	An upper limit on the stochastic gravitational-wave background of cosmological origin. *Nature*, **2009**, 460, 990-4	50.4	267
43	STACKED SEARCH FOR GRAVITATIONAL WAVES FROM THE 2006 SGR 1900+14 STORM. *Astrophysical Journal*, **2009**, 701, L68-L74	4.7	40
42	Impaired timing precision produced by striatal D2 receptor overexpression is mediated by cognitive and motivational deficits. *Behavioral Neuroscience*, **2009**, 123, 720-30	2.1	61
41	Extremality conditions for isolated and dynamical horizons. *Physical Review D*, **2008**, 77,	4.9	52
40	The Mock LISA Data Challenges: from Challenge 1B to Challenge 3. *Classical and Quantum Gravity*, **2008**, 25, 184026	3.3	50
39	Astrophysically triggered searches for gravitational waves: status and prospects. *Classical and Quantum Gravity*, **2008**, 25, 114051	3.3	24
38	A hierarchical search for gravitational waves from supermassive black hole binary mergers. *Classical and Quantum Gravity*, **2008**, 25, 184027	3.3	13
37	Interpreting the results of searches for gravitational waves from coalescing binaries. *Classical and Quantum Gravity*, **2008**, 25, 105002	3.3	25

36	First joint search for gravitational-wave bursts in LIGO and GEO 600 data. *Classical and Quantum Gravity*, **2008**, 25, 245008	3.3	19
35	Report on the second Mock LISA data challenge. *Classical and Quantum Gravity*, **2008**, 25, 114037	3.3	34
34	Search for gravitational-wave bursts from soft gamma repeaters. *Physical Review Letters*, **2008**, 101, 211102	7.4	64
33	Implications for the Origin of GRB 070201 from LIGO Observations. *Astrophysical Journal*, **2008**, 681, 1419-1430	4.7	126
32	Beating the Spin-Down Limit on Gravitational Wave Emission from the Crab Pulsar. *Astrophysical Journal*, **2008**, 683, L45-L49	4.7	148
31	Host Galaxies Catalog Used in LIGO Searches for Compact Binary Coalescence Events. *Astrophysical Journal*, **2008**, 675, 1459-1467	4.7	109
30	Optimizing Workflow Data Footprint. *Scientific Programming*, **2007**, 15, 249-268	1.4	23
29	Transient overexpression of striatal D2 receptors impairs operant motivation and interval timing. *Journal of Neuroscience*, **2007**, 27, 7731-9	6.6	167
28	Search for gravitational-wave bursts in LIGO data from the fourth science run. *Classical and Quantum Gravity*, **2007**, 24, 5343-5369	3.3	70
27	Searching for a Stochastic Background of Gravitational Waves with the Laser Interferometer Gravitational-Wave Observatory. *Astrophysical Journal*, **2007**, 659, 918-930	4.7	107
26	Isolated, slowly evolving, and dynamical trapping horizons: Geometry and mechanics from surface deformations. *Physical Review D*, **2007**, 75,	4.9	66
25	Search for gravitational-wave bursts in LIGO's third science run. *Classical and Quantum Gravity*, **2006**, 23, S29-S39	3.3	36
24	Pavlovian contingencies and temporal information. *Journal of Experimental Psychology*, **2006**, 32, 284-94		25
23	A first comparison of search methods for gravitational wave bursts using LIGO and Virgo simulated data. *Classical and Quantum Gravity*, **2005**, 22, S1293-S1301	3.3	14
22	Status of the joint LIGO TAMA300 inspiral analysis. *Classical and Quantum Gravity*, **2005**, 22, S1109-S1118	3.3	4
21	Horizon energy and angular momentum from a Hamiltonian perspective. *Classical and Quantum Gravity*, **2005**, 22, 4515-4550	3.3	34
20	Limits on gravitational-wave emission from selected pulsars using LIGO data. *Physical Review Letters*, **2005**, 94, 181103	7.4	109
19	Upper limits on a stochastic background of gravitational waves. *Physical Review Letters*, **2005**, 95, 221101	7.4	69

18	Searching for gravitational waves from binary inspirals with LIGO. *Classical and Quantum Gravity*, **2004**, 21, S1625-S1633	3.3	31
17	Plans for the LIGO□TAMA joint search for gravitational wave bursts. *Classical and Quantum Gravity*, **2004**, 21, S1801-S1807	3.3	5
16	The first law for slowly evolving horizons. *Physical Review Letters*, **2004**, 92, 011102	7.4	88
15	Canonical phase space formulation of quasi-local general relativity. *Classical and Quantum Gravity*, **2003**, 20, 4507-4531	3.3	6
14	Effects of dopamine antagonists on the timing of two intervals. *Pharmacology Biochemistry and Behavior*, **2003**, 75, 9-15	3.9	91
13	Quantum gravity, shadow states and quantum mechanics. *Classical and Quantum Gravity*, **2003**, 20, 1031-1061	3.3	179
12	Scalar Timing in Animals and Humans. *Learning and Motivation*, **2002**, 33, 156-176	1.3	59
11	DISTORTED BLACK HOLES WITH CHARGE. *International Journal of Modern Physics D*, **2001**, 10, 691-709	2.2	41
10	Mechanics of isolated horizons. *Classical and Quantum Gravity*, **2000**, 17, 253-298	3.3	165
9	Isolated horizons: Hamiltonian evolution and the first law. *Physical Review D*, **2000**, 62,	4.9	223
8	Phase advance after one or three simulated dawns in humans. *Chronobiology International*, **2000**, 17, 659-68	3.6	26
7	Generic isolated horizons and their applications. *Physical Review Letters*, **2000**, 85, 3564-7	7.4	186
6	Isolated horizons: a generalization of black hole mechanics. *Classical and Quantum Gravity*, **1999**, 16, L1-L7	3.3	157
5	Timing processes in the reinforcement-omission effect. *Learning and Behavior*, **1995**, 23, 286-296		14
4	Ratio versus difference comparators in choice. *Journal of the Experimental Analysis of Behavior*, **1994**, 62, 409-34	2.1	20
3	Dawn and dusk simulation as a therapeutic intervention. *Biological Psychiatry*, **1989**, 25, 966-70	7.9	73
2	Scalar expectancy theory and choice between delayed rewards. *Psychological Review*, **1988**, 95, 102-14	6.3	165
1	Timing the second response in two-response avoidance. *Journal of the Experimental Analysis of Behavior*, **1983**, 39, 199-211	2.1	2