Stefan Danilishin

List of Publications by Year
in descending order

114 papers	24,792 citations	30070 54 h-index	22832 112 g-index
114 all docs	114 docs citations	114 times ranked	12314 citing authors

#	Article	IF	Citations
1	Observation of Gravitational Waves from a Binary Black Hole Merger. Physical Review Letters, 2016, 116, 061102.	7.8	8,753
2	Advanced LIGO. Classical and Quantum Gravity, 2015, 32, 074001.	4.0	1,929
3	The Einstein Telescope: a third-generation gravitational wave observatory. Classical and Quantum Gravity, 2010, 27, 194002.	4.0	1,211
4	Characterization of the LIGO detectors during their sixth science run. Classical and Quantum Gravity, 2015, 32, 115012.	4.0	1,029
5	LIGO: the Laser Interferometer Gravitational-Wave Observatory. Reports on Progress in Physics, 2009, 72, 076901.	20.1	971
6	Predictions for the rates of compact binary coalescences observable by ground-based gravitational-wave detectors. Classical and Quantum Gravity, 2010, 27, 173001.	4.0	956
7	Enhanced sensitivity of the LIGO gravitational wave detector by using squeezed states of light. Nature Photonics, 2013, 7, 613-619.	31.4	825
8	A gravitational wave observatory operating beyond the quantum shot-noise limit. Nature Physics, 2011, 7, 962-965.	16.7	716
9	Sensitivity studies for third-generation gravitational wave observatories. Classical and Quantum Gravity, 2011, 28, 094013.	4.0	644
10	ASTROPHYSICAL IMPLICATIONS OF THE BINARY BLACK HOLE MERGER GW150914. Astrophysical Journal Letters, 2016, 818, L22.	8.3	633
11	GW150914: The Advanced LIGO Detectors in the Era of First Discoveries. Physical Review Letters, 2016, 116, 131103.	7.8	466
12	Prospects for Observing and Localizing Gravitational-Wave Transients with Advanced LIGO and Advanced Virgo. Living Reviews in Relativity, 2016, 19, 1.	26.7	427
13	Scientific objectives of Einstein Telescope. Classical and Quantum Gravity, 2012, 29, 124013.	4.0	355
14	An upper limit on the stochastic gravitational-wave background of cosmological origin. Nature, 2009, 460, 990-994.	27.8	303
15	The third generation of gravitational wave observatories and their science reach. Classical and Quantum Gravity, 2010, 27, 084007.	4.0	287
16	GW150914: Implications for the Stochastic Gravitational-Wave Background from Binary Black Holes. Physical Review Letters, 2016, 116, 131102.	7.8	269
17	Search for gravitational waves from low mass compact binary coalescence in LIGOâ€™s sixth science run and Virgoâ€™s science runs 2 and 3. Physical Review D, 2012, 85, .	4.7	185
18	SEARCHES FOR GRAVITATIONAL WAVES FROM KNOWN PULSARS WITH SCIENCE RUN 5 LIGO DATA. Astrophysical Journal, 2010, 713, 671-685.	4.5	155

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19	Quantum Measurement Theory in Gravitational-Wave Detectors. Living Reviews in Relativity, 2012, 15, 5.	26.7	134
20	Parameter estimation for compact binary coalescence signals with the first generation gravitational-wave detector network. Physical Review D, 2013, 88, .	4.7	132
21	GRAVITATIONAL WAVES FROM KNOWN PULSARS: RESULTS FROM THE INITIAL DETECTOR ERA. Astrophysical Journal, 2014, 785, 119.	4.5	125
22	Observation of a kilogram-scale oscillator near its quantum ground state. New Journal of Physics, 2009, 11, 073032.	2.9	123
23	Search for gravitational waves from low mass binary coalescences in the first year of LIGOâ€™s S5 data. Physical Review D, 2009, 79, .	4.7	120
24	Calibration of the LIGO gravitational wave detectors in the fifth science run. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 624, 223-240.	1.6	120
25	Search for gravitational waves from compact binary coalescence in LIGO and Virgo data from S5 and VSR1. Physical Review D, 2010, 82, .	4.7	111
26	All-sky search for gravitational-wave bursts in the first joint LIGO-GEO-Virgo run. Physical Review D, 2010, 81, .	4.7	107
27	All-sky search for gravitational-wave bursts in the second joint LIGO-Virgo run. Physical Review D, 2012, 85, .	4.7	107
28	Search for gravitational waves from low mass compact binary coalescence in 186 days of LIGOâ€™s fifth science run. Physical Review D, 2009, 80, .	4.7	105
29	FIRST SEARCH FOR GRAVITATIONAL WAVES FROM THE YOUNGEST KNOWN NEUTRON STAR. Astrophysical Journal, 2010, 722, 1504-1513.	4.5	104
30	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.	4.5	104
31	Directional Limits on Persistent Gravitational Waves Using LIGO S5 Science Data. Physical Review Letters, 2011, 107, 271102.	7.8	94
32	Search for gravitational waves from binary black hole inspiral, merger, and ringdown in LIGO-Virgo data from 2009â€“2010. Physical Review D, 2013, 87, .	4.7	92
33	Einstein@Home all-sky search for periodic gravitational waves in LIGO S5 data. Physical Review D, 2013, 87, .	4.7	91
34	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.	4.5	90
35	BEATING THE SPIN-DOWN LIMIT ON GRAVITATIONAL WAVE EMISSION FROM THE VELA PULSAR. Astrophysical Journal, 2011, 737, 93.	4.5	89
36	Standard Quantum Limit for Probing Mechanical Energy Quantization. Physical Review Letters, 2009, 103, 100402.	7.8	88

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37	Improved Upper Limits on the Stochastic Gravitational-Wave Background from 2009â€“2010 LIGO and Virgo Data. Physical Review Letters, 2014, 113, 231101.	7.8	86
38	Search for gravitational waves from binary black hole inspiral, merger, and ringdown. Physical Review D, 2011, 83, .	4.7	85
39	Implementation and testing of the first prompt search forÂgravitational wave transients with electromagnetic counterparts. Astronomy and Astrophysics, 2012, 539, A124.	5.1	84
40	Search for gravitational-wave bursts in the first year of the fifth LIGO science run. Physical Review D, 2009, 80, .	4.7	79
41	Preparing a Mechanical Oscillator in Non-Gaussian Quantum States. Physical Review Letters, 2010, 105, 070403.	7.8	79
42	Einstein@Home search for periodic gravitational waves in early S5 LIGO data. Physical Review D, 2009, 80, .	4.7	78
43	First low-latency LIGO+Virgo search for binary inspirals and their electromagnetic counterparts. Astronomy and Astrophysics, 2012, 541, A155.	5.1	75
44	The characterization of Virgo data and its impact on gravitational-wave searches. Classical and Quantum Gravity, 2012, 29, 155002.	4.0	73
45	Testing the generalized uncertainty principle with macroscopic mechanical oscillators and pendulums. Physical Review D, 2019, 100, .	4.7	70
46	Constraints on Cosmic Strings from the LIGO-Virgo Gravitational-Wave Detectors. Physical Review Letters, 2014, 112, 131101.	7.8	68
47	All-sky search for periodic gravitational waves in the full S5 LIGO data. Physical Review D, 2012, 85, .	4.7	66
48	SEARCHES FOR CONTINUOUS GRAVITATIONAL WAVES FROM NINE YOUNG SUPERNOVA REMNANTS. Astrophysical Journal, 2015, 813, 39.	4.5	66
49	Directed search for continuous gravitational waves from the Galactic center. Physical Review D, 2013, 88, .	4.7	65
50	SWIFT FOLLOW-UP OBSERVATIONS OF CANDIDATE GRAVITATIONAL-WAVE TRANSIENT EVENTS. Astrophysical Journal, Supplement Series, 2012, 203, 28.	7.7	62
51	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.	4.5	60
52	IMPLICATIONS FOR THE ORIGIN OF GRB 051103 FROM LIGO OBSERVATIONS. Astrophysical Journal, 2012, 755, 2.	4.5	60
53	First all-sky search for continuous gravitational waves from unknown sources in binary systems. Physical Review D, 2014, 90, .	4.7	60
54	FIRST SEARCHES FOR OPTICAL COUNTERPARTS TO GRAVITATIONAL-WAVE CANDIDATE EVENTS. Astrophysical Journal, Supplement Series, 2014, 211, 7.	7.7	57

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55	SEARCH FOR GRAVITATIONAL WAVE BURSTS FROM SIX MAGNETARS. Astrophysical Journal Letters, 2011, 734, L35.	8.3	55
56	Search for gravitational waves associated with the August 2006 timing glitch of the Vela pulsar. Physical Review D, 2011, 83, .	4.7	54
57	Narrowing the Filter-Cavity Bandwidth in Gravitational-Wave Detectors via Optomechanical Interaction. Physical Review Letters, 2014, 113, 151102.	7.8	51
58	Search for gravitational waves from intermediate mass binary black holes. Physical Review D, 2012, 85, .	4.7	48
59	Directed search for gravitational waves from Scorpius X-1 with initial LIGO data. Physical Review D, 2015, 91, .	4.7	47
60	First LIGO search for gravitational wave bursts from cosmic (super)strings. Physical Review D, 2009, 80, .	4.7	45
61	STACKED SEARCH FOR GRAVITATIONAL WAVES FROM THE 2006 SGR 1900+14 STORM. Astrophysical Journal, 2009, 701, L68-L74.	4.5	45
62	QND measurements for future gravitational-wave detectors. General Relativity and Gravitation, 2011, 43, 671-694.	2.0	43
63	Upper limits on a stochastic gravitational-wave background using LIGO and Virgo interferometers at 600â€“1000Â Hz. Physical Review D, 2012, 85, .	4.7	43
64	The NINJA-2 project: detecting and characterizing gravitational waveforms modelled using numerical binary black hole simulations. Classical and Quantum Gravity, 2014, 31, 115004.	4.0	42
65	Sensitivity limitations in optical speed meter topology of gravitational-wave antennas. Physical Review D, 2004, 69, .	4.7	41
66	Double optical spring enhancement for gravitational-wave detectors. Physical Review D, 2008, 78, .	4.7	39
67	Searching for stochastic gravitational waves using data from the two colocated LIGO Hanford detectors. Physical Review D, 2015, 91, .	4.7	39
68	Advanced quantum techniques for future gravitational-wave detectors. Living Reviews in Relativity, 2019, 22, 1.	26.7	39
69	Search for gravitational wave ringdowns from perturbed black holes in LIGO S4 data. Physical Review D, 2009, 80, .	4.7	38
70	Probing macroscopic quantum states with a sub-Heisenberg accuracy. Physical Review A, 2010, 81, .	2.5	38
71	Narrow-band search of continuous gravitational-wave signals from Crab and Vela pulsars in Virgo VSR4 data. Physical Review D, 2015, 91, .	4.7	37
72	Search for gravitational radiation from intermediate mass black hole binaries in data from the second LIGO-Virgo joint science run. Physical Review D, 2014, 89, .	4.7	35

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73	Implementation of an $mathcal{F}$-statistic all-sky search for continuous gravitational waves in Virgo VSR1 data. Classical and Quantum Gravity, 2014, 31, 165014.	4.0	34
74	Search for high frequency gravitational-wave bursts in the first calendar year of LIGOâ€™s fifth science run. Physical Review D, 2009, 80, .	4.7	32
75	A first search for coincident gravitational waves and high energy neutrinos using LIGO, Virgo and ANTARES data from 2007. Journal of Cosmology and Astroparticle Physics, 2013, 2013, 008-008.	5.4	32
76	Search for Gravitational Waves Associated with<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î³</mml:mi></mml:math>-ray Bursts Detected by the Interplanetary Network. Physical Review Letters, 2014, 113, 011102.	7.8	32
77	First low frequency all-sky search for continuous gravitational wave signals. Physical Review D, 2016, 93, .	4.7	32
78	Search for long-lived gravitational-wave transients coincident with long gamma-ray bursts. Physical Review D, 2013, 88, .	4.7	31
79	Multimessenger search for sources of gravitational waves and high-energy neutrinos: Initial results for LIGO-Virgo and IceCube. Physical Review D, 2014, 90, .	4.7	29
80	Methods and results of a search for gravitational waves associated with gamma-ray bursts using the GEO 600, LIGO, and Virgo detectors. Physical Review D, 2014, 89, .	4.7	29
81	All-sky search for long-duration gravitational wave transients with initial LIGO. Physical Review D, 2016, 93, .	4.7	29
82	Search for gravitational wave ringdowns from perturbed intermediate mass black holes in LIGO-Virgo data from 2005â€“2010. Physical Review D, 2014, 89, .	4.7	28
83	Achieving ground state and enhancing optomechanical entanglement by recovering information. New Journal of Physics, 2010, 12, 083032.	2.9	24
84	A new quantum speed-meter interferometer: measuring speed to search for intermediate mass black holes. Light: Science and Applications, 2018, 7, 11.	16.6	24
85	Universal quantum entanglement between an oscillator and continuous fields. Physical Review A, 2010, 81, .	2.5	23
86	Quantum noise of a Michelson-Sagnac interferometer with a translucent mechanical oscillator. Physical Review A, 2010, 81, .	2.5	23
87	Negative optical inertia for enhancing the sensitivity of future gravitational-wave detectors. Physical Review D, 2011, 83, .	4.7	21
88	Application of a Hough search for continuous gravitational waves on data from the fifth LIGO science run. Classical and Quantum Gravity, 2014, 31, 085014.	4.0	21
89	Quantum noise of non-ideal Sagnac speed meter interferometer with asymmetries. New Journal of Physics, 2015, 17, 043031.	2.9	21
90	Laser interferometry with translucent and absorbing mechanical oscillators. New Journal of Physics, 2011, 13, 093017.	2.9	20

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91	Interferometer readout noise below the standard quantum limit of a membrane. Physical Review A, 2012, 85, .	2.5	20
92	First joint observation by the underground gravitational-wave detector KAGRA with GEO 600. Progress of Theoretical and Experimental Physics, 2022, 2022, .	6.6	20
93	Observation of three-mode parametric instability. Physical Review A, 2015, 91, .	2.5	19
94	Quantum Optomechanics. Progress in Optics, 2016, 61, 113-236.	0.6	17
95	Search of the Orion spur for continuous gravitational waves using a loosely coherent algorithm on data from LIGO interferometers. Physical Review D, 2016, 93, .	4.7	17
96	Practical design of the optical lever intracavity topology of gravitational-wave detectors. Physical Review D, 2006, 73, .	4.7	16
97	Local-oscillator noise coupling in balanced homodyne readout for advanced gravitational wave detectors. Physical Review D, 2015, 92, .	4.7	16
98	Speedmeter scheme for gravitational-wave detectors based on EPR quantum entanglement. Physics Letters, Section A: General, Atomic and Solid State Physics, 2018, 382, 2219-2225.	2.1	11
99	The discrete sampling variation measurement. Physics Letters, Section A: General, Atomic and Solid State Physics, 2000, 278, 123-128.	2.1	10
100	Optimizing the regimes of the Advanced LIGO gravitational wave detector for multiple source types. Physical Review D, 2008, 78, .	4.7	9
101	Time evolution of parametric instability in large-scale gravitational-wave interferometers. Physical Review D, 2014, 90, .	4.7	9
102	A Sagnac interferometer as a gravitational-wave third-generation detector. Moscow University Physics Bulletin (English Translation of Vestnik Moskovskogo Universiteta, Fizika), 2014, 69, 519-528.	0.4	8
103	Effects of static and dynamic higher-order optical modes in balanced homodyne readout for future gravitational waves detectors. Physical Review D, 2017, 95, .	4.7	7
104	Stroboscopic variation measurement. Physics Letters, Section A: General, Atomic and Solid State Physics, 2002, 300, 547-558.	2.1	6
105	Quantum noise cancellation in asymmetric speed metres with balanced homodyne readout. New Journal of Physics, 2018, 20, 103040.	2.9	5
106	Negative optical inertia in optomechanical systems. Optics and Spectroscopy (English Translation of) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	0.6	4
107	Three mode interaction noise in laser interferometer gravitational wave detectors. Classical and Quantum Gravity, 2014, 31, 145002.	4.0	3
108	Concepts and research for future detectors. General Relativity and Gravitation, 2014, 46, 1.	2.0	2

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109	Fundamental limits of laser power stabilization via a radiation pressure transfer scheme. Optics Letters, 2020, 45, 3969.	3.3	2
110	Enhancing high frequency sensitivity of gravitational wave detectors with a Sagnac interferometer. Physical Review D, 2021, 104, .	4.7	2
111	Quantum speed meter in laser gravitational antennas. Optics and Spectroscopy (English Translation) Tj ETQq1 1 0.784314 rgBT /Overlo	0.6	1
112	Trade-off between quantum and thermal fluctuations in mirror coatings yields improved sensitivity of gravitational-wave interferometers. Physical Review D, 2012, 86, .	4.7	1
113	Publisherâ€™s Note: Search for gravitational waves associated with the August 2006 timing glitch of the Vela pulsar [Phys. Rev. D83, 042001 (2011)]. Physical Review D, 2011, 83, .	4.7	0
114	Demonstration of a switchable damping system to allow low-noise operation of high- Q low-mass suspension systems. Physical Review D, 2017, 96, .	4.7	0