Kenneth A Strain

List of Publications by Year
in descending order

159	9,600	70961 41	37111 96
papers	citations	h-index	g-index

161	161	161	6025
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	First joint observation by the underground gravitational-wave detector KAGRA with GEO 600. Progress of Theoretical and Experimental Physics, 2022, 2022, .	1.8	20
2	A Gravitational-wave Measurement of the Hubble Constant Following the Second Observing Run of Advanced LIGO and Virgo. Astrophysical Journal, 2021, 909, 218.	1.6	144
3	LIGO detector characterization in the second and third observing runs. Classical and Quantum Gravity, 2021, 38, 135014.	1.5	128
4	Approaching the motional ground state of a 10-kg object. Science, 2021, 372, 1333-1336.	6.0	59
5	Environmental noise in advanced LIGO detectors. Classical and Quantum Gravity, 2021, 38, 145001.	1.5	38
6	Experimental investigation of the limitations of polarisation optics for future gravitational wave detectors based on the polarisation Sagnac speedmeter. Classical and Quantum Gravity, 2021, 38, 195004.	1.5	1
7	First Demonstration of 6ÂdB Quantum Noise Reduction in a Kilometer Scale Gravitational Wave Observatory. Physical Review Letters, 2021, 126, 041102.	2.9	50
8	Direct limits for scalar field dark matter from a gravitational-wave detector. Nature, 2021, 600, 424-428.	13.7	43
9	Point Absorber Limits to Future Gravitational-Wave Detectors. Physical Review Letters, 2021, 127, 241102.	2.9	3
10	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. Living Reviews in Relativity, 2020, 23, 3.	8.2	447
11	Modulated Differential Wavefront Sensing: Alignment Scheme for Beams with Large Higher Order Mode Content. Galaxies, 2020, 8, 81.	1.1	1
12	Local active isolation of the AEI-SAS for the AEI 10 m prototype facility. Classical and Quantum Gravity, 2020, 37, 115004.	1.5	3
13	Comparison of different sloshing speedmeters. Classical and Quantum Gravity, 2020, 37, 085022.	1.5	2
14	A cryogenic silicon interferometer for gravitational-wave detection. Classical and Quantum Gravity, 2020, 37, 165003.	1.5	120
15	Improving the robustness of the advanced LIGO detectors to earthquakes. Classical and Quantum Gravity, 2020, 37, 235007.	1.5	11
16	Lowest observed surface and weld losses in fused silica fibres for gravitational wave detectors. Classical and Quantum Gravity, 2020, 37, 195019.	1.5	9
17	Quantum-Enhanced Advanced LIGO Detectors in the Era of Gravitational-Wave Astronomy. Physical Review Letters, 2019, 123, 231107.	2.9	359
18	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. Living Reviews in Relativity, 2018, 21, 3.	8.2	808

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19	Quantum noise cancellation in asymmetric speed metres with balanced homodyne readout. New Journal of Physics, 2018, 20, 103040.	1.2	5
20	Matrix heater in the gravitational wave observatory GEO 600. Optics Express, 2018, 26, 22687.	1.7	12
21	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. , 2018, 21, 1.		2
22	Experimental demonstration of coupled optical springs. Classical and Quantum Gravity, 2017, 34, 035020.	1.5	3
23	The basic physics of the binary black hole merger GW150914. Annalen Der Physik, 2017, 529, 1600209.	0.9	69
24	Quantum correlation measurements in interferometric gravitational-wave detectors. Physical Review A, 2017, 95, .	1.0	16
25	Effects of static and dynamic higher-order optical modes in balanced homodyne readout for future gravitational waves detectors. Physical Review D, 2017, 95, .	1.6	7
26	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.	1.6	52
27	First Demonstration of Electrostatic Damping of Parametric Instability at Advanced LIGO. Physical Review Letters, 2017, 118, 151102.	2.9	24
28	Candidates for a possible third-generation gravitational wave detector: comparison of ring-Sagnac and sloshing-Sagnac speedmeter interferometers. Classical and Quantum Gravity, 2017, 34, 024001.	1.5	13
29	Effects of transients in LIGO suspensions on searches for gravitational waves. Review of Scientific Instruments, 2017, 88, 124501.	0.6	6
30	Huddle test measurement of a near Johnson noise limited geophone. Review of Scientific Instruments, 2017, 88, 115008.	0.6	13
31	Passive-performance, analysis, and upgrades of a 1-ton seismic attenuation system. Classical and Quantum Gravity, 2017, 34, 065002.	1.5	4
32	Demonstration of a switchable damping system to allow low-noise operation of high- Q low-mass suspension systems. Physical Review D, 2017, 96, .	1.6	0
33	Demonstration of an optical spring in the 100 g mirror regime. Classical and Quantum Gravity, 2016, 33, 075007.	1.5	4
34	Characterization of transient noise in Advanced LIGO relevant to gravitational wave signal GW150914. Classical and Quantum Gravity, 2016, 33, 134001.	1.5	225
35	Interferometer techniques for gravitational-wave detection. Living Reviews in Relativity, 2016, 19, 3.	8.2	48
36	Prospects for Observing and Localizing Gravitational-Wave Transients with Advanced LIGO and Advanced Virgo. Living Reviews in Relativity, 2016, 19, 1.	8.2	427

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37	GEO 600 and the GEO-HF upgrade program: successes and challenges. Classical and Quantum Gravity, 2016, 33, 075009.	1.5	86
38	High power and ultra-low-noise photodetector for squeezed-light enhanced gravitational wave detectors. Optics Express, 2016, 24, 20107.	1.7	14
39	Local-oscillator noise coupling in balanced homodyne readout for advanced gravitational wave detectors. Physical Review D, 2015, 92, .	1.6	16
40	New design of electrostatic mirror actuators for application in high-precision interferometry. Classical and Quantum Gravity, 2015, 32, 175021.	1.5	0
41	Upper limit to the transverse to longitudinal motion coupling of a waveguide mirror. Classical and Quantum Gravity, 2015, 32, 175005.	1.5	0
42	Costâ€“benefit analysis for commissioning decisions in GEO 600. Classical and Quantum Gravity, 2015, 32, 135014.	1.5	1
43	Limitations of Underactuated Modal Damping for Multistage Vibration Isolation Systems. IEEE/ASME Transactions on Mechatronics, 2015, 20, 393-404.	3.7	6
44	Enhanced characteristics of fused silica fibers using laser polishing. Classical and Quantum Gravity, 2014, 31, 105006.	1.5	15
45	Advanced techniques in GEO 600. Classical and Quantum Gravity, 2014, 31, 224002.	1.5	77
46	A source of illumination for low-noise â€˜Violin-Modeâ€™ shadow sensors, intended for use in interferometric gravitational wave detectors. Measurement Science and Technology, 2014, 25, 125111.	1.4	4
47	Thermal correction of astigmatism in the gravitational wave observatory GEOâ€‰600. Classical and Quantum Gravity, 2014, 31, 065008.	1.5	8
48	Design of a speed meter interferometer proof-of-principle experiment. Classical and Quantum Gravity, 2014, 31, 215009.	1.5	29
49	Progress and challenges in advanced ground-based gravitational-wave detectors. General Relativity and Gravitation, 2014, 46, 1.	0.7	2
50	Concepts and research for future detectors. General Relativity and Gravitation, 2014, 46, 1.	0.7	2
51	Experimental test of higher-order Laguerreâ€“Gauss modes in the 10 m Glasgow prototype interferometer. Classical and Quantum Gravity, 2013, 30, 035004.	1.5	29
52	Enhanced sensitivity of the LIGO gravitational wave detector by using squeezed states of light. Nature Photonics, 2013, 7, 613-619.	15.6	825
53	Optical layout for a 10 m Fabryâ€“Perot Michelson interferometer with tunable stability. Classical and Quantum Gravity, 2012, 29, 075003.	1.5	9
54	A new method for the absolute amplitude calibration of GEOâ€‰600. Classical and Quantum Gravity, 2012, 29, 065001.	1.5	4

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55	Sensors and actuators for the Advanced LIGO mirror suspensions. Classical and Quantum Gravity, 2012, 29, 115005.	1.5	65
56	Status of the AEI 10 m prototype. Classical and Quantum Gravity, 2012, 29, 145005.	1.5	4
57	Design and development of the advanced LIGO monolithic fused silica suspension. Classical and Quantum Gravity, 2012, 29, 035003.	1.5	88
58	The output mode cleaner of GEO 600. Classical and Quantum Gravity, 2012, 29, 055009.	1.5	11
59	Suspension platform interferometer for the AEI 10 m prototype: concept, design and optical layout. Classical and Quantum Gravity, 2012, 29, 095024.	1.5	11
60	Update on quadruple suspension design for Advanced LIGO. Classical and Quantum Gravity, 2012, 29, 235004.	1.5	123
61	Damping and local control of mirror suspensions for laser interferometric gravitational wave detectors. Review of Scientific Instruments, 2012, 83, 044501.	0.6	19
62	Seismic attenuation system for the AEI 10 meter Prototype. Classical and Quantum Gravity, 2012, 29, 245007.	1.5	13
63	The AEI 10 m Prototype Interferometer frequency control using the reference cavity and its angular control. Journal of Physics: Conference Series, 2012, 363, 012012.	0.3	1
64	Scientific objectives of Einstein Telescope. Classical and Quantum Gravity, 2012, 29, 124013.	1.5	355
65	Design of the 10 m AEI prototype facility for interferometry studies. Applied Physics B: Lasers and Optics, 2012, 106, 551-557.	1.1	13
66	Translational, rotational, and vibrational coupling into phase in diffractively coupled optical cavities. Optics Letters, 2011, 36, 2746.	1.7	4
67	Sensitivity studies for third-generation gravitational wave observatories. Classical and Quantum Gravity, 2011, 28, 094013.	1.5	644
68	First results from the â€˜Violin-Modeâ€™ tests on an advanced LIGO suspension at MIT. Classical and Quantum Gravity, 2011, 28, 245001.	1.5	11
69	Apparatus for dimensional characterization of fused silica fibers for the suspensions of advanced gravitational wave detectors. Review of Scientific Instruments, 2011, 82, 044502.	0.6	12
70	Invited Article: CO2 laser production of fused silica fibers for use in interferometric gravitational wave detector mirror suspensions. Review of Scientific Instruments, 2011, 82, 011301.	0.6	37
71	Control and automatic alignment of the output mode cleaner of GEO 600. Journal of Physics: Conference Series, 2010, 228, 012014.	0.3	5
72	Designs of the frequency reference cavity for the AEI 10 m Prototype interferometer. Journal of Physics: Conference Series, 2010, 228, 012028.	0.3	2

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73	Lateral input-optic displacement in a diffractive Fabry-Perot cavity. Journal of Physics: Conference Series, 2010, 228, 012022.	0.3	1
74	Towards a Suspension Platform Interferometer for the AEI 10 m Prototype Interferometer. Journal of Physics: Conference Series, 2010, 228, 012027.	0.3	2
75	The upgrade of GEO 600. Journal of Physics: Conference Series, 2010, 228, 012012.	0.3	79
76	Commissioning of the tuned DC readout at GEO 600. Journal of Physics: Conference Series, 2010, 228, 012013.	0.3	5
77	Interferometer Techniques for Gravitational-Wave Detection. Living Reviews in Relativity, 2010, 13, 1.	8.2	63
78	Violin mode amplitude glitch monitor for the presence of excess noise on the monolithic silica suspensions of GEO 600. Classical and Quantum Gravity, 2010, 27, 155017.	1.5	3
79	The third generation of gravitational wave observatories and their science reach. Classical and Quantum Gravity, 2010, 27, 084007.	1.5	287
80	The AEI 10 m prototype interferometer. Classical and Quantum Gravity, 2010, 27, 084023.	1.5	25
81	The Einstein Telescope: a third-generation gravitational wave observatory. Classical and Quantum Gravity, 2010, 27, 194002.	1.5	1,211
82	Experimental demonstration of a suspended, diffractively coupled Fabryâ€“Perot cavity. Classical and Quantum Gravity, 2010, 27, 084029.	1.5	1
83	AIGO: a southern hemisphere detector for the worldwide array of ground-based interferometric gravitational wave detectors. Classical and Quantum Gravity, 2010, 27, 084005.	1.5	20
84	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.	1.6	90
85	DC-readout of a signal-recycled gravitational wave detector. Classical and Quantum Gravity, 2009, 26, 055012.	1.5	64
86	Finite element modelling of the mechanical loss of silica suspension fibres for advanced gravitational wave detectors. Classical and Quantum Gravity, 2009, 26, 215012.	1.5	32
87	Coupling of lateral grating displacement to the output ports of a diffractive Fabryâ€“Perot cavity. Journal of Optics, 2009, 11, 085502.	1.5	9
88	Experimental demonstration of a suspended diffractively coupled optical cavity. Optics Letters, 2009, 34, 3184.	1.7	8
89	Large interferometers for small displacements: a technological view of gravitational wave detection. , 2009, , .		3
90	Techniques in the optimization of length sensing and control systems for a three-mirror coupled cavity. Classical and Quantum Gravity, 2008, 25, 235003.	1.5	1

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91	Measurement and simulation of laser power noise in GEO 600. Classical and Quantum Gravity, 2008, 25, 035003.	1.5	3
92	Novel sensing and control schemes for a three-mirror coupled cavity. Classical and Quantum Gravity, 2007, 24, 3825-3836.	1.5	7
93	Photon-pressure-induced test mass deformation in gravitational-wave detectors. Classical and Quantum Gravity, 2007, 24, 5681-5688.	1.5	15
94	Demonstration and comparison of tuned and detuned signal recycling in a large-scale gravitational wave detector. Classical and Quantum Gravity, 2007, 24, 1513-1523.	1.5	27
95	Charge measurement and mitigation for the main test masses of the GEO 600 gravitational wave observatory. Classical and Quantum Gravity, 2007, 24, 6379-6391.	1.5	28
96	Optical modulation techniques for length sensing and control of optical cavities. Applied Optics, 2007, 46, 7739.	2.1	3
97	Physical instrumental vetoes for gravitational-wave burst triggers. Physical Review D, 2007, 76, .	1.6	11
98	The GEO-HF project. Classical and Quantum Gravity, 2006, 23, S207-S214.	1.5	133
99	Status of the GEO600 detector. Classical and Quantum Gravity, 2006, 23, S71-S78.	1.5	123
100	Linear projection of technical noise for interferometric gravitational-wave detectors. Classical and Quantum Gravity, 2006, 23, 527-537.	1.5	20
101	Robust vetoes for gravitational-wave burst triggers using known instrumental couplings. Classical and Quantum Gravity, 2006, 23, 5825-5837.	1.5	10
102	Control sideband generation for dual-recycled laser interferometric gravitational wave detectors. Classical and Quantum Gravity, 2006, 23, 5661-5666.	1.5	2
103	Search for gravitational-wave bursts in LIGO's third science run. Classical and Quantum Gravity, 2006, 23, S29-S39.	1.5	40
104	Laser amplitude stabilization for advanced interferometric gravitational wave detectors. Classical and Quantum Gravity, 2005, 22, 4279-4283.	1.5	12
105	Results from the first burst hardware injections performed on GEO 600. Classical and Quantum Gravity, 2005, 22, 3015-3028.	1.5	9
106	Feedforward correction of mirror misalignment fluctuations for the GEO 600 gravitational wave detector. Classical and Quantum Gravity, 2005, 22, 3093-3104.	1.5	2
107	The status of GEO 600. Classical and Quantum Gravity, 2005, 22, S193-S198.	1.5	27
108	Optimal time-domain combination of the two calibrated output quadratures of GEO 600. Classical and Quantum Gravity, 2005, 22, 4253-4261.	1.5	20

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109	Upper Limits on a Stochastic Background of Gravitational Waves. Physical Review Letters, 2005, 95, 221101.	2.9	89
110	Signal based vetoes for the detection of gravitational waves from inspiralling compact binaries. Physical Review D, 2005, 72, .	1.6	11
111	Damping and tuning of the fibre violin modes in monolithic silica suspensions. Classical and Quantum Gravity, 2004, 21, S923-S933.	1.5	26
112	Status of GEO 600. Classical and Quantum Gravity, 2004, 21, S417-S423.	1.5	85
113	Squeezed light for the interferometric detection of high-frequency gravitational waves. Classical and Quantum Gravity, 2004, 21, S1045-S1051.	1.5	24
114	Towards dual recycling with the aid of time and frequency domain simulations. Classical and Quantum Gravity, 2004, 21, S991-S998.	1.5	3
115	Calibration of the dual-recycled GEO 600 detector for the S3 science run. Classical and Quantum Gravity, 2004, 21, S1711-S1722.	1.5	15
116	Commissioning, characterization and operation of the dual-recycled GEO 600. Classical and Quantum Gravity, 2004, 21, S1737-S1745.	1.5	15
117	Alignment control of GEO 600. Classical and Quantum Gravity, 2004, 21, S441-S449.	1.5	19
118	Dual recycling for GEO 600. Classical and Quantum Gravity, 2004, 21, S473-S480.	1.5	35
119	Principles of calibrating the dual-recycled GEO 600. Review of Scientific Instruments, 2004, 75, 4702-4709.	0.6	17
120	An investigation of eddy-current damping of multi-stage pendulum suspensions for use in interferometric gravitational wave detectors. Review of Scientific Instruments, 2004, 75, 4516-4522.	0.6	12
121	Automatic beam alignment for the mode-cleaner cavities of GEO 600. Applied Optics, 2004, 43, 1938.	2.1	4
122	The status of GEO 600. , 2004, , .		2
123	Sensing and control of the advanced LIGO optical configuration. , 2004, , .		6
124	Seismic isolation and suspension systems for Advanced LIGO. , 2004, , .		18
125	Sensing and control in dual-recycling laser interferometer gravitational-wave detectors. Applied Optics, 2003, 42, 1244.	2.1	47
126	Calibration of the power-recycled gravitational wave detector, GEO 600. Review of Scientific Instruments, 2003, 74, 4184-4190.	0.6	16

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127	Mode-cleaning and injection optics of the gravitational-wave detector GEO600. Review of Scientific Instruments, 2003, 74, 3787-3795.	0.6	27
128	A report on the status of the GEO 600 gravitational wave detector. Classical and Quantum Gravity, 2003, 20, S581-S591.	1.5	14
129	Detector characterization in GEO 600. Classical and Quantum Gravity, 2003, 20, S731-S739.	1.5	0
130	Calibration of GEO 600 for the S1 science run. Classical and Quantum Gravity, 2003, 20, S885-S893.	1.5	19
131	PQMon: a powerful veto for burst events. Classical and Quantum Gravity, 2003, 20, S895-S902.	1.5	17
132	Status of the GEO600 gravitational wave detector. , 2003, , .		2
133	Comparison of advanced gravitational-wave detectors. Physical Review D, 2002, 65, .	1.6	17
134	Quadruple suspension design for Advanced LIGO. Classical and Quantum Gravity, 2002, 19, 4043-4058.	1.5	73
135	The GEO 600 gravitational wave detector. Classical and Quantum Gravity, 2002, 19, 1377-1387.	1.5	284
136	Data acquisition and detector characterization of GEO600. Classical and Quantum Gravity, 2002, 19, 1399-1407.	1.5	15
137	Performance of a 1200 m long suspended Fabryâ€“Perot cavity. Classical and Quantum Gravity, 2002, 19, 1389-1397.	1.5	12
138	The modecleaner system and suspension aspects of GEO 600. Classical and Quantum Gravity, 2002, 19, 1835-1842.	1.5	21
139	Dual recycling for GEO 600. Classical and Quantum Gravity, 2002, 19, 1547-1553.	1.5	19
140	The automatic alignment system of GEO 600. Classical and Quantum Gravity, 2002, 19, 1849-1855.	1.5	14
141	Silica research in Glasgow. Classical and Quantum Gravity, 2002, 19, 1655-1662.	1.5	17
142	Narrow-band phase noise measurement around an electro-optically applied, RF phase modulation of a laser field. Journal of Optics, 2001, 3, 196-199.	1.5	2
143	Toward gravitational wave detection. AIP Conference Proceedings, 2000, , .	0.3	0
144	The status of GEO600. AIP Conference Proceedings, 2000, , .	0.3	2

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145	Suspension design for GEO 600â€"an update. AIP Conference Proceedings, 2000, , .	0.3	1
146	Modeling of multistage pendulums: Triple pendulum suspension for GEO 600. Review of Scientific Instruments, 2000, 71, 2546-2551.	0.6	15
147	GEO 600 triple pendulum suspension system: Seismic isolation and control. Review of Scientific Instruments, 2000, 71, 2539-2545.	0.6	81
148	Automatic beam alignment in the Garching 30-m prototype of a laser-interferometric gravitational wave detector. Optics Communications, 1999, 160, 321-334.	1.0	18
149	Response of a Fabryâ€"Perot optical cavity to phase modulation sidebands for use in electro-optic control systems: errata. Applied Optics, 1998, 37, 4936.	2.1	2
150	Experimental Demonstration of a Suspended Dual Recycling Interferometer for Gravitational Wave Detection. Physical Review Letters, 1998, 81, 5493-5496.	2.9	66
151	Aspects of the suspension system for GEO 600. Review of Scientific Instruments, 1998, 69, 3055-3061.	0.6	41
152	Response of a Fabryâ€"Perot optical cavity to phase modulation sidebands for use in electro-optic control systems. Applied Optics, 1997, 36, 6802.	2.1	6
153	Test of an 18â€mâ€long suspended modecleaner cavity. Review of Scientific Instruments, 1996, 67, 2443-2448.	0.6	19
154	The Glasgow 10â€‰m prototype laser interferometric gravitational wave detector. Review of Scientific Instruments, 1995, 66, 4447-4452.	0.6	48
155	Experimental demonstration of the use of a Fabryâ€"Perot cavity as a mirror of variable reflectivity. Review of Scientific Instruments, 1994, 65, 799-802.	0.6	8
156	Light scattering described in the mode picture. Applied Optics, 1994, 33, 7547.	2.1	19
157	Modulation, signal, and quantum noise in interferometers. Physical Review A, 1991, 44, 4693-4703.	1.0	51
158	Wave-front distortion in laser-interferometric gravitational-wave detectors. Physical Review D, 1991, 43, 3117-3130.	1.6	20
159	Experimental demonstration of dual recycling for interferometric gravitational-wave detectors. Physical Review Letters, 1991, 66, 1391-1394.	2.9	87