Borja Sorazu

List of Publications by Year
in descending order

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Version: 2024-02-01

63	5,296	218381	182168
papers	citations	26 h-index	51 g-index

63	63	63	5505
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Enhanced sensitivity of the LIGO gravitational wave detector by using squeezed states of light. Nature Photonics, 2013, 7, 613-619.	15.6	825
2	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
3	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
4	Prospects for Observing and Localizing Gravitational-Wave Transients with Advanced LIGO and Advanced Virgo. Living Reviews in Relativity, 2016, 19, 1.	8.2	427
5	Quantum-Enhanced Advanced LIGO Detectors in the Era of Gravitational-Wave Astronomy. Physical Review Letters, 2019, 123, 231107.	2.9	359
6	Scientific objectives of Einstein Telescope. Classical and Quantum Gravity, 2012, 29, 124013.	1.5	355
7	Sensitivity of the Advanced LIGO detectors at the beginning of gravitational wave astronomy. Physical Review D, 2016, 93, .	1.6	286
8	Characterization of transient noise in Advanced LIGO relevant to gravitational wave signal GW150914. Classical and Quantum Gravity, 2016, 33, 134001.	1.5	225
9	Sensitivity and performance of the Advanced LIGO detectors in the third observing run. Physical Review D, 2020, 102, .	1.6	196
10	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
11	LIGO detector characterization in the second and third observing runs. Classical and Quantum Gravity, 2021, 38, 135014.	1.5	128
12	Identification and mitigation of narrow spectral artifacts that degrade searches for persistent gravitational waves in the first two observing runs of Advanced LIGO. Physical Review D, 2018, 97, .	1.6	104
13	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
14	GEO 600 and the GEO-HF upgrade program: successes and challenges. Classical and Quantum Gravity, 2016, 33, 075009.	1.5	86
15	Advanced techniques in GEO 600. Classical and Quantum Gravity, 2014, 31, 224002.	1.5	77
16	Improving astrophysical parameter estimation via offline noise subtraction for Advanced LIGO. Physical Review D, 2019, 99, .	1.6	77
17	The basic physics of the binary black hole merger GW150914. Annalen Der Physik, 2017, 529, 1600209.	0.9	69
18	Approaching the motional ground state of a 10-kg object. Science, 2021, 372, 1333-1336.	6.0	59

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19	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
20	The Detection of Ultrasound Using Fiber-Optic Sensors. IEEE Sensors Journal, 2008, 8, 1360-1367.	2.4	50
21	First Demonstration of 6ÂdB Quantum Noise Reduction in a Kilometer Scale Gravitational Wave Observatory. Physical Review Letters, 2021, 126, 041102.	2.9	50
22	Prospects for Detecting Gravitational Waves at 5ÂHz with Ground-Based Detectors. Physical Review Letters, 2018, 120, 141102.	2.9	47
23	Direct limits for scalar field dark matter from a gravitational-wave detector. Nature, 2021, 600, 424-428.	13.7	43
24	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
25	Design of a speed meter interferometer proof-of-principle experiment. Classical and Quantum Gravity, 2014, 31, 215009.	1.5	29
26	Optical Generation and Detection of Ultrasound. Strain, 2003, 39, 111-114.	1.4	28
27	First Demonstration of Electrostatic Damping of Parametric Instability at Advanced LIGO. Physical Review Letters, 2017, 118, 151102.	2.9	24
28	Local-oscillator noise coupling in balanced homodyne readout for advanced gravitational wave detectors. Physical Review D, 2015, 92, .	1.6	16
29	Quantum correlation measurements in interferometric gravitational-wave detectors. Physical Review A, 2017, 95, .	1.0	16
30	Detecting Ultrasound Using Optical Fibres. Journal of Optics (India), 2004, 33, 241-255.	0.8	13
31	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
32	Waveguide grating mirror in a fully suspended 10 meter Fabry-Perot cavity. Optics Express, 2011, 19, 14955.	1.7	12
33	Smart Charging Technologies for Portable Electronic Devices. IEEE Transactions on Smart Grid, 2014, 5, 328-336.	6.2	10
34	<title>Novel methods of Lamb wave detection for material damage detection and location</title>. , 2005, 5768, 313.		9
35	Wavefront Integrating Fiber Sensors for Ultrasonic Detection. IEEE Sensors Journal, 2011, 11, 1623-1631.	2.4	9
36	Lowest observed surface and weld losses in fused silica fibres for gravitational wave detectors. Classical and Quantum Gravity, 2020, 37, 195019.	1.5	9

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37	Comparison of point and integrated fiber optic sensing techniques for ultrasound detection and location of damage. , 2004, , .		7
38	Novel sensing and control schemes for a three-mirror coupled cavity. Classical and Quantum Gravity, 2007, 24, 3825-3836.	1.5	7
39	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
40	Effects of transients in LIGO suspensions on searches for gravitational waves. Review of Scientific Instruments, 2017, 88, 124501.	0.6	6
41	Fibre optic polarimetric detection of Lamb waves. , 2002, , .		5
42	Obtaining complementary Lamb wave dispersion information by two signal processing methods on an all-optical non-contact configuration. Sensors and Actuators A: Physical, 2014, 217, 95-104.	2.0	5
43	Quantum noise cancellation in asymmetric speed metres with balanced homodyne readout. New Journal of Physics, 2018, 20, 103040.	1.2	5
44	Translational, rotational, and vibrational coupling into phase in diffractively coupled optical cavities. Optics Letters, 2011, 36, 2746.	1.7	4
45	Demonstration of an optical spring in the 100 g mirror regime. Classical and Quantum Gravity, 2016, 33, 075007.	1.5	4
46	Optical modulation techniques for length sensing and control of optical cavities. Applied Optics, 2007, 46, 7739.	2.1	3
47	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
48	Experimental demonstration of coupled optical springs. Classical and Quantum Gravity, 2017, 34, 035020.	1.5	3
49	Point Absorber Limits to Future Gravitational-Wave Detectors. Physical Review Letters, 2021, 127, 241102.	2.9	3
50	Damage detection in structural materials using a polarimetric fiber optic sensor. , 2003, , .		2
51	Progress and challenges in advanced ground-based gravitational-wave detectors. General Relativity and Gravitation, 2014, 46, 1.	0.7	2
52	Concepts and research for future detectors. General Relativity and Gravitation, 2014, 46, 1.	0.7	2
53	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. , 2018, 21, 1.		2
54	Optical technique for examining materials' elastic properties. , 2005, , .		1

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55	Inversion technique for an all-optical inspection of materials' elastic properties. , 2006, , .		1
56	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
57	Costâ€“benefit analysis for commissioning decisions in GEO 600. Classical and Quantum Gravity, 2015, 32, 135014.	1.5	1
58	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
59	Ultrasonic wavefront integration using interferometric optical fiber sensors. , 2003, 5050, 23.		0
60	Optically noncontact extraction of the elastic properties of materials. , 2004, , .		0
61	Noncontact material evaluation for characterization and wear detection using laser-generated ultrasound and interferometric detection. , 2004, 5384, 296.		0
62	Upper limit to the transverse to longitudinal motion coupling of a waveguide mirror. Classical and Quantum Gravity, 2015, 32, 175005.	1.5	0
63	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