

Borja Sorazu

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

60
papers

3,368
citations

21
h-index

58
g-index

63
ext. papers

4,396
ext. citations

7.5
avg, IF

2.92
L-index

#	Paper	IF	Citations
60	Enhanced sensitivity of the LIGO gravitational wave detector by using squeezed states of light. <i>Nature Photonics</i> , 2013 , 7, 613-619	33.9	572
59	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. <i>Living Reviews in Relativity</i> , 2018 , 21, 3	32.5	543
58	Prospects for Observing and Localizing Gravitational-Wave Transients with Advanced LIGO and Advanced Virgo. <i>Living Reviews in Relativity</i> , 2016 , 19, 1	32.5	393
57	Scientific objectives of Einstein Telescope. <i>Classical and Quantum Gravity</i> , 2012 , 29, 124013	3.3	256
56	Sensitivity of the Advanced LIGO detectors at the beginning of gravitational wave astronomy. <i>Physical Review D</i> , 2016 , 93,	4.9	208
55	Quantum-Enhanced Advanced LIGO Detectors in the Era of Gravitational-Wave Astronomy. <i>Physical Review Letters</i> , 2019 , 123, 231107	7.4	182
54	Characterization of transient noise in Advanced LIGO relevant to gravitational wave signal GW150914. <i>Classical and Quantum Gravity</i> , 2016 , 33,	3.3	155
53	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. <i>Living Reviews in Relativity</i> , 2020 , 23, 3	32.5	144
52	Sensitivity and performance of the Advanced LIGO detectors in the third observing run. <i>Physical Review D</i> , 2020 , 102,	4.9	84
51	SEARCH FOR GRAVITATIONAL-WAVE INSPIRAL SIGNALS ASSOCIATED WITH SHORT GAMMA-RAY BURSTS DURING LIGO'S FIFTH AND VIRGO'S FIRST SCIENCE RUN. <i>Astrophysical Journal</i> , 2010 , 715, 1453-1461	4.7	79
50	Identification and mitigation of narrow spectral artifacts that degrade searches for persistent gravitational waves in the first two observing runs of Advanced LIGO. <i>Physical Review D</i> , 2018 , 97,	4.9	77
49	Advanced techniques in GEO 600. <i>Classical and Quantum Gravity</i> , 2014 , 31, 224002	3.3	60
48	Improving astrophysical parameter estimation via offline noise subtraction for Advanced LIGO. <i>Physical Review D</i> , 2019 , 99,	4.9	58
47	GEO 600 and the GEO-HF upgrade program: successes and challenges. <i>Classical and Quantum Gravity</i> , 2016 , 33, 075009	3.3	52
46	A Gravitational-wave Measurement of the Hubble Constant Following the Second Observing Run of Advanced LIGO and Virgo. <i>Astrophysical Journal</i> , 2021 , 909, 218	4.7	46
45	The basic physics of the binary black hole merger GW150914. <i>Annalen Der Physik</i> , 2017 , 529, 1600209	2.6	45
44	The Detection of Ultrasound Using Fiber-Optic Sensors. <i>IEEE Sensors Journal</i> , 2008 , 8, 1360-1367	4	44

43	Search for Gravitational Waves Associated with Gamma-Ray Bursts during the First Advanced LIGO Observing Run and Implications for the Origin of GRB 150906B. <i>Astrophysical Journal</i> , 2017 , 841, 89	4-7	42
42	Prospects for Detecting Gravitational Waves at 5Hz with Ground-Based Detectors. <i>Physical Review Letters</i> , 2018 , 120, 141102	7-4	33
41	LIGO detector characterization in the second and third observing runs. <i>Classical and Quantum Gravity</i> ,	3-3	31
40	Design of a speed meter interferometer proof-of-principle experiment. <i>Classical and Quantum Gravity</i> , 2014 , 31, 215009	3-3	26
39	Experimental test of higher-order Laguerre-Gauss modes in the 10 m Glasgow prototype interferometer. <i>Classical and Quantum Gravity</i> , 2013 , 30, 035004	3-3	21
38	Optical Generation and Detection of Ultrasound. <i>Strain</i> , 2003 , 39, 111-114	1-7	21
37	First Demonstration of Electrostatic Damping of Parametric Instability at Advanced LIGO. <i>Physical Review Letters</i> , 2017 , 118, 151102	7-4	18
36	First Demonstration of 6dB Quantum Noise Reduction in a Kilometer Scale Gravitational Wave Observatory. <i>Physical Review Letters</i> , 2021 , 126, 041102	7-4	18
35	Approaching the motional ground state of a 10-kg object. <i>Science</i> , 2021 , 372, 1333-1336	33-3	14
34	Local-oscillator noise coupling in balanced homodyne readout for advanced gravitational wave detectors. <i>Physical Review D</i> , 2015 , 92,	4-9	13
33	Waveguide grating mirror in a fully suspended 10 meter Fabry-Perot cavity. <i>Optics Express</i> , 2011 , 19, 14955-63	3-3	12
32	Candidates for a possible third-generation gravitational wave detector: comparison of ring-Sagnac and sloshing-Sagnac speedmeter interferometers. <i>Classical and Quantum Gravity</i> , 2017 , 34, 024001	3-3	11
31	Quantum correlation measurements in interferometric gravitational-wave detectors. <i>Physical Review A</i> , 2017 , 95,	2-6	9
30	Wavefront Integrating Fiber Sensors for Ultrasonic Detection. <i>IEEE Sensors Journal</i> , 2011 , 11, 1623-1631	4	9
29	Detecting Ultrasound Using Optical Fibres. <i>Journal of Optics (India)</i> , 2004 , 33, 241-255	1-3	9
28	Smart Charging Technologies for Portable Electronic Devices. <i>IEEE Transactions on Smart Grid</i> , 2014 , 5, 328-336	10-7	7
27	Novel sensing and control schemes for a three-mirror coupled cavity. <i>Classical and Quantum Gravity</i> , 2007 , 24, 3825-3836	3-3	7
26	Effects of static and dynamic higher-order optical modes in balanced homodyne readout for future gravitational waves detectors. <i>Physical Review D</i> , 2017 , 95,	4-9	6

25	Novel methods of Lamb wave detection for material damage detection and location 2005 , 5768, 313		6
24	Obtaining complementary Lamb wave dispersion information by two signal processing methods on an all-optical non-contact configuration. <i>Sensors and Actuators A: Physical</i> , 2014 , 217, 95-104	3.9	5
23	Comparison of point and integrated fiber optic sensing techniques for ultrasound detection and location of damage 2004 ,		5
22	Effects of transients in LIGO suspensions on searches for gravitational waves. <i>Review of Scientific Instruments</i> , 2017 , 88, 124501	1.7	4
21	Translational, rotational, and vibrational coupling into phase in diffractively coupled optical cavities. <i>Optics Letters</i> , 2011 , 36, 2746-8	3	4
20	Fibre optic polarimetric detection of Lamb waves 2002 ,		4
19	Demonstration of an optical spring in the 100 g mirror regime. <i>Classical and Quantum Gravity</i> , 2016 , 33, 075007	3.3	4
18	Quantum noise cancellation in asymmetric speed metres with balanced homodyne readout. <i>New Journal of Physics</i> , 2018 , 20, 103040	2.9	4
17	Direct limits for scalar field dark matter from a gravitational-wave detector.. <i>Nature</i> , 2021 , 600, 424-428	50.4	4
16	Experimental demonstration of coupled optical springs. <i>Classical and Quantum Gravity</i> , 2017 , 34, 035020	3.3	3
15	Violin mode amplitude glitch monitor for the presence of excess noise on the monolithic silica suspensions of GEO 600. <i>Classical and Quantum Gravity</i> , 2010 , 27, 155017	3.3	3
14	Optical modulation techniques for length sensing and control of optical cavities. <i>Applied Optics</i> , 2007 , 46, 7739-45	1.7	3
13	Lowest observed surface and weld losses in fused silica fibres for gravitational wave detectors. <i>Classical and Quantum Gravity</i> , 2020 , 37, 195019	3.3	3
12	Progress and challenges in advanced ground-based gravitational-wave detectors. <i>General Relativity and Gravitation</i> , 2014 , 46, 1	2.3	2
11	Concepts and research for future detectors. <i>General Relativity and Gravitation</i> , 2014 , 46, 1	2.3	2
10	Damage detection in structural materials using a polarimetric fiber optic sensor 2003 ,		2
9	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA 2018 , 21, 1		2
8	CostBenefit analysis for commissioning decisions in GEO 600. <i>Classical and Quantum Gravity</i> , 2015 , 32, 135014	3.3	1

- 7 Inversion technique for an all-optical inspection of materials. *Elastic properties* **2006**, 1
- 6 Optical technique for examining materials. *Elastic properties* **2005**, 1
- 5 Point Absorber Limits to Future Gravitational-Wave Detectors.. *Physical Review Letters*, **2021**, 127, 2411024 0
- 4 Upper limit to the transverse to longitudinal motion coupling of a waveguide mirror. *Classical and Quantum Gravity*, **2015**, 32, 175005 3-3
- 3 Techniques in the optimization of length sensing and control systems for a three-mirror coupled cavity. *Classical and Quantum Gravity*, **2008**, 25, 235003 3-3
- 2 Noncontact material evaluation for characterization and wear detection using laser-generated ultrasound and interferometric detection **2004**, 5384, 296
- 1 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 3-3